

Urban Planning and Public Health:

Synergies for Achieving a Healthy Delaware

Dona Schneider, PhD, MPH & Michael R. Greenberg, PhD

1. Associate Dean for Programs, Edward J. Bloustein School of Planning and Public Health Policy, Rutgers University; Principle Investigator, HIV Prevention, Community Support and Development Initiative, Department of Health, State of New Jersey

2. Interim Dean, Distinguished Professor, Edward J. Bloustein School of Planning and Public Health Policy, Rutgers University

“For too long in this society, we have celebrated unrestrained individualism over common community.” – Joe Biden, Wilmington, DE, June 9, 1987

Delaware’s almost one million inhabitants currently reside in 57 incorporated cities, towns, and villages.

The largest municipality by population is Wilmington, while the largest by area is Dover.¹ The present configuration of the state’s land and people took hundreds of years to develop, from the earliest settlements at Zwaanendael in 1631 (currently Lewes), Fort Christina in 1638 (currently Wilmington), and Fort Casimir in 1651 (currently New Castle), to today’s urban centers, strip malls, suburbs and subdivisions, resort communities, tourist attractions, and agricultural landscapes. When population growth and technological advances force economic and social change, it is often difficult for communities to agree upon how to cope. Historically, urban planners tended to focus on bringing order to the physical landscape while achieving prosperity through economic growth; the public health community focused on protecting and promoting human health, usually though containing contagions and providing sanitary living conditions. The two professions all too often talked past each other. Without a common vocabulary, they could not agree upon what made a “healthy community.” Indeed, the CDC notes “As public health professionals and urban planners begin to work more closely, they need the ability to speak each other’s languages in order to work together effectively.”² Why did this happen and how can Delaware synergize these professions to achieve a “Healthy Delaware”?

Not So Healthy History

In colonial times, the earliest concerns for public health revolved around containing infectious disease outbreaks, usually those linked to sanitation.³ In 1793, however, yellow fever broke out in Philadelphia. Little was understood about vector-borne diseases at the time and Stephen Girard, a wealthy local banker, supervised the conversion of a mansion outside that city’s limits into a hospital with volunteers who would isolate and nurse the victims.⁴ Despite Girard’s efforts, boatloads of Philadelphians fled down the Delaware River to safety in Wilmington. While no Wilmington residents died while caring for the sick that arrived during that outbreak (not surprising as yellow fever is not a communicable disease), they did not fare as well in 1798 when yellow fever broke out in the southern part of their own city. The yellow fever outbreak continued into November of that year when cold weather killed off the mosquito population. The outbreak of 1798 left 86 of 119 cases dead.⁵

In 1832, cholera visited Wilmington, causing 17 deaths among the 47 who fell ill. The disease appeared again in 1849 with 65 deaths among the 116 who fell ill, primarily at the almshouse located on Fourth and Broome Streets. Smallpox outbreaks occurred sporadically across the state from the eighteenth century until 1883. The largest of these occurred in 1871, when 411 cases were reported.⁶ In response, the Delaware State Board of Health implemented compulsory smallpox vaccination and quarantine for outbreaks of contagious diseases, efforts that made the state relatively free of outbreaks compared to the reported outbreaks that plagued its neighbors.

In the second half of the nineteenth century rapidly growing industrial cities such as New York and Pittsburgh belched steam and soot from smokestacks that made visibility at noon almost as bad as on a moonless night. Immigrants slept in shifts in the same bed, often a dozen wretched soles occupying a small, unvented room at the same time. For example, 1880 New York averaged more than 16 persons per dwelling.⁷ With no running water, few sewers, and night soil piling up between houses, living conditions in the major cities were filthy, smelly, and frankly abominable. Fire departments, where they existed, were run as for-profit businesses rather than as public services. They were mostly equipped with manual pumps and could not handle even small fires that broke out in the shoddily erected wooden structures that went up like matchsticks.

The lack of adequate public water supplies, poor building construction, and coordinated public fire-fighting services in the booming cities resulted in enormous conflagrations such as the Great Baltimore Fire of 1904. That fire broke out in on a Sunday morning in February, but was so intense and rapidly spreading that a call for additional firefighters and equipment from other cities went out within hours.

Engines arrived from Philadelphia and Wilmington on Monday morning, and later that day from Altoona, Chester, Harrisburg, and York, Pennsylvania.

Unfortunately, the arriving fire-fighting equipment and the couplings on hydrants in the city were not standardized so that much of the equipment could not be used. Despite the valiant efforts of more than 1200 firefighters, more than 1500 buildings were completely lost and more than 1000 additional buildings were seriously damaged (see Figure 1). The costs at the time were estimated at more than \$100 million.⁸

Figure 1. Baltimore après l'incendie de 1904 [Baltimore fire aftermath] (Fred Pridham, Source: Baltimore County Public Library, public domain)



The lesson about the dangers of fire, particularly for urban populations, was not lost on the residents of Delaware. While the City of Wilmington had chartered various private fire companies from the 1850s onward, they tended to come and go when not profitable. As a result, the city formally took over fire protection in 1921. Today, the City of Wilmington has multiple fire stations and residents of Delaware are well protected by 65 fire companies across the state (24 in New Castle County, 20 in Kent County and 21 in Sussex County), with some companies covering multiple fire stations.⁹

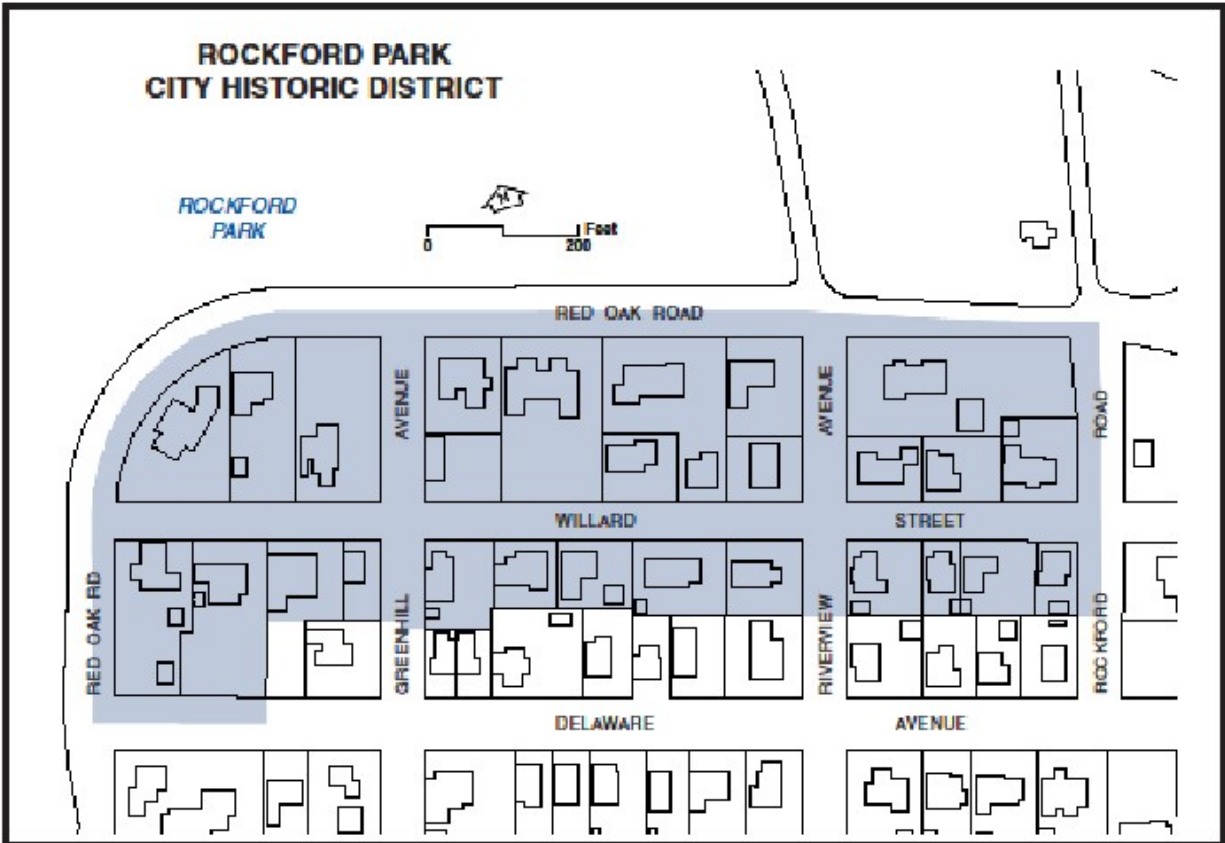
In the late nineteenth century, Delaware had fewer problems with immigration, housing shortages, and sanitation than those faced by rapidly growing places such as New York City and Chicago. The state also engaged in some innovative planning practices and benefited from a revival of interest in conservation during the Progressive Era. For example, wealthy Quaker businessman William Poole Bancroft was successful in passing legislation to create the Wilmington Park Commission where he served as commissioner and president from 1884 to 1922. Bancroft hired acclaimed landscape architect Frederick Law Olmsted (co-designer of Central Park in New York City) to consult on the design of Brandywine Park. He also convinced the duPont family to donate land adjacent to his own 59 acres to create Wilmington's Rockford Park.¹⁰ Bancroft's vision for a statewide park system for Delaware was acknowledged as "prescient planning" by President Barack Obama when he declared the establishment of the First State National Monument in 2013 (see Figure 2). That proclamation included Woodlawn (1100 acres in the Brandywine Valley); land in New Castle, including the Sheriff's House and an easement to protect the Court House and Green; and land in the City of Dover to protect the Dover Green.¹¹

Figure 2. Before designation as a National Historical Park, First State was a National Monument. (Image Source: Claire Robinette Cooney)



Bancroft's prescient planning also extended to housing. Rejecting the poor living conditions suffered by residents of America's industrial cities, Bancroft visited Bournville in Birmingham, England. Bournville was and still is a factory town created by the Quaker Cadbury brothers (of Cadbury chocolate fame). The community was designed to provide a pleasant and affordable living situation for local workers in the Cadbury factory. Encouraged by what he saw at Bournville, Bancroft determined to build an affordable, planned community in Wilmington where each house had access to a private garden and community residents had access to parkland.¹⁰ Today, Figure 3 shows how his planning efforts have survived time in the Rockford Park City Historic District, just below Rockford Park's southern border.¹²

Figure 3. Map of Rockford Park City Historic District



Planning and Public Health as Separate Professions

Around the turn of the twentieth century, activists were advocating loudly for reforms, pointing out the need for clean water, indoor plumbing and garbage removal, as well as housing reforms that included building and fire codes. Science was linking bacteria with specific diseases, and it was becoming clearer by the day that the poor health of the population was linked to inadequate housing, poor sanitation, unemployment, and dangerous working conditions. Most planners at the turn of the century had been trained as primarily either architects or civil engineers, focusing on the form and function of cities rather than population health. What constituted a healthy city from the planning perspective of the day were free flowing streets that could handle the increase in those journeying to work or moving goods through the system, a firm economic base that provided tax revenue and jobs, shining civic spaces to celebrate the American experience, and open space to provide for recreation. What mattered to practitioners of public health, who were mostly trained as physicians, was providing immunizations to prevent outbreaks of contagious disease, safe food and water, and education to promote better hygiene. The link to the built environment was less of an imperative for those practicing preventive medicine.

That planning and public health would veer even farther apart was inevitable once their professional associations were chartered and their pathways for education became formalized. The first academic urban planning program in the United States is credited to Harvard in 1900. Today, academic urban planning programs include training in housing and community development, environmental and land use planning, economic and regional development, historic preservation, transportation planning, urban design, and geographic information systems (GIS) and are accredited through the Planning Accreditation Board (PAB). A review of PAB

accreditation standards and criteria shows that the word “health” appears in its documentation beginning in 2012.¹³

The beginning of formal training in public health can be traced to Johns Hopkins in 1916. Academic training in public health is acknowledged through programs that are accredited by the Council for Education in Public Health (CEPH). A search of CEPH accreditation standards and criteria does not yield the words “urban planning,”¹⁴ although the websites of the American Public Health Association (APHA) and Centers for Disease Control and Prevention (CDC) websites do have pages describing the link between urban planning and public health.

As the vocabularies of professions did not readily overlap, and as the accrediting bodies of their academic training programs did not share a common vision, it is not surprising that their ships tended to sail in different directions. For those with an interest in the history of the development of the professions, Table 1 lists the dates of the establishment of the professional associations and their respective accrediting bodies.

Table 1. Selected Professional Organizations, Academic Training Programs and Associated Accrediting Bodies for Urban Planning and Public Health in the United States

Year	Organization
1857	The American Institute of Architects (AIA) is founded.
1852	The American Society of Civil Engineers (ASCE) is founded.
1872	The American Public Health Association (APHA) is founded. https://www.apha.org/
1899	The American Society of Landscape Architects (ASLA) is founded.
1906	The American Society of Sanitary Engineers (ASSE) is founded.
1917	The American City Planning Institute (ACPI) is founded, becoming the American Institute of Planners (AIP) in 1939.
1934	The American Society of Planning Officials (ASPO) is founded.
1937	The National Environmental Health Association (NEHA) is founded. http://www.neha.org/
1941	The Association of Schools of Public Health (ASPH) is founded becoming the Association of Schools and Programs of Public Health (ASPPH) in 2013. http://www.aspph.org/
1960	The National Education Development Committee (NEDC) of the American Institute of Planners (AIP) is created to credential planning program graduates. (1977 first AIP exam)
1974	Council on Education for Public Health (CEPH) is established to accredit schools and programs in public health. http://ceph.org/
1978	American Institute of Certified Planners (AICP) is founded. AICP Certification is introduced. https://www.planning.org/aicp/
1984	Planning Accreditation Board (PAB) is established to accredit schools and programs in urban planning. http://www.planningaccreditationboard.org
1994	The National Association of Local Boards of Health (NALBOH) is established. http://www.nalboh.org/
2005	The National Board of Public Health Examiners (NBPHE) is founded. http://www.nbphe.org/aboutthecph.cfm

2007	The Public Health Accreditation Board (PHAB) is established to accredit tribal, state, local, and territorial public health departments. http://www.phaboard.org/
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Encouraging Common Planning and Public Health Goals

In the second half of the twentieth century, Americans faced common concerns such as air and water pollution, disposal of hazardous waste, sick building syndrome, and the aging of housing stock. After World War II, the concept of a single family home, with fresh air and a yard for children to play became idealized. Residents began fleeing the nation's decaying urban centers in droves and planners began addressing this massive population shift by designing housing and infrastructure for the newly developing suburbs. Within a few decades, however, the impacts of suburbanization became apparent as the environment suffered from urban sprawl with ugly strip malls and traffic woes for commuters.¹⁵ Even tiny Delaware was beginning to suffer. For example, the Sierra Club noted:

“Delaware’s size makes the issue of open space an important one. While we spend many billions of dollars to plan and build our infrastructure, our failure to plan for and protect our “green infrastructure” condemns it to inevitable destruction. The importance of open space to our environment and balance of life cannot be over emphasized. It is necessary to preserve our state’s environmental health and biological diversity, which in turn protects the health of our citizens.”¹⁶

To address urban sprawl, planners shifted to creating new urban designs that would result in human scale development—to be centered on walkable, mixed use neighborhoods with accessible public institutions and local shopping. Planning terminology shifted towards concepts such as “brownfields redevelopment,” “green building,” “sustainability,” “traditional neighborhood development,” and “transit-oriented development.”

At the same time that planning was shifting its focus, public health was grappling with the skyrocketing costs of medical care. AIDS, cancer, diabetes, heart disease and stroke, and an aging Baby Boom generation would shortly bankrupt the country. The initial public health response was that Americans needed to reduce their risky behaviors, and get proper nutrition and regular physical exercise.¹⁷ Of note was public health’s initial lack of focus on the economic, environmental and social factors that impact public health.

Part of the difference in the two professions’ view of the “social determinants of health”¹⁸ is rooted in their academic and professional training. Planners are often visionaries who understand the relationship between the built environment and a good quality of life. In contrast, public health professionals are trained to require evidenced-based practices, with benchmarked data to document progress. The development of this public health mindset comes from protecting the public from quackery in the early years of medicine and from pie-in-the-sky expectations as advertised in the media today. Otherwise put, planners and public health professionals tend to think differently. They are, however, beginning to shift their understanding of each other’s vocabularies.

Coming Back Together

During the late 1980s, the World Health Organization (WHO) began stressing an ecological view of health and announced that 70 percent of the world’s population will be living in cities by 2050. WHO stated that urban planning was critical to human existence to create healthy, equitable and sustainable cities.¹⁹ In the United States, the Healthy People 2000 initiative launched in 1990 set out health objectives that were data driven, requiring benchmarking and data monitoring for progress towards preset goals, often a decade away.²⁰ Health People 2000 was largely focused on access to health care and individual behavioral risk factors (e.g., smoking, obesity, risky sexual behaviors).

It did not focus on the social determinants of disease or “upstream” factors that influence health. Social epidemiologists responded by creating new, “soft” datasets to deal with these upstream factors and, when the Healthy People 2020 initiative was launched in 2010, the social determinants of disease were finally included. These were linked to an overarching goal of achieving social and physical environments that “promote good health for all”.²¹ Table 2 lists events that show the slow but sure reconnecting of the professions over the past two decades.

Table 2. Reconnecting Urban Planning and Public Health

Year	Event
1999	The World Health Organization releases Healthy Cities and the City Planning Process, encouraging planners to develop health as a key principle in urban planning.
2003	The Institute of Medicine publishes The Future of the Public’s Health in the 21st Century, with a separate section on the social determinants of health. A recommendation is to develop accreditation for public health infrastructure.
2003-2006	American Journal of Public Health, American Journal of Health Promotion, Journal of Urban Health, and Journal of the American Planning Association publish special issues linking public health and planning.
2009	The Pew Charitable Trust and the Robert Wood Johnson Foundation launch the Health Impact Project that promoting the use of health impact assessments (HIAs) to decisions such as transportation, planning, education or housing.
2010	The Healthy People 2020 initiative is launched, including the social determinants of disease for the first time.
2011	The National Research Council releases Improving Health in the United States: The Role of Health Impact Assessment (HIA) to assist decision-makers in examining the potential health effects of proposed projects, programs, plans, policies.
2011	The Public Health Accreditation Board (PHAB) begins accrediting public health departments. A pre-requisite of being accepted for accreditation requires a community (or state) health assessment (CHA).
2012	The Planning Accreditation Board (PAB) includes a criterion to address health. In the 2017 PAB Accreditation Standards it appears under Values and Ethics (Health and Built Environment: planning’s implications on individual and community health in the places where people live, work, play and learn).

The events of 2011 and 2012, in particular, are currently working to bring planners and public health professionals into stronger partnerships that can result in healthier communities. For instance, many planners have now received training in Health Impact Assessments (HIAs), used to estimate how a planned change in the built environment will affect the health of a community. The local health department can be a key player in the development of an HIA. Similarly, public health departments must participate in community health assessments (CHAs) as part of their agency's requirement for accreditation. A good CHA obtains input from key informants and stakeholders in the community, one of whom might be the local planner.

A CHA leads to a community health improvement plan (CHIP), which may require the help of planners to help implement (e.g., developing safe routes to school; improving parks and recreational options; reducing the impact of food deserts). In other words, collaborations between the professions are being built across the nation, collaborations that recognize the importance of the built environment to community health.

Signs that the training programs for the professions are also retooling can be seen in the academic literature. For example, our review of the academic literature resulted in hundreds of articles linking public health and urban planning since 2000. Fourteen journals published the most articles on topics such as active living, aging, air and water quality, climate change, crime and violence, food security, housing, noise, obesity, social environments, sprawl, traffic congestion, transportation access, walking and cycling.³ These journals were:

- American Journal of Preventive Medicine
- American Journal of Public Health
- Annual Review of Public Health
- Environment and Planning A
- Environmental Health Perspectives
- Environmental Impact Assessment Review
- Environmental Planning and Management
- Environmental Science and Technology
- Health Affairs
- Journal of Planning Education and Research
- Journal of the American Planning Association
- Morbidity and Mortality Weekly Report
- Natural Hazards Review
- Risk Analysis, An International Journal

We were also pleased to find that the U.S. Environmental Protection Agency (EPA), the CDC, the Federal Emergency Management Agency (FEMA), and the National Association of County and City Health Officials (NACCHO) carry hundreds of links, webinars, and other resources for planning and public health practitioners to improve the health of their communities. As exemplars, cross-discipline programs can aid in chronic disease and injury prevention, aid community residents with disabilities in accessing public services, and help with preserving air

and water quality. Recreational facilities can be planned to be made more accessible and extreme weather events can be planned for to reduce health impacts. Overall, planners and public health professionals are working together to provide safe and healthy places in which to live, work, and play. So how is this working in Delaware?

Planning For a Healthy Delaware and Beyond

A web search for “Healthy Delaware” yields a website which proclaims “Everything you need to prevent, test and treat chronic diseases--all in one place,”²² as well as a Facebook page,²³ and a YouTube page from the same organization.²⁴ In other words, the first set of “hits” does not relate to the built environment or healthy communities. Rather, it focuses on the individual health of Delawareans, as did the original Healthy People 2000 initiative.

A more detailed search of Delaware programs and initiatives linked to the term “healthy” brings up the Delaware Center for Health Innovation (DCHI), a non-profit organization dedicated to making Delaware one of the five healthiest states in the nation. The DCHI’s website provides a link to its 2016 Strategic Plan which shows that the organization is primarily focused on health care, although it does include a Healthy Neighborhoods initiative which purports to focus on the social determinants of disease. There is no mention of the built environment in the information on the Healthy Neighborhoods initiative link. Rather, it lists healthy lifestyles, maternal and child health, mental health and addiction, and chronic disease prevention and management as priorities. Again, this approach is linked to the original Healthy People initiative, with an individual, behavioral health focus.

Using a search engine to find URLs that address healthy communities through the built environment is somewhat difficult. The term “planning” brings up hits for health care planning, family planning, planning for emergency preparedness, and community planning for HIV prevention. A review of official state department and division websites is also not helpful. Two websites from the University of Delaware, however, stand out as excellent resources for both planners and public health professionals, as well as the general public. The first of these, Toolkit for a Healthy Delaware, covers materials from an initiative funded by the Delaware Division of Public Health and the Delaware Department of Transportation. The website includes tabs for assessing and promoting walkability and likability,²⁵ understanding food deserts and planning for access to healthy foods, comprehensive plan assessment,²⁶ HIAs to create Healthy Places,²⁷ planning for a smoke-free Delaware, and planning for complete streets (to make streets safe, comfortable, and convenient for both vehicles and pedestrians of any age and ability).²⁸ For public health professionals not yet in the mindset of thinking about the built environment, this is an excellent tool to get your vocabulary ready so you can talk with your local planner.

The second website, the Complete Communities Toolbox, is also available from a University of Delaware website.²⁹

This one is supported by the Delaware Department of Transportation and is both highly interactive and visual, with five sections covering planning tools, community-design tools, public-engagement strategies, news, and visual tools. The planning tools link includes complete streets, as well land use tools for creating healthy communities and retooling communities facing distinct urban planning challenges (planning for redevelopment, infill, resilience, and more). Of particular interest is the section on how to engage the public. Here you find listed typical planning tools such as charrettes and visual preference surveys, but also newer ones such as

gathering crowd sourcing data and creating mobile apps. The CommunityVIZ link provides a case study of rapidly growing Milford (Sussex County) where local citizens used digital crayons and real-time 3D to significantly influence the resulting City Plan. Bryan Hall from the Delaware Office of State Planning Coordination is quoted as saying the process allowed the people of Milford to collaborate so that the town and state could “develop shovel-ready projects while preserving quality of life for today and future Delawareans.”³⁰

A variety of collaborative groups addressing community health and wellness issues have come and gone across Delaware over the past decade. Some of the groups are simply inactive, not for lack of interest but for lack of funding. Others have completed their task (such as agitating for hiking trails or bike lanes), found their issues subsumed by larger organizations (such as state agencies), or had their concerns addressed in community health improvement plans led by local hospitals or public health departments. Indeed, lack of concerned citizen groups agitating for community health and wellness issues across the state may actually be a sign that the planning and public health professions are working well together to address these concerns.

Public health has become more than providing immunizations and getting people to reduce behavioral risks, watch their diets, and increase their physical activity. Planning has become much more than drafting plans for open space and negotiating for more rates to increase the local tax base. The professions are now intertwined with the common goal of providing healthy “common communities” (as per Joe Biden’s quote) where we can live, work and thrive in an amenable environment that is sustainable for future generations.

The urban planning and public health professions have long known that the built environment can create unsafe conditions and foster disease. It stands to reason, then, that well-planned built environments should be able to promote human health and well-being and result in healthier communities. At the national level, the challenge is to create a shared language between public health and planning, and to adjust academic training programs so that both professions respect each other’s strengths. In Delaware, the Toolkit for a Healthy Delaware and Complete Communities Toolbox websites demonstrate how the professions in one state have embraced the built environment and public participation as important for creating healthy communities. All that is needed now is for this fledgling process to continue with new and expanded collaborations that will result in a healthier Delaware.

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