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Moving From Policy to Implementation: A Methodology and Lessons Learned to Determine Eligibility for Healthy Food Financing Projects

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Public health obesity prevention experts have recently emphasized a policy systems and environmental change approach. Absent, however, are studies describing how practitioners transition from policy adoption to implementation. In the realm of food policy, financing programs to incentivize healthy food retail development in communities classified as "underserved" are underway at the local, state, and national levels. Implementing these policies requires a clear definition of eligibility for program applicants and policy administrators. This article outlines a methodology to establish eligibility for healthy food financing programs by describing the work of The Food Trust to coadminister programs in 3 distinct regions. To determine program eligibility, qualitative assessments of community fit are needed and national data sources must be locally verified. Our findings have broad implications for programs that assess need to allocate limited public/private financing resources.

KEY WORDS: food access, Healthy Food Financing Initiatives, obesity, public policy, supermarkets

In the United States, two-thirds of adults and nearly one-third of children are overweight or obese[1]; at the same time, nearly 30 million US residents live more than 1 mile from a supermarket.[2] Research has documented that the presence of a grocery store in a community has been shown to have a positive impact on fruit and vegetable consumption and even body mass index.[3,4] In response, public health advocates have emphasized the importance of government involvement and investment in modifying the food environment to support healthier lifestyles and diets.[5] Introduced in 2010 by the Director of the Centers for Disease Control and Prevention, the Health Impact Pyramid presents a 5-tier model of public health interventions ordered by their potential for population-level impact and the amount of individual-level effort required to yield change.[6] Socioeconomic interventions are identified at the base as having the highest potential impact, followed by interventions that change the context of the environment to make the default choice the healthy choice. Programs that support healthy food retail in underserved communities are examples of interventions that change the environment. Many experts assert that a comprehensive approach to combat obesity is needed[7]; in particular, the Institute of Medicine highlights that government investment to encourage supermarket development is a key strategy to accelerate progress in obesity prevention.[5]

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As a result, several state and city healthy food financing programs and the national Healthy Food Financing Initiative are underway, with more in development (see Table, Supplemental Digital Content 1, available at http://links.lww.com/JPHMP/A79, which lists healthy food financing programs across the country). These programs provide financing to grocers or real estate developers seeking to open or expand stores in areas without adequate access to affordable, nutritious foods. The first program of its kind, the Pennsylvania Fresh Food Financing Initiative (PA FFFI) launched in 2004 and approved 88 grocery retail projects for funding, representing more than 5000 jobs and increased access to healthy foods for nearly half a million Pennsylvania residents.[8] In addition, from 2006 to 2010, Philadelphia saw an unprecedented 5% decline in rates of childhood obesity.[9] During that time period, nearly 20 stores in Philadelphia received PA FFFI funding. While FFFI is only one of many factors that likely contributed to the decline in childhood obesity in Philadelphia, and more research is needed on the impact of grocery stores on health, multiple studies have linked the presence of a grocery store to positive health outcomes.[10]

The Pennsylvania program has served as a model for other public-private healthy food financing programs. Policy efforts to develop the PA FFFI and similar healthy food financing programs frequently start by producing maps of the region that highlight low-income areas in need of healthy food retail and then convening a group of experts from different sectors, including public health, community and economic development, and the grocery industry, to develop specific solutions to overcome the challenges associated with opening and operating stores in underserved communities.[11] In all cases, one of the policy recommendations has included the establishment of a fund, typically grants and loans, to support healthy food retail projects in underserved areas. Funding through these programs is provided as a one-time injection of funds to help grocery operators overcome the extraordinary start-up costs associated with developing stores in underserved areas and not as an ongoing subsidy or mechanism to cover operational costs.

Once a policy is created, thoughtful consideration is needed to implement the policy. To date, however, very little is written about how program implementation occurs and how eligibility for program funding is determined. As an example of how programs can be implemented, we present here a framework to evaluate eligibility for healthy food financing programs on the basis of policy in 3 states where The Food Trust has worked to coadminister the program. A common goal of these policies has been to eliminate "food deserts." However, the implementation process and criteria for determining which applications are eligible for funding, and under what conditions, have required significant effort to define even after policies were passed. While maps of a region can paint a general picture of the problem and highlight areas in greatest need of healthy food retail,[12-14] they do not suffice to determine eligibility for a new grocery site because they do not account for criteria such as community fit or grocer experience; in addition, the data sources used by these maps are not always completely accurate or up-to-date.

In this article, we will describe a process to implement an eligibility analysis for healthy food financing programs and share lessons learned from administering the Pennsylvania, New York, and New Orleans healthy food financing programs over the course of the past 9 years. We bring forward for consideration the infrequently discussed process of moving from policy creation to program implementation to ensure that interventions have the intended impact. This approach will help inform agencies that are working to promote public-private policy-oriented health solutions and interested in establishing eligibility criteria for allocating funds.

Methods

In 2004, the PA FFFI was established with state seed funds. Partners who had advocated for the program were then in the position to identify guidelines and definitions to formalize the application process and operationalize the new policy. Tools that were used during advocacy efforts, such as maps and broad definitions of need, were useful to explain the scope and severity of the problem but inadequate as tools to evaluate applications for program eligibility.

Since the creation of PA FFFI, more than 300 grocery store and other food retail applications to healthy food financing programs have been reviewed as part of the Pennsylvania program[8] along with the New York Healthy Food Healthy Communities Fund[15] and the New Orleans Fresh Food Retailer Initiative[16] by The Food Trust and program partners. As a result, The Food Trust and program partners have developed a 5-step process to review and approve grocery applications for grant and/or loan funding (See Figure, Supplemental Digital Content 3, available at http://links.lww.com/JPHMP/A78, which outlines the healthy food financing application process). This article details the second step in that process, the eligibility analysis.

Determining whether an applicant is eligible to receive funds first requires clearly articulated program priorities and then relies on a set of criteria to determine whether program intentions are met. In consultation with experts in the field, including the grocery industry and other community partners, healthy food

financing program priorities have been established for the administration of the Pennsylvania, New York, and New Orleans programs. These include criteria to ensure that public funds are directed to grocery projects that (1) serve lower-income communities, (2) serve neighborhoods that lack healthy food retail, and (3) align with community needs.

Relevant data sources that are feasible to obtain are needed to evaluate applicants against eligibility criteria. Fresh Food Financing program eligibility assessments initially consider secondary data sources (Table) to provide a preliminary assessment of community income levels and food retail landscape but ultimately require considerable verification at the local level to ensure that secondary data sources accurately reflect the experience on-the-ground in communities. It is worth noting that the eligibility review is not the sole determinant in whether or not an applicant receives program funding. If and when program eligibility is established, the appropriateness of the business model and likely financial viability is evaluated by a partner Community Development Financial Institution (CDFI) with expertise in loan underwriting, particularly in distressed communities.

Eligibility Review Process: Description and Discussion

Income

The first step in the evaluation process is to determine whether the applicant store will be serving a region that can be deemed "low income," and evaluators consider the specific census track or block group represented by the applicant's proposed location. Generally, a low-income community is defined as a census tract, block group, or primary service area with an income level at or below 80% of the area median income, which is a similar threshold as that used by many public funding programs, including the Community Development Block Grant Program, the New Markets Tax Credit Program, and Section 8 Housing. The use of Median Household or Median Family income, along with varying income cutoff points for very low, low, and moderate income, has varied on the basis of local geography, source of funding, and program structure. The American Community Survey, conducted by the US Census Bureau, is the primary source of income data. In addition, PolicyMap, a mapping tool developed by The Reinvestment Fund, which synthesizes census information with numerous other data, can be very useful for looking at income in a community.

Another source of income data is the CDFI Fund, which provides information on census tracts and block groups that are eligible for CDFI Funding and New Markets Tax Credits, based on income and poverty rates. These 2 programs currently use American Community Survey 2006-2010 data to determine income and poverty rates and deem "low" income tracts, those at or below 80% of area median income, as eligible.[17,18] Both PolicyMap and the CDFI Fund web site allow users to type in an address and access income data at the census tract level, which can then be used to determine eligibility.

Local verification has greatly enhanced the understanding of income levels in a community in evaluating sites for eligibility for the Pennsylvania, New York, and New Orleans programs. The American Community Survey, 5-year pooled data released by the US Census Bureau, is a widely accepted data source for income. However, community data centers and other regional organizations provide additional insight on the basis of local knowledge and help validate this part of the evaluation.

For the statewide healthy food financing programs in Pennsylvania and New York, program staff created a database of community and economic development leaders representing every county and contacted these leaders to get a local perspective on specific applications and an understanding of need for a grocery store in those communities. On occasion, outreach to local community development leadership established that the American Community Survey data did not accurately represent nuances of income levels at a smaller geographic unit like small towns within a much larger census tract. In 1 case in Pennsylvania, municipal leaders addressed this issue by conducting their own survey to more accurately reflect the socioeconomic makeup of the town. This new local census information was used to qualify the area for federal funding, including Community Development Block Grant dollars, and was taken into account when evaluating an FFFI grocery applicant in this region. What at first glance looked like a middle-income community that would not have qualified for FFFI funding was in fact a community with a much lower-income population that met the income criterion. In Pennsylvania, to further understand income levels across the state, a partnership with the Center for Rural Pennsylvania yielded socioeconomic data at the borough and township level. These data helped determine income levels for smaller neighborhood geographies. Note that block group level data rely on a smaller sample and can, therefore, have a higher rate of error.[19]

Underserved

At the policy advocacy stage, the rationale for creating a healthy food financing program is that it will support "underserved" or "food desert" areas, although

TABLE ● Data Sources Used in Analyzing Healthy Food Financing Applicants

Source	Purpose	Eligibility Criterion(a)
Examples: Primary (Local) Data Sources		
Site visit	When possible, a site visit to existing stores in a trade area is ideal.	Underserved and community fit
Store calls	Can verify existence, store hours, and current healthy food offerings	Underserved
Personal interviews	Local residents can provide information regarding store existence, size, and offerings, as well as information on new or closing stores. Community leaders can provide important context regarding details of community support, income, surrounding stores, and the project site.	All
Local media	It is notable whether a particular store has received significant positive or negative press regarding the quality of offerings, accessibility, and other factors that determine community fit.	Community fit
Local grocers associations and wholesalers	Grocery industry representatives can provide up-to-date information regarding store existence, size, and offerings, as well as information on new or closing stores.	Underserved and community fit
Examples: Secondary (Federal/Commercial) Data Sources		
Google Maps: maps.google.com	Shows all grocery stores located within a certain distance from proposed location.	Underserved
Google Street View: maps.google.com	Offers panoramic street view of location to see exterior of stores and determine size/type of store when site visit is not possible.	Underserved
The Reinvestment Fund Limited Supermarket Access Tool: www.policymap.com[a]	Maps areas in which residents must travel longer distances to reach supermarkets, as compared with middle- and upper-income residents living in areas with similar population density and car ownership rates. Also provides grocery retail demand and leakage to demonstrate market viability.	Underserved
USDA Food Access Research Atlas (formerly USDA Food Desert Locator): http://www.ers.usda.gov/data-products/food-access-research-atlas.aspx	Presents a spatial overview of food access indicators for low-income and other census tracts using different measures of supermarket accessibility.	Underserved
Nielsen Trade Dimensions (should be the most recent year available)	Industry data that list all stores across the country by type (eg, superette, supermarket).	Underserved
Community Development Financial Institution (CDFI) Fund: www.cdfifund.com	Shows census tracts/block groups that are eligible for CDFI funding and New Market Tax Credits.	Income
Federal Financial Institution Examination Council: www.ffiec.gov	Provides census information including income level and population data.	Income
Department of Housing and Urban Development: www.hud.gov	Provides income cutoffs for certain forms of federal funding (eg, Community Development Block Grant).	Income
US Census and American Community Survey: www.census.gov; http://www.census.gov/acs/www/	Offers income, population density, car ownership, and other demographic data.	Income
Free or reduced lunch rates (from the latest statewide list by school/county)	Offers additional insight on local income levels when census data are inconsistent/unavailable.	Income
Local Market Data (provided by city/county department or applicant)	Can demonstrate economic analysis of local retail demand and leakage. Grocers often get a professional site study as part of predevelopment.	Underserved

[a]PolicyMap is comprehensive mapping tool designed by The Reinvestment Fund that synthesizes numerous sources of socioeconomic and industry data. Subscription is required for certain functions and data sets.

definitions vary for these terms.[20] Therefore, policy implementation requires that evaluators pay careful attention to nuances of store location, size, and format as compared with existing food retail in the surrounding area. It is important to confirm that there are no other comparable stores in the grocery applicant's trade area to ensure that the store is filling a void in fresh food access and also that government funding is appropriately allocated to areas most in need. Key steps taken to determine whether a grocery applicant will serve an area that can be considered underserved by healthy food retail are outlined below:

1. Determine appropriate trade area for applicant retailer on the basis of size of store and population density of neighborhood served (described later).
2. Map applicant store address.
3. Identify any other existing food retail stores in the applicant's trade area.
4. Confirm existence of food retail stores within trade area and determine extent of their healthy food retail offerings through local verification research.
5. Based on the aforementioned steps, make a determination whether the grocery applicant will indeed serve an area in need and therefore meets the "underserved" criterion.

The first step in this process is to identify the trade area of the applicant. Trade areas are used to approximate the service area of a store and are developed in collaboration with the grocery industry and community leaders. They take into consideration such factors as population density of a region, physical boundaries, and the size of the proposed store. The sizes of trade areas are customized by each program on the basis of urban and rural population densities and range from a 2-block radius for very small stores (<10 000 sq ft) in highly dense areas such as New York City to a 2-mile radius for larger stores (≥25 000 sq ft) in less densely populated areas such as rural Pennsylvania. If there are no stores selling a variety of healthy food items in the trade area of the applicant, the applicant meets the underserved critierion. In borderline cases in which grocery stores exist only on the edge of a store's trade area, factors such as leakage of dollars, that is, dollars spent on food outside the community, are also considered. See Table, Supplemental Digital Content 2, available at http://links.lww.com/JPHMP/A80, which describes eligibility cases, example 6.

Once the trade area size is established, program staff map the address of the applicant's store using Google Maps and/or PolicyMap. Next, existing food retail stores within the approximate trade area of the proposed store's address are identified. To determine the location of existing stores within the applicant's trade area, program staff search for store addresses using several sources. Generally, this entails 2 key tools: (1) Google Maps, a constantly updated source of grocery store locations that incorporates user-submitted verification[21] and (2) Nielsen Trade Dimensions, annually released retail industry data (available on PolicyMap). However, there is no real-time and fully accurate database of stores, and databases may also misclassify stores.[22-24] To overcome this challenge in Pennsylvania, New York, and New Orleans, all stores in a given trade area are called to confirm their existence and to assess the amount of healthy food offered. In addition, the "street view" function of Google Maps provides a preliminary sense of store size and type. The visual representation of the neighborhood provided by Google Maps, PolicyMap, and the United States Department of Agriculture (USDA) Food Access Research Atlas also highlights physical boundaries, such as railroad tracks, which might prevent access to a nearby store. Finally, when possible, findings are also verified by a local contact. See Supplemental Table 2, available at http://links.lww.com/JPHMP/A80, examples 4 and 5.

Other food access mapping resources, such as the recently updated USDA Food Access Research Atlas and PolicyMap's Limited Supermarket Access analysis, both of which identify areas as underserved using their own set of criteria, are also considered as part of the eligibility evaluation. These methodologies rely on store locations accessed through the Supplemental Nutrition Assistance Program (SNAP) database directory and Nielsen Trade Dimensions. While these tools can provide important baseline information about a region, it is essential that data be verified to reflect the current situation in a community so that healthy food retail projects are not erroneously qualified or disqualified for funding. See the Table for an overview of data sources used to determine whether an applicant's grocery store location meets the underserved criteria.

Finally, local academic or community institutions can also provide existing data to shed light on the food retail landscape in a given city or county. For example, upon the launch of the New Orleans Fresh Food Retailer Initiative, researchers from the Tulane University Prevention Research Center generated maps of proposed initial program eligibility areas on the basis of food environment surveillance data.[25] Overall, local verification research ensures that public dollars are directed to areas of greatest need.

Community fit

A third tier of evaluation bolsters data findings and clarifies how well a store will serve a community. To determine community fit, a comprehensive qualitative assessment of the potential food retail project considers these factors: (1) product mix and healthy food offerings, (2) location/accessibility of site, (3) reputation of operator, (4) public support for the store (as well as any opposition), and (5) jobs created and local hiring. As compared with the income and underserved criteria that rely on a combination of data sources and local verification, this component of analysis relies solely on community research including conversations with local leaders, site visits, and other outreach.

When possible, site visits are undertaken, particularly if an applicant operates an existing store. Store visits yield information on the extent and quality of

fresh foods offered and the overall cleanliness of the store. However, when site visits are not possible, calls with community partners, including community and economic development officials, community health agencies, and/or other civic leaders can help clarify information regarding store quality. For these purposes, program staff rely heavily on a database of community and economic development leaders. Interviews with these contacts ascertain information on the experience of the operator and knowledge of how to effectively source, price and turn over produce, and perception of quality, as well as adequate supply chain to ensure sustainability of both the store and its fresh offerings. In addition, statewide grocers' associations and local wholesalers are a good resource for information about the applicants' experience and can provide a perspective on the capacity of the operator and/or any other planned grocery projects nearby.

Interviews with community contacts are also conducted to assess support for proposed projects and to get perspective on the project's fit with the community's need. The opinion of elected officials is obtained, along with perspectives from a variety of points of view from a few different, unaffiliated organizations to avoid any potential biases. In New York, in addition to community and economic development leadership, program administrators with New York City's FRESH program, which provides taxing and zoning incentives to healthy food retail projects in New York City,[26] provide on-the-ground perspective on site location and potential community impact. In some extreme cases, researching community fit can highlight strong concerns with the project and may ultimately cause the project to be ineligible for program funding. See Supplemental Table 2, available at http://links.lww.com/JPHMP/A80, example 7.

Conclusion

Currently, little is known about best practices for implementation, especially for policy efforts that require cooperation across sectors (eg, public-private financing programs). The case study of healthy food financing programs within a policy systems and environmental change context demonstrates the importance of defining processes for policy implementation.

The article by Giang et al,[27] "Closing the Grocery Gap in Underserved Communities: The Creation of the Pennsylvania Fresh Food Financing Initiative," began a detailed conversation about an effective approach to policy development. It highlighted the importance of convening partners, defining the problem, and articulating solutions, including the applicability of cross-sector approaches to addressing public health problems.[27] Our article describes the next phase of the work, policy implementation, including setting eligibility criteria that align with stated program goals and identification of appropriate data sources to inform decisions about applicant eligibility.

Because of its impact on food access, health, and economic development, PA FFFI has been replicated in many cities and states (See Supplemental Table 1, available at http://links.lww.com/JPHMP/A79). In addition, the US Department of Treasury and the US Department of Health and Human Services have allocated $118 million (as of 2013) as part of a federal Healthy Food Financing Initiative, established to finance healthy food retail across the country.[28] The findings in this article are relevant to these numerous emerging healthy food financing policies.

Fleischhacker et al[29] discuss methodologies for assessing underserved areas in their recent article on evaluating Healthy Food Financing Initiative programs and emphasize the importance of defining "underserved". They highlight a variety of data sources, including the USDA Food Desert Locator (now the USDA Food Access Research Atlas) and The Reinvestment Fund's Limited Supermarket Access tool on PolicyMap. However, the article emphasizes that primary data sources are best, given adequate time and funding. A separate article by Fleischhacker et al[30] concludes that secondary data sources do not always accurately represent the food environment in communities, a finding that healthy food financing program administrators have also identified. The Pennsylvania, New York, and New Orleans experiences have shown that data verification is essential to determine community need.

Understanding the nuances of a community's socioeconomic and healthy food retail landscape is a complicated process, and the methodology put forth in this article has limitations, especially since populations and store development are ever-changing. The methodologies described provide multiple mechanisms to stay on top of trends in communities but require a sizable commitment to checking several data sources and working with community partners. In addition, programs that cross sectors require significant time and flexibility to establish common ground. Many healthy food financing programs emerged through collaboration between public health and economic development sectors, requiring each to learn the other's perspectives, guidelines, and language. For example, terms such as "low income" often have different thresholds for different sectors. As programs establish guidelines and operationalize eligibility, standards must account for varying perspectives.

Despite limitations, eligibility assessment is greatly enhanced by a process that uses several data sources

and local verification research to determine whether applicants should be deemed eligible for funding. Local verification is necessary to fully understand community needs, whether they are healthy food retail, transportation infrastructure, housing development, or other forms of community development. While direct observation through site visitation is ideal, we discuss other ways to verify data locally.

Our findings have broad implications for programs assessing need in a community and provide practice-based evidence for the operationalization of public-private mechanisms to support policy systems and environmental (PSE) change work. As PSE work evolves and healthy food financing initiatives emerge across the country, we call for others to document and publish methodologies and share best practices. Descriptive criteria and actionable guidelines are essential for effective implementation of healthy food financing programs in every region. The more information put forth on this topic, the easier it will be for others to successfully implement programs and maximize impact.

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