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Population Health

Closing Gaps in Care Around the Globe

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One of the most frequent and compelling questions I have gotten as President-Elect of the American College of Cardiology (ACC) is: "What are you going to do as President?" It is a logical question—of course people want to know the direction the next leader is going to take.

As ACC leaders, we are very fortunate to inherit the foundational work of past leaders. In my case, my most recent predecessors have done great work to expand the ACC's digital strategy and develop a 5-year strategic plan; ensure a continued focus on educational funding and research; broaden the ACC's reach internationally and across the cardiovascular care team; and guarantee a focus on patient-centered care. During my time as President, I hope to focus on increasing our ongoing effectiveness as advocates for patient access to the best cardiovascular care possible, regardless of age, race, ethnicity, sex, income, or geography. Additionally, I hope to focus on the transformation of care across patient populations.

It is well known that cardiovascular disease is a leading cause of death all over the world. In fact, cardiovascular disease mortality is projected to increase from 17.5 million in 2013 to 23.6 million in 2030 (1). So many of these deaths are preventable through education and a focus on closing gaps in care across populations.

Tobacco use, for example, is responsible for 6 million preventable deaths/year across the globe, according to the Centers for Disease Control and Prevention. This is expected to increase to 8 million deaths annually by 2030 (2). The World Health Organization (WHO) has set a global target to reduce the prevalence of current tobaccos use in persons over the age of 15 by 30%. A 1-size-fits-all approach is not the answer to reaching this goal. However, targeting those areas where the greatest disparities in usage occurs just might. For example, tobacco use is 5 times higher among males (37%) than females (5%), causing 12% of global deaths compared to 7% in females. Looking beyond sex to geography, smoking is most prevalent in the Western Pacific region, where nearly one-half of the male population over the age of 15 years smokes. Coming in close second and third, with nearly 40% of males smoking, are the European region and the Eastern Mediterranean (3). Targeted smoking education campaigns directed at males in these areas could go a long way toward meeting the global target.

On a broader scale, efforts to ensure that people are receiving the necessary drug therapy and counseling to prevent heart attacks and strokes are another area ripe for improvement. Indeed, <50% of low-income countries have tests and procedures in place to screen for cardiovascular risk factors like cholesterol and diabetes. Nearly 25% of countries do not have guidelines for management of cardiovascular disease. The probability of dying from 1 of 4 main noncommunicable diseases (NCDs) (the most prevalent being cardiovascular disease) between the ages of 30 and 70 years is highest in Southeast Asia at 25%, followed closely behind by Africa and the Eastern Mediterranean region at >20%. This is compared with countries like Australia, Israel, Italy, Japan, Republic of Korea, and Switzerland, where the probability is <10% (3).

The WHO has set a global target of at least 50% of eligible people receiving drug therapy and counseling to prevent heart attacks and strokes. To do this, the WHO recommends an approach that addresses total cardiovascular risk versus an approach to make treatment decisions solely on

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the basis of individual risk factor thresholds. "A total risk approach enables integrated management of hypertension, diabetes and other CV risk factors in primary care and targets available resources at those persons most at risk," the organization states (3).

What will it take to get here? There have been several recent clinical trials exploring the use of the "polypill" as an option for preventing heart attacks and strokes in people over age 55 years, but further research into cost-effectiveness and other factors is needed. Making drugs more affordable is needed, regardless, particularly in low-income countries. For example, >30 days wages are needed by the lowest paid unskilled worker in the Democratic Republic of the Congo to earn enough money to purchase originator brand medication and a little more than 10 days of wages for the lowest-priced generic hypertension medication (3). Wider-spread use of clinical data registries could also allow for better estimations of all-cause deaths, the effect of drugs and devices on treatment of cardiovascular disease, improvements in prevention across countries, and more. Funding for such surveillance, monitoring, and research is necessary, however, particularly in the areas of Africa and the Eastern Mediterranean.

Community-wide programs targeting cardiovascular disease risk reductions are also proving to be successful. A study published early this year in the *Journal of the American Medical Association* analyzed data over 40 years from 22,444 rural, low-income residents in Franklin County, Maine, beginning in the 1970s. Residents were exposed to the Franklin Cardiovascular Health Program, which emphasized detection and control of hypertension and hyperlipidemia; minimal tobacco use; management of diabetes; and an active lifestyle and healthy eating. Hospital staff as well as local businesses and schools were actively involved in the program to ensure continuity across the county. Results were impressive, with control over hypertension increasing from 18% in 1975 to 43% in 1978, whereas control of elevated cholesterol increased from 0.4% in 1986 to 29% in 2010. The rate of quitting smoking improved from 49% in 1996 to 70% in 2000. Mortality rates also decreased below Maine averages from 1970 to 2010 (4).

How can the ACC have an effect? With nearly 50,000 members around the globe; a growing network of domestic and international chapters with networks on the ground in countless states, countries, and provinces; and strong partnerships with other medical specialty societies and government agencies, the College can have an effect that few other medical societies can deliver. If we can work together to increase international participation in educational activities, encourage global use and exchange of data, and raise public awareness about cardiovascular disease and its risk factors, progress is well within our grasp.

Over the last several years, the ACC has also actively advised the United Nations on its efforts to combat NCDs since the 2011 Political Declaration of the United Nations High-Level Meeting on NCDs. In fact, ACC Past Presidents John Gordon Harold, MD, MACC, Patrick T. O'Gara, MD, MACC, and William Zoghbi, MD, MACC, have all played critical roles in moving from discussion to action around the global target of a 25% reduction in premature mortality from NCDs by 2025. As a member of the NCD Alliance, the ACC is working to support this global target, as well as corresponding NCD targets focused on high blood pressure, smoking cessation, diabetes, obesity, and reliable access to medicines. These goals are embedded in the WHO's global action plan against NCDs. In addition to the WHO, we share these goals with the American Heart Association, European Society of Cardiology, World Heart Association, American Medical Association, Association of Black Cardiologists, and many other medical societies with whom we share goals and strategies.

As technology becomes even more widespread, the ACC can play an important role in advising on the use of clinical registries to improve care, as well as the development of clinical guidelines. Providing access to educational resources is also an area of strength for the College, particularly with the growth and use of mobile devices. Online education and access to guidelines and the latest research is literally within one's grasp.

Of course we will not solve all of the world's cardiovascular problems in 1 year, but I certainly hope to continue us on the path to success and gain more momentum during this year. I hope to build upon our already solid foundation and move us even closer to taking down heart disease as the #1 killer worldwide. This goal is within our grasp and we will succeed.

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