

Managing the modern infodemic

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As if facing a novel coronavirus was not bad enough, health care professionals today have to contend with a torrent of misleading information circulating via social media. As Tedros Adhanom Ghebreyesus, the Director-General of the World Health Organization, noted in mid-February, “We’re not just fighting an epidemic, we’re fighting an infodemic” in the form of “fake news” that “spreads faster and more easily than this virus.”¹ Coronavirus disease 2019 (COVID-19) is the biggest pandemic to occur since the proliferation of cellphones, laptops and other devices that now allow an estimated 4.7 billion people, or around 59% of the total population of Earth, to access the Internet.² That enhanced connectivity has amplified the speed and volume at which false claims about COVID-19 are circulating. “Hoaxes are making doctors’ jobs harder,” physicians Seema Yasmin and Craig Spencer recently reported in the *New York Times*.³

Social media seems governed by an “anything goes” ethos directly at odds with the health care field’s commitment to scientific rigor. That makes it tempting to categorize the COVID-19 infodemic as an information technology problem, not a medical one. But a historical perspective suggests that concluding “it’s the Internet’s fault” is not only overly simplistic but also understates how the medical profession can help combat COVID-19 misinformation.

The word blend “infodemic” (information plus epidemic) reflects the outsized effect that new information technologies have had on contemporary health communication. The political scientist David Rothkopf first used the term during the 2003 severe acute respiratory syndrome (SARS) pandemic to describe



how “a few facts, mixed with fear, speculation and rumor, amplified and relayed swiftly worldwide by modern information technologies have affected national and international economies, politics and even security in ways that are utterly disproportionate with the root realities.”⁴ Although the word blend is relatively new, the association between epidemics and misinformation is certainly not. From the mid-14th century bubonic plague to the late-20th century HIV-AIDS epidemic, disease outbreaks have often stimulated a torrent of confusing rumors, conspiracy theories and improbable cures.⁵ What new information technologies have done in the past 2 decades is intensify that process and make it harder to control.

Changes in biomedical research and health care economics have contributed substantially to this informational churn.

Since the 1970s, both media and medicine have been reshaped by the rapid analysis and sharing of information via the “electronic highway.” In both scientific and economic terms, information has become an increasingly valuable commodity that is integral to both academic and business interests. Those changes have greatly benefited medical research and practice, while at the same time laying the foundation for more viral infodemics.

To understand why, distinctions used in the sociology of knowledge and media are useful. One such distinction is between information and knowledge. The dictionary definition of the 2 makes them seem simple to distinguish: information consists of facts or data and knowledge in the skillful interpretation and application of that information. But being in possession of good facts and data does not guarantee their wise interpretation.⁶

Because it is easier and more profitable to produce, information is often conflated with its more precious by-product, knowledge. The other useful distinction is between misinformation, which is produced accidentally, and disinformation, which is produced deliberately. Although medical professionals are rarely implicated in the latter, they have a more complex relationship to the former.

One type of misinformation is generated when medical experts are trying to make sense of a new disease phenomenon: they read the data differently and come to different conclusions or, as more data becomes available, they change their minds. Good medicine requires tolerating this uncertainty, as Arabella Simpkin and Richard Schwartzstein have argued.⁷ But to compete for funding or policy relevance, researchers face the temptation to overstate their certainty. Despite efforts to hold them to high standards of scientific inquiry (e.g., double blinding, replication and external review), data get muddled, findings are hard to replicate and conflicts of interest persist. In some instances, the profitability of health care has attracted corporate funding or “science for hire,” which has become a potent source of what David Michaels calls “truth decay” in medicine and other fields of science.⁸

In addition, patients and the public are exposed to commercial health messaging that is regulated by more business-centric standards of what constitutes truth. Claims in a hospital’s public relations campaign or a pharmaceutical company’s advertisement are judged truthful by different standards than those of medical journals. The line between information and infomercial can be hard to discern. The definition of good versus bad facts depends on the eye of the beholder. What is indisputably true to one group is seen as rank falsehood by another: think of climate change and vaccinations. We depend heavily on health care professionals, patients and the public to be critical consumers of this mixed bag of health information — and it is hard work.⁹

These challenges will persist no matter how social media platforms change in the future. So what can medical professionals

do to mitigate the current COVID-19 infodemic? First, they need to support ongoing efforts to pressure the big social media platforms to remove dangerous material related to COVID-19. Some physicians may be reluctant to “get political” or restrain free speech, but such regulation is literally a matter of life and death. Those groups trying to remove disinformation need the medical profession’s help.³

Second, physicians can avoid contributing to the misinformation cycle by making sure their own COVID-19 information is up to date. As Yasmin and Spencer noted, physicians have not been blameless when it comes to promoting bad advice.³ It is important to be ready to direct patients, friends and relatives to quality sources of COVID-19 information.¹⁰ Those links can be shared with the acknowledgement that COVID-19 knowledge is a work in progress, so frequent updates are a sign of good science at work.

Third, health care professionals can embrace their role as “influencers.” Past experience with epidemics, in particular HIV-AIDS, suggests that personal forms of communication can make a huge difference. Although it might not seem so, the public still has a much higher degree of trust in their doctors than they do in politicians or ads on a platform like Facebook. Thus, the profession’s access and connection in real time to patients, relatives and neighbours is invaluable.

Along the same lines, health care professionals need to partner with community leaders. In the AIDS epidemic, neighbourhood organizers had far more success overcoming grassroots distrust of preventive measures than did public health officials.¹¹ This outreach is especially important for communities of colour who have good reason to be suspicious of experts.

This is all hard and demanding work. Most researchers and clinicians undoubtedly wish they could just focus on finding cures and treatments and leave the infodemic to the information technology experts. However, for the reasons sketched above, health care professionals have to get involved in managing the COVID-19 infodemic. Perhaps in time we will become grateful for the lessons it is teaching about both the power of a wired world

and the need to become more tolerant of scientific uncertainty in the face of novel health threats.

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