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Editorial: Health misinformation: examining its presence and impact across communication contexts

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Editorial on the Research Topic

[Health misinformation: examining its presence and impact across communication contexts](#)

Modern technologies provide consumers unprecedented access to health information. Digital platforms give users the ability to locate immediate, customizable resources for addressing health needs. Although these dynamic media tools present opportunities to increase health literacy/consciousness, they also make consumers vulnerable to misleading or false health claims. While news of false political information arguably generates the most media attention, health misinformation is particularly harmful to individuals and society given the potential to provoke mistrust in both medical institutions/professionals and highly validated medical procedures. Ultimately, as false health content gets shared and reinforced through various information channels (face-to-face, traditional media, social media) this may lead individuals to engage in unproven, and at times dangerous, health behaviors. Public figures/influencers now use increasingly more sophisticated digital tools to exert significant influence on the health attitudes and behaviors of millions of individuals. At the time of this writing, a measles outbreak triggered in western Texas, USA has led to over 1,300 documented cases throughout the country [[Centers for Disease Control \(CDC\), 2025](#)]. Measles, a viral disease the U.S. declared eradicated 25 years ago, can lead to a variety of serious health conditions as well as death. In the aftermath of this outbreak, news reports highlight how both social media users and public figures are promoting unproven treatments, such as the consumption of cod liver oil and vitamin A. Although this highly contagious and deadly virus can be prevented through a safe and extremely effective vaccine ([Moss and Griffin, 2006](#)), increased access to alternative information sources preying on vaccine doubts as well as news sources offering false balance between credible and discounted claims may contribute to a decline in uptake. This case study reflects one of many recent examples where public health initiatives collide with increasingly more dynamic and influential forms of misinformation, thus posing challenges to the wellbeing of vulnerable populations.

This Research Topic “*Health misinformation: examining its presence and impact across communication contexts*” explores the global prevalence and impact of health misinformation highlighting the challenges faced by health care entities and opportunities to address this dilemma. The 10 articles selected present diverse findings across various cultural, social, and political contexts. Three of these articles examine user discernment

of accurate health information. In [Wei et al.'s](#) investigation *"Factors influencing user's health information discernment abilities in online health communities: based on SEM and fsQCA"* presents a unique model to address how personal judgments linked to online health communities drive the ability to "discern" accurate health information. The findings from this analysis offer critical theoretical and practical implications for health information seeking in this digital environment. [Peng et al.'s](#) experimental research, *"The media literacy dilemma: can ChatGPT facilitate the discernment of online health misinformation?"* compares ChatGPT to other media literacy tools in aiding individual efforts to identify true vs. false health content. The findings suggest that there are significant limitations to ChatGPT utility as a misinformation detection resource. [Li et al.'s](#) large-scale survey of Chinese citizens during the height of COVID-19, *"COVID-19 vaccine-related misinformation identification among Chinese residents during a regional outbreak"* provides a unique perspective on the role of information source judgments and geographical differences that drive COVID-19 misinformation detection skills.

Three of our other Research Topic selections explore concerns over user-generated health misinformation. [Humprecht and Kessler's](#) study *"Unveiling misinformation on YouTube: examining the content of COVID-19 vaccination misinformation videos in Switzerland"* highlights one case of the infodemic proliferating during COVID-19 ([Islam et al., 2020](#)). By identifying leading Swiss figures posting false vaccine information on YouTube, the authors provide a quantitative assessment of the prevalent misinformation strategies, including commercialization and emotionalization. Furthermore, many of the videos intersperse false information with scientific evidence, thereby increasing user engagement. [Zhao et al.](#) investigation of short online videos providing lung cancer information to Chinese adults—*"Current status of short video as a source of information on lung cancer: a cross-sectional content analysis study"*—analyzes the educational value of these non-traditional information sources. Results of this analysis raise questions on the validity of user-generated content, highlighting the importance of source expertise. [Skarzauskiene et al.'s](#) project, *"Profiling antivaccination channels in Telegram: early efforts in detecting misinformation"* address the troubling aspects of vaccine-related misinformation on Telegram as well tools to identify malicious content. The findings reveal important insights into how misinformation actors frame health crises, manipulate online conversations (i.e., testimonial strategies), and emotionally-driven language.

[Bates et al.](#) article *"Navigating misinformation and political polarization of COVID-19: interviews with Milwaukee, Wisconsin county public health officials"* provides an in-depth examination of the misinformation challenges faced by U.S. public health officials during the peak of the COVID-19 pandemic. The insights shared by these public health professionals offers lessons on attempts to combat both media misinformation and political polarization when trying to implement preventative health measures.

[Pjesivac et al.'s](#) study *"Examining conspiracy theory spillover in health communication arena: factors that impact COVID-19 conspiratorial beliefs and health-related behaviors"* indicates

that general conspiracy beliefs drive more specific acceptance of COVID-19 related conspiracies. Examining the ramifications of this relationship through a sequential process, the researchers show that embracing general conspiracy theories indirectly contributes to less COVID-19-specific avoidance behavior by driving acceptance of COVID-19 conspiracy theories.

Finally, two systematic reviews are included in this Research Topic. [Bhattacharya and Singh's](#) research, *"Unravelling the infodemic: a systematic review of misinformation dynamics during the COVID-19 pandemic"* provide a comprehensive analysis of information gaps emerging during COVID-19. The research offers key analysis of technical, social and psychological factors facilitating the spread of COVID-19 misinformation. Furthermore, the authors provide a critical assessment of the effectiveness/limits of government regulation and public education in minimizing this infodemic. [Alfred et al.'s](#) systematic review, *"Drivers of vaccine mis/disinformation in the media: from personal beliefs to cultural dimensions"* differentiate between demand and supply side dynamics in mediated false vaccine information. The project highlights the influence of cultural dimensions (individualistic vs. collectivistic societies) in determining the main drivers of vaccine misinformation.

Overall, these 10 articles reflect the scope of global health misinformation across health contexts and modalities. As information tools become increasingly sophisticated, personalized, and accessible, the insights from this Research Topic can provide guidance to public health initiatives aimed at better educating and empowering citizens to make responsible health decisions.

Author contributions

CM: Writing – original draft, Writing – review & editing.

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