THE BUILT ENVIRONMENT AND HEALTH

11 Profiles of Neighborhood Transformation
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Prevention Institute is a nonprofit, national center dedicated to improving community health and well-being by building momentum for effective primary prevention. Primary prevention means taking action to build resilience and to prevent problems before they occur. The Institute’s work is characterized by a strong commitment to community participation and promotion of equitable health outcomes among all social and economic groups. Since its founding in 1997, the organization has focused on injury and violence prevention, traffic safety, health disparities, nutrition and physical activity, and youth development. This, and other Prevention Institute documents, are available at no cost on our website.
In recent years the public health community has become increasingly aware that the design of the built environment can have a major impact on the health of the public. For example, one may expect more physical activity and healthier diets among persons in communities with convenient, safe walking paths and accessible sources of fresh fruits and vegetables. On the other hand, poorer health indicators may be expected among residents of communities with high crime rates, few parks or walking paths, numerous alcohol and tobacco outlets, and little access to fresh food.

In this monograph, the Prevention Institute has profiled eleven projects in predominantly low-income communities where local residents mobilized public and private resources to make changes in their physical environments to improve the health and quality of life for their citizens. Such changes included building a jogging path around a cemetery, transforming vacant lots into community gardens, reducing the prevalence of nuisance liquor stores, and creating attractive murals on walls where graffiti once reigned.

These case studies will help concerned citizens, urban planners, and public officials examine possibilities for local environmental changes that would improve the health of the residents of their communities.

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This is the last town in the world...
Before this came to be, there were all the possibilities in the world.
There were all the opportunities for starting with small things to create a sweet new history and future.
If only we had seen them.

BEN OKRI, A PRAYER FOR THE LIVING

There is growing recognition that the built environment—the physical structures and infrastructure of communities—plays a significant role in shaping our health. To a great extent, the connection between environment and health has centered on the results of human exposure to contaminated air, water, and soil. Decisions about land use, zoning, and community design influence the degree of human exposure to toxins, but also have implications for neighborhood access to healthy foods, and the level of safety and attractiveness of neighborhoods for activities such as walking and biking. The designated use, layout, and design of a community’s physical structures including its housing, businesses, transportation systems, and recreational resources affect patterns of living (behaviors) that, in turn, influence health.

With support from the Centers for Disease Control and Prevention’s National Center for Environmental Health, Prevention Institute crafted 11 profiles about communities across the country that reveal how the built environment can positively influence the health of community residents. These profiles were written to:
1. Describe the important connections between the built environment and health for practitioners in public health, city and regional planning, community economic development, and other related fields;
2. Support public health practitioners in looking beyond the traditional bounds of the healthcare system to address social and environmental determinants of health;
3. Suggest potential expanded roles for practitioners from diverse fields to promote health-enhancing improvements to the built environment;
4. Highlight a range of opportunities to create community-level change to the built environment through multi-sector partnerships with community residents, businesses, community organizations, and local government; and,
5. Provide concrete examples that demonstrate the importance of the built environment in promoting health.

Environmental factors contribute to disproportionately high incidences of negative health outcomes (cancer, asthma, injuries) in low-income communities which are often also beset with structural and institutional inequities. Disenfranchised communities are more likely than wealthy communities to be the sites of hazards and,
BUILT ENVIRONMENT AND HEALTH: OVERVIEW OF PROFILES
The program profiles include: 1) a description of the geographic area and changes that were made; 2) the process required to implement the changes, including leadership and organizational collaboration; 3) any documented impacts, positive and negative; 4) lessons learned, framed as “wisdom from experience;” 5) supporting research that documents the connection between the built environment and health; and 6) next steps for action.

The program profiles tell the following stories:

1. Evergreen Cemetery Jogging Path: In the predominantly Latino, urban area of Boyle Heights, California in East Los Angeles, the Latino Urban Forum and neighborhood residents rally community-wide support to create a safe, 1.5 mile walking/jogging path. Community members previously had no access to parks or open space, but can now get physically active, in their own neighborhood.

2. Partners Through Food: In the Upper Falls community of Rochester, New York, a dynamic collaborative of community members increases access to healthy food by organizing for over five years to bring a full-service supermarket into a community which lacked a single grocery store.

3. Boston Lead-Safe Yard Project: An innovative partnership focusing on Roxbury and Dorchester in Boston, Massachusetts uses affordable techniques to minimize exposure to lead in inner-city yards—a contemporary environmental hazard linked to developmental disabilities and learning delays, particularly among children under six, living in older, urban homes.

4. Gardens for Growing Healthy Communities: A community/academic partnership transforms vacant lots into community gardens in urban neighborhoods throughout Denver, Colorado, creating and documenting new opportunities for physical activity, healthy eating and social connections among community residents, survivors of abuse and homeless people.

5. South Los Angeles Liquor Store Closures: Working to reduce violence and crime in South Los Angeles, California, this community-driven, grassroots effort organizes community residents to close neighborhood liquor stores that negatively impact community health and safety.

6. The Paterno Trivium: Community residents work collaboratively with city government to transform an unsafe traffic intersection into a neighborhood gathering spot and to improve the pedestrian environment on adjacent streets in Hudson Heights, New York City—an ethnically diverse, urban community.

7. The Fenway Alliance: A powerful coalition of 20 well-respected arts, culture and academic institutions revitalizes a cultural district by improving walkability through major infrastructure projects in Boston, Massachusetts. Although focused in a commercial district, their efforts demonstrate innovative roles for large-scale institutions in improving the built environment. Their work is focused on attracting African American and Latino pedestrians from nearby schools and communities.

8. Westside Project: With an eye toward improving the built environment, a collaborative of local government agencies, including the public health department, work to build community support and trust before building pedestrian amenities for residents in Stamford, Connecticut who had become wary after a history of displacement and gentrification.

9. The Seattle Department of Transportation: This citywide department pays special attention to achieving equity across geographic and economic boundaries while working to create an integrated network of pedestrian and bicycle infrastructure that promotes safe physical activity for residents throughout Seattle, Washington.

10. The Wray Health Initiative: In the rural town of Wray, Colorado a coalition builds a neighborhood walking path, basketball court and other features to make fitness fun for people of all ages by soliciting community buy-in and creating social support for activity.

11. Philadelphia Mural Arts Program: Utilizing a grassroots model, this effort engages community members, including ex-gang members, in the creation and painting of murals that improve aesthetics and transform neighborhoods in urban, economically disenfranchised communities throughout Philadelphia, Pennsylvania.
at the same time, often lack the infrastructure to support physical activity and healthy eating. Too many residents live in community environments that promote disease and injury and do not support healthy behaviors that can help them avoid major chronic diseases that result from sedentary lifestyles and poor nutrition (e.g., heart disease and stroke). Many people live in neighborhoods that are over-saturated with alcohol outlets and advertisements, lack grocery stores, have sidewalks in disrepair, have little access to open space, and have dangerously high traffic speeds.

Further, compared to residents of middle-class communities, residents of low-income neighborhoods—struggling with the presence of environmental hazards, crumbling infrastructure, and a lack of economic resources—face even more barriers to overcoming them. They often need to implement change in the face of inadequate transportation, fewer businesses in the neighborhood to support them, institutional barriers to neighborhood investment, and lack of influence within the local government. In addition, people’s previous experiences of housing cost increases and gentrification may create a realistic concern that enhancing the neighborhood could result in unintended strain and disruption to the community.

However, the physical environment can promote health directly through access to clean air and water and can influence people’s behavior by facilitating health-promoting activities, such as walking, biking, and healthy eating. Changes to the built environment can have a positive impact on many health-related issues, from diabetes and asthma to traffic safety and community violence. In many cases, a change to the built environment will simultaneously impact multiple health conditions.

In choosing these 11 profiles, we focus primarily on improvements in communities where the mean resident income is low and where concentrations of African American and Latino residents are high. We highlight how improvements to the built environment can enhance the health and well-being of members of these communities. The examples illustrate how changes to the built environment can be particularly meaningful in communities that have historically lacked important features such as well-maintained pedestrian infrastructure, services and institutions, or public art. Taken more broadly, the profiles demonstrate how improvements to the built environment have the potential to reduce health disparities.

In compiling these profiles, several themes emerged about how communities are able to overcome challenges and succeed.

- Broad, diverse participation is necessary to mobilize the resources and build the will to make community improvements.
- Efforts to create health-promoting environments provide opportunities to build community resilience and marshal community assets, rather than the more typical focus on risk factors.
- Persistence and innovation are common qualities of the organizers and organizing efforts that successfully brought about improvements to the built environment.
- Engaging communities to focus on changing the policies and practices of local organizations and institutions is part of an effective strategy for improving health and leaving behind lasting changes in neighborhoods.
- Focusing on the built environment fits well with other public health approaches that a) recognize that changing individual behavior involves changing social norms and environmental determinants of health and b) concentrate on the community as the unit of analysis and action.
While making built environment changes may be necessary, they are not sufficient. As the profiles of the Wray Health Initiative in Wray, Colorado and the Westside Project in Stamford, Connecticut illustrate, improvements to the physical environment are significant components of a multifaceted strategy for promoting health that includes community education, increasing social capital and enhancing social support.

Over the past decade, more and more communities have emphasized the importance of making design decisions in the context of the overall community. The term “smart growth” refers to a land development strategy aimed at managing the growth of a community, minimizing automobile transportation dependence, and improving the efficiency of infrastructure investments. While “smart growth” initiatives have brought attention to the need to manage new growth and development effectively, Built Environment and Health: 11 Profiles, calls attention to the value of neighborhood-level changes within existing structures. Many low-income urban environments suffering from disinvestments and decay already have the skeleton of a walkable community and possess great potential. Practices as simple and routine as road repavement are opportunities for neighborhood enhancement. One road at a time, more space can be created for bicycles and pedestrians, and routes can be narrowed and altered to promote “traffic calming,” (i.e., decreasing vehicular speed, and increasing safety). These profiles demonstrate that small and incremental changes are opportunities to design solutions that suit unique neighborhood environments and are significant contributions toward improving health and quality of life locally. These changes offer substantial enhancements for the affected residents, and build momentum for further improvements.

In identifying profiles, a key goal was to highlight initiatives that clearly demonstrate linkages between environmental changes and changes in health behaviors and outcomes. However, such projects are few and our selected efforts are not thoroughly evaluated. Documenting the health impact of environmental change efforts remains a challenge for a host of reasons. Communities generally are not collecting the quality and quantity of data needed to demonstrate impact. Some built environment initiatives are not explicitly designed with health outcomes in mind, and therefore health-related information may not be collected. Furthermore, multi-year surveillance of changes in population health status is often beyond the scale or resource capacity of localities. Therefore, to improve the evaluation of future initiatives it may be appropriate for local evaluation to focus on documenting changes in behavior. For example, a community can assess changes in rates of walking among residents in a manner that can be coordinated with national efforts examining changes in the rate of health conditions such as obesity and heart disease.

In cases where documenting behavior change is beyond an initiative’s scope or capacity, evaluation can focus on documenting the environmental change that occurred. With nationally supported evidence demonstrating that a specific environmental change at the community level yields a positive health outcome, communities can focus on implementing and documenting the particular environmental change, rather than attempt to document the expected behavior change. Toward this end, further investment in thorough case studies to evaluate the impact of some interventions, like those profiled in this report, may be warranted.

The powerful influence of the built environment on health suggests that public health practitioners should be involved in planning and policy decisions related to land use, zoning and community design. Health practitioners can serve an essential role in collaborating with other professionals and working alongside neighborhood residents to create and promote healthy communities. Their participation becomes imperative as the conviction grows that addressing the social and
physical environment is an essential element of a strategy to encourage healthy behaviors. Thus, a new role for public health leadership is emerging. In this emerging role, practitioners need to engage in three principal areas of action. The first is to assess the health impact of land use and community design options before decisions are made as well as after improvements are implemented. The second is to catalyze and facilitate inclusive partnerships with membership that stretches far beyond traditional health fields to plan new structures and redesign existing ones. Third, public health practitioners need to participate in policy-making on issues related to the built environment to ensure protection from toxins, access to healthy food outlets, places to walk and recreate, and other health-promoting environments.

While Prevention Institute was successful at documenting compelling profiles, we also found critical needs and unfulfilled opportunities in communities throughout the country where health and quality of life could be improved through changes to the built environment. Our hope is that the profiles that follow will stimulate and inspire practitioners from multiple fields and sectors to partner with community residents, design solutions, and take action to improve the built environment for the health and well-being of all.
In the late 1970’s, high crime rates and lack of perceived safety brought together concerned organizations to address the vitality of an area that boasts many of Boston’s finest arts institutions, some dating back to the early 1900’s. To help remedy these and other neighborhood problems, local businesses and cultural organizations continue to levy their collective influence through the Fenway Alliance, a coalition whose mission is to “achieve an improved physical environment, sense of community, and quality of life for members, residents and constituent patrons of the Fenway Cultural District.” Fenway Alliance represents 22 well-respected arts, culture and academic institutions and boasts a high degree of credibility within the city. Today, it shepherds multi-million dollar infrastructure projects that focus on making the Fenway area walkable, beautiful, and accessible to both visitors and residents. Their success serves as a model of how a partnership can encourage a walkable community. Improving the walkability of a community increases opportunities for physical activity that can result in positive health outcomes for community residents.

Fredrick Law Olmsted, one of America’s great landscape architects and the creator of New York City’s Central Park. When he conceived the park landscape, Olmsted hoped it would serve as a refuge where city dwellers could regenerate and restore mind, body, and spirit. The Fenway area is not the most ethnically diverse neighborhood, with only 22% of its population comprised of African American, Latino, Asian, and “other” residents. However, nearby Roxbury and South End communities are considerably more diverse with ethnic groups making up 94% and 55% respectively. The Fenway Alliance is working to make the district attractive, affordable and accessible to diverse residents (including Russians and elderly in and near the Fenway community).

THE PROJECT

When ten organizations first joined to form the Fenway Alliance in 1977, the group’s primary concern was safety. Gradually, as their efforts began to positively impact safety concerns, the group’s focus expanded.

THE PLACE

Home to Symphony Hall, the Boston Museum of Fine Arts, and The New England Conservatory (among other arts centers), the Fenway area also boasts Harvard University’s School of Public Health and Northeastern University. Both the nation’s first YMCA and Fenway Park, home of the Boston Red Sox, have adorned this rich cultural district since 1912. The area also features a 19th century linear park system called the Emerald Necklace, designed by Fredrick Law Olmsted, one of America’s great landscape architects and the creator of New York City’s Central Park. When he conceived the park landscape, Olmsted hoped it would serve as a refuge where city dwellers could regenerate and restore mind, body, and spirit. The Fenway area is not the most ethnically diverse neighborhood, with only 22% of its population comprised of African American, Latino, Asian, and “other” residents. However, nearby Roxbury and South End communities are considerably more diverse with ethnic groups making up 94% and 55% respectively. The Fenway Alliance is working to make the district attractive, affordable and accessible to diverse residents (including Russians and elderly in and near the Fenway community).
The Fenway Alliance shift in mission came about as representative institutions observed that, despite the beautiful and historic institutions embedded in the Fenway, the surrounding area was simply not very attractive or inviting. Two major thoroughfares funneled high-speed traffic through the area, creating traffic patterns at odds with pedestrian and bicycle safety. By the late 1980s the Fenway Alliance began efforts to increase pedestrian traffic by improving both the walkability and aesthetics of the area. Today’s Alliance is made up of 22 member institutions.

Among other projects, the Fenway Alliance serves as an organizer, overseer and watchdog for the massive reconstruction of Huntington Avenue/Avenue of the Arts. To promote foot traffic that is both good for the community and good for business, the group has lobbied for pedestrian enhancements to the major roadway including widening sidewalks, adding stop signs, planting hundreds of trees, and installing antique-looking lights, public art and “street furniture.” To keep reconstruction moving forward, representatives from the Fenway Alliance visit construction trailers biweekly and attend team meetings to ensure progress and ongoing funding. “There were many times when things would not have gotten done if the Fenway Alliance wasn’t there watching out,” said Kelly Brilliant, Executive Director.

Through the Alliance’s advocacy efforts, the city of Boston (Department of Public Works), the state of Massachusetts (Massachusetts Highway Department) and the Massachusetts Bay Transportation Authority (MBTA) were able to access state and federal funds to implement changes to the avenue in the heart of the Fenway Cultural District. Nevertheless, “Funding is constantly in jeopardy, and we repeatedly plead our case to the city and the state,” says Brilliant.

Another ongoing project is the restoration of the Muddy River, which serves as the backbone of Olmsted’s Emerald Necklace. The Fenway Alliance joined restoration efforts already underway when flooding in 1977 and 1995 caused millions of dollars of damage to artwork in the Museum of Fine Arts.
Arts, and damage within several of the surrounding academic members. The system of linked parks, which integrates glades, dells, sweeping vistas, reflecting pools, bike paths, and walkways, is one of the most uniquely designed historic urban waterways in the nation. The Fenway Alliance is currently collaborating with preservation groups to achieve a balance between historic landscape preservation principles, resource protection regulations, public safety measures, and modern engineering practices. Their goal is to create a place that people will want to walk to and enjoy.

**THE RESULTS**

Healthy Change in Local Environments

Renovation of Huntington Avenue/Avenue of the Arts is almost complete (expected: fall 2004). In an area where people once feared for their safety, pedestrians stroll the avenue at all hours. Much of this transformation has been attributed to efforts to make the area more pedestrian friendly and vibrant for passersby. Upgrades to the physical environment are also underway in the Muddy River Park. When the river restoration project is complete, the park will be a beautiful place for residents and visitors alike and threats of flooding will be greatly reduced.

Because its interest lies in bringing more foot traffic to the area to support local businesses and institutions, the Fenway Alliance has not attempted to document increased physical activity as a result of restoration efforts, as they are more interested in increasing admission to, and patronage of, local institutions. However, previous research suggests that improving pedestrian access increases walking activity. In *Health*
and Community Design: The Impact of the Built Environment on Physical Activity, Frank et al. synthesize diverse literature from urban planning, transportation and health and describe myriad factors associated with walking and community design. “Pedestrians require good sidewalks and crosswalks [as well as] highly detailed, interesting spaces along their route (store fronts, building facades, so-called ‘street furniture,’ etc.),” the authors explain. They also suggest that recreational walking “is best suited to either social environments wherein people stroll along a pedestrianized street or other type of highly social space, or quiet environments for fast walking or exercise.”1

Similarly, Cervero and Kockelman found that amenities such as street lighting and sidewalks increased trips by modes other than by car.2,3 Likewise, research by the Task Force on Community Preventive Services, among others, strongly suggests that enhanced pedestrian facilities promote walking,4 and increased walking leads to improvements in health.

Wisdom from Experience

According to Brilliant, “Although keeping all 22 agencies on board when each has its own budget and bureaucracy requires ongoing negotiation and communication, the collective influence of the Alliance is a testimony to the power of collaboration.” She says that she has really had to “learn how to be patient but persistent in dealing with different timeframes to better connect with different constituents. For example, community groups and city government often move in slower timeframes than institutions and the Fenway Alliance itself, so when attempting to receive input from many constituencies, it often takes time to get groups together.” Brilliant also mentions that her multifaceted role has taught her to “figure out when to ask questions and go deeper and to know when a quick decision based on available information is needed.” She believes that one important aspect of her work goes much broader than the Fenway itself and that is to “advocate to restore funds to arts and culture by describing how much the creative economy brings to the area.”

Most of all, she says, “Remember people matter and should be the first priority of any initiative. Changes to the built environment alone—no matter how necessary or excellent—will not bring people to the area if they don’t feel ownership, comfort, or at home there. Work to break down barriers by really learning what different types of people like, want, and need.”

Looking Ahead

As another important prong in its attempts to engage the community, the Fenway Alliance is ramping up efforts to increase pedestrian traffic and public use of area institutions by expanding its “Opening Our Doors” program, a popular single day event of free cultural activities. To complement these infrastructure enhancements aimed at pedestrians and use of institutions, the group is currently looking at “deeper issues of access” that include identifying ways to increase the diversity of patrons and bringing more Latino, African American, Russian, elderly, and disabled residents from neighboring communities to visit institutions in the area.

The group plans to conduct focus groups to better understand what features might draw Latino and African American visitors. Additionally, the Fenway Alliance has submitted a proposal to partner with schools to bring more youth to local institutions. The member institutions are also planning to implement a “Culture Pass” program that will give discounts or free admission to local attractions. All of the efforts of the Fenway Alliance are woven together in the common fabric of its mission to use the strength of the institutions to improve the physical environ-
ment with the end result of enhancing the quality of life for residents and stakeholders.

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**ENDNOTES**


This is one in a series of 11 profiles that reveal how improvements to the built environment can positively influence the health of community residents. The examples illustrate how changes to the built environment can be particularly meaningful in communities that have historically lacked important features such as pedestrian infrastructure, services and institutions, or public art. Taken more broadly, the profiles demonstrate how improvements to the built environment have the potential to reduce health disparities.

The profiles were written and produced by Prevention Institute. Funding and guidance were provided by the Centers for Disease Control and Prevention’s National Center for Environmental Health. It is our hope that these profiles will stimulate and inspire partnerships between community residents and practitioners from multiple fields and sectors to design solutions and take action to improve the built environment for the health and well-being of all.