The North Carolina Physical Activity Policy Research Center:

Making Connections with North Carolina Planners

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Physical activity participation for youth and adults is suboptimal in North Carolina. There is growing interest among policy makers to promote physical activity, yet research in this area is limited. The North Carolina Physical Activity Policy Research Center was established in 2004 to conduct research on physical activity and policy. This cross-disciplinary center brings together faculty and researchers from the University of North Carolina School of Public Health and the College of Arts and Sciences. Current projects include understanding and documenting polices that affect walking and bicycling to school, trail development, and community planning decisions related to physical activity.

Physical activity is defined as any movement of the body that is produced by moving muscles (U.S. Department of Health and Human Services, 1996). Physical activities include exercise, such as jogging or bicycling for leisure, but also encompass such activities as walking to the bus stop or a store, gardening, or taking the stairs instead of the elevator. Health and quality of life can be substantially improved through accumulation of regular amounts of moderate-to-vigorous physical activity (U.S. Department of Health and Human Services, 1996).

Despite the importance of physical activity, the prevalence of physical activity remains low. This is especially true in North Carolina, where in 2004 almost 25 percent of adults reported no leisure activity in the past month, such as walking, bicycling, or gardening (Centers for Disease Control and Prevention, 2005a). Furthermore, in 2003 almost 35 percent of North Carolina high school students did not participate in at least 20 minutes of vigorous physical activity on three or more of the past seven days, and did not do at least 30 minutes of moderate physical activity on five or more of the past seven days (Centers for Disease Control and Prevention, 2005b).

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The decision to be physically active is influenced by a variety of factors. These include individual factors such as health, motivation, or enjoyment of activity; interpersonal factors such as social support; environmental factors such as living near sidewalks and trails; and policy factors. There is growing evidence that the built environment and the policies shaping it influence people's opportunities to integrate physical activity into their daily lives. A report issued by the Transportation Research Board and Institutes of Medicine of the National Academies (Committee on Physical Activity, 2005) reviewed studies from the areas of urban planning, travel behavior, public health, and physical activity. Although the report found that the relationship between the built environment and physical activity is complex and multifaceted, it provided evidence that the built environment can facilitate or hinder physical activity. Some policies that influence community characteristics and the built environment include sidewalk conditions, bike paths, street connectivity, population density, land use mix, school siting policies, school acreage standards, congestion, and traffic volume. Several of these policies are linked to physical activity but have yet to be systematically examined (Saelens et al, 2003; Collins and Kearns, 2003; Ewing et al, 2003). Therefore, the Centers for Disease Control and Prevention (CDC) created the Physical Activity Policy Research Network in October 2004 to develop a physical activity policy research agenda that would bring together interdisciplinary research expertise from such fields as public health, transportation, urban planning, and architecture.

The North Carolina Physical Activity Policy Research Network

The Network was established as part of the Prevention Research Centers' program, with funding from the Division of Nutrition and Physical Activity at CDC. As formally established, the network consists of four member centers (University of North Carolina, Harvard University, University of South Carolina, and University of Washington), one coordinating center and member (St. Louis University), and a group of CDC technical advisors. Since the founding, several other Prevention Research Centers have joined the network as affiliate member centers. More information can be found online at http://prc.slu.edu/paprn.htm. The mission of the Physical Activity Policy Research Network is to conduct transdisciplinary policy research by:

- Identifying physical activity policies
- Identifying the determinants of the policies
- Describing the process of implementing policies
- Determining the outcomes of physical activity policies

Each member center receives guidance from an advisory board. The advisory board for the North Carolina Center is comprised of an interdisciplinary team with representatives from planning, transportation, architecture, public health, economics, parks and recreation, and law (see Table 1 for listing of current advisory board members).

The North Carolina Physical Activity Policy Research Center is presently working on four physical activity policy-related projects. The first two projects involve collaboration with other centers to study 1) active transport to and from school, and 2) trail development. For the other two projects, the center is conducting two case studies of how policy and community planning affect physical activity and health in specific counties. A brief description of each project is provided next, along with a summary of research questions pertinent to planners that these projects could address (Table 2).

Project 1: Identifying Policies Affecting Active Transport To and From School.

In North Carolina, the prevalence of walking and bicycling to school is low (Evenson, Huston, McMillen, Bors & Ward, 2003). Initiatives that promote walk-

Table 1: Advisory Board for the North Carolina Physical Activity Policy Research Center

Semra A. Aytur, Ph.D.	Postdoctoral Fellow at UNC-Chapel Hill in the Department of Epidemiology.
Carolyn Crump, Ph.D.	Research Assistant Professor at UNC-Chapel Hill in the Department of Health Education and Health Behavior
Janet D'Ignazio, MRP	Senior Research Associate at the NC State University Institute for Transportation Research and Education
Eric Finkelstein, Ph.D., MHA	Senior Economist at RTI International
Karla Henderson, Ph.D.	Professor at NC State University in the Department of Parks, Recreation, and Tourism Management
Laurie Mesibov, JD	Professor of Public Law and Government at the UNC-Chapel Hill School of Government
Jimmy Newkirk, BS	Physical Activity Coordinator for the NC Department of Health and Human Services, NC Division of Public Health, Physical Activity and Nutrition Branch
Tony Sease, M.Arch, BSE	President of Civiteach, LLC
Sarah Strunk, MHA	National Program Director of Active Living by Design, a Robert Wood Johnson Foundation Program
Sherée Thaxton, MA, RD, LDN	Healthy Weight Communications Coordinator for the NC Department of Health and Human Services, NC Division of Public Health, Physical Activity and Nutrition Branch
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ing and biking to school are an excellent example of physical activity policy and the commitment of community and school to children's health. The purpose of this project is to explore the barriers and enablers of active transport policies in a sample of diverse elementary schools. Additionally, the researchers will compare and contrast policies and initiatives at the different schools across the United States. Interviews with key informants, such as principals, school board members, physical education teachers, local planners, public safety officers, community coordinators, and parent representatives will provide insight on the important aspects of policies affecting transport to and from school.

Project 2: Exploring Policy Change in the Development of Community Trails

The development of a multi-use trail is an example of an intervention that could increase physical activity among community residents. The network will be conducting a multi-site case study to explore the policies involved with trail development. Specifically, the objectives of the study are to identify the process by which policies are enacted or changed to facilitate the development of a community trail and to explore differences in policy changes as they relate to diverse locations and populations. The methodology will include examination of historical documentation of trail development and key informant interviews.

Project 3: Community Planning for Health and Physical Activity in North Carolina.

The goal of this case study is to explore how communities have used the planning process, specifically land use and transportation planning, to address issues relating to community health, community organization, and equity. The project team will choose one or two communities in North Carolina that have developed plans utilizing innovative land use and transportation planning strategies. Within these communities, several perspectives will be sought, including, but not limited to, community members, community-based organizations, local government officials, planners, parks and recreation officials, public health professionals, conservation groups, and university collaborators. Qualitative

Table 2: Potential Research Questions to be Addressed by Each Project

Project 1: Identifying Policies Affecting Active Transport to and from School	
Research Questions	What kind of policies, initiatives, or programs successfully encourage active transport? (e.g., transport/walk zones, school siting, city/school district level coordination with school, Safe Routes to School) What are the barriers and enablers to active transport policies in the school-community sites being studied? (e.g., lack of adequate pedestrian signage, lack of parental support, lack of support within the school, school siting) What conditions have to be in place for these policies, initiatives, or programs to be successful? (e.g., pedestrian/bicycle facilities, interagency coordination, walking culture within area) Who are the key players in the process and who needs to be included? (e.g., school officials, parents, planners, transportation planners)
Project 2: Exploring Policy Change in the Development of Community Trails	
Research Questions	Which policies enable or hinder trail development? (e.g., land use policies, SAFETEA-LU funds, local support, city/county government cooperation, zoning changes, use of rail corridors) Who are the key players in policy change process? (e.g., community groups, city officials, planners, transportation planners) Are there similar factors that facilitate or hinder community trail development across sites? Are the differences or similarities related to trail characteristics? (e.g., location, length, type, funding)
Project 3: Study Community Planning for Health and Physical Activity in North Carolina	
Research Questions	How did the community collaborate with partners such as nonprofit groups, government officials, and university researchers to develop the comprehensive or town plan? How do different policy subgroups perceive benefits and/or costs to themselves from various aspects of the comprehensive or town plan? How do different policy subgroups perceive benefits or costs to other groups? To what extent has the comprehensive or town plan been implemented? Which groups or coalitions are still actively involved in planning or other civic processes? How has their role evolved? How do community members or different groups perceive the value of the spaces created by the plans (e.g., greenways, soccer fields, ATV park, community gardens, etc.)? What are the material (resource-based) results and what are the process-oriented results (e.g., participation in the process, capacity building, empowerment)?
Project 4: Exploring Physical Activity Policies in a Single County	
Research Questions	Who are the main advocates of policies that facilitate physical activity in Montgomery County (e.g., planners, environmentalists, health advocacy groups)? Is physical activity an explicit or an incidental outcome of planning interventions in Montgomery County? What policies have towns in Montgomery County adopted that encourage people (both children and adults) to be more physically active? What barriers hinder advocacy for physical activity through planning interventions? How are these barriers managed?

research methods will be used to explore questions such as whether the planning process was used as a means of building community capacity for health, whether the process facilitated dialog across various community coalitions, the extent to which plan implementation occurred, and how different community groups may perceive the value of public spaces created by the plans in different ways, especially with respect to interpretations of health.

Project 4: Exploring Physical Activity Policies in Montgomery County, Maryland

The center is also conducting a case study of Montgomery County, Maryland, to examine how county policies can influence physical activity directly or in unanticipated ways. The project team began by collecting, coding, and relating the land use plans that exist in the county both presently and historically. They followed this with 26 key informant interviews in spring 2005, including land use planners, transportation planners, parks and recreation employees, county and state elected officials, and individuals involved in health promotion. Initial results indicate that many officials who are engaged in policy-making efforts that affects physical activity do not perceive their roles as being physical activity-related. In addition, the following elements were found to be important for implementing policy: knowledge and intent, commitment and capacity, coordination, and the existence of a policy champion.

Conclusion

The North Carolina Physical Activity Policy Research Center provides a venue for researchers and professionals from various disciplines to work together to inform policy research, interventions, and dissemination to improve population levels of participation in physical activity. The goal to study the effectiveness of policies in changing the environment to increase physical activity and to disseminate research findings to policy makers, practitioners, and researchers is being achieved through several projects. Members of the Policy Research Center expect to contribute planning- and policy-related evidence to improve the health of North Carolinians.

Across all levels of government, land use and transportation decisions and policies that planners help develop can impact the health of their community. The research conducted thus far demonstrates that planning policies that incorporate health objectives are able to accomplish a number of other goals as well, including those of greater community sustainability and well-being. The North Carolina Physical Activity Policy Research Center is available to planners as a resource to help support and inform such policies.

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