

Editorial Article

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Cardiology at a Crossroads: From Volume to Value in the Indian Context

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ABSTRACT

Cardiovascular disease remains the leading cause of death in India, despite major advances in cardiology. This editorial highlight the growing disconnect between technological progress and equitable, outcome-driven care. Key challenges include early-onset coronary artery disease, gaps between guidelines and real-world practice, limited emphasis on prevention, and variability in access to evidence-based therapies. The need for context-sensitive guidelines, indigenous research, ethical practice, and strengthened training is emphasized. The potential of digital health to reduce care disparities is discussed, alongside the importance of patient-centered, value-based cardiology. A balanced approach integrating innovation, affordability, and prevention is essential for improving cardiovascular outcomes in India.

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Introduction

Cardiovascular disease (CVD) remains the single largest contributor to mortality in India, accounting for nearly one-third of all deaths. Yet, this stark statistic tells only part of the story. Indian cardiology today stands at a critical crossroads—marked by remarkable technological progress on one hand, and persistent systemic, socioeconomic, and implementation gaps on the other. As clinicians, researchers, and policymakers, the challenge before us is no longer merely to do more, but to do better, shifting the focus from volume-driven care to value-based, patient-centered cardiovascular medicine.

Over the past two decades, India has witnessed exponential growth in interventional cardiology. High-end catheterization laboratories, advanced imaging modalities, structural heart interventions, and complex electrophysiological procedures are now routinely performed across urban centers. Indian cardiologists have demonstrated technical expertise comparable to global standards, often under far more constrained conditions. However, this rapid procedural expansion has not been matched by commensurate gains in population-level cardiovascular outcomes, particularly in rural and semi-urban India where the burden of disease is highest [1].

One of the most pressing issues in Indian cardiology is the epidemiological transition occurring at an unprecedented pace. Indians develop coronary artery disease nearly a decade earlier than Western populations, often with more diffuse and severe disease. The convergence of urbanization, sedentary lifestyles, diabetes, hypertension, and dyslipidemia has created a perfect storm. Despite this, primary prevention remains underemphasized.

Opportunistic screening, inconsistent risk stratification, and poor long-term adherence to evidence-based therapies continue to undermine outcomes [2].

Equally concerning is the persistent gap between guidelines and ground reality. While international and national guidelines are widely disseminated, their real-world implementation is uneven. Cost constraints, fragmented healthcare delivery, limited insurance penetration, and variable access to medications all play a role. For example, while high-intensity statins, novel antiplatelets, and SGLT2 inhibitors are guideline-recommended, their uptake is often limited by affordability rather than clinical judgment. This raises an important question: should Indian cardiology move toward developing more context-sensitive, resource-stratified guidelines that reflect real-world practice without compromising scientific rigor? [3].

Another evolving challenge is the overmedicalization of cardiovascular care. The proliferation of diagnostic testing and interventions, sometimes driven by defensive medicine or financial incentives, risks shifting attention away from holistic patient care. The Indian cardiology community must actively engage in self-regulation, promoting appropriateness criteria, shared decision-making, and ethical practice. The true measure of success lies not in procedural counts but in improved quality of life, reduced hospitalizations, and long-term survival [4].

At the same time, India is uniquely positioned to contribute meaningfully to global cardiovascular science. With its vast and diverse patient population, the country offers unparalleled opportunities for high-impact clinical research, registries, and pragmatic trials. Indigenous data are crucial—Western evidence cannot always be extrapolated to Indian patients due to genetic, metabolic, and sociocultural differences. Strengthening multicenter

collaborations, simplifying regulatory pathways, and integrating research into routine clinical practice must be national priorities [5].

The role of digital health and artificial intelligence in cardiology also deserves thoughtful consideration. Telecardiology, wearable technologies, AI-assisted imaging, and automated ECG interpretation hold promise, particularly for bridging rural–urban disparities. However, technology should be viewed as an enabler, not a replacement, for clinical acumen. Validation, data privacy, and equitable access must remain central to any digital transformation strategy.

Medical education and training represent another pillar requiring reform. While India produces a large number of cardiologists, disparities in training quality persist. Structured fellowships, continuous professional development, and outcome-based training models are essential to ensure uniform standards of care. Equally important is nurturing skills in preventive cardiology, heart failure management, and longitudinal patient care areas that often receive less emphasis than interventions [6].

Finally, cardiology in India cannot function in isolation from public health policy. Tackling cardiovascular disease requires multisectoral action—urban planning that promotes physical activity, taxation of tobacco and unhealthy foods, air pollution control, and large-scale awareness campaigns. Cardiologists must increasingly assume the role of advocates, engaging with policymakers and the public to address upstream determinants of cardiovascular health.

In conclusion, Indian cardiology stands at a moment of both achievement and introspection. The path forward demands balance between innovation and affordability, intervention and prevention,

global evidence and local realities. By embracing value-based care, strengthening indigenous research, and reaffirming our ethical and social responsibilities, we can ensure that the next phase of cardiology in India is not only technologically advanced but also equitable, sustainable, and profoundly patient-centric.

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Ethical Approval: NA

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