



Editorial

Gender, socioeconomic and ethnic/racial disparities in cardiovascular disease: A time for change



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ABSTRACT

Cardiovascular disease (CVD) mortality rates have declined steadily over the past few decades but gender, socioeconomic and ethnic/racial disparities have not. These disparities impede cardiovascular health care reaching all those in need. The origins of disparities in CVD are numerous and wide-ranging, having largely evolved from inequalities in society. Similarly, disparities in CVD, interventions and outcomes will also vary depending on the minority or disadvantaged group. For this reason, strategies aimed at reducing such disparities must be stratified according to the target group, while keeping in mind that these groups are not mutually exclusive. There is a pressing need to move beyond what can be inferred from traditional cardiovascular risk factor profiling toward implementation of interventions designed to address the needs of these populations that will eventuate in a reduction of disparities in morbidity and mortality from CVD. This will require targeted and sustainable actions. Only by ensuring timely and equitable access to care for all through increased awareness and active participation can we start to close the gap and deliver appropriate, acceptable and just care to all, regardless of gender, socioeconomic status or ethnicity/race.

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Cardiovascular disease (CVD) mortality rates have declined steadily over the past few decades [1] yet gender, socioeconomic and ethnic/racial disparities have not [1–3]. The pervasive nature of these disparities equates to significant barriers that impede cardiovascular health care from reaching all those in need. Consequently, and often substantially, cardiovascular outcomes vary by gender, socioeconomic status (SES) and ethnicity/race [4,5]. Even though contributors to disparities in cardiovascular outcomes are multi-factorial, equitable access to and uptake of evidence-based interventions are necessary to instigating change. In an attempt to close the gap and deliver appropriate, acceptable and just care to all individuals, increasing awareness assumes priority.

The origins of disparities in CVD are numerous and wide-ranging, including variations in the type, awareness and presentation of symptoms and the response to them [5]. These disparities (gender, SES, ethnicity/race) have largely evolved from inequalities in society. Similarly, disparities in CVD, interventions and outcomes will also vary depending on the minority or disadvantaged group. For this reason, strategies aimed at reducing such disparities must be stratified according to the target group, while keeping in mind that these groups are not mutually exclusive.

Gender disparities

There are many misconceptions about CVD in women. In fact, risk factors are similar for men and women and CVD is the major cause of death for both in developed countries [6]. Notwithstanding, women lose less years of life due to CVD as they develop the disease approximately 7 to 10 years later due to the cardioprotective benefits of estrogen [7]. Predominantly, gender disparities in CVD arise due to women, especially younger and elderly, being far more likely than men to present with atypical symptoms (e.g. deep fatigue, disturbed sleep, nausea and abdominal, neck, jaw and shoulder pain) and absence of chest pain [8].

Substantial improvements have been made in CVD risk factor awareness, treatment and prevention [9] in women since the publication of female-specific guidelines [10]. However, reminding us of the challenges that lie ahead, studies continue to report that women receive more delayed and less evidence-based treatments than men, which result in women experiencing poorer health outcomes [6,8,11–13]. For example, women with myocardial infarction (MI) are more likely to have asymptomatic cardiac arrest, and younger women are more likely to die in hospital, compared to their male counterparts – having received delayed treatment [8]. Adding to the complexity of gender disparities is that women, more so than men, have suboptimal awareness of CVD as the leading cause of death among women [6,14]. Subsequently, women have been found to be highly likely (47%) not to seek emergency services if they thought they were having symptoms of an

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MI and, a majority, perceive that unproven preventive therapies will reduce their risk of heart disease [12].

Reducing gender disparities lies not only in improving health systems and policies that fail to respond to specific needs of women but also in acknowledging the responsibility of individuals. Increasing awareness among women regarding prevalence and recognition of their cardiovascular risk factors and symptoms has the potential to improve early detection and reduce disease burden.

Socioeconomic disparities

People who are socioeconomically disadvantaged experience higher rates of CVD burden and mortality [15]. Originally, CVD and its risk factors were more common in upper socioeconomic groups in the developed world, but over the past 50 years this pattern has reversed and the differential widened [2,15].

The inverse association between SES and CVD risk in high-income countries is the result of compounding behavioral and psychosocial risk factors. Not only are low SES groups more exposed to cardiovascular risks such as smoking, alcohol consumption, physical inactivity and poor diet, disadvantaged socioeconomic conditions are also known to disproportionately increase this risk across the life course [16]. In addition to poor health behaviors, people in low SES groups have less access to medical care and social support, greater co-morbidity and job stress, and poorer health-seeking behaviors, than their counterparts in higher SES groups [1].

Closing the gap between low and high SES groups offers great potential for reducing CVD. Possible actions for incorporating the socioeconomic context of CVD risk factor exposure into interventions and policy include health equity audits, risk calculations, and appropriate screening. By attempting to address the root social causes of inequities such as social deprivation and poverty, essential resources can be earmarked for improving the health of these disadvantaged groups.

Ethnic/racial disparities

The higher prevalence of CVD in minority ethnic and racial populations is growing in magnitude globally [17,18]. Not only do ethnic and racial groups have higher rates of CVD and related risk factors [19,20], but also they confront more barriers to CVD diagnosis [21], receive lower quality health care [22], and experience poorer health outcomes [23]. For example, there are lower rates of cardiac intervention among Hispanic and black patients than white patients [22], lower rates of admission and shorter lengths of stay in cardiac care units among black patients than among white patients [24], and twice the age-standardized rate of fatal incident coronary heart disease in black patients than in white patients [17]. There is also a significant atypical presentation of cardiac symptoms in ethnic and racial groups, e.g. African-American, Hispanic, South Asian and Asian [14,20,25–27], and much higher rates of CVD morbidity and mortality among migrant South Asians compared with individuals of European descent [28,29].

In addition, poorer recording of clinical data has been identified in ethnic and racial groups, possible reasons include language and communication difficulties, lack of cultural awareness, limited access to interpreters, and institutional failings e.g. failure to provide adequate staff training [30].

What is clear is that each ethnic and racial group has differences in terms of health and illness beliefs and behaviors and in seeking and acting on professional advice [31]. This highlights a need to explore both patient and health care professional decision-making in order to make sense of the significant and persistent ethnic and racial disparities in cardiovascular outcomes. Better understanding and awareness of disparities in CVD by ethnicity and race is the first step toward overcoming ethnic and racial boundaries and developing culturally appropriate services to ensure timely and appropriate access to cardiovascular care.

Moreover, many of these disparities are not mutually exclusive. For instance, among patients prescribed statins, women and nonwhite patients are at increased risk for non-adherence [32]. Thus, a priority is to recognize, acknowledge and understand the factors that feed into these gaps, only then, can we systematically assess and address the needs of these populations.

A time for change

Most cardiovascular risk factors are modifiable, as such, disparities in cardiovascular outcomes are potentially amenable to intervention, yet rates of evidenced-based change in minority groups are rarely reported. The primary reason being women, SES and racial/ethnic minorities (those with poorer cardiovascular outcomes) are subject to relatively little interventional attention [33]. There is a stark need to move beyond what can be inferred from traditional cardiovascular risk factor profiling toward implementation of interventions designed to address the needs of these populations that will eventuate in a reduction of disparities in morbidity and mortality from CVD. This will require targeted and sustainable actions such as behavioral interventions, promoting participation in decision-making, increasing educational campaigns for those at highest-risk as well as their health care providers, improving health literacy in at-risk groups and ensuring the use of culturally-sensitive materials, and increasing CVD research in disadvantaged groups. Only by ensuring timely and equitable access to care for all through increased awareness and active participation can we start to close the gap and deliver appropriate, acceptable and just care to all, regardless of gender, socioeconomic status or ethnicity/race.

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