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Smart Growth for Community Development

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Toni N. Harp

The built environment has a profound effect on public health. For instance, community transportation policy influences pollution levels, which in turn contribute to levels of illness and death. The panelists for this session elaborate on this concept with perspectives drawn from varied experiences.

Wendy Collins Perdue

In the late 19th Century, early public health practitioners recognized that the built environment, that is, the man-made elements and infrastructure of the communities in which we live and work, affected public health. They observed unsanitary sewage and water conditions, along with dark, airless tenement housing located near toxic industrial wastes, all contributed to the spread of disease. In response, planners advocated the building of sewer and water infrastructure, developing building codes and zoning plans to separate people from toxins, and designing housing to reduce population concentrations.

Although people in developed nations nowadays suffer less from infectious diseases and more from chronic health conditions than earlier generations, choices for the built environment continue to influence health issues. Chronic disease, injuries, crime, environmental toxins, physical access to health facilities, and emergency evacuations are all affected by the built environment. Land use and facility design may discourage physical activity, many people have limited access to healthy foods, and toxic effluents from industrial processes and transportation networks that support single-passenger vehicular travel contribute to poor air quality. The lack of physical activity, poor diet, air pollution, and environmental toxins such as lead-based paint and radon, in turn, factor into many of the chronic health problems of modern society (e.g., heart disease, asthma, and diabetes). In addition, streets poorly designed for pedestrians and cyclists lead to travel-related injuries, and poor building design and placement increase injury related to crime.

Progressive urban planners now advocate a number of "smart growth" measures to counteract these disturbing health trends. By modifying zoning codes and returning to a mixed-use grid pattern of street design, which places desirable destinations (e.g., schools, stores, libraries) within walking distance, and by installing sidewalks on both sides of streets and crossing aids such as pedestrian islands on busier streets, residents will be encouraged to walk more when traveling to frequented destinations. In contrast, the suburban residential ideal of subdivisions with cul-de-sacs, prevalent since just after World War II, isolates people from most destinations. Distance and other obstacles make walking outside the immediate neighborhood a challenge few are willing to take on voluntarily.

A few relatively simple modifications would likely make people feel safe enough to walk and bicycle more often for practical transportation. Bike lanes or bike paths that go near desired destinations, racks at public and commercial locations for parking and securing bikes once arrived, and showers at workplaces all encourage cycling. In addition, for longer travel distances, cities can design transit systems to promote bimodal transportation, combining walking with riding transit, by considering pedestrian safety (e.g., placing stops near an intersection rather than

mid-block to discourage jaywalking; designing well-lit rail stations) and comfort (e.g., providing covered bus stops). Bike carriers on buses and policies to allow bicycles on rail cars encourage bimodal transportation for cyclists, too.

All of these modifications to transportation policies serve the dual purpose of promoting moderate exercise in the course of ordinary activities and reducing vehicle miles traveled, which improves air quality. Some other relatively simple changes that promote physical activity include designing stairways that are well lit and visible so that they feel safe and pleasant for people to use; planting trees between streets and sidewalks, creating at least some psychological barrier for walkers from cars; placing parking areas farther away from the locations they serve so that car passengers walk a bit farther; and making recreational facilities widely available and attractive for all ages to encourage play.

Communities can also improve public health by ensuring that all residents have access to affordable healthy food choices, especially fruits and vegetables, by promoting the location of full-service grocery stores and community gardens and by reducing the concentration of fast food retailers. Community and architectural design features such as adequate street and building lighting, designs promoting awareness of potential problems by having many "eyes on the street," and careful consideration of the layout of structures relative to each other can help reduce crime. Adaptively reusing existing structures, rather than seeking unused areas for building, is consistent with the mixed-use, smart growth ideal.

Tensions may naturally arise in suggesting these changes to the builders of the built environment. For instance, transportation engineers have been trained to focus on moving more cars faster, usually by widening roads. Wide roads with fast-moving vehicles are, however, inherently less safe for pedestrians and cyclists. The recent trend in recreational facilities has been to build fewer but larger facilities, which may make access difficult for residents of neighborhoods more distant from the park. Full-service grocery chains, perceiving limited available income or crime, may require economic incentives to locate stores in low-income neighborhoods. A policy approach seeking to reduce the concentration of fast food businesses would potentially face opposition from both political forces and civil libertarians. In addition, if effective, this approach could lead to unintended consequences such as the loss of already scarce jobs in poorer neighborhoods. Finally, taxpayers may resent footing the expense for having environmental toxins removed from public buildings.

Carol Maclennan

The Tri-County (Colorado) Health Department (TCHD) serves urban, suburban and rural communities, each of which has different conditions and priorities. This creates challenges for implementing the goal of TCHD's land use program: "To incorporate sound public health principles into planning and development activities."

All land use decisions require balancing of varied and sometimes conflicting interests such as economic development, transportation, aesthetics, etc. TCHD believes that land use decisions should also reflect several fundamental public health objectives: (1) protecting against environmental hazards, (2) preventing the spread of disease, (3) preventing illness and injury, and (4) encouraging healthy behaviors.

The primary environmental health challenges in the TCHD service area, as in the United States as a whole, have evolved significantly over the past three decades. In the early 1970s, when laws such as the Clean Air and Safe Drinking Water Acts were new or non-existent, public health agencies regularly encountered human health risks from exposure to contaminants, whether they were from carcinogens in the workplace or from chemicals dumped or allowed to leak into, or near, public spaces. Communities clearly saw these conditions as public health concerns, and environmental health departments were the agencies statutorily authorized to require entities to bring worksite environments and waste management practices into compliance with adopted health and safety regulations.

Since then, the United States has made great progress in cleaning up the environment. Today, air, soil and water contamination still require the attention of health officials. The focus of public health concern in the first decade of the 21st century, however, has shifted significantly towards chronic, debilitating and often fatal health conditions linked to behavior choices. Sedentary lifestyles, along with dietary choices, have pushed the widespread occurrence of obesity in Americans to the forefront of the public health agenda. The Centers for Disease Control and Prevention reports that in 2002, lack of physical exercise and a pattern of poor nutrition were responsible for 400,000 deaths. They were second only to tobacco use as the leading cause of preventable death in the United States.

The dynamics of the current health challenge also differ from those of the '70s, both in causes and possible solutions. Today's built environment frequently designs regular exercise out of everyday activities.

Often the quickest or only way for many Americans to get to and from work, school or shopping is to drive. Drive-through services are more pervasive, allowing us to do our banking and dry cleaning, and buy medicines and meals conveniently, but without so much as taking a step. Inside buildings, elevators are prominent, while stairwells are often hidden.

Lifestyle choices are clearly affected by community design. And, as it should be, community design solutions will be implemented, not by health officials, but by professionals who are expert in community design: planners, architects, transportation engineers, etc. Because a growing body of research tells us that the way we design and build our communities affects public health, however, land use decisions should also be informed by input from health agencies. Unfortunately, few planning or public health professionals currently acknowledge this broad land use role for the public health sector.

In Colorado at least, it appears that one reason for this is that the statutes are perceived by some to prohibit or limit health departments' role in the area of land use planning. For example, Colorado's public health law, at C.R.S. 25-1-507(1)(h), broadly authorizes health agencies to provide environmental health services. This theoretically supports an ability to comment on the public health impacts of specific developments, as well as master plans and codes. The statute, however, does not specifically address the provision of these services in the land use process. Likewise, the county land use statute, at C.R.S. 30-28-136(1), stipulates that counties must refer subdivision applications to health departments only for review of water quality issues and regulatory approval of the proposed wastewater plan.

A 2003 random survey of 1,000 American Planning Association (APA) members indicated that only 4 percent of planners had consulted with their public health department to create opportunities for people to become more physically active. The year before, a TCHD survey of fifteen planners showed similar results. Half to all of the planners ranked wastewater, air and water quality issues as very important issues for health department input, but only one placed community or master planning in the same category. At the same time, TCHD's informal survey of several other local health departments in Colorado revealed that most were not involved in community planning to encourage healthy behaviors.

While many health departments have accepted a limited interpretation of their role in the land use planning process, TCHD has broadly interpreted its mandate as a partner in planning. Through educational efforts, it has allied with county commissioners and planners in promoting their respective public health priorities in land use decision-making. TCHD believes that local governments' land use authority is one of the strongest tools available to create and maintain healthy communities.

Three examples illustrate how the counties served by TCHD used their land use codes to address public health issues. In each case, the county and TCHD collaborated to identify an existing or potential public health problem. Working with TCHD, the counties then revised or utilized their existing land use regulations to address the concern.

In the first example, the county adopted an overlay zoning ordinance that regulates development on or around former solid waste landfills to prevent health and safety hazards from explosive landfill gases. A large number of historic disposal sites exist in the county. The county identified the need for the ordinance when two utility workers died in a landfill gas explosion that was triggered when they were installing a water pipe. The overlay zone, adopted in the 1980s, was based on a comprehensive landfill gas survey that TCHD conducted for the county after the fatal accident. When the land use code was updated two years ago, county, health, and fire department staff formed a task force to recommend revisions to the ordinance. The county commissioners adopted the changes, which included additional safeguards and clarification of each agency's implementation role. Ordinances such as this one may have broad applicability at brown field sites across the country where redevelopment of infill areas is being encouraged as a smart growth tool. (Reference: <http:// www.co.adams.co.us/>, Zoning Code Section 3-33.)

In the second example, the county adopted a code requirement that all new subdivisions served by individual sewage disposal systems (ISDS), or septic systems, implement an ISDS management program approved by TCHD. Historically, once the health department has issued a permit for an ISDS, regular maintenance of the ISDS is often neglected, increasing the risk of failure. Yet ISDS failures may expose residents to harmful bacteria, viruses or chemicals. The county code requires five ISDS management elements: (1) designation of a management entity, (2) a financing mechanism, (3) an enforcement mechanism, (4) homeowner education, and (5) annual reporting to TCHD. With increasing nationwide reliance on ISDS, widespread management of ISDS could prevent public health exposures and protect water quality in many areas. (Reference: <http:// www.co.adams.co.us/>, Subdivision Regulations, Section 5-04-06.)

In the final example, an initial development plan

for a large master planned community in the TCHD area lacked design features that would encourage residents to bicycle or walk routinely for recreation or utilitarian purposes. In response to the initial submittal, the county adopted design guidelines as a policy framework to improve the overall quality and livability of the proposed development and future projects. Over a period of several months, county planning staff promoted the non-mandatory guidelines with the developer, supporting them with existing, though less specific, land use code performance standards. During this time, TCHD reinforced the planners' directions through written comments and by facilitating a presentation by national Walkable Communities expert, Dan Burden. The presentation was followed by a working session among Mr. Burden, the developer, and county staff. These collective efforts convinced the developer of the benefits of smart growth principles. The developer ultimately submitted, and the county approved, a development plan that adopted the design guidelines and exceeded code. It includes active living elements such as mixed uses, pedestrian-sensitive design, options for future transit connections and a trail system linking destinations within and adjacent to the community. This example showed the importance of leveraging existing code, and utilizing health department support to identify collateral health benefits of smart growth principles. (Reference: <http://www.co.arapahoe.co.us/>, Departments, Development Services, Planning, Private County Design Guidelines.)

Creating a significant role for public health in land use planning may or may not require clarification or revision of statutory authority. Any approach, however, must involve effective partnerships between local land use and public health agencies.

John O. Norquist

The post-World War II urban development model, the simplified city plan, uses separate-use zoning to buffer residential districts from commercial districts, a "solution" that has produced the side effect of urban sprawl. Responding to the perceived ideal of locating living spaces (homes) away from the less pleasant environments in which people work and shop (offices and retail stores), planners have created subdivisions, business parks, shopping centers, and similar use-based islands connected by a road system designed to move cars quickly from one island to another. An isolated business park may provide ample parking spaces for cars but its location precludes reasonable access by any means other than driving.

The road system presents similar challenges to would-be pedestrians or cyclists, with "feeder" roads emptying traffic from subdivisions into "connecters," somewhat larger roads that, in turn, empty into "arterials," 72-foot wide multi-lane roads divided by medians, usually without lanes for bicycles or sidewalks for walkers. With little shade and few sidewalks on which to stand, this is not the sort of street on which one would plan a parade, a prime social gathering event in the days before the simplified city plan predominated.

In fact, many elements of simplified city design, realized in areas such as Crystal City around Ronald Reagan Washington National Airport, predate the postwar period. Le Corbusier's *The City of Tomorrow and Its Planning* (1929) suggests a new design, ultimately rejected by Parisians, for the Latin Quarter in Paris. Le Corbusier's design, with high-rise buildings connected by orderly roadways, sprang from a socialist perspective that rejected supposedly unnecessary artifice and promoted the ideal of equality among people through architecture. Similarly, simplified city design has grown out of a failed ideal, mainly imposed by the public sector rather than evolved from private enterprise, in an unsuccessful effort to make life easier in crowded urban areas.

Wicker Park in Chicago presents a mixed-use alternative to urban sprawl. Older buildings redeveloped into retail spaces and lofts have drawn an artistic crowd to the area and revitalized a part of town once falling into disuse. Residents can walk from homes to workplaces or shops; visitors can park on the street and walk from place to place. Neighborhoods in which residential and commercial spaces co-exist recall a mixed-use urban model from the country's earlier days, when families commonly lived in rooms above their shops below. In addition, contrary to the separate-use sensibility, retailers in urban areas benefit from a higher density of shoppers than do strip center stores with huge parking lots, as even Wal-Mart and Target are beginning to discover.

In general, planners adopting a mixed-use model need not develop a whole new set of design principles. Rather, they can follow principles of building placement developed over centuries. One historical design feature of cities that should be resurrected is the terminated vista, in which streetscapes direct the view towards a single large visual element. Cathedrals provided the dominant visual element in many older European cities; in the United States of today, many other architectural structures could serve this function. A few places in the United States already offer a view of what this design might look like: Cedarburg, Wisconsin; LaSalle Street in Chicago; and, most notably, Disney World.

In addition to any commercial and aesthetic advantages, mixed-use design also allows more humane choices for directing resources from city budgets. Instead of money being poured into expensive road works, it can be directed towards ensuring affordable housing options.

Urban dwellers express being happier living in a mixed-use environment. As developers follow where the market leads, signs are they may be getting this message. Last year, developers constructed only one interior-facing mall of more than 300,000 square feet, while construction of street front lifestyle centers, combining commercial and residential space, increased. Furthermore, this design trend reflects preference not just from a single band of the political spectrum. In closing, as we become aware of problems to which current urban design contributes, it is up to us to get actively involved in solutions.