

Social media and global cardiovascular disparities

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Social media have become pervasive in modern life, academic practice, and medicine, even more so in response to the COVID-19 pandemic. Ladeiras-Lopes *et al.*¹ present a timely overview of social media in cardiovascular medicine, highlighting successes to date and opportunities to responsibly incorporate social media in clinicians' and researchers' toolbox. Indeed, the power and growth of social media cannot be disregarded. For professional platforms like Twitter, the reach of tweets can be as much as hundreds of thousands of unique users: a large and fast gain for minimal (280-character) effort. The potential of social media platforms has further been clear through its ability to foster social networks, remote mentorship, virtual journal clubs, post-publication peer review, and more.² In today's world, where virtual communication, education, and telemedicine are increasingly leveraged, opportunities arise to take existing social media tools beyond our immediate environments and seek to connect with and learn from peers and colleagues in low- and middle-income countries (LMICs) and remote areas.³

Disparities in cardiovascular medicine persist as 18 million people die each year from cardiovascular diseases, of which a vast majority takes place in LMICs.⁴ Six billion people lack access to safe, timely, and affordable cardiac surgical care,⁴ whereas little is known regarding the global distribution of non-surgical cardiac care providers. Nevertheless, many challenges, such as inefficient supply chains, limited training programmes, remote populations, lack of financial risk protection, and other barriers to care remain common across all cardiovascular disciplines. In addition, beyond health system disparities, language barriers contribute to the vast gap in country- or population-specific research in the global health and global surgery context. Moreover, this has commonly been skewed with anglophone predominance, requiring a paradigm shift to instill more equitable practices within today's academic ecosystem.

Social media has shown vast potential in the realms of global health and global surgery, creating networks of clinicians, trainees, and researchers all the way to the last mile.⁵ While current social media engagement is focused largely on online dialogue, it is increasingly

leveraged as a tool to foster global collaboration, community engagement, education, and awareness regarding global health issues.⁶ Importantly, social media have been used to facilitate telemedicine and teleconsult communication channels to gain expertise from colleagues remotely or to educate residents and fellows, especially in lower-resource or remote settings.^{7,8} The current pandemic further leverages such channels and networks to host virtual conferences and shift to virtual education, ranging from video-conference calls to online training modules and low-cost, low-to-high-fidelity virtual reality and simulators.³ Similar opportunities arise to utilize such networks, specifically with regards to social media, in the fields of global cardiology and global cardiac surgery.

Social media platforms aid in creating global networks that transcend borders and promote international collaboration. For example, the Global Cardiac Surgery Initiative brings together trainees and young surgeons in cardiac surgery from around the world to advance the field of global cardiac surgery, illustrating what can result from such networks in terms of mentorship, sponsorship, and support for trainees and early-career researchers.⁹ Education and research are no longer limited by distance or time zones, giving way to open-access information through low-cost or free-of-charge webinars and conferences. Experts in the field share evidence-based and experience-based education and advice, recordings of which are readily available for whenever needed. Cases, some one-of-a-kind as observed in the current pandemic, may be discussed among colleagues and how to best manage them considering available resources and training. Accordingly, social media facilitates virtual training, presenting a variety of topics directed to students, trainees, faculty, and even patients. Moreover, virtual coaching of the entire cardiac surgery team present in the operating room, including perfusionists, scrub technicians, and nurses, remains an area of opportunity to explore to truly leverage the heart team mentality at the core of our work and such online engagement.

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During this pandemic, social media has proven to be an effective tool for rapidly disseminating novel information, guidelines, and recently published papers.¹⁰ This allows for global efforts to continue in a timely fashion despite known or unforeseen barriers, such as the COVID-19 pandemic. Therefore, recognizing and understanding such barriers constitutes an important aspect of global health. One may utilize such platforms to present ongoing projects and the difficulties they encounter along the way. Additionally, social media allows for increasing awareness regarding understudied and under-addressed topics, such as global cardiac surgery. It makes connecting and interacting with others dedicated to global health, as well as other medical and non-medical disciplines, amiable, and approachable. These are of importance to create a true interdisciplinary and intersectoral health system that aims to consider multiple points of views and cover all issues thoroughly, as opposed to conventional vertical-only global health interventions. It is time for governments, global organizations, and individuals to search for long-due solutions and implement radical changes, in which social media can be a fundamental tool. Global research collaborations allow for increased awareness of each countries' disparities and ideas to dissipate them, as well as finding sponsor organizations and partners with similar goals, facilitating resource collection and allocation in a sustainable manner. Social media may provide an opportunity for generating international registries to better understand population-specific characteristics and differences in access to care. Finally, it serves as an invaluable tool to inspire and mentor trainees to pursue certain career options, at home and abroad. The impact on the formation of present and future cardiology and cardiac surgery leaders will continue to grant encouraging results, extending to all corners of the world.

Global cardiovascular disparities prevail and substantially impede progress towards the Sustainable Development Goals and countries'

paths towards universal health coverage. Social media is a tool that should be leveraged to foster awareness surrounding these global disparities and accelerate shared learning, network building, and knowledge generation and dissemination within global cardiovascular care.

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References

- Ladeiras-Lopes R, Baciú L, Grapsa J, Sohaib A, Vidal-Perez R, Böhm A, Silvola H, Rubini Gimenez M, Muscoli S, Wallner M, Rakisheva A, Klaudia Nagy V, Cowie MR, Clarke SC, Achenbach S; On Behalf of the 'Cardiologists of Tomorrow', Digital Health and Media Committees of the European Society of Cardiology. Social media in cardiovascular medicine: a contemporary review. *Eur Heart J Digit Health* 2020;**1**:10–19.
- Thamman R, Gulati M, Narang A, Utengen A, Mamas MA, Bhatt DL. Twitter-based learning for continuing medical education? *Eur Heart J* 2020;**41**: 4376–4379.
- Vervoort D, Dearani JA, Starnes VA, Thourani VH, Nguyen TC. Brave new world: virtual conferencing and surgical education in the COVID-19 era. *J Thorac Cardiovasc Surg* 2020;**S0022-5223(20)32268-6**. doi: 10.1016/j.jtcvs.2020.07.094.
- Vervoort D, Swain JD, Pezzella AT, Kpodonu J. Cardiac surgery in low- and middle-income countries: a state-of-the-art review. *Ann Thorac Surg* 2020; **S0003-4975(20)31293-5**. doi: 10.1016/j.athoracsur.2020.05.181.
- Vervoort D, Luc JG. Hashtag global surgery: the role of social media in advancing the field of global surgery. *Cureus* 2020;**12**:e8468.
- Navarro SM, Mazingi D, Keil E, Dube A, Dedeker C, Stewart KA, Ncube T, Rickard JL, Lavy C, Tuttle TM. Identifying new frontiers for social media engagement in global surgery: an observational study. *World J Surg* 2020;**44**:2881–2891.
- Kauta NJ, Groenewald J, Arnolds D, Blankson B, Omar A, Naidu P, Naidoo M, Chu KM. WhatsApp mobile health platform to support fracture management by non-specialists in South Africa. *J Am Coll Surg* 2020;**230**:37–42.
- Ewbank C, Groen RS, Kushner AL, Gupta S. WhatsApp: an essential m-health tool for global surgeons. *Surgery* 2017;**161**:1745–1746.
- Vervoort D. The elephant in the room: social media as a tool. *J Thorac Cardiovasc Surg* 2020;**159**:e273.
- Vervoort D, Ma X, Luc JGY, Zieroth S. Rapid scholarly dissemination and cardiovascular community engagement to combat the infodemic of the COVID-19 pandemic. *Can J Cardiol* 2020;**36**:969.e1-969.e2.