1. Introduction

In the United States, an estimated 8.8 percent of the population has limited access to healthy and affordable food options. An absence of nearby supermarkets, income constraints, and limited transportation options can all present barriers to accessing a full range of food options. Where areas have limited food access, residents often experience higher than average rates of poor health outcomes, including obesity and diabetes.

Improvements to Smaller Markets in Mattapan

In areas of Boston, food access and correlated negative health outcomes mirror national trends. Reports by the Boston Public Health Commission and the Food Trust identify the Boston neighborhoods of Roxbury, Dorchester, Mattapan and East Boston as areas in greatest need of improved healthy and affordable food options. In addition to experiencing a dearth of supermarkets (a proxy for healthy food choices), several neighborhoods also have higher than city-average rates of obesity, diabetes, and cardiovascular disease. Thirty-seven percent of Mattapan’s population is obese; this is in stark comparison to Boston’s 21 percent average. Roxbury has the highest rates of both diabetes and heart disease of Boston’s neighborhoods. The combination of diet-related health outcomes and limited grocery store service in those neighborhoods build the case for the need to improve availability of healthy and affordable food options.

The following analysis reveals that in addition to a demonstrated social need for improved healthy food options, there are also business opportunities in these neighborhoods for developing new food markets. By measuring the service areas of Boston’s existing supermarkets, ten distinct areas are shown to have limited access to supermarkets. Within these neighborhoods, the lack of nearby supermarkets suggests that the money spent on food is either being spent at supermarkets outside of the neighborhoods or at limited service food markets within the neighborhoods. The outflow of money to outside supermarkets represents an opportunity for food enterprise interventions within underserved neighborhoods.

2. Methodology

Analysis included several steps in the following order:

Determining areas with limited supermarket service & purchasing power: The limited service areas were determined by identifying the Census Block Groups that fall in the gaps of the Supererved areas. These areas are depicted in the Undererved map (top right). Purchasing power of the limited service areas was determined using Census data from 2010, measurements of food spending from the Consumer Expenditure Survey, and estimates of supermarket locations. Using measurements from the Food Marketing Institute, sales volume of $531.44 per square foot was used to estimate the square footage of new market development areas could support. The equations below were used to arrive at neighborhoods estimates. The table (middle right) shows the results.

Purchasing Power = (Total HH $ / 7 percent) * 60 percent

Grocery Demand = (square feet) * Purchasing Power/square feet

The Fresh Truck Site Expansion in Mattapan

Various interventions to improve healthy food access are recommended to provide immediate, intermediate and long-term solutions. Focusing on Mattapan, where the food purchasing capacity is shown to be the greatest, the following recommendations are made:

Expanded Routes for The Fresh Truck: a revitalized route that sells fresh produce in Boston. In 2013, their inaugural year, The Fresh Truck sold at 11 sites throughout Boston. Two of these sites are near but not within the Mattapan limited service area. I suggest three additional sites for consideration. The barriers to vending at these sites are likely to be low, and The Fresh Truck could consider these sites for its upcoming 2014 season. The sites recommended are the Young Achievers School at 20 Outland Road, Franklin; Field BVA at 100 Amos Street and a City of Mattapan-owned lot at 76 Norfolk Street.

Improvements to existing Small- and Mid-Sized Markets: “Healthy on the Block”, an initiative of the Boston Public Health Commission (BPHC), currently works with corner stores in Mattapan and East Boston to improve their healthy food offerings. Within the Mattapan limited service area there are 7 small food markets; I suggest that BPHC could consider these markets for inclusion in the Healthy on the Block program to improve the healthy food options available in the stores.

3. Recommendations

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4. Conclusion

Agencies and organizations throughout Boston recognize the need to improve food options for city neighborhoods with limited access to healthy food options, and are working to improve conditions through a number of strategies. This research and analysis suggests that in addition to the demonstrated need, there are also opportunities to improve food access through growing healthy food businesses. Such developments would also positively impact the local economy. These are opportunities for cross-sector collaboration between policy makers, community members and business owners to further examine the recommendations made herein, in Mattapan and in other underserved neighborhoods with opportunities for food retail improvements.

Limitations: This research focused on Boston supermarkets only. Supermarkets just outside Boston’s boundaries were not considered, and as such the underserved areas that abut municipal boundaries would require further research and verification. The identified areas that are coastal or completely within Boston’s boundaries correctly identify limited access areas.