

GUEST EDITORS' PAGE



Health Equity Across the Life Course

A Call to Action for the Cardiovascular Community



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The field of cardiovascular medicine has made tremendous scientific advances in recent decades, leading to improved health outcomes for many. However, these gains have not been equitably distributed across all populations. Persistent disparities in cardiovascular health are seen and can be observed in many demographics including race, ethnicity, socioeconomic status, and geography. For example, a recent study found that from 1999 to 2020, the Black population in the United States experienced over 1.6 million excess deaths and more than 80 million excess years of life lost compared with the White population, with heart disease contributing the highest excess mortality rates. Independently, race offers no biological reason for these differences in outcome; thus, these disparities are driven by the burden of acquired risk factors, influence of social determinants of health, limitations in access to care, and structural racism that has been a historical legacy.¹ This stark evidence underscores that achieving cardiovascular health equity across the life course—from prebirth through old age—is an urgent challenge that requires action on multiple fronts.

This special issue of *JACC: Advances* brings together a compelling collection of studies, reviews, and commentaries that examine cardiovascular health disparities through the lens of the life course. This research highlights inequities in cardiovascular health that begin early in life and accumulate over time and presents both unique challenges and

opportunities for advancing health equity across these life stages.

Several studies demonstrate the early roots of cardiovascular health disparities. Setty et al.'s² analysis of multicenter data shows racial disparities in outcomes for children undergoing cardiac surgery for congenital heart disease. The research letter by Rim et al.³ finds significant sociodemographic differences in cardiovascular risk factors among young collegiate football players. These studies suggest that efforts to achieve cardiovascular health equity must begin in childhood, or earlier.

Other articles highlight the cumulative impact of health disparities across the life trajectory. Kaur et al.⁴ explore sex differences in the relationships between midlife vascular risk factors and late-life cognitive decline. Peng et al.⁵ find racial and socioeconomic differences in use of coronary artery calcium screening in middle-aged adults, potentially contributing to inequities in cardiovascular prevention efforts during a critical period for risk factor modification and offering prospects for opportunistic imaging to facilitate more equitable cardiovascular prevention.

The geriatric population faces unique cardiovascular health challenges, as highlighted by Al-Yafeai et al.'s study⁶ documenting the rising disparity in methamphetamine-associated heart failure hospitalizations among vulnerable older adults. Huang et al.⁷ examine trajectories of medication adherence among

older Medicare beneficiaries, finding significant gaps and opportunities for improvement.

Several articles examine health disparities across broader segments of the life course and care continuum. Ibrahim et al.⁸ review the evidence on relationships between social vulnerability and disparities spanning the cardiovascular care continuum. Mahdi et al.⁹ explore sex and pregnancy-related differences in outcomes for adult congenital heart disease patients. The study by Desai et al.¹⁰ on county-level variation in use of guideline-directed medical therapy for heart failure underscores the impact of geography on care quality and outcomes for this chronic condition.

Importantly, this special issue goes beyond simply characterizing inequities to propose and evaluate potential solutions at various stages of the life course. Oguuniyi et al.¹¹ describe a novel peer mentoring program to enhance diversity in the cardiovascular workforce, with the goal of mitigating provider-level biases and barriers that contribute to care inequities. Moayed et al.¹² explore the feasibility of using widely available consumer digital health technology—a single-lead electrocardiogram from a commercially available smart watch—to facilitate equitable detection of atrial fibrillation among patients with heart failure. Starks et al.¹³ evaluate an innovative drone-based delivery program for automated external defibrillators to improve equitable access to this lifesaving therapy for out-of-hospital cardiac arrest. While much work remains to evaluate and scale these solutions, they offer promising examples of how a life course equity lens can be translated into action.

The special issue also highlights the critical importance of multisectoral collaboration in advancing cardiovascular health equity across the life course. Rajagopalan et al.¹⁴ articulate the vital role academic medical centers and large health systems can play in partnering with communities to improve rural cardiovascular health through research, workforce development, and care delivery innovation. Thomas et al.¹⁵ provide a framework for health care organizations to move beyond good intentions and operationalize equity through data-driven action and accountability. Brown et al.¹⁶ emphasize the need for collaborative efforts spanning health care, public health, social services, and policy to make meaningful progress. Johnson et al.¹⁷ outline opportunities for cardiovascular innovators, clinicians, and policymakers to embed health equity at every stage from discovery to dissemination and policy. Together, these papers underscore the importance of

cross-sector partnership for dismantling structural barriers and creating equitable conditions for cardiovascular health across the life course.

This special issue makes clear that achieving cardiovascular health equity requires systematic action at every stage of the life course. In childhood and adolescence, we need efforts to optimize prenatal health, mitigate risk factors, and ensure access to preventive care. Throughout the life span, we must work to reduce disparities in primordial, primary, and secondary prevention as well as in acute treatment. For older adults, it is critical to address inequities in management of chronic conditions and symptoms. Across all ages, we need strategies to create equitable community conditions and dismantle structural barriers to optimal cardiovascular health.

While daunting, the life course lens offers hope by highlighting multiple opportunities to intervene. Each stage of life holds potential for mitigating disparities and achieving health equity. The research and expert opinions in this issue provide a roadmap for comprehensive, life course-oriented approaches to eliminate cardiovascular health inequities. However, realizing this vision will require deliberate action and collaboration from stakeholders across sectors: health care, public health, policy, and beyond.

vvAs the cardiovascular community, we must embrace health equity as a core part of our mission. We need to embed an equity lens into every aspect of our work—research, clinical care, training, community engagement, advocacy, and more. Most importantly, we need to partner with the communities facing the greatest inequities to cocreate solutions that meet their needs and priorities. The enormity of the challenge requires bold, sustained, collective action. But, as shown in this special issue, our understanding of cardiovascular health inequities and how to address them is growing rapidly. By working together across disciplines and sectors to apply an equity lens at every stage of the life course, we can create a more just and equitable future for cardiovascular health. There is no time to waste.

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