VIEWPOINT

Public Health Messaging in an Era of Social Media

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Multimedia

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Public health organizations have always used messaging to educate the public in an attempt to control the spread of epidemic diseases. Early efforts that relied on word-of-mouth communication and poster campaigns transitioned to radio and television as those technologies emerged, yet these forms of communication likely have become less effective in a crowded, noisy, and confrontational online environment. Over the past decade, emerging digital platforms have become sophisticated, targeted, and responsive in reaching and influencing the public.

Widespread physical distancing during the coronavirus disease 2019 (COVID-19) pandemic has limited informal social interactions and exposure to signage is considerably lessened as many people limit travel, order products online, and work from home. An effective messaging strategy will require meeting people where they are and through the information networks and devices they use for day-to-day interactions. As of December 27, 2020, more than 80 million people have contracted COVID-19 and 1.7 million have died. The need for effective public health messaging about community spread, prevention measures, and vaccines is more important than ever.

Digital platforms are powerful yet underused tools for engaging the public and should be considered essential for public health preparedness, response, and recovery. This Viewpoint explores the following 4 strategies to advance public health messaging during this and future public health emergencies: deploying countermeasures for misinformation, surveillance of digital data to inform messaging, partnering with trusted messengers, and promoting equity through messaging.

Misinformation Is a Public Health Crisis

Misinformation is a serious threat to public health, especially during pandemics. Misinformation has likely accelerated the spread of COVID-19 by fragmenting and influencing the response to prevention strategies like wearing a mask and physical distancing. Misinformation has emerged about nearly every aspect of the pandemic, including the origins of the virus (eg, it was manufactured in a laboratory), treatments (eg, bleach, alcohol), and vaccine safety (eg, vaccines include embedded microchips).

Misinformation is very difficult to correct because it is massive in volume, contagious, and can appear to come from trusted social networks. Because misinformation is not labeled, distinguishing it from credible information can be increasingly difficult, particularly when highly politicized and opposing views are categorized as fake news. Furthermore, misinformation is being distributed from multiple sources, including government leaders in the US and reportedly from highly organized groups in Russia and other countries.

Recent research is informing the development of approaches to counteract misinformation. Prior studies support a "find and replace" approach that includes posting timely corrections about what is false and why and frequently reiterating accurate information.[1] The vaccine hesitancy literature also suggests the importance of understanding the origin of rumors and false information.[2] This approach can help to understand the concerns and ideologies that can inform development of thoughtful and responsive countermeasures. Because each social media platform has different features and users, the strategies that public health organizations use to address misinformation should also be distinct and responsive to the nuances of each site. A study of 8 million posts about COVID-19 on 5 social media platforms (Twitter, Instagram, YouTube, Reddit, and Gab) demonstrated variability in both the content of accurate and inaccurate information and ways in which it spread across each site.[3] Sites varied in the volume of COVID-19–related messages about topics like cures, therapies, and protection advice; for example, Reddit limited the influence of questionable sources, whereas Gab increased the diffusion of questionable sources.

Public health organizations should also work with technology companies that have platforms with the infrastructure to label misinformation and limit its spread. In response to COVID-19, the World Health Organization partnered with several entities (eg, Facebook, Twitter) to address false information and promote health updates.

In the midst of this pandemic, there is an immediate need to evaluate the effectiveness of these and other countermeasures against misinformation. It will be difficult to make progress toward an unmeasured and understudied problem. Identifying misinformation as a public health crisis has the potential to bring the full weight of public health organizations and other entities toward addressing this problem.

Surveillance of Digital Data to Inform Public Health Messaging

Data from social media can provide insights about the response of the public to preventive health measures. For example, information from social media, digital platforms (eg, OpenTable, Google), and remote sensors is already being used to track the movement of populations and understand where individuals are adhering to guidelines about physical distancing and where they are not. A study of 580 million tweets posted during the early months (ie, January to May 2020) of the pandemic showed that the geographic information associated with tweets can be used as a proxy for human mobility.[4] Public health organizations can use this real-time data to inform messaging content and where to target hyperlocal messages about public health measures (eg, shelter in place).

In addition to serving as a proxy for behavioral responses, social media data can also provide information about public opinion and sentiment in response to public health interventions. Traditional approaches for assessing public attitudes and well-being rely on phone or mail surveys. Delays in the availability of these types of data limit their use for timely surveillance in evolving crises. During the early phases of the COVID-19 pandemic, the Penn Medicine Center for Digital Health and the World Well-Being Project launched a public-facing platform that uses machine learning approaches to synthesize data from Twitter about COVID-19 in real time.[5] Based on data from this platform and others and to enhance public awareness, the Washington State Department of Health posts weekly online behavioral health situation reports containing regional estimates of sentiment, loneliness, and anxiety.[6] This approach could be further harnessed to support situational awareness and enable more directed health messaging to address well-being and population-level mental health needs in response to COVID-19.

Align With Trusted Messengers

Individuals often rely on information that is passed along from people they know and respect. Community organizers and political campaign strategists invest in identifying individuals embedded in communities to help spread important information to their friends and neighbors. Similarly, public health organizations should partner with community influencers (eg, community health workers, religious leaders) who can help with propagating trustworthy messages and dismantling false ones through online channels. In the case of vaccine campaigns, trusted messengers are often engaged to disseminate information about vaccine safety.[2]

Public health organizations can also learn from social movements such as #BlackLivesMatter and #MeToo in elevating the ideas and experiences of young and often marginalized groups to shape a national dialogue that leads to change. Frontline leaders for these movements are often trusted messengers that public health organizations can collaborate with when trying to access vulnerable communities. Messages crafted and disseminated by these influencers will likely reach more people and be more persuasive than those created solely by organizations. Furthermore, messages that speak to multiple facets of what people are experiencing (eg, COVID-19 and racism, anxiety, unemployment, caregiving, homeschooling, or isolation) and leverage narratives and storytelling are likely to be effective.

Equity and Public Health Messaging

To date, Black, Latino, and Native American communities are disproportionately affected by COVID-19 and its economic consequences. Conversations about equity are at the forefront of national consciousness as a result of the intersecting events of the COVID-19 pandemic and the killing of George Floyd and other Black individuals. Racism is a centuries-old construct that will not be dismantled with a series of hashtags and Instagram stories. However, social media is an important tool that public health organizations can use to address racism and equity with the same focus as the messages being deployed about COVID-19.

Inequalities contribute to how different groups access, process, and share information. Research from the H1N1 pandemic highlighted how differences in exposure to information and differences in modes of delivery could influence the response to the outbreak.[7] Structural barriers should also be addressed. Disparities in access to broadband and Wi-Fi limit exposure and access to digital content for some populations. This has been of particular salience for online public school education during this pandemic and supports the need for equity in access to technology infrastructure as well as a diversity of communication approaches.

Attentiveness to Risks and a Need for Adaptability

There are notable risks (eg, violations of privacy, data security, perpetuation of bias) with engaging on social media that must be carefully considered for deploying health messaging online. Yet, not expanding traditional approaches and engaging with the full complement of available digital strategies represents a missed opportunity. Just as communication approaches have evolved over time to respond to each emerging public health emergency, there is now urgency for harnessing new approaches to effectively engage the public.

ARTICLE INFORMATION

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Additional Information: Dr Lurie served as Assistant Secretary for Preparedness and Response in the US Department of Health and Human Services from 2009 to 2017.

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