

Disrupting Food Deserts and Food Swamps



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Introduction

The following report is an exploration of a narrow field within the broad context of health and human services work. It is not an exhaustive treatment of all effective programs or approaches within the field, but rather a narrow investigation of a topic of interest.

The subject matter of this paper does not necessarily represent an area of financial investment, grant funding, or other programmatic pursuit for United Way of Olmsted County. Rather, this report reflects on a specific type of intervention that allows individuals to reach their full potential, and presents related research.

There may be a wide variety of programs or services that address individual and community needs, and this report is not designed to enumerate all possibilities. United Way of Olmsted County hopes that readers will think creatively about the ways in which the ideas and experiences contained within the report might inform programs, services, and community changes in Olmsted County.

Food Deserts and Food Access

A food desert is an area, especially one with low-income residents, that has limited access to affordable and nutritious food. To qualify as a food desert according to USDA definitions, at least 500 people and/or at least 33% of the census tract's population must reside more than one mile from a supermarket or large grocery store. For rural census tracts, the distance is more than 10 miles (Gallagher, 2011). Within Olmsted County, federally-designated food deserts are located in Rochester, concentrated in the Northwest and Southeast parts of town (Ver Ploeg & Breneman, 2017). Even in areas that are not federally-designated food deserts, access to fresh fruit, vegetables, and other healthful whole foods can become burdensome without a car or reliable public transport, particularly in a climate with seasonal extremes such as Minnesota.

Why is it Important to Disrupt Food Deserts?

In rural locations, the unhealthy consumption habits and associated health outcomes attributed to food deserts can be interrupted by introducing grocery stores, but this has not been found to be the case in urban areas (Dubowitz, Ghosh-Dastidar, Steiner, Escarce, & Collins, 2013). This is speculated to be because, while in a rural areas the lack of a grocery store means there are few or no alternative food-purchasing options, in an urban area the lack of a grocery store pushes individuals to purchase their food

from fast food establishments and corner stores – both of which sell calorie-dense food of low nutritional value. Areas in which this is the case have unaffectionately been dubbed “food swamps” (Fielding & Simon, 2011).

The eating and food environment in food swamps factors heavily in the health outcomes of people that live in them. Residents with poor access to healthy foods have less healthy diets (Gustafson et al., 2013), a higher risk of being overweight and obese (Cerin et al., 2011), and higher incidence of high blood pressure (Dubowitz et al., 2012), which in turn contribute to chronic health issues like heart disease, stroke, and diabetes (WHO, 2017).

How Can Food Swamps be Disrupted?

Disrupting a food swamp is not as simple as introducing a grocery store – studies suggest that when there is an unhealthy food environment, a grocery store nearby has little effect on eating habits (Dubowitz et al., 2013; Fielding & Simon, 2011; Rose et al., 2009). Instead, strategies intending to increase access to wholesome, nutritional food in an urban setting often focus on health education strategies (*Reel & Badger, 2014*), distribution systems (Widener, Metcalf, & Bar-Yam, 2012), or community-based interventions that improve access to fresh food in vulnerable populations (Ganann, Fitzpatrick-Lewis, Ciliska, & Peirson, 2012). For both distribution systems and community-based interventions, health education is a complementary component that can be incorporated into the program design. As noted above, simple provision of healthy alternatives does not automatically result in improved eating habits.

Health Education

Nutrition is more than simply having enough to eat, it also requires there to be sufficient vitamins and minerals – as well as appropriate levels of fats, salts, and sugars – to result in good health. Generally, low-calorie and high-fiber foods are more expensive than refined and processed foods and in a food desert or food swamp, low-calorie and high-fiber foods are often geographically distant. This confluence may be one reason for the somewhat paradoxical finding that those suffering from food insecurity may disproportionately suffer from obesity (Franklin et al., 2012). In addition to obesity, and for similar reasons, individuals who are food insecure have an increased risk for diet-sensitive chronic diseases such as hypertension, high blood pressure, and diabetes (Seligman, Laraia, & Kushel, 2010). An individual with nutritional and health literacy, despite living in a moderately unhealthy eating environment, may experience improved health outcomes as long as there is a minimum level of access to healthy foods.

Parent education on nutrition has been shown to readily influence what children eat and drink (Rich, 2012), and children that grow up in households where healthy eating is modeled and encouraged tend to exhibit similar behaviors when they are grown (Savage, Orlet Fisher, & Birch, 2007). At times, these interventions are low-cost or no-cost (such as encouraging parents to give toddlers water rather than juice as a drink) and can be implemented even without changing the food environment.

Distribution Systems

Market barriers often prevent full-service supermarkets from operating profitably in low-income neighborhoods. Fixed costs and space for high-margin items, among other things, result in grocery chains' preference for larger stores, which tend to be located in more affluent neighborhoods (Dunkley, Helling, & Sawicki, 2004). As a result of market barriers, market uncertainty, and crime, low-income neighborhoods tend to be served by smaller stores with poor selections and high prices (Dunkley et al., 2004; Jetter & Cassady, 2006; Raja, Ma, & Yadav, 2008). In short, neighborhoods with such barriers are unlikely to see conditions change without intervention. One way of disrupting these conditions – without opening a grocery store – is by establishing distribution systems that bring fresh produce into these neighborhoods. This can be done using established infrastructure such as incentivizing local markets to improve their healthy food selection, incentivizing other stakeholders to become food providers, or encouraging new partnerships that lead to either of those two results. There are also a number of strategies that have demonstrated success in changing eating habits and require no new infrastructure. These solutions are diverse: programs that distribute food to seniors and the convalescing, backpack-distribution programs, mobile markets, bulking purchasing programs, and many more. All of these efforts focus on bringing healthy food options into an area that may not have previously had ready or affordable access to them, but does not involve the creation of a place-based source of healthy foods.

Community-Based Access to Fruit and Vegetables

The most direct way to disrupt a food desert or swamp is to introduce a place-based source of healthy foods. As noted above, supermarkets often face challenges operating profitably in low-income neighborhoods. For this reason, community-based interventions are unlikely to be structured like a traditional supermarket. They may include job training or entrepreneurial components, such that the profit margin on the produce sold is not the sole source of program success or financial solvency – examples may include programs that provide job training while producing or selling food. They

may also involve community-mobilizing or socializing components, such that the food is not regarded by program clients to be the primary focus of the work. Place-based sources of healthy foods can be sustainable in the long run and if sufficiently successful (i.e., have a high enough rate of participation, affordable prices, and consistent and varied options), have the potential to eliminate a food desert entirely.

Successful Models

The New Jersey Healthy Corner Store Initiative uses existing stores to improve access to healthy food by working with corner-store owners to help them profitably stock, market and sell nutritious, affordable food items to their customers. Through the initiative, community partners provide retailers the tools they need to dedicate more shelf space to fresh foods and place signs and labels around the store that help their customers recognize healthier choices. The program is helping turn stores into greater community resources, yielding impressive results in both improving healthy food access and generating new local jobs (Ramos, Weiss, Manon, & Harries, 2015).

The WIC Farmers' Market Nutrition Program and the Senior Farmers' Market Nutrition Program are two efforts administered by the USDA's Food and Nutrition service. While farmers' markets have long accepted SNAP benefits (food stamps), the transition to a debit-card system made it difficult for open-air markets to continue accepting payments via public assistance. In 2009, efforts were made to introduce wireless point-of-sale devices to farmers' markets while at the same time expanding the program to accept WIC and senior benefits. In 2010, the program served 900,000 seniors, 2.15 million WIC recipients, and by 2011 over 40% of participating markets served one or more food deserts (USDA, 2011).

Buffalo Grown Mobile Marketplace uses a single truck to deliver organic, locally grown, affordable produce, diverse locally made food products, education and resources to Buffalo's low-income neighborhoods. Acquiring most of their produce from local farms as well as their own urban garden, MAP sends its mobile market to several locations across the city during the summer on different days of the week, with the goal of serving the least healthy food-insecure regions across the city. Using data from the medium-sized city of Buffalo, New York, results show that, with relatively few resources, the model increases these residents' access to healthy foods, helping to create a healthier city (Widener et al., 2012).

Fresh Food Here is a program sponsored by United Way of Central Ohio that works with store owners to increase their inventory of healthy foods and encourage healthy choices through partnerships. In return, stores receive coaching, specialized assistance, and free advertising (United Way of Central Ohio, 2017).

The Backpack Program is a national program supported by Feeding America that serves more than 450,000 children. The backpack program

discreetly provides nutritious, child-friendly, easy-to-prepare food to chronically hungry children. The food is distributed in ordinary backpacks students take home over the weekends and out-of-school times. School staff distribute them on Friday as kids head home for the weekend. On Monday, the backpacks return empty to school, where the volunteers pick them up in order to refill them for the next week. The backpack program is provided free of charge to the students. Children are chosen based upon eligibility for free and reduced price lunches as identified by the schools ("Feeding America," 2017).

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