

The Justus-Warren Heart Disease and Stroke Prevention Task Force and the North Carolina Plan to Prevent Heart Disease and Stroke

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One in 4 deaths in North Carolina is attributed to heart disease and stroke. The legislatively mandated Justus-Warren Heart Disease and Stroke Prevention Task Force provides statewide leadership for the prevention of cardiovascular disease. This commentary reviews the work and accomplishments of the task force and its comprehensive plan to reduce the state's cardiovascular burden.

Hear disease and stroke are the cause of approximately 29% of all deaths in the United States and 27% of all deaths in North Carolina. The need for a multi-pronged approach involving changes in policy, the health care system, and the environment has become increasingly evident as the state and nation continue to battle these significant health problems [1,2]. For more than 17 years, the Justus-Warren Heart Disease and Stroke Prevention Task Force has served as an umbrella organization for stakeholders along the continuum of cardiovascular disease (CVD) prevention and care who have united to fight against these leading causes of death and disability.

When the task force was established, heart disease and stroke were respectively the first and third leading causes of death in North Carolina, and the state had the nation's third highest mortality rate from stroke [3, 4]. Prior to the establishment of the task force in 1994, Dale Simmons, the director of the state's Division of Community Health (which no longer exists, but was part of the state's health department in the mid 1990s) recognized that "there was no attention to, no fear of, and no funding for the prevention of cardiovascular diseases, the leading cause of hospitalization and death, and a leading cause of severe long-term disability in adults" [5]. Simmons called for the establishment of an internal state health department work group to develop a preliminary plan for the prevention of heart disease and stroke. The plan, completed in the spring of 1995, was reviewed and endorsed by 25 partner organizations [5]. The first of 10 recommended activities was to establish and fund a legislative heart disease and stroke prevention task force in order to increase visibility and ownership by key policymakers and stakeholders, enhance the state's ability to address policy changes, and secure funding [5].

Later in 1995, the North Carolina General Assembly passed legislation establishing the North Carolina Heart Disease and Stroke Prevention Task Force (subsequently named the Justus-Warren Heart Disease and Stroke Prevention Task Force) [6]. The legislation specifies that North Carolina's governor and the General Assembly, upon the recommendations of the speaker of the house and the president pro tempore of the senate, shall appoint 24 of the task force's 27 members [5], with 6 of those seats designated for legislators (3 recommended by the president pro tempore of the senate and 3 recommended by the speaker of the house). The remainder is filled by health professionals, survivors, members of volunteer and governmental organizations, business leaders, and a representative of the media. In addition, there are 3 designated positions for certain key leaders within the North Carolina Department of Health and Human Services (NC DHHS), thereby ensuring a close working relationship between the task force and the department. The membership is configured to also reflect North Carolina's demographic characteristics. In addition, a large number of partners and resource persons attend task force meetings and participate in committees, giving essential support to the work of the task force. Relationships with the American Heart Association/American Stroke Association (AHA/ASA) and with groups such as the North Carolina Hospital Association, which have government relations staff, have been particularly helpful in addressing the policy work and maintaining the viability of the task force.

The legislation enabling the task force outlines 3 key charges: to develop a profile of the CVD burden in North Carolina; to publicize that burden and its preventability; and to develop a comprehensive statewide prevention plan [5]. The initial task force appropriation in 1995 of \$100,000 per year for 2 years established 2 positions: an executive director and administrative assistant [5].

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North Carolina has a stroke mortality rate that is among the highest in the nation [7]. In April 2005, a bill was introduced in the North Carolina General Assembly, requiring that every hospital in North Carolina have a plan for acute stroke care [8]. Although this legislation did not pass, other legislation was passed in 2006 directing the task force to establish and appoint a Stroke Advisory Council (SAC) [9]. The council was charged with advising the task force regarding the development of a statewide system of stroke care that would include the identification and dissemination of information about the location of primary stroke centers. Seventeen SAC members, including stroke experts and stakeholders, were appointed by the task force. The task force and the SAC are supported by staff of the Division of Public Health, NC DHHS, and specifically staff of the Heart Disease and Stroke Prevention Branch, with assistance from other members of the Chronic Disease and Injury Section.

Task Force Accomplishments

There have been numerous accomplishments since the task force was formed. One that best reflects the collective achievement is the reduction between 2000 and 2009 in North Carolina's heart disease and stroke death rates by 32.7% and 37.9%, respectively. These reductions exceed Healthy Carolinians 2010 objectives [10]. In addition, the proportion of all North Carolina deaths due to CVD dropped from 38.1% in 1996 to slightly less than 28% in 2010. Between 1996 and 2010, there was also a narrowing of the gaps in stroke mortality between North Carolina and the United States and also between African American North Carolinians and white North Carolinians [10]. Although numerous factors contributed to these successes, many experts on this subject believe that the work of the task force and its many partners is the major contributing factor.

Because of the widespread prevalence of CVD and the multiple risk factors with which it is associated, there is an unparalleled opportunity to make a measurable difference by bringing together all those involved along the continuum of care from primary prevention to rehabilitation and recovery. The task force has served as a vehicle to garner diverse support from multiple partners and has enabled the state to leverage significant human and financial resources. The important accomplishments of the task force and its many partners would have been unlikely had North Carolina not been one of the first 2 states in the nation to be awarded CDC funding at the comprehensive level. In 1998—when CDC announced this funding opportunity—the Justus-Warren Heart Disease and Stroke Prevention Task Force was in place and had already received some state funding. The comprehensive funding from CDC (\$1.25 million per year for 5 years) positioned North Carolina to become a leading state in heart disease and stroke prevention. Since 1998, the state's initial investment of \$100,000 per year for 2 years has provided a return of over \$20 million in CDC funds.

There have been other milestones as well. In 1998, the task force first published a comprehensive report on the burden of CVD in North Carolina, which is continuously updated. Three comprehensive plans to prevent and improve cardiovascular health (CVH) along the continuum of care have been developed, including an evidence-based comprehensive stroke system of care (SSoC) plan for North Carolina. Several noteworthy accomplishments have been made based on task force reports and plans. These accomplishments have had statewide implications, and have allowed for customized approaches at the regional and local level. For instance, stroke networks, which provide regionally coordinated and locally driven approaches to cerebrovascular issues, have been developed in the western and then the eastern areas of the state.

Legislative members of the task force have been instrumental in the development and passage of legislation to support task force recommendations. Members have successfully sponsored legislation that prohibited smoking in multiple venues statewide. The task force recommended legislation in 2007 that made all state government buildings smoke-free [11], and sponsored the bill that prohibited smoking in the state government motor fleet in 2008 [12]. They also recommended legislation in 2008 that gave clear local authority for community colleges to prohibit smoking and all tobacco use on their campuses [13]. In addition, task force members sponsored legislation in 2009 making all restaurants and bars smoke-free [14]. In a presentation to the task force in November 2011, then State Health Director Jeffrey Engel, MD, reported on a study showing a 21% decline in the average number of emergency department visits per week for heart attacks in the 12 months following implementation of the smoke-free restaurants and bars law [15].

The task force has provided supplemental support to the CDC-funded North Carolina Stroke Care Collaborative quality improvement program, as recommended by the task force's Stroke Advisory Council in January 2007, to assure evidence-based stroke care in all North Carolina hospitals. And the task force partnered with the North Carolina Office of Emergency Medical Services (EMS) to develop an acute stroke care toolkit for all of the state's EMS systems to assure evidence-based protocols for prehospital recognition and treatment of stroke. The task force also supported a signs and symptoms awareness campaign to address the time-sensitive nature of heart attacks and strokes and to enhance early recognition and activation of the chain of survival by calling 911.

The complexity and demands of today's health care environment require continued leadership by the task force. In May 2012, in correspondence to a legislator regarding recent North Carolina legislation (the Boards and Commissions Efficiency Act of 2012) seeking to eliminate the task force along with a long list of other boards and commissions, Jim Stackhouse, a member of the task force for 17 years, made the following statement:

The task force actually evolved to coordinate the activities of multiple private and state-funded activities in heart disease and stroke prevention. It did this by bringing to the table entities that had had little to do with each other before, and in some cases did not know of each other's existence. But the synergy was impressive. And duplication of state services was reduced.

North Carolina's Plan to Prevent Heart Disease and Stroke

As noted above, the development of a comprehensive statewide plan to prevent heart disease and stroke is 1 of 3 main charges to the task force. To date, 3 plans have been developed. The first was published in 1999 (for years 1999-2003), the second in 2005 (for years 2005-2010), and a third will be released in late 2012 (for years 2012-2017). Each comprehensive plan describes the vision of diverse stakeholders who collectively have prioritized goals, objectives, and strategies to best address CVH in North Carolina. The current plan guides the work of the task force and of the state Heart Disease and Stroke Prevention Branch, and its work with partners as well. The plan also includes a platform for funding and policy priorities and incorporates the work done by the SAC in developing the SSoc Plan, which is incorporated in the 2012 plan.

The overarching goals of North Carolina's comprehensive plan are to increase quality and years of healthy life through heart-healthy and stroke-smart environments; to improve cardiovascular disease prevention, treatment, and rehabilitation; and to eliminate health-related disparities. These objectives are all designed to increase the proportion of North Carolinians who live healthy lifestyles supportive of cardiovascular health, whose risk factors have been identified and are appropriately managed and controlled, who have access to and receive appropriate integrated emergency and acute care for cardiovascular events, and who receive appropriate coordinated management of postacute transitional care following cardiovascular events.

Each updated version of the plan reflects new and expanded priorities and partnerships. To work most effectively and use the expertise of members and partners in the development of the 2012-2017 plan, working groups have been formed along the continuum of care to focus on each of these areas: prevention and public awareness, emergency response, prehospital care, acute care, recovery and transitions of care, and telestroke. Each group has been tasked with identifying goals, objectives, strategies, and organizations responsible for implementation and baseline and target measures—all while addressing disparities. Strategies must be implementable within 5 years, have the greatest opportunity for impact and reach, be evidence-based, and leverage resources.

The new plan also includes some promising practices such as advocating for system changes that integrate and sustain the use of community health workers and other health care extenders into primary care settings. This would provide

increased support for CVD prevention and management. And several strategies in the plan have implications beyond CVH. One of these, telehealth, holds particular promise for treatment and services in areas where there is limited access to specialists and rehabilitation. In addition, access to primary care is another facet of health care that has received strong recognition in the plan for its pervasive influence on CVH.

The initial plan (1999) centered on primary prevention [16]. The second plan (2005) continued to address primary prevention, but also incorporated an increased focus on secondary prevention, which was required by CDC funding and was reflected in the 2003 edition of the CDC publication *A Public Health Action Plan to Prevent Heart Disease and Stroke* [17, 18]. This national action plan includes a comprehensive framework on which the North Carolina plan has been based and which will continue to guide the work of plan implementation, which lies ahead. Also during the planning period for the 2005 plan, modified directives were received from the CDC to focus on the ABCS (aspirin, blood pressure, cholesterol, smoking cessation) reflected in the national Million Hearts Campaign. The 2005 plan also incorporated new data findings, national guidelines, evidence-based strategies, and promising practices identified by expert panels and groups.

As evidence-based information and recommendations on behavioral approaches become available, along with clinical guidelines, social determinants of health, community and clinical linkages, transitions of care, policy changes, environmental changes, and system-level changes, they will be incorporated into the objectives and strategies of the new plan, which is currently under review. Work on the plan and the partnerships required to develop and implement it have highlighted the need to continue to break down disease-specific silos and integrate public health into new domains. Implementation will require support at fiscal, clinical, programmatic, and policy levels. Each year of delay in moving forward imposes a substantial burden on the state and the many individuals and families representing the faces of CVD. With new research findings, evidence-based strategies, and an economy that demands efficiency, we are perhaps better armed than ever to meet the challenge of creating a heart-healthy and stroke-free North Carolina. **NCMJ**

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