Tackling Heart Disease at the Global Level
Implications of the United Nations’ Statement on the Prevention and Control of Noncommunicable Disease

Simon Stewart, PhD, FCSANZ, NFESC, FAHA

This article reflects on the United Nations’ recent statement on the prevention and control of noncommunicable disease, the disproportionate burden of these diseases in low-to-middle-income countries (with a particular focus on noncommunicable forms of heart disease), and the practical difficulties of tackling such a historically underresourced and complex health problem.

Perceptions Are Everything
Like many of us, I have spent more than a decade of my research career trying to persuade the lay public and, indeed, many health care workers and administrators, that cardiovascular disease (CVD) and its major component, heart disease, is a major burden to rival that of the common forms of cancer. The American Heart Association’s “Go Red for Women” campaign is indicative of our collective fight to address common misperceptions about the risk of heart disease in women and its often fatal consequences. Even when presenting compelling evidence of the disproportionate number of men and women who lose their life prematurely (many suddenly and with little warning) to acute myocardial infarction and chronic heart failure relative to the common malignancies, the response is underwhelming. Is this so surprising, given the entrenched branding of cancer sufferers as predominantly young “survivors” in a heroic battle to overcome a life-long disease? The broad misperception of heart disease, of course, is often limited to male-dominated “heart attacks” that leave the “victims” deceased (and therefore unable to tell their battle to survive) or the idea of an instant “cure” thanks to modern-day technology—the external and implantable cardiac defibrillator being the most recognizable of these. There is no “right or wrong” in our efforts to highlight serious public health issues and educate the public and health administrators alike to the enormity of the problem. The terminal malignancy that killed my own father at an early age deserves equal attention to that of heart disease and, indeed, more commonly recognized forms of cancer. There is, however, no reason or excuse for us (the health community) to remain ignorant of major public health crises as they evolve and allow highly preventable disability and death at unprecedented levels to remain unchallenged. Unfortunately, an insidious and highly preventable epidemic of noncommunicable disease forms of heart disease that rivals the epidemic seen in high income countries has taken hold of the rest of the world without an adequate response from those best able to respond to it.

Recognizing the Burden of Heart Disease Beyond Our Borders
I can now publicly confess to being ignorant of the true impact of noncommunicable forms of heart disease in low-to-middle-income countries (LMIC) until I was able to directly witness their profound impact on the most vulnerable and disadvantaged members of our global community. Like many, my original perception of CVD, and more specifically, heart disease in poverty-stricken regions of the world such as sub-Saharan Africa, can be simply characterized as “almost nonexistent” in the adult population and, if present, dominated by infectious cases such as rheumatic heart disease. My first visit to the townships of Soweto in South Africa, followed by an increasing involvement in heart disease research in sub-Saharan Africa, including the Heart of Soweto Study and a stroke surveillance project in Maputo, Mozambique, quickly convinced me that I’d been unjustifiably ignorant of the true burden of disease around the globe. Among the 36 million global deaths per annum attributable to noncommunicable disease (80% of which occurred in LMIC), CVD is the leading cause. Moreover, it is predicted that noncommunicable forms of CVD will become the leading cause of death and disability overall by 2020. The ability of LMIC governments already struggling with the historic burden of communicable disease is best illustrated by the fact they typically spend less than 5% (ie, <$US50 per capita) on health care compared with high-income countries and that noncommunicable disease is often the lowest priority. Unfortunately, my profound ignorance has been shared by those that really matter — those organizations most responsible for identifying global health issues and then supporting efforts to combat them in the form of raising awareness, funding health services research, and supporting care (in the form of training health care workers and funding health infrastructure projects). Without naming and shaming such organizations and not forgetting the myriad of organizations that have been proactive in this area, it is sobering to consider that a...
contemporary report estimated that whereas HIV/AIDS has (deservedly) attracted SUS 1029.10 per related death in global health support and research funding, this compares to only $3.21 per noncommunicable disease-related death. Without a profound shift in our perceptions on the role of noncommunicable disease in limiting the potential health (and wealth) of vulnerable communities in LMIC around the globe, we cannot make the type of investment required to address this global health disaster. It was a relief to many, therefore, that the World Health Organization (WHO) developed a strategic plan to limit the impact of noncommunicable disease in LMIC. This strategy is underpinned by comprehensively mapping the emergence and consequences of this evolving epidemic, reducing exposure to common risk factors (primary prevention) and strengthening health care resources to support those already affected (secondary prevention and disease management). However, talk (including policy and political rhetoric) is cheap, whereas the cost of making a difference in low-resource settings on a global basis will be enormously challenging, particularly when confronted by the commercial resources of the fast-food and tobacco industries.

A Step in the Right Direction: A Declaration of Intent From the United Nations

It was profoundly important, therefore, that a global epidemic of noncommunicable disease (much of which is still poorly understood and based on unreliable projections) be supported by a United Nations meeting and declaration that charges the WHO with leading global efforts to combat this evolving epidemic in much the same way as other global threats have been duly acknowledged and tackled. A number of key statements in the United Nations declaration resonate with those of us who have directly witnessed the profound impact of noncommunicable forms of heart and cerebrovascular disease on individuals who have survived the diseases of poverty while battling to raise sufficient awareness and resources to combat them. These include (paraphrased):

- The profound role of tobacco use, harmful use of alcohol, unhealthy diet, and lack of physical exercise in feeding a new epidemic of heart disease in vulnerable communities.
- The vicious cycle that exists between poverty and noncommunicable disease and therefore the profound socioeconomic impact of this modern-day epidemic on the social and economic health of affected communities.
- The disproportionate burden of care-giving on women coupled with the fact that they often have risk factors for noncommunicable disease.
- The nexus between noncommunicable disease, communicable disease, and multiple affected organs.
- The wider burden of noncommunicable disease on the family unit and social fabric of affected communities.

As part of the Heart of Soweto Study in South Africa, we established a number of aspects around the emergence of noncommunicable heart disease in a large urban African community in epidemiological transition that challenges historic perceptions of heart disease in Africa and simplistic solutions derived from our experiences in combating the epidemic in high-income countries. Notably, we established that women and those of a working age (ie, those often supporting family units and children ravaged by the HIV/AIDS epidemic) bear the greatest burden of noncommunicable heart disease. Moreover, we also established that in the setting of limited awareness of heart disease and health care resources, many affected individuals present with advanced (and often irreversible) forms of heart disease. These cases are often complicated by communicable disease states acquired in childhood (eg, rheumatic heart disease) and diseases linked to the environment and occupation (eg, right heart failure). At face value, the major preventable drivers of noncommunicable disease including tobacco use (particularly men), poor dietary options, and less exercise that have led to a dramatic rise in obesity (particularly women) and hypertensive rather than atherosclerotic heart disease (in both sexes) in urban regions are easy to combat. However, it is difficult to deny someone who has lived in a world of manual labor, malnutrition, and poverty the same opportunities and luxuries enjoyed by those in high-income countries, particularly when they are presented in such an attractive manner by the tobacco and food industries and framed with embedded cultural influences (eg, the stigma of appearing undernourished). The reality of combating an emergent epidemic of noncommunicable disease in sub-Saharan Africa and beyond is more complex and challenging than many of us will ever imagine. However, it is a battle that must be waged and with the full support of our peak international organization (the United Nations) and its most powerful health organization—the WHO.

Conclusions

It is hoped that this timely call to arms will alter our collective perceptions of the threat imposed by noncommunicable forms of CVD in LMIC. It is important to reiterate the size and complexity of the task ahead. As outlined in the United Nations declaration, to reduce the future impact of noncommunicable disease, we will need a systematic approach to monitoring the evolving epidemic of risk and disease to strengthen national public health policies and health care systems from a primary and secondary prevention perspective, build effective collaborations (particularly at the international level), and develop new ways to cost-effectively prevent and control one of our greatest global health challenges. One can only hope that we will see concrete initiatives in the form of greater global funding to support direct action/research in LMIC with a focus on building local capacity for research and delivering effective health care services. High-quality international research, with an investment in policies, people, and infrastructure, will result in an increasing number of high-level reports that provide a better understanding of the problem and effective solutions that translate into less disability, fewer deaths, and greater economic prosperity for the diverse peoples of LMIC. Only time will tell if we can truly expand our efforts to a global level and tackle a crisis that is largely occurring in individuals, communities, and populations that we traditionally know little about.
Acknowledgments

Dr Stewart is supported by the National Health and Medical Research Council of Australia.

Disclosures

None.

References


KEY WORDS: cardiac outcomes ■ cardiovascular diseases ■ health care policy ■ high-risk populations
Tackling Heart Disease at the Global Level: Implications of the United Nations' Statement on the Prevention and Control of Noncommunicable Disease
Simon Stewart

doi: 10.1161/CIRCOUTCOMES.111.963678
Circulation: Cardiovascular Quality and Outcomes is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2011 American Heart Association, Inc. All rights reserved.
Print ISSN: 1941-7705. Online ISSN: 1941-7713

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circoutcomes.ahajournals.org/content/4/6/667