News and Perspectives

The Future of Online Misinformation Research: Tackling the Landscape With Integrity and Urgency

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Abstract

Since early 2025, the scientific research and funding landscape has faced tremendous changes and challenges in the United States. In this *News and Perspectives* article, health communication scholar, former program official of the National Cancer Institute, and JMIR Correspondent Wen-Ying Sylvia Chou discusses the impact on—and future of—online misinformation research in this politicized context.

Key Takeaways:

- Threats to research on health communication, social media, and misinformation undermine scientific integrity, truth, and democracy.
- Despite challenges impeding scientific inquiry, continued research on online health misinformation is critically important.
- Current research priorities include uncovering and countering the tactics of major misinformation spreaders, scaling up mitigation interventions, and addressing root causes of misinformation spread.

This January, I made a life-altering decision to leave a cherished, 18-year federal career at the National Cancer Institute, where I had overseen a portfolio of hundreds of projects on social media and digital health.

Like most civil servants throughout 2025, I witnessed political overreach and endured sleepless nights replaying actions taken in response to (or in anticipation of) new rules and expectations. The moral injury became too great and I decided, at significant personal cost, to resign. This decision, while personal, may serve to illuminate a path forward for the beleaguered field of health misinformation research.

Evolution of Online Misinformation Research

Over a decade immersed in investigating the evolving media landscape and its impact on health, I have slowly come to understand the upheavals, tensions, and engineered "controversies" affecting this scholarship. Since the late 2010s, we enthusiastically conducted observational and interventional research, demonstrating social media's impressive, low-cost reach and positive health impacts. Concerns about potential harm were initially overlooked. Then, growing disinformation campaigns worldwide, including during the 2016 US presidential election, started to shift public perception of social media. Researchers began investigating the causes and consequences of health misinformation across populations, platforms, and topics.

Just as valuable insights were gained and promising mitigation strategies developed, the sociopolitical dynamics—including the appointment of Robert F Kennedy Jr as Secretary of Health and Human Services—quickly rendered this area "controversial," if not entirely off-limits for those seeking federal funding.

I had a front-row seat to the self-censorship that ensued: watching (and participating in) the pausing of projects, replacing or deleting words in materials, and suggesting grantees alter their applications to "clean up" (implying that there was something impure before) or "realign" (suggesting political alignment was necessary for scientific research) research to avoid running afoul of unspoken rules about allowable research. In fact, the first terminated grant in my portfolio was an intervention to help reduce people's vulnerability to falsehoods. The word "misinformation" was in the title. Since then, censorship at the National Institutes of Health (NIH) has only increased and become normalized. Such censorship compromises our ability to effectively communicate evidence-based health information and safeguard truth.

Science, Truth, and Democracy

This tumultuous arc illustrates the intricate connection between social science and democracy.

We now understand health misinformation not just as an impediment to health but also as a symptom of a larger set of societal challenges: frayed relationships, polarization, lack of effective regulation (or self-regulation) in the technology sector, entrenched prejudice, and media silos. This knowledge now equips us better to combat misinformation and address the broader challenges.

> *We simply cannot afford to hamstring research on this topic out of anticipatory obedience.*

This fraught sociopolitical and information landscape is here to stay and misinformation is only becoming more rampant. We simply cannot afford to hamstring research on this topic out of anticipatory obedience. Instead, we must tackle the online information ecosystem with urgency, navigating the complexities of the moment with moral integrity.

When science and truth is undermined, so is our democracy.

From Retreat and Capitulation to Solution and Scale-Up

It's clear that neither the technology industry nor Congress currently have the political will to implement systematic efforts to curb the spread of misinformation.

Nonetheless, there remain critical and timely research opportunities that can inform effective health communication and improve the health and well-being of people across diverse communities. Three domains have received limited attention to date and should be prioritized.

Uncover and Counter the Tactics of Major Spreaders

Beyond characterizing information quality, we need to continue identifying major spreaders of health misinformation and uncovering their tactics. For example, the Virality Project from the now-shuttered Stanford Internet Observatory described, through natural language processing–assisted data mining techniques, what the authors called a "full-spectrum propaganda" approach around COVID-19 vaccine disinformation driven by an organized business model.

Such investigative efforts must expand given the rise of AI-generated content and algorithms designed to maximize user engagement at all costs. Through refined computational methods capable of analyzing large amounts of textual and visual data, monitoring and understanding the playbook of disinformation agents can inform a timely response of communication practitioners. For example, instead of raising awareness of poor-quality content, efforts may be better directed toward calling out misinformation spreaders and their tactics—including manipulative use of AI, such as generating deepfakes of health care providers endorsing unproven medical products, to target and tailor content to vulnerable users.

Scale Up Mitigation in Collaboration With Other Societal Actors

Recent scholarly work has generated an arsenal of misinformation mitigation strategies such as debunking and "prebunking" interventions. There is an urgent need, however, to expand and diversify study samples and scale up efficacious strategies. Even as technology companies themselves pull back on mitigation efforts, large-scale interventions such as prebunking or the use of compelling personal narratives can be implemented through online ads, potentially reaching millions of users at a reasonable cost. Similar interventions could be implemented in specific online echo chambers where misinformation is especially prevalent.

Efforts to scale mitigation interventions may engage with other societal actors: community organizations (eg, churches, advocacy groups), clinics and hospitals, or health care payers. A starting point is fostering trusting relationships and getting buy-in from community members (eg, pastors, pediatricians, residents in a retirement community), wherein mitigation efforts can be disseminated by already trusted voices.

Address Root Causes

Tangible communication strategies—for example, articulate topline messages; tackle misinformation themes, tropes, and techniques instead of fact-checking statements; avoid creating an information vacuum—are necessary, but no longer sufficient.

Misinformation spread is driven by, and exacerbates, many other social phenomena, including information silos, a frayed social fabric, lack of trust in institutions, tribalism, and limited science literacy. It's time to address these fundamental challenges head-on.

Health communication is part of the broader communication landscape and sociocultural-political discourse. When a health topic becomes politicized, traditional campaigns and messaging may be too late to be effective. We need to confront and shift the public discourse. We can start with facilitating meaningful conversations—creating opportunities such as a third place for dialogue, building common ground across disparate silos, and allowing disagreement while maintaining civility. Ultimately, building common ground can restore trust in experts; oftentimes, trust in the source of the information is more important than message accuracy. Centering interpersonal relationships is a crucial way to address root causes of misinformation.

A Call to Hold the Line

The academic community must collectively confront and learn from the recent attacks the misinformation research field has withstood. I recall witnessing communication research at NIH being canceled in 2023—leaders, in what I have now understood as an act of anticipatory compliance, were fearful that the science would be labeled as "controversial." They

thought the best strategy would be to stop this work, or at a minimum, call it something else. At the time, my postmortem "how could this happen?" went unanswered, only countered with "let's keep quiet and move on."

There is actually much to reflect on when a given research topic gets falsely labeled as "political," "controversial," or "woke." We can uncover motives and agendas, engage in discussions and debates, and fight back by following professional ethical standards and the rule of law, and uphold our right to academic freedom. It is all the more important to continue the research and, whenever possible, challenge censorship attempts—today one deletes a word, tomorrow the aims are altered, and the next day the project ceases. When we stop studying the causes and consequences of misinformation, not only is the public's health on the line, but so is truth and democracy.

I have used the word "moral" several times in this article. I do not invoke this term lightly. Every scholar and research funder in the United States, private or public, currently faces a precarious situation due to a polarized and fraught political landscape. Moral courage, not just pragmatism and rigor, is critical. Continuing our research is a responsibility, a defense of science and the public good, and an act of necessary defiance.

Glossary	
Misinformation	False, inaccurate, or misleading claim of fact regardless of the intention of those who spread the information.
	Example: Sharing a post about a potential COVID-19 treatment you believe to be true.
Disinformation	False, inaccurate, or misleading information that is deliberately shared with the intent to mislead, deceive, or cause harm.
	Example: A company with a vested interest sharing a post about a potential COVID-19 treatment with no proven efficacy in order to generate profits or manipulate public opinion.
Debunking	Interventions that involve retroactively identifying and correcting false, inaccurate, or incomplete information.
	Examples: A label on a social media post verifying that it contains misinformation. A video stitch correcting misinformation in another video.
Prebunking	Interventions that involve proactive warnings, context, or training to help people recognize and resist false, inaccurate, or misleading information.
	Examples: A warning label on posts from a bot account urging users to fact-check its posts. An online toolkit providing social media users with examples of common types of misinformation or disinformation techniques.

Keywords: misinformation; disinformation; science communication; political interference; science policy; academic freedom; chilling effect; censorship; debunking; prebunking

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