How Do Neighborhood Conditions Shape Health?

An excerpt from

Making the Case for Linking Community Development and Health

CSDH CENTER on SOCIAL DISPARITIES in HEALTH

Build Healthy Places Network

Robert Wood Johnson Foundation

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Introduction

It has been said that your ZIP code may be more important for your health than your genetic code.[4] This is because factors known as the social determinants of health (such as housing, education, job opportunities, child care, and transportation) can greatly influence your chances of becoming sick and dying early. Your address reflects the daily living conditions that can create—or limit—your opportunities to be healthy. This report is intended to be a resource for those working to improve low-income communities and the lives of the people living in them.

Building a Movement to Improve Low-Income Communities and the Lives of the People Living in Them

While the connections between poverty and poor health have long been recognized, a new but growing movement is tackling these issues in innovative ways by connecting two sectors—community development and health—that have previously worked in relative isolation from each other.

For decades, diverse organizations within the community development sector have worked to improve the physical and economic infrastructure of low-income neighborhoods—with a focus on improving places. And, for over a century, public health and medical care institutions serving poor communities have worked to improve the health of socially disadvantaged groups—with a focus on the people who live in low-income neighborhoods.

A baby born in the poorest neighborhood of New Orleans is likely to live 25 years less than a baby born just 4 miles away in the most affluent neighborhood of the same city.[1]

In the Chicago area, just a few subway stops can correspond to a 16-year difference in life expectancy at birth.[2] **Sadly, these are not isolated examples; similar patterns are seen across the United States.**[3]

The **social determinants of health** are factors apart from medical ("health") care that strongly influence health and can be shaped by social policies.

The **community development sector** is a multi-billion dollar industry that aims to improve the social, physical, and economic conditions in disadvantaged neighborhoods through developing and financing affordable housing, schools, grocery stores, community services such as child care and health clinics, economic and workforce development projects, and other activities that revitalize or stabilize low to moderate income areas.

The **health sector** includes both **public health**, which aims to protect and promote the health of whole populations, and **medical care**, which diagnoses, treats, and prevents physical and mental impairments among individuals.

"There is an entire industry—community development—with annual resources in the tens of billions of dollars that is in the 'ZIP-code-improving' business. And in the health field, there is increasing recognition of the need to act on the social determinants of health. The time to merge these two approaches—improving health by addressing its social determinants and revitalizing low-income neighborhoods—is now."

– David Erickson, director, Center for Community Development Investments, Federal Reserve Bank of San Francisco

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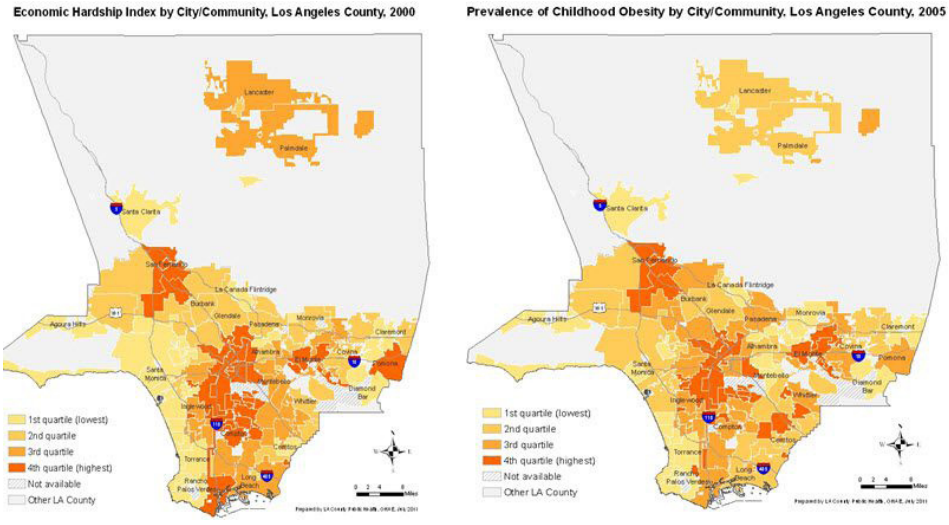
Over the last dozen years,[5] the health sector—including both public health and medical care—has increasingly recognized the importance of social determinants of health, the factors apart from medical care that strongly influence health and can be shaped by social policies. And community development has increasingly turned its attention to the effects of neighborhood improvements on residents' well-being—including their health. As community development has placed more emphasis on people and as the health sector has increasingly recognized the importance of places, the commonalties across these sectors have become clearer.



In Los Angeles County, California, childhood obesity is most prevalent in areas with the greatest economic hardship.[6]

"I envision a time in the near future when our fields [community development and health] and the people who work in them do not need to make a special effort to develop partnerships because they will be working side by side in communities, states, and nationally, with common aims, combining our best assets and skills to improve the lives of all Americans."

– Risa Lavizzo-Mourey, Robert Wood Johnson Foundation President and CEO, "Investing in What Works for America's Communities"

In 2014, after testimony from leaders in both the community development and health sectors, the Robert Wood Johnson Foundation Commission to Build a Healthier America recommended that we must **"Fundamentally change how we revitalize neighborhoods, fully integrating health into community development."**

As cross-sector interest has increased, there has been a growing need for common understanding across sectors that have different functions, aims, and vocabularies. This report seeks to increase knowledge of shared values and goals and raise awareness of how organizations are working together across the country at the intersection of community development and health.

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"One of the most promising new partners in community development is the health care sector. Factors such as educational attainment, income, access to healthy food, and the safety of a neighborhood tend to correlate with individual health outcomes in that neighborhood … these factors are linked to economic health as well as physical health."

– Ben S. Bernanke, former chairman, Federal Reserve Board of Governors

How Do Neighborhood Conditions Shape Health?

One in every four persons in the U.S. (25.7 percent) lives in a high-poverty neighborhood, often defined as an area in which at least 20 percent of the residents are poor.[7]

Poverty in the U.S. has become more concentrated in the last decade, leading to more high-poverty and disadvantaged neighborhoods.[8] Because of historically entrenched and persistent racial residential segregation, Blacks and Latinos are more likely than Whites to live in neighborhoods with concentrated poverty, even when their individual household incomes are similar to those of Whites.[9]

How can neighborhood conditions shape health?

It is not difficult to imagine how conditions in a neighborhood could affect health. For example, poorer neighborhoods generally have more crime, pollution, fast-food outlets, and ads promoting tobacco and alcohol use,[10,11] and often lack safe places to play and exercise.[12] Residents of high-poverty neighborhoods are more likely to live in substandard housing that can expose children to multiple health hazards including lead poisoning and asthma.[13] Perhaps less obvious but equally important is the fact that children living in poor neighborhoods are more likely to attend underperforming schools[14, 15] and have fewer job opportunities,[16,17] which can limit social mobility[18]—and therefore health[19,20,21]—across generations.

Are features of neighborhoods really that important for health—or should we focus primarily on the individuals who live in them?

For years, researchers have tried to understand the connection between high-poverty neighborhoods and poor health among the residents, but it is challenging to distinguish the health effects of neighborhood conditions from the health effects of resources

and characteristics—such as family income or education—of the individuals who live in these areas.[22, 23] Conditions in high-poverty neighborhoods can expose residents to harmful air quality, toxic materials in homes, dangerous streets, and pervasive advertising promoting harmful substances; these neighborhoods also may have limited options for healthy food and safe leisure physical activity, and few opportunities for education and high-quality employment—all of which can damage health. And, to make matters even more complicated, these neighborhood conditions can influence the characteristics of the individual residents; for example, living in a neighborhood with limited access to good jobs can deepen individuals' poverty.

Despite these research challenges,[24] many studies have documented links between residents' health and a wide range of conditions in neighborhoods, even after taking into account relevant individual characteristics.[25, 26] For example, one study that compared heart disease among people living in different neighborhoods found that individuals who lived in the most socioeconomically disadvantaged neighborhoods were more likely to develop heart disease than individuals who were socioeconomically similar (based on individuals' incomes, education, and occupational status[27,28]) but who lived in the most advantaged neighborhoods.[29] A recent longitudinal study by Harvard University economists found that the length of exposure to a lower-poverty neighborhood during childhood is a key determinant of an individual's long-term economic outcomes and is associated with increased future earnings.[30] Although other research also has shown how economic mobility can affect health, this provides particularly compelling recent evidence for how neighborhood conditions can shape economic mobility through pathways related to child development.

The physical, service, and social environments[31] of neighborhoods have been repeatedly and strongly linked to mortality, general health status, disability, birth outcomes, and chronic conditions, as well as health behaviors, mental health, injuries, violence, and other important health indicators.[32]

Connecting the Dots: Neighborhood Conditions and Health

A large body of literature has linked different kinds of conditions in neighborhoods with health; these include physical conditions, the services available, and social conditions. Healthy and unhealthy neighborhood conditions are not distributed randomly. Extensive research shows that low-income and minority neighborhoods are more likely to experience harmful conditions and to lack health-promoting conditions. On the following pages we have summarized some of the best examples of research that delves into neighborhood conditions and health. We've also included an overview of research that demonstrates the toll that these combined characteristics of disadvantaged neighborhoods can take on health.

Physical Conditions in Neighborhoods Can Influence Health

"Physical conditions" are features such as air, water, and soil quality, hazardous substances, streets, sidewalks, and buildings, which are aspects of the natural environment and the human-made "built environment.

Lead poisoning in children can severely and permanently affect their mental and physical development.[33]

- A study of 204,746 Rhode Island children found that 31 percent of children who lived in the highest poverty areas had elevated blood lead levels, compared to 8 percent of children who lived in the lowest poverty areas.[34]

Air particulate matter is hazardous to human health,[35] **affecting the young, the elderly, and those with heart or lung diseases, more than others.**[36]

- In California, neighborhoods with the lowest median family income were three times more likely to have high traffic density (increasing risk of exposure to hazardous air pollutants) than neighborhoods with the highest median incomes.[37]

Community and street design interventions that improve walking and bicycling opportunities have been associated with increases in physical activity.[38] **For pedestrians and bicyclists, the introduction of traffic safety measures (such as traffic-slowing features, well-marked street crossings, and bike lanes) have been linked to a decreased risk of injuries and fatalities.**[39,40]

- While socioeconomically disadvantaged populations tend to live in neighborhoods with more walkability (according to conventional measures of walkability,[41] i.e. shorter block length, greater street node density, more developed land use, higher density of street segments), finer-scale features that encourage walking and promote pedestrian safety such as sidewalks on both sides of the street, traffic calming features, and marked crosswalks may be less present in low-income communities.[42,43]

Neighborhood "built environment" attributes have been associated with crime, perceived safety, and health behaviors.[44] **For instance, improved street lighting has been associated with reduced crime**[45] **and greater exposure to alcohol advertising has been associated with an increase in drinking.**[46]

- Streets with street and/or sidewalk lighting are more common in high-income areas than in middle-income or low-income communities.[47] A study in Los Angeles found that low-income and minority communities had more outdoor advertising promoting the use of harmful products than other communities, adding to other research with similar findings.[48,49,50,51]

Services in Neighborhoods Can Influence Health

"Service conditions" are features of the physical environments that provide services to the public, such as schools, child care centers, grocery stores, public transportation systems, businesses, and parks.

Americans who use transit spend a median of 19 minutes daily walking to and from transit; 29 percent achieve greater than or equal to 30 minutes of physical activity a day solely by walking to and from transit.[52] **One study found that the introduction of light-rail transit may increase physical activity and is associated with reductions in body mass index among riders.**[53]

- A large share of public transit riders are low-income, African American, Hispanic, and seniors.[54]
- The working poor spend a much higher portion of their income on commuting; unreliable transportation can lead to late fees for child care, lower earnings and possibly job loss due to delays getting to work.[55] These can have adverse health consequences through pathways involving stress.[56]
- Low-income neighborhoods often experience inferior transit service, overcrowding, and routes that do not match their desired trip patterns.[57,58, 59,60]

As the number of alcohol outlets increases, so do levels of crime and violence.[61,62,63,64] **A higher concentration of convenience stores is associated with a higher level of individual smoking,**[65] **and living in a census tract with a high concentration of liquor stores was associated with a higher risk of excessive drinking.**[66,67] **Some studies suggest that living in an area with a high concentration of fast-food restaurants is associated with obesity.**[68,69,70]

- Liquor stores are more common in low-income areas than in high-income areas.[71,72,73]
- Predominantly Black neighborhoods have a higher concentration of fast-food restaurants than predominantly White neighborhoods.[74]

Full-service supermarkets can contribute to health in poor neighborhoods in a number of ways. They can drive economic development by creating jobs.[75] **By offering more healthful and affordable foods,**[76] **they may be an important part of strategies to increase access to nutritious foods and encourage healthy eating.**[77,78,79]

- Significantly fewer supermarkets (distinguished from small corner grocery or convenience stores) are located in predominantly Black neighborhoods, as compared to predominantly White neighborhoods, regardless of residents' incomes.[80,81]

Access to recreational facilities is associated with greater physical activity among adults, adolescents, and children.[82]

- A nationally representative study found that low-income and high-minority neighborhoods are less likely to have physical activity facilities.[83]

Early childhood development programs have been shown to promote cognitive development and increased readiness to learn.[84,85]

- Low-income children are less likely to attend preschool and low- to middle-income children are less likely to attend high-quality prekindergarten programs. Black children are the most likely to be in low-quality settings and are more likely to have low-quality interactions with preschool teachers.[86]

Educational attainment is strongly linked to health; people with more education are more likely to live longer, experience better health outcomes, and practice health-promoting behaviors.[87]

- Residents of low-income areas and minorities are more likely to attend poorly funded schools[88] with lower teacher quality.[89,90]

Social Conditions in Neighborhoods Can Influence Health

"Social conditions" are the social relationships among community members, such as mutual trust and support and the willingness to intervene for the public good.

Perceived neighborhood safety has been associated with levels of physical activity.[91,92]

- Residents of low-income neighborhoods are less likely to report favorable neighborhood appearance, pedestrian/biking facilities, safety from traffic and crime, and access to recreation facilities than residents of higher-income areas.[93]

"Closely knit" neighborhoods are more likely to exchange information and work together to achieve common goals; they also may have more effective social norms that discourage crime and unhealthy or destructive behaviors such as drunkenness, youth alcohol or smoking behavior, littering, and graffiti.[94,95]

- Residents of high-poverty neighborhoods may be exposed to increased social disorder, reduced social cohesion, and increased chronic stress.[96] Neighborhood crime, social norms that encourage unhealthy behaviors and widespread feelings of hopelessness [97] may create social conditions in disadvantaged neighborhoods that are hazardous to health.[98]

"Too many neighborhoods have too few opportunities and too many challenges. This fact is hurting the health of many Americans, and children bear the brunt because so many live in poverty."

– Douglas Jutte et al., "Neighborhood Adversity, Child Health, and the Role for Community Development," Pediatrics (2015)[118]

The Toll of Growing Up in a Disadvantaged Neighborhood

Children are particularly vulnerable to the health effects associated with growing up in a disadvantaged community; these health effects may extend into adulthood.

Exposure to environmental hazards can take a particularly large toll on children's health, sometimes with lifelong consequences. For example, lead exposure can result in permanent neurodevelopmental impairment,[99] mold and dust mites can trigger asthma attacks,[100] and unsafe streets mean greater risk of injury.[101,102] Aggressive advertising of alcohol and tobacco products, unhealthy social norms, lack of safe and appealing places to play, and pervasive social disorder may negatively influence the development of health-related attitudes and behaviors in childhood with consequences that last into adulthood. Lower quality child care options can mean less readiness for school, and underperforming schools also may limit children's opportunities for higher educational attainment, a key determinant of health in adulthood.[103] Living in a neighborhood with pervasive crime, violence, and instability is likely to be stressful; chronic stress in childhood has been linked with poor long-term health outcomes, including heart disease, diabetes, and premature mortality in adulthood. These adverse neighborhood contexts may limit the ability of caregivers to create supportive environments for children, despite great effort.

The combined effects of harmful neighborhood conditions and other adverse experiences can produce chronic (meaning persistent) stress in childhood that can overwhelm a child's ability to cope.[104,105,106,107] This is sometimes referred to as "toxic stress."[108]

A growing body of research demonstrates how toxic stress can get "under the skin", leading to poorer health outcomes later in life. While many chronic conditions do not manifest until adulthood, researchers have identified substances detectable in laboratory tests that indicate elevated risk for chronic disease within children who experience toxic stress.[109,110,111,112,113,114] Researchers have also observed differences in brain development and behavior that reflect impaired cognitive and emotional development among children who experience toxic stress and have found that affected children are more likely to engage in risky health behaviors.[115,116,117]

Many children who live below the federal poverty line live in high-poverty, low-opportunity neighborhoods. A 2015 journal article explains how the community development sector can be a key partner in improving the health of the one out of five children who live in poverty (and the one out of three Latino and African American children who live in poverty) by improving neighborhood conditions.[118,119] To illustrate these modifiable neighborhood level factors that shape health and social mobility, Dolores Acevedo-Garcia and colleagues developed the Child Opportunity Index, a tool that calculates the positive and negative neighborhood influences on children's well-being for the 100 largest metropolitan areas in the U.S.[120] The Child Opportunity Index shows that Black and Latino children are much more likely than White children to grow up in low-opportunity communities.

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A Call To Action

As the preceding report reveals, the social determinants of health are not equally distributed across all neighborhoods. Rather, residents of low-income and minority neighborhoods are much more likely to experience the harmful conditions that influence health. This disparate impact is one reason why community development and health must work more closely together on these issues. The work of the community development sector, by its nature, is focused exclusively on these very low-income neighborhoods experiencing the greatest health risks. Increased partnerships between community development, public health, and the medical field to document disparities, identify the most efficacious investments, design thoughtful interventions, and track their effectiveness are critical if we are to reach our shared goals of reducing disparities in health and economic opportunity, enabling everyone to reach their full potential, and making all neighborhoods healthy places to live and thrive.

About This Issue Brief Series

This issue brief is one in a series on the social determinants of health. Others in the series include:

- *Early Childhood Experiences Shape Health and Well-Being Throughout Life*
- *What Shapes Health-Related Behaviors?*
- *Stress and Health*
- *Income, Wealth and Health*
- *Education and Health*
- *Race, Socioeconomic Factors and Health*
- *Housing and Health*
- *Neighborhoods and Health*
- *Work, Workplaces and Health*
- *Violence, Social Disadvantages and Health*
- *Health Impact Assessment: A Tool for Promoting Health in All Policies*
- *Breaking through on the Social Determinants of Health: An Approach to Message Translation*

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Additional Resources

- Build Healthy Places Network: www.buildhealthyplaces.org
- Federal Reserve Bank of San Francisco Healthy Communities Initiative: www.frbsf.org/community-development/initiatives/healthy-communities
- Local Initiatives Support Coalition for Healthy Community Development: www.lisc.org/nyc/sustainable_communities/index.php
- Low Income Investment Fund: www.liifund.org
- The Reinvestment Fund: www.trfund.com
- What Counts: Harnessing Data for Ameriåca's Communities: www.whatcountsforamerica.org
- County Health Rankings & Roadmaps: www.countyhealthrankings.com
- National Prevention Strategy: www.surgeongeneral.gov/initiatives/prevention/strategy/healthy-safe-environments.pdf
- Centers for Disease Control and Prevention Built Environment and Health Initiative: www.cdc.gov/healthyplaces

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