#### **Policy Options**

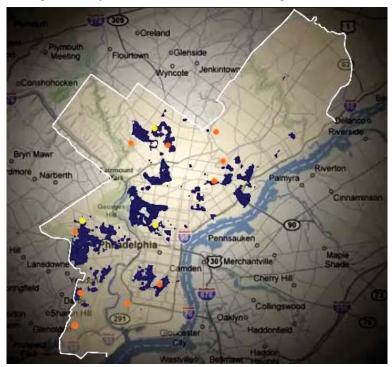
A variety of programs and policies to reduce the effects of limited access to affordable and nutritious food have been implemented or considered across the country. This chapter discusses broad categories of these programs and highlights examples that either have been implemented in an area or are under consideration. Many of the programs have been initiated at the community, local, or State levels, some with Federal support (as described in the previous chapter), but often only with support from localities, States, or private sources. Where available, evidence of the effectiveness of programs that have already been implemented is considered, although there is not a substantial literature from which such evaluations can be drawn. The chapter concludes with some broad guiding principals for setting policy priorities. It is suggested that a variety of demonstration projects might be a feasible way to begin efforts to decrease the effects of limited access to food and to simultaneously learn more about what works and what does not.

# Incentive Programs To Entice New Stores or Improve Existing Stores

The discussion at the end of Chapter 6 described broad trends in supermarket and foodstore markets. These trends have had major impacts on where supermarkets of different types locate and the prices that consumers face. The trends also exhibit the market forces that drive food retailers to adjust their store formats, production costs, and location decisions. For example, the rise of nontraditional retailers in food retail (supercenters and large discount stores like Wal-Mart, Costco, or Super Target), which offer foods at prices that are 8 to 27 percent lower than at large supermarket chains, has changed the competitive environment and has likely led to decreases in the average prices of foods for consumers (Leibtag, 2006). These stores are not typically located in urban areas and may not be accessible in all rural areas either. Thus, those outside of the reach of these large stores may be less affected by the price benefits of the stores. On the other hand, several major supermarkets have subsidiaries tailored specifically to cater to low-income and bargain shoppers, for example, Save-A-Lot, ALDI, and Food-4-Less stores. Often these stores locate in low-income neighborhoods or underserved rural areas. They serve as examples of market-driven alternatives--meaning that the retailers sees a gap in a market where they can profitably operate and adjust their business models to fit the needs of the consumers, in this case, low-income consumers and discount shoppers.

Some traditional grocers have opened stores in more densely populated areas (although not necessarily low-income areas), adapting their store models to fit into smaller spaces. Further, many other nontraditional retailers, such as pharmacies and dollar stores, have expanded into food retail as well (Sharkey and Horel, 2009). Smaller corner stores and convenience stores that already serve areas without access to a supermarket have also expressed interest in offering more nutritious foods in their stores (Gittelsohn, 2009). These stores are sometimes unwilling to take the risk of offering these foods when there is uncertainty about whether they can sell enough of them (Gittelsohn, 2009).

Map 8.1 Locations of new or planned foodstores in Philadelphia through Pennsylvania Fresh Food Financing Initiative



Blue areas represent the areas of greatest need, which have low supermarket sales, low income, and high rates of deaths due to diet-related diseases. The orange dots represent stores that have been opened under the Pennsylvania Fresh Food Financing Initiative. The yellow dots represent stores funded by the program that are under construction.

Source: Figure provided courtesy of Robert Wood Johnson Foundation and The Food Trust, http://www.rwjf.org/files/newsroom/profiles/foodtrust/

There are many other examples of grocery stores that have opened stores or expanded service in underserved areas (see, for example, Food Marketing Institute, 1998).

As explained in Chapter 6, both cost factors for food retailers and demand factors for consumers may leave some areas underserved by food retail stores or types of food retail stores. If cost factors keep food retailers from developing new stores or expanding services in existing stores (e.g., if fixed costs of obtaining land and permits for building a new store are higher in these areas), then efforts to reduce these costs or to subsidize development of new or expanded stores may be effective policy solutions.

Many localities and some States have utilized a number of methods to entice new stores to open in these areas or to improve existing stores. These efforts range from financing for new large-scale supermarkets, to small incentives offered to existing stores to stock healthier foods, such as gift cards at fruit and vegetable wholesalers. This section highlights a few of these efforts. Previously published studies provide very good detail about the potential benefits and the hurdles of different approaches and the strategies that can be used to ensure successful store development (Policy Link, 2007; Food

Marketing Institute, 1998). Less has been published about the potential drawbacks of these approaches. Two examples of potential drawbacks that have not been explored are the use of tax revenues to encourage grocery stores when other uses of the revenues could be more beneficial to low-income areas or the degree to which changes in competition faced by existing stores could affect the local market.

One program to encourage development of new supermarkets or other grocery stores in underserved areas is the Pennsylvania Fresh Food Financing Initiative. This program provides grants of up to \$250,000 or loans of up to \$2.5 million per store when the infrastructure costs or credit needed to develop a new store in an underserved market are not available. The initiative is a public-private partnership involving the State of Pennsylvania, The Food Trust, the Greater Philadelphia Urban Affairs Coalition, and the Reinvestment Fund (TRF). The State appropriated \$30 million and TRF gave \$90 million for the program. Thus far, \$41.8 million in grants and loans have funded 58 stores and 1.4 million square feet of retail space (Weidman, 2009). Figure 8.1 shows the location of new or planned foodstores in Philadelphia funded through this partnership. A study to evaluate the impact of the opening of a large supermarket in one underserved area in Pennsylvania is underway. Illinois, Louisiana, New Jersey, and New York are also currently considering similar funding programs.

A number of Federal financing and incentive programs have been used to encourage new store development. These programs exist primarily to spur community development (not just supermarket development) in areas that lack mainstream investment (Federal Reserve System and Brookings Institution, 2008). The services provided through these programs include grants and low-interest financing, tax incentives, and training or technical assistance in community development. The programs have varying goals, including improving labor market opportunities and housing options and spurring development in low-income areas. Often, they include financing or cooperation with State and local governments. Examples of these programs include New Market Tax Credits, Community Development Block Grants (CDBG), the Empowerment Zone Program, the Environmental Protection Agency's Brownfield program, and the Department of Housing and Urban Development's Section 108 Loan program. For examples of how these programs have been leveraged to improve food availability in communities, see Policy Link (2007).<sup>45</sup>

Improvements to already existing stores have also been used to address food accessibility in underserved areas. Modifications to such existing stores include increasing the availability of nutritious food, decreasing the availability of less healthy food, changing the relative prices of both of these types of foods, or changing the physical layout of foods within stores (Gittelsohn, 2009). These improvements are at a smaller scale than new store development, and, thus, can be less time consuming and much less expensive. Store improvements such as these have been applied in a number of settings (e.g., Baltimore Healthy Stores, Apache Healthy Stores, tiendas in North Carolina and California).

New York City has recently implemented a program to improve food offerings within small stores or bodegas throughout the city, which are <sup>45</sup>This chapter also discusses the CDBG program in considering housing policy options.

often much more plentiful and convenient in underserved communities than large grocery stores or supermarkets. The Healthy Bodega Initiative recruited bodegas to increase their offerings of low-fat milk and, eventually, fruits and vegetables. The city also provided promotional and educational materials to entice consumers to purchase the new offerings and to encourage bodegas to participate. About 1,000 bodegas were recruited for the low-fat milk campaign, and 450 bodegas were recruited for the fruit and vegetable campaign. Participating bodegas experienced increases in sales of low-fat milk and of fruits and vegetables (Nonas, 2009).

The changes in the WIC food packages currently being implemented in States may have an impact on the feasibility of increasing nutritious food options in small grocery stores and corner stores. The new food packages include greater incentives to purchase low-fat milk and whole grains, and vouchers for purchasing fruits and vegetables. Each State is required to adopt the new food packages by October 2009. The new food packages may provide increased and steady demand for these foods in stores in neighborhoods with high concentrations of WIC participants and may encourage operators of small stores to offer healthier food options. A pilot program implemented in New York State showed that the vegetable and fruit vouchers were popular among stores that accepted the WIC vouchers (New York State Department of Health, 2007).

During the 1990s, USDA's Food and Nutrition Service pursued a research agenda to address questions about food access among SNAP participants and other low-income households (see Chapter 5). The agency concurrently implemented three projects to identify strategies for improving access in underserved areas. Activities included a conference with experts who shared their ideas for increasing food access among low-income Americans (Koralek, 1996), along with two studies. The studies examined successful supermarkets in low-income, inner-city communities (O'Connor and Abell, 1992) and identified widely used means to improve consumer food access in underserved neighborhoods (CRP, 1998).

Two key themes emerged from the conference and were reinforced by the two descriptive studies:

- Proximity to a supermarket is generally regarded as critical to ensuring access to a variety of reasonably priced foods.
- There are desirable alternatives to traditional supermarkets as a means of ensuring food access.

The conference focused on bringing supermarkets to low-income communities through careful, cooperative planning and troubleshooting that starts with sound market research (Koralek, 1996). Adequate funding was identified as a key issue, and several private and public sources of support were discussed. These sources ranged from commercial banks with community development subsidiaries to grant and loan programs sponsored by Federal agencies. Participants in the conference, as well as findings from an FNS study (O'Connor & Abell, 1992), emphasized the importance of community buy-in for supermarket development. Introduction of a supermarket not only provides new products and services but also creates

jobs and helps to keep money in the community. These points can be used to obtain support from a mayor or city council when it comes to handling zoning, tax, and other issues. Buy-in from consumers will affect the ultimate success of the business, so matters of location, preferred store type, and other consumer interests should be addressed up front.

Desirable alternatives to traditional supermarkets include food cooperatives, urban agriculture, farmers' markets, public markets, smaller independent stores, and transportation hubs. Each has its own challenges but can contribute to a community's capacity to provide its own food.

### **Community-Level Interventions**

Another type of intervention to increase the availability of healthy foods is through community-level programs, such as farmers' markets, community gardens, or mobile carts or trucks that sell fruits and vegetables. These options for improving the food environment are often less expensive, require less space, and can be quicker to implement than programs that encourage new store development. These programs typically operate on a more limited scale (e.g., seasonally or only 1 day a week) or in the case of community gardens can require large time commitments on the part of consumers. The goal of these interventions is to give consumers more options for purchasing nutritious food by increasing the supply of these foods. Often these interventions include nutrition and food education components or incentives to consumers to increase demand for nutritious food.

There are many, many examples of farmers' markets, community gardens, mobile carts, or other similar community-level interventions implemented in underserved areas. This analysis cannot cover them all but highlights an example from New York City as one of the more comprehensive plans that has been implemented. Also discussed is the use of SNAP benefits at farmers' markets, as it involves a component of the largest U.S. food and nutrition assistance program and could potentially be a lever with which the Federal efforts could increase access.

In addition to the Healthy Bodegas initiative, the City of New York has implemented two other community-level initiatives to increase access to fruits and vegetables. One initiative is to increase the number of farmers' markets in underserved neighborhoods and increase their use by residents through the Health Bucks program. The Health Bucks program offers \$2 coupons for the purchase of fresh fruits and vegetables at participating farmers' markets. Health Bucks were used as a tool to introduce consumers to farmers' markets, generating business for producers and helping reduce food access barriers for consumers. The program was expanded specifically for SNAP participants, with an additional \$2 Health Buck offered for every \$5 spent using EBT at the farmers' market. Through this program, EBT sales at farmers' markets more than doubled from \$40,000 in 2007 to over \$89,000 in 2008 (Nonas, 2009). The program is being expanded into upstate New York as the Fresh Bucks program.

In addition to the farmers' market and Health Bucks program, the city is also in the process of implementing a "Green Cart" program, which is intended to increase the number of mobile carts that sell fresh produce, especially in underserved areas. Green Cart vendors are subject to the same permit process as other vendors, except they are restricted to operate in underserved areas and sell only fresh produce under the NYC Green Cart umbrella. The program is still recruiting vendors, a process that has been more difficult than expected (Nonas, 2009). To aid in the recruitment process, private foundation grants are being used to offer low-cost microloans to finance carts for vendors.

Another mechanism to increase use of farmers' markets among underserved communities and populations is through SNAP. The percent of SNAPauthorized stores comprised of farmers' markets has been consistently low. With widespread implementation of EBT systems during the late 1990s, the presence of farmers' markets among authorized retailers declined. This may be explained by the need for access to electricity in order to use the typical point-of-sale EBT equipment. Over the last several years, however, the number of participating farmers' markets has grown. In FY 2008, there were 753 farmers' markets authorized to participate in the program, up from 253 in FY 2000. Several factors contributed to this increase, including the increased popularity of these markets among the general population. In addition, FNS has endorsed a number of local and State initiatives to provide access to benefits through wireless point-of-sale equipment or scrip alternatives. With provisions in the 2008 Farm Bill, USDA's Agricultural Marketing Service will set aside 10 percent of the approximately \$5 million in competitive grants funding for FY 2009 for new EBT projects at farmers' markets.

Farmers' markets and community gardens have sprung up in many places, including in underserved areas. There is much knowledge about how such programs can successfully operate and become sustainable for long periods (see, for example, Fisher, 2009 and Smiley, 2009). There are often benefits of the programs that are harder to measure, such as increasing community and social capital or keeping ethnic and minority populations in touch with their cultural culinary heritage. The programs can also serve as educational opportunities for teaching about horticulture, nutrition, and farming and growing practices. There is, however, little evaluation of their effectiveness in terms of changing shopping behavior, diet, and diet-related outcomes for consumers.

# **Transportation-Related Improvements**

In contrast to bringing the stores to people, an alternative approach is to bring the people to the stores. Programs that improve public transportation routes from areas with limited access or provide transportation subsidies to low-income individuals or subsidized supermarket shuttle services could be effective ways to reduce access problems. Transportation improvements such as these have some advantages, depending on characteristics of the areas. First, as the analysis in Chapter 2 showed, supermarket access may also be a problem for low-income people who live outside of low income areas. In cases where those with access problems are dispersed, transportation interventions may be more efficient than new store development since targeting an area for a store to locate to reduce access problems for this group would be difficult (relative to areas where there are high concentrations of low-income people with access problems). If public

transportation in the area already exists, it may not be too expensive or take as much time to change or add routes that could be used to improve access to stores. A transportation subsidy given to those with limited access may enable consumers to access foodstores that better fit their budgets. Such improvements could also help consumers access other services that may be lacking in their area (such as banks or health care providers).

Using the NFSPS survey data and data from the Louisiana Neighborhood Environment and Consumption Survey (LANECS), Rose et al. (2009) estimated travel costs for different transportation modes and across areas in New Orleans that had poor or good access to supermarkets. This exploratory exercise considered both out-of-pocket travel costs and time costs for the different travel options for grocery shopping.<sup>46</sup>

Not surprisingly, a taxi was the most expensive option (\$66.60 per month), while a bus was \$38.70, a ride from a friend or relative was \$21.90, and walking was \$21.00.<sup>47</sup> Driving one's own car was the least expensive method for getting to the store (\$5.90 per month). The study also considered differences in time costs for New Orleans residents living in areas with poor access to supermarkets (defined as census tracts more than 2 kilometers from a supermarket), compared with the time costs for those living in areas with good access (defined as census tracts within 2 kilometers of a supermarket) (Rose et al., 2009). The average difference in travel cost between areas with poor access and areas with good access was \$10.58 per month—meaning that SNAP participants in poor-access areas of New Orleans had total travel costs (both time and out-of-pocket costs) that were on average (across mode of transportation) almost \$11 higher than those in areas in New Orleans with good access.

To improve access to supermarkets for low-income households, a transportation benefit in conjunction with SNAP benefits for participants who do not own cars and who have poor access to a supermarket could be considered (provided a satisfactory method for assessing access levels for participants is already available and could be implemented). SNAP benefits for people who live in areas with poor access could include a transportation subsidy (on top of the food benefit) that could be used to compensate for out-of-pocket costs to getting to a supermarket. For example, the city of Madison, WI, recently proposed to offer monthly bus passes at a discounted rate of \$27.50 (originally \$55) to people eligible for SNAP (Rose, 2009). Another option could be to deduct transportation costs from total income for applicants with limited access to supermarkets, which would effectively give a larger benefit to these households (Rose et al., 2009).

Further exploration into the feasibility and costs and possible reactions of consumers to such transportation interventions is needed. If better public transportation options are made available, it would be useful to project how many people would use them. If transportation costs are deducted from income for SNAP applicants, it would also be useful to know the percentage of participants who would use their additional benefits to access better stores and more nutritious food, or who would simply buy more of the same foods from the same stores.

<sup>46</sup>The time cost estimates use the hourly minimum wage to value time. See table 5 in Rose et al., 2009, for details.

<sup>47</sup>Costs are to the nearest supermarket by mode of transport based on approach by Feather, 2003. Costs for each mode were weighted using the distributional data on the mode of transportation.

<sup>&</sup>lt;sup>48</sup>The program is partially intended to offset the effect of an increase in fares on low-income individuals.

<sup>&</sup>lt;sup>49</sup>This would not increase benefits for households that already receive the maximum benefit.

#### **SNAP Retailer Policy**

Retailers authorized to participate in SNAP must sell staple foods for home preparation and consumption. In addition, the store must offer for sale, on a continuous basis, three different varieties of foods in each of four staple food categories, with perishable foods in at least two categories; or have more than 50 percent of total gross sales in staple foods. Most stores are authorized under criterion a. A store technically can meet this criterion with a small number of items that meet the variety and perishable requirements.

As part of an overall review of existing regulations, USDA will review the current provisions for retailer depth of stock. The goal remains to balance access to a sufficient number of neighborhood stores with availability of a continuous supply of required foods.

There is some previous research on the relative tradeoffs of restricting small stores from SNAP authorization and from increasing access to large grocery stores or supermarkets (Feather, 2003). At the time of the study, (pre-EBT card implementation), there was concern about the amount of fraud in small stores authorized to receive SNAP benefits. The study, which valued and compared the benefits (costs) of restricting access for small stores and increasing access to large stores for participants, showed that access to a new store would result in a gain of \$2.78 to \$7.76 per participant, per month, depending on store location in relation to the participant location and the value of the cost of travel time. On the other hand, the loss to participants of restricting store access to only supermarkets and large grocery stores was estimated between \$4.16 and \$8.78 per participant, per month.

# **Housing and Community Development-Related Policy**

State and local governments make most of the zoning and land-use planning decisions that determine the relationship of residential to commercial land uses. Yet, research shows many planners do not actively or systematically plan their communities' food access the way they plan access to services and facilities like transportation, parks, hospitals, or schools (Pothukuchi and Kaufman, 2000).

Some planning by units of local government is in direct response to Federal mandates and can be influenced by shifts in Federal policy. For example, when developing or rehabilitating public housing, public housing agencies are required by Federal regulation to choose sites that are accessible to commercial services. Chapter 3 of this study finds segregated, low-income areas are more likely to lack adequate food access than other areas. The characteristics of those areas are consistent with those of areas having large public housing developments, though further study is necessary to establish any potential links between low-access and public housing. If public housing and low-access are linked, the U.S. Department of Housing and Urban Development has existing regulatory authority to require future developments be sited closer to opportunities to access healthy food.

Another example of a Federal opportunity to encourage local governments to plan for communities' food access is the Community Development Block Grant program. Federal regulations specifically lay out the following goals:

increased access to quality public and private facilities and services, and access to capital and credit for development activities that promote the long-term economic and social viability of the community. Communities could be encouraged to incorporate healthy food systems planning in the required Consolidated Plans they submit that lay out their plans for the use of grant funds.

No changes to Federal rules governing programs like public housing and Community Development Block Grants would be needed to encourage food systems planning at the local level. Encouraging local governments to plan does not dictate specific policies, but instead allows communities to devise solutions specifically tailored to the community.

### **Anti-Poverty Policy**

Chapter 3 provided analysis of the factors correlated with whether an area has limited access to affordable and nutritious food. Findings showed that some household characteristics are associated with greater risk of low access. Household characteristics such as low educational attainment, low employment levels, and reliance on public assistance were found to be the most influential determinants (in addition to low-income, upon which the analysis was conditioned). Federal anti-poverty programs, such as the Earned Income Tax Credit, Temporary Assistance for Needy Families; and food and nutrition assistance programs, such as SNAP, WIC, and the school meal programs are targeted to households with these characteristics. These programs often have goals to encourage and support employment and to offer income support, food, and better nutrition. Thus, some of the populations for which a food access policy intervention may be targeted already receive public assistance from these general anti-poverty programs. If these programs are successful in raising incomes, employment prospects, and educational opportunities, then low-income populations may be able to access better foods as well.

# **Summary**

This chapter outlined the types of policy options that could be considered to reduce the effects of limited access to affordable and nutritious foods. A formal evaluation of the benefits and costs of these policy interventions was beyond the scope of this study. There are, however, some broad overarching guidelines to consider if future policy interventions are needed.

The analysis in chapter 2 shows that the number of people that are likely affected by limited access is small. Further, data on shopping patterns and prices actually paid show that many, but perhaps not all, low-income consumers have strategies for finding stores that offer the products they want at lower prices. Both of these findings suggest that a large-scale, national-level program may have difficulty addressing what are likely to be quite localized pockets of limited access.

The analysis in Chapter 2 and from other studies (Sparks et al., 2009; Apparicio et al., 2007) also shows food access may be a problem for some low-income families who live outside of areas with high concentrations of poverty. This observation is also important for policy considerations because

the type of intervention that may be effective in areas with concentrated poverty are probably different than the type of interventions that may be effective if the population with limited access is more geographically dispersed. For example, improving existing stores or enticing new stores or farmers' markets to areas where the population with limited access is concentrated may be an effective solution. On the other hand, if those who lack access are more dispersed, it may be more effective to improve transportation options or provide transportation subsidies for this population to travel to stores rather than encouraging new stores.

It is difficult to discern the degree to which supply-side and demand-side factors contribute to differences in store access (Bitler and Haider, 2009). Yet, making this determination is critical for understanding the types of policy interventions that may be needed.

On the demand side, the key question is if better access to affordable and nutritious food is provided, will people buy these foods? Evidence is mixed (see Cummins, 2005; Wrigley, 2003; Gittelsohn, 2009; Ayala et al., 2009). These studies show small increases or no changes in consumption of healthy foods in areas where access was improved. Related evidence suggests that price subsidies for fruits and vegetables can increase consumption of these foods for low-income consumers in general, but the effects are small and consumption is still below recommended levels (Dong and Lin, 2009). It is possible that demand for more nutritious foods like fruits and vegetables may also be driven by the time costs associated with preparing and cooking them, especially considering the relative convenience and price of alternative sources of foods. It is also possible that some consumers may not know the nutritional benefits of such foods. Some may also lack familiarity with preparation and the taste of these foods. If either of these is true, then increasing access through supply-side factors alone (e.g., enticing new stores) will not change food purchasing and dietary habits. A public health campaign to promote healthier eating and cooking habits may be more effective. Or, a program that gives low-income consumers incentives to purchase more fruits and vegetables, such as the Healthy Incentive Pilot that is being planned by FNS, could be more effective in increasing demand for these foods. If the time-cost tradeoffs are the major determinants behind lower demand, then such products as already-cut-and-cleaned fruits and vegetables or healthier prepared food options may be useful. There are usually price premiums for these prepackaged alternatives, however.

If supply-side factors, such as high fixed costs for new store development in low-income areas or restrictive zoning policies, are an obstacle for larger food retailers, then local policies toward zoning or government programs (at the Federal, State, or local level) that subsidize these costs for stores may be effective. There is some evidence that overall operating costs of stores serving low-income consumers are similar to those of other stores (King et al., 2004). But it is still possible that high fixed costs (as opposed to operating costs) could be barriers to entry for stores trying to locate in underserved areas.

Either of these demand or supply factors could be a market failure—that is, the market is not operating efficiently such that a government intervention could make the market operate more efficiently in a way that everyone

benefits. But again, there is not enough information to tell if there is a market failure on either the demand or supply side (see Bitler and Haider (2009) for a more complete discussion).

It is also important to differentiate between general issues faced by low-income neighborhoods and only those relevant to the supply of healthy foods. Many low-income neighborhoods may also lack access to banking services, health care services, and well-functioning public schools (Federal Reserve Bank and Brookings Institute, 2008). A supermarket can be a politically popular development for a low-income neighborhood because it provides for a most fundamental need—food (Rose et al., 2009). On the other hand, other services and businesses may be more important for a community (Bitler and Haider, 2009).

Chapter 4 summarized research on the effects of interventions on food shopping and consumption of specific foods. Given the rather modest findings, it is important to have realistic expectations about the potential effects of policy interventions on diet and, particularly, on more distal outcomes such as high BMI, obesity, and diet-related diseases. More proximate outcomes, such as shopping patterns and food intake, are more likely to be affected by any policy to increase access than more distal outcomes like obesity because there are so many other factors that contribute to obesity and because increased consumption of healthy foods may not lead to weight loss.

Given the lack of understanding about the actual causes of differences in access to food, it is tenuous to consider large-scale, national-level policy interventions. One possible approach, however, is to fund a number of demonstration projects throughout the country that use different approaches to reducing the effects of limited access to food. Projects could be appropriately tailored to fit the access issues facing a community considering the specific needs of low-income people and the communities in which they live. The projects funded could vary in size and scope as appropriate—for example, incentives for the development of large-scale supermarkets or smaller projects like the Community Foods Projects that are already underway. Some of the demonstrations could operate through SNAP—for example, a transportation benefit for SNAP participants or a deduction of transportation costs for participants in determining benefit levels could be implemented in a variety of settings. Expansions to programs that focus on broader community development goals besides attracting food retailers could also be considered (such as CDBGs or New Market Tax Credits).

Regardless of the types of projects that may be considered, an important component of the projects should include formal evaluations of the benefits and costs of interventions. In some cases, randomized trials could conceivably be conducted; for example, transportation subsidies could be randomly assigned to SNAP participants who face access barriers. In other cases, this kind of evaluation would not be possible. Instead, the collection of longitudinal data on changes in shopping behavior or dietary intake (or whatever the desired outcome change is) for affected populations is important. Also important to consider are opportunities to conduct natural experiments or quasi-experimental designs in which comparison areas

or populations are used as a benchmark control to the intervention area or population. It may also be possible to tailor interventions specifically to people who already have diet-related diseases and who have difficulty accessing foods they need to manage their diseases. For example, diabetes patients under clinical care could be randomly assigned coupons for farmers' markets or coupons for healthy options at supermarkets to determine if increasing access was an effective way to manage the disease.

Chapter 4 and Rose et al, (2009) raised the possibility that food swamps and not food deserts may be more of a factor in BMI and obesity concerns. If it is the case that energy-dense foods are too easily accessed, then policy interventions may need to reduce the incentive to eat less healthful foods or reduce access to these foods. This could be much more difficult because even stores stocking the healthiest of options also stock the least healthy options. Taxing less healthy foods (e.g., soda or sweetened beverages) is one example of such a policy, but these taxes inherently have distributional tradeoffs that must also be considered.

#### References

Apparicio, P., M. Cloutier, R. Shearmur (2007). The Case of Montreal's Missing Food Deserts: Evidence of Accessibility to Food Supermarkets," *International Journal of Health Geographics*, 6(1), 4.

Ayala, G.X., B. Baquero, L. Linnan, B.A. Laraia, and P. Bloom (2009). "Working With Tiendas to Promote Healthy Eating," Presentation at the IOM/NRC Workshop on the Public Health Effects of Food Deserts, January 27, Washington, DC.Bitler, M., and S. Haider (2009). "An Economic View of Food Deserts in the United States," National Poverty Center Working Paper, http://www.npc.umich.edu/news/events/food-access/index.php

CRP Incorporated (1998). A Study of Access to Nutritious and Affordable Food, U.S. Department of Agriculture, Food and Nutrition Service, April.

Cummins S, A. Findlay, M. Petticrew, and L. Sparks (2005). "Healthy Cities: The Impact of Food Retail-Led Regeneration on Food Access, Choice and Retail Structure," *Built Environ* 31(4): 288-301.

Dong, D., and B.H. Lin (2009). Fruit and Vegetable Consumption by Low-Income Americans: Would a Price Reduction Make a Difference? Economic Research Report No. 70, U.S. Department of Agriculture, Economic Research Service, January.

Feather, P.M. (2003). "Valuing Food Store Access: Policy Implications for the Food Stamp Program," *American Journal of Agricultural Economics*, Vol. 85(1): 162-172.

Federal Reserve System, and the Brookings Institution (2008). *The Enduring Challenge of Concentrated Poverty in America: Case Studies from Communities Across the U.S.*, A Joint Project of the Community Affairs Offices of the Federal Reserve System and The Metropolitan Policy Program at The Brookings Institution, Federal Reserve Bank of Richmond: Richmond, VA.

Fisher, A. (2009). "Community Level Food Environment" Presentation at the IOM/NRC Workshop on the Public Health Effects of Food Deserts, January 27, Washington, DC.

Food Marketing Institute (1998). *Urban Supermarkets*, Food Marketing Institute.

FNS-314 (2000). Together We Can! A What, Why and How Handbook for Working to End Hunger in Your Community, U.S. Department of Agriculture, Food and Nutrition Service, January.

FNS-315 (2000). *The National Nutrition Safety Net: Tools for Community Food Security*, U.S. Department of Agriculture, Food and Nutrition Service, January.

Gittlesohn, J. (2009). "Overview of Efforts to Change the Food Environment," Presentation at the IOM/NRC Workshop on the Public Health Effects of Food Deserts, January 27, Washington, DC.

King, Robert P., Ephraim S. Leibtag, and Ajay S. Behl (2004). *Supermarket Characteristics and Operating Costs in Low-Income Areas*, Agricultural Economic Report No. 839, U.S. Department of Agriculture, Economic Research Service.

Koralek, R.D. (1996). Conference on Access to Food September 18 and 19, 1995. U.S. Department of Agriculture, Food and Nutrition Service, November.

Leibtag, E. (2006). "The Impact of Big-Box Stores on Retail Food Prices and the Consumer Price Index," Economic Research Report No. 33, U.S Department of Agriculture, Economic Research Service.

New York State Department of Health (2007). *New York State WIC Program 2006 Vegetable and Fruit Demonstration Project*, Bureau of Supplemental Food Programs Food Delivery Systems Unit, Division of Nutrition, Albany, NY.

Nonas, C. (2009). "New York City: Healthy Food Access," Presentation at the IOM/NRC Workshop on the Public Health Effects of Food Deserts, January 27, Washington, DC.

O'Connor, J.J., and B. Abell (1992). *Successful Supermarkets in Low-Income Inner Cities*, U.S. Department of Agriculture, Food and Nutrition Service, August.

Policy Link, and LISC Bay Area (2007). Grocery Store Attraction Strategies, http://www.policylink.org/documents/groceryattraction\_final.pdf

Pothukuchi, K., and J. L. Kaufman (2000). "Longer View: The Food System: A Stranger to the Planning Field," *Journal of the American Planning Association*, Vol. 66, Part 2.

Rose, D. (2009). "Discount Bus Passes Proposed," *Wisconsin State Journal*, Friday, February 20, http://www.madison.com/wsj/home/local//index.php?ntid=431881

Rose, D., J.N. Bodor, C.M. Swalm, J.C. Rice, T.A. Fraley, and P.L. Hutchinson (2009). "Deserts in New Orleans? Illustrations of Urban Food Access and Implications for Policy," National Poverty Center Working Paper, http://www.npc.umich.edu/news/events/food-access/index.php

Sharkey, J., and S. Horel (2009). "Characteristics of Potential Spatial Access to a Variety of Fruits and Vegetables in a Large Rural Area," National Poverty Center Working Paper, http://www.npc.umich.edu/news/events/food-access/index.php

Smiley, A. (2009). Title Presentation at the IOM/NRC Workshop on the Public Health Effects of Food Deserts, January 27, Washington, DC.

Sparks, A., Bania, N., and L. Leete (2009). "Finding Food Deserts: Methodology and Measurement of Food Access in Portland, OR," National Poverty Center Working Paper, http://www.npc.umich.edu/news/events/food-access/index.php

Weidman, J. (2009). "Improving Access to Nutritious Food," Presentation at the IOM/NRC Workshop on the Public Health Effects of Food Deserts, January 27, Washington, DC.

Wrigley, N., D. Warm and B.Margetts (2003). "Deprivation, Diet, and Food-Retail Access: Findings From the Leeds "Food Deserts" Study," *Environment and Planning A* 35: 151-188.