Trust During Misinformation and Chaos: The Role of Medical Education Journals

Gail M. Sullivan, MD, MPH Lalena M. Yarris, MD, MCR Nicole M. Deiorio, MD Anthony R. Artino Jr, PhD Deborah Simpson, PhD

ealth professionals are reeling under the daily barrage of US policy changes that conflict with best medical evidence for practice. At the same time, health-related misinformation and conspiracy theories are spread by the highest US government officials. This avalanche of news consumes cognitive space while provoking ethical and professional conflicts and strong emotions. We hear from trainees who are unable to sleep or focus on learning, and colleagues who fear the loss of their career purpose. The purpose of the Journal of Graduate Medical Education (JGME) continues unchanged: to provide a home for high-quality research in graduate medical education (GME), delivered in keeping with our values of honesty, clarity, and transparency, to support GME and improve patient health. To do this we are committed to critical, systematic inquiry (ie, high-quality scientific methods). This purpose and our values require a wide diversity in voices, from authors, readers, reviewers, and editors.

It may be somewhat reassuring to recall that the United States has an exceedingly long history of battles between proponents of personal health freedom and various health professionals. In past centuries this controversy was reasonable and even inevitable, when physicians and non-physicians alike promoted primarily unproven, "snake oil" therapies. In the last century high-quality research has continuously produced new information to guide more credible recommendations for prevention and treatments. This has resulted in astounding improvements in health, quality of life, and life expectancy, which may be taken for granted. Similarly, medical education has benefited from robust inquiry to enhance learning. Yet now direct-to-consumer advertising, the internet, and social media facilitate rapid access to information that can be accurate, misleading, absolutely false, and everything in between.

While science, "alternative facts," and spurious expertise fight for our attention, medical trainees and

educators must find ways to stay focused on acquiring best practices, skills to discuss these practices with patients and colleagues, and useful tools to stay up to date. Those trained in the scientific method understand how approaches, even those once considered the gold standard, can change with more data. Consider how we once valued beta-blockers for all post-myocardial infarction patients or prescribed special diets, rather than antibiotics for *H. pylori*, for peptic ulcer disease. We teach trainees to use the best evidence available at the time, change practice when more evidence emerges, and remain lifelong learners. GME trainees thus avoid losing trust in medical leaders when new data emerge.

Medical education journals usually have not been at the forefront in disseminating strategies to further trust in science or health professionals. JGME and other education journals publish studies on competencies such as interpersonal and communication skills. Yet these studies may not focus on practicing in an environment that withholds or falsifies important public data and encourages misinformation.^{2,3} For some trainees, future patients will value "best evidence" far less than opinions found online or spouted by the popular influencer of the day.

Patient trust in physicians has been declining, as patients perceive that physicians' advice may be guided by profit or other motives, rather than patient benefit.^{4,5} Continuing scandals related to research fraud further erode this trust.⁶ Trust between patients and health professionals is fragile yet associated with improved health outcomes.⁷ GME may need new methods to teach trainees how to sustain trust in those who have little, in an environment where "science" is fungible: vulnerable to political ideology or whim.

What strategies work best for exposing trainees to different views of the world and health, whether religious, cultural, or ideological in source, while preventing the development of contempt and disengagement? Condescension or apathy is not an effective strategy to promote health, yet colleagues are choosing to walk away: for example, refusing to take on patients who do not accept recommended childhood vaccinations.⁸

Action Is the Answer to Apathy

In the fall of 2024, we decided that JGME needed a plan to leave X (formerly Twitter), to stay true to our mission and values. The COVID-19 pandemic proved the value of social media and virtual communities, as experiences and data could be shared, in real time, rapidly among individuals, institutions, and countries. At that time JGME found Twitter (now X) to be a rich source of medical education dialogue, through conversations around articles, meetings, and virtual journal clubs. In 2022, X weakened content moderation rules and removed third party fact-checking, in favor of "community notes" about the accuracy of information. Community notes are posts by anyone regarding the likely veracity of the information. Subscribers also lost control of feeds, which became toxic. In 2024, X made changes to its blocking feature, taking away users' ability to control who can view and engage with their content. Compounding the information chaos, Grok (artificial intelligence used by X) uses posts for training, and is embedded in information on X. To avoid being a party to increasing misinformation and conspiracy theories, JGME is transitioning away from X and has joined BlueSky (BOX).

BlueSky, originally a research project within Twitter, became a separate social medica company in 2022 and opened to the public in February 2024. Like X, members can share short posts containing words, images, or videos. Unlike X, members can manage their own feeds, through moderation tools, and create "starter packs" to rapidly assemble and follow related accounts. Bluesky Social PBC is a privately-owned for-profit corporation. Currently BlueSky prohibits conduct targeting people based on factors such as race, religion, gender, disability, or sexual orientation, with a company trust and safety team. As of February 2025, BlueSky has expanded to over 31 million members, in just 1 year. ¹⁰

Like X, Meta, the parent of Facebook, Instagram, and Threads, will no longer be using third party fact-checking and will also move to community notes about the accuracy of posts. Note that Meta's fact-checking was initially adopted during rampant misinformation concerning the 2016 US presidential election; with no evidence that misinformation is slowing down, there is no public health rationale or benefit for ending fact-checking now. Nonprofit communities, such as AMEE Connect, have become more active in the vacuum left by X, but many require membership for access.

What Else Can JGME Do?

We are committed to valuing diversity, in specialty, gender, ethnicity, culture, program resources, experience,

BOX JGME BlueSky Connections

JGME @jgmejournal.bsky.social Gail Sullivan, Editor-in-Chief @meded-itor.bsky.social Anthony Artino, Deputy Editor @mededdoc.bsky.social Deborah Simpson, Deputy Editor @debsimpson3.bsky.social Tom Cooney, Associate Editor @pdxtom.bsky.social @AvrahamCooperMD. Avraham Cooper, Associate Editor bsky.social Rachel Gottlieb-Smith, @rgottliebsmith.bsky.social

Associate Editor

Max Wohlauer, Associate Editor @doctormaxw.bsky.social

health disciplines, and geography. We are exploring voluntary self-disclosure in these areas for our editors, reviewers, and authors, to ensure we are expanding the voices in JGME. We will continue to follow the International Committee of Medical Journal Editors (ICMJE) recommendations for conduct, reporting, editing, and publishing scholarly work, ¹⁶ and refer more often to our values when considering new initiatives.

JGME is not able to appoint US cabinet members or elect officials who believe in science over unproven ideas or conspiracy theories. Nor can we go to court over unlawful freezes on congressionally funded Centers for Disease Control and Prevention website reporting of US population disease and health statistics.² We cannot reinstate the cancellation of all US Agency for International Development (USAID) funding for groups such as Save the Children and Catholic Relief Services.¹⁷ Similarly, JGME will not be able to compel the United States to rejoin the World Health Organization.

JGME can provide a forum to discuss how these actions are affecting GME programs, trainees, educators, and researchers. We can publish articles on how those in GME are handling the challenging environment while contributing to new knowledge about medical education. We recommit to do our best to avoid bias in reviewing and editing. We will support respectful dialogue on any GME topic, within our limit of 6 issues per year. As individuals we may call our state and federal representatives or give money to organizations that do good work. We can engage with our colleagues and neighbors with empathy and respect.

Tell us your stories and share what is working for faculty and trainees during these difficult times. JGME is not walking away. We are listening.

References

 Grossman LA. Choose Your Medicine: Freedom of Therapeutic Choice in America. Oxford University Press; 2021

- Cox C, Rae M, Kates J, Ortaliza J, Dawson L. A look at federal health data taken offline. KFF. Published February 2, 2025. Accessed February 4, 2025. https:// www.kff.org/policy-watch/a-look-at-federal-health-datataken-offline/
- 3. McQuade B. Attack From Within: How Disinformation is Sabotaging America. Seven Stories Press; 2024.
- Armstrong K, Rose A, Peters N, Long JA, McMurphy S, Shea JA. Distrust of the health care system and self-reported health in the United States. *J Gen Intern Med.* 2006; 21(4):292-297. doi:10.1111/j.1525-1497.2006.00396.x
- 5. Piller C. Blots on a field? *Science*. 2022;377(6604): 358-363. doi:10.1126/science.add9993
- Perlis RH, Ognyanova K, Uslu A, et al. Trust in physicians and hospitals during the COVID-19 pandemic in a 50-state survey of US adults. *JAMA Netw Open*. 2024;7(7):e2424984. doi:10.1001/jamanetworkopen.2024.24984
- 7. Birkhäuer J, Gaab J, Kossowsky J, Hasler S, Krummenacher P, Werner C, Gerger H. Trust in the health care professional and health outcome: a meta-analysis. *PLoS One*. 2017;12(2):e0170988. doi:10.1371/journal.pone.0170988
- Cheung A, O'Leary ST, Temte JL. Deciding whether to accept an unvaccinated child into a pediatric practice. N Engl J Med. 2025;392(5):510-512. doi:10.1056/ NEJMcIde2407983
- Oremus W, Thadani T, Merrill JB. Elon Musk says X users fight falsehoods. The falsehoods are winning. The Washington Post. Published October 30, 2024. Accessed February 4, 2025. https://www.washingtonpost.com/technology/2024/10/30/elon-musk-x-fact-check-community-notes-misinformation/
- Cooper G. Are you a "Twitter quitter?" 31 million people are using Bluesky. CNET. Published February 21, 2025. Accessed February 21, 2025. https://www. cnet.com/tech/how-and-why-to-join-bluesky-which-now-has-31-million-users-as-a-twitter-alternative/
- Chan K, Ortutay B, Riccardi N. Meta eliminates fact-checking in latest bow to Trump. Associated Press.
 Published January 7, 2025. Accessed February 25, 2025. https://apnews.com/article/meta-facts-trump-musk-community-notes-413b8495939a058ff2d25fd23f2e0f43
- Conger K. Meta turns to community notes, mirroring X. The New York Times. Published January 7, 2025.
 Accessed February 4, 2025. https://www.nytimes.com/ 2025/01/07/business/meta-community-notes-x.html

- 13. Borges do Nascimento IJ, Pizarro AB, Almeida JM, et al. Infodemics and health misinformation: a systematic review of reviews. *Bull World Health Organ*. 2022;100(9):544-561. doi:10.2471/BLT.21. 287654
- 14. Esma Aïmeur E, Amri S, Brassard F. Fake news, disinformation and misinformation in social media: a review. *Soc Netw Anal Min.* 2023;13(1):30. doi:10.1007/s13278-023-01028-5
- International Association for Medical Education (AMEE). Online membership community. Accessed February 7, 2025. https://amee.org/four-ways-a-cleanworkplace-makes-employees-happy-and-healthy/
- International Committee of Medical Journal Editors. Recommendations. Accessed Feb 11, 2025. https:// www.icmje.org/recommendations/
- Dorn S. These are the top USAID recipients—from religious groups to major U.S. companies—as Trump targets agency. Forbes. Published February 3, 2025.
 Accessed February 11, 2025. https://www.forbes.com/ sites/saradorn/2025/02/03/these-are-the-top-usaidrecipients-from-religious-groups-to-major-us-companiesas-trump-targets-agency/



Gail M. Sullivan, MD, MPH, is Editor-in-Chief, Journal of Graduate Medical Education (JGME), Chicago, Illinois, USA, and Associate Director for Education, Center on Aging, and Professor of Medicine, University of Connecticut Health Center, Farmington, Connecticut, USA; Lalena M. Yarris, MD, MCR, is Deputy Editor, JGME, Chicago, Illinois, USA, and Professor of Emergency Medicine, Oregon Health & Science University, Portland, Oregon, USA; Nicole M. Deiorio, MD, is Executive Editor, JGME, Chicago, Illinois, USA, Professor, Department of Emergency Medicine, and Associate Dean, Student Affairs, Virginia Commonwealth University School of Medicine, Richmond, Virginia, USA; Anthony R. Artino Jr, PhD, is Deputy Editor, JGME, Chicago, Illinois, USA, and Professor and Associate Dean for Evaluation and Educational Research, The George Washington University School of Medicine and Health Sciences, Washington, DC, USA; and Deborah Simpson, PhD, is Deputy Editor, JGME, Chicago, Illinois, USA, and Director of Education, Academic Affairs at Advocate Aurora Health, and Clinical Adjunct Professor of Family and Community Medicine, Medical College of Wisconsin, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin, USA.

Disclaimer: The views expressed in this editorial are those of Nicole M. Deiorio, MD, and do not reflect the views of her employers, Virginia Commonwealth University (VCU) and VCU Health.

Corresponding author: Gail M. Sullivan, MD, MPH, University of Connecticut Health Center, Farmington, Connecticut, USA, gsullivan@uchc.edu