

The North Carolina Division of Public Health's Vision for Healthy and Sustainable Communities

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The North Carolina Division of Public Health is working to improve access to physical activity through changes in the built environment by participating in the Healthy Environments Collaborative and by leading the state's Communities Putting Prevention to Work project and the Shape Your World movement.

Prevention is critical if we are to curb the steady increase in health care costs that is greatly affecting our state. In 2010, an estimated \$14 billion in medical costs and lost-productivity costs in North Carolina were attributable to 3 preventable risk factors: tobacco use, physical inactivity, and low dietary intake of fruits and vegetables [1]. Prevention is necessary to decrease demand for limited health care resources, to decrease health care costs, and most important of all, to increase the health and quality of life of North Carolinians, especially those affected by health disparities. Advancing health through prevention will require continued improvement of and support for the provision of health care services, as well as a new emphasis on making changes with respect to environmental influences on health. These changes include improving air quality, decreasing exposure to secondhand smoke, decreasing exposure to lead and other potential toxins, assuring continued access to safe drinking water, and designing the built environment to improve access to physical activity. The built environment consists of human-made resources and infrastructure designed to support human activity, such as buildings, sidewalks, parks, stores, and roads [2]. Increasing access to safe places to be physically active makes it more likely that individuals will engage in physical activity, which is associated with decreased risk of developing heart disease, type 2 diabetes, stroke, and some cancers [3].

Research shows that the built environment affects physical activity levels. A cross-sectional study was recently conducted to examine the effect of light rail transit (LRT) on body mass index (BMI) and physical activity levels in Charlotte. Individuals living within a 1-mile radius of a new LRT line were surveyed by telephone 8 to 14 months before the line was operational and again 6 to 8 months after it began operating. When the people who used LRT were com-

pared with similar individuals who did not use it, a significant association was found between LRT use and reductions in BMI over time. LRT use was also associated with reduced odds of becoming obese. In addition, the study found that people who reported a more positive perception of their neighborhood had a lower BMI, were less likely to be obese, and were more likely to engage in the recommended amount of physical activity (20 minutes of vigorous activity 3 times a week, or 30 minutes of walking 5 times a week) [4].

Putting Prevention to Work

Affecting change in the built environment will require new partnerships, and to this end the Physical Activity and Nutrition (PAN) Branch of the Division of Public Health (DPH), North Carolina Department of Health and Human Services has expanded its strategic approach to increasing access to physical activity across the state. With an understanding that decisions made outside of the public health and health sectors affect the health of the population by improving or limiting access to physical activity, the DPH has aligned strategically with other state agencies. Understanding the interconnectedness of the different agencies that shape the community and how their decisions affect health is critical to achieving good health for the population. "Health in all policies" is an approach to the decision-making process that acknowledges that many decisions made outside of the health sector affect the health of the population. Including health benefits and impacts as a part of the decision-making process ensures that health is considered along with economics, commerce, transportation, safety, environment, education, and other factors.

Since 2006, the North Carolina Departments of Transportation (DOT), Environment and Natural Resources (DENR), Commerce, and Health and Human Services (specifically DPH) have been working together through the Healthy

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Tobacco-Free Parks: Maximizing Health Impact in Built Environment Planning

Erin Shoe

Established in 1997 as a successor to the Cabarrus County Health Department, Cabarrus Health Alliance (CHA) is organized as an independent governmental entity and is incorporated as the Public Health Authority of Cabarrus County. The CHA board of health has expressed its philosophy and vision in the alliance's mission statement: "We aim to achieve the highest level of individual and community health through collaborative action."

CHA seeks to improve overall community health and to eliminate health disparities by providing clinical services, health education, and prevention programming to the uninsured and underserved in Cabarrus County. Additionally, CHA has a model health initiatives department that provides programming to address needs identified through the community needs assessment (a comprehensive report containing primary and secondary data, which is compiled every four years by a variety of community stakeholders to analyze the health of the community). These programs include heart disease and stroke prevention, teen pregnancy prevention, tobacco prevention and cessation, faith-based exercise and nutrition, and childhood obesity prevention.

Reducing exposure to secondhand smoke is one of the most critical steps that can be taken to protect the public's health. The Surgeon General released a report in 2006 stating that scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke. Thus, breathing even small amounts of secondhand smoke can be harmful to your health. Exposure causes heart disease, lung cancer, and acute respiratory effects. Among children, secondhand smoke increases the risk for ear problems and exacerbates asthma, and infants who are exposed are at greater risk for Sudden Infant Death Syn-

drome (SIDS) [1].

While tobacco and smoke-free initiatives have been present in public health programs for many decades, there were multiple local and state efforts in the mid-2000s working toward tobacco-free policies and helping people become tobacco-free. Examples of such initiatives include the statewide TRU (Tobacco Reality Unfiltered) campaign, advocacy for tobacco-free venues, local Healthy Carolinians partnerships, and local heart disease and stroke prevention efforts. In addition, social acceptance of tobacco free and smoke-free venues was on the rise. Equally important to note, Cabarrus County was home to one of the world's largest and most successful tobacco manufacturers, Phillip Morris, from the early 1980s until 2009 when Phillip Morris closed the Cabarrus plant and consolidated operations in another state. All of these forces combined to form a springboard for public health and county leaders to move forward in adopting tobacco-free policies, ordinances, and rules.

With all of this in mind, CHA initiated one of the first tobacco-related policies in the county with the adoption of a board of health rule in 2005 prohibiting tobacco use within 50 feet of county-owned or county-operated buildings and air intakes. This rule still allowed tobacco use in some key areas such as outdoor spaces including parks. Allowing tobacco use in parks and other recreational spaces really counters what those spaces are intended for—places for people to be active and healthy.

Park directors from Cabarrus County, the City of Concord, and the City of Kannapolis all agreed that an additional policy was necessary to further restrict usage in the parks. At a meeting in 2010, the Cabarrus County Parks and

Environments Collaborative (HEC) to address areas of intersection between the environment, the economy, and health. This work was accelerated in 2010, when DPH became one of only 13 state health departments to receive Communities Putting Prevention to Work II (CPPW II) funding. This funding, provided through the 2009 American Reinvestment and Recovery Act, was awarded to state health departments that could demonstrate a readiness to implement special large-scale, statewide policy, or environmental change initiatives that affect population groups rather than individuals. One of the stated goals of the funding was to reduce health care costs through prevention.

The PAN Branch of DPH partnered with the Department of Health Behavior and Health Education of the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill (UNC-Chapel Hill) on the design and implementation of the CPPW II project. The UNC-Chapel Hill partners brought innovation and expertise in policy anal-

ysis to the project, and the PAN Branch had a strong working relationship with the HEC. Working together, the team designed and implemented a project to create environments that support active living. Strategies include working with the HEC to integrate health concerns into projects involving transportation, the environment and natural resources, and commerce; working with municipalities to inform state-level work by providing information on barriers and facilitators to creating active living environments at the local level; and creating a communications campaign to help people understand how the environment around them affects their health and to let them know how they can become involved in making changes in their local communities to support active living.

Using an approach that involves state-level partners, community-level partners, and community members was critical in creating change across the state. The state-level partners in the HEC reviewed their practices, policies, and

Recreation Commission suggested eliminating tobacco use from all parks owned or operated by Cabarrus County. After speaking with management and sensing initial approval, parks and recreation leaders, including Cabarrus County Parks and Recreation Director Londa Strong, began working with CHA on the best way to proceed.

In addition to CHA, many partners were involved from the onset of policy development, including all municipal parks and recreation departments. All departments agreed that it would be ideal to create a policy or ordinance and signage that were consistent across all parks to reduce confusion among citizens. One municipality, Harrisburg, located within Cabarrus County already had an ordinance, but had neither signage nor enforcement. The Cabarrus County staff were the first to take a policy to their elected board, the county commissioners, on June 20, 2011. They unanimously adopted the tobacco free ban in parks. The cities of Kannapolis and Concord quickly followed with policy adoptions of their own. The final policy was finalized after collaborating with the Tobacco Prevention and Control Branch of the Division of Public Health, North Carolina Department of Health and Human Services. The branch was instrumental in providing ordinance examples and guidance on language to include in the final version.

To support the Cabarrus County parks ordinance, a group of teens from the Healthy Cabarrus Teen Task Force presented tobacco facts and expressed their agreement with the policy at a monthly work session of the Cabarrus County Board of Commissioners. The commissioners were very engaged in the presentation and posed questions to the teens. These task force members had been involved in tobacco prevention work and policy advocacy for several years. Their message was passionate and powerful. Much to the surprise of staff, the commissioners unanimously voted to place the policy adoption on the consent agenda for their next board meeting.

After Londa Strong explained Cabarrus County's process and presented its experiences at several North Caro-

lina Recreation and Park Association board meetings and conferences, she was contacted by other agencies for information. The towns of Huntersville, Salisbury, Davidson, and the counties of Rowan, Gaston, New Hanover, and Watauga County are some of entities she has shared information with about the ordinance and how it was implemented.

The feedback from park patrons has been very positive. A number of people have thanked officials for taking this needed step to protect the health of Cabarrus County citizens. Proper research and planning among county department heads, collaboration with the Tobacco Prevention and Control Branch, and a compelling presentation from the teens all made it easier to pass this policy. The time was right to make this courageous step forward for the health of the citizens of Cabarrus County. Having tobacco-free parks is one more way to create spaces where people can be active without the concern of secondhand smoke. NCMJ

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planning processes that have an impact on physical activity. They considered ways to increase support for and alignment around these activities. One unique example that arose from this project was the space allotment required at the local level for greenways. Partners at the DOT and the DENR discovered that the DOT's space requirements for local greenways differed from DENR's requirements. Once they became aware of this discrepancy, the 2 departments were able to resolve it, and requirements no longer hinder approval for proposed greenway projects.

Through a competitive application process, 11 municipalities—the cities of Gastonia and Wilmington, and the towns of Midland, Eden, Mount Gilead, Carrboro, Ashokie, Lumberton, Sparta, Banner Elk, and Waxhaw—received funding to identify barriers to active living in their communities, create action plans, and engage in projects to promote active living. The projects included updating comprehensive land use and transportation plans, adopting a resolution in support of the DOT's Complete Streets Policy (which intends to

make streets useable by all types of users including pedestrians, bicyclists, transit riders, motorists, and individuals of all ages and capabilities), implementing bike routes by adding signs and creating maps showing the routes, and initiating new programs. In addition, the municipalities informed the HEC of the barriers they encountered and engaged in dialogue about potential solutions.

Conclusion

As a result of the CPPW II project, the HEC partnership has strengthened and increased its focus on active living, and each partner has found ways to align its efforts with those of other state agencies. For example, the DOT is integrating public health considerations into the long-range transportation planning process, the statewide bicycle and pedestrian plan, and the Complete Streets design guidelines; the North Carolina Department of Commerce hopes to incorporate "access to physical activity" criteria into the worksite certification program; and the DPH has begun

Shape Your World

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Shape Your World (SYW) is a statewide movement of North Carolinians who are committed to creating safer, healthier, and more connected communities to support physically active lifestyles. SYW mobilizes people across the state to get more involved by asking them to see their community in a new way, to connect with the issue by understanding the benefits that an active living environment can bring to them, and to act to shape the built environment in their community. SYW encourages people to think about how their communities are designed and to realize that they have a voice in how the community gets built, developed, or changed.

The SYW Web site (<http://www.ShapeYourWorldNC.com>) contains a wealth of resources that help community members learn about the built environment and learn how they can become engaged in creating the changes they want to see happen. The Web site contains many resources to help community members better understand and become engaged in shaping the active living environment in their community, including the following: a walkability and bikeability checklist; success stories of people across the state who are making changes in their community; a visualization tool that allows the user to upload pictures and add elements to a space, such as bike

racks, lights, or a playground, to see what various changes might look like; and a search tool to help community members find county commissioners, local planners, and parks and recreation departments. **NCMJ**

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work on increasing joint-use agreements between communities and facilities offering green space and playground access as part of public health interventions. The HEC state agencies are collaboratively looking at how to increase the inclusion of health considerations in comprehensive planning with an understanding of the connections between health and land use planning, transportation planning, environmental equality, and economic development.

The participation of state-level partners, community-level partners, and community members in the CPPW II project has been essential to its success. The HEC partnership has played a critical role in helping each individual agency understand how state departments could align and integrate efforts to support active living. Municipalities have been able to inform state partners of barriers they experience in their communities as a result of state practices and policies. Local community partners and community members have been able to better understand how the built environment can help or hinder their ability to make healthy choices.

In the end, we all win when North Carolina communities become healthier through increased access to physical activity. This requires collaboration between local community members, health officials, the public health community, parks and recreation organizations, regional planners, decision makers, and local and state agencies. The DPH is incorporating this vision in planning its work. Adding input from the medical and public health communities will facili-

tate success in these efforts and set us on a path to lower the demand for medical treatment, decrease health care costs, and improve the quality of life and the level of wellness for the entire population. **NCMJ**

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