

Health Care Providers Can Help Combat Harmful Misinformation About the Pandemic

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In a typical flu season or an atypical pandemic, much of the burden for ensuring one's health falls on individual behavior choices, and public health messaging is a tool for enabling people to make good ones. Today's complicated media environment is difficult to navigate. As trusted experts, physicians can guide patients toward evidence-based resources.

How Audiences Access Health Information

The ability to understand and critically consider information is an essential skill with implications in a variety of fields, one of which is health. For individuals, the US Department of Health and Human Services offers the following definition: "Personal health literacy is the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others."

For individuals who are lacking in this ability, there can be serious consequences [2].

Society already has measures in place to encourage health literacy. For pupils in public schools, health lessons are generally a part of the curriculum and subject to state standards for what will be taught. These kinds of programs are regularly studied and found to be effective, although often the assessments are pre- or post-examinations that indicate short-term learning but show less about lasting effects. Other community groups like scouting also provide health education to youth. As people become older, community health fairs, county fairs, and church groups sometimes fill this need by providing opportunities for education on good health-related practices. Usually, programming comes from either practitioner-approved curricula or is offered as a public service by practitioners themselves.

Public health efforts also come from government, in the form of information booths at events and public message campaigns from organizations such as city and state health departments, the Centers for Disease Control and Prevention, and the Food and Drug Administration. Private groups that support particular causes, such as the American Lung Association, the Susan G. Komen Foundation, and the American Cancer Society, also do extensive public information work as a part of their missions. Sometimes, nonprofits like the Ad Council will work to create engaging messages around public health topics.

The success of these campaigns often depends on securing willing media partners to magnify the messages. Public interest in the topic is apparent: newscasts and newspapers regularly run health stories, and these stories are popular content in magazines and magazine-style television shows as well. However, the quality of media coverage varies widely. Curricula in journalism schools do not require education in health topics, and even mandated science classes in the general curriculum are minimal. Even if journalists are capable of understanding and communicating health information, business-side pressures on a collapsing news industry can sometimes affect the choices of topics covered [3].

In the age of the SARS-CoV-2 pandemic, accurate information correctly applied has been an important part of strategy in avoiding illness and preserving life. However, a number of factors have made acceptance of practices like masking and social distancing a continual challenge. First is the public's ability to access and process accurate information. Although government entities and media have made information available on dedicated websites and in social media campaigns, algorithmic determination of content means that the information is less likely to be seen. Search engines like Google and Bing and social media properties like Facebook and Twitter assist users in processing the stream of content from the sometimes thousands of connections the users have by using rules to select and display the content the user wants most. Wants are a challenging thing to determine. The formulas for this vary by site and change over time, but generally include assessment of the user's behavior with other content and sometimes assessment of the behavior of the user's connections [4]. In social media, if a user consistently clicks on posts about pizza, they will be more likely to see pizza posts in the future, and other content can be crowded out of the feed. In a search context, it's possible that choosing health articles from individual bloggers would influence future search results to

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include more blogs rather than content from medical organizations. The most accurate content may be shown far down in the search results, where it is unlikely to be seen. The amount of content that gets screened out can be quite high—on the order of 80% or higher for social media [4].

Even when accurate content is shown, it can be difficult for users to see and process information. This can be because of poor basic literacy [5] or because the information is counter to beliefs that the viewer already holds [6]. This problem is greatly exacerbated because of the deconstructed way in which most people now get their news. In the past, news was a packaged product that came in a single publication or broadcast with the source (*The Raleigh News & Observer* or WRAL-TV, for example) clearly indicated. Surveys have indicated that most people now find their news via social media postings [7]. When individual stories or videos are shown on a search page or a social media feed, they seem decontextualized, with all appearing the same. This can require users to take extra steps to see the original source—steps that research suggests many do not, in fact, take [8].

The Information Environment

The capabilities and proclivities of the audience can pose a significant problem, even if one assumes that the information itself is clear, accurate, and shared with an intent to preserve public health above all else. When it comes to SARS-CoV-2, unfortunately, this has not proven to be a good assumption.

First, because the disease is novel, early messaging in the United States was based on experiences in other countries, where the outbreak was still unfolding. Messaging on distancing and masking varied in the first weeks of known US outbreaks, and changing messages raised doubts about the competency of the messenger. This continues to be a problem as knowledge about the disease grows.

Second, the need to restrict public movement in order to not overwhelm health care providers imposed a substantial burden on citizens. Some lost jobs, some lost needed services like child care, and some just wanted to get their hair cut. Pressure from frustrated citizens led some politicians to seek to differentiate themselves by siding with the frustrated on the issue of personal freedom. They encouraged and continue to encourage cities and states to make at-risk individuals responsible for their own safety, or even suggested the at-risk selflessly make a sacrifice of disease or death in the service of a return to normal life for others [9]. An unfortunate situation evolved in which the public health officials were saying one thing and the politicians were in some cases agreeing and in others saying different things. In the choice between two apparently credible sources, it was tough for audiences to know whom to believe. At the same time, social media and search engine algorithms were serving people the information that reinforced what they wanted to see or believe.

Third, a toxic, anti-truth environment expanded, as followers of several anti-institutionalist conspiracy theories found solace in each other's beliefs. SARS-CoV-2 conspiracies, including things like the "Film Your Hospital" campaign [10, 11] that argued that the virus was a hoax perpetrated by the scientific community in tandem with the press, found good company with anti-vaccination activism, worries about an alleged plan led by Bill Gates to get people to accept vaccination as a way to microchip humanity, flat earthers who believe scientists and big government are trying to fool the public for their own gain, and even the Q-Anon conspiracy that argued the president was about to take down a global cabal of elites who were kidnapping children [12]. A shared belief that powerful people, structures, and governments are acting against the interests of citizens has helped meld these theories together, and seeing what seems like a large number of adherents to these theories interacting on social media has encouraged resistance to public health messaging around the pandemic [13].

Finally, confusion, chaos, illness, and death are helpful to some foreign governments who would like to operate unseen in ways that would normally encourage sanction from a functional United States. As part of a continual and growing disinformation cyber war between the United States and countries like Russia, Iran, and China, foreign actors are inserting disinformation into the discourse on social media, in news comment sections, and in other online spaces [14]. Everyday users are finding these postings and sharing the ones that they agree with, adding an element of social proof that allows the posts to then find their way into the feeds of more users.

The Physician's Potential Roles

The physician has an opportunity to be uniquely effective in improving public health by fighting disinformation about the pandemic. When patients seek health care, they are stipulating a level of expertise from their provider that can be useful in encouraging good information-seeking practices. The following practices may lead to changes in patient attitudes and behaviors [15]. Practical steps can include:

Offering referral to sources of evidence-based health information such as departments of public health and respected medical organizations. This could be information or links on a website or social media page, or could be a bulletin board item in a waiting room or examination room with a heading like Good Places to Look for Health Information and a suggestion to take a picture for later use.

Gently asking patients to state evidence for beliefs expressed in the course of working with them. A respectful, "I haven't seen that in the medical literature. Where did you come across that?" can be helpful in encouraging people to reflect on the information they consume.

Sharing expectations to use and promote evidence-based sources with others on the care team including nurses, aides,

laboratory technicians, and office staff. Social media health disinformation often comes with proof of veracity in the form of, "I heard from my friend, whose cousin is a nurse," and the like. Physicians' clear expectations for how their teams communicate with patients can help mitigate this.

Referencing the evidence-based sources of information you use yourself when talking to people, both in patient care settings and elsewhere. The current information environment has made it challenging for audiences to know what information can be trusted. This confusion can become a literal matter of life and death, and the physician can play a key role in helping the patient find and understand useful sources to follow. NCMJ

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