The Cardiovascular State of the Union
Confronting Healthcare Disparities

Robert O. Bonow, MD; Augustus O. Grant, MD, PhD; Alice K. Jacobs, MD

As we reach the midpoint of the first decade of the twenty-first century, we are also at the midpoint in the timeline of the American Heart Association (AHA) strategic plan to reduce coronary heart disease, stroke, and risk by 25% by the year 2010.1,2 Encouraging evidence demonstrates important gains toward that goal, with decreases in coronary heart disease and stroke mortality, as well as reductions in certain risk factors such as cigarette consumption and untreated hypercholesterolemia. Still, troubling evidence indicates that other ominous risk factors—physical inactivity, overweight and obesity, diabetes, and hypertension—are on the rise,3 especially among adolescents and young adults, and these may contribute to the next wave of the cardiovascular epidemic. And there is undeniable evidence that not all Americans have shared equally in the improved cardiovascular outcomes. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.

Disparities in cardiovascular prevention, diagnosis, treatment, and outcomes have been documented in a number of publications from the US Department of Health and Human Services (DHHS),4–6 the Institute of Medicine,7 and the Kaiser Family Foundation,8 and reports of continuing racial and ethnic disparities appear regularly in cardiovascular surveillance. Individuals in specific subgroups defined by race, ethnicity, socioeconomic status, and geography have a disproportionate burden of myocardial infarction, heart failure, stroke, and other cardiovascular events. These individuals also have a worse outcome after these events, including higher mortality rates, and a higher prevalence of unrecognized and untreated risk factors places them at greater likelihood of experiencing these events. Differences such as these arise not only from disparities in access to care and quality of care but also from disparities in awareness and access to knowledge.
evidence of less effective secondary prevention strategies after coronary artery bypass surgery in African American patients. After adjusting for differences in outcomes of hospitals used by African American versus white patients, 30-day and 90-day postoperative mortality rates were the same in both groups, but African American patients had a 17% higher mortality rate at 1 year. It is noteworthy in this latter study that before adjustment for hospital outcomes it was clear that African American patients did have higher short-term mortality, which was related to treatment at hospitals in the highest mortality category and in the lowest volume category.

Studies of providers also are revealing. Lurie et al\(^\text{17}\) report that only 34% of cardiologists agree that disparities of care exist in the United States, but even fewer (5%) believe that these disparities exist in their own practices. Werner et al\(^\text{18}\) demonstrate evidence of physician bias based on perceived higher risk of minority patients undergoing bypass surgery, resulting in fewer minority patients undergoing surgery shortly after the introduction of physician report cards in New York. Thus, a system change designed to improve healthcare quality actually aggravated racial and ethnic disparities in health care.

A study in the present issue provides new evidence of major disparities in cardiovascular disease mortality among Native Americans\(^\text{19}\) that have increased dramatically in the past decade, and another provides additional evidence of increased stroke risk among African Americans and Hispanic Americans compared with white individuals.\(^\text{20}\) Unfortunately, the increased stroke risk among minority populations is coupled to a lower level of awareness of stroke and stroke warning signs among minority women compared with white women.\(^\text{21}\)

Current data from the Centers for Disease Control and Prevention reported in this issue\(^\text{22}\) substantiate the persistent, significantly higher prevalence of risk factors in minority populations, most notable for striking rates of hypertension (41%) in African Americans independent of gender or educational status and obesity (47%) in African American women. High rates of obesity are also reported among Mexican American men and women (33% and 38%, respectively) and among white women with lower levels of education (37%). These risk factor profiles translate into significantly higher rates of stroke in African Americans and heart failure in African Americans, Hispanics, and Native Americans compared with whites. Overall, ischemic heart disease and stroke incidence are inversely related to education and income levels.

Thus, the studies reported in this issue of Circulation provide a unique, compelling, and sobering series of snapshots of the cardiovascular state of the union in 2005. They provide different perspectives on the various components that together define the disparity problem. The overall picture is the immense and pervasive nature of healthcare disparities, from lack of provider and population awareness, to disproportionate risk factors and disease prevalence, to higher cardiovascular disease event rates and adverse outcomes among the highest-risk segments of our population. One can only conclude that the current situation is not acceptable.

The current situation calls for constant surveillance; for renewed efforts to increase awareness of health disparities among medical professionals, the public, and legislators; and for the design and implementation of effective interventions to reverse these troubling trends. One example is the community-based multiple risk factor intervention program discussed by Becker et al.\(^\text{23}\) Another is the faith-based Search Your Heart program of the AHA,\(^\text{24}\) which is targeted to African American and Hispanic communities and which has been implemented nationwide.

Another component of the solution, but one that is also difficult to deliver, is the development of a more diverse and more culturally competent cardiovascular workforce. Currently, the supply of minority healthcare professionals, especially cardiovascular specialists, is inadequate to meet the demand, and the pipeline of future minority doctors and nurses is nearly empty. Greater efforts to stimulate the brightest young people to pursue careers in biomedical science are required.

Recommendations for a strategic framework to eliminate cardiovascular disparities are articulated by Dr George Mensah.\(^\text{25}\) His proposed strategic imperatives to eliminate disparities in cardiovascular health call on strong partnerships at the community and state level based on sound clinical, population, and public health science. We support this call to action. As pointed out in the Guiding Principle for Improving Minority Health from the Centers for Disease Control and Prevention, “The future health of the nation will be determined to a large part by how effectively we work with communities to reduce and eliminate health disparities between non-minority and minority populations experiencing disproportionate burdens of disease, disability, and premature death.”\(^\text{26}\) The AHA guide for improving cardiovascular health at the community level\(^\text{27}\) could serve as a template to begin implementing changes in at-risk communities. Important steps include exercise facilities that are safe and secure, supermarkets that provide fresh fruits and vegetables of comparable quality to those in more affluent communities, elimination of cigarette advertising in minority neighborhoods, and schools that provide physical education and healthy lunches, to name a few.

The underlying causes for healthcare disparities are deeply rooted in our society and are not merely medical issues. Thus, healthcare professionals and scientists alone cannot solve them. But the community of medicine and science, when challenged and mobilized, can be a powerful force that can help to implement change through education, research, and advocacy.

We commend the editors of Circulation for publishing this special issue dedicated to such an important area of cardiovascular health and disease, and Dr Emelia Benjamin in particular for her editorial efforts in selecting the articles that cover the full spectrum of the disparity landscape. We hope the information contained in these excellent articles will generate considerable thought, discussion, and fruitful debate.

References


The Cardiovascular State of the Union: Confronting Healthcare Disparities
Robert O. Bonow, Augustus O. Grant and Alice K. Jacobs

_Circulation._ 2005;111:1205-1207
doi: 10.1161/01.CIR.0000160705.97642.92

_Circulation_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2005 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/111/10/1205

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in _Circulation_ can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to _Circulation_ is online at:
http://circ.ahajournals.org//subscriptions/