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HEALTHY EATING ACTIVE LIVING CONVERGENCE PARTNERSHIP

working together to create healthy people in healthy places

Strategies for Enhancing the Built Environment to Support Healthy Eating and Active Living

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Prepared by
Prevention Institute

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PREFACE

New attention and importance is being placed on the built environment and its significant impacts on creating healthy places and healthy people. The "built environment" encompasses places and spaces created or modified by people including buildings, parks, and transportation systems. The built environment is structured by land use rules, as well as by economics and design features. Research is increasingly demonstrating links between specific community factors, such as the availability of parks, accessibility of healthy and affordable produce, and the "walkability" of neighborhoods, and the choices people make in their daily lives.

Healthy people require healthy environments—neighborhoods, schools, childcare centers, and workplaces. People need their environments to be structured in ways that help them access healthy foods and easily incorporate physical activity into their daily routines. Creating healthy environments cannot be done in isolation by any one organization or field. It requires coordinated and comprehensive efforts by multiple organizations, leaders, fields, and sectors.

As individual funders we have been engaged in different comprehensive efforts to create access to healthy foods and physical activity. Through the Healthy Eating Active Living Convergence Partnership, a collaboration among funders, we can maximize our impact by coordinating our efforts. The partnership steering committee includes The California Endowment, Kaiser Permanente, Nemours, the Robert Wood Johnson Foundation, and the W.K. Kellogg Foundation. The Centers for Disease Control and Prevention serve as critical technical advisors on the steering committee. In 2007, PolicyLink was selected as the program director to develop and implement a strategic plan, identify potential new members, engage with those already in the field, and seek creative ways to advance the overall vision of the partnership—*healthy people in healthy places*.

Strategies for Enhancing the Built Environment to Support Healthy Eating and Active Living outlines a range of organizational practices and public policies being considered to improve the built environment in support of healthy eating and regular physical activity. Prevention Institute developed this document based on key informant interviews and a scan of policy and research reports. *Strategies for Enhancing the Built Environment to Support Healthy Eating and Active Living* serves as a resource to identify target policies and opportunities towards building healthy environments.

This document is part of a larger strategy to identify high impact approaches that will move us closer to our vision of *healthy people in healthy places*. In addition to this document, the partnership will release other policy briefs on topics such as access to healthy foods, and physical activity in children and youth. The partnership will also release a comprehensive list of cross-cutting policies, strategies, and programs in their report, *Promising Strategies for Creating Healthy Eating and Active Living Environments.* All of the partnership policy briefs and reports will include information on opportunities for accelerating the development of healthy communities.

We will not act alone. We will foster partnerships among funders, advocates, and practitioners, and support specific efforts to advance our goals. We are dedicated to encouraging environmental, policy, practice, and organizational changes, with core values grounded in equity and social justice. Motivated by the work currently taking place across the nation, we look

forward to supporting the growing movement to create environments that facilitate healthy eating and active living.

We appreciate the participation and input of the diverse group of stakeholders that contributed to creating this policy brief. In particular we would like to thank the reviewers who participated in providing constructive input during the finalization of the brief including, Elva Yanez, director of Audobon Center at Debs Park; Bill Wilkinson, executive director of The National Center for Bicycling and Walking; Barbara McCann, coordinator of The National Complete Streets Coalition; Rich Bell, project officer at Active Living by Design; Michael Hamm, professor of Sustainable Agriculture, Michigan State University; Andy Dannenberg, associate director for Science at the National Center for Environmental Health at the Centers for Disease Control and Prevention; and Tom Schmid, evaluation specialist at the Division of Nutrition, Physical Activity, and Obesity at the Centers for Disease Control and Prevention. A special thanks to Virginia Lee, Leslie Mikkelsen, Janani Srikantharajah, and Larry Cohen of Prevention Institute for drafting the policy brief and for ensuring broad input.

Sincerely,

The Healthy Eating Active Living Convergence Partnership:
The California Endowment, Kaiser Permanente, Nemours, the Robert Wood Johnson Foundation, the W.K. Kellogg Foundation, and the Centers for Disease Control and Prevention.

INTRODUCTION

Health and well-being are influenced by the communities where people live, work, play, and learn, through the interplay of a community's physical, social, and cultural environment. In analyzing how best to address rising rates of diabetes and the persistence of chronic diseases related to unhealthy eating habits and sedentary behavior, researchers and community members alike have identified creating built environments that support healthy eating and active living as one essential strategy for good health.[1,2,3,4,5]

The built environment is broadly defined as manmade surroundings that include buildings, public resources, land use patterns, the transportation system, and design features.[6] Research is increasingly demonstrating links between the built environment and eating and physical activity behaviors, which in turn impact health outcomes. Specific community factors, such as the availability of parks and walking trails, the presence of retail outlets with affordable, high-quality produce and other healthy foods, and the "walkability" of neighborhoods, appear to have an influence on the choices people make in their daily lives.

Parks and trails, healthy foods, and pedestrian-friendly neighborhoods are not equally available across all communities. That inequality contributes to disparities in health outcomes. Low-income individuals and people of color, regardless of income, tend to get ill more frequently, more severely, and at younger ages. Both groups are more likely to live in communities where residents face concerns such as limited access to fresh fruits and vegetables, high concentrations of alcohol outlets, few park and recreation facilities, and higher rates of street crime, all of which are linked to these poorer health outcomes. Improving the built environment is an important element of a strategic approach to reducing health disparities, a way to reduce the likelihood that vulnerable populations will need medical care *in the first place*.

Decisions made by government, businesses, and institutions have an important impact on shaping the conditions in the built environment. For example, policies and practices related to transportation and land use, investments in commercial and residential developments, and the location of schools and worksites ultimately influence the distances people travel to work, the convenience of purchasing healthy foods, and the safety and attractiveness of neighborhoods for walking and accessing neighborhood parks. Many localities have begun to think more carefully about implementing changes that address concerns about health and the environment. Federal and state policies can further incentivize positive changes and diminish negative impacts at this level.

PURPOSE AND METHODS

This brief outlines a range of organizational practices and public policies being considered to improve the built environment in support of healthy eating and regular physical activity. It reflects diverse perspectives of professionals and advocates working on various aspects of the built environment. It was developed for the Healthy Eating and Active Living Convergence Partnership and originally served as a background document to provide an overview of the built environment and the factors related to healthy eating and active living. Key informants were interviewed and policy and research reports were scanned to capture the breadth of built environment strategies, policies, and political opportunities for creating eating and activity environments, with special attention given to low-income communities and communities of color. While the impact of the built environment manifests itself locally, this brief focuses on national and state level efforts and opportunities that shape the local reality. This is due to the partnership's interest in identifying where *convergence could add value*, especially through efforts that engage participation of constituencies from multiple sectors and disciplines. The brief also identifies contributions made by local efforts working to achieve healthier communities.

The key audiences for this brief are funders, professionals, and advocates who are interested in an overarching strategy for how the built environment can promote healthy eating and active living. It is also intended for those who are deeply focused on one aspect of the built environment and can benefit from seeing the broader array of built environment approaches and their impact on healthy eating and activity. The brief opens by describing key characteristics of the built environment and how they affect eating and activity behaviors. It then outlines three target areas–active transportation and public transit, activity-friendly recreation environments, and land use planning–and provides a general overview of the breadth of strategies and federal policies to effect change. The brief also highlights political opportunities, primarily at state and federal levels, that promote increased levels of physical activity and healthy eating in communities.

CHARACTERISTICS OF THE BUILT ENVIRONMENT

Important characteristics of the built environment critical to supporting healthy behaviors include:

- Walkable and bikable neighborhoods
- Public transit
- Parks, recreation facilities, and open spaces
- Healthy food environments
- Safety

Walkable and Bikable Neighborhoods

Specific features in the built environment influence whether people choose to walk or bicycle for transportation, and these features can be effective tools for increasing daily physical activity. Neighborhoods that have destinations that are well connected and in close proximity to each other, a pedestrian- and bicycle-friendly infrastructure, and accessibility to public transit encourage and support walking and bicycling for children and their families.

People, especially children and those with limited mobility, are more likely to walk and bicycle along streets that are inviting and safe. Some characteristics of safe and inviting streets include sidewalks that are in good condition and have curb cuts, traffic that is moving at a slow to moderate speed, and sidewalks and streets designed to engender a feeling of separation from motor vehicles. Amenities including trees, benches, and public art are also utilized by planners to encourage foot traffic. Residents who live in communities with pedestrian- and bicycle-friendly infrastructure tend to be more physically active.[7] In fact, residents in a highly walkable neighborhood have been shown to engage in about 70 more minutes per week of moderate and vigorous physical activity than residents in a low-walkability neighborhood.[8]

Closely interrelated with the streetscape, destinations within walkable and/or bikable distances can encourage physical activity among visitors. As noted in a study in the *American Journal of Preventive Medicine* and confirmed in a review by *The Synthesis Project*, built environment features such as close proximity to desirable (and useful) destinations like stores and services, have been strongly associated with people walking and bicycling as a means of transportation.[9,10] This finding is consistent with studies from urban planning literature, which find that building communities with nonresidential destinations within walking distance of housing may be beneficial to people's health.[11]

Contrary to some popular stereotypes, bicycling is not just a middle class choice. For example, *Bicycling Magazine's* "Invisible Riders" article describes the experiences of low-income Latino immigrant cyclists and notes a survey conducted by the Los Angeles County Bicycle Coalition showed that cyclists who used their bicycles more often had far fewer resources: 40 percent of street respondents earned less than $15,000 annually (65 percent earned below $35,000).[12] Another study by Williams and Larson analyzed demographic data from the U.S. Census and found that younger "carless" bicycle commuters exceeded the number of more affluent, older commuters.[13] The bicycle commuters had lower incomes than others in their age group, and Latinos, Native Americans, and Asians were more likely to bicycle-commute than whites.

Public Transit

Public transit is essential as it vastly extends the distance people can travel via foot or bicycle. An

environment that supports access to alternative modes of transportation instead of primarily cars can help people maintain an active lifestyle. Built environment features that place bus or train stops within walking distance of housing, offices, retail, and open spaces make it more convenient for people who live or work in these communities to travel on foot or by public transportation instead of by car. People who use public transit walk more on a daily basis than non-transit users. Lilah Besser of the Centers for Disease Control and Prevention (CDC) pointed out in a study that, "an additional benefit to encouraging transit accessibility and usage can help physically inactive populations achieve recommended levels of physical activity, especially among low-income and minority groups."[14] The study found that transit users walked an average of 25 minutes to and from public transit. According to the Transit Cooperative Research Program, there has also been a significant growth in bicycle and transit integration, which has contributed to the increased use of bicycles to reach transit stations and the growing availability of bicycle racks on buses over the last few years.[15]

Lower rates of car ownership make public transportation an essential mode of transportation in low-income communities. Yet according to Howard Frumkin, director of the National Center for Environmental Health/Agency for Toxic Substances and Disease Registry at CDC, transportation systems do not provide certain populations, such as low-income people, with convenient and practical access to their jobs and healthcare.[16] A 1996 report by the Federal Transit Administration found that nearly one-third of the American population, predominantly children, seniors, people with disabilities, low-income people, women, and rural residents, is transportation disadvantaged.[17]* While lack of car ownership and access to public transit results in more opportunities for health-promoting behaviors including walking and biking, there are disadvantages for these populations as well. These individuals are most vulnerable to public transportation fare hikes and isolation from needed goods, services, medical care, and employment, all of which are ultimately linked to health outcomes.

*The Federal Transit Administration has defined transportation disadvantaged individuals as, "those persons who because of disability, income status, or age, are unable to transport themselves or to purchase transportation and are, therefore, dependent upon others to obtain life-sustaining activities."

Parks, Recreation Facilities, and Open Space

Parks, recreation facilities (e.g., playgrounds, sports areas, and public pools), and open space provide people with a place where they can engage in active play such as sports, leisurely strolls, or bicycle rides along trails and greenways. Outdoor play, particularly among children, is associated with higher levels of physical activity.[18] Playgrounds provide an outdoor environment where children can actively engage in physical activity and participate in more informal, unstructured play experiences. The Task Force on Community Preventive Services reported that there is strong evidence supporting creation and/or enhancement of places for physical activity as an effective intervention for increasing physical activity levels.[19] In addition to the availability, the success of a park or recreation facility depends on its vitality (i.e., the number of users and the social capital associated with the park among community members).

Places for physical activity are not distributed evenly among communities. Several studies have documented inequities in access to parks and open space, finding that low-income individuals and people of color are less likely to have access to parks and other types of physical activity settings (such as bicycle trails and public pools) than white and more affluent communities.[20,21] People in the top quartile of access to open space walked at recommended levels (moderate to vigorous activity for 30 minutes), 47 percent more than those in the lowest quartile.[22]

There are also differences in access to playgrounds and in the maintenance of playgrounds between low-income and high-income neighborhoods. In many low-income communities, public playgrounds may be few, but schools can play a role in offering their playgrounds during out-of-school hours. When parks are available, safety-related barriers to physical activity result in residents often limiting their time in public spaces to reduce their risk of experiencing violent crime.[23] (Note: We have not dealt in this brief with *private* physical activity spaces—e.g., gymnasiums—in part because they tend to be less available for low-income populations, but there are some opportunities and strategies to encourage further penetration of these resources into low-income communities and communities of color that could be explored.)

Healthy Food Environments

Increasing attention has been given to the links between the built environment and healthy food choices.[24] Easy access to fresh and affordable food is a starting point to a healthful diet. While there is limited research documenting the association between built environment features and eating habits, data about this relationship are growing. An early landmark study by Kimberly Moorland in 2001 found that for each supermarket in their census tract, white American residents increased their fruit and vegetable intake by an average of 11 percent and African American residents increased their intake by 32 percent.[25] More recent research has also found a link between neighborhood retail and fruit and vegetable consumption.[26]

Disparities in access to healthy foods have affected both low-income urban and rural communities for decades. Several studies have documented that low-income neighborhoods have far fewer supermarkets compared to middle-income neighborhoods, and that African-American and Hispanic neighborhoods are also less likely than white neighborhoods to have these stores.[27,28] In contrast, these same neighborhoods have a high concentration of liquor outlets.[29] While a reliance on smaller stores can mean that people face higher prices, less variety, and lower quality and quantity of healthy foods, it is important to note that there are some low-income neighborhoods where retailers feature affordable produce and ingredients for the traditional ethnic diets of neighborhood residents.

In general, however, as described by Lisa Feldstein, former director of the Land Use and Health Program for Public Health Law & Policy, disinvestment and poor land use planning disproportionately impact low-income neighborhoods and contribute to the creation of "food deserts," leaving residential neighborhoods lacking ready access to the components of a fresh and healthful diet.[30] Limited access to food stores within walking distance is further exacerbated by lower rates of car ownership among lower income households.[31,32] Yet few public transportation systems have planned their routes to ensure convenient direct access to grocery stores for transit users.[33] Underlying challenges to food access at a neighborhood level are larger forces related to urban development and the food system. As observed by Barbara McCann, of McCann Consulting and former director of Information and Research at Smart Growth America, "these forces include the loss of investment in existing cities, the creation of sprawling suburbs that consume farmland, and the birth of the corporate food system."[34]

Safety

Both perceived and real safety issues hinder people's ability to be active. There are three categories of safety concern that emerge in built environment issues: unintentional injuries, such as crashes and falls; environmental hazards; and crime and violence. People are more reluctant to walk, bicycle, jog, or play in neighborhoods that feel less safe, which in turn leads both to physical inactivity and to the decreased likelihood of obtaining healthy foods at retail stores, if these destinations are more distant. A national survey found that twice as many low-income respondents as moderate-income respondents worried about safety in their neighborhoods.[35]

Safety intersects with the other four characteristics of the built environment: walkable and bikable neighborhoods; public transit; parks, recreation facilities, and open spaces; and healthy food environments. A safe environment increases the likelihood of people bicycling and walking, making use of public transit, accessing parks, and patronizing healthier eating venues. Designing streets for pedestrian travel by raising medians and redesigning intersections and sidewalks has been shown to directly reduce pedestrian risk by 28 percent.[36] Indirect safety improvements occur when the perception of safety increases, leading to more people walking and bicycling. One study showed that residents are 65 percent more likely to walk in neighborhoods with sidewalks.[37] Another study revealed that upon installation of a bicycle lane, bicycling increased by 23 percent.[38] An older (1991) but still frequently cited Harris poll found that 59 percent of the respondents would walk more if there were safe, designated paths or walkways. About half of the respondents said they would commute if safe bicycle lanes were available or they had safe, separate designated paths on which to ride. (They also emphasized the value of workplace incentives, including financial incentives, showers, lockers, and secure bicycle storage.)[39] Comprehensive changes that

include bicycle lanes as well as other types of support (e.g., traffic calming measures) encourage more people to use bicycles as a form of transportation and provide a safer environment to do so.

- **Unintentional Injury**
  Fear of unintentional injury is a significant barrier among specific populations, including women, children, people with disabilities, and seniors. A recent CDC-funded study looked at youth and estimated that traffic danger inhibited approximately 40 percent of children from walking or bicycling to school.[40] Falls and inadequate time to cross large intersections are particularly relevant concerns for seniors and children. Older Americans make just 8 percent of their trips on foot or bike–far less than in some European countries, where 50 percent of seniors' trips use these active modes.

- **Environmental Hazards**
  The presence of toxins in the built environment can affect physical activity frequency by affecting the quality of the air people breathe, the soil where children play and neighbors garden, the water residents recreate in, and the building conditions in which people live, work, learn, and play. For example, sprawling developments increase dependence on automobiles, and this leads to more air pollution. Perhaps less obvious are the links between foods and toxins—the soil in which food is grown; the increased siting of schools on the outskirts of town, contiguous to agricultural spraying; and the impacts of these decisions on the water supply.

  Further, the long distances that food is transported also contribute to poor air quality. Fresh produce is transported an average of 1,500 miles, primarily by diesel trucks, from where it is grown to where it is delivered to major terminal markets.[41] Rates of childhood asthma are exacerbated by automobile and truck pollution, and this negatively impacts children's ability to engage in physical activity. Unfortunately, but not surprisingly, communities of color and low-income communities are more likely to experience harmful exposures that lead to poor health outcomes.[42]

- **Crime and Violence**
  Safety concerns go beyond fears of unintentional injuries and environmental hazards. It is intuitive that fear of violence leads to people shopping closer to home, irrespective of what is available to buy; driving more often instead of bicycling and walking; and being reluctant to allow children to play outdoors, even in nearby parks. While it is not clear exactly to what *extent* crime impacts physical activity, research shows that crime or fear of crime is associated with lower physical activity levels, especially among women of color, young people, and seniors.[43,44] A national survey found that twice as many low-income respondents as moderate-income respondents worried about safety in their neighborhoods.[45]

  Certain elements of the community environment, including broken windows, brownfields, vacant lots, graffiti, abandoned houses and cars, and litter, contribute to the feeling of an unsafe neighborhood, and are amenable to built environment improvements. When there is a perception of improved safety, positive behavior change results. For example, New York City's subway system had significant increases in usage at all hours after the violence problem was mitigated. Some strategies that may have contributed to this include better enforcement of laws against minor offenses, removing graffiti, fixing broken windows, and cleaning litter. As discussed earlier in this brief, communities with amenities such as good lighting, trees, benches, and other aesthetic qualities encourage more people to frequent the area and can foster a sense of safety.

  The complexity of the intersection of safety (especially violence prevention) and the built environment requires diverse sectors (such as public health, planners, transportation engineers, school officials, law enforcement, and community groups) to work in partnership together. Each sector has unique areas of expertise and thus a complementary role to play. For example, public health professionals can add value by bringing important background, expertise, and a history of success related to health and safety. This is important to note because, while the built environment is an area where significant

health improvements can be accomplished, such changes are more possible if health professionals start to play a stronger role and feel that the built environment is within their "comfort zone." While many parts of the built environment agenda are new territory to many health professionals, safety is an area of a bit more familiarity. Public health professionals can leverage their experience with injury prevention (e.g., traffic safety, car seats, and seatbelts), environmental health, and violence prevention work, to help shape broader discussions with other sectors around how the built environment can advance health. Given this, health leaders must bring their experience in fostering collaborations and play a facilitative (not a directive) leadership role.

Additional Equity Issues Related to the Built Environment

As low-income communities respond to the concerns described above and to other related and broader concerns regarding health and safety, displacement due to gentrification—the transformation of low-income, deteriorating neighborhoods—often results. As a result of improvements, neighborhoods are transformed from low value and desirability to high value and desirability. While one goal of gentrification is to improve the built environment and thus the quality of life for community residents, there is the potential threat of displacing long-time residents due to more amenities, higher rents, mortgages, and property taxes.[46]

Secondly, built environment designs, while responsive to needs of the general population, must take into account *everyone,* including any special needs of people with disabilities, and seniors. Poor street design and maintenance, lack of curb cuts, high speed traffic without adequate crossings, and inaccessibility to public transit, parks, and recreation can particularly affect less ambulatory populations. In moving forward, more attention to these issues is necessary and more research is required to better understand the best strategies to meet the needs of the entire community.

STRATEGIES, POLICIES, AND POLITICAL OPPORTUNITIES

This section highlights examples of strategies to shape the built environment that allow people to feel safe walking and biking to desirable destinations and accessing trails, parks, and open space in their neighborhoods. These strategies are clustered in three arenas: *active transportation and public transit, activity-friendly recreational environments, and land use planning.* It is important to note that while changing the built environment is critical, promotion and programming aimed at encouraging people to access opportunities should occur along with physical improvements.

Active Transportation and Public Transit

To promote and maintain active lifestyles, people need a variety of transportation options beyond personal automobiles, including walking, bicycling, and public transit. As state and local agencies design transportation systems, it is critical to provide routine accommodation for all users of the roadway, including pedestrians, bicyclists, individuals with disabilities, seniors, users of public transportation, and motorists. This is particularly important for seniors, since elderly populations are increasing. "We need a culture shift so people in this country don't think of bicycles as toys and walking as a simple stroll around the block," remarked a transportation advocate.

Another means to encourage active transportation—non-motorized modes of transportation—is to fund alternative transportation projects that connect walking and bicycle paths to different parts of the city or town. For example, development of greenways is a strategy that utilizes corridors of land that are either natural, such as rivers and streams, or manmade, to connect people and places together. Similarly, "rails to trails" efforts focus on preserving unused rail corridors by transforming them into community trails. Lastly, improving access to public transit will encourage people to walk and bicycle more as they are moving from one destination to another.

Strategies and Policies

- **Implement complete streets policies to provide for the safe and convenient travel of all users of the roadway, including pedestrians, bicyclists, public transit users, motorists, children, seniors, and people with disabilities.** Complete streets is a regulatory strategy to ensure that all roads provide routine accommodation for all users, including bicyclists, transit users, and pedestrians of *all ages and abilities,* by including or enhancing pedestrian and bicycle infrastructure during routine road maintenance and repair, new construction, and redesign. Comprehensive complete streets solutions include traffic calming measures, such as widening sidewalks, raising medians, and narrowing roadways; placing bus stops in a safe and convenient environment; and making various improvements (e.g., refuge medians) for disabled travelers—all of which play a role in reducing the number of crashes and reducing pedestrian risk of injury.[47]

  Complete streets policy initiatives are aimed at transforming the billions of dollars allocated through federal transportation legislation that are currently spent on automobile-oriented infrastructure into funding that supports activity-friendly rights-of-way. Specific advocacy efforts focus on modifying policies and practices of departments of transportation and planning to accommodate all users. Early successes have been achieved at state and/or local levels in California, Florida, Illinois, Massachusetts, Michigan, Oregon, North Carolina, and South Carolina.[48, 49] Current work is stitching together these successes into a national movement that would inform the reauthorization of the federal transportation law—the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), expected in 2009—and to replicate models at the state and municipal levels.

The National Complete Streets Coalition plays a role in advocating for street planning, design, and construction changes to accommodate bicyclists and pedestrians. The coalition is comprised of diverse partners: organizations representing bicycle and pedestrian advocates; smart growth, public health, planning, and transportation agencies; environmentalists; and others.

- **Connect roadways to complementary systems of trails and bicycle paths that provide safe places to walk and bicycle for children, seniors, and the general public.**
  Active transportation systems (i.e., seamless networks of accessible trails, sidewalks, and on-road bike facilities) present opportunities for physical activity and provide safe connections between community destinations such as parks, schools, retail stores, and workplaces. Walking and bicycle paths, trails, and greenways that are separated from traffic will enable people, especially children and seniors, to walk or bicycle safely from one place to another.

  "Rails to trails" is a growing national strategy aimed at transforming unused rail lines into trails and connecting corridors for active transportation and recreation. For example, the Seattle Department of Transportation implemented a comprehensive urban trail system that connects the corners of the city with downtown. By converting abandoned rails into trails, the city provides access to recreational activities, promotes bicycling as a viable transportation option, and links neighborhoods, parks, and open spaces throughout Seattle in a way that reduces unintentional injuries from motor vehicle crashes.[50]

  Current work in other states as well is focused around rails to trails conversion, but many advocates are still figuring out the best models for low-income communities. The rails to trails model can be expanded to include utility and sewer rights of way to create full bicycle trail networks. A key policy target at the federal level is to secure $100 million for rails to trails conversion.

  Programs offering free or inexpensive bicycle rentals can encourage bicycling along trails and bicycle paths. Many European cities, including Amsterdam and Paris, have model programs. The International Bicycle Fund lists community bicycle programs in 38 states that offer either free or inexpensive programs to promote bicycling.

- **Encourage the adoption of pedestrian and bicycle master plans, which can be incorporated into city general plans and capital improvement programs.**
  Generally developed at a local or regional level, bicycle and pedestrian plans can be integrated into local city plans and capital improvement programs to reflect a commitment to increasing walking and bicycling. Pedestrian and bicycle plans tend to articulate goals for increasing trips by foot and bicycle, safety, accessibility, and connectivity of passages for pedestrians and bicyclists. Many cities and regions have developed plans and use them to guide land use and funding decisions. For example, the Kansas City Walkability Plan is an excellent model and recognizes how pedestrian and bicycling mobility play a factor in quality of life.

  Roles for state and federal governments include: 1) integrating pedestrian and bicycle design guidelines into transportation planning practice[51] (e.g., The American Association of State Highway and Transportation Officials provides guidelines that support pedestrian and bicycle design); 2) dedicating a larger share of transportation funding to bicycle and pedestrian infrastructure, as well as making sure all projects include basic accommodation for all modes; and 3) encouraging all localities to both develop plans and fund implementation.

  In addition to building better infrastructure, programming can help increase the number of non-motorized trips. For example, bicycle safety trainings can prepare and build the confidence of the average bicyclist to take full advantage of environmental changes like complete streets.

- **Invest in public transit to provide affordable and reliable multimodal transportation options for all neighborhoods.**
  Investments in public transportation make public

transit fast, affordable, high quality, and accessible to all residents. Particularly in urban areas, quality public transit systems allow residents to reap the benefits of increased levels of daily walking that are associated with public transit use. A variety of modes, including paratransit, rapid bus, and light rails, are needed to form a strong network of public transportation options. To be accessible, all transit modes need to implement design standards to ensure access for people with disabilities. Public transit routes need to be planned to provide frequent service to worksites, food retail, health care, parks and recreation facilities, and other important destinations. Strategies must also focus on promoting seamless intermodal connections (e.g., between light rail lines, bus stops, bicycling, and pedestrian paths). The success of public transit efforts is dependent upon density, and coordination of transportation and land use planning is critical in order to achieve thriving public transit systems.

- **Ensure that children can walk and bicycle safely to school, including Safe Routes to School non-infrastructure activities and infrastructure improvements to provide sidewalks and bicycle paths.**
  Safe Routes to School (SRTS) is a national effort to ensure that children can walk and bicycle safely to school. The Safe Routes to School National Partnership, which represents more than 300 organizations and government agencies, was established to make the best use of available federal SRTS funds, to remove policy barriers to walking and biking to school, and to provide information, resources, and models to state and local agencies. As a result of the organizing force behind this movement, federal funding for Safe Routes has increased. The SRTS partnership currently focuses on working in nine key states and the District of Columbia, and aims to replicate and share successes about policies and practices working to promote safe bicycling and walking to and from schools throughout the United States.

  The SRTS coalition and supporters successfully advocated for a federal allocation of $612 million over five years from SAFETEA-LU, which is distributed to each state department of transportation. Funding distributed to state programs should be used strategically to foster effective programs and demonstrate the value and continued need for SRTS programs. Some advocates also see potential in using the safe routes notion as a building block for complete streets by supporting campaigns such as safe routes to health care, transit, food, and parks.

- **Increase federal funding sources for active transportation and public transit.**
  According to the Department of Transportation Federal Highway Administration, the 2005-2009 federal transportation law, SAFETEA-LU, provides funding for highways, highway safety, and public transportation totaling $244.1 billion and represents the nation's largest surface transportation investment.

  For bicycle, pedestrian, safe routes to school, transit, and trail advocates, the next major funding opportunity is the 2009 reauthorization of SAFETEA-LU, a $286 billion dollar authorization that rivals the defense department budget in size. Organizations are working to ensure that the overall spending favors non-motorized transit more than previous transportation reauthorization acts. Advocates view current spending patterns as inequitable—not reflecting either the percentage of all trips made by walking or bicycling or the percentage of injuries and fatalities suffered by pedestrians and bicyclists.

  Funding in the bill flows largely to state departments of transportation, which become the primary decision-makers and tend to emphasize auto-oriented highway projects in line with their legacy as builders of the interstate system. A much smaller portion of the money is controlled by metropolitan areas, where most people live and most walking occurs. And in sharp contrast to the streamlined state-driven process to build new road infrastructure, new transit projects must pass high federal government hurdles for cost-efficiency and other measures before getting approval, and funding is so limited that such projects usually receive a much smaller federal match than highway projects. Groups are looking to change the federal funding distribution formulas so that there are more federal

dollars devoted to transit and to non-motorized transportation, and subsequently to devise a strategy to work with states to use the money efficiently.

Political Opportunities

Policies established by local and state transportation departments influence to what extent the need of pedestrians and bicyclists is fully integrated into transportation planning. An important resource for implementing these strategies is the federal funding that is allocated to state departments of transportation. Walking, bicycle, trail, and safe routes to school advocates see the upcoming 2009 reauthorization of SAFETEA-LU as a tremendous opportunity. Current federal transportation funding does not adequately support infrastructure for non-motorized activities such as walking and bicycling. As one interviewee strongly commented, "The elephant in the room is 'where's the investment in the community?' Most transportation money is being invested unhealthily."

In order to shift the funding to favor walking and bicycling, there is a need for leadership from different sectors and constituencies, including seniors, education, and public health. Public health professionals and others advocating for healthy eating and active living have an opportunity to make the case for health, but in general few are at the table. One advocate pointed out that "frequently community coalitions are uncomfortable engaging transportation engineers. They often don't invite DOT (Department of Transportation) into the partnership to be part of the change process."

Most of the momentum around pedestrian- and bicycle-friendly infrastructure (i.e., complete streets) seems to be occurring at the local level. However, the opportunities to support local efforts depend on available state and federal funding. There needs to be more advocacy support from local and state constituencies to influence decisions at these higher policy levels. An easier victory related to future transportation projects will be for provisions that call for states and localities to include walking and bicycling facilities in new developments, and the more challenging task will be to gain funds for retrofitting old developments.

According to some advocates, there is great potential for a national complete streets policy. However, it has been difficult getting support from state departments of transportation as many transportation policy decisions are often dominated by highway builders. To really achieve complete streets, pressure on state departments of transportation needs to come from both grassroots advocates and from the federal level. Some advocates argue that legislative efforts may be premature, and there is not enough public support to push such efforts through. One strategy to increase public support would be to implement a complete streets promotional campaign to educate the community, local elected officials, media, and other professionals.

Another area of focus is increasing opportunities for walking and bicycling by creating trails and greenways. One major effort is "rails to trails" described in the previous section of this paper. Other trail projects include building along utility corridors and waterfronts. Advocates work to connect local, state, and national advocacy efforts, particularly aimed at using resources to support non-motorized transportation through SAFETEA-LU.

Safe Routes to School is viewed as a "political winner." SAFETEA-LU currently allocates $612 million dollars to state departments of transportation through the fiscal year 2009. The law provides funding for roads, pathways, or trails near schools; the creation of state level SRTS coordinator positions; and a national SRTS clearinghouse. Due to high funding requests from many state departments of transportation, the Safe Routes to School National Partnership estimates $600 million in SRTS funding upon reauthorization of SAFETEA-LU in 2009.[52] The program needs to be successful enough to convince Congress to allocate more funding in future reauthorizations.

Several interviewees mentioned the opportunity presented by climate change for building new partnerships to strengthen advocacy efforts to increase physical activity. The relationship between land use development, vehicle travel distances, and the carbon dioxide emitted by vehicles jointly impacts people's ability to engage in physical activity and contributes to global warming.[53] Part of the solution to the crisis of climate change—in the context of the built environment—is designing communities in a way that

reduces sprawl and improves transportation systems to include more safe and inviting opportunities for walking, bicycling, and using public transit.

A shared vision of each of these major advocacy groups is that federal transportation dollars would reflect greater equity between spending on non-motorized transportation and new road construction. Without federal resources, states, regions, and locales are stifled in making land use and transportation projects that are safe and accessible for bicyclists and pedestrians and do not harm the environment.

Activity-Friendly Recreation Environments

Parks, playgrounds, and open spaces provide opportunities for physical activity. Key strategies to encourage active play focus on creating and enhancing parks and open spaces, making these areas safe, and offering activity programming. One approach to reducing the need for new construction is to extend the use of existing facilities. For example, making school facilities available to community members after hours could encourage increased physical activity. Lower-income neighborhoods, which frequently have the least park and playground facilities, are also more likely to have school doors locked after hours. Additionally, providing trails and greenways in recreation areas help people to conveniently move within a park system as well as connect to desirable locations beyond its boundaries.

Strategies and Policies

- **Provide local parks, playgrounds, and recreation facilities in currently underserved residential areas.**
  Public financing of parks, playgrounds, and recreation facilities can occur locally and at the state level. Numerous financing mechanisms exist for the creation, operation, and maintenance of parks, which include but are not limited to, sales and use taxes, bonds, parcel taxes, special assessments, and benefit assessments. There are distinctions between the mechanisms with regard to how funds will be used. For example, sales and parcel taxes and special assessments can be used for capital expenditures, operations, and maintenance, while park finance measures (e.g., bonds) are generally reserved for capital expenditures to create new parks. Park bond measures have been replicated in many communities, and though still on a smaller scale, efforts are beginning to focus on securing land in low-income areas for more typically urban uses like community gardens, pocket parks, and playgrounds.

  There are challenges in developing parks in underserved areas, as well as issues around usage and safety. Efforts should include community engagement in planning, designing, building, and investing in parks and playgrounds as it increases community ownership, which can lead to increased use, sustainability, willingness to maintain, and decreased misuse and vandalism.

- **Require new housing developments to incorporate recreation and open space for activity.**
  At the local level, developer fees can be levied to ensure that housing developments provide open spaces for activity or play within the development as well as safe, attractive pathways for public use around the development. Incentives like density bonuses* or expeditious permits are complementary strategies to punitive measures. At the state and federal level, decisions about whether to fund public housing developments can (and in some cases do) give points or preference to plans that include infrastructure for physical activity like swimming pools, playgrounds, and/or walking routes.

- **Offer parks and recreation programming that encourages and supports physical activity.**
  Once parks are in place, parks and recreation programming (such as swimming, youth sports, etc.) serves as a magnet for community members to use the park. In fact, programming is not only a means to increase park usership, but it is an important mechanism to increase park safety, as parks are typically safer when more people are using them. Lack of structured programming can often lead to more frequent misuse of parks. Programming is generally offered by community-based organizations, local parks and recreation departments, and local health departments.

* An approach that allows for an increased number of market-rate units on the site as an incentive for the construction of affordable housing.

- **Establish joint use agreements that allow use of public schools and facilities for recreation by the public.**
  Joint use agreements can take many forms, but most relevant to physical activity is the opening of public schools and facilities for public use. Examples could include agreements for opening up school playgrounds and gymnasiums after school hours for community use or giving schools access to a city park if they do not have a playground on campus. The choice about whether to actually fulfill joint use agreements is generally up to local decision makers, and historic challenges with collaboration often present barriers. Although there are many local policies on the books, concerns about liability, cleanliness, maintenance, and security are often cited. Implementation has been a real challenge, particularly in low-income, low resource communities. While there has been some success in overcoming challenges, in many communities these concerns still need to be addressed.

- **Increase access to national and state park systems among people from low-income communities and communities of color.**
  One major challenge for low-income communities is their inability to access state and national parks. Lack of transportation is an issue, and strategies need to focus on creating modes that enable these populations to access the parks. Walking/bicycle trails and greenways linking to parks are part of the solution, but these alone are not necessarily the best mechanisms for meeting the needs of certain communities. A more promising strategy would address public transit concerns and work on improving people's ability to travel to parks by bus. This would require creative partnerships among local non-profits that serve these communities, national/state park services, and public transit agencies.

- **Increase federal funding sources for parks, playgrounds, and open space.**
  The Urban Park and Recreation Recovery (UPARR) program was established in 1978. It authorized $725 million to provide matching grants and technical assistance to economically distressed urban communities, but has not received funding since 2002. It is viewed as an important vehicle for funding to establish and care for the "park at the end of your street," and therefore needs to be reinvigorated and repackaged to become a meaningful vehicle for rehabilitating and planning urban parks.

  The Land and Water Conservation Fund (LWCF) provides federal money to state agencies to conduct statewide planning, purchase green space, and develop and maintain local, state, and national outdoor recreation areas. LWCF is authorized at $900 million annually, although that level has only been achieved twice since its inception in 1965, and is divided into two distinct funding streams: state grants and federal acquisition funds.[54]

  The Statewide Technical Assistance Program gives state agencies seed or match money for the acquisition or development of land and facilities that provide or support public outdoor recreation. Given that a majority of money for state and local parks is received through public financing (e.g., bonds), state and local agencies can potentially match money that comes down from the federal level. The creation of state-funded land and water conservation programs is another possible strategy to ensure that state and local entities receive adequate funding.

Political Opportunities

"The most important parks in America are the ones down the street," noted an interviewee. Nevertheless, factors such as inadequate funding, lack of facilities, and safety concerns serve as barriers for people, especially low-income communities of color, to accessing parks, playgrounds, and open spaces in their neighborhoods. As advocates are trying to support building new parks, they are continually challenged by debates about jurisdiction (i.e., who is responsible for maintaining parks) and funding to support maintenance. While this brief focuses primarily on federal and state opportunities, we acknowledge that most successful park efforts occur at the local level. Local finance measures (e.g., sales taxes) are the most viable way to cover costs of maintenance and programming, yet they do not consistently receive public support, especially where there is a strong "anti-tax" climate. In order to further local success, federal resources need to reprioritize how general funds are

allocated to localities to increase levels of steady funding for local parks. Federal efforts to create a state matching fund program would provide incentives for local finance measures.

At the national level, the National Park Service (NPS) is the key organization managing the national parks system, a network of natural, cultural, and recreation sites across the nation. NPS also offers grants and assistance to create community parks and local recreation facilities, conserve rivers and streams, and develop trails and greenways. A coalition of park advocates is exploring opportunities to reinvigorate the UPARR program operated by NPS, which as mentioned above has not been funded since 2002.

Lead advocacy entities for the LWCF include parks and recreation, land conservation, and more traditional environmental groups. According to one park advocate, "federal advocates for the most part consider LWCF the most promising pot of money" to fund *all* communities (not just urban areas) to acquire and develop outdoor recreation areas and facilities. There are concerns, however, that the LWCF is not funded at its full capacity, and that money trickling down from the federal level is not sufficient. Park advocates highlight the need for a better mechanism for funding allocations to states and local parks (possibly through a "state" land and water conservation fund).

Overall, emphasizing the links between parks and health has been a useful tool for advancing advocacy efforts for parks in economically disadvantaged communities. One California park advocate pointed out that "the relationship [between the health and parks movement] has been a phenomenal lynchpin for making sure that money (CA Proposition 84) wasn't distributed across the board, but targeted to 'park poor and economically poor people.' The link to health has been fundamental for the rallying cry for more parks." Not only using health data, but also having health advocates at the table, is considered a pivotal strategy for success.

Land Use Planning

The way in which communities are designed can influence people's ability to be physically active and to purchase affordable fresh foods. There are many facets to changing land use patterns, and many organizations and governments offer resources from which to build upon. This section draws upon this current work and provides a range of example strategies of how land use can support healthier eating and increased physical activity. One key strategy for promoting active living and healthy eating is the development of compact, mixed-use neighborhoods that integrate housing, shops, workplaces, schools, parks, and civic facilities. Assessing the health impact of revitalized residential areas or new developments in low-income communities can help ensure these environments support healthy behaviors as well as other health benefits.

Land use planning strategies include developing open spaces for physical activity (e.g., playgrounds or walking paths); increasing access to public transportation to enable people to travel from home to work and other important destinations; requiring retail stores to carry healthy, affordable foods; limiting the number of fast-food chains; and providing space for farmers' markets and community gardens. Additional elements for communities to consider in making land use decisions are incentives to include affordable housing units in renovation and new development projects. In addition to low-income housing tax credits, which are incentives targeted at investors and developers, inclusionary housing actually allocates a percentage of affordable housing for low- and moderate-income residents. Such provisions can help avoid problems associated with clusters of low-income housing or gentrification by making housing available for people at a range of income levels.

Strategies and Policies

- **Integrate health and smart growth considerations, including infill development*; compact, transit oriented development; mixed-use buildings; walkable, bikable neighborhoods; and green building practices into general plans, area specific plans, and zoning decisions.**
  A **general plan** (also referred to as a city plan, comprehensive plan, or master plan) lays out

* Infill development is the process of developing vacant or underutilized sites within existing city centers or urban areas that are already largely developed.

the future of a city or county's development in broad terms through a series of general policy statements. It is most easily thought of as a local land use "constitution," from which all local land use decisions must derive.[55] General plan provisions vary by state. In some states, these plans are important mechanisms for outlining what a city or county envisions as overall patterns of growth. Plans go through major revisions every 10-15 years and smaller amendments may be allowed more frequently. Localities may need to provide incentives to attract developers that will support general plan guidelines.

Area specific plans, also called community plans, are more specific, refined versions of the general plan and allow local governments and planners the flexibility to create zoning standards appropriate to a particular geographic area. These plans take less time to develop relative to a general plan and are a good opportunity to have a more immediate impact. **Zoning** is the division of a community into districts and the application of different requirements in each of those districts.[56] Zoning is often required to be consistent with the general plan.

General plans could provide incentives to developers and local governments to encourage mixed-use and urban infill and redevelopment projects through expedited permitting, waiver of fees and taxes, density bonuses, form-based codes, and other changes in planning and zoning techniques. Another strategy, hometown overlay zoning, can be used as a mechanism for overriding existing zoning requirements that are unfriendly to compact, mixed-use developments while preserving local character. Mixed-use, infill requirements for healthy food establishments and limited fast food are among the many land use regulatory strategies related to promoting healthy eating and walkable and bikable communities.

It is important for public health officials and other professionals to be involved in planning and land use decision-making processes to advocate for a smart growth vision, including walkable communities, and to outline goals and objectives addressing health concerns. Practitioners can utilize the Ahwahnee Principles for More Livable Communities, developed under the auspices of the Local Government Commission, as an overarching guide for incorporating smart growth concepts into planning decisions.[57]

- **Establish development requirements that give priority to creating transit oriented development.**
  Transit oriented developments (transit-oriented designs) are mixed-use, walkable communities developed around transit stops (usually rail transit). They allow community residents to take immediate advantage of public transit to access jobs, goods, and services that are near (within 5 minutes) transit stations.

  Transit oriented developments are often used for economic development and require a partnership with a regional transit agency. Transit oriented development is characterized by mixed-use development—the creation of compact, walkable communities. This is generally a local issue, but the development of transit lines is usually regional with resources coming from federal and state agencies. Potential issues associated with transit oriented development are cost/affordability, accessibility, and safety.

  Federal and state resources can incentivize transit oriented developments and promote coordination with local planning departments. Newer transit oriented development models are in about a dozen places, but in America's older, densely populated cities like New York City, transit oriented development is the norm.

- **Support the development of mixed-income housing to provide affordable options in convenient locations and avoid concentrations of poverty.**
  As developments are newly built or renovated, strategies addressing gentrification should be implemented to prevent the displacement of current neighborhood residents. The development of mixed-income communities would provide a range of housing prices that accommodate families

with multiple income levels. Inclusionary zoning is another promising policy strategy that allocates a percentage of the rental or for-sale units in housing developments for low- and moderate-income residents. In return, developers receive cost offsets as compensation for their affordable housing contribution. Additionally, incentives (e.g., tax breaks and credits) for planners, developers, and local governments may help control displacement of current residents.[58]

Housing is intricately tied with land use issues ranging from mixed-use development and transit-oriented design to gentrification and inclusionary zoning laws. As a result, there are both challenges and opportunities to exploring a shared advocacy agenda between groups concerned with affordable housing and those working to address issues like economic development, food access, and walkability.

- **Stimulate economic development and revitalize communities by providing a mix of retail, housing, and transit in underserved communities.**
  Economic development is a mechanism for attracting businesses and influencing how they operate.[59] Establishing enterprise zones—designated geographical areas that allow businesses to enjoy favorable tax credits, financing, and/or other incentives—is a key strategy for creating a mix of retail, housing, and transit to improve walkabilty and bikability and access to healthy foods in underserved neighborhoods. Successfully attracting pedestrians can have an upward spiral effect on walking trips as perceptions of safety are enhanced and more people walk to nearby destinations.

  The U.S. Department of Housing and Urban Development (HUD) administers a number of programs that can contribute to the economic revitalization of communities, including community development block grants (CDBG) and empowerment zone and brownfield redevelopment programs. Advocacy efforts could work to expand federal funding for these programs and to encourage the agency to include health considerations or health impacts in their selection criteria for new projects.

- **Renovate or rebuild schools located in neighborhoods that students can easily walk or bicycle to and from, or when building new schools ensure that they are located in areas that are easily accessible by walking, bicycling, and public transit.**
  The location of schools (school siting) impacts the ability of students, parents, teachers, and administrators to walk or bicycle to school. The trend to build schools on the fringes, where they are hard to walk or bicycle to (i.e., edge of suburbs or in largely undeveloped communities) is a consequence of the relatively low cost of land in suburbs or undeveloped areas, the ability to purchase and "build big" on large swaths, and the aging of neighborhood schools. There is also a disincentive to retrofit or renovate schools due to the two-thirds rule which states that if the cost of fixing a school exceeds a certain percentage of new construction costs, a new school must be built.

  A small number of states, including Arizona, Florida, and Maine have made efforts in healthy school siting. The Environmental Protection Agency (EPA) recently announced a grant program to document and analyze state level school siting policies that create barriers to walking or biking to school, and to help overcome challenges to health, smart growth, and environmental quality. At the state level, policies can require school districts to partner with local government, community residents, and city planners to develop community-centered schools on smaller sites. Another strategy is to remove acreage requirements, which foreclose opportunities to build smaller schools in communities that are within walking distance from students' homes. At the federal level, school facilities planning guidelines could promote or require consideration of health impact (e.g., air quality and physical activity) and preservation of neighborhood schools.

- **Refine and promote the use of health impact assessments for development decisions.**
  A health impact assessment serves as a tool to evaluate the health impact of any project or policy (e.g., general plan, school siting, development project, industrial land use, living wage/social issues, and campaign finance laws). Health impact

assessments have been implemented more fully internationally, particularly in the United Kingdom and New Zealand, and by the World Health Organization. Within the United States, local health departments have begun implementing health impact assessments and analyzing policies ranging from living-wage ordinances to housing development to transit changes.

Possible state legislation could give local public health agencies and community organizations technical assistance and grants to use health impact assessments for the evaluation of land use planning decisions in their communities (e.g., AB 1472: The California Healthy Places Act).

- **Expand access to retail establishments that provide healthy food options.**
  Land use policies and zoning ordinances have the power to encourage or discourage healthy food retail. Inserting general plan language that states the specific intent to encourage healthy food retail options within designated walkable areas is considered a key starting point. Eliminating barriers in current codes, such as restrictions that might prohibit sidewalk produce displays or limit the use of specific sites for healthy food retail, is an important corollary strategy for increasing access to healthy food.

  While land use policy is a starting point, localities will need other incentives to attract grocery stores, improve small stores, and establish farmers' markets in underserved communities, such as attractive financing options, support to reduce operating costs, and assistance with locating and developing appropriate sites. A few states have utilized low-interest financing mechanisms to support supermarkets. For example, Pennsylvania Fresh Food Financing provides grants and loans, financing, and technical assistance.

- **Establish restrictions on sales and marketing of fast food and alcohol.**
  Formula retail and restaurant ordinances are being used to limit the density of fast-food chains and liquor outlets or set minimum distances from specific sites such as schools.* Conditional use permits (CUP) are one way for a municipality to control certain "nuisance" businesses that have specific public health risks (e.g., fast-food restaurants, liquor stores, auto repair shops, and dry cleaners). Most cities have some form of a CUP in their zoning ordinance, but their uses are varied. Zoning laws can also be used to restrict the distance that certain products can be sold from certain other institutions like schools and churches.

- **Preserve farmland on the urban and suburban fringes and in prime growing areas.**
  Farmland preservation within urban and suburban fringes promotes regional agriculture, provides land for growing food, and helps prevent sprawl. Land trusts are one partnership mechanism to keep farmlands in operation. Preventing expansion at the urban and suburban fringe through policies like infill development is an important strategy. Maintaining existing farmland at the urban or suburban fringe also requires policy attention to ensure farming operations are compatible with neighboring developments (i.e., operations do not pollute the air, water, and soil near schools and housing). An emerging area of interest is the intersection of farmland preservation, open space, recreation, and park development efforts and their relationship to health.

- **Expand community gardens and urban agriculture.**
  Community gardens and urban agriculture (commercial farming in urban areas) are land use planning strategies for improving neighborhood food access and providing increased opportunities for physical activity. They provide a healthy source of produce for residents and reinforce the practice of behaviors such as eating healthily, gardening, and walking. An additional benefit is that community gardens beautify the neighborhood and provide an environment where people are more likely to enjoy spending time.

* Requires that any retail establishment, including food service / fast food outlets, that must adhere to a standard—or formula—for marketing, sales, or signage can only locate in specified areas of the city and only when granted a conditional use permit by the city.

Many innovative school and community gardening programs exist in cities including Brooklyn, Denver, Oakland, and Seattle. There are general concerns that they have not been brought to scale, particularly across the breadth of very low-income and food insecure communities. Community gardens and gardeners are both positively and negatively impacted by local land use issues and policies (e.g., temporary and low-cost leases, marginal land, in-kind use of city resources for irrigation and maintenance), and development pressures (e.g., evictions are common).

At the federal level, the Community Food Project grant program and Cooperative Extension can provide funding and technical support for school and community gardens. Current advocacy efforts at the national level are largely focused on the Federal Farm Bill to support community garden projects and allocate funds intended for community gardens and/or farmers' markets.

Political Opportunities

Public health professionals, developers, architects, planners and planning commissions, city and county managers, elected officials, community members, realtors, and others are increasingly advocating for and/or integrating smart growth principles into land use planning decisions. This has helped create communities that support healthy behaviors, in addition to reducing greenhouse gases that contribute to global warming.[60]

"Placemaking" as described by one of the interviewees, "is one of these holistic strategies. Walkability, bikability, access to parks, and walking to fresh foods are all part of placemaking." Planning and decision-making around land use issues involve varying degrees of involvement and influence from a number of stakeholders, including the U.S. Department of Housing and Urban Development, the EPA, city and county planning departments, city redevelopment agencies, developers, architects, transportation planners, and others. General plans and zoning are popular vehicles for incorporating a healthy community perspective into land use developments. Reducing distances between housing, jobs, schools, and retail stores and services is a key goal for increasing walking and bicycling for transportation. Compact, mixed-use developments, inclusionary zoning, and transit oriented developments are viewed by advocates as key strategies to ensure more livable and walkable communities.

There is some movement across the country around school siting, and a handful of states (e.g., Arizona, Florida, and Maine) are talking about and/or implementing school siting policies. The current land use practice, as explained by an interviewee, is, "we're building communities around cars, and building schools at the fringes of communities. Schools in neighborhoods are getting older and instead of working to fix them up, we're moving them to the fringes. Policy change is paramount." Advocates acknowledge that school siting has some promise, but there is not much legislation yet.

Another growing area of interest is the potential to use land use and zoning decisions to improve access to healthy foods and reduce exposure to unhealthy foods. In recent years, conferences focused on smart growth planning have added sessions specifically devoted to food issues. At the same time advocates focused on sustainable, local, and regional food systems are incorporating planning and land use strategies that support food systems. Key proposed policy strategies include specific general plan language to encourage healthy food retail options, including farmers' markets, as well as space for community gardens and urban agriculture. Several cities around the country have ordinances in place to limit fast foods utilizing formula retail characteristics as the basis for restrictions.

Regardless of the type of project or policy effort, it is important to consider the implications that land use decisions have on health. Key partnerships have emerged around the country to develop tools and resources that promote a better understanding and application of health impact assessments. The National Association of City and County Health Officials (NACCHO) and the American Planning Association (APA) are collaborating on development of a health impact assessment tool, in order to include public health officials in planning processes as well as educate planners about the health implications of planning decisions. The CDC has been actively engaged in research, training, and funding for health impact assessments as well.

In addition to health and/or smart growth-oriented individuals and organizations, there are a number of stakeholders that would benefit financially (and otherwise) from healthier communities. These constituencies include building and construction organizations, insurance companies, health care institutions, chambers of commerce, and other business-oriented organizations. These non-traditional partners can contribute to the political force that could help move a broad agenda. Drawing such a wide constituency of support to act in a coordinated fashion depends on having a comprehensive agenda that frames issues broadly enough to give everyone a stake in the ultimate outcome, while simultaneously promoting a concrete package of promising strategies that actually creates healthier communities for people to live, work, play, and learn.

CONCLUSION

Improving the built environment is a core approach to improving community health. This brief provides an overview of strategies from around the country that are being promoted and adopted to create environments that encourage and support healthy eating and active living. While the built environment is most immediately a product of local decision making, state and federal actions can be important mediators of local outcomes. The built environment field is moving quickly, and other strategies will emerge as it advances. There are potentially promising links between efforts to promote healthier eating and physical activity, and approaches to other health problems related to the built environment such as violence, unintentional injury, and childhood asthma. These overlapping concerns present opportunities for cross-pollination across issues as well as collaboration between sectors and disciplines to maximize synergy around improving health through environmental and policy change approaches.

Though this brief primarily views the built environment through a public health lens, it also describes built environment issues from the perspective of environmental justice, sustainable food systems, economic development, equity, and climate change. There is a tremendous opportunity for diverse sectors to forge effective partnerships that bring together their varied, yet intersecting interests. Ultimately, it is the convergence of efforts and partnerships that will make it more likely to achieve the larger vision of community health.

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