

Promoting Health on Social Media: The Way Forward

Lorien C. Abroms, ScD¹, Robert S. Gold, PhD, DrPH²,
and John P. Alagrange, PhD³

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Figuring out how to make our digital technologies health promoting is one of the key public health challenges of the 21st century. Social media has become a dominant and pervasive force in modern societies, affecting people's daily habits and patterns both in the United States and in other parts of the world. In many ways, the ubiquity of social media presents exciting opportunities for improving public health. Social media offers new ways of reaching people with public health messages such as in disaster and emergency response, connecting people with similar health conditions to support each other, and providing people with increased access to programs and services such as behavioral counseling for addiction treatment (Abroms, 2019; Bernhardt, Chaney, Chaney, & Hall, 2013; Galea & Vaughn, 2017; Patrick et al., 2016).

While social media and their applications may reach millions of people with health information and advice (Hesse, Moser, & Riley, 2015; Pagoto & Bennett, 2013; Riley, Oh, Aklin, & Wolff-Hughes, 2019), health-related research has also shown that social media use over time (and unlike in-person socializing) is associated with decreases in physical and mental well-being (Shakya & Christakis, 2017). In addition, social media sites have been implicated in facilitating drug sales that have fueled the opioid epidemic, promoting thin body style ideals and the anorexic communities to support them, and spreading misinformation about vaccines and other established public health practices. Additionally, although the efficacy of media-based interventions to improve health has been demonstrated across an increasingly wide range of conditions, much remains to be done to enhance the potential for broad population dissemination of these interventions (Bennett & Glasgow, 2009; Brabham, Ribisi, Kirchner, & Bernhardt, 2014).

The Grand Challenge

The challenge for the public health community is to better understand both the positive and negative effects of these technologies on public health, as well as how to harness these technologies for improving public health. In addition, consideration should also be given to the separate question of how to reshape aspects of our social media environments so that their content and structures are health promoting.

This is not a simple proposition. Social media sites are operated by for-profit corporations that derive significant revenues from ads and other ways of monetizing their users' data on their sites. They are closed-off systems with opaque algorithms that shape the content to which users are exposed (e.g., the newsfeed, advertisements, and recommendations for additional content). While these sites have developed and issued "Terms of Use" and "Community Guidelines" that, for the most part, promote ideals consistent with the protection of privacy, freedom of expression, and public health goals—prohibiting the posting of content related to the sale of illegal substances, child pornography, violent behavior, the promotion of eating disorders, and hate speech—such Terms of Use or Community Guidelines are difficult to enforce and, in practice, are often not enforced around public health topics.

Central to the challenge for health promotion practitioners and researchers alike are the dual challenges of being able to gain entrance to the social media environments of the public and being able to study and manipulate these environments in ways that might prove to be more health promoting. Thus, the public health community is faced with myriad questions: How do we conduct health promotion in this existing context? How do we structure social media sites so they are more health promoting? What are the tangible opportunities for collaboration across the public and private sectors in applications of digital technology to improve public health? What kinds of oversight and regulatory actions are needed, especially around public health topics like suicide and the spread of health-related misinformation that lead, for example, to vaccine hesitancy? Inherent in such questions are thorny ethical issues such as those dealing with the balance of free speech and public health and the degree to which social media sites should be seen as public spaces and

¹The George Washington University, Washington, DC, USA

²University of Maryland, College Park, MD, USA

³Columbia University, New York, NY, USA

Corresponding Author:

Lorien C. Abroms, Department of Prevention and Community Health, Milken Institute School of Public Health, The George Washington University, 950 New Hampshire Avenue, NW, Washington, DC 20052, USA.
Email: lorien@gwu.edu

subject to public oversight. These are big questions that constitute the “Grand Challenge” before us—one that will require a cross-sectoral approach to address, and the involvement and cooperation of social media sites, government, and researchers and public health experts.

The Way Forward

What, then, should success look like and what is the way forward?

First, success should look like government agencies forging ongoing collaborations and partnerships with social media companies to advance our progress in responding to pressing public health problems. While the Food and Drug Administration held a Summit in 2018 with Facebook, Instagram, Google, Yahoo, Bing, Twitter, and Alibaba to enlist their help in addressing illegal online opioid sales on social media, sustained partnerships remain elusive. Additional initiatives—driven by a common agenda and ongoing, durable collaborations across the academic, government, and industry sectors—are needed to proactively address multiple public health issues over time (Abroms et al., 2019; Gold et al., 2019).

Second, success should look like scholarship that seeks to understand both the positive and negative effects of social media use. Data-mining research that has sought to identify the types of “bots” and other malicious actors currently infiltrating Twitter and other social media to promote the antivaccination agenda (Jamison, Broniatowski, & Quinn, 2019), as well as emerging efforts to mine archival data to determine whether Internet search engine queries can yield new insights into the diagnosis of health conditions such as diabetes or cancer (Hochberg, Daoud, Shehadeh, & Tom-Tov, 2019), are among some of the more compelling examples of the utility of scientific research for improving public health.

Third, success should look like public health communication campaigns that are conducted through social media sites, subject to rigorous and ongoing process and impact evaluation, and improved over time in response to user needs. It is encouraging that Google has partnered with the Centers for Disease Control and Prevention to monitor the reach and effectiveness of the Centers for Disease Control and Prevention’s antiopioid ad campaign.

Finally, the way forward also suggests that private social media companies must recognize that they occupy a vital public space in which they must lead and act in a socially responsible manner. Perhaps, in the spirit of noblesse oblige, they should operate more like a public utility rather than solely as a for-profit enterprise (de los Reyes, 2019; de los Reyes, Scholz, & Smith, 2017). Examples here include Pinterest changing their Terms of Service to prohibit health misinformation (Caron, 2019) and Facebook changing their search algorithms to deprioritize antivaccination content (Matsakis, 2019). In addition, the U.S. government has stepped in to issue antitrust judgments and levy fines

against Google and YouTube for violating children’s privacy laws; similarly, Germany and the European Union are now taking action to enforce a new law to prohibit hate speech on social media.

Public health historians have argued that creating effective hygiene and sanitation systems was the key public health challenge of the 19th century, and limiting tobacco consumption was the key challenge of the 20th century. Figuring out how to rein in the ill effects of social media as well as harness it by utilizing the data being generated by its ever-increasing use to more rapidly identify diseases and populations at risk are the defining public health challenge of the 21st century. Moreover, making the investment to fund the science that can undergird the various utilities—both those available today and those yet to come in the future—surely deserves attention at the highest levels of government, industry, and academia.

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References

- Abroms, L. C. (2019). Public health in the era of social media. *American Journal of Public Health, 109*(Suppl. 2), S130-S131.
- Abroms, L. C., Allegrante, J. P., Auld, M. E., Gold, R. S., Riley, W. T., & Smyser, J. (2019). Toward a common agenda for the public and private sectors to advance digital health communication. *American Journal of Public Health, 109*, 221-223.
- Bennett, G. G., & Glasgow, R. E. (2009). The delivery of public health interventions via the Internet: Actualizing their potential. *Annual Review of Public Health, 30*, 273-292.

- Bernhardt, J. M., Chaney, J. D., Chaney, B. H., & Hall, A. K. (2013). New media for health education: A revolution in progress. *Health Education & Behavior, 40*, 129-132.
- Brabham, D. C., Ribisi, K. M., Kirchner, T. R., & Bernhardt, J. M. (2014). Crowdsourcing applications for public health. *American Journal of Preventive Medicine, 46*, 179-187.
- Caron, C. (2019, February 23). Pinterest restricts vaccine search results to curb spread of misinformation. *New York Times*. Retrieved from <https://www.nytimes.com/2019/02/23/health/pinterest-vaccination-searches.html>
- de los Reyes, G., Jr. (2019). Institutional entrepreneurship for digital public health promotion. *Health Education & Behavior, 46*(Suppl. 2), 30S-36S. doi:10.1177/1090198119871245
- de los Reyes, G., Scholz, M., & Smith, N. C. (2017). Beyond the "win-win": Creating shared value requires ethical frameworks. *California Management Review, 142*, 142-167.
- Galea, S., & Vaughan, R. D. (2017). On the promise and peril of technology for population health: A public health of consequence, November 2017. *American Journal of Public Health, 107*, 1703-1705.
- Gold, R. S., Auld, M. E., Abroms, L. C., Smyser, J., Yom-Tov, E., & Allegrante, J. P. (2019). Digital health communication common agenda 2.0: An updated consensus for the public and private sectors to advance public health. *Health Education & Behavior, 46*(Suppl. 2), 124S-128S. doi:10.1177/1090198119874086
- Hesse, B. W., Moser, R. P., & Riley, W. T. (2015). From big data to knowledge in the social sciences. *Annals of the American Academy of Political and Social Science, 659*, 16-32.
- Hochberg, I., Daoud, D., Shehadeh, N., & Tom-Tov, E. (2019). Can internet search engine queries be used to diagnose diabetes? Analysis of archival search data. *Acta Diabetologica*. Advance online publication. doi:10.1007/s00592-019-01350-5
- Jamison, A. M., Broniatowski, D. A., & Quinn, S. C. (2019). Malicious actors on Twitter: A guide for public health researchers. *American Journal of Public Health, 109*, 688-692.
- Matsakis, L. (2019, March 7). Facebook will crack down on anti-vaccine content. *Wired*. Retrieved from <https://www.wired.com/story/facebook-anti-vaccine-crack-down/>
- Pagoto, S., & Bennett, G. G. (2013). How behavioral science can advance digital health. *Translational Behavioral Medicine, 3*, 271-276.
- Patrick, K., Hekler, E. G., Estrin, D., Mohr, D. C., Riper, H., Crane, D., . . . Riley, W. T. (2016). The pace of technologic change: Implications for digital health behavior intervention research. *American Journal of Preventive Medicine, 51*, 816-824.
- Riley, W. T., Oh, A., Aklin, W. M., & Wolff-Hughes, D. L. (2019). National Institutes of Health support of digital health behavior research. *Health Education & Behavior, 46*(Suppl. 2), 12S-19S. doi:10.1177/1090198119866644
- Shakya, H. B., & Christakis, N. A. (2017). Association of Facebook use with compromised wellbeing: A longitudinal study. *American Journal of Epidemiology, 185*, 203-211.