Responding to public health challenges of medical advice from social media influencers

Raffael Heiss and colleagues argue that influencers' medical advice is often shaped by multiple biases and suggest how to reduce the associated risks.

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Social media influencers have become powerful in a digital information ecosystem shaped by platform algorithms and commercial incentives.[1 2] Influencers are people with large followings on social media platforms gained by posting engaging and entertaining content, but many have also become important sources of health information.[3] Their backgrounds range from qualified health professionals to people with no medical training, and their reach spans from a few thousand followers to millions. More than 70% of young adults in the US follow influencers, and over 40% have purchased products based on their recommendations.[4] In Austria, 83% of 15-25 year olds report seeing health related influencer content, and 31% have purchased dietary supplements, 13% medications, and 11% medical self-tests as a result.[5]

The reliability of influencer advice varies widely. For instance, a recent study found that influencer and corporate posts about popular medical tests with uncertain evidence and risks of overuse were mostly promotional, citing benefits in 87% of cases but mentioning harms in only 15%.[6] Another study of German influencers' promotion of dietary supplements found that about two thirds of the recommended doses exceeded national safety recommendations and 7% surpassed the European Food Safety Authority's upper safe limits.[7] Such advice can cause psychological, physical, financial, and systemic harm—from inaccurate self-diagnosis and inappropriate treatments to unnecessary spending and higher healthcare costs.

Information provided by influencers can be subject to four sources of bias: lack of medical expertise or relevant knowledge, industry influence, entrepreneurial interests, and personal biases (**table 1**). The effect of these biases is magnified by influencers' ability to form real or one sided (often referred to as "parasocial") bonds with followers, making them highly persuasive communicators.[5 8] Oversight is therefore important, but effective monitoring and regulation are difficult because user experiences are personalised, shaped by opaque algorithms, and often cross national borders beyond the reach of regulation.

Sources of bias in influencers' medical advice

The first source of bias is a lack of expertise or relevant knowledge. Unlike healthcare providers or trained medical journalists, many influencers have no formal education in the topics they cover, increasing the risk of promoting inappropriate tests or treatments. A prominent example is celebrity Kim Kardashian, who encouraged her 360 million Instagram followers to have full body screening with magnetic resonance imaging—a test which is without proved benefits and linked to overdiagnosis, unnecessary interventions, and costs.[6] However, even influencers with medical qualifications can provide misleading advice, particularly when speaking outside their area of expertise or offering generalised recommendations without knowledge of individual health histories. During the covid-19 pandemic, for instance, medically trained influencers with large followings promoted insufficiently tested treatments, including high dose vitamin D supplements and ivermectin.[9 10]

A second source of bias is industry influence. Companies may provide free products, pay for promotional posts on social media or blogs, use affiliate marketing (commission for sales through unique links), or engage influencers in long term collaborations as brand ambassadors.[6 11] As a result, many influencers are paid to promote direct-to-consumer tests, skincare products, or even prescription drugs. This is especially problematic when the influencers are physicians and profit from promoting medical products or treatments.[12] In many countries, rules require influencers to clearly disclose any "material connection" to a brand— such as payment or gifts—but enforcement is inconsistent and penalties for violations are rare or minimal. A recent report from the UK Advertising Standards Authority estimated that only 57% of influencers' advertising content on Instagram and TikTok was adequately disclosed.[13]

Third, many influencers pursue their own entrepreneurial interests. To gain attention, they often use threat inducing content that drives engagement.[14] Such strategies can help influencers expand their audience while promoting their own products, including dietary supplements, which are weakly regulated, easy to produce, and often untested.[7] Some create and amplify concerns about low testosterone or vitamin deficiencies to boost sales, despite the risks of overdose, drug interactions, or contamination with harmful substances.[6 7 15] Certain supplements may also act as gateway products—for example, the use of muscle building supplements has been associated with subsequent use of anabolic steroids among young men.[16]

Table 1 | Examples of influencers' biases and harmful medical advice

Bias	Influencer	Medical advice	Why it can be harmful
Lack of medical expertise	**Chantelle Knight** (100 000 TikTok followers): UK based influencer and advocate for neurodivergent communities	Promoted SaffPro, a saffron-based supplement, as a natural alternative to ADHD medication and claimed effects on serotonin, dopamine, and melatonin levels[17]	May discourage medically prescribed treatments for ADHD, misleadingly suggest medical benefits. The UK Advertising Standards Authority ruled the ads were misleading and potentially harmful
Industry influence	**Khloé Kardashian** (300 million Instagram followers): US media celebrity	Quote from Instagram post: "I love @nurtecodt so much! … I just take #NurtecODT and it can start to relieve my migraine pain within 1 hour!!!"[18]	Rimegepant (Nurtec) is a prescription migraine medication, and the direct-to-consumer advertising can be accessed in regions where such advertising is prohibited
Promoting own products	**Dr Eric Berg** (14 million YouTube subscribers): US chiropractor who shares health advice on YouTube and runs an online supplement store	Quote from video: "Today we gonna talk about why an average person should be taking 10 000 IU of vitamin D3 as a maintenance dosage every single day."[19]	Promotes high dose supplementation while selling his own brand of vitamin D and other supplements, some of which were subject to a legal warning for lead content above safety levels[15 19]
Potential personal bias	**Ellie Grey** (200 000 Instagram followers): British wellness influencer who shares alternative health views on Instagram and Telegram	Claimed that cannabis, intravenous vitamin C, apricot kernels, or alkaline diets can cure cancer. Denied that a child in the UK died from measles, suggesting the disease is not dangerous.[20 21]	Promotes anti-science views that may lead followers to reject evidence based medical care. Could delay effective treatment or vaccine uptake and result in serious harm

Finally, influencers—including patients and trained physicians—may be shaped by personal biases. These include lifestyle choices or ideological beliefs that are not supported by reliable evidence, such as in homoeopathy or anti-vaccine misinformation. Some lifestyle influencers share anti-vaccine content rooted in personal experience and mistrust of mainstream health authorities.[22] While many people hold such beliefs, these biases are typically moderated in professional contexts through institutional norms (as in journalism or medicine) and organisational safeguards, such as editorial oversight or clinical guidelines. Influencers are usually not subject to such standards and operate without professional or editorial accountability.

Given these sources of bias, why do people still trust influencers? One reason is that many are unaware of these biases or overlook them, sometimes not even recognising when messaging is actually marketing. Another is that influencers often act as role models, and their communities may trust them even in promotional settings.[5] Their authority rests on three inter-related facets: they have the ability to create intimate bonds through sharing personal experiences and interacting directly with users; they are often perceived as authentic because they express personal opinions and experiences without institutional constraints; and they signal expertise in the field they comment on, positioning themselves as opinion leaders.[8] Together, these dynamics can draw attention away from potential biases in their advice.

Can influencers also help the public?

Some influencers do provide useful health advice.[2 23] This includes doctors and others who help to debunk common misconceptions—for example, myths about oral contraceptives, toxins in vegetables, or unsupported vaccine side effects.[24] Influencers sometimes work with medical professionals to amplify evidence based messages[23] using plain, relatable language and reaching audiences that traditional health communication often misses, including young people and marginalised groups. They can also use their bonds with followers to motivate lifestyle changes and encourage healthy behaviours.

Influencers who are patients themselves may provide valuable peer support, especially for stigmatised conditions, by creating safe spaces and sharing personal experiences. Many patients also see themselves as experts in their own condition, and their lived experience can offer important insights that differ from professional knowledge. However, their specific expertise does not automatically translate into broader medical authority. Lived experience should therefore be complemented by reliable evidence, and should not be used irresponsibly—for instance, to promote medicines.[11]

Action to reduce harm

Maximising the benefits and minimising the harms of influencers' medical advice will require collaboration between multiple stakeholders, particularly governments and social media platforms (**table 2**).

Governments can act by reducing systemic risks, including those arising from legal but harmful medical advice. The EU's Digital Services Act (DSA) requires large online platforms to assess systemic health risks and report how they mitigate them.[25] For example, platforms must evaluate whether their algorithms amplify anti-vaccine content and describe measures to limit its spread. These processes are subject to independent audits, with substantial fines for non-compliance.

Another approach is to increase influencer accountability by assigning them editorial responsibility, treating them similar to traditional media. In Italy, high reach influencers must register with the national media authority and comply with a formal code of conduct, which includes avoiding misleading or harmful health content.[26] In France, legislation prohibits influencers from promoting cosmetic surgery, nicotine products, certain medical

devices, and from encouraging therapeutic abstention (eg, discouraging chemotherapy). Violations by influencers targeting a French audience (eg, using French language) can incur fines of up to €300 000 or prison terms of up to two years.[27]

Platforms also bear responsibility as hosts and amplifiers of influencer content. They can strengthen fact checking mechanisms, partner with medical fact checkers, and avoid shifting responsibility to users. Transparency could be improved by granting independent researchers access to platform data, algorithms, and moderation processes. Although the EU Digital Services Act mandates such access, it still relies on the cooperation of platforms, and platforms could extend access to other regions. Broader access would enhance understanding of the risks of misleading medical advice from influencers and its crossborder spread. Platforms can also establish professional standards for influencers, implement mandatory training, and enforce sanctions—including demonetisation (ie restricting the ability to earn money on the platform) or removing from the platform—when standards are breached.

Other societal actors can also contribute. Some influencers may participate in training, share evidence based information, and engage in public health campaigns.[23 28] Users can help by correcting misleading advice in comment sections or reporting problematic posts through in-platform tools or to national regulators such as the UK's Advertising Standards Authority.[29] Yet awareness of these mechanisms is low and users need scepticism, digital literacy, and motivation to respond. Traditional media and fact checking organisations can debunk harmful advice, while healthcare professionals can counter misinformation in consultations. Health institutions can partner with influencers to deliver evidence based messages, and patient organisations can mobilise communities to critically discuss circulating advice. Most of these measures, however, are reactive and depend on sustained funding and government support.

No single solution

All of these measures face obstacles, and regulating platforms and influencers is not straightforward. Platforms are powerful commercial organisations with substantial lobbying resources,[30] while influencers are profitable content creators. To resist regulation, platforms invoke freedom of speech—even for misleading content. Similar tactics have long been seen in other public health disputes, including those involving tobacco, alcohol, and food industries, which framed regulation as an attack on individual choice and portrayed the state as a political leviathan.

Table 2 | Actions to protect public from potential health harms from social media influencers

Agent	Solution	Action	Challenge
Government	Make platforms accountable for systemic health risks	Require platforms to share data, engage in algorithm audits, and report measures to mitigate risks	Low political will; lobbying efforts of platforms
	Editorial responsibility for influencers	Develop and implement codes of conduct similar to those for broadcasters (eg, Italy's national influencer code)	Limited resources for oversight; resistance from platforms
	Restrict harmful medical advice	Prohibit clearly harmful content for public health (eg, France's ban on content discouraging chemotherapy).	Concerns about freedom of expression; avoid "chilling" effects
	Strengthen advertising regulations	Update advertising regulations and sanction non-compliance (eg, fines to influencers, platforms).	Enforcement is difficult; low political will; lobbying efforts of industry.
	Support medical fact checking	Provide resources to reputable organisations, researchers, and medical associations to ensure a diverse supply of fact checking	Low political will; limited resources available
	Support digital and health literacy	Invest in public and school digital and health literacy programmes; support campaigns targeted at influencers and users	Limited resources available; takes time; some target groups hard to reach
Social Media Platforms	Strengthen fact checking	Work closely with medical fact checkers. Offer easy access to fact checking on the platform and further develop automated detection systems	Fact checking and automated systems are resource intensive; limits profits
	Offer clear guidelines for medical advice	Involve professionals to develop guidelines and integrate into terms of service; sanctioning non-compliance (suspensions, demonetisation)	Influencers are cash cows for platforms; limited incentives on platform side
	Train influencers	Create mandatory training modules for influencers covering evidence based communication and disclosure rules.	Low incentives for platforms; profit relies on attention grabbing content
	Enforce geospecific advertising	Implement technological solutions to limit all advertising content to authorised regions (geoblocking)	Difficult for influencers' native content and subtle promotions

Governments should not be deterred by such efforts. Effective regulation requires political will, particularly in the face of industry resistance. The EU's Digital Services Act is an attempt to make platforms more accountable. If platform cooperation is ensured and enforcement proves effective, the act could serve as a model for other legislation. The UK's Online Safety Act, for

example, shares similar goals but focuses mainly on illegal content and child safety, and does not explicitly mandate oversight of harmful but legal medical advice directed at adults.

Regulators will also need better ways to hold influencers accountable. Existing breaches of advertising rules often result in little more than warning letters or content removal, which has limited deterrent effect.[17] Stricter regulations in Italy and France attempt to increase sanctions, but it remains uncertain whether compliance with the regulations can be effectively monitored or if they will truly enhance accountability, particularly across borders. For instance, users may still encounter English language content, including prescription drug advertising from the United States. International agreements and the implementation of georestrictions for regulated health products may offer additional protection by limiting access to such content by location.

Other measures face similar constraints. Fact checking often fails to reach its intended audience, and evidence is limited that influencer training changes behaviour at scale.[28] Public education to help users critically assess unqualified medical advice is urgently needed, but such efforts will take time to show results. Engaging influencers to share evidence based advice, particularly with hard-to-reach groups, is therefore also important.[23] Yet public funding for these initiatives will not compete with the far greater financial resources of industry collaborations.

There is no one-size-fits-all solution, but combined efforts across multiple fronts can make a meaningful difference. Required strategies include effective regulation, stronger platform and influencer accountability, and user empowerment through targeted education and access to reliable, fact checked information. Together, these strategies can help create a safer information environment in which influencers are constructive rather than harmful sources of health advice.

Key messages

- Social media influencers are a growing source of medical advice but can be misleading
- Influencers' reliability is often undermined by four key biases: lack of expertise, industry influence, entrepreneurial interests, and personal beliefs
- Such biased or misleading advice—amplified by parasocial bonds and direct engagement—can cause physical, psychological, financial, and systemic harm
- Coordinated action by governments and platforms is essential to protect users and to strengthen users' ability to evaluate medical advice from influencers

Contributors and sources

RH is a communication scientist and public health researcher with expertise in digital health communication. SW is a physician and researcher specialising in evidence based medicine and medical communication. SD is executive director of Generation Patient, an organisation representing young adults with chronic conditions through direct support and policy reform. EE and SG are PhD candidates in health communication and contributed specific expertise on influencer communication. EW, a health communication scholar, provided input on digital media environments and direct-to-consumer health messaging. This article was conceptualised by RH and SW, who also led the writing and revision process. All authors contributed to the interpretation of evidence, drafting of recommendations, and revision of the manuscript. The article draws on peer-reviewed literature, policy documents, and market research reports. RH is the guarantor.

Public and patient involvement

SD contributed her perspective on how influencer communication affects young patients' decision-making and information needs. Her input helped shape the framing of harms, the emphasis on engagement of young adults, and the recommendations for patient-centred solutions. This article reflects insights from both research and lived experience.

Competing interests

We have read and understood BMJ policy on declaration of interests and have no interests to declare.

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