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The Food Trust

Access to Healthy Food and Why It Matters:

A Review of the Research

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The Food Trust, founded in 1992, is a nonprofit organization working to ensure that everyone has access to affordable, nutritious food.

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Access to Healthy Food and Why It Matters:

A Review of the Research

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Preface

The nation is abuzz with talk about good, healthy food, but for far too many people, and especially for those living in low-income communities and communities of color, healthy food is simply out of reach. Finding quality fresh food means either traveling significant distances or paying exorbitant prices for wilting vegetables and overripe fruit. With these burdens, it is no surprise that these same communities face the highest risks of obesity, diabetes, and other preventable food-related health challenges. Yet, these are the very communities that are driving the nation's population growth and upon whom the country's future will depend. What will America's future be like if we do not fix this problem and end these disparities?

In recognition of this, PolicyLink and The Food Trust[a] have been working together over the past five years to advance policies to help entrepreneurs and food retailers build or expand stores in underserved communities. Bringing grocery stores to low-income underserved areas creates a healthier food environment that supports making healthier choices: having easy, regular access to grocery stores or other food markets that sell fruits, vegetables, produce, and other staples at affordable prices is necessary to eat the well-rounded, nutritious diet essential for good health. Supermarkets and other retail outlets that sell healthy foods are also major contributors to strong, local economies. Supermarkets, for example, are often "economic anchors" that draw in the foot traffic to support additional stores. They not only create many local jobs, but also foster other commercial development and breathe new life into neighborhoods that have been disinvested for decades.

Successful advocacy by hundreds of organizations working to promote equity, health, entrepreneurship, and community development has helped bring over $1 billion in resources to healthy food access projects across the country through the federal Healthy Food Financing Initiative and similar efforts in more than 10 states and localities. We have proudly helped to spark and support a virtual explosion of innovative healthy food retail projects in a vast number of urban, suburban, and rural low-income communities.

Research, of course, has been essential to both understanding the problem and developing effective solutions. And the research community has been thoroughly engaged with this issue. Over the past *three* years, at least 170 studies—more than in the previous two decades—have been published. These studies have examined what

[a] In most of this work, we have partnered with The Reinvestment Fund.

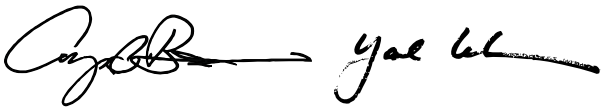
factors affect access to healthy food and its impact on individual and community health.

This report provides a current picture of the state of the research on food access, following up on our 2010 report, *The Grocery Gap: Who Has Access to Healthy Food and Why It Matters.* The presence of so many new and diverse innovations in healthy food retailing has provided researchers with more opportunities to examine the relationship between the "food environments" in which people live and their diets, as well as the relationship between food retailing and community economic development. The recent material also reflects researchers' growing intentions and capacities to measure change over time in terms of better access to healthy food.

While much progress is being made to develop new models of food retailing that serve communities previously left out, the evidence continues to suggest that many families are underserved and that the problem is most pronounced for residents of low-income communities and communities of color. The research indicates that poor access to healthy food corresponds with poor nutrition and that new healthy food retail contributes to community economic development in tangible, positive ways.

Working together, we have seen that local leaders have the power to make a real difference. Leaders in many communities are crafting sustainable and authentic solutions to the grocery gap, creating healthier communities, and contributing to the nation's health and well-being. We have also seen how supportive policy can generate solutions in communities with the impetus coming sometimes from local policymakers and other times from the state or federal level. Most recently, we have seen powerful combinations from all three levels leading to important innovations and new access to healthy food in low-income communities of color.

We offer this review in the hope that it supports the work of current food access champions and attracts new leaders to join in this remarkable time of community leadership, innovation, and lasting economic and health impacts.



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Introduction

Healthy food retailers—grocery stores; farmers' markets; cooperatives; mobile markets; and other vendors of fresh, affordable, nutritious food—are critical components of healthy, thriving communities. As the country inches its way out of the Great Recession and seeks to grow a more sustainable and equitable economy, ensuring that healthy food is accessible to all is crucial. Without access to healthy foods, a nutritious diet and good health are out of reach. And without grocery stores and other fresh food retailers, communities are also missing the commercial vitality that makes neighborhoods livable and helps local economies thrive.

Moreover, the challenge of access to healthy food has been a persistent one for communities of color. Beginning in the 1960s and 1970s, white, middle-class and working-class families left urban centers for homes in the suburbs, and supermarket chains went with them, leaving many inner-city neighborhoods with few or no full-service markets—often for decades. Limited access to healthy food also plagues many rural communities and small towns, where population losses and economic changes have diminished food retail options. Even in agricultural centers where fruits and vegetables are being grown, residents may not have a retail outlet nearby. Many of the communities that lack healthy food retailers are also oversaturated with fast-food restaurants, liquor stores, and other sources of inexpensive, processed food with little to no nutritional value. For decades, community activists have organized around the lack of access to healthy foods as an economic, health, and social justice issue.

Healthy food retailers can generate significant economic stimulus by serving as anchors for further commercial revitalization, creating local jobs, generating tax revenues, and capturing local dollars within the community, among other economic and community development outcomes.[1, 2] For example, it is estimated that 24 new jobs are created for every 10,000 square feet of retail grocery space,[3] so a very large market can generate between 150 and 200 full- and part-time jobs.[1] Attracting and incentivizing new or improved healthy food retail in communities of color and low-income, urban, and rural communities is an important component of a comprehensive strategy to revitalize disinvested areas by improving health and economic outcomes in the places that need it most.

As concerns have grown over the worsening obesity epidemic, access to healthy and affordable food has moved to the forefront of community, civic, and policymakers' agendas. A shared recognition of the role that healthy food access plays in promoting stronger local economies, vibrant neighborhoods, and healthy people has sparked support for different projects and initiatives, bringing an array of approaches from grocery stores to farmers' markets, mobile markets, food hubs, and community gardens.

Even as recognition of the problem is growing and progress is being made, between 6 and 9 percent of all U.S. households are still without access to healthy food. Nearly 30 million people live in low-income areas with limited access to supermarkets (defined as the closest store being more than a mile away).[4] The problem is particularly acute in low-income communities of color. People living in these neighborhoods must either make do with the foods available in smaller local stores, which are very often less healthy and more expensive, or spend nearly 20 minutes traveling to the nearest large retailer or even more time in rural communities where a full-service grocery store may be more than 20 miles away.[5]

There has been a proliferation of innovative approaches to bringing healthy food retail into underserved communities in recent years. The best-known large-scale innovation is the highly successful Pennsylvania Fresh Food Financing Initiative—a statewide public-private effort that helped develop

or improve 88 supermarkets, smaller independently owned grocery stores, farmers' markets, and other fresh food outlets in underserved urban communities, small towns, and rural areas throughout Pennsylvania. Launched in 2004, the initiative leveraged more than $190 million in healthy food retail projects over six years and is responsible for creating or retaining more than 5,000 jobs in Pennsylvania communities.[6, b] This program has so far been adapted and funded in six other states and cities, bringing much-needed financial resources and development know-how to communities seeking to improve healthy food access. Several more jurisdictions are in the process of starting funding for similar initiatives.

The federal Healthy Food Financing Initiative (HFFI), established in 2011, has, in three years, distributed more than $500 million in grants and tax credits to improve access to healthy food in communities across the country. The President has proposed to expand the program further in 2014. In total, more than $1 billion in private capital has already been leveraged to support an array of different projects and approaches—not only full-scale grocery stores but also consumer co-operatives, farmers' markets, mobile markets, and food hubs. Thousands of jobs have been created, and hundreds of thousands of people have new access to healthy food.

The local and state-level efforts confirm that support for healthy food retail can come in many forms and that new models are emerging at a fast pace. Improving offerings at corner stores and bodegas, starting or expanding farmers' markets and mobile markets, enhancing community gardens and other forms of urban agriculture, and initiating new forms of wholesale distribution through food hubs are among the promising strategies that bring economic and health benefits to neighborhoods. The local economy, development resources, community leadership and support, political will, and other factors determine what is possible and viable.

In 2010, PolicyLink and The Food Trust published *The Grocery Gap: Who Has Access to Healthy Food and Why It Matters,* a comprehensive review of the previous two decades' worth of food access research. The review found overwhelming evidence that access to healthy food was particularly limited for low-income communities, communities of color, and rural communities. The research also suggested that access to healthy food corresponds with a good diet and lower risk for obesity and other diet-related chronic diseases. A third, more emergent, theme in the literature was that new and improved healthy food retail in underserved communities creates jobs and helps to revitalize low-income neighborhoods.

Given the proliferation of research since the 2010 *Grocery Gap* publication, it was determined important to systematically review the new studies and reevaluate the evidence base. This new report does that, providing an up-to-date summary of what is known about access to healthy food and why it matters. The majority of the evidence continues to support—or strengthen—three primary findings:

- Accessing healthy food is still a challenge for many families, particularly those living in low-income neighborhoods, communities of color, and rural areas.
- Living closer to healthy food retail is among the factors associated with better eating habits and decreased risk for obesity and diet-related diseases.
- Healthy food retail stimulates economic activity.

While most of the newer research continues to point to positive health and economic impacts, some contradicting results have also surfaced. As this report documents, however, the majority of research still indicates that in order for people to improve their diets they need to have convenient access to good quality, healthy food.

The proliferation of local efforts to provide access to healthy food has drawn attention to the factors that can determine the impact of these innovations, including transportation access and the quality, price, and cultural appropriateness of the offerings. As more studies of local circumstances are published, a more complete picture is emerging of the realities for people living in low-income urban neighborhoods, communities of color, and rural areas with limited access. There is also more clarity about what happens to purchasing, consumption, health outcomes, and the local economy when access changes. The following summary of the state of the research can inform *policymakers*, advocates, researchers, philanthropic organizations, and others in identifying, designing, and implementing strategies to ensure all people have access to healthy food.

[b] In addition to state legislative leadership, the initiative arose from the work of Pennsylvania-based nonprofit organizations including The Food Trust and The Reinvestment Fund, with strong support from the food retailing industry.

Findings

The field of healthy food access research has benefited from rapid growth and wider attention in the last three years. The result of this increased scrutiny and documentation is a more well-rounded understanding of the problems and the emergence of a literature that describes impacts at both the individual and community levels. The results from the review of the literature are organized by the three main findings described in the introduction and elaborated upon in this section.

1. Accessing healthy food is a challenge for many families, particularly those living in low-income neighborhoods, communities of color, and rural areas.

An overwhelming body of evidence over 20 years indicates that accessing affordable, high-quality, and healthy food is a challenge for many families; this challenge is most pronounced in low-income neighborhoods of color.[4, 7-170] Recent national-scale studies conducted by the United States Department of Agriculture's Economic Research Service (USDA ERS) and The Reinvestment Fund have found that 25 to 30 million Americans—about 9 percent of the total population—are living in communities that do not provide adequate access to healthy food retailers, such as supermarkets or grocery stores, within a reasonable distance[c] from their home.[4, 142] Both studies found that the populations living in these communities are more likely to be low-income and to be people of color.

Where Are Food Deserts Located?

In an effort to help identify the communities that can most benefit from targeted resources and strategies to improve healthy food access, the United States Department of Agriculture (USDA) and The Reinvestment Fund have developed and launched free data sources that assist in the identification of areas lacking healthy food access, or food deserts.[171] The Food Access Research Atlas (USDA) and PolicyMap (The Reinvestment Fund) both, with varying levels of complexity, visually depict gaps in healthy food access across the country.

From 1990 through February 2013, many studies have documented how low-income communities and communities of color have less access to healthy food than higher-income and less diverse communities.

- A national cross-sectional study found that low-income, urban neighborhoods of color have the least availability of grocery stores and supermarkets compared with both low- and high-income white communities.[172]
- A 2012 comprehensive review of published literature about the role of the retail food environment in shaping racial, ethnic, and socioeconomic disparities in obesity risk concluded that the retail environments of communities of color lack accessibility to healthy food, while the opportunities to purchase processed, convenience foods and alcohol are great.[100]
- In an assessment of nearly 1,200 residents in Baltimore, Maryland, white, college-educated, and higher-income households have significantly higher availability of healthy food options

[c] The Reinvestment Fund (TRF) considers a "reasonable distance" to be one that is "comparatively acceptable" to the distance traveled by residents in well-served areas. TRF defines "comparatively acceptable" as the distance that residents of well-served areas (block groups with incomes greater than 120 percent of the area's median income) travel to the nearest supermarket. The USDA defines "reasonable distance" as the presence of a supermarket within one mile of a person's residence.

Predominantly African American neighborhoods and low-income neighborhoods had the smallest increase in food store availability and the greatest reduction in the number of available grocery stores.[95]

compared with black, less-educated, low-income households.[99]

- In New York City, one-third of all predominantly black census tracts and one-third of the lowest-poverty tracts lack walking or subway access to supermarkets. Further, of all neighborhoods in the city, the predominantly black neighborhoods have the lowest access to healthy food.[158]
- A study examining the relative changes in availability of various food stores by race and socioeconomic status, from 1997 to 2008, found that predominantly African American neighborhoods and low-income neighborhoods had the smallest increase in food store availability and the greatest reduction in the number of available grocery stores.[95]

Not only is access lacking in low-income communities and communities of color, but disparities exist in the quality, variety, quantity, and price of healthy foods as well.[107, 109, 112, 113, 123, 129, 168, 170] Together, the barriers inhibiting access to fresh foods and the plethora of inexpensive fast-food outlets can make it more difficult for people living in low-income neighborhoods and communities of color to eat a healthy diet.[159]

- In an assessment comparing low- and high-income food environments in Kansas City, Kansas, and Kansas City, Missouri, low-income neighborhoods have less availability and lower-quality produce than higher-income neighborhoods.[168]
- Supermarkets serving African American communities in Pittsburgh, Pennsylvania, are perceived by residents to offer produce and meats of poorer quality than branches of the same supermarkets serving white neighborhoods.[107] Women in a low-income African American community in Chicago, Illinois, reported numerous environmental barriers to acquiring healthy food, including store availability and upkeep; food availability, placement, and quality; high food prices; and safety concerns, among other issues.[109]

Rural Food Access

Lack of access to healthy foods in rural communities, especially within Native American reservations, is a significant concern.[24, 32, 35, 36, 39, 47, 50, 54, 55, 75, 80, 95, 135, 138, 173-181] In rural areas, 10 miles is typically considered an acceptable distance to travel to a grocery store, supermarket, or other retail food outlet. However, it is not uncommon for the closest grocery store to be much farther away, and people living in low-income, rural communities typically have the farthest distances to travel to access healthy food.[5]

- A national study identified nearly 8 percent of the total rural population in the United States as living in communities lacking access to healthy food, and nearly 35 percent of those lacking access are also low income.[142]
- One study evaluating the food accessibility on 22 Native American reservations in Washington State observed physical and financial barriers to accessing healthy food: 15 reservations do not have an on-reservation supermarket or grocery store, yet the cost of shopping at off-reservation supermarkets is about 7 percent higher than the national reference cost.[182]
- On one reservation in South Dakota, nearly 40 percent of families with young children experience hunger and food insecurity.[183, d]

[d] Food insecurity is defined by the USDA as follows: "Food insecurity—the condition assessed in the food security survey and represented in USDA food security reports—is a household-level economic and social condition of limited or uncertain access to adequate food." [263]

Other considerations associated with accessibility—such as perceptions of quality, price, and preference—may also be more pronounced in rural areas where the density of food retail outlets is much lower than in urban areas. Even if a rural community's access is not considered limited based on the standard geographic definition, residents may still experience challenges meeting their dietary needs and preferences. For example, two separate studies conducted in rural areas in Maine tell a different story about the rural food landscape.

- A study assessing proximity to fresh food retail within a rural community in Maine found that most residents are within acceptable distances (defined as within 10 miles) of stores offering healthy food options, although these stores may not be supermarkets.[184]
- A qualitative study examining the rural food environment in Maine found that cost, travel distance, and food quality are all factors that emerge as influential in rural, low-income families' efforts to get food and families often travel up to 80 miles to purchase affordable, high-quality food.[105]

Transportation

Lack of transportation to grocery stores presents a serious problem for many people. About 2.1 million households do not own a vehicle and live more than one mile from the nearest supermarket. While this figure has been improving (down from 2.4 million households in 2006), the lowest vehicle ownership occurs among low-income people, further exacerbating the challenges to accessing healthy food in low-income communities.[4] Although rural residents generally tend to have higher rates of vehicle ownership, lack of access to reliable transportation in rural communities can pose an acute added barrier for accessing healthy food given the lack of transit systems in most rural areas.[47, 55, 105, 180, 181, 185]

Similar studies have looked at the impact of transportation in urban, low-income communities as well.[14, 15, 36, 74, 112, 113, 128, 139, 140, 181, 186] Lack of transportation is frequently cited as a barrier to accessing a full-service supermarket or grocery store, and recent results have reinforced an older body of literature, including congressional reports.[127, 148, 153, 169, 187]

School Settings

While research has more frequently examined access to healthy food relative to the home, some recent studies have sought to explore the food environment around schools.[156, 188-190] The food environment in many low-income urban communities often comprises primarily convenience stores and smaller markets. Convenience stores located in close proximity to middle and high schools represent an important—yet predominantly unhealthy—source of food for youth, and can have a substantial impact on diets regardless of the quality of food provided in schools.

- The findings of two studies indicate that students in low-income, urban neighborhoods in Oakland, California, and Minneapolis, Minnesota, have greater access to convenience food sources around their schools, lower access to healthy snack options, and greater access to unhealthy snack options compared with their counterparts in more affluent areas.[189, 190]
- Conversely, students in higher-income neighborhoods have less access to convenience food sources compared with students attending low-income schools, and when they do, their options are healthier.[189]

Convenience stores located in close proximity to middle and high schools represent an important—yet predominantly unhealthy—source of food for youth, and can have a substantial impact on diets regardless of the quality of food provided in schools.

CHALLENGES OF ACCESS

nearly

30 million

live in low-income areas with limited access to supermarkets.[4]

one-third

of all predominantly black census tracts in New York City lack walking or subway access to supermarkets.[158]

RURAL FOOD ACCESS

nearly

8%

of the total rural population in the United States live in communities lacking access to healthy food.[4]

nearly

35%

of those lacking access are also low income.[142]

15 out of 22

Native American reservations in Washington State do not have an on-reservation supermarket or grocery store.[182]

2. Living closer to healthy food retail is associated with better eating habits and decreased risk for obesity and diet-related diseases.

Obesity and overweight affects two in every three adults and one-third of children ages 6 to 19. These rates are even more striking for children of color, with more than half of Hispanic and African American children classified as overweight or obese. For the first time in history, American children are projected to live shorter lives than their parents.[191-193] The dire circumstances and projections have created urgency about the need to reduce obesity rates and widespread interest in changes in food environments. Healthy food access has been recognized by national agencies and associations including the Centers for Disease Control and Prevention (CDC), the Institute of Medicine (IOM), and the American Heart Association (AHA) as a necessary strategy to reduce obesity and improve the public's health. While not the sole solution to the complexities of the obesity epidemic, access to nutritious and affordable food is an important factor enabling community residents to make easy, healthy choices about their diets.

More than 75 studies in the past three years have examined the direct health impacts of access to healthy food on diet and on the risk of obesity or overweight, as measured by fruit and vegetable consumption and body mass index (BMI)[e] respectively.[8, 10, 16, 17, 24, 27-30, 34, 37, 45, 46, 49, 51, 76-78, 80, 83, 84, 94-96, 100, 101, 106, 110, 120, 128, 131, 137, 159, 175, 187, 188, 194-237]

The latest research both reinforces and challenges previous research outcomes. Healthy eating and positive health outcomes were associated with access to healthy food in the following studies.

- A study of nearly 600 rural seniors found that increased distance to the nearest supermarket or other healthy food retail outlet is associated with decreased daily consumption of fruits and vegetables.[200]

[e] Body mass index (BMI) is a calculation of an individual's weight-for-height ratio. According to the Centers for Disease Control and Prevention (CDC), BMI provides a reliable indicator of body fatness for most people and is used to screen for weight categories that may lead to health problems.[264]

- Another study examining the relationship between healthy food access and produce consumption in a large metropolitan area found that better geographic accessibility to multiple grocery stores is associated with increased fruit and vegetable consumption. The model utilized in this study predicted that an additional 10 stores located within a mile of a person's residence would correspond with a 15 percent increase in the likelihood of eating four or more servings of fruits and vegetables per day.[208]
- A study using a sample of national, secondary data found that lower produce prices, higher fast-food prices, and greater access to supermarkets are related to increased fruit and vegetable consumption and lower BMI, especially among low-income teenagers.[95]
- A study of nearly 4,000 adults living in New Orleans found that each additional supermarket in a participant's neighborhood is associated with reduced risk for obesity, while fast-food and convenience store access are predictive of greater odds of obesity.[94]
- Data from more than 300 food stores and more than 1,200 telephone interviews in one region found that higher-quality food environments—not specific food retail types—are associated with a decreased risk of obesity and overweight.[202]

While numerous studies support a direct connection between access to healthy food, a healthy diet, and health outcomes, there is also a smaller body of studies with findings that question the strength of that connection.

- A study assessing the density of both healthy and unhealthy food retail in relationship to childhood obesity risk found that low-income neighborhoods of color have greater access to all sources of food retail (both healthy and unhealthy) as measured by the number of outlets of all kinds. This measure of proximity does not independently explain weight gain over time in this sample of elementary school-aged children. The author concluded that accurate understanding of the ease of access requires better measurement of transportation and store inventories, and that factors such as pricing and the "psychology of food purchase patterns" can influence childhood obesity.[199]

TRANSPORTATION

2.1 million

households do not own a vehicle and live more than one mile from the nearest supermarket.[4]

ECONOMIC IMPACT OF HEALTHY FOOD

$540 billion

in grocery store sales in 2011, translated to a…

$50 billion

payroll for two million Americans working in food retailing.[241]

13,780

jobs were directly created by the food industry, generating…

$3 billion

in economic activity in Vermont.[119]

150-200

full- and part-time jobs can be generated by a large retail grocery market.[1]

ECONOMIC IMPACT OF HEALTHY FOOD

Every $5.00

in new SNAP benefits generates…

$9.00

in local spending at supermarkets, grocery stores, and other approved SNAP-accepting retailers.[253, 254]

$1 billion

of SNAP benefits generates anywhere from…

8,900-17,900

full-time-equivalent jobs.[256]

- A 2012 analysis of 19,000 children and adolescents in California found no relationship between the home and school neighborhood food environments and youth diet quality. This exploratory study was the first to examine the impact of neighborhood food environments using BMI and measures of dietary intake from a statewide health interview survey, an approach limited by relatively low response rates, small sample sizes, and reliance on self-reporting. These researchers also recommended examination of other factors that can influence food purchasing and would sharpen the measurement of access.[188]
- A 2011 systematic literature review reported that mixed associations were found between greater accessibility to supermarkets or grocery stores and fruit and vegetable consumption, with five out of six studies showing no association between the two measures.[195]

Studies showing mixed results are reminders that community-level factors influencing healthy eating, such as distance to the store, or the prevalence of fast-food outlets, will have different degrees of salience to distinct local populations. In one published report, contrasting results were observed for different *types* of communities. A county-level analysis of metropolitan areas, utilizing a national data set of individual behaviors, found that as distance to a supermarket increased, consumers are less likely to eat five or more servings of fruits and vegetables per day and are more likely to be obese. However, this study also found that distance to the supermarket has no associations with obesity or fruit and vegetable consumption in nonmetropolitan (e.g., rural and small town) areas.[96]

Studies questioning the extent to which the availability of healthy food impacts eating behaviors and overall health reveal that access is embedded in a complex set of relationships and factors in which the presence of a store is a necessary factor, but not necessarily the only factor, to ensure healthy eating. A more complete understanding of the impacts of access can be obtained by including assessments

of additional factors that influence the ability of neighborhood residents to eat healthy diets. These factors include the following:

- **Transportation options:** The overwhelming majority of people travel by car to shop for groceries, but some people use public transportation or walk, and a better understanding could be gained about the reliability and feasibility of the modes of transportation people use to access healthy food. For example, a February 2013 town hall call-in survey of 127 Detroit city residents found that 22 percent of participants identified lack of transportation as the primary limitation to providing healthy food to their families.[169]
- **Quality and price of produce and other healthy food options:** Some studies looking at the relationship between the food environment and health outcomes use the simple presence of a store as a proxy for the availability of healthy foods. However, without a store assessment, this sort of analysis does not take into account the quality or price of the foods stocked in these stores. For example, a study of low-income, urban, food-desert consumers of color living in Detroit found that consumer income plays a significant role in determining purchasing behaviors and that increasing income or lowering price leads to increased fruit consumption.[129]
- **Cultural appropriateness of neighborhood food choices:** A store will have appeal and relevance in meeting its community's needs if it stocks the foods in which the shoppers are interested at reasonable prices and treats them with respect. There is a need for more research regarding how the unique economic conditions, history, and cultural mix of neighborhoods affect food availability.[238] Recent efforts in many cities to bridge the cultural gaps between small-store owners and residents of different ethnicities suggest that more successful healthy retailing can be attained when these issues are addressed directly.

ECONOMIC IMPACT OF HEALTHY FOOD (CONT'D)

$190 million

has been leveraged in healthy food retail projects by the Pennsylvania Fresh Food Financing Initiative since 2004, with…

5,000

jobs for Pennsylvania communities.[6,b]

500

new farmers' markets per year could yield as many as…

13,500

jobs over a five-year period.[251]

Additionally, to gain a more complete understanding of community food access, it may be appropriate to take into consideration the perceived access of healthy food within a community, as well as the availability of healthy foods near other places in the community besides their homes where people commonly spend significant amounts of time, such as work and school.[239, 240]

Equality in healthy food access is paramount. Lack of access, in addition to other influences, inhibits healthy eating. As new strategies to improve access to healthy food are implemented more widely, there will be many opportunities to better analyze and understand their impact and their interaction with all of the factors that contribute to improving diet and health.

3. Healthy food retail stimulates economic activity.

Improving health outcomes is not the only reason for increasing access to healthy food retail in disinvested communities. An equally important motive is the role of healthy food retail outlets as drivers of economic activity. Even during times of economic downturn and amid threats to established business models, the supermarket and grocery store industry is a powerful economic entity that can create jobs and stimulate growth. The recent growth in attention to healthy food retail has generated robust findings documenting the scale and impact of the industry, in general, and new innovations, in particular.

- In 2011, grocery sector sales exceeded $540 billion, and more than two million Americans were employed on a payroll of more than $50 billion across the country.[241]
- The economic potential of individual stores is significant—it is estimated that 24 new jobs are created for every 10,000 square feet of retail grocery space created.[3] Given that the average supermarket ranges from 20,000 to 50,000 square feet in size, one new store in that size range could generate between 48 and 120 new, local jobs.[3] Supermarkets with unionized workers offer living wages and benefits in private sector jobs that do not require a college degree.

The economic impacts of a supermarket or grocery store in a community are not limited to jobs and income earned. Home values, for example, increase with improved accessibility to neighborhood retail, including grocery and other food retail outlets.[242-244]

- In Philadelphia, home values near new grocery stores increased from 4 to 7 percent. Local tax revenues also receive a boost from healthy food retailers: a single store in Philadelphia generated a $540,000 increase in local tax revenue.[245]

Local access to healthy food retail also prevents "leakage" within the local economy by ensuring dollars spent stay within the community rather than outside of it. "Drill down" analyses by the nonprofit group Social Compact, as well as studies by other market analysts for a host of central cities, have quantified the potential for cutting down on this leakage through new local retail outlets. Outcomes usually show that the local purchasing power is greater than what had been previously estimated. These studies have supported the development of many new commercial projects in low- and moderate-income communities.[60-71, 73, 140, 246, 247]

- A nationwide study found that residents living in communities lacking healthy food retail entities, such as supermarkets, spend $1,120 annually on food outside of their neighborhood.[142]

Healthy food retail development also creates substantial indirect and induced effects, based on the extent to which the activities of one industry are linked to other industries within the local economy. Supermarkets and grocery stores generate direct effects on the economy through the activities related to operation, management, packaging, and shipping. Indirect impacts then occur when these activities require purchases of goods and services, such as building materials from local or regional suppliers; induced impacts occur when the workers involved in direct and indirect activities spend their wages in the community.

- In Vermont, the food industry directly created 13,780 jobs in the state and generated $3 billion in state economic activity. Combining direct jobs and spending, indirect activities, and induced impacts, which include construction, Vermont's food industry is responsible for about 15 percent of the state's overall economy.[119]

Healthy Food = Good Business

Businesses are also starting to recognize the benefits of promoting healthy products. Small and large companies are demonstrating that what is good for the health of families is also good for business. For example, New Seasons Market, a chain based in Portland, Oregon, has spurred local economic development throughout the food system, as they give priority to local farmers, sourcing a third of their products from the "home grown" region of Oregon, Washington, and Northern California.[248] Walmart has cut the costs of fruits and vegetables to its consumers by $2.3 billion over the past two years and is reporting increased sales of fresh produce.[249]

Although they utilize a different business model than full-service grocery stores, farmers' markets carry unique social and economic implications as well by keeping consumer dollars within regional economies; adding community vibrancy through the building of social capital; supporting small, local businesses; and preserving regional farmlands.[250] Farmers' markets also bring jobs to communities, albeit often seasonal employment opportunities. A comprehensive economic analysis of the impact of farmers' markets estimates that 500 new markets per year could yield as many as 13,500 jobs over a five-year period.[251]

Governmental food benefits for low-income consumers, spent at retail outlets, represent another dimension of local economic impact. Studies have quantified the economic effects of the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). These programs can be essential to the viability of some stores and make a significant difference in aggregate purchasing power in the poor neighborhoods that are most likely to lack healthy food. SNAP and WIC—together representing approximately an $85 billion public investment in 2012—make a significant, positive impact on the local economy through the circulation of benefit dollars.[252]

- Every $5 in new SNAP benefits generates $9 in local spending at supermarkets, grocery stores, and other approved SNAP-accepting retailers.[253, 254]
- An increase in the national SNAP participation rate by five percentage points would generate an additional $2.5 billion in new economic activity nationwide.[255]
- One billion dollars of SNAP benefits generates anywhere from 8,900 to 17,900 full-time-equivalent jobs.[256]

More recently, SNAP participants have gained access to farmers' markets across the country. Between October 2010 and September 2011, SNAP sales at farmers' markets nationwide topped $11.7 million.[257] In Rhode Island-based Greenmarkets, expanding SNAP purchases to include farmers' markets resulted in an increase in SNAP sales from $1,000 in 2005 to more than $500,000 in 2010.[118]

Fruit and vegetable coupon programs—like Philly Food Bucks, New York City's Health Bucks or Michigan's Double-Up Food Bucks—aim to increase the consumption of fresh local produce by increasing the purchasing power of SNAP users and promoting repeat visits. The economic success of coupon incentive programs has been significant and evaluation results are showing increased consumption of fruits and vegetables.

- An evaluation study conducted on the Philly Food Bucks program found a 335 percent increase in SNAP sales over an 18-month period, which directly increased farmers' sales.[258]
- The introduction of the Double-Up Food Bucks program in Detroit, which matches SNAP benefits spent at participating farmers' markets up to $20, resulted in a 368 percent increase in SNAP spending at Eastern Market. Across all participating markets, a total of $1.3 million in SNAP and Double-Up Food Bucks tokens were redeemed between August and October 2011.[259, 260]

The growth in purchasing produce demonstrates a pent-up demand for fresh fruits and vegetables among low-income consumers at a time when unemployment and poverty in low-income communities of color remains exceptionally high.


atural Cereal
Cereal
Peanut
Buns
Bread

Implications for Policy and Research

The evidence published in the last two decades, and the past three years in particular, shows that access to healthy food continues to be a critical factor for improving both the physical and economic well-being of communities. Especially at the local level, examples abound describing how a new grocery store serves as the lifeblood for a struggling rural town, or offers a fresh start in employment for a previously incarcerated person; how a farmers' market is fostering social cohesion in a neighborhood where racial tensions used to prevail; or how a new full-scale grocery store is bringing new economic vitality to a low-income, urban community of color that had lacked access for decades. Healthy food access is about improving economic and community health. It is about investing in the people and places that have been left behind. It is about providing access to basic community services and creating economic opportunity. Above all, it is about better health.

Comprehensive equity-oriented approaches are needed to improve health

Compelling evidence suggests that healthy food access is an important component to improving health outcomes. After years of battling an obesity crisis—with food environments that make unhealthy food fast, cheap, and easy to find and physical environments that make regular exercise difficult—small decreases in childhood obesity rates are finally being achieved in a handful of cities, regions, and states across the country, including 11 communities of different types extensively documented by the Robert Wood Johnson Foundation in 2013.[261] All of these places attribute their progress to broad sweeping and comprehensive reform across multiple sectors: policy and environmental changes such as regulating the types of foods and beverages available in schools and government work sites, building new pedestrian and bicycle routes, improving the purchasing power of consumers with vouchers for fresh produce at farmers' markets, implementing financing initiatives to attract grocery stores and other healthy food retailers, providing nutrition education to children and adults, and a plethora of other healthy community strategies. The research compiled for this report reinforces the experiences of these places—a comprehensive approach is the key to achieving the greatest impacts.

In addition to aggressively scaling up comprehensive strategies that are working, special attention needs to be paid to communities of color. In the places that have seen improvements in health outcomes, only in Philadelphia have trends improved for both white children and children of color.[261] In New Mexico, for example, there was a 5.3 percent decrease in obesity among third graders, yet rates were still highest among American Indian students (30%) compared to Hispanic students (22.7%) and white students (15.2%).[262] Previous experience tells us that resources must be targeted to those communities most in need to alleviate long-standing inequities. New focused research may also help us understand why these differences are occurring. Emerging evidence suggests that the greatest benefit is reaped from interventions to address access in places where the need is greatest. For example, Philadelphia, which saw these improvements across racial lines, employed a citywide approach called Get Healthy Philly that included nutrition education and wellness activities in every school, a robust network of community farmers' markets, fitness initiatives, community gardening, a network of over 600 corner stores (bodegas) selling healthier options, and more grocery stores in areas of need through the Pennsylvania Fresh Food Financing Initiative. The city has embraced a comprehensive, equity-oriented approach to healthy eating and active living.

> *In the places that have seen improvements in childhood obesity health outcomes, only in Philadelphia have trends improved for both white children and children of color. The city has embraced a comprehensive, equity-oriented approach to healthy eating and active living.*[261]

Strategies should focus on those most in need—low-income people and communities of color

Strategies designed to improve access for low-income people and communities of color can result in benefits for the broader community. Healthy food financing opportunities incentivize improved access in communities where healthy food has been limited, create jobs, and produce wide-reaching economic benefits. The federal Healthy Food Financing Initiative (HFFI) is leveraging its impact with programs in states and metropolitan areas and with resources from financial and philanthropic institutions. Further, the flexibility of the HFFI approach, with its reliance on locally generated projects, supports innovative and diverse strategies to improve access and advance sustainable approaches, such as supermarkets, co-ops, farmers' markets, or smaller grocery stores. Programs, like SNAP and WIC, also benefit the broader community by producing specific economic benefits for individual stores and creating broader economic stimulus across regions. The evidence suggests that these initiatives should be continued and expanded.

Policymakers can also use many other tools to attract and promote healthy food retail, including land use planning and zoning, economic development, tax credits, and other incentives, as well as strengthening the purchasing power of consumers by enhancing and expanding nutrition assistance. The federal New Markets Tax Credit, in particular, has proved to be a powerful tool with more than $400 million used to support larger-scale healthy food retail projects. Localities can also help healthy food retailers overcome barriers to market entry by providing publicly owned land at low or no cost, identifying and marketing sites for retail development, and providing technical assistance and affordable financing to small stores so that they can make capital improvements.

Research is critical to understanding how healthy food can be accessed by all

As all of these innovations proceed, they should be accompanied by well-crafted, culturally sensitive, creative, and rigorous research that produces actionable information and insights about healthy food access. Tracking and evaluating the implementation of the diverse strategies referenced in this report will help policymakers and program and community leaders tailor and improve these strategies, measure their impacts, and influence future policy decisions. And, no matter how large the sample for a future study of healthy food access may be or how precise the measurements of food intake or body mass index, it will be important to be able to look closely at variables associated with *local food environments* to more thoroughly understand people's experiences. Local "lived experiences," qualitative store assessments, and consumer inquiries should be highly considered when assessing the local food environments and, ultimately, the building blocks of healthy communities. As the development of healthy food retail continues to dramatically expand, particularly in low-income communities of color, new models in financing, format, and pricing hold great promise for bringing access to healthy food to all.

Conclusion

Even as progress is being made to improve access in urban neighborhoods and rural communities, millions of Americans are still struggling to put healthy food on the table, making efforts to address gaps in access as essential as ever. Action must be taken across all levels—local, state, regional, and federal—to leverage resources and target efforts to the places with the greatest need. Improving access to healthy food remains a pivotal catalyst to revitalize neighborhoods and improve community health and vitality for all.

Appendix

Methods

In 2010, PolicyLink and the Food Trust published a first-of-a-kind review of food access research in the United States, *The Grocery Gap: Who has Access to Healthy Food and Why It Matters.* The report assessed 132 studies related to healthy food access published between 1990 and 2009. Inclusion criteria for research contained in the *Grocery Gap* were as follows:

- Related directly or indirectly to identifying disparities in access to food retailers or healthy food, and the relationship between food retail and health.
- Either included original research on these topics or reviewed other studies.
- Conducted in the United States.
- Published during or after 1995 (although a few important studies that were conducted between 1990 and 1994 were included).

This new analysis combines the studies from the original review with examination of new documents published since January 2010. The findings outlined in this report feature the relevant scientific and "gray" literature (studies, reports, and analyses that are not published in peer-reviewed journals) that have contributed to the past two decades of healthy food access research.

Two databases of relevant research were developed and subsequently combined to serve as the foundation for this report. The first database was compiled between May and June 2009, and ultimately included 132 research articles published primarily between 1995 and 2009 (with a few studies published between 1990 and 1994). The second database was compiled in January and February of 2013, and included research selected from the period between January 2010 and February 2013. While inclusion criteria were nearly identical for the development of both databases, collection methods differed slightly. Extensive outreach to experts and organizations in the food access field was conducted in addition to an online database search to compile the research included in the first database. Significantly less outreach was involved in the collection of the newer compilation of research, which relied primarily on university-based library access to search a database of holdings that exceeds 100 million resources from books, scholarly journals, newspaper articles, e-books, theses, dissertations, and conference proceedings. In addition to information culled from this systematic search, other relevant resources, especially non-academic literature, were identified through internet searches and a number of the newest reports and articles were suggested for consideration by experts in the field.

Search term limits for the second database were inclusive to the publication years of 2010 to 2013 and the terms "healthy food access" or "food access." These searches yielded more than 1,200 hits, excluding mass media newspaper articles, as well as masters' theses and doctoral dissertations. Two reviewers independently evaluated the relevance of retrieved articles, and slated each article for "inclusion" or "exclusion" in the database based on the article's relevance to the topic. The resulting compilation of literature features approximately 170 articles, reports, book chapters, and briefs.

In total, more than 300 studies published between 1990 and 2013 were reviewed and assessed to develop the themes presented in the findings section and arrive at the conclusions presented in this report.

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