

Advertising medical procedures on social media platforms: Dangers and ethical considerations

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To the Editor,

Social media has become the main communication platform, so even healthcare professionals have changed the common medical communication channel. With platforms such as TikTok and Instagram, doctors can reach hundreds of millions of prospective patients, suggesting complex medical information through simplistic and engaging content. Nevertheless, those same features that make social media attractive (essentially, short-format videos, visual narratives, and algorithm-based exposure) present risks when used for medical procedures. Simplified or exaggerated portrayals of medical procedures can mislead audiences, compromise informed consent, and create unrealistic expectations among those who are vulnerable. The limited time frame and format of social media posts often require the omission of critical details about medical procedures, such as risks, complications, and necessary aftercare. Such misleading oversimplification leads to an imperfect conception of medical procedures and the patient's decision-making process. Social media algorithms give strong preference to content that is both compelling or visually exciting and often overlook the truth. This dynamic can amplify unverified claims or promote unregulated medical practices. This is particularly significant for cosmetic or plastic surgery procedures. For example, an analysis of plastic surgery posts on TikTok found that posts are almost exclusively concerned with appearance rather than procedural complexity, safety, or postoperative recovery (1). On the same note, Atiyeh et al. (2021)

noted social media platforms can disseminate misleading information about cosmetic surgery that creates misunderstanding among patients about the safety and efficiency of action (2). The pressure to obtain likes, shares, and followers can drive healthcare professionals toward entertainment instead of education. Ethical breaches, including overhyping results, the creation of sensational content, or the promotion of non-evidence-based practices, damage the professional reputation of medical professionals. A systematic review of plastic surgery by Dorfman et al. (2017) documented that significant ethical concerns exist with broadcasting medical videos on social platforms (3). Therefore, as indicated by the authors, guidelines should be recommended to avoid potential pitfalls.

Social media's younger users are particularly susceptible to idealized portrayals of medical procedures. Exorbitant ideals of beauty broadcasted by the content on social media have led to the emergence of phenomena like "Snapchat dysmorphia", in which people undergo cosmetic surgery to try to look like the artificially enhanced pictures (4). This influence can also lead to more impulsive choices, that, on average, are probably not accompanied by a solid grasp of the risk/consequences and recovery involved. Promotional content on social media often excludes comprehensive discussions of risks, benefits, and alternative treatments, which are essential components of informed consent. A study by Eldaly et al. (2022) noted that patients exposed to social media advertising are also at risk of having unrealistic expectations, which poses a challenge to informed consent in clinical clinics (5).

Over-advertising medical treatments via social media raises significant ethical challenges which demand immediate and comprehensive action. Social media frequently misleads or exaggerates information about medical treatments, with an excessive emphasis on dramatic success stories while omitting critical details about risks, limitations, or the variability of patient outcomes. This practice undermines the principle of informed consent (a basic ethical obligation in healthcare) by persuading patients to make medical decisions on incomplete, biased, or sensationalized information rather than scientifically validated evidence. The consequent impact can be severe, resulting in undue psychological distress, financial exploitation, and, in some cases, adverse health outcomes when patients pursue unnecessary or inappropriate procedures. Addressing this pervasive issue requires a structured and multi-layered strategy involving legislative, regulatory, and policy-based action. Firstly, governments should put into place stringent laws that limit the dissemination of misleading medical advertising and punish offenders accountable through substantial penalties. Such legislation requires that all medical procedures be clear, factual, and balanced when represented in promotional materials. Facts must be based on credible, peer-reviewed evidence to support the claims. Regulatory agencies should develop enforceable standards that compel providers and influencers to disclose all relevant information regarding the procedures they are promoting, including risks, contraindications, and the likelihood of achieving advertised outcomes. The regulatory agencies should also establish robust mechanisms for monitoring and penalizing non-compliance. On the other hand, social media platforms, which play a pivotal role, are responsible for implementing stricter content moderation policies to combat misinformation. For this purpose, social media should employ sophisticated algorithms and human supervision to identify and flag unverified or exaggerated health claims and prioritize partnerships with credible health organizations to disseminate accurate and truthful medical information. On a broader scale, public health initiatives must invest in creating campaigns that teach users how to critically assess medical information found online, identify biased content, and reserve consulting licensed professionals for medical

advice. Educational campaigns should target both the general public and vulnerable populations, equipping them with tools to differentiate between credible and dubious sources of medical information. Furthermore, legal measures need to be enacted as deterrents against egregious overuse and manipulation of medical content. Ultimately, a cohesive framework including governments, healthcare institutions, and civil society organizations can enhance the spread and impact of these strategies. To sum up, mitigating the ethical and pragmatic risks of disseminating information on medical procedures across social media, healthcare professionals and healthcare institutions demands the use of evidence-based and patient-centered strategies:

- **Transparent Communication:** posts should be factually represented showing the benefits, risks, limitations, and the realistic achievable outcomes of the procedures, and should focus on evidence-based practices
- **Educational Content:** social media should concentrate on patient education and clear language to describe the procedures and their related complications
- **Professional Guidelines:** regulatory bodies need to develop broad guidelines for ethical engagement with social media with the help of health professionals
- **Platform Accountability:** social media companies need to work with healthcare providers to find and eliminate false information and disseminate valid, evidence-based information.
- **Patient-Centric Influencer Collaborations:** influencers should be required to disclose any relationships or affiliations they have and include disclaimers encouraging their audience to seek advice from qualified professionals when needed (6).

Conclusion

Marketing medical procedures through social media platforms is a double-edged sword. These platforms are powerful tools for education and interaction, but their misuse could jeopardize public health, patient

safety, and professional ethics. Transparency, accuracy, and ethical behavior need to be at top of the medical community's agenda regarding social media communication. This is critical for maintaining patient confidence and supporting good decision-making. Regulatory boundaries and platform guidelines should be in harmony to tackle the risks and assure that medical promotion functions as a source of empowerment and not a source of exploitation.

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References

1. Oregi P, Cavale N, Khatib M, Rahman SM. The ethics and responsibilities of social media usage by plastic surgeons: a literature review. *Aesthet Plast Surg.* 2024;48:530–42. doi: 10.1007/s00266-023-03553-2
2. Atiyeh BS, Chahine F, Abou Ghanem O. Social media and plastic surgery practice building: a thin line between efficient marketing, professionalism, and ethics. *Aesthet Plast Surg.* 2021;45:1310–21. doi: 10.1007/s00266-020-01961-2
3. Dorfman RG, Vaca EE, Fine NA, Schierle CF. The ethics of sharing plastic surgery videos on social media: systematic literature review, ethical analysis, and proposed guidelines. *Plast Reconstr Surg.* 2017;140(4):825–36. doi: 10.1097/prs.0000000000003695
4. Ramphul K, Mejias SG. Is “Snapchat dysmorphia” a real issue? *Cureus.* 2018;10(3):e2263. doi: 10.7759/cureus.2263
5. Eldaly AS, Mashaly SM. The new dilemma of plastic surgery and social media: a systematic review. *Eur J Plast Surg.* 2022;45:371–82. doi: 10.1007/s00238-021-01891-5
6. Bautista JR, Zhang Y, Gwizdka J. Healthcare professionals' acts of correcting health misinformation on social media. *Int J Med Inform.* 2021;148:104375. doi: 10.1016/j.ijmedinf.2021.104375

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