

The Blue Ridge Corridor Experience

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During the 33 years that have passed since moving to Raleigh at age 16, I have witnessed a dramatic increase in the population of the Piedmont and the influence of that growth on land use. As a primary care practitioner with the rare benefit of living within walking distance to my office on Blue Ridge Road in west Raleigh, I have also become aware of the lack of attention in the modern urban environment to the health and safety of those not traveling by motor vehicle. I am now privileged to be involved in a project that is trying to bring about land-use decisions designed to make our community healthier and more sustainable.

In the mid 19th century, landscape architect Frederick Law Olmsted Sr was a pioneer in recognizing that urban planning should take public health concerns into account. (Olmsted Jr, discussed in Silver's commentary, did not share his father's passion for public health.) Olmsted Sr envisioned New York City's Central Park as the "lungs of the city" [1]. This synergy—between public health and city planning—continued for about a century, and improvements in community infrastructure generally resulted in public health benefits. However, these two disciplines were separated for many reasons over the years, one of which was the advent of automobile-centric urban sprawl during the last half of the 20th century. Indeed, urban planning during this period had unintended negative consequences for individual and population health.

Locally, Raleigh's land use increased more than 10-fold between 1950 and 2000, growing more than 3 times as fast as the population [2]. Long considered "a city within a park," Raleigh earned another nickname: "Sprawleigh" [3]. Although the city has a nationally renowned greenway system primarily designed for recreational use, pedestri-

ans, bicyclists, and those traveling by public transportation have rarely been considered during development of the city's major corridors. During the second half of the 20th century, Raleigh's thoroughfare plan and buffering and landscaping requirements also created barriers to physical activity through an imbalance of preferred transportation modes [4].

Over the past few years, the pendulum has begun to swing in the opposite direction both locally and nationally. The economic downturn has forced a reassessment of existing resources, with developers and the public now more likely to join urban planners in recognizing the need to coordinate land use, transportation, and infrastructure. At the same time, a growing body of evidence has developed documenting the role of the built environment in health problems associated with physical inactivity [5]. Additionally, the Centers for Disease Control and Prevention, in conjunction with the US Department of Health and Human Services, has begun to promote the use of health impact assessments as a means of identifying the potential effects of proposed projects on the health of a population. In fact, the national Healthy People 2020 goals incorporate measures of the built environment [6].

I became interested in the literature on these topics while serving as chair of a group of stakeholders in the Blue Ridge Corridor (BRC) that is focused on coordinating the area's rapid growth. In my office, I was seeing first-hand the rise in obesity and associated diseases such as diabetes over the past two decades and noted that minimal attention was being paid to the root causes of obesity within the medical literature. Ultimately, my professional interests began to overlap with my role in the BRC planning process.

efficient, more livable, more attractive, and less chaotic. The planning conferences held in 1909 and 1910 were both called the National Conference on City Planning and the Problems of Congestion. But by 1911, Olmstead had persuaded the planning association to drop the phrase "the Problems of Congestion" from the name of the conference. Olmstead wanted to develop city planning as a field of physical planning and knowledge. Unlike Marsh, he was not interested in mounting a national campaign for social reform [3]. So city planners took their leave of social reformers and public health advocates and went in a different direction. In 1917, the American City Planning Institute was formed as a professional society [4].

The history and purpose of planning and public health are clearly intertwined. In the early 20th century, policymakers also recognized this interconnectedness. Congress passed the standard state enabling acts for zoning and planning in the 1920s [5]. Section 1 of the zoning legislation states that the act is for regulating land use "for the purpose of promoting

health, safety, morals, or the general welfare of the community..." [6] Then and today, any local government with a zoning code has language in it that ties zoning to public health. Although, public health is one of the pillars of zoning, it had lost its connection with the planning profession until recently.

Planning and public health, which had once had much in common, became very specialized and separate fields in the 20th century. The 2 professions are once again joining forces to tackle a common problem: the public health consequences due to suburbanization.

Planners Get Interested in Public Health Again

The Futurama exhibit at the 1939 New York World's Fair sold Americans on the dream of highways and suburbs; they bought the vision hook, line, and sinker. Congressional action, including passage of the National Interstate and Defense Highways Act of 1956 [7], helped build more than 40,000 miles of highways. By the 1950s, the suburbanization of America was in full swing. By the end of 20th cen-

The BRC group began as a small-scale effort to leverage the expansion plans of Rex Healthcare and the North Carolina Museum of Art into improvements in connectivity, including pedestrian access, on Blue Ridge Road. Over the past 4 years our group has grown, and it now includes stakeholders representing some 2,000 acres in west Raleigh, including the Centennial Authority's PNC Arena, the North Carolina State Fairgrounds, and North Carolina State University's Centennial Biomedical Campus. During the course of our discussions, the BRC stakeholders group realized that this district could serve as a statewide model for 21st-century urban planning. This was confirmed by the first-place ranking given to the corridor in the 2011 grant program of the North Carolina Sustainable Communities Task Force, a multiagency group created by the North Carolina General Assembly in 2010 to lead and support the state's sustainable community initiatives [7].

In keeping with the goals of the Sustainable Communities Task Force, the corridor offers the potential to bring together the components of land-use planning, transportation, and affordable housing while preserving open space and the environment, enhancing economic development, and optimizing public health. As part of the planning process for the corridor, one of North Carolina's first comprehensive health impact assessments (funded by the Blue Cross and Blue Shield of North Carolina Foundation) will be conducted through the Gillings School of Global Public Health and the Department of City and Regional Planning at the University of North Carolina at Chapel Hill with the cooperation of the city of Raleigh.

Furthermore, the BRC can also serve as a pilot program for the North Carolina Department of Transportation's new Complete Streets Policy (which intends to make streets useable by all transportation modes), by collaborating on multimodal transportation options needed to serve the community, including pedestrians, bicyclists, and public transit users. Ultimately, the corridor provides a possible paradigm for statewide healthy development

that does not compromise natural systems or the needs of future generations of North Carolinians. NCMJ

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tury, suburban sprawl and an environment designed for cars rather than for pedestrians had resulted in lower levels of physical activity and a rise in obesity. These emerging trends have led public health professionals and planners to recognize that they once again have in common a problem that needs to be addressed. This time the threat is not urbanization, but suburbanization.

The health trends attributable to sprawl are troubling. According to the Centers for Disease Control and Prevention (CDC), only 43.5% of adults are highly physically active, and 25.4% engage in no leisure-time physical activity whatsoever [8]. Based on 2007-2008 data, it is estimated that 68% of people in the United States are either overweight or obese, and this proportion is rising rapidly [9]. The CDC estimates that nationally, more than one third of adults are obese, and in 2008, medical costs associated with obesity amounted to \$147 billion [10]. In North Carolina in 2010, 29.4% of adults were obese [11], and a 2012 study estimated that the state

spends \$4.6 billion a year on medical care associated with obesity-related illnesses [12]. Further, it should be noted that certain groups of people tend to be more at risk for obesity, including those with less household income, less education, and those of certain racial/ethnic groups such as African Americans and Latinos [11].

Although some planners are beginning to work with public health professionals to address concerns about physical activity levels and obesity, many are not yet doing so. A 2011 survey conducted by the American Planning Association (APA) and funded by the CDC found that most cities do not consult public health professionals when creating comprehensive plans. It is noted that the survey "was intended as an information-gathering tool to inform further case-study research" and will be used to "help develop a policy report that will feature tools and strategies planning and health professionals can use to integrate health into the plan-making process" [13].