



No Health Without Cardiovascular Health: Collaboration and Integration as the Beating Heart of Global Surgery

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Cardiovascular disease remains the leading cause of morbidity and mortality worldwide. Over 80% of related deaths occur in low- and middle-income countries (LMICs), which account for less than 10% of the 1-1.5 million cardiac surgical procedures performed globally each year.(1,2) This harsh inequity reflects the insufficient prioritization of cardiovascular care in national and international political agendas, with cardiovascular diseases largely absent from the modern discourse surrounding global surgery and non-communicable disease (NCD) agendas focused on prevention over care.(3,4) Although progress has been made in global surgery across multiple subspecialties, cardiovascular care has yet to elicit the same urgency.

Global disparities in cardiac surgical care pose an ongoing challenge, with over six billion people lacking safe, timely, and affordable access when needed.(5) LMICs, home to most of the world's population, hold a disproportionately small number of cardiac centers and surgeons, reflecting wealth disparities rather than population needs. This maldistribution has remained largely unchanged since the previous century, contributing to over 100 countries and territories still without a single cardiac surgeon.(2,6) Addressing these disparities and their complex underpinnings requires a comprehensive, systems-wide approach extending across all levels of care into the community. Cardiovascular health inequities also have far-reaching implications, proving closely linked to socioeconomic disparities and overall health.

Rheumatic heart disease (RHD), a condition of poverty and social disadvantage, imposes a disproportionate burden on LMICs with over 40 million people living with RHD, particularly affecting children, adolescents, and women of childbearing age.(7) Congenital heart disease (CHD), affecting approximately 1 in 100 live births, poses unique challenges in LMICs due to larger paediatric populations,

late or no detection and screening, and fewer paediatric cardiac surgeons compared to high-income countries (HICs), leaving 90% of affected children in LMICs without the care they need.(7) Additionally, ischemic heart disease (IHD) affects a younger adult demographic in LMICs than HICs, impacting breadwinners and those vital to countries' socioeconomic growth. The misperceptions surrounding costs and feasibility associated with cardiac surgery in LMICs, including the need for specialized equipment, training, and personnel, may contribute to its historical absence from political agendas. However, advocating for global cardiovascular health is economically favourable in the long-term, with healthier populations alleviating the burden on global health systems and increasing economic productivity.(2)

At the country level, National Surgical, Obstetric, and Anesthesia Plans (NSOAPs) serve to sustainably strengthen surgical health systems. Despite eight countries launching NSOAPs and dozens actively developing theirs, only Zambia specifically acknowledged cardiac surgical care.(4) Internationally, NCD and surgical health policy equally fail to recognize the need for cardiac surgical care as part of comprehensive health systems.(3) The 77th World Health Assembly in 2024 will be themed around climate change and conflict, whereas further NCD and surgical policy updates by countries to the World Health Assembly are not expected until 2025. Nevertheless, the intersection between socioeconomic and political crises, environmental health, and cardiovascular health is increasingly well-established, raising an ongoing need for discourse. In 2025, the Fourth High-Level Meeting of the United Nations General Assembly on NCDs will mark the deadline for the NCD prevention and control targets set by countries in 2013, of which none mentioned surgical care. Despite important progress, the world remains far off the ambitious targets. In particular, the progress on cardiovascular disease and



risk factors is insufficient.(7) Akin to the transition from the Millennium to Sustainable Development Goals in 2015, targets will be updated and extended to 2050—hopefully, with honest introspection.

Developing a roadmap to global equity in cardiac surgery begins with understanding current surgical volumes and establishing targets. Surgical volume is one of six key indicators by the *Lancet Commission on Global Surgery* to benchmark and trend health system performance. (8) To address the estimated need for 321.3 million surgical cases globally, the targets set for 2030 include at least 5,000 procedures per 100,000 population and all countries tracking surgical volume and perioperative mortality. The *Commission* did not, however, specifically discuss cardiac surgical care. Nevertheless, considering an average of 123.2 cardiac surgical procedures per 100,000 population per year in HICs and adjusting for disease burden, estimated volume targets to meet population needs are high at 86.1 procedures per 100,000 annually in upper-middle-income, 55.1 in lower-middle-income, and 40.2 in low-income countries; actual volumes are still far off.(9)

Governmental commitment to developing sustainable and high-quality ecosystems for cardiac care is limited by the few number of cardiac surgical stakeholders in high-level

policy-making, requiring the cardiac surgical community to strengthen its advocacy efforts and the global surgical community to actively engage cardiovascular voices (**Figure 1**).(10) Surgeon-advocates are well-positioned to bridge the gap between the operational silos of surgical practice, evidence-based recommendations, and health systems governance, working with colleagues across surgical, non-surgical, and non-health sectors. As there is no health without cardiovascular health, the integration of cardiac surgical care in ongoing global surgical and NCD policy efforts is long overdue.

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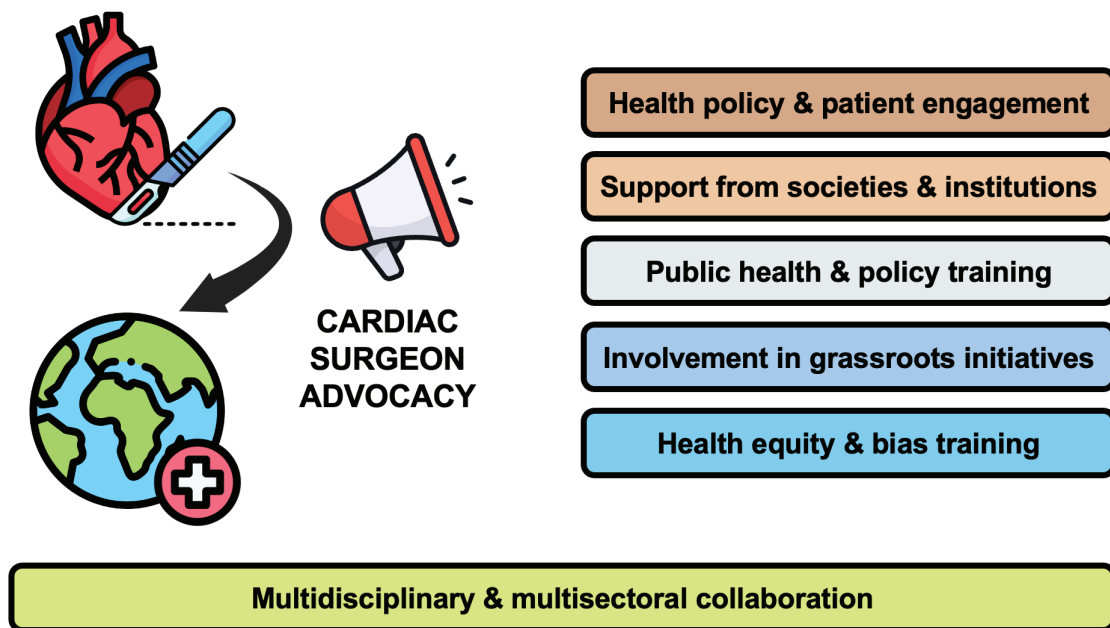


Figure 1. Positioning cardiovascular care in the global health and global surgical discourse. Increasing cardiac surgeon-advocacy calls for the integration of health policy and patient-family engagement in training and practice, efforts from surgical societies and institutions to foster early-career surgeon-advocates, encouragement of public health or policy training, contextualizing healthcare disparities through involvement in grassroots initiatives, and raising awareness for the conscious and unconscious biases that perpetuate systemic sociocultural inequities.



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