

The paradox of trust in health care in the age of social media



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Health systems worldwide face two fundamental and connected challenges: pervasive misinformation and disinformation and eroding public trust. This erosion reveals a paradox at the heart of contemporary science–society relations: the more science succeeds in solving complex problems through rigour and institutional coordination, the more it alienates a public that values immediacy, authenticity, emotional resonance, and personal connection. Consequently, those most committed to scientific rigour—scientists, health-care institutions, professional societies, and public health agencies—are increasingly distrusted, whereas those least accountable—untrained influencers, unqualified individuals with financial motives or political agendas, and artificial intelligence bots—are deemed credible. This so-called trust paradox is amplified by engagement-driven social media environments that reward disinformation, immediacy, group identity, and authenticity over factual truth. The consequences are harmful health outcomes and misguided policy decisions. Addressing this paradox requires not only technical accuracy but also co-production from the outset, overarching horizontal communication, infrastructures for transparency and emotional resonance, and regulatory reforms for algorithms and digital environments.

Introduction

Trust in health institutions and experts is facing a historic crisis. Across high-income countries, confidence in the credibility and legitimacy of health institutions and evidence-based health policy has plummeted.^{1,2} This erosion has been unfolding over the past two decades, but the COVID-19 pandemic sharply accelerated and exposed it. The global pandemic response had some avoidable mistakes;³ however, unlike the response to the 1918 influenza pandemic, which caused 50–100 million deaths,⁴ and the delays during the 2014 West African Ebola outbreak,⁵ COVID-19 saw international genomic and wastewater surveillance,⁶ rapid regulatory intervention,⁷ and the development of safe, effective vaccines within a year, averting at least 2.5 million deaths and saving 15 million life-years.^{8–10}

This unprecedented response should have rekindled public trust in science-informed policy making—it did not.^{11,12} Although some surveys suggested an initial rise in trust early in the pandemic,¹³ this proved short-lived. Between 2021–23, satisfaction with health institutions declined in 16 of 19 Organisation for Economic Co-operation and Development countries.^{14,15} Public health agencies, scientific advisors, and even front-line health workers were seen as overreaching, unaccountable, or politicised. In the USA, Dr Anthony Fauci faced conspiracy-driven attacks and death threats,¹⁶ while President Trump distanced himself from the very mRNA vaccines his administration had funded.¹⁷ In Germany, the far-right Alternative für Deutschland, a party that opposed lockdowns and vaccination, rose to become the country's most popular party. Even in New Zealand, where Jacinda Ardern's Government oversaw one of the world's most effective public health responses, voters ultimately rejected her administration, with anti-vaccine rhetoric entering mainstream discourse.¹⁸ These political shifts have had tangible health effects. In the USA, studies show that post-vaccine excess mortality varied substantially by political affiliation,

driven by differences in trust and uptake between Democrats and Republicans.¹⁹

Displacement of trust to lay platforms and influencers

Post-COVID-19, distrust has not erased trust in science itself. Globally, science remains a widely trusted way of understanding the world.^{20,21} Despite limitations, such as self-reporting and framing biases, polling consistently shows this trend: 74% of respondents in the 2024 Edelman Trust Barometer across 28 countries trusted scientists “to tell the truth about new technologies”.²² A 2025 survey of 71922 respondents in 68 countries confirmed these results, with no country showing low overall trust in scientists.²⁰

Instead, much of the erosion of trust lies in how scientific expertise is institutionalised and how these institutions are perceived. In the Edelman survey, most respondents viewed science as politicised and believed governments and major funders exert excessive influence over research.²²

Some distrust can be attributed to real failures by health authorities, such as the initially confusing messaging about the effectiveness of masking. Also, many communities—especially those historically underserved or previously harmed by biomedical institutions—are justifiably predisposed to distrust: for younger or historically marginalised groups, traditional health authorities have often never been credible interlocutors. Social media have further enabled the deliberate propagation of disinformation, including by officials seeking influence for personal, electoral, or financial gain.²³

In most cases, however, this displacement of trust reflects systemic factors. The Global Listening Project found that, during crises, people trust family members more than scientists, whereas celebrities (39%) and religious leaders (43%) also wield considerable influence.²⁴ Individuals' self-confidence in their health judgements amplifies this shift. The 2024 Edelman

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Special Report on Trust and Health found that 65% of respondents feel highly confident in judging health information, yet 43% of them distrusted health-care institutions.²⁵ This combination of self-confidence and institutional distrust is combustible. When individuals trust themselves over experts and online disinformation spreads faster and becomes more accessible than facts, non-credentialed sources become vectors of alternative narratives.

Thus, trust in science and medicine hasn't vanished, but has shifted away from traditional experts and institutions.²¹ Most people now consult search engines (98%) and health websites (68%) for medical information.²⁶ A survey of Austrian youth found 37% followed influencers posting health-related content, with nearly one-third having purchased health products based on those recommendations despite explicit financial motives.

Growing evidence suggests this trend is not organic but shaped by algorithms and bots. A 2024 survey of young female TikTok users found that although 65% actively sought health information on the platform, nearly all users (92%) were exposed to such content passively through algorithmic feeds.²⁷ This constant, unsolicited exposure normalises peer content and amplifies the perceived authority of online influencers. Consequently, 40% of respondents report trusting these influencers as credible health sources. Meanwhile large language model-based artificial intelligence (AI) chatbots, such as OpenAI's ChatGPT and Microsoft's Copilot, already serve as primary health sources for nearly 20% of the population.²⁸

The paradox of trust as a public health issue

Science now faces what we call the paradox of trust: the very institutions that most rigorously develop and apply science are viewed as untrustworthy, politicised, or elitist. Meanwhile, uncredentialed and often unaccountable internet influencers with financial conflicts are increasingly trusted to interpret science. Algorithmic platforms and bots amplify these voices, prioritising engagement over accuracy, and disseminate disinformation faster and wider than truths.

The cost of this displacement of trust for both health and democracy is profound. When high self-confidence is paired with low institutional trust, compliance with public health recommendations declines, vaccine uptake drops, and misinformation spreads. Data show that individuals with high trust in the health-care system were more likely to be fully vaccinated against COVID-19 (54%) than those distrustful of the system (40%). This erosion of trust in scientific authorities and its redirection toward partisan informal sources has had measurable public health consequences, including higher mortality among populations less aligned with expert guidance.¹⁹

Explaining the shift from experts to laypeople

Five established psychosocial mechanisms help explain the widening gap in public trust between institutional

experts and online influencers. One is the invisibility paradox. The more successful biomedical interventions are at preventing catastrophes, the more invisible their benefits become. It is intrinsically hard to counterfactually appreciate something that fails to occur. In public health, this is particularly pronounced. The success of preventive measures often undermines their perceived necessity: during COVID-19, reduced hospitalisations and mortality led many to dismiss lockdowns, masking policies, and vaccines as excessive or unjustified.²⁹ New Zealand's data-driven pandemic response saved thousands of lives, yet the absence of visible tragedy created an information void in which misinformation spread. This dynamic reflects the multidimensional nature of misinformation, which thrives not only as a symptom of broader social conditions but also as a belief-shaping causal force.³⁰ The invisibility paradox also explains why vaccines have become particularly politically charged and publicly mistrusted. Unlike post-hoc treatments for visible illness, vaccines are administered before disease emerges, requiring people to trust a counterfactual future. The very preventive nature of vaccines makes them vulnerable to scepticism whenever absence of evidence is misread as evidence of absence.

The second explanation is the formation of parasocial relationships: one-sided emotional bonds that mimic genuine friendship.³¹ Humans innately tend to trust familiar, emotionally-resonant social relations. Consciously or not, influencers cultivate these relationships through the informality of everyday life: speaking from their bedrooms, while doing makeup or unpacking groceries. Influencers talk like friends, projecting relatability and intimacy. In a parasocial sense, people come to perceive them as family and friends. Influencers express what their audiences feel, including scepticism towards institutional authority.

This false intimacy creates a paradox of misinformation: individuals who disseminate misinformation can still be perceived as trustworthy. An influencer's credibility is based neither on objective accuracy nor expertise but on perceived situational-attitudinal alignment. The appeal of the so-called honest liar inheres not in truthfulness, but in emotional comfort. Emotional honesty, not factual accuracy, drives trust in the digital age.

Closely related is the role of emotional resonance and perceived authenticity. While parasocial bonds develop over repeated exposure, emotional resonance can occur instantly: through a single reel that feels deeply aligned with a person's identity, values, or lived experience. Perceived authenticity reinforces this effect: communicators who appear warm, sincere, unfiltered, and emotionally-attuned are often trusted, even without previous exposure. As health-care systems grow more complex and impersonal, people default to those who project relatability because it fosters a sense of alignment and emotional connection.³² Influencers and podcasters fulfil this need by offering emotionally

engaging narratives that feel more immediate and authentic than institutional communication.

Scientific accuracy, by necessity, demands qualification, nuance, and differentiation across populations, which can make public health guidance appear uncertain or inconsistent. During COVID-19, for example, the US Centers for Disease Control and Prevention (CDC) initially advised against public mask use to preserve supplies for front-line health-care workers, then reversed its position as evidence and availability changed.^{11,33} Although the change reflected rational resource allocation strategies, it led to public confusion and perceptions of political motivation. Anti-mask influencers and media figures framed the CDC's revision as proof of institutional unreliability and partisanship.³⁴ In this environment, audiences gravitated towards communicators who reinforced their pre-existing beliefs and appeared emotionally aligned. Authenticity outweighed authority.

A fourth factor is the influence of cognitive biases, such as motivated reasoning and identity-protective cognition.³⁵ These biases lead individuals to interpret information in ways that affirm their previous beliefs and group affiliations. People can draw opposite conclusions from the same facts, depending on their ideological orientation.³⁶ In public health, this reinforcement of bias means that even scientifically robust messages can be rejected not because of content, but because they challenge identity-driven worldviews.

Finally, cognitive simplicity plays a decisive role. In the attention economy, sources that offer quick, simple answers are preferred because they minimise uncertainty and provisos. People juggling busy lives want simple checklists not scientific treatises. Complexity, qualifications, and conditionality are hallmarks of scientific discourse. However, they are often perceived as hard to comprehend and annoying. Influencers meet this demand by providing simplicity in an emotionally-charged way. They do not bypass the epistemic norms of expertise accidentally, they bypass them strategically, by presenting simplified, affirming narratives that feel trustworthy. In this context, trust is not epistemic, but affective. It is not rooted in verification but in comfort and identity: people are more likely to believe those who make them feel seen, understood, and validated. The 2025 Edelman Trust Barometer confirms this: 70% of respondents associated legitimacy with relevant personal experience, whereas just 65% valued formal training and academic credentials.³⁷ This dynamic also explains why conspiracy theories spread so readily: they are easier to understand than scientific explanations, and therefore propagate faster.

Rebuilding trust in scientific institutions and experts

Countering misinformation with scientific facts is intrinsically important to establish the truth. However, rebuilding public trust in health institutions will require more than just correcting falsehoods or refining

messages. Fundamentally, it demands changing how communication occurs. Experts and health institutions need to adapt to the realities of contemporary information ecosystems and public expectations for simple messaging with emotional connection. In today's digital economy, trust does not propagate vertically from experts and institutions to the public; it spreads horizontally, through networks of relatable and trusted peers, often amplified by rebroadcasts of prominent account holders. Trust is not granted based on credentials or citations, but on identification and perceived authenticity.³² Furthermore, although structural factors dominate, trust erosion stemming from individual opportunism requires institutional accountability for those who intentionally undermine it.

Thus, experts and scientific institutions confront a structural dilemma. To preserve integrity, experts must speak with nuance, conditionality, and restraint. Yet these very features make them appear detached or untrustworthy in an ecosystem that rewards authenticity, intimacy, and confidence. This conflict between rigour and authenticity is why many experts struggle on platforms such as TikTok. Rather than abandoning scientific rigour, experts must adapt how they engage publics. Experts must become less broadcasters of authoritative knowledge, and more participants in emotionally-resonant, socially-embedded trust networks.

Trust must be rebuilt horizontally through five recommendations (appendix p 1). First, alongside scientific accuracy, health institutions must incorporate emotional engagement. This engagement does not mean imitating influencers by deploying their performative empathy and emotionally manipulative techniques, but it implies that scientific authority must cultivate identification, authenticity, and emotional proximity along with reliable data. Experts should be trained to communicate with warmth and self-disclosure, sharing not just knowledge, but also values and lived experience.

Making space for emotional resonance within expert discourse is essential to humanising institutional voices, acknowledging uncertainty without condescension, and illustrating how science intersects with everyday life. For a public accustomed to parasocial intimacy, trust arises from how speakers sound and feel. Identification, not just factual information, is the currency of trust. In today's media ecosystem, emotional connection is not a betrayal of scientific values, but a necessary condition for public receptivity and legitimacy.³⁸ Therefore, health communication training must be redesigned. Evidently, emotional communication is not universally effective. Some audiences might prioritise objective facts, others culture-specific emotional registers. Engagement strategies must be carefully tailored, not applied uniformly, across diverse publics. Most importantly, emotion should complement, not replace, rigour.

Second, health-care experts and institutions must rebuild trust by explicitly showing their independence

See Online for appendix

and integrity. Public suspicion often stems from perceptions of partisanship or economic entanglement. Buffering science from short-term political pressures is essential, but insufficient if these protections remain opaque. Transparency in both funding and risk communication, conflict-of-interest disclosures, and participatory decision-making mechanisms must be made not only structurally robust but emotionally credible to the public. Transparent communication of risks and benefits does not undermine public trust.³⁹ Institutions and experts should proactively communicate the why and how of their independence, anticipating scepticism rather than reacting to it. This type of communication also means being honest about the limitations of neutrality: acknowledging past failures, explaining unavoidable value judgements, and resisting the impulse to present science as untainted by context. Trust is earned through accountability that can be seen, felt, and shown over time. Yet, accountability must be a shared responsibility, not a burden borne by science and medicine alone. Many influencers who give health advice also sell products, creating financial conflicts of interest they rarely disclose. Unlike clinicians, influencers face no oversight. Rebuilding trust requires levelling the playing field: non-institutional actors should be subject to comparable transparency norms, including clear disclosure of their financial or promotional incentives.

Third, health communication strategies must embrace co-production with trusted intermediaries. Experts must understand the algorithms shaping visibility, the emotional tones driving engagement, and messengers who hold social capital. Rather than seeking absolute control, they should partner with content creators, community leaders, faith leaders, and storytellers who already possess emotional credibility within specific social contexts. Building trust must begin with codefined questions, following community-based participatory research models that ask what issues matter most to communities.⁴⁰ This trust-building process can then progress to co-produced solutions. To prevent co-production from legitimising bad-faith actors, institutions must establish ethical guardrails: transparent criteria for identifying good-faith collaborators and mechanisms for accountability. Initiatives, such as TrustWorks, show how transparency, accuracy, and disclosure can be embedded into decentralised communication ecosystems.

Fourth, experts and institutions must not only adapt to the logic of algorithmic platforms but actively shape algorithmic governance. Algorithms are not neutral—they determine who is passively engaged and whose voices are amplified, what information becomes visible, and how it is emotionally framed. Furthermore, the tech companies that create and adjust social media algorithms have financial interests in grabbing attention, which often results in prioritising virality over veracity. As whistleblowers from

within the tech industry and independent studies have shown,^{41,42} recommender systems can be designed to trap users within self-reinforcing belief bubbles. Scientific and public health institutions with the relevant capacity and mandate should engage in shaping the ethical governance of AI and algorithmic platforms, especially novel AI chatbots and geopolitically weaponised botfarms. This governance involves engaging with emerging policy frameworks, such as the EU's Artificial Intelligence Act and Digital Services Act, which, respectively, classify algorithmic recommender systems as high-risk in sensitive contexts, such as health, and mandate greater transparency in content moderation and algorithmic curation by digital platforms. Similar policy developments are unfolding globally: the White House Blueprint for an AI Bill of Rights in the USA called for algorithmic accountability and public input in high-impact systems, whereas Canada's proposed Artificial Intelligence and Data Act foregrounds transparency and safety in automated decision making. Health-care institutions should not be bystanders in these developments. They should bring expertise and public health priorities into regulatory design. Regulating algorithms is not simply a matter of digital governance but central to protecting the integrity of scientific communication, reducing the virality of misinformation, and public health.

Finally, it is crucial that all these efforts to restore trust must begin immediately. Trust cannot be built reactively during a crisis. Experts and institutions must invest in long-term engagement that nurtures public relationships during calm periods. Although such investment might seem counterintuitive at a time when many scientific and public health institutions face shrinking budgets, it is precisely this downward trend that urges us to counter the cycle. Declining institutional funding is often a downstream consequence of the political success of movements that have both contributed to and benefited from public distrust in science and medicine. To reverse this trend, institutions need diversified funding streams. These include dedicated public funding, philanthropic support, and contributions from private-sector actors in health care, biotechnology, and digital health, who share a stake in restoring public trust. Structural prioritisation of engagement is also needed, including recognition of public-facing work in promotion and tenure systems. Community partnerships with schools, local organisations, religious institutions, and digital creator networks should not be episodic or campaign-based, but ongoing, reciprocal, and grounded in shared values. Professional societies can help by training experts, setting engagement norms, and promoting evidence-based communication. These infrastructures must also reflect cultural, generational, and ideological diversity, recognising that there cannot be a generalised approach to building trust. Repairing and reimagining trust relationships requires time, humility, and sustained proximity not just during disaster but in the latency

between crises: what might be called the inter-pandemic interval. Trust must be earned in the period between public health emergencies to ensure stability in volatile times.

Conclusion

Once lost, trust does not automatically return. Trust must be rebuilt within the same emotional and digital spaces where it eroded. Rebuilding trust in science and health care requires more than improved communication. It means reshaping how experts and institutions speak and listen: sharing epistemic authority with scientifically grounded yet emotionally attuned voices, resolving the tension between the emotional authenticity people seek and the objectivity science requires. Such efforts must be institutionally supported since public trust cannot depend on individual altruism alone. In an era where belief is shaped by identity, emotion, and perceived alignment, trust will belong to institutions that pair scientific rigour with warmth and authenticity and to experts who engage the public as participants in knowledge, not just its recipients. Equally important is adapting to the algorithmic infrastructures that shape public discourse and, where necessary, helping to govern them.

Contributors

MI and EJE conceptualised this Viewpoint. MI wrote the first draft of the manuscript. EJE and CG co-wrote substantive sections of the manuscript. All authors reviewed, revised, and approved the text.

Declaration of interests

We declare no competing interests.

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