

LAND USE & COMMUNITY DESIGN AND HEALTH

Land Use and Community Design Determine Health

Heart diseases, cancer, diabetes, stroke, injuries and mental illness leading causes of morbidity and mortality. Many can be prevented by health-promoting built environment policies and practices. The term “built environment” broadly refers to the “form and character of communities” encompassing land-use patterns, urban design characteristics, and transportation systems. The built environment, comprising the physical and the social environments, affects both human and natural environmental health.

The physical aspect of the built environment shapes people’s social behaviors and lifestyles. The land-use mix and layout and the urban design of neighborhoods can determine one’s proximity to health-relevant opportunities and resources. Uncontrolled growth and reliance on cars do not only cause traffic volume and injury fatalities, but also physical inactivity, air pollution, and carbon emissions. Proximity to unhealthy food retail, such as convenience stores and fast food restaurants, is linked to unhealthy dietary behaviors and related chronic diseasesⁱⁱ. Residential proximity to environmental hazards can increase the risk of adverse health outcomes, including adverse pregnancy outcomes, cancer, cardiovascular and respiratory illnessesⁱⁱⁱ.

The social aspect of the built environment equally affects our health. In general, this relates to safety, violence, and social disorder. Specific factors pertain to the type, quality, and stability of social connections, including social participation, social cohesion, social capital, community resilience, and the collective efficacy of the neighborhood (or work) environment. Social capital depends on the ability of people to form and maintain relationships and networks with their neighbors. Characteristics of communities that foster distrust among neighbors, such as neglected properties and criminal activity, can affect both the cohesiveness of neighbors and our health and well-being^{iv}.

The Logic Model

Input/ Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
Compact Development	<ul style="list-style-type: none"> Encourage development densities that existing and planned infrastructure and services can support. Encourage mixed-use development. Support Smart Growth^v principles. Ensure jobs-housing balance/match in mixed use centers. 	<ul style="list-style-type: none"> Increased walkability and physical activity. Increased social connection. Increased transit usage. Reduced greenhouse gas emissions. Reduced impervious surface. Improved urban stormwater. Improved air quality. 	<ul style="list-style-type: none"> Improved air quality. Increased environmental and social capitals in local communities. Reduced body mass index and obesity. Reduced morbidity and fatalities. Reduced mortality. Reduced the prevalence of depression. Improved health and well-being.

Input/ Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
	<ul style="list-style-type: none"> • Provide opportunities to walk to amenities and services. 	<ul style="list-style-type: none"> • Reduced urban sprawl. • Reduced reliance on cars. • Reduced commuting. • Reduced motor vehicle accidents. 	<ul style="list-style-type: none"> • Improved quality of life. • Increased community inclusiveness. • Increased neighborhood safety. • Improved a sense of community^{vi} and place.
Complete Neighborhood ^{vii} ^{viii}	<ul style="list-style-type: none"> • Build 20-minute neighborhoods at a walkable and bikeable human scale, and meets the needs of people of all ages and abilities. • Provide safe and easy walking access to goods and services needed in daily life, such as active transportation options, grocery stores and other personal services, quality public schools, parks and recreational facilities, and other civic amenities. • Provide mixed-income housing with affordable access to diverse opportunities. • Retrofit or add to existing neighborhoods to improve amenities, adjacency, and experience where residents already live. 	<ul style="list-style-type: none"> • Increased equitable access to housing, transit, healthy food and lifestyle. • Increased walkability and physical activity. • Increased social connection. • Reduced vehicle miles traveled. • Reduced greenhouse gas emissions. • Increased “an eye on the street”. 	<ul style="list-style-type: none"> • Reduced body mass index and obesity. • Reduced health disparities. • Improved health and well-being. • Improved quality of life. • Increased social and environmental capitals in local communities. • Increased community inclusiveness. • Increased neighborhood and housing integration. • Improved neighborhood safety. • Improved a sense of community and place. • Increased social integration.
Transit-oriented Development and Colocation ^x of Services	<ul style="list-style-type: none"> • Develop mixed-use centers along reliable transit facilities. • Co-locate essential services along transit facilities and near community hubs. • Explore joint use facilities and public-private partnerships in addition to co-locating services. • Design for maximizing use, ridership and multiplier effect of new transit investments. 	<ul style="list-style-type: none"> • Increased walkability and physical activity. • Increased social connection. • Increased transit usage due to increased density. • Reduced vehicle miles traveled. • Reduced greenhouse gas emissions. 	<ul style="list-style-type: none"> • Reduced body mass index and obesity. • Improved air quality. • Improved health and well-being. • Improved quality of life. • Increased social and environmental capitals in local communities. • Increased community inclusiveness. • Improved a sense of community and place.

Input/ Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
Neighborhood Environment	<ul style="list-style-type: none"> • Encourage retail that supports healthy living on main streets^x. • Discourage fast food restaurants by limiting drive-through services. • Identify foodshed and sources of fresh, nutritious food. • Provide access to local healthy foods and community gathering opportunities through community gardens and farmers' markets. • Expand curb-side opportunities for deliveries and placemaking. • Provide and capitalize on small, informal outdoor gathering spaces, such as parklets and pocket parks, with flexible seating and shade environment, etc. • Develop safe routes to destinations with street trees and amenities (including water fountain to adapt urban heat island effect). • Apply Crime Prevention through Environmental Design (CPTED) principles to improve community health. 	<ul style="list-style-type: none"> • Improved access to healthy foods and healthy eating. • Reduced obesity and cardiovascular risk factors. • Increased foot traffic. • Increased "an eye on the street" and reduced crime. 	<ul style="list-style-type: none"> • Increased social, cultural and environmental capitals in local communities. • Increased community inclusiveness and mobilization, and collective efficacy. • Improved neighborhood safety. • Improved health and well-being. • Improved quality of life.
Urban-Rural Connection	<ul style="list-style-type: none"> • Right-size land-use markets through economic mechanisms, such as Transfer of Development Rights. • Create stronger continuum of shared impacts regarding land-use change and opportunities. • Recognize agricultural productivity and its importance, along the urban-rural gradient. • Support connections to the land and responsible farming practices, identity of land 	<ul style="list-style-type: none"> • Improved urban-rural connections. • Improved food systems and nutrition security. 	<ul style="list-style-type: none"> • Improved healthy eating across population groups. • Improved food justice and food stability. • Increased environmental capital. • Improved environmental and human health.

Input/ Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
	<p>stewardship tied to sustainable agriculture, and family farms and regional foods.</p> <ul style="list-style-type: none"> • Document food deserts and loss of agricultural productivity as a form of environmental injustice. • Explore tools, such as agricultural conservation easement and density purchase, etc., to protect healthy and responsible farmlands. • Work with Conservation Futures to secure funds to acquire and preserve timberlands and agricultural areas.^{xi} 		
Placemaking and Built Form	<ul style="list-style-type: none"> • Develop complete streets as healthy and safe “places”. • Build urban parks including linear parks for spontaneous social interaction. • Encourage development densities that existing and planned infrastructure and services can support • Provide place-making opportunities through public space design and public arts by engaging the local community. • Provide safe and interesting destinations and public spaces along main streets and in mixed-use centers to encourage social gatherings. • Encourage placemaking strategies and tactics to encourage social gatherings. • Provide movable furniture in public spaces and destinations for informal use and social interactions. 	<ul style="list-style-type: none"> • Increased pedestrian traffic. • Improved traffic safety. • Reduced social isolation and depression. • Reduced street crime. • Increased “an eye on the street” and reduced crime. 	<ul style="list-style-type: none"> • Increased social, cultural and environmental capitals in local communities. • Increased place attachment^{xiii}. • Improved a sense of community. • Improved street and neighborhood safety. • Increased social support. • Reduced psychological distress and depression. • Improved health and well-being. • Improved quality of life.

Input/ Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
	<ul style="list-style-type: none"> • Encourage the use of street plinth (ground floor building façades) to create “a city at an eye level^{xiii}” offering attractive public space and pedestrian interaction opportunities with ground floor activities. • Create human-scale, pleasant and walkable neighborhoods with the use of form-based codes. • Encourage architectural features of the front entrance, such as porches, to promote visibility from a building's exterior. • Protect against widespread privatization of public spaces as unintended consequence of redevelopment. • Preserve public access and comfort for pedestrians and visitors, regardless of income, ability and interest. • Work with developers to provide private open space and walkway connectivity for public use at all reasonable hours. 		
Universal Design	<ul style="list-style-type: none"> • Apply universal design principles to create safe and walkable neighborhoods for all ages and abilities.^{xiv} 	<ul style="list-style-type: none"> • Increased generational-friendly opportunities to support aging-in-place. • Increased access opportunities for people with special needs. • Reduced injuries and deaths among aging populations. 	<ul style="list-style-type: none"> • Increased social capital. • Increased a sense of place. • Increased community diversity, inclusiveness and social integration. • Improved health and well-being. • Increased life expectancy.
Biophilic City	<ul style="list-style-type: none"> • Bring nature to the built environment by integrating nature into urban design. • Increase and protect urban tree canopy. 	<ul style="list-style-type: none"> • Increased protected tree canopy. • Reduced urban heat island effect. 	<ul style="list-style-type: none"> • Improved air quality. • Increased environmental, social and physical capitals.

Input/ Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
	<ul style="list-style-type: none"> • Encourage green infrastructure, such as green roofs and rain gardens, etc. • Create tree-lined linear urban parks for recreation and mobility. 	<ul style="list-style-type: none"> • Increased walkability and physical activity. • Reduced body mass index. • Increased social interaction. • Increased levels of focus, concentration and self-discipline. 	<ul style="list-style-type: none"> • Increased a sense of place and community. • Decreased the prevalence of depression. • Improved health and mental well-being.
Historic and Architectural Resources	<ul style="list-style-type: none"> • Identify and make visible all histories of the community, including those of displaced and historically marginalized populations. • Work with the local communities and tribes to identify and preserve the historic, architectural, and aesthetic character and heritage of a community. • Make affordable housing preservation a priority in retention of historic buildings to prevent displacement of renters. • Bring old buildings up to the National Healthy Housing Standard^{xv} and current codes. • Consider using the “Transfer of Development Right” tool to preserve buildings of historic, cultural and architectural significance. • Consider impacts and mitigations to historic and cultural features during SEPA reviews. • Work with Conservation Futures to secure funds to acquire and preserve cultural, archaeological and historic landmark sites. 	<ul style="list-style-type: none"> • Improved walkability. • Increased neighborhood socializing. • Increased access to affordable housing. • Reduced residential and local business displacement. • Reduced urban sprawl. • Increased investment to renew urban neighborhoods. • Increased efficient use of existing resources. • Increased heritage tourism. • Reduced building-specific crime, such as graffiti. 	<ul style="list-style-type: none"> • Increased a sense of place, history, culture and community. • Increased social, cultural and physical capitals. • Increased social and community resilience. • Improved social well-being. • Improved local economy. • Improved cultural identity among generational residents.

Input/ Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
Arts and Cultural Resources	<ul style="list-style-type: none"> • Use public arts to promote community culture and history, and walkability. • Work with local artists and engage local communities in creative placemaking and transformative public arts project. • Encourage local public arts in public spaces and facilities to tell the story of the local community. • Support “creative class” to fuel economic development. • Promote arts through adaptive reuse of underutilized buildings, etc. 	<ul style="list-style-type: none"> • Reduced social isolation. • Decreased stress. • Increased self-efficacy. • Reduced crime. • Broadened public participation. • Increased art-based industries, businesses and tourism. 	<ul style="list-style-type: none"> • Increased social, cultural and physical capitals. • Increased community resilience and community healing. • Increased a sense of identity, place, history, culture, and belonging. • Increased social inclusiveness and community diversity. • Improved mental and emotional health outcomes. • Improved public safety. • Increased civic pride. • Improved health and well-being. • Improved quality of life.

Research Evidence

Compact Development

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