

PREFACE

This textbook on *Cardiovascular Disease in Racial and Ethnic Minorities* is designed to explore the importance of human genomic variation and the impact of environment on cardiovascular diseases. The Human Genome Project has confirmed that all human populations, regardless of self-identified race or ethnicity, are essentially the same, with widespread variation within self-defined racial groups. In this project, we did not attempt to confirm the validity of race, but to examine to what extent biomedical and scientific literature can clarify the impact of genetic variation versus environment as related to cardiovascular disease.

Specifically, this project was initiated with the encouragement of Annemarie Armani, MD, and is the culmination of our multiple prior collaborations, and our collective efforts to quantify and highlight accurate data and the unique aspects of cardiovascular-related conditions in multiple populations. In choosing varied areas of clinical practice and research, we sought to include experts who have both a history of academic rigor and a thoughtful reflection on these areas of study.

Medical knowledge is more than the simple accumulation of unrelated data. We learn from our patients, and when we delve into these sensitive areas of racial/ethnic disparities, we become better practitioners. In order to keep pace with the shrinking world, medical science must recognize that advances in transportation and communications increase global connectivity. In a 2008 document, the World Health Organization (WHO) confirmed that heart disease remains the top cause of worldwide mortality. Cardiovascular disease, including myocardial infarction, heart failure, and stroke, especially among women, accounts for 29% of deaths worldwide each year. This WHO report on the global burden of disease also confirmed that infectious diseases also contribute to 16.2% of worldwide deaths and thirdly, cancer causes 12.6% of global deaths. Furthermore, the WHO asserted that women die more often from heart disease than men (31.5% versus 26.8%). As noted throughout the text, the primary forces behind the consistent high rates of heart disease in various populations are persistently and increasingly overweight and obesity status, insufficient physical activity, and the excess consumption of fat and salt.

I was nurtured and educated by my parents, Vallery Ferdinand, Jr., and Inola Copelin Ferdinand, to be a force for positive change and contribute to the removal of inequities in our society. My first formal education beyond the shelter of my native Lower 9th Ward and the segregated South occurred as a

Telluride Scholar at Cornell University in Ithaca, New York. As a freshman, initially majoring in history, I was energized by the passion of the youth of the turbulent 1960s to make a difference in other people's lives. Along with several of my fellow student activists, I chose to serve my disadvantaged community through medicine. We considered it essential to use our formal training to impact the welfare of the African-American community and other disadvantaged groups only recently emerging from the shadows of an American experience crippled by racial strife and inequality.

Subsequently, at the historic Howard University, College of Medicine, I became convinced that internal medicine and specifically cardiovascular disease should be my primary area of research and clinical practice since African-Americans were clearly disproportionately affected by hypertension, heart failure, stroke, and end-stage kidney disease. Medical textbooks published before this time considered coronary heart disease to be a rare cause of morbidity/mortality in United States blacks. These earlier concepts were wrong. Cardiovascular heart disease mortality in African-Americans is the highest of all major racial/ethnic subpopulations in the United States.

As recently as 2008, organized medicine, specifically the American Medical Association (AMA), recognized its complicity in propagating racial inequality through an unfortunate history of omission and commission. Apologizing for these past errors, the AMA, along with the National Medical Association and the National Hispanic Medical Association, have created a commission to address healthcare disparities. The coalition's goals are to identify and promulgate means of eliminating health disparities (www.ama-assn.org). In this light, the best means for assessing nuances and significant findings related to cardiovascular disease in various populations is to address a broad range of topics with a diverse group of experts and I have invited submissions from a wide range of geographically and racially/ethnically diverse men and women.

In this book, we explore new findings and implications of genomics and inheritance specifically related to single-nucleotide polymorphisms and the concept of ancestry versus the sociopolitical historical category of race. Perhaps in the future, medical research will not use the blunt, inaccurate determination of race as a category but will attempt to define the risk of certain diseases based on genomics, including better understanding and identification of these single-nucleotide polymorphisms. In the interim, the very presence of unacceptable cardiovascular disease disparities, based on race and ethnicity, specifically in the United States, indicates the need for universal access to evidence-based medicine, removal of socioeconomic barriers, and the application of therapeutic lifestyle changes for all individuals at increased risk.

Our understanding of cardiovascular disease in minority populations in the United States and eventually multiple populations worldwide must include the impact of environment. High rates of cardiovascular disease in

various racial/ethnic populations will not be curtailed if we do not address obesity, diabetes, and the impact of westernization and urbanization of lifestyle. Describing the essence of Hawaiian culture in the provoking text, *Nā Kua'āina: Living Hawaiian Culture*, Davianna Pōmaika'i McGregor traces the unbroken lineage of native Hawaiians, noting that their very survival is related to their positive relationship to the land and resources where they live and work. Similarly, the various authors in this text recognize the impact of adverse lifestyle, especially urban living conditions on cardiovascular disease, and have weaved new and emerging data related to these findings throughout this work.

Medicine is both art and science. Clinicians who believe that medical knowledge is simply a collection of tangential data cannot fully appreciate the significant interaction between environment, culture, social economic status, and politics that impact the health of each individual in our society. The unique and forward-thinking Ghanaian author, Ayi Kwei Armah, wrote in his groundbreaking fiction/fact-filled novel of the need for Africans to embrace healers. In his 1978 allegorical tale, *The Healers*, he noted that there is greater power in healing than our individual desire for supremacy and accumulation of wealth. This power lies in the ability to help life recreate itself. Although Armah's text refers to African society and the need to overcome the wounds of colonialism, this concept can be applied to any environment where people have been unduly injured and suffer from lack of access to health, unequal application of modern, evidence-based medicine, or live in an environment burdened by poverty and adverse lifestyle.

In 25 years of direct patient care in cardiovascular medicine in my native Ninth Ward, New Orleans, Louisiana, I along with my wife, Daphne Pajeaud Ferdinand, PhD, APRN, maintained an independent, progressive cardiovascular center, Heartbeats Life Center, which served the people of our native Crescent City community. During the development of our clinic, it became increasingly evident that simply prescribing medications, and completing diagnostic testing, and interventional procedures would not successfully curb the disproportionate high levels of cardiovascular morbidity and mortality experienced in the community. On August 29, 2005, the Southern Gulf Coast was devastated by Hurricane Katrina, including the flooding of 80% of New Orleans and the devastated the Lower 9th Ward. Heartbeats Life Center remains at present an empty shell. Nevertheless, the study of cardiovascular medicine and the application of technologically advanced care must continue to respond to the needs of all populations. Working with the Association of Black Cardiologists, the National, Heart, Lung and Blood Institute on its ad-hoc community on minority populations, and the Center for Disease Control and Prevention, and others I have become increasingly aware of the subtle distinctions in how cardiovascular diseases present and are managed in various subgroups.

This compilation hopefully stands as one small effort to define and clarify the nuances of how racial/ethnic groups manifest cardiovascular illnesses and seeks best practices to control risk factors and eliminate unnecessary death and disability. The expert authors will hopefully be recognized for their significant contributions to the medical literature and prompt us to further overcome shortcomings in our understanding of the complex nature of various cardiovascular conditions.

“Wise people are not absorbed in their own needs. They take the needs of all people as their own.”

Inspiration from Tao Te Ching

Keith Copelin Ferdinand, MD

Cardiovascular Disease in Racial and Ethnic Minorities

Ferdinand, K.C.; Armani, A. (Eds.)

2010, XVIII, 331 p., Hardcover

ISBN: 978-1-58829-981-9

A product of Humana Press