



Go Fresh Mobile Farmer's Market

August 2016





Executive Summary

The Go Fresh Mobile Farmer's Market report summarizes data collected in 2014 and 2015 growing seasons, using two types of surveys. The Community Nutrition Environmental Evaluation Data system (C-NEEDS) provides an overview of fruit and vegetable availability within a ½ mile radius around Go Fresh sites. C-NEEDS showed that there is a disparity in the healthful food opportunities within the different neighborhoods of Springfield, MA. In 2014 and 2015, satisfaction surveys were conducted at the end of the Go Fresh season. The purpose of the satisfaction surveys was to capture the demographics, perceptions, and experiences of Go Fresh shoppers. The satisfaction survey from 2015 found that mostly older adults used the market. In general, the market was well received, and over 90% of participants planned on shopping at the market the year after taking the survey. There were many positive remarks about the quality of the food and service. It is important to continue the Go Fresh program as it allows access to healthy foods as well as a sense of community, leading to increases in both physical and mental health.

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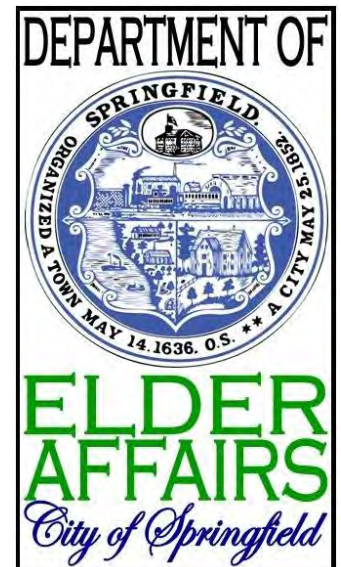


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Introduction

The Go Fresh Mobile Farmer's Market is a not-for-profit, multi-organizational collaboration that includes city departments, a public health institute, three farms, a community action organization, and a nonprofit community loan organization. With its mobile setup, Go Fresh brings fresh produce to various locations in Springfield, from July to October, during the New England growing season. This collaborative experience helps to empower low income communities to gain access to fresh fruits and vegetables.

History of the Go Fresh Program

Go Fresh in Springfield has been in operation since 2011, selling locally grown fresh fruits and vegetables such as berries, apples, tomatoes, leafy greens, and squash. Four partners cooperated to develop and implement this food access project: Springfield Housing Authority, Springfield Department of Elder Affairs, Enterprise Farm, and Partners for a Healthier Community (PHC).

During that first year, the market had two stops per week. It then expanded incrementally over the next three years, by adding more farms, market stops, and a greater variety of fruits and vegetables. This was possible with the support of the partners and funding from a range of sources, including: sponsors, federal grant funds, foundation funds, and other local organizations.



Originally, the market operation was under the leadership of Enterprise Farm. With the help of Springfield based organizations like Partners for a Healthier Community and Department of Elder Affairs, relationships with market sites were developed and funding secured, to support the project. Partnerships with Gardening the Community and New Lands Farm, two other local farming organizations, were established in the second year.

With support from the Go Fresh Leadership Team and dedicated PHC staff, the many GoFresh market needs have been covered year to year as transitions between operators have been necessary to sustain the project. In May of 2014, New Lands Farm assumed the role of overseeing operations of the market.

Over the past two years, the Go Fresh Leadership Team, which is convened by PHC, has raised funds to support operations, the market vehicle, market promotion, and community engagement effort; such as nutrition education and SNAP match. PHC has also conducted educational workshops in various community centers, connected nutrition education instructors with members of the community, and led efforts to assess the impact of the project. Go Fresh is an integrated project of the Live Well Springfield coalition, which leads community movement to support healthy eating and active living in Springfield, Massachusetts.

In 2014, Go Fresh operated three days a week and was scheduled for weekly, one to one and a half hour stops at twelve locations in eight of Springfield's seventeen neighborhoods. Go Fresh locations included subsidized housing complexes, senior centers, and other sites of congregation such as the Caring Health Center. Go Fresh continues to be a multi-organizational endeavor, with partners and operators including: Partners for a



Healthier Community, Department of Elder Affairs for the City of Springfield, Springfield Housing Authority, Gardening the Community, New Lands Farm, Common Capital, Springfield Partners for Community Action, and most recently, Nuestras Raices. Each organization plays an important role in helping the Go Fresh market meet its goals.

Goals

Go Fresh aims to serve minority populations and low income families by improving access to locally grown fruits and vegetables, as well as providing social interaction for elders and a sense of community for everyone. All of the produce at the market sites has been competitively priced to be similar to, or less than local supermarket prices. The market accepts senior Farmers Market Coupons, WIC vouchers, and SNAP dollars. Go Fresh has consistently provided a 50% discount on items for all Supplemental Nutrition Assistant Program (SNAP) participants.

Springfield Demographics

The city of Springfield, Massachusetts has a diverse population. In 2010, the United States Census Bureau found that 51.8% of individuals reported to be Caucasian or white, 38.8% as Hispanic or Latino, and 22.3% as African American or black. Additionally, 10.9% of the city's inhabitants are 65 years of age, or older (United States Census Bureau, 2010). While a large amount of Springfield residents (30.1%) live in poverty (United States Census Bureau, 2015), food deserts also remain to be an issue for many of the 17 neighborhoods within the city. A 2010 report indicated that 8.24% of individuals had low access to healthy

foods in Springfield (Pioneer Valley Planning Commission, 2014; USDA: Atlas, 2015).

Innovative solutions such as Go Fresh, may be an important means of providing Springfield residents with access to fresh fruits and vegetables.



Map of Go Fresh Market Sites

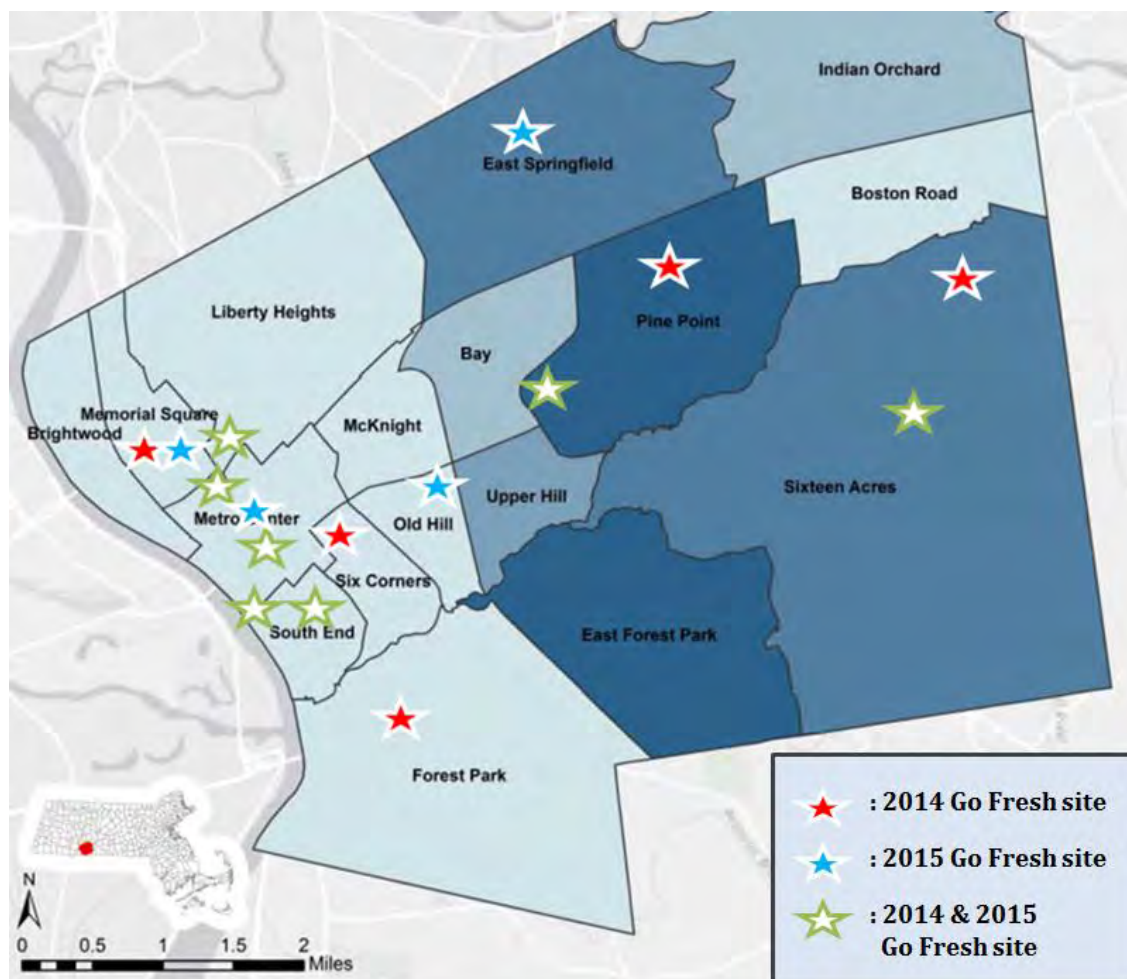


Figure 1. Map of the different neighborhoods within Springfield, MA. The Location of Go Fresh Mobile Farmer's Market sites are represented by the different stars. These represent the 2014, 2015, and shared Go Fresh locations (see Appendix A for specific site names). The shaded neighborhoods represent the level of food security and access. The darker shades signify low access to food; while the lighter shades represent higher access to food.

C-NEEDS

Description

The Community Nutrition Environment Evaluation Data System (C-NEEDS) is a food environment tool that identifies food availability and quality of healthful and less healthful food options within neighborhoods and communities. C-NEEDS was designed for the Northeast region of the U.S. and was validated at the University of Massachusetts Medical School (Olendzki et al., 2015). It includes regionally available fresh, canned, and frozen food, and foods common to Latino/Hispanic populations. For the purpose of this report, the fruit and vegetable component of the C-NEEDS survey was collected and summarized. This included: fresh fruit and vegetables, canned and frozen fruits and vegetables, canned beans, and 100% orange juice. Additional data was collected on whether or not stores carried other food items which are considered healthful; such as: whole grains, lean meat, seafood, nuts, and seeds. These additional food products may help a store achieve a more healthful ranking based on the wider variety of quality food items offered.

Fruit and Vegetable Access in the Go Fresh Area

More than half of Springfield census tracts have a low-income population living a half-mile away from a grocery store. This included 25% of areas being 1 mile away from a grocery store (USDA: Atlas, 2015).

The USDA Economic Research Service (ERS) defines a food desert as a census tract with at least 33% of the census tract's population living more than one mile from a supermarket or large grocery store. ERS estimates that 23.5 million people live in food

deserts. More than half of the people living in food deserts, approximately 13.5 million people, are low income individuals, and 11.2 million live in urban areas (USDA: Agricultural Marketing Service, 2015). In 2015, 30.1% of Springfield residents fell below the poverty line (United States Census Bureau, 2015). Additionally, a 2010 report indicated that 19.35% and 8.24% of people had low access to healthy foods, in Massachusetts and Springfield, respectively (Pioneer Valley Planning Commission, 2014; USDA: Atlas, 2015). This was measured by the Centers for Disease Control and Prevention's (CDC) definition of a food desert being an "area that lacks access to affordable fruits, vegetables, whole grains, low fat milk, and other foods that make up a full range of a healthy diet" (2012).

We conducted in-store food audits using the C-NEEDS tool (Olendzki et al., 2015) from April to June, 2015, in half-mile radius areas surrounding ten confirmed 2015 Go Fresh sites and three potential future sites (13 total study areas). We chose half-mile radius areas because the half-mile range of food access is consistent with the United States Department of Agriculture's (USDA) criteria for food desert classification in densely populated urban areas, as it designates walking range of food access for urban dwellers (USDA: Atlas, 2015).

Why is Access Important?

Chronic diseases are the leading cause of death in the United States and cost billions of dollars each year (AHA, 2013). Low income populations have limited access to fruits and vegetables, and are a particularly vulnerable population because the chance of developing a diet-related chronic condition such as cardiovascular disease (e.g. heart disease, stroke),



diabetes, metabolic syndrome, and inflammation, may be greater (Seligman, Laraia & Kushel, 2010). The prevalence of individuals living with multiple chronic conditions is also increasing and affects approximately 75% of older adults in the U.S. (Goodman et al., 2014). Lifestyle modifications such as consuming a high quality diet consisting of fruits, vegetables, whole grains, and lean protein sources, as well as being physically active, help protect against and manage chronic disease (HHS & USDA: DGA, 2015).

C-NEEDS Results

A total of 87 food outlets (43 of which were food stores) were included in the analysis for the current study. Store types included one supermarket, five grocery stores, four specialty markets, 15 convenience stores, 12 gas station convenience stores, one dollar store, four pharmacies, and one small produce business. Restaurant types included 23 sit down restaurants, 14 fast casual restaurants, 14 fast food restaurants, and one food truck.

On average, there were five food outlet varieties among the 13 half-mile radius areas. Two of the study areas located in Springfield's Metro Center had a maximum of nine varieties of food outlets, while one study area located in Springfield's Sixteen Acres neighborhood had zero varieties of food outlets.

There was one supermarket in the area covered by Go Fresh. Supermarkets are defined as corporate “chain stores”, that are large in size (>20,000 square feet), and have at least two million dollars in sales annually. This store type provides a wide array of groceries and carries nearly 15,000 items, while usually offering a deli and a bakery (Morland, Wing, Diez-Roux, & Poole, 2002; Leibtag, 2005). Although the supermarket in the

study area offered the most healthful food options compared to any other store type, it also offered a large quantity of unhealthful food items; such as sugar sweetened beverages and processed foods.

On average, the five grocery stores in the study sold about half of the healthful food items included on C-NEEDS (47%); such as whole grains, beans, and low fat milk. These stores were defined as being smaller than supermarkets, being non-corporate owned stores, and having sales below one million dollars per year (Morland et al., 2002). Grocery stores in this study were considered to be healthful food outlets because they typically sold the majority of the seafood (60%), fruits and vegetables (53%), and nuts, seeds, and soy products (50%) included on C-NEEDS. Lean meat and poultry were generally not sold in the five grocery stores studied, as they were only found 10% of the time.

Specialty markets, convenience stores, gas station convenience stores, dollar stores, pharmacies, fast food restaurants, and food trucks were not considered healthful food outlets; however, the small produce business, fast casual restaurants, and sit down restaurants were considered healthy food outlets.

Fruit & Vegetable Availability in Food Stores

Figure 2 shows the number of food stores and the different types of foods available, as well as vegetable variety. Figure 3 shows the Availability Scores of fruit and vegetable access near Go Fresh locations. Scores were determined based on the availability and variety of fruits and vegetables offered at store locations.



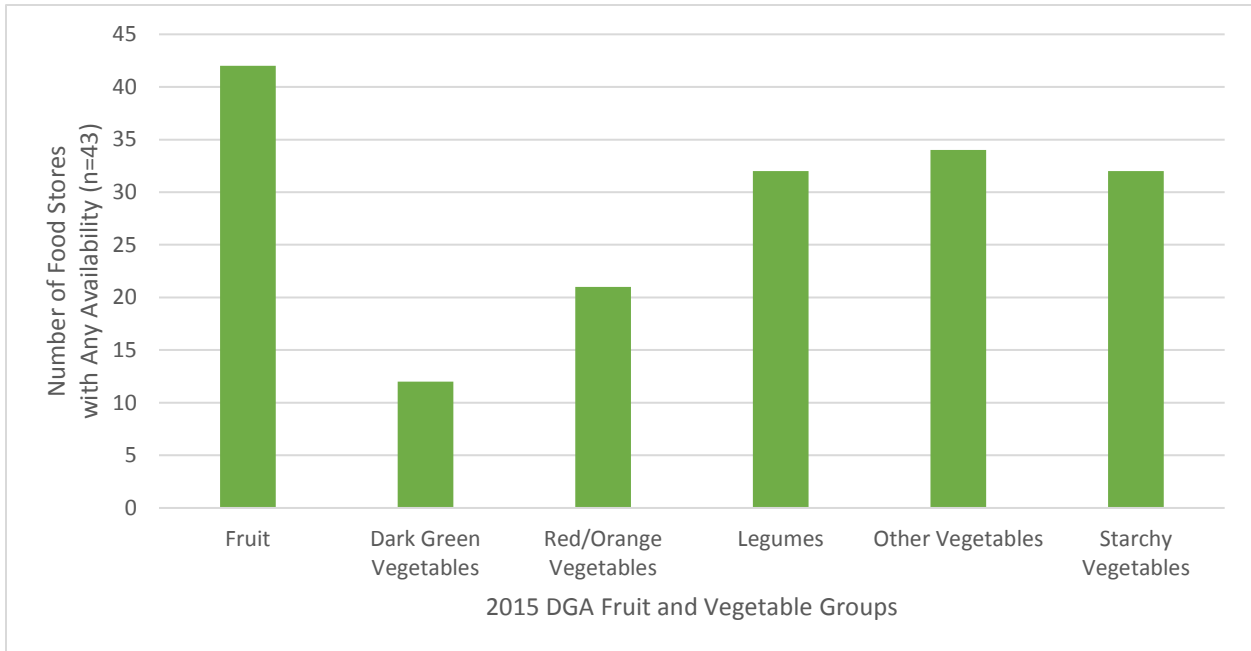


Figure 2. The number of stores surrounding Go Fresh areas that provide fruit and vegetables, and the specific vegetable group types.

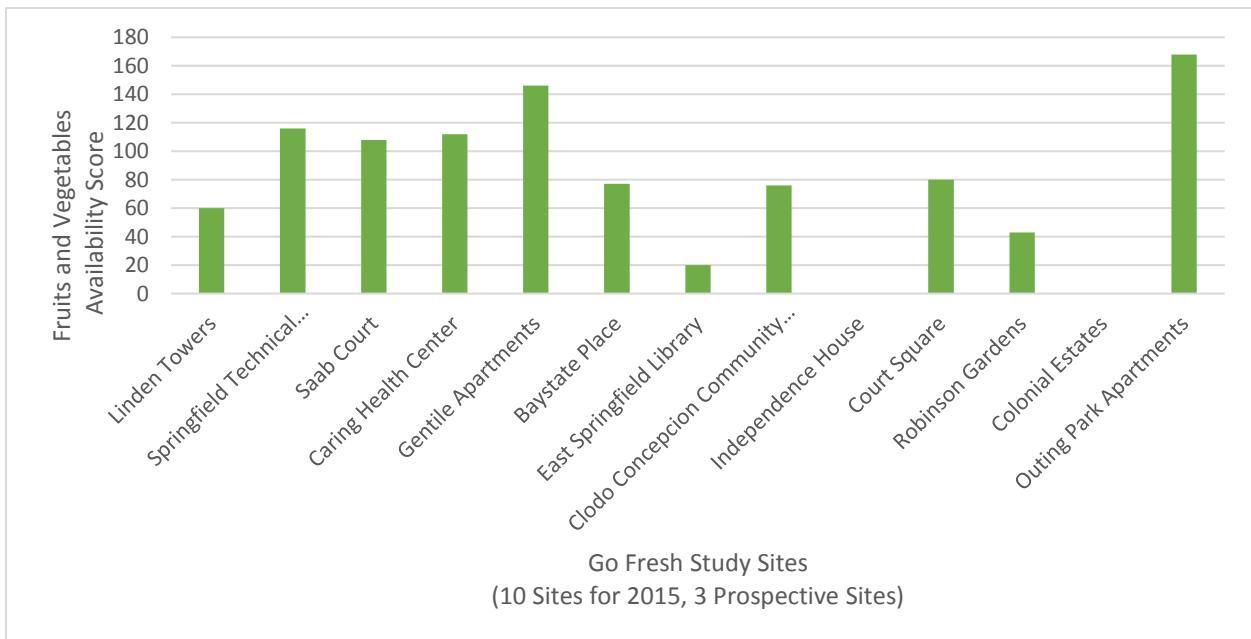


Figure 3. The Availability Score near Go Fresh locations. Scores are based on the availability and variety of fruits and vegetables present in stores near Go Fresh sites.

Accessibility & Walkability to Food Stores

Nearly 70% percent of the study areas contained a major intersection or highway. Presence of a major intersection or highway could affect shoppers' ability to walk to food outlets because having to cross a busy road may be risky, especially for older adults. If residents were to walk to food outlets, they would have to cross the busy highway, which may not be safe or favorable. The only Springfield neighborhoods in the study that were not affected by a major intersection or highway were the Pine Point and McKnight neighborhoods, where three of the 13 half-mile radius areas were located.

Forty-six percent of the study areas were scored as very walkable. Only one half-mile radius area required no car to access nearby amenities. The least-walkable areas were located in Springfield's Sixteen Acres and Pine Point neighborhoods. Two of the 13, half-mile radius areas were considered to be areas that were "car dependent" in order to access nearby amenities (Walk Score, 2016).

Summary of Findings

We found that residents in Springfield, MA have higher access to a high quality diet if they live in areas with supermarkets and grocery stores because, on average, these store types offered the majority of the healthful food items recommended by the 2015 Dietary Guidelines for Americans. Although there are some healthy shopping options available to Springfield residents, other individuals may struggle to find access to healthy foods, particularly in such an urban area. Go Fresh is a unique program as its mobile set-up allows

for stops at multiple locations throughout Springfield, MA, providing fruits and vegetables in underserved areas, as well as offering it at, or below grocery store prices.

The majority of the stores (67%) in the study area were either convenience stores or gas station convenience stores. Convenience stores and gas station convenience stores were not considered healthful food outlets as they often had low availability of fruits and vegetables, and sold unhealthy foods, such as low fiber bread (white bread).

Although convenience stores did not sell a high volume and variety of fruits and vegetables, all convenience stores and gas station convenience stores sold at least one item of fruit. All convenience stores sold at least one type of canned legume (kidney beans, black beans, and/or chick peas), and the majority sold at least one type of canned or frozen vegetable. While food shopping in convenience stores is not ideal, individuals can purchase a small variety of healthful items at these food outlets. However, it is important to note that researchers have found that individuals who shop for the majority of their food at convenience stores and gas stations, pay up to 37% more money for groceries than those who shop at supermarkets (Morland et al, 2002). This cost difference could help be mediated by mobile programs such as Go Fresh, which offer produce at low cost, with additional savings for those participating in SNAP benefits.

The small produce business in the study scored lower than expected on the percentage of healthful food availability. The store only sold fresh fruits and vegetables and little of the other healthful food included on the survey (e.g. lean meat, seafood, whole grains). It should be noted that this store had the most variety and selection of fruits and vegetables compared to any of the food outlets in the study, but a majority of the fresh produce items sold were not included on C-NEEDS.

Along with the presence of healthful food stores, the presence of environmental facilitators including public transportation and sidewalk availability, acceptable quality of produce, and high walkability, increased access to a high quality diet.

Several environmental characteristics are considered to be vital in accessing a healthy diet. One study suggested that adequate public transportation was an important environmental characteristic because having a high density of food stores that sell fruits and vegetables did not matter if transportation was not adequate to access stores (Lucan, Hillier, Schechter, & Glanz, 2014). In another study it was found that older adults were motivated to shop and cook food despite challenges of mobility and cost (Munoz-Plaza et al., 2013). Most of the adults utilized public transportation or walked to grocery stores to obtain food. Participants frequently reported shopping at least once per week in order to purchase food in small amounts to avoid carrying heavy groceries and to avoid food spoilage (Munoz-Plaza et al., 2013).

Additionally, the presence of major intersections/highways may interfere with the ability for individuals to walk to food outlets. One study found that older adults did not prefer walking in areas with major intersections due to inconvenient crossing opportunities, inadequate signal times, and long crossing distances across multiple lanes. Participants noted feeling rushed, and/or having a fear of falling when crossing busy streets (Grant, Edwards, Sveistrup, Andrew, & Egan, 2010).

One of the 2015 GoFresh Mobile Market sites, located within Liberty Heights is at a senior living facility. The half-mile radius area had 0 healthful food outlets. Although multiple bus routes and sidewalks were available in the area, major intersections and highways were present which can obstruct the ability to walk. This information suggests

that healthful food access to the older adults living at the senior living facility or within the half-mile area is limited and therefore could be linked to lower diet quality (Vernez-Moudon et al., 2013).

In conclusion, the current study found that access to a high quality diet that is rich in fresh produce is within reach for some, but there are disparities to healthful food access across the thirteen study locations. These disparities include: lack of supermarkets and grocery stores in certain neighborhoods, limited walking accessibility to store locations, lack of transportation, and costly produce. Neighborhoods which would benefit greatly by Go Fresh would be those requiring additional nutritious venues for individuals to better meet the 2015 Dietary Guidelines for Americans. By providing an additional means to purchase produce that is within easy access to one's home and is affordable, the Go Fresh Mobile Farmer's Market contributes towards the goal of helping individuals achieve a higher quality diet.

Opportunities

Although C-NEEDS has allowed us insight into the needs of the Springfield area, further analysis of the city, and individual neighborhoods could help in identifying further opportunities. This could be done particularly in the case of identifying areas to prioritize if/when Go Fresh is in the position to expand the number of site locations. Such expansion of the Go Fresh market could help provide individuals with healthful food options at affordable prices. Additionally, the continuation of work across key community sectors is important in order to bring quality foods into existing stores, such as convenience stores,



which are quite prevalent throughout the city. This additional produce offered at existing stores, at affordable prices, and more Go Fresh stop locations may help resolve the currently high proportion of food desserts seen in the Springfield area.

Further opportunity involves the improvement of transportation services for older adults and families with young children. Transportation was seen to be an important determiner of access to a healthy diet (Lucan et al., 2014). The addition of regular bus stops and vehicles that accommodate the needs of older adults and others in the area, may be vital in improving accessibility. Specific identification of neighborhoods requiring more transportation services is needed.



2014 & 2015 Satisfaction Surveys

Description of the 2014 & 2015 Surveys

At the end of the Go Fresh 2014 and 2015 seasons, Go Fresh shoppers were invited to complete a questionnaire. Questions about demographics, shopping behaviors, experiences, and perceptions of shopping at the Go Fresh Mobile Farmer's Market were included on the questionnaire (see Appendix B & C for 2014 and 2015 surveys). The questionnaire was offered in three languages (English, Spanish, and Vietnamese in 2014; English, Spanish, and Russian in 2015) in an effort to be inclusive to all who attended the market.

Demographics

In both the 2014 and 2015 survey years, participants were predominately female (Figure 4 & Figure 5) and resided in the Liberty Heights neighborhood (Figure 6 & Figure 7). In 2014, the largest proportion of participants (35.8%) reported their race to be Hispanic or Latino (Figure 8). In 2015 this shifted, as the largest proportion of participants (50.6%) identified as being white or Caucasian (Figure 9). Regardless, a large number of participants in 2015 still reported themselves as Hispanic or Latino (28.9%). Participants were able to select multiple race/ethnicities. It is also important to recognize that the sample size for the 2014 survey was 147 and the sample size for the 2015 survey was 94



participants. Not all questions were answered by every participant, since they were able to skip any questions desired.

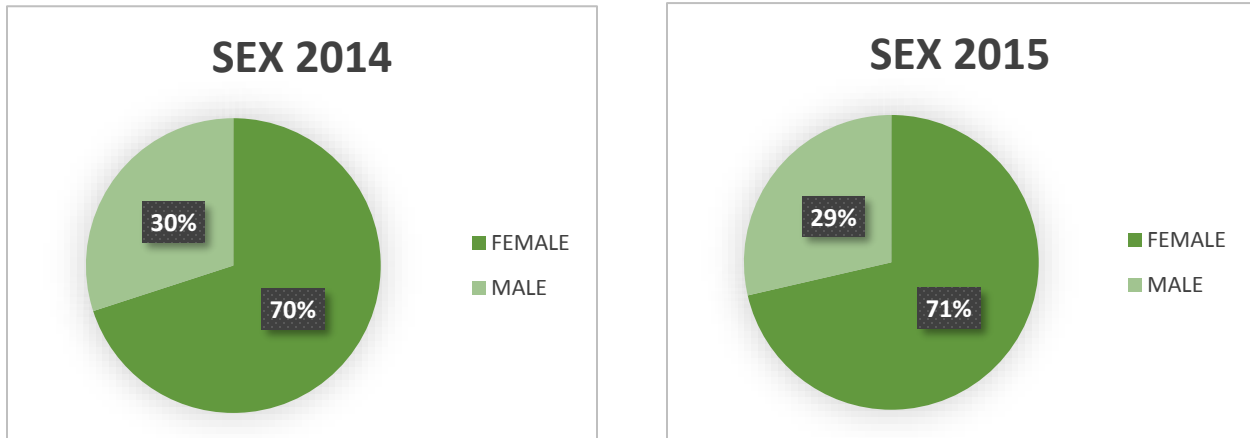


Figure 4 (left) and Figure 5 (right) show that the majority of the market participants were female in both 2014 and 2015, with 70% and 71% respectively.



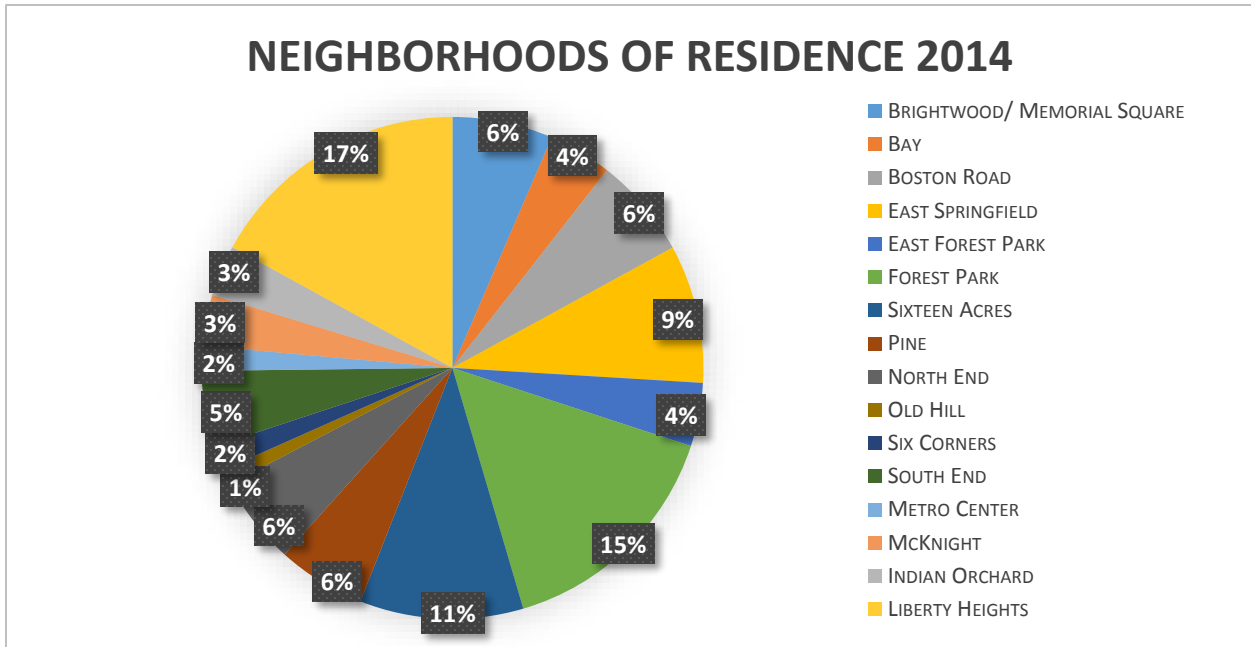
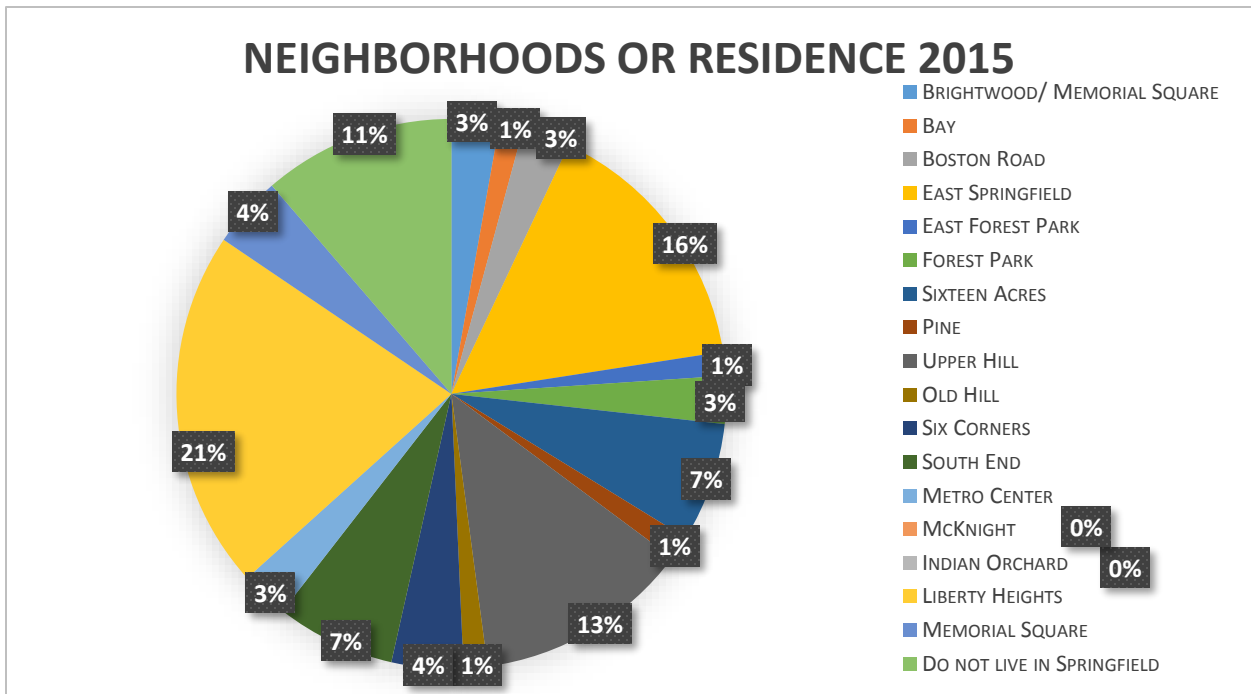


Figure 6 (top) represents the neighborhoods of residence of survey participants in 2014. Not included in these results are 7 people who listed other residences in Springfield and 10 residences who listed addresses outside of Springfield. Figure 7 (bottom) represents the neighborhoods of residence of survey participants in 2015. In both years, the majority of participants were from the Liberty Heights neighborhood.



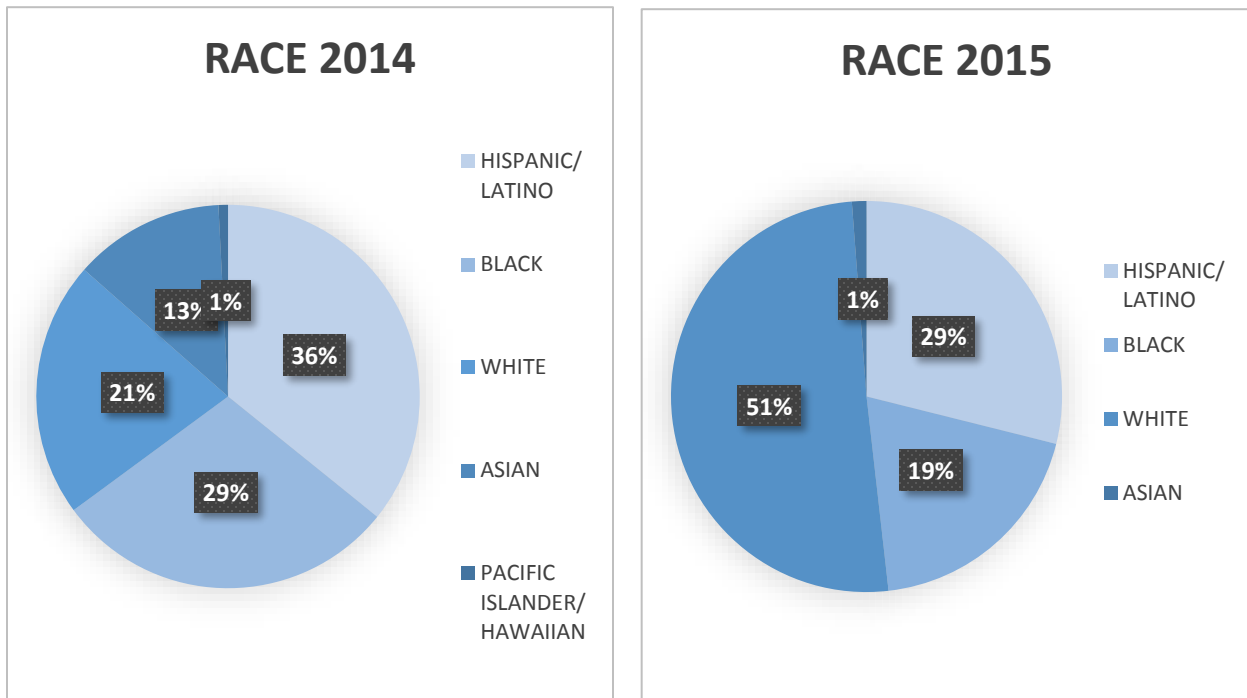


Figure 8 (top left) and Figure 9 (top right) show the different races of the survey participants in 2014 and 2015 respectively. In 2014 the largest proportion of participants were Hispanic or Latino (35.8%). In 2015, the largest proportion of participants were white or Caucasian (50.6%). Nonetheless, the Hispanic/Latino population was the second largest proportion of participants in 2015 (28.9%).

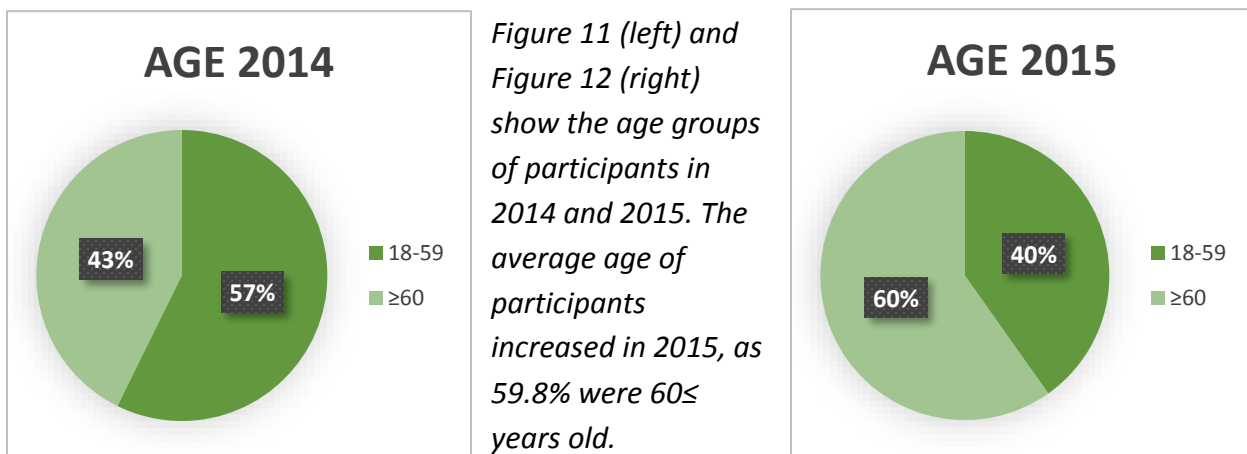


Figure 11 (left) and Figure 12 (right) show the age groups of participants in 2014 and 2015. The average age of participants increased in 2015, as 59.8% were 60≤ years old.

Another shift was seen in regards to the age of Go Fresh shoppers. In 2014 the majority of shoppers who participated in the survey, were between the ages of 18-59 (Figure 11), while the majority of shoppers in 2015 identified as being 60 years or older (Figure 12).

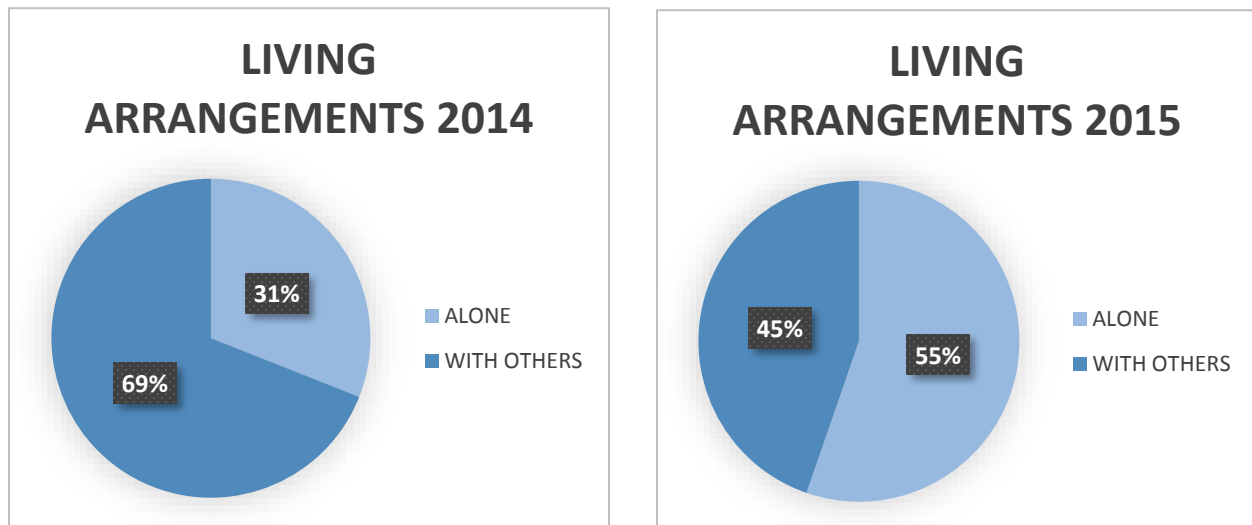


Figure 13 (left). Most participants in 2014 lived with others (69%) although almost a third (31%) lived alone. Figure 14 (right). Most participants in 2015 lived alone (55.3%).



Figure 15 (left). Most participants (93%) in 2014 reported on planning to shop at the Go Fresh market the following year. 0% of individuals answered “no” to the question. Figure 16 (right). Most participants (99%) in 2015 reported on planning to shop at the Go Fresh market the following year.

Participants in the 2014 survey were more likely to live with others (Figure 13), while 2015 participants were more likely to live alone (Figure 14). In both years, nearly all participants stated that they planned to shop at Go Fresh the following year (Figure 15 & Figure 16).

Results of 2014 Survey

For most survey participants, 2014 was their first year shopping at Go Fresh (72.1%). The median range of money spent at Go Fresh was \$5-10, with 36.6% of participants spending less than \$5, and 25.4% spending more than \$10 (Figure 17).

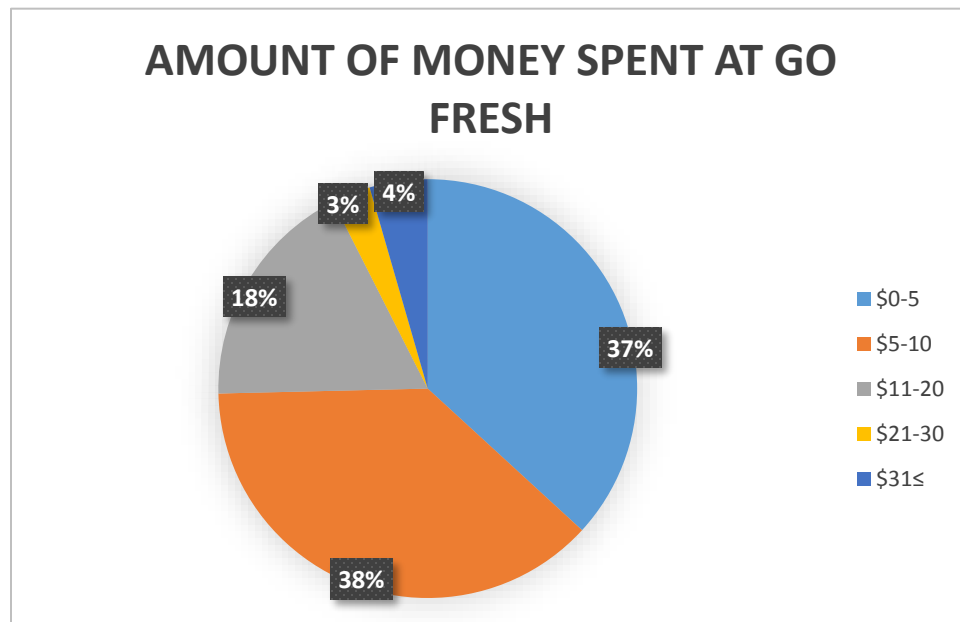


Figure 17. The amount of money spent at Go Fresh in 2014 varied. The median amount of money spent was \$5-\$10, followed by \$0-\$5.

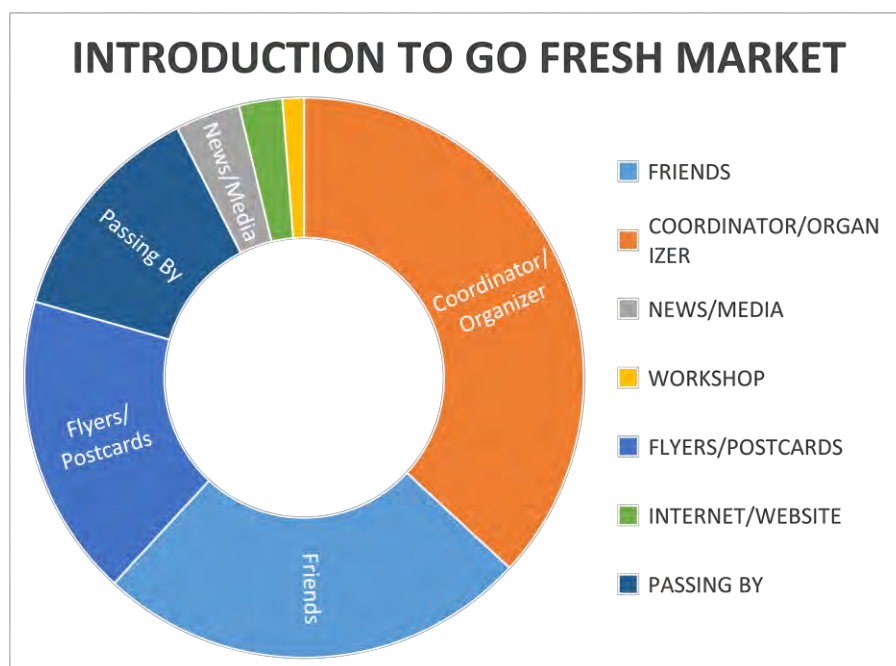


Figure 18. Participants were introduced to the Go Fresh Farmer's Market by different means. The most common methods were via the event Coordinator/Organizer (41.3%) and from friends (28%). Participants were able to select multiple answers.

The most common means that participants found out about Go Fresh was through a community organization (41.3%), from friends (28.0%), flyers/postcards (19.6%), and passing by the market (14.7%) (Figure 18).

Older participants were predominately Black (32.1%), White (25.0%), and Hispanic (21.4%). Hispanics represented a larger proportion of younger participants (46.2%). Older participants were more likely to be shopping for one person (46.4%), rather than multiple people. This was significantly different than the shopping behaviors of young adults, who were more likely to buy for two to three people (65.8%) or four or more people (21.5%).

Individuals were satisfied with Go Fresh for various reasons. Location was the characteristic that most participants liked (72.7%), followed by price (47.6%), locally grown produce (46.2%), hours (37.1%), variety (32.2%), safety (30.1%), and activities, such as food demonstrations and visits by nutritionists (10.5%).

“Freshness” and “personnel [being] very nice” were provided as write-in responses. In addition to the characteristics that participants enjoyed about Go Fresh, individuals were asked what they would like to see improved for the future seasons of the program. Wanting more variety was the highest response (39.5%) for desired changes, followed by hours (21.1%), nothing (21.1%), and price (17.7%). Write-in responses shed light on the desire for increased hours and locations, and posting of prices.

The three highest responses regarding desired future activities were: taste sampling (44.2%), nutritional counseling (30.6%), and SNAP or health care information (27.9%).

Forty-four unique food items were provided in response to the question “Are there any vegetables and fruits missing from the Go Fresh mobile market that you wish were available?” Items that were mentioned 3-5 times included: hot peppers, bell or sweet peppers, cilantro, green beans, cucumbers, avocados, oranges, peaches, and grapes. Items that were mentioned 6 or more times included: tomatoes, bananas, and “fruit”. “Fruit” was mentioned most often at 16 times.

Forty-five individuals wrote in responses to the request, “Please share any other comments you have”. These responses included: enjoying and wanting more variety, enjoying the convenience of the location, not finding the location convenient, wanting additional locations, finding prices affordable and not affordable, enjoying produce freshness and quality, enjoying the market setup, staff, and EBT incentives, and desiring more hours, a winter market, and an updated Facebook page.



Summary of 2014 Survey

The 2014 survey captured the five dimensions of access, including: *availability*, *accessibility*, *affordability*, *acceptability*, and *accommodation*. Nearly one third (32.2%) of the participants indicated satisfaction with the variety of produce, which pertains to the markets' *availability*. However, 39.5% of participants wished that produce variety would improve. This may be difficult, though, because participants' write-in responses indicated foods that are not locally produced or have a season that doesn't span the entire four months of the market.

Not only did the majority of participants travel less than one mile to the market they shopped at, but they also reported appreciating the locations of the markets, attesting to the *accessibility* of the project.

Affordability was the second most liked characteristic of Go Fresh. Almost half of the participants recorded satisfaction with the prices. Although only about a third of the participants used EBT, offering all forms of payment is an important part of the project to continue, as studies show SNAP benefits are an important facilitator for purchasing fresh produce among low-income populations (Karakus, Milfort, MacAllum, & Hao, 2014). Our own data indicates that the SNAP discounts provided were important in making Go Fresh produce affordable, particularly among older adults and those who live alone.

Nearly half of the participants (46.2%) reported appreciating the quality of the produce, especially how it was fresh and locally grown. There were no expressions of dissatisfaction of the *acceptability* of the produce in the write-in responses.

Positive experiences with shopping and the market staff were also recorded, pertaining to *accommodation*. Our findings; however, indicate that there may be a greater accommodation to older adults, who may need to shop more frequently and in small batches to avoid spoilage and the difficulty of carrying large bags to their homes, even at sites where the customers were able to shop right at their housing development (Munoz-Plaza et al., 2013).

Though older and younger shoppers shared similar perceptions of the market, older shoppers (aged ≥ 60 years) were more likely to live alone, be long-term Go Fresh shoppers (for 2-3 years), and use an EBT card. As those who live alone are at a greater nutritional risk, it is important for the market to continue to provide fresh produce to this demographic (Walker & Beauchene, 1991). Additionally, those living alone can find social interaction and a sense of community at the market, which may explain the weekly and long term commitment that older and alone adults tend to show (Jennings et al., 2012). Research shows that gathering places are important not only for breaking societal isolation but also for lowering the risk of malnutrition (Walker & Beauchene, 1991).

Results of 2015 Survey

Survey participants in 2015 were asked if a doctor or other health-care professional had ever told them that he or she had a chronic medical condition; they were able to select all conditions which applied to them. The largest group of individuals suffering from a chronic condition were those who suffered from high blood pressure (41%), with subsequent groups including those with high cholesterol (31.3%), those who were

overweight or obese (27.7%), those with diabetes (24.1%), asthma (20.5%), heart disease and/or history of a stroke (15.7%) (Figure 19). The remaining 27.7% of the participants did not have any of the chronic conditions listed on the survey. In terms of general health, 9.4% reported their health as excellent, 22.4% as very good, 30.6% as good, the largest group (34.1%), as fair, and 3.5% reported poor health (Figure 20).

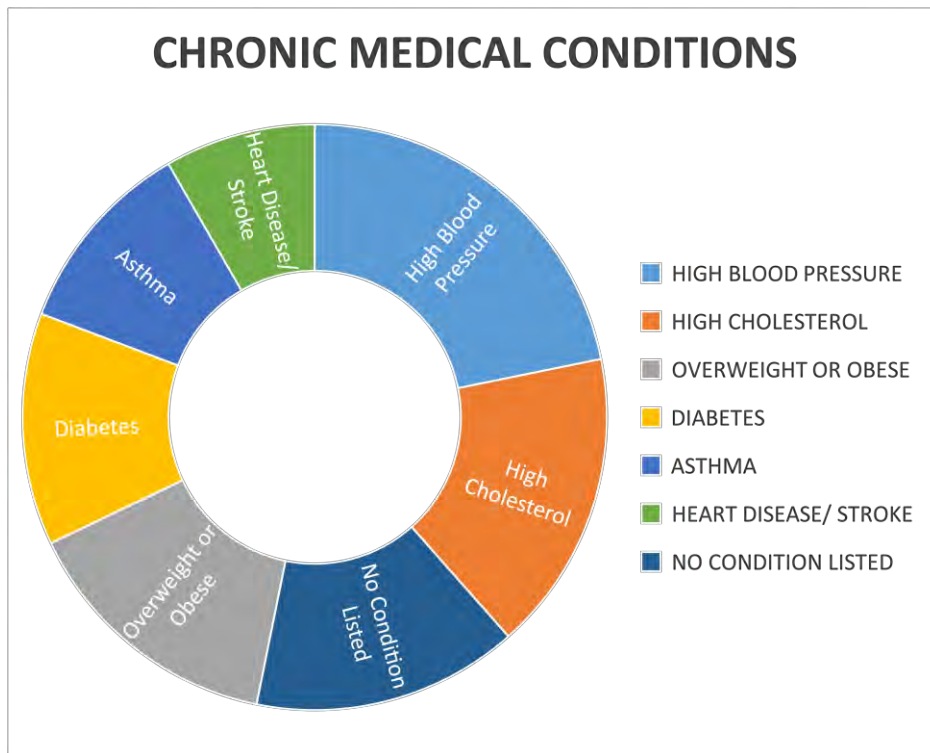


Figure 19. Survey participants were able to select all chronic conditions which applied to them. The most prevalent condition participants had was high blood pressure (41%), followed by high cholesterol (31.3%) and being overweight or obese (27.7%).

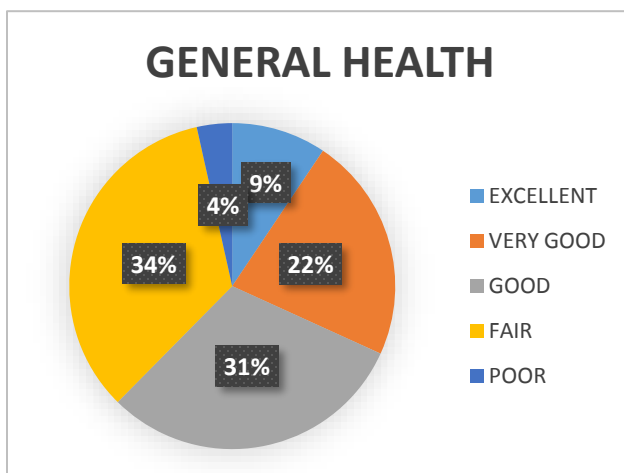


Figure 20. Most participants self-reported their health as “fair” (34.1%), which was the second to last rating on a scale from “excellent” to “poor”. Only 9.4% of participants rated their health as “excellent”, while 3.5% rated their health as “poor”.

Before the implementation of the market, most people ate two servings of fruits and/or vegetables a day (33.3%) followed by one serving a day (31%), three servings a day (14.9%), five or more a day (12.6%), four a day (6.9%), and no servings (1.1%) (Figure 21). After shopping at the markets, participants reported eating two servings a day (36.9%), three a day (22.6%), four a day (14.3%), one a day (13.1%), five or more a day (10.7%), and no servings (2.4%) (Figure 22). The groups shifted to an increase in 2015 of two servings of fruits and/or vegetables per day (+3.6%), three servings a day (+7.7%), and four servings a day (+7.4%). An increase was also seen in 2015 by those who consumed no servings daily (+1.3%) and a decrease in those who consumed five or more fruits/vegetables a day (-1.9%).

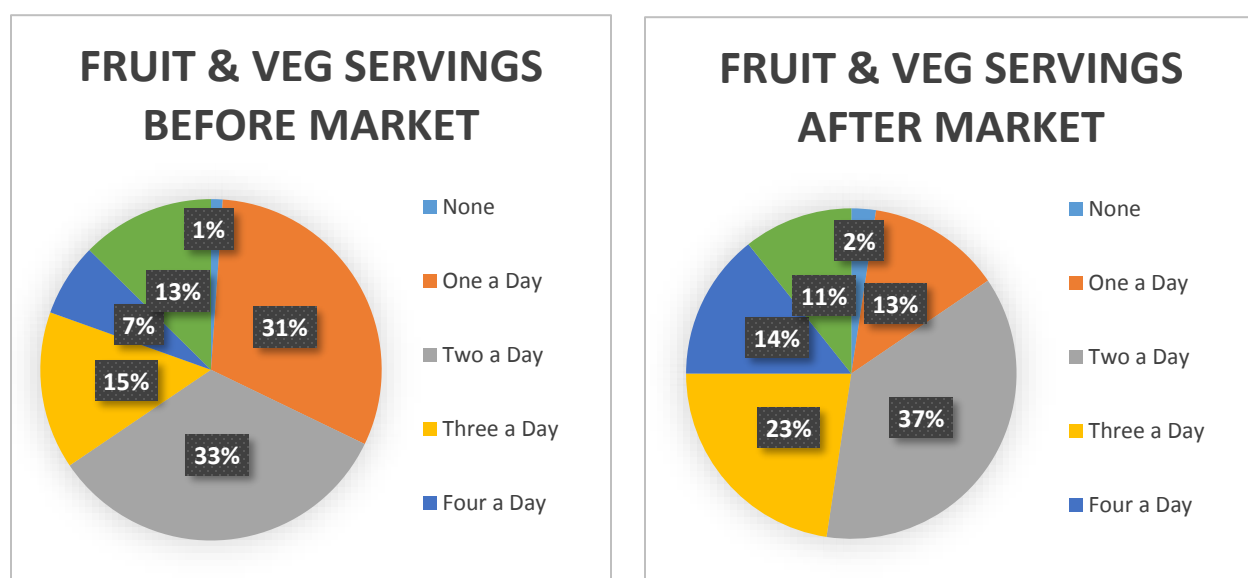


Figure 21 (left) and Figure 22 (right) depict fruit and vegetable consumption, pre and post the Go Fresh market season. One serving being 1 medium piece of fruit, 1/2 cup of fruit or vegetable (raw, cooked, canned, or frozen), 1 cup of leafy salad greens, 1/4 cup of dried fruit, 3/4 cup or 6 ounces of 100% juice, 1/2 cup cooked peas or beans. The percentage of people who ate three servings or two servings increased from shopping at the market.

Summary of 2015 Survey

Overall, individual fruit and vegetable consumption increased due to Go Fresh participation (Figure 21 & Figure 22), despite the slight decrease in the consumption of five or more fruits or vegetables a day. This is an important finding since the majority of the surveyed population still does not consume the number of servings recommended by the USDA (National Cancer Institute, 2015). According to MyPlate recommendations, adults over the age of 51 should eat approximately two servings of vegetables and two servings of fruits a day (USDA: Myplate, 2016). Although, most survey participants increased their daily intake, they did not consume the recommended amounts. These results are unsurprising and consistent with the current national statistics.; according to NHANES data collected from 2007-2010 of 18,117 participants, only 25% of the adults participating met their daily fruit intake and even less (13%) met their daily vegetable intake (National Cancer Institute, 2015).

The increase in consumption of fruits and vegetables is especially important to this survey considering how many people reported having a chronic disease. Eating more fruits and vegetables may reduce some of the chronic conditions reported by participants. According to the USDA's MyPlate, diets rich in fruits and vegetables that contain fiber and other nutrients may reduce the risk for heart disease (including heart attack and stroke), obesity, high blood pressure, and could protect against some types of cancers (2015). The presence of the Go Fresh market and the slight increase in produce consumption due to participation in the program is promising for the future health of the community.



Social Interaction

Social interaction proves to be an important component of Go Fresh. The most common ways that people found out about the market in 2014 were through coordinators/organizations (41.3%) and friends (28.0%) (Figure 18). Research shows that places of gathering, such as community centers, are important for reducing social isolation and lowering the risk of malnutrition (Walker & Beauchene, 1991). The market benefits those who live alone, giving them an opportunity to see and make connections with other shoppers and/or market staff. Ten participants wrote in comments with positive experiences regarding market staff and the welcoming social environment in which they create for shoppers.

Opportunities

The satisfaction surveys provided unique insight regarding Go Fresh shopper opinion's as well as demographics. Future work with Go Fresh might include fine tuning market sites based on particular demographic groups we wish to reach. Additionally, we can strive to better meet the needs and desires of those individuals.

It is evident that shoppers enjoy some of the educational opportunities offered at the market sites. In the past there has been nutrition education, information on SNAP benefits, and food demonstrations. More campaigning might be advantageous regarding specific education on the fruits and vegetables grown locally to the New England area. A number of individuals desired more variety of produce, as well as specific items which cannot grow in this climate, or do not grow the entire length of the season. Educating



individuals about the limitations yet advantages of locally grown produce may help participants better understand why certain food varieties are not offered.

Furthermore, additional visits and demonstrations from nutritionists may increase the number of individuals who meet the national recommendations for fruit and vegetable consumption. Providing shoppers with food samples and recipes could introduce individuals to fruits and vegetables that they would not normally consume. The implementation of innovative ways to increase produce consumption are needed to aid in the reduction of chronic disease via nutritional methods.

Conclusion

Providing quality, healthy food sources is important when combating chronic disease. Due to the urban nature of Springfield, residents may be impacted by food deserts, and unhealthful food options (e.g. fast food, convenience stores). It is important for individuals to have ready access to grocery stores, markets, and other suitable vendors within walking distance of their homes. Go Fresh helps to facilitate access to fresh fruit and vegetables in Springfield neighborhoods, by bringing the fresh produce to neighborhood centers where people live, work, and socialize. The market strives to include low-income individuals through the SNAP benefits and discounts that it offers. Since low-income populations are at particular risk for developing chronic disease, the continuation of enterprises such as Go Fresh, are important in increasing health (Seligman et al. 2010).



Providing fresh fruit and vegetables to the different neighborhoods within Springfield, Go Fresh aims to bring affordable produce to individuals in need. Through this initiative, Go Fresh increases access to fruits and vegetables with an added benefit of providing a sense of community for its shoppers. This is especially important for older adults and residents who may be living alone. Not only does Go Fresh serve the elderly, but it continues to offer a 50% discount to those participating in SNAP. Through the Go Fresh Mobile Farmer's Market, low income families, food insecure families, and elderly and minority individuals can come together to take charge of their health through better access to locally grown fruits and vegetables.



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Appendix A

Appendix A: Locations of the Go Fresh Mobile Farmer's Market sites used in 2014 & 2015.

Go Fresh Farmer's Market Locations 2014 Only	Go Fresh Farmer's Market Locations 2015 Only	Go Fresh Farmer's Market Locations Shared in 2014 & 2015
North Citizen's Council	East Springfield Library	Saab Court
Colonial Estates	STCC	Clodo Conepción Community Center (Greenleaf Senior Center)
Puerto Rican Cultural Center	Baystate Mason Square Neighborhood Health Center	Linden Towers
Robinson Gardens		Independence House
Vietnamese American Civic Association	Baystate Place	Gentile
		Court Square
		Caring Health Center



Appendix B

Appendix B: The 2014 Go Fresh Mobile Farmer's Market Satisfaction Survey.

Thank you for your time to answer these questions about the Go Fresh Mobile Farmer's market. We'd like to know more about your experience to help us to better understand how people are using the Go Fresh Mobile Market and how the market may best serve the needs of the community. The survey will take less than 10 minutes to complete. **All answers that you provide are completely confidential.**

Please read each question and circle the answer that best describes your situation or experience. You will sometimes be asked to circle all responses that apply to you.

1. Gender:

- Male₁
- Female₂

2. What is your age?

12-17₁ 18-24₂ 25-29₃ 30-39₄ 40-49₅ 50-59₆ 60-69₇
70 plus₈

3a. Are you Hispanic or Latino?

- Yes₁
- No₂

3b. What ethnicity do you consider yourself to be? (Select one or more of the following)

- White or Caucasian₁
- Black or African American₂
- Asian₃
- American Indian or Native Alaskan₄
- Native Hawaiian or other Pacific Islander₅
- Other, please specify _____



4. What Springfield neighborhood do you live in?

Bay ¹	Six Corners ⁷	North End ¹⁴
East Springfield ²	South End ⁸	Pine Point ¹⁵
Indian Orchard ³	Boston Rd ⁹	Sixteen Acres ¹⁶
McKnight ⁴	East Forest Park ¹⁰	Upper Hill ¹⁷
Metro Center ⁵	Forest Park ¹¹	(Between AIC & Springfield College)
Old Hill/ Springfield College ⁶	Liberty Heights ¹²	Other: _____
	Memorial Square ¹³	

I do not live in Springfield. Please specify where you live:

5. How often have you shopped at the Go Fresh Mobile Market this year?

- Weekly¹
- Twice/Month²
- Once/Month³
- Once or Twice⁴
- This is my first time⁵

6. How did you find out about the Go Fresh Mobile Market? (Please circle all that apply)

- Friends¹
- Coordinator of my building/organization²
- News/media³
- Workshop or information session⁴
- Flyers/postcards⁵
- Internet/ website⁶
- I saw it as I passed by⁷



7. Do you shop at other locations/stops of the Go Fresh Mobile Market or just this one?

- I only shop at this Go Fresh market location¹
- I shop at other Go Fresh location(s)²: (Please circle all that apply)

Saab Court¹

Greenleaf Senior Center²

Puerto Rican Cultural Center³

Robinson Gardens⁴

Vietnamese American Civic Assoc.⁵

Caring Health Center⁶

Gentile Apt.⁷

Independence House⁸

Linden Towers⁹

Court Square¹⁰

New North Citizen's Council¹¹

Colonial Estates¹



8. Is this your first year shopping at the Go Fresh Mobile Market or have you shopped at this mobile produce market in past years?

- This is my first year¹
- I started shopping at the Go Fresh Mobile Market last year²
- I started shopping at the Go Fresh Mobile Market 2-3 years ago³

9. How far did you travel to get to the Go Fresh Mobile Market today?

- less than 1 mile¹
- 1-5 miles²
- 6-10 miles³
- 11-25 miles⁴
- 26-50 miles⁵

10. How much did you spend at the Go Fresh Mobile Market today? (Please round up to the nearest dollar)

- \$ 0-5¹
- \$ 5-10²
- \$ 11-20³
- \$ 21-30⁴
- \$ 31-40⁵
- \$ 41-50⁶
- \$ 51-75⁷
- over \$ 75⁸

11. Have you ever used an EBT card to purchase your produce at the Go Fresh Mobile Market?

- Yes¹
- No²

12a. Are you the primary purchaser of food for your household?

- Yes¹
- No²



- I am purchasing food for someone not in my household₃

12b. How many people are you purchasing food for?

- 1₁
- 2-3₂
- 4-5₃
- More than 5₄

14. What do you like about the Go Fresh Mobile Market? (Please circle all that apply)

- Location₁
- Safety of location₂
- Hours of operation₃
- Cost of produce₄
- Produce is locally grown₅
- Variety of produce₆
- Activities led by community organizations like food demonstrations and a visit by a WIC nutritionist₇
- Other: _____(please specify)

15. What would you like to see changed about the Go Fresh Mobile Market for next year? (Please circle all that apply)

- Location₁
- Safety of location₂
- Hours at my market location₃
- Pricing₄
- More variety of products₅
- More activities by community agencies₆
- Nothing- it's perfect!₇
- Other: _____(please specify)



16. Are there any vegetables or fruits missing from the Go Fresh Mobile Market that you wish were available at the mobile market?

Please list: _____

17. If offered at the Go Fresh Mobile Market, which of these activities are most important to you? (Please circle all that apply)

- Taste sampling¹
- Cooking classes²
- Nutritional counseling³
- SNAP or health care benefit information⁴
- None of these, I am not interested⁵
- Other: _____(Please specify)

18a. Do you live alone or with others?

- Alone¹
- With Others²

18b. If you live with others, who do you live with? (Circle all that apply)

- I live alone¹
- Partner or spouse²
- Parents³
- Children⁴
- Other relatives⁵
- Non-family members⁶

19. Do you plan to shop at the Go Fresh Mobile Market next year?

- Yes¹
- No²

20. Please share any other comments you have: _____



Appendix C

Appendix C: The 2015 Go Fresh Mobile Farmer's Market Satisfaction Survey.

Thank you for taking the time to complete this survey! This information will help us to better understand how our Mobile Market is helping people. We will use this information to help fund our efforts to continue providing the Mobile Market to the community.

1. Which Go Fresh Mobile Farmer's Market stops do you shop at? (please check all that apply)
 - (a) Linden Towers
 - (b) STCC Farmer's Market
 - (c) Saab Court
 - (d) Caring Health Center
 - (e) Gentile
 - (f) Baystate Place
 - (g) East Springfield Library
 - (h) Clodo Concepcion Community Center
 - (i) Independence House
 - (j) Court Square Across from City Hall
 - (k) Concerned Citizens of Mason Square Saturday Farmer's Market

2. How many times have you shopped at the Mobile Market since the season started July 8th?
 - (a) This is my first time
 - (b) 1-3 times
 - (c) 3-5 times
 - (d) 5-10 times
 - (e) More than 10 times

3. How long have you been shopping at the Mobile Market?
 - (a) This is my first year
 - (b) 2 years
 - (c) 3 years
 - (d) 4-5 years

Next, we'd like to get a little more information about you so we can better understand who our Mobile Market customers are and who we still need to reach.

4. What is your age?

<input type="checkbox"/> 12 - 17	<input type="checkbox"/> 25 - 29
<input type="checkbox"/> 18 - 24	<input type="checkbox"/> 30 - 39



40 – 49

70 +

50 – 59

60 – 69

5. With what gender do you identify? Female Male Transgender Other

6. What is your race/ethnicity (please check all that apply):

(a) Asian

(b) Black or African-American

(c) Latino or Hispanic

(d) Native American or American Indian

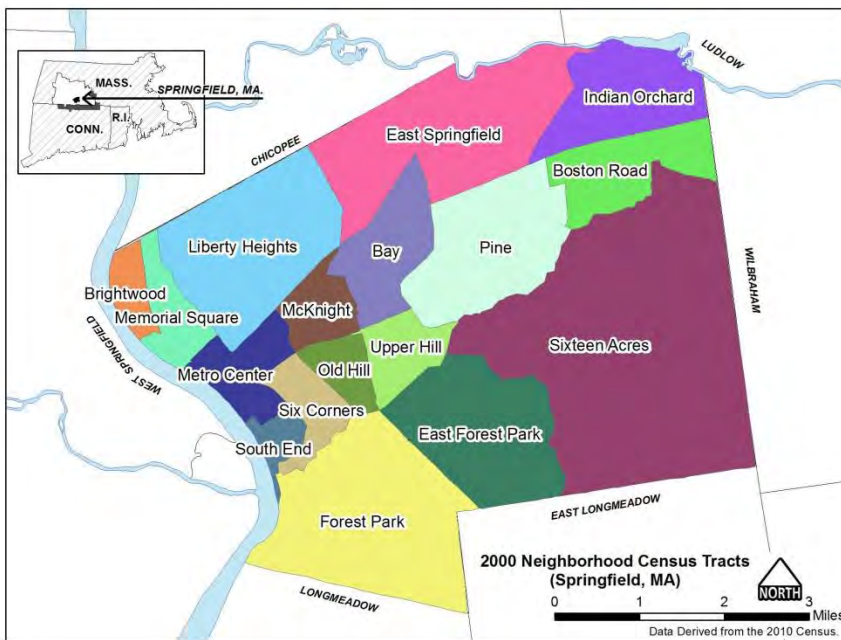
(e) White or Caucasian

(f) Other (please specify) _____

7. What Springfield neighborhood do you live in?

Please look at the map and check your neighborhood on the list.

If you do not live in Springfield, please check here _____



(a) Brightwood/Memorial Square

(b) Bay

(c) Boston Road

(d) East Springfield,

(e) East Forest Park

(f) Forest Park

(g) Sixteen Acres

(h) Pine

(i) Upper Hill

(j) Old Hill

(k) Six Corners

(l) South End

(m) Metro Center

(n) McKnight

8. What is the zip code of your home address?

01103

01105

01108

01104

01107

01109

01118 01128 01151 01119 01129

9. What two streets cross at the intersection that is closest to your home? _____

10. How long have you been living in that area?

 Less than a year 11-20 years 1-3 years More than 20 years 4-10 years

11. How do you get to the Go Fresh Mobile Market stop(s)? Please check all that apply

 Walk Drive Bike Public Transportation

12. Do you live alone or with other? If with others, who do you live with? Please check all that apply.

 live alone children Partner or spouse Other relatives Parents Non family members

13. How many people are you purchasing food for?

 1 2 - 3 4 - 5 More than 5

14. Has a doctor or other health professional ever told you that you had any of the following chronic medical conditions (check all that apply)?

 (a) I do not have any of the conditions listed (b) Asthma (c) Diabetes (d) Heart disease and/or stroke (e) High blood pressure (f) High cholesterol (g) Overweight or obese

15. In general, would you say your health is?

 (a) Excellent (b) Very good

- (c) Good
- (d) Fair
- (e) Poor

16. Before you started coming to the Go Fresh Mobile Market, how many servings of fruits and vegetables would you estimate that you ate per day? *One serving is 1 medium piece of fruit, 1/2 cup of fruit or vegetable (raw, cooked, canned, or frozen), 1 cup of leafy salad greens, 1/4 cup of dried fruit, 3/4 cup or 6 ounces of 100% juice, 1/2 cup cooked peas or beans.*

None	1 a day	2 a day	3 a day	4 a day	5 or more a day
0	1	2	3	4	5

17. Since shopping at the Mobile Market, how many servings of fruits and vegetables do you currently eat? *One serving is 1 medium piece of fruit, 1/2 cup of fruit or vegetable (raw, cooked, canned, or frozen), 1 cup of leafy salad greens, 1/4 cup of dried fruit, 3/4 cup or 6 ounces of 100% juice, 1/2 cup cooked peas or beans.*

None	1 a day	2 a day	3 a day	4 a day	5 or more a day
0	1	2	3	4	5

18. I look forward to shopping at the Go Fresh Mobile Market because (check all that apply)

- Fresh, local vegetables at affordable prices
- I like to go with friends/neighbors
- Gets me out of the house
- It is more convenient than shopping somewhere else
- I meet new people
- I get new information about health and nutrition
- I get to share and learn about food preparation and health



19.

In the past year how often have you been involved in the following community organizations? (please check your response for each location)			
(a) Senior Center	Never	Sometimes	Often
(b) Church or religious center	Never	Sometimes	Often
(c) School or educational organization	Never	Sometimes	Often
(d) Community center	Never	Sometimes	Often
(e) Community garden	Never	Sometimes	Often
(f) YMCA	Never	Sometimes	Often
(g) Other(Please specify)	Never	Sometimes	Often

20. Do you plan to shop at the Go Fresh Mobile Market next year?

___ yes

___ no

