



# DEPARTMENT OF PLANNING

## Healthy Food Assessment: Baltimore City's Public Markets

Final Report

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## I. EXECUTIVE SUMMARY

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With more public markets than any other U.S. city, Baltimore has a remarkable opportunity to increase the city's availability and accessibility of healthy foods. The six public markets are an integral part of the city; over 4.2 million customers come to the markets a year.<sup>a</sup> Unfortunately, each market is located in or near "food deserts;"<sup>b</sup> three are situated in neighborhoods with over 55% of the households below the poverty line.<sup>1</sup>

Low-income, ethnic minority communities are known to have increased energy intake, poor diets, and adverse health outcomes because of the lack of fresh produce and the abundance of fatty foods through the high number of prepared food sources (PFSs).<sup>2,3,4,5</sup> PFSs, also known as carryouts, are typically individually-owned, small food stores that serve calorie-dense foods to-go, such as fried chicken, Chinese take-out, and sandwiches.<sup>6,7</sup>

On average, Americans spend more than half of their food dollars on prepared foods.<sup>8</sup> More importantly, African-American adults in Baltimore City consume approximately 200 kcal above the national average, obtaining more than half of their daily energy intake from the city's 786 carryouts.<sup>9,10,11</sup> Efforts must be made to best strategize how public markets can increase the availability of healthy, affordable foods in several of the city's food deserts rather than continue to add to the density of unhealthy prepared foods. This report provides the foundation for accomplishing this by assessing the prepared food environment of all six public markets and providing specific recommendations.

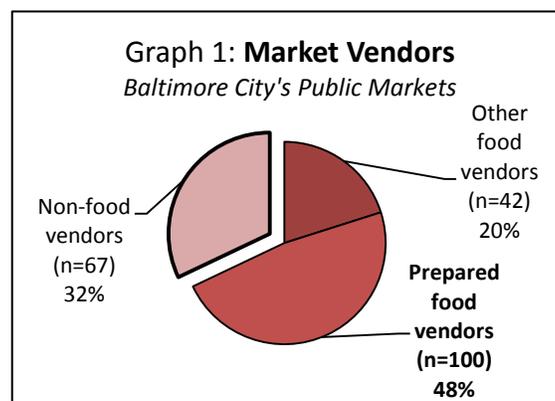
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### *Carryouts make up 70% of all food vendors in Baltimore's public markets*

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The assessment, completed between April and July 2011 at Lexington, Northeast, Hollins, Cross Street, Avenue and Broadway Markets, revealed that Baltimore's public markets are dominated by PFSs. **Carryouts (n=100) make up 70% of food vendors** and 50% of all market vendors (n=209), **greatly contributing to the existing high density of PFSs in Baltimore** (Graph 1). Lexington Market, the largest public market, has 54 carryouts.

The results showed that there should have been a greater availability of vegetables, fruits and whole grains. Out of 100 carryouts, 49% had planned and committed on their lease agreements to sell vegetables, fruits and/or meats prepared in low-fat cooking methods but did not offer them at the time of the assessment. Only 33, out of 62 vendors that sold bread, had a whole wheat option. Fried meats, French fries and chips were sold in 40% of the vendors. While many



<sup>a</sup> Estimated customer volume from Baltimore Public Market Corporation.

<sup>b</sup> Food deserts are defined as low-income block groups with 40% or more of the residents below the poverty line (household income <\$25,000 per year) and are more than a ¼ mile from a supermarket (Center for Livable Future, Johns Hopkins School of Public Health, March 2010).

carryouts did sell at least one healthy option such as vegetables, only three vendors used menus, or marketing at the point-of-purchase, to emphasize, promote, and encourage customers to purchase these items.

Some market-specific findings include:

- **Lexington Market:** This market has the highest number of produce stands (n=8) but also the most carryouts (n=54), greatly contributing to the already high density of PFSs in the West Baltimore low-income community (55% live under the poverty line). Further, 22 out of 54 carryouts (41%) did not sell healthier items specified on their leases.
- **Northeast Market:** The market, also located in a food desert, has 20 carryouts and two produce stands. Roughly 60% of the local East Baltimore community lives under the poverty line. Of the carryouts, 50% did not sell the healthier items they specified on their leases.
- **Hollins Market:** Located in West Baltimore, the 6 out of 8 carryouts in this market planned to but did not sell vegetables, baked chicken, and/or fruits at the time of the assessment.
- **Cross Street and Broadway Market:** Situated on the border of food deserts, these public markets should include a larger selection of healthy options and better promote healthy dietary decisions on their menus. Over 60% of the carryouts in these two markets have seating adjacent to the store, allowing for high visibility of material emphasizing healthy eating.
- **Avenue Market:** This market is also located in a food desert, where 68% of the local community live under the poverty line. Moreover, 3 out of 5 carryouts planned to but did not sell garden salads and collard greens as promised on their leases, adding to the dearth of vegetables in the neighborhood's food environment.

The results of this assessment emphasize the need to support carryout vendors and get buy-in with other public market stakeholders in order to transform public markets into healthy food centers. The report includes recommendations that are modeled after evidence-based strategies from Dr. Joel Gittelsohn and his team from Johns Hopkins School of Public Health's Center for Human Nutrition. Based on their recommendations and findings from our extensive formative research, we recommend that further initiatives include:

- Use of symbolic menu labeling to raise consumer awareness and demand for healthier items;
- Supportive relationships with vendors to aid in including low-fat options as planned on leases;
- Introduction of day stands for taste testing of promoted items and for selling local produce;
- Evaluation of the initiative's impact on consumer purchasing behavior and availability of healthy foods in public markets.

Future policy implications will include developing formal criteria for healthy carryout certification. Accordingly, carryouts throughout the public markets and city will need to meet the evidence-based criteria to obtain and maintain certification from the City. With the implementation of these recommendations, public markets can become central locations where the local community can access wholesome foods at healthy carryouts and produce stands.

## II. BACKGROUND

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Public markets have a long history, internationally and in the United States, serving social, political and economic goals.<sup>12</sup> With six public markets and a total of 100 carryouts, Baltimore can use its public markets to serve those three goals as well as improve health outcomes of its community through introducing healthier food choices and promoting healthier dietary behavior.



Baltimore has over 4.2 million customers frequent their six markets annually.<sup>c</sup> In one year, Lexington Market serves as many as 2.8 million consumers and Northeast Market has about 650,000 customers annually. The following are estimates of each market's annual customer volume:

<b>Lexington Market</b>	2,800,000	<b>Cross Street Market</b>	420,000
<b>Northeast Market</b>	648,000	<b>Avenue Market</b>	67,500
<b>Hollins Market</b>	234,000	<b>Broadway Market</b>	100,000

With such a large clientele, the public markets have a significant role in the city's food environment.

PFSs in public markets contribute to the existing high proportion of small food vendors in Baltimore's low-income, African-American communities. These small food stores primarily serve calorie-dense foods, such as fried chicken, Chinese take-out, and submarine sandwiches, and few healthy items.<sup>6,13</sup> A recent assessment of East and West Baltimore showed that 70% of all PFSs are carryouts, providing customers with food to-go as opposed to on site as in sit-down restaurants.<sup>6</sup> Public market carryouts add to the 786 carryouts in Baltimore City.<sup>10</sup> Research shows that the lack of wholesome foods in low-income ethnic-minority communities adversely affects health outcomes of local residents.<sup>2</sup> The high availability of fast-food sources, small food stores and other PFSs, is positively correlated with poorer diets, consisting of too much sugar and fat and too few fruits and vegetables, and increased energy intake by 138 calories and 58 calories for African-American men and women, respectively.<sup>6,3,4,5</sup> More specifically, carryouts and other PFSs provide more than half of the total calories consumed by low-income African Americans in Baltimore City.<sup>8</sup>

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*The high proportion of prepared food sources, especially in low-income African-American communities, is correlated with poorer diets*

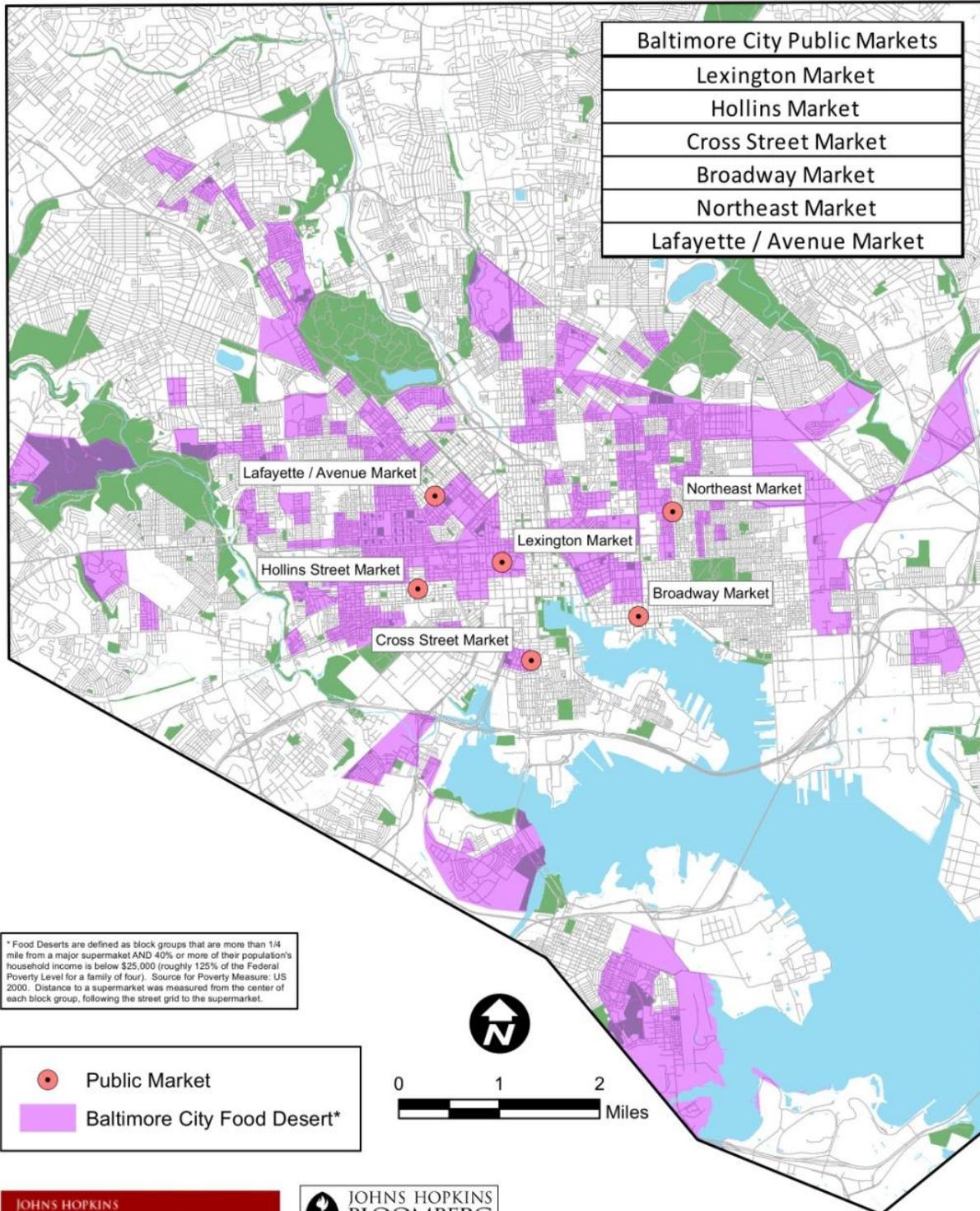
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Baltimore has an exceptional opportunity to improve the food environment, reduce health disparities, and change dietary behavior through interventions across its six public markets. Currently, little is known about the prepared food environment in public markets and its potential role in promoting healthy foods. This report provides the evidence base necessary to support and expand upon recommendations to improve the Baltimore City food environment, and, in turn, decrease chronic disease health risks among low-income ethnic minority residents.

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<sup>c</sup> Estimates of market customer volume from Baltimore Public Market Corporation.

# Baltimore City Food Deserts and Public Markets



### III. INTEGRATING RESEARCH

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Individual-focused nutrition interventions, alone, cannot adequately influence dietary decisions without necessary changes to the food environment.<sup>14</sup> Research suggests that programs and policies tailored to impact the food and built environment, by increasing access to healthy foods, most effectively influence low-income, urban communities and ethnic minority groups.<sup>15,16,17</sup> Small food store interventions, including point-of-purchase marketing and pricing and behavioral strategies, have shown success in improving dietary knowledge, demand, and supply of healthy foods.<sup>13,18,19,20,21</sup> Point-of-purchase (POP) marketing aims to influence customer purchasing decisions at the point where sales are made. Strategic POP messages can be used to effectively promote healthy food choices.<sup>22</sup> Research shows that nutrition environmental interventions particularly in carryouts, which have fewer menu options, have a significant impact on dietary behaviors.<sup>13</sup> Since all PFSs in public markets are carryouts, a multi-pronged intervention that fosters healthier dietary decisions has the potential to significantly impact local community members.

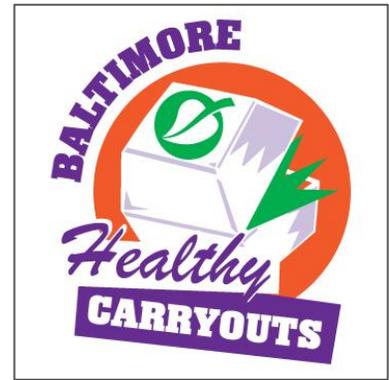


Image 1: BHC logo

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*Programs and policies can be tailored to increase access to healthy foods in low-income urban communities and reduce health disparities*

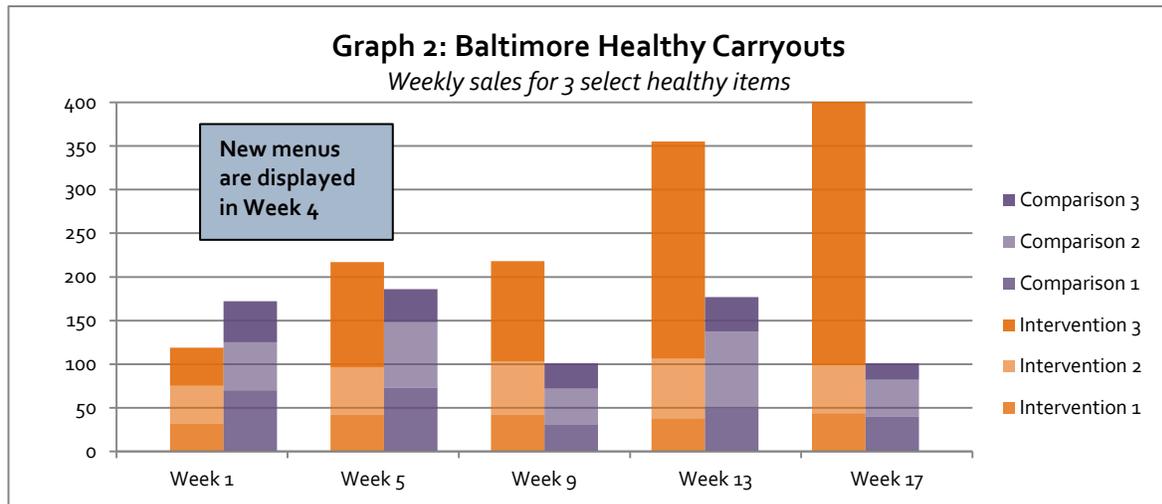
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There is evidence that customers favor menu labeling, a form of POP marketing, allowing them to make informed dietary decisions.<sup>23,24</sup> Federal and local policies have pushed for caloric labeling on menus in fast-food chains and restaurants but its effect on positively changing dietary patterns is unclear, particularly in populations who have low-literacy and little understanding of the relationship between calories, diet and health.<sup>25</sup> According to findings from studies in New York City, caloric menu labeling may not have the largest impact on low-income customers.<sup>26</sup> Symbolic labeling of low fat/low cholesterol foods, on the other hand, is a promising alternative for carryout settings. Findings from a study in northern Californian restaurants showed significant increases in sales of foods designated by symbols.<sup>27</sup>

The intervention proposed here adopts evidence-based strategies that have increased healthy food availability and demand specifically in Baltimore City's corner stores and carryouts. Preliminary results from Baltimore Healthy Carryouts (BHC), a pilot study directed by Dr. Joel Gittelsohn and Seung Hee Lee, at Johns Hopkins School of Public Health's Center for Human Nutrition, show that there is an increase in sales of healthier items when they are designated as fresh, healthy choices with a green leaf symbol on carryout menus (Graph 2).

In a focus group conducted by BHC, the study coordinators found that calorie labeling was not acceptable in low-income communities and would instead provide incentive to eat items with the highest calories.<sup>28</sup> The team found that store owners were also strongly opposed since they did not have the resources to calculate calories for each product, especially since most are custom ordered. Instead, BHC decided to use a green leaf to designate and highlight healthier items on menus and posters (Image 1 and 2). The idea of using a leaf came as a result of customer interviews and interest in

incorporating more greens, like collards and kale, into carryouts. Additional qualitative research showed that an overwhelming majority highly favored the leafy logo because it was associated with the perception of healthy foods.<sup>29</sup>



Evidence-based strategies that have found success in individual stores can also be applied to the public market setting. The current BHC project and other interventions suggest that a combination of POP marketing, interactive nutrition sessions, and increased healthy food availability can positively impact dietary behaviors.<sup>30,31,32</sup> By coupling the results of this food assessment with proven strategies, we can work to increase demand and availability of healthy foods in Baltimore’s six public markets.

**Baltimore Healthy Carryouts**  
Hours of Operation  
Monday - Saturday 10:00a.m. - 9:00p.m.  
Sunday 11:00a.m. - 6:00p.m.

Item	Price
<b>Platters w/ Rice &amp; Veggies</b> (Served with sauteed broccoli, onions, green & red peppers, and Spanish rice)	
Steak, Salmon, Chicken, Tilapia, Veggie, Ground Turkey	\$10.00
Shrimp	\$12.00
Jumbo Lump/Jumbo Shrimp	\$15.00
Add Shrimp	\$2.00
<b>Fried Platters</b>	
Fish and Chips	\$6.50
Chicken Tenders and Fries	\$6.50
Wings and Fries	\$6.50
<b>Wraps</b> (Filled with sauteed broccoli, onions, green & red peppers, cheese and Spanish rice)	
Steak, Salmon, Chicken, Tuna, Veggie, Ground Turkey, Chicken Salad or Caesar Salad	\$8.00
Shrimp	\$10.00
Jumbo Lump/Jumbo Shrimp	\$12.00
Add Shrimp	\$2.00
<b>Sandwiches</b>	
Grilled Burgers - Turkey or Beef	\$4.50
Salad - Tuna or Chicken	\$3.50
Steak	\$5.00
Salmon	\$6.00
Grilled Chicken	\$5.50
Turkey Club	\$4.50
Turkey Shrimp Club	\$5.50
BLT	\$4.00
Add Bacon	\$1.00
<b>Hot Dogs</b>	
Kosher Beef	\$2.50
Halal Beef	\$1.50
Halal Turkey	\$2.00
<b>Sides</b>	
French Fries	\$1.50
Seafood Salad	\$2.00
Rice	\$2.00
<b>Soup of the Day</b> (Sm. \$3.50 Lg. \$5.49)	
Chicken Noodle, Maryland Crab, Lamb, Shrimp and Corn, Cream of Broccoli	
<b>Desserts</b>	
Sweet Potato Cheese Pies	\$3.00
Homemade Cookies	\$3.50
Carrot Cake	\$3.50

**Look for the leaf for a fresh and delicious choice!**

**Try these fresh options!**

- Salmon Sandwich
- Veggie Wrap
- Shrimp Platter

Image 2: BHC menu with its green leaf symbol

## IV. METHODOLOGY

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In order to assess the prepared food environment in Baltimore's six public markets, we used an abbreviated version of the Nutrition Environment Measures Survey in Restaurants (NEMS-R) instrument (Image 3).<sup>33</sup> This is an observational tool that measures the availability of foods, pricing, signage, and other factors that contribute to food choices.<sup>6</sup>

Throughout the report, prepared food sources (PFSs) and carryouts are used interchangeably because all PFSs in public markets are carryouts. The following definitions were also used:

**Take-out carryout** is defined as a restaurant without tables and/or chairs that sells ready-to-eat foods.

**Delicatessen (deli) carryout** is defined as one that sells sandwiches and submarine sandwiches with deli meats and cheeses.

**Diner type carryout** is defined as a restaurant with a counter and chairs. The customer orders, is served while seated, and pays after eating.<sup>6</sup>

In the second half of each assessment, the two most common PFSs types, take-out and delicatessen carryouts, were assessed separately since they differ in the foods offered. Foods sold in a delicatessen mainly include sandwiches and require little or no investment for equipment, as seen in the lack of food preparation equipment in most deli-only carryouts. Take-out carryouts, on the other hand, serve a range of hot and ready-to-eat prepared foods. The results from the assessment of preparation equipment by carryout are included in Appendix A. Each market was then assessed according to the menu abstractions from the vendors' leases to understand what items vendors had planned to offer.

Through this assessment, the following questions are addressed:

1. What prepared foods are available in public markets?
2. What type of food preparation equipment is used?
3. How can healthier items be introduced based on type of prepared food vendor?

Carryout ID: _____		<b>BALTIMORE HEALTHY CARRYOUTS ENVIRONMENT CHECKLIST</b>				Data checked by: .....	
Food Source Name: _____		Date: ___/___/___	Time: _____	Day: _____	Data Collector: _____		Date of checking: .....
Location: _____		Ethnicity of Store Owners _____				Date of entry: .....	
<b>Type of Food Source</b>		Number cash registers: _____		Number of tables & chairs _____		Form ID: .....	
Number of menus: _____		Number cash registers: _____		Number of tables & chairs _____		Carryout ID: .....	
Take-Out only 1 Fast-food 2 Deli 3 Take-Out and Deli 4 Restaurant 5 Fast Food Chain 6 Street Vendor 7 Other 8							
<i>1 = yes, 0 = no * circle options, if applicable</i>							
Entrée (Main Meal)	Side dishes	Desserts /Drinks	Food Source Environment				
Fried Meat (e.g. chicken, pork)	French Fries	Baked goods	Any other health info on menu	Most expensive food on the menu	Item Price		
Grilled poultry	Chips	Puddings	Calorie posting	Least expensive entrée on the menu	Item Price		
Grilled seafood	Baked chips	Fruit w/o sugar	Reduced size portions offered on the menu	Combo meal advertisement (Y/N)	# of diff varieties: 0 1-2 3-5 6-10 11+		
Deli meat	Salads/ fresh leafy greens (refer to back page if yes)	Fresh fruit smoothie	Healthy food options defined on menu* (low fat/calorie label)	Healthy cooking method (e.g. baked, broiled, boiled)*	# of diff varieties: 0 1-2 3-5 6-10 11+		
Low fat deli meat	Corn	Yogurt	Diet options for fountain drinks	Fountain drinks	Choice of healthy side on menus (baked chips, salad, fruits, veggies)		
Beef burger	Cooked greens (kale/collard)*	Frozen yogurt	Fried side automatically incl. with entrée	Vegetable toppings* (tomato, lettuce, onions, other)	Additional charge (Y/N)		
Veggie burger	Non-fried vegetables (steamed/grilled/ raw)*	Regular soda	Self administered coffee/tea station* (artificial sweetener, LF creamer)	Food sold the most	Describe health-related signs (Nutrition related or not)		
Turkey burger	White rice	Diet soda	Self administered LF condiments* (LF mayo, mustard, cheese, relish)	Describe promotion of healthy foods on menu			
White bread	Red beans & rice	Water (e.g. bottled, fountain)					
100% Whole wheat bread	Coleslaw	Iced tea (sweetened)					
Wrap	White rice	Diet iced tea					
Stir-fry incl. vegetables	Brown rice	Juice/lemonade					
	100% fruit juice						
	LF milk* (2%, 1%, skim)						
<b>Food Prep Equipment (#)</b>	Baked beans	Flavored milk					
Fryer	Potatoes* (Baked/mashed/hash)	Tea					
Stove	Sweet Potatoes* (Baked/mashed/hash)	Coffee					
Grill							
Food Warmers							
Ovens/Rotisseries							

**Image 3: Environmental Assessment Tool**

## V. MARKET ASSESSMENTS

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This chapter includes the healthy food assessment report of all six public markets. Each assessment includes major findings such as the number of carryouts and type, food availability and food marketing used in the markets.

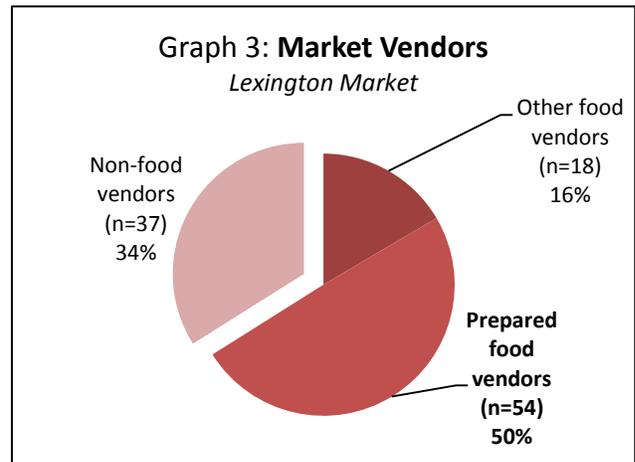
1. LEXINGTON MARKET
2. NORTHEAST MARKET
3. HOLLINS MARKET
4. CROSS STREET MARKET
5. AVENUE MARKET
6. BROADWAY MARKET
7. OVERALL HEALTHY FOOD ASSESSMENT FINDINGS

## 1. HEALTHY FOOD ASSESSMENT: LEXINGTON MARKET

Lexington Market is the world's largest continuously running market of its type, seeing over 2.8 million customers a year.<sup>34</sup> According to a recent Lexington Market merchandising study, it has a loyal clientele with over half of the customers coming seven or more times a month.<sup>35</sup> The market is located in west Baltimore, where half of the local residents are middle-aged (43%), African-American (56%) and make an annual household income of less than \$25,000 (55%).<sup>1</sup> The healthy food assessment was completed at Lexington Market in June 2011.

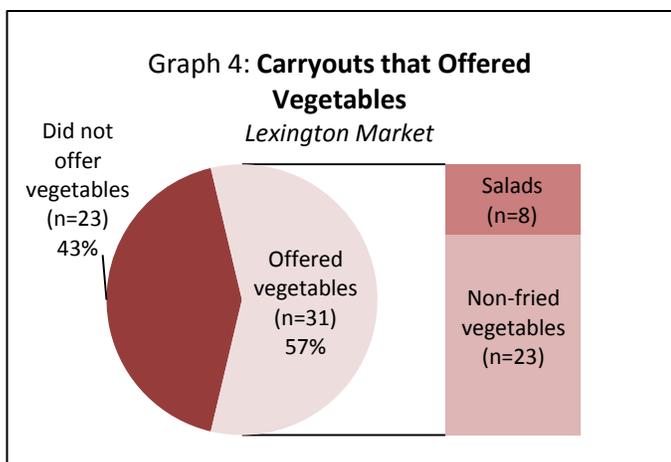
### A) CARRYOUTS

Lexington Market offered a variety of foods ranging from deli sandwiches, fried chicken, soul food and Chinese take-out. There are 109 market vendors and 72 vendors, or 66%, sold prepared foods (PF), produce, meat or seafood. PF vendors (n=54) made up 75% of the 72 food vendors and 50% of all market vendors (graph 3). Forty-two of the 54 carryouts served take-out foods; nine were delicatessens; two were a combination of take-out and deli, and one was take-out with seating. The high concentration of carryouts in the market adds to existing density of PFSs in the local community (see detailed map of the food environment around Lexington Market in Appendix C).



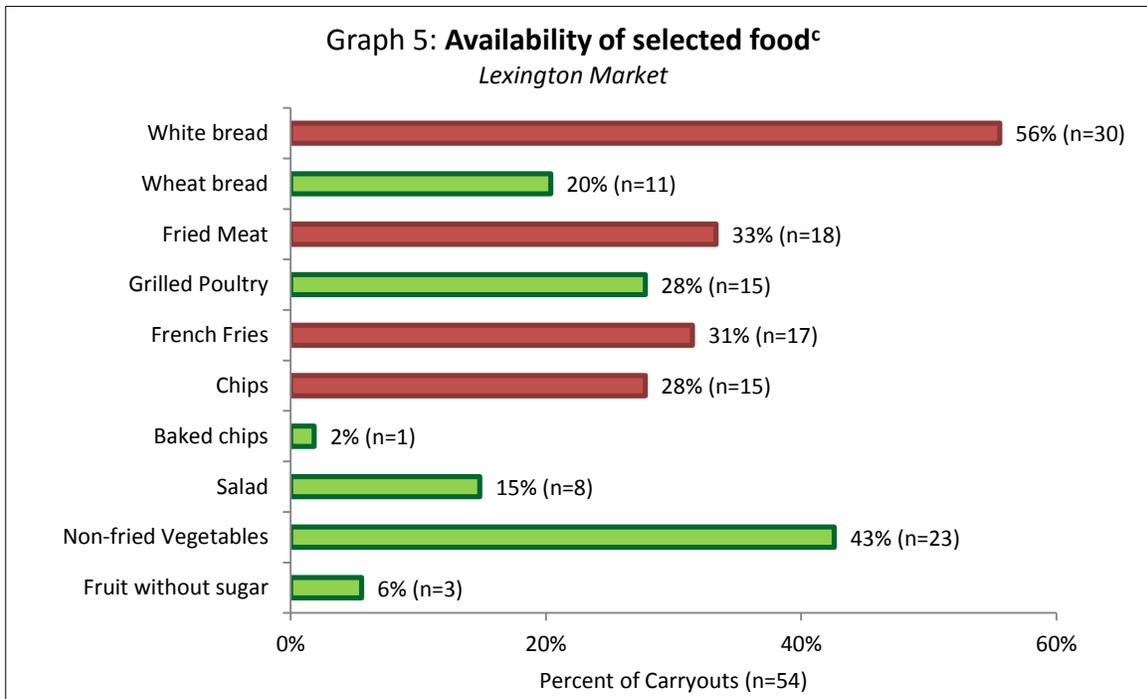
### B) FOOD AVAILABILITY

#### (1) FOODS AND DRINKS SOLD



Carryouts at Lexington Market sold a variety of items; and although some offered vegetables and whole grain items, these dishes were not emphasized in menu or entrée displays. Out of 54 prepared food vendors, 30 carryout vendors sold white bread while only 11 of those sold whole wheat bread. Only one vendor, Andy's Best, had a sign on their storefront highlighting that they now carry whole wheat bread. Eighteen vendors sold fried

meats and 17 vendors sold French fries. Out of the 15 carryouts that sold chips, only one sold baked chips, a healthier alternative. Eight vendors, half of which were deli-type carryouts, sold prepared salads. Although about 23 vendors, or 43% of the carryouts, sold some type of non-fried vegetables, these dishes were less predominant than other fried or heavily greased entrées (Graph 4). Only 15 vendors (28%) offered grilled poultry, meat, or seafood which was prepared in less oils and fats. Shrimp was the most commonly grilled seafood item and was often included in cheese steak subs. Also, in total, there were only three carryouts that have fresh fruits; two sold them in ready-to eat containers while one used them for syrup-based smoothies (Graph 5<sup>d</sup>). Vendors should be encouraged to increase availability of healthier items and promote them on their menus.



Forty-three carryouts (80%) sold regular bottled soda while 37 PFSs (69%) sold diet bottled soda. Bottled sodas provide consumers with four to eight extra fluid ounces compared to canned sodas. Juice and water were the next most commonly sold beverages, both of which were sold in about three-fourths of the prepared food vendors. All juices sold were mainly made with sugar and a small percent of real fruit juice, if at all. Thirty-four carryouts offered fountain drinks; most sold soda, iced tea, and lemonade in small, medium, large, and jumbo sizes. Most drinks were priced under \$1.25 and many vendors included them with combination meals. Less than half of the vendors that offered fountain drinks offered the diet version of their drinks. A detailed table of selected foods and drinks can be found in Appendix A.



<sup>d</sup> Healthier items are highlighted in light green.

(2) COMBINATION MEALS



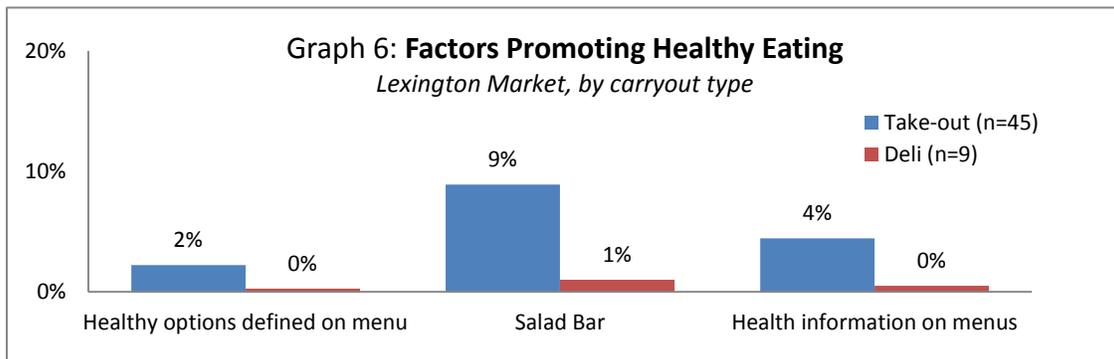
Seventy-four percent of carryouts (n=40) offered combination meals; which typically included a side of French fries or chips and a 16 or 20 oz. fountain drink. In the context of the entire market, 76% of all the take-out type carryouts (n=45) and 67% of all the delicatessens (n=9) offered a set meal that was higher in calories and fat than an entrée ordered alone. Some of the vendors that sold combination meals also sold prepared salads or non-fried vegetables, but did not include it as part of a combination meal. Introducing combination meals with healthier sides could be a plausible way to work with already existing items as well as provide customers with a more complete, wholesome meal.

(3) ASSESSMENT OF LEASES: HEALTHY FOODS NOT SOLD AS PROMISED

The assessment showed only a small sample of the healthy items that was intended to be sold at the market. An evaluation of the menu abstractions from the vendors' leases showed that while 16 prepared food sources sold vegetables and grilled or baked meats as mentioned on their leases, 22 carryouts did not sell healthier items specified on their leases. These items included vegetables, soups, and low-fat deli meats. Twelve vendors included cooked greens or salads in their lease but did not offer them during the assessment. In fact, these items were not listed or advertised on the vendor's menu boards. The most common items that were stated on the leases but were not sold include cooked greens, such as cabbage, green beans, broccoli, soups and salads.

C) FOOD MARKETING

The assessment showed that 22 vendors (41%) sold some type of healthy side on their menus, such as salads or vegetables, but they failed to market those items to consumers. Only three vendors (6%) used their menus to highlight and emphasize that these sides were healthy, encouraging customers to purchase these items (Graph 6). Increasing customer awareness of these healthier items, may in turn increase sales, incentivize vendors to include more fresh, healthy items, and make it easier to encourage vendors to prepare them in less oil.

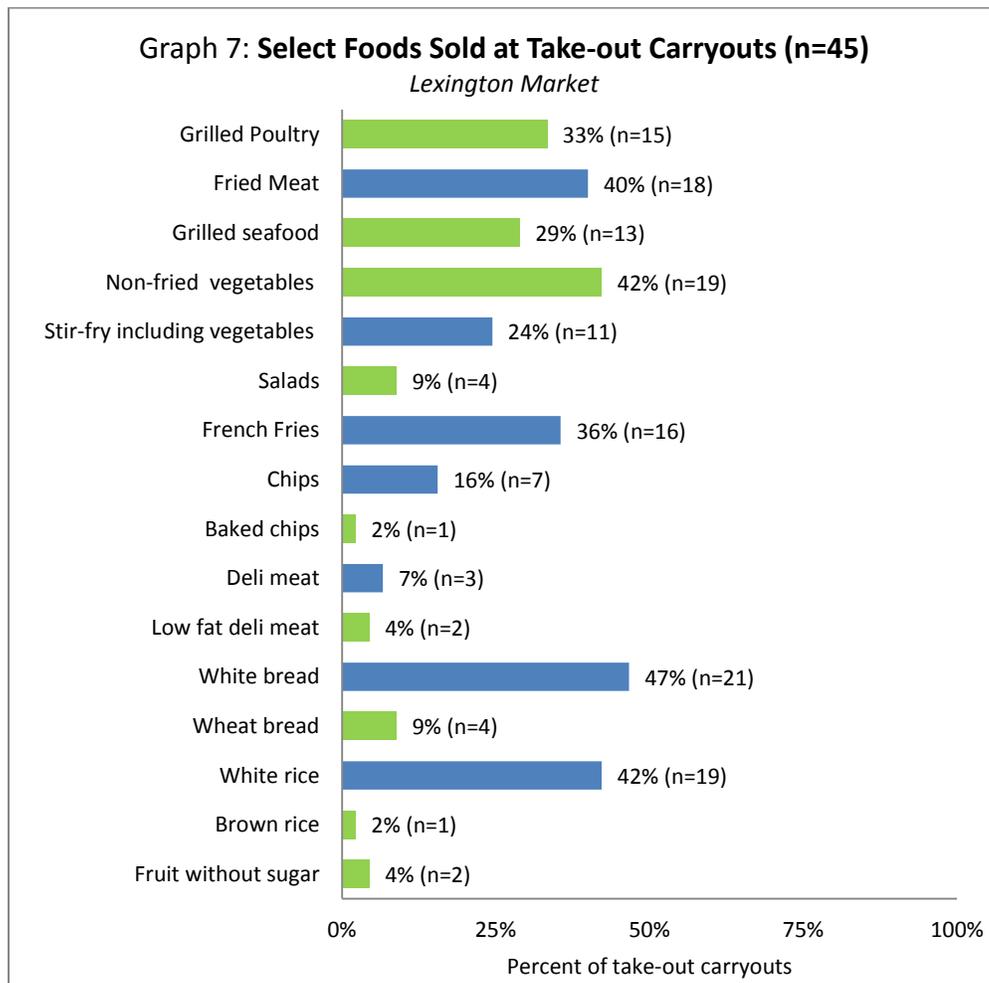


D) ASSESSMENT BY TYPE OF CARRYOUT

Availability of foods and healthy eating promoting factors by type of store is detailed below.<sup>e</sup>

(1) TAKE-OUT CARRYOUTS

There are 45 vendors categorized as take-out only, take-out with seating, or take-out and deli combination type carryouts. None of these vendors included any form of caloric labeling and only two vendors included information regarding the healthiness of their menu items. One vendor, Krause Lite Fare, highlighted their turkey dinner or turkey BBQ sandwich under “Low Calorie Hot Specials.” Another vendor, Lucky House, designated that their store did not use extra oil and was low fat on a banner next to their store name. Unfortunately, Lucky House still sold a selection of heavily greased stir-fry foods. Eighteen vendors (40%) sold fried meats and only two sold prepared salads (Graph 7). Nineteen take-out carryouts (42%) sold non-fried vegetables<sup>f</sup> and 13 vendors (29%) sold collards and green beans. In working with take-out carryouts, future projects should begin first with vendors who already sell cooked vegetables; encouraging them to prepare them in less high-fat oils and use fresher produce.



<sup>e</sup> A more detailed table is included in Appendix A.

<sup>f</sup> Non-fried vegetables were defined as either broiled, grilled or served raw.

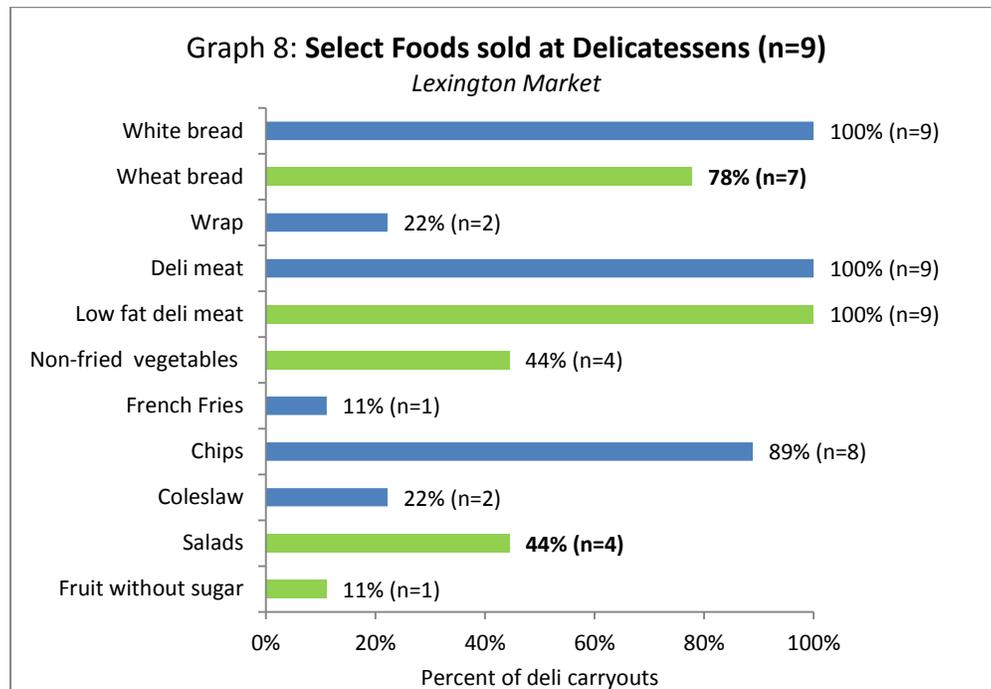


## (2) DELICATESSEN CARRYOUTS

Nine vendors at Lexington Market primarily sold sandwiches and subs with deli meats. Like take-out carryouts, no delicatessen posted any information about calories or healthy food options, such as low-calorie or low-fat labels, on their menus. All vendors offered regular and low-fat meats<sup>8</sup> (Graph 8), but the health benefits of eating low-fat meats were not mentioned for consumer to make informed dietary decisions. In addition to the lack of information, not all vendors offered healthier alternatives to highly refined white breads which cause the body's glucose levels to rise and fall more quickly than higher fiber, whole grain breads.<sup>36</sup>

Seven offered wheat bread, but based on the data collector's observation, not all may have had whole wheat as their dominant ingredient, meaning that the bread was still highly refined. Similarly, eight deli carryouts (89%) offered chips but none offered lower-fat baked chips. Only four vendors sold prepared salads.

One of all nine delicatessens, Matthew's Delly, used their menu boards to display and highlight its sandwiches, salads and fresh fruit salads. The storefront was different than most delicatessen in public markets as it had salads and fruit containers of various sizes laid out on ice. This vendor could serve as a model for attracting consumers to the variety of items, particularly salads and fruits, through large images on their menu boards. All delicatessens should be further supported in offering healthier alternatives and efforts should be focused on promoting consumer awareness of these items and the health benefits associated with them.



<sup>8</sup> Low fat deli meat was defined as chicken or turkey breast deli meats

## E) DISCUSSION

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As the largest public market serving downtown Baltimore, Lexington Market should find ways to support vendors and help them introduce healthier and more wholesome foods that are affordable and culturally acceptable. Although there is a lack of low-fat and balanced meal options among the 54 carryouts, the assessment showed that this market is at a relatively good starting point for improvements. There are carryouts that sold vegetables, few of which also sold salads and fruits; however, consumers cannot make informed decisions that would result in healthy diets because storefronts lack the appropriate promotional materials to highlight these items.

Despite this, Lexington Market vendors display an intention to offer a variety of healthy, fresh foods since the majority of vendors mentioned vegetable dishes on their leases. Although the vegetables that were available were not always cooked in low-fat oils or made from fresh produce, and the words used to promote healthy eating were not accurately placed, this market showed that there is a desire to incorporate and promote healthier items. A strategy to improve the healthiness of foods offered in the market, through fresher items and better preparation methods, must emphasize the need to support Lexington Market vendors. Since this market has many carryout vendors, particular focus should be taken to support vendors by addressing their need to increase customer demand of their items and to ease any concern that healthier items may not be as profitable. They should also receive support in how to include sides and entrées that are healthier and cost-friendly for their specific type of carryout.

Recommendations for the next steps for improving the food environment in Lexington Market are included in Chapter 6. Further research will be needed to evaluate what items are economically feasible for this market's vendors and are culturally acceptable to the current customers and local community. Likewise, the market's eight produce stands will also need to be assessed to see how locally grown produce can be included or added in an additional stall, allowing the market to function as a means of supporting local agriculture.

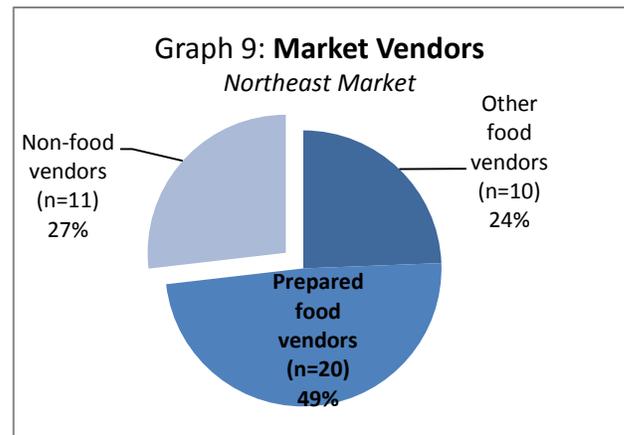
## 2. Healthy Food Assessment: Northeast Market

Northeast Market is a few blocks from the Johns Hopkins School of Public Health and Medical Institutions and is located on the border of the Madison/East End and Middle East community statistical area.<sup>1</sup> The market is Baltimore's second largest public market, serving roughly 650,000 customers from both the Johns Hopkins and local community. More specifically, the local communities of the East End and Middle East are both predominately African-American (91 and 92%, respectively) and live in poverty (47% and 70%, respectively).<sup>1</sup> In April 2011, a food environmental assessment was taken of all 20 carryouts in the Northeast Market in order to assess the healthiness of foods available to this large and diverse clientele.



### A) CARRYOUTS

The market had a total of 41 market vendors; 30 of these vendors sold prepared foods, produce, raw meat and seafood. Carryouts (n=20) made up 67% of all food vendors at Northeast Market (Graph 3). Of the 20 carryouts, 13 were take-out only, six were deli carryouts and one was a combination of both (Graph 4).

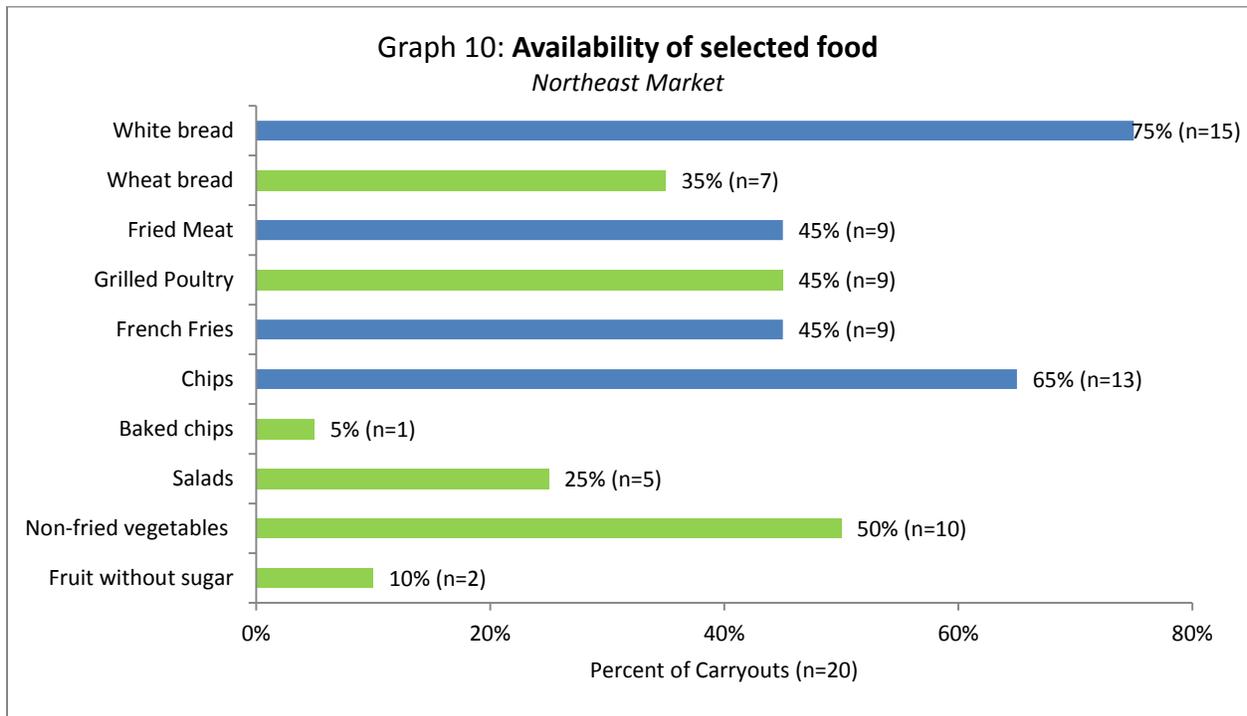


### B) FOOD AVAILABILITY

#### (1) FOODS AND DRINKS SOLD

The foods and drinks sold at carryouts varied throughout Northeast Market. Fried meats were sold at nine carryouts; while grilled chicken, which is prepared in less oil, were also sold at nine carryouts, the market as whole did not offer a comparable amount of healthier options (Graph 10, *healthier options are in light green*). White bread was available in 15 carryouts (75%) while whole wheat bread was only available in seven (35%). Thirteen carryouts (65%) had regular chips while only one carryout (5%) had baked chips as a healthier alternative. Only five of the carryouts (25%) offered salads, ten (50%) offered non-fried vegetables, and two (10%) offered fruits with no added sugar. Around 70% of vendors offered fountain drinks with juice or iced tea yet only three of those stores gave customers a diet option. Only two out of the 20 carryouts

had a salad bar. In addition to the low availability of vegetables and low-fat food choices, there was little promotion of the existing healthier items in displays and menus throughout the market. A detailed table of selected foods and drinks can be found in Appendix A.



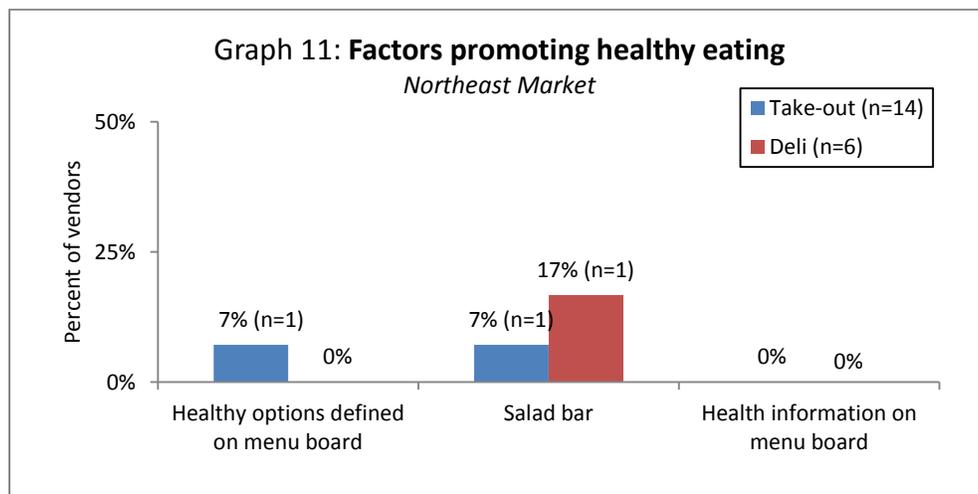
*(2) ASSESSMENT OF LEASES: HEALTHY FOODS NOT SOLD AS PROMISED*

An assessment of the menu abstractions of the carryout leases revealed that the market could have had a higher availability of vegetables and fruits. Of the 20 vendors, 50% (n=10) did not sell the healthy items specified on their leases. Five of these vendors stated that salads or vegetables would be offered, but at the time of the assessment, no salads were offered. Likewise, 5 vendors agreed to sell fruits or fruit salads, yet fruit was unavailable at the time of assessment.



C) FOOD MARKETING

There are four vendors that made overall storefront renovations in recent years; two created fairly new menu banners, one included displays of sandwiches and wraps, and the last one, Jamie’s Wraps, made complete storefront renovations. The other vendors, on the other hand, displayed no change in their storefront or menu offerings. Many of the menus were outdated and cluttered papers taped on to the plastic panels; making them nonfunctional. Other take-out carryouts did not even have a proper store name banner or menu. Even though 11 vendors (55%) offered some type of healthier sides, such as vegetables and salads, few carryouts used their menu board to draw consumer attention by either including them on the menus or mentioning them as low fat, low calorie, reduced size or whole wheat options (Graph 11). In fact, the only take-out carryout to associate an item as low-fat was in regards to their “lite Italian dressing” for their prepared salads. By increasing customer demand through promoting healthier items on carryout menus and storefronts, vendors are more likely to increase the supply of these foods and introduce additional healthy items.



D) ASSESSMENT BY TYPE OF CARRYOUT:

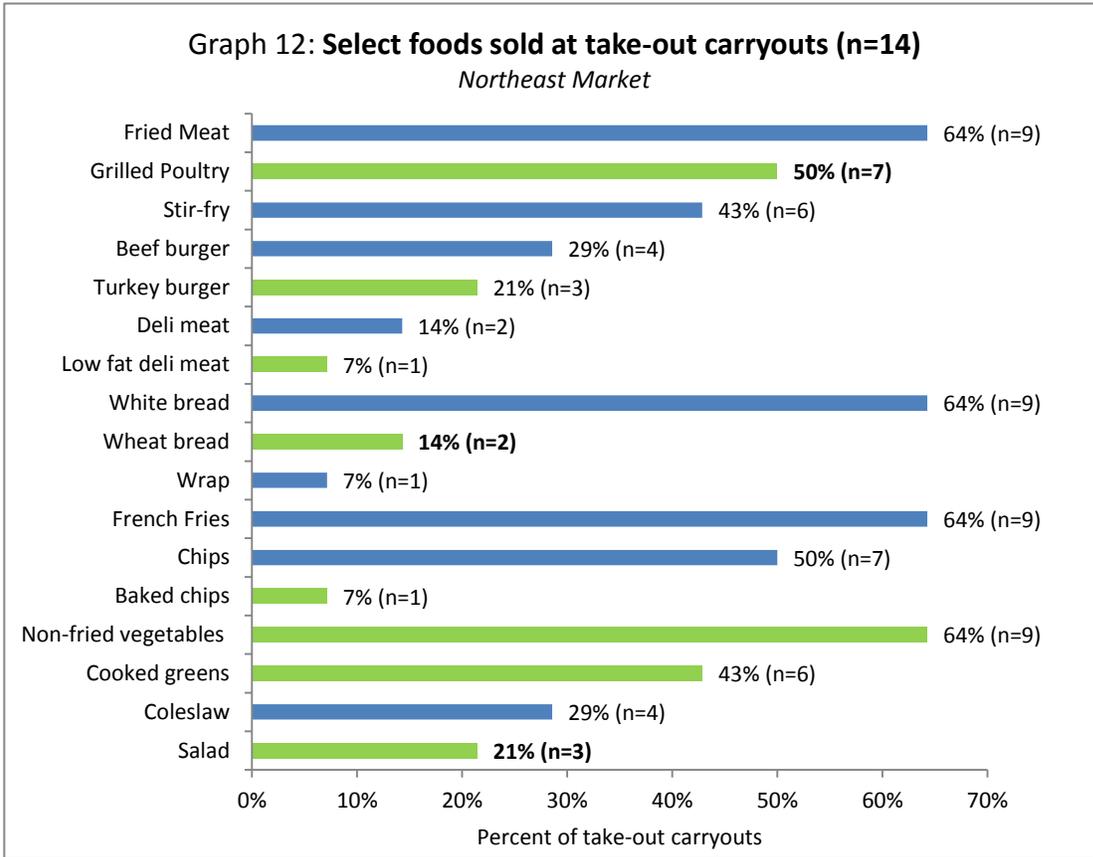
Availability of foods and healthy eating promoting factors by type of store is detailed below.



(1) TAKE-OUT CARRYOUTS

There are 14 take-out type carryouts at Northeast Market. Of these 14, nine stores sold fried meat such as chicken, fish, liver, and gizzards as well as French fries (Graph 12). Nine stores offered white bread while only two stores offered whole wheat bread. Similar trends were found in the availability of drinks; 12 (86%) offered sweetened iced tea while only three (21%) offered diet iced tea. All 14 stores offered juice or lemonade but none

were 100% juice; thus providing consumers with a high level of sugar but little nutrients. Only three vendors sold salads. Although nine vendors (64%) sold at least one non-fried vegetable dish, no vendor used their menus to label that these options would be beneficial to consumer's health.



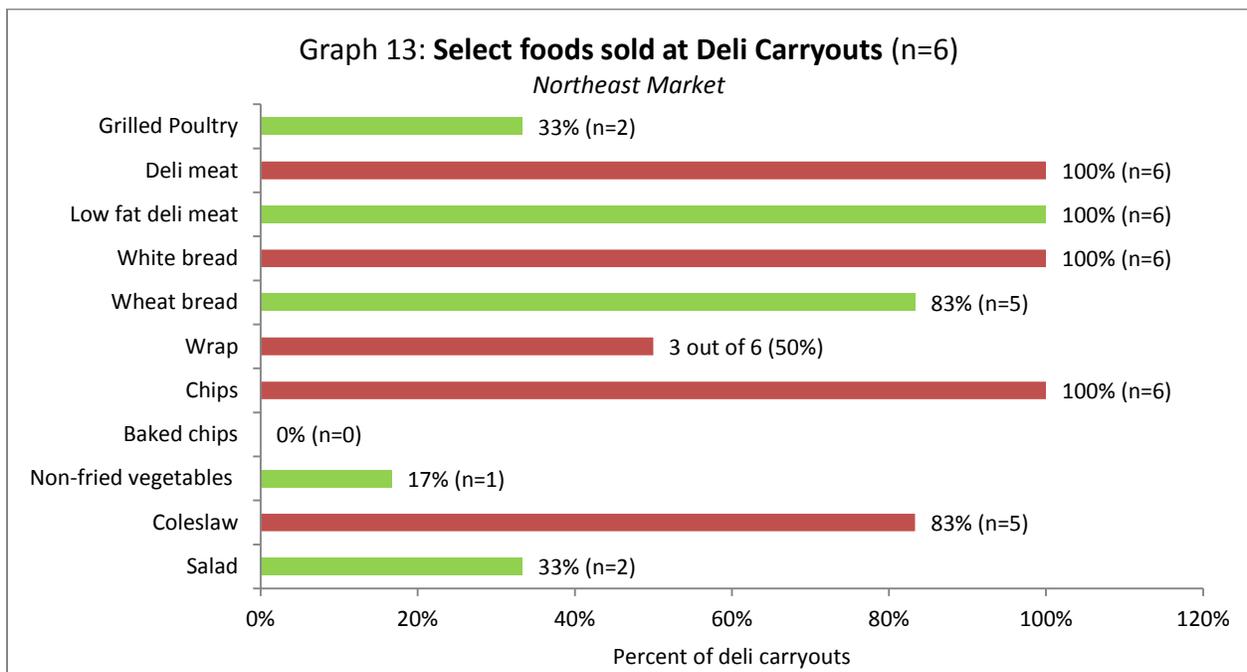
*Qualitative data of one of the take-out carryouts:*

Jamie's Wrap was one of the busiest take-out carryouts during the lunch hour. Although the store did not use labeling on their new menus, the colorful menus and open storefront gave the impression that it offered fresh, healthy food options. The foods available included wraps with vegetables as well as prepared foods like cooked vegetables, stir-fry, and baked chicken breasts. A qualitative interview showed that although the owner was initially hesitant to invest in renovations, the store has since seen increased sales as a result of adding more hot plates and a new menu display in early 2010. The store is planning further renovations in the winter of 2011-2012. Future initiatives to introduce improved menus with healthy food labeling should include vendors like Jamie's Wrap as a testament of how new menus and renovated storefronts can positively impact business.



## (2) DELICATESSEN CARRYOUTS

Six prepared food vendors were delicatessens. All six carryouts had both regular and low fat deli meat available (Graph 13). Five delicatessens provided whole wheat bread in addition to white bread. Three offered wraps in addition to their sandwiches and subs. All sold chips but none offered baked chips as a healthy alternative. Five delicatessens sold coleslaw, which was heavily covered in mayonnaise in almost every store. Only three stores offered vegetables, such as salads. No delicatessen promoted the availability of low-fat deli meat, whole wheat bread or vegetables on their menus, when applicable. Delicatessens should be encouraged, and appropriately supported, to increase availability of prepared salads since they do typically have no cooking equipment. Similarly, point-of-purchase marketing could increase sales and demand of the whole grain options they already provide.



## E) DISCUSSION

Northeast Market is a public market that serves a variety of foods, from fried chicken to Korean small dishes, to its diverse customer base. Carryouts throughout this market had menu boards composed of posted papers and few had updated storefronts. This assessment suggests that the market neither offers as many healthy sides as promised nor promotes the items currently available. Northeast Market should be attentive to support vendors through strategies such as: point-of-purchase marketing of healthier items to further increase sales and demand, assistance on introducing more low-fat, high fiber sides, and guidance on cost-effectively providing the healthier items mention on their leases. In moving forward, it will be critical to promote vendors like Jamie’s Wrap as models of successful businesses that promoted healthier foods.

### 3. Healthy Food Assessment: Hollins Market

Hollins Market is located west of downtown Baltimore. This two-story market was built in 1877 and, until the late 1950s, hosted a large range of outdoor street vendors spanning three blocks. The market is located in a less populated community than the other markets but still has over 230,000 visits per year. The local community is predominantly African-American (82%)<sup>1</sup> and according to the Director of Operations of Baltimore Public Market Corporation, there is high customer loyalty and the market's clientele spans several generations. In July 2011, a food environmental assessment was taken on all eight prepared food vendors in Hollins Market.

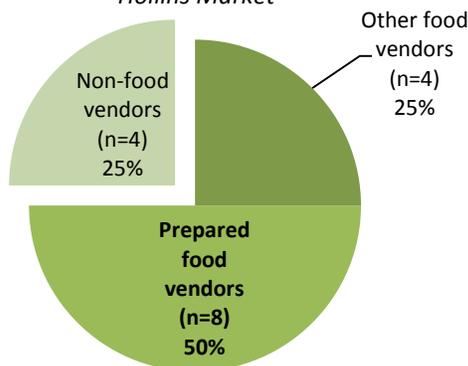


#### A) CARRYOUTS

The market offers a range of items for purchase, from hot prepared foods, deli sandwiches, and salads to raw poultry, deli meat by bulk and fresh produce. Carryouts (n=8) represent 67% of all 12 food vendors and 50% of the 16 market vendors (Graph 14). Four vendors offered take-out food that is hot or cold, three offered deli sandwiches and subs and the last one offered both.

Graph 14: **Market Vendors**

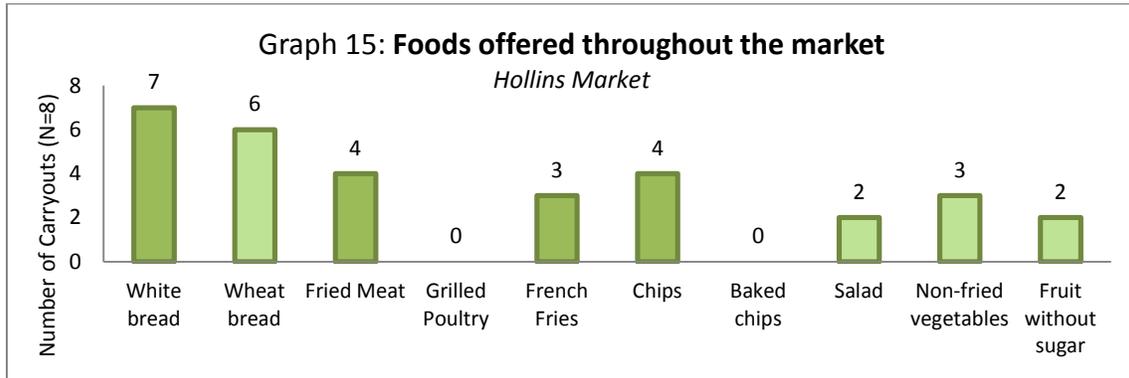
Hollins Market



#### B) FOOD AVAILABILITY

##### (1) FOODS SOLD

At Hollins Market, white bread and fried chicken were the most common items on menus (Graph 15, *healthier options are in light green*). Seven of the eight vendors sold white bread, regardless whether they sold sandwiches or not. Six out of the seven vendors that sold white bread also sold whole wheat bread. Only one of these vendors advertised this whole grain option on its menu. Three vendors sold non-fried vegetables, coleslaw, and potatoes. Two vendors sold salads, one of which was a salad bar carryout; the last vendor sold salads, coleslaw, and fruit salads on request. Half of the carryouts (n=4) sold fried chicken while no vendor sold grilled chicken, a healthier alternative. Efforts should be made to increase the availability of healthy options, such as grilled chicken and vegetables, and promote these choices to consumers. A detailed table of select foods and drinks can be found in Appendix A.



(2) *COMBINATION MEALS*

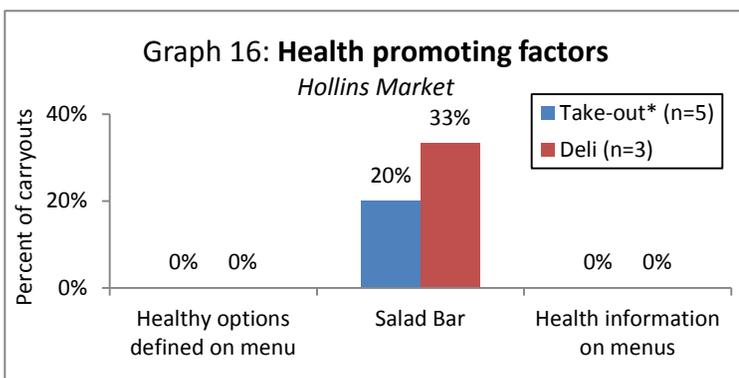
Seventy-five percent of carryouts (n=6) offered entrées with a side and drink. Out of the six vendors, none gave customers the option of healthier sides as part of the combination meal. Although one of the vendors sold salads on request, it did not include salads as a side on any of their combination options. Introducing combination meals at Hollins Market could be a plausible way to work with existing, or new, healthy sides as well as provide customers with a more complete, wholesome meal.

(3) *ASSESSMENT OF LEASES: HEALTHY FOODS NOT SOLD AS PROMISED*

An evaluation of each vendor’s menus on their lease agreements revealed that Hollins Market would have had a higher availability of healthy foods if every item was offered as intended; there were discrepancies in six out of the eight leases. Two take-out carryouts in particular had a lengthy list of healthy foods such as mixed greens, string beans, corn, eggplant, baked chicken, fruit salads, garden salads, coleslaw, and baked potatoes but did not sell or advertise those items. Four vendors did not sell fruit salads as stated. On the other hand, there was one vendor who sold fruits on request and included it on their menu board even though it was not included in their lease agreement.



C) *FOOD MARKETING*



The assessment showed that 50% of the prepared food vendors (n=4) offered an item that was relatively healthy but none used their menus to promote these dishes to consumers (Graph 16). One vendor, Kim’s Deli & Meat, mentioned salads, coleslaw, and fruit salads on their menus but did not prepare them until customers ordered. Another vendor, Mike’s

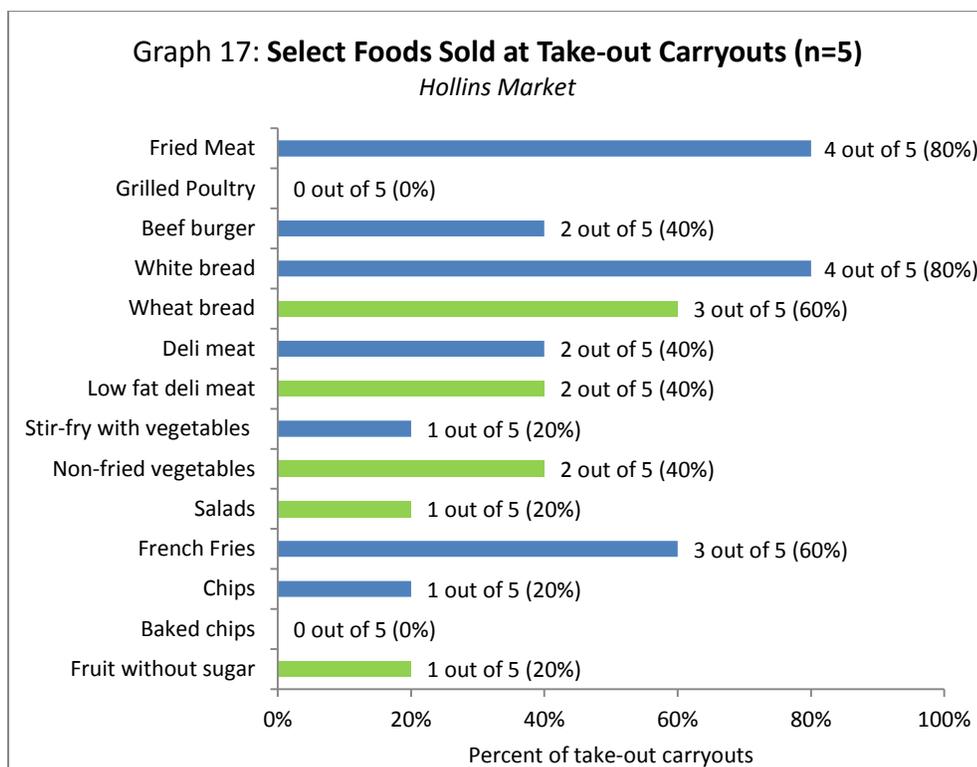
Lunch, sold containers of cut watermelon, and although it could be seen in the small refrigerated unit, there was no advertisement of this healthy side on the large menu displays or small paper menus. Using menu labeling, point-of-purchase marketing, or predominant physical display, may increase customer awareness and increase sales.

#### D) ASSESSMENT BY TYPE OF CARRYOUT

Availability of foods and healthy eating promoting factors by type of store is detailed below.

##### (1) TAKE-OUT CARRYOUTS

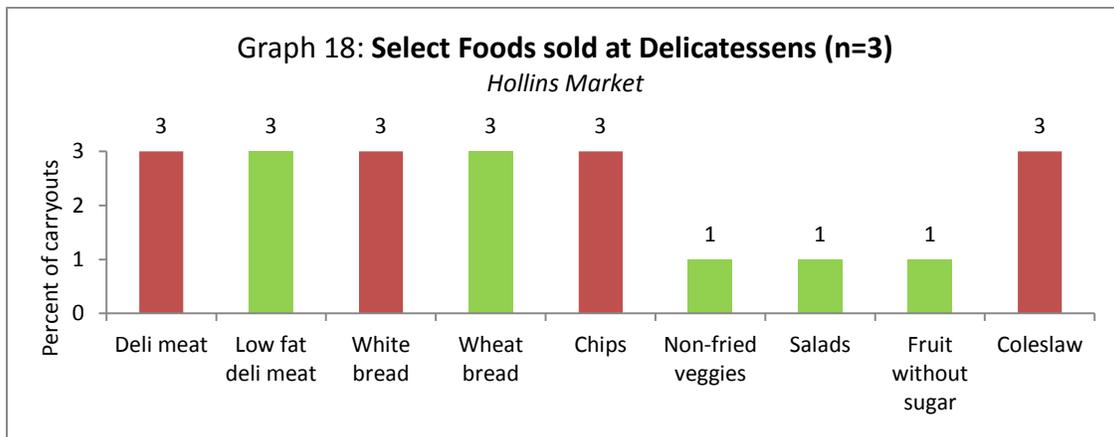
There are five take-out carryouts at Hollins Market. Eighty percent of take-out carryouts (n=4) offered fried meat and white bread; three offered French fries (Graph 17, *healthier options are in light green*). On the other hand, only two sold non-fried vegetables<sup>h</sup> and one offered salads. Hollins Market is the only market that has a dedicated salad bar vendor near the entrance of the market. It will be invaluable to understand the challenges and barriers to providing fresh salads from this vendor as future initiatives work to introduce salads and vegetables into Hollins and other public markets. Efforts to improve the market should also work with those already selling cooked greens; encouraging them to prepare them in less high-fat oils and use fresher produce.



<sup>h</sup> Non-fried vegetables were defined as either broiled, grilled or served raw.

(2) DELICATESSEN CARRYOUTS

There were three delicatessens in Hollins Market. One delicatessen, Kim’s Deli & Meat, offered salad as a healthy side but it did not come automatically or in any of the combination meals offered. Salads and fruits, although mentioned on their menu board, was only prepared if specifically ordered by customers. All delicatessens offered white and whole wheat bread as well as regular and lean deli meats (Graph 18, *healthier options are in light green*). Improved marketing and promotion of these already available healthier items could encourage consumers to eat these sides as part of a healthy diet.



E) DISCUSSION

This market has a larger percent of take-out carryouts selling fried meats (80%) and the only market that did not sell grilled poultry as a healthier alternative. Although Hollins Market is one of the smallest of Baltimore’s public markets based on square foot area, it has a strong customer base, and as such, any introduction of healthier items must be catered to them. The assessment of leases showed that there is strong intention among vendors to sell healthier items; the largest fraction of vendors than in any other market. Use of menu labeling and incorporation of combination meals with healthy sides could increase customer demand of existing healthy items, although limited at this market. This may in turn make it easier to encourage carryouts to include additional healthy options and use low-fat food preparation methods particularly for vegetables and chicken. In addition, market customer input and feedback will be critical to determining what items are most culturally acceptable in this market.

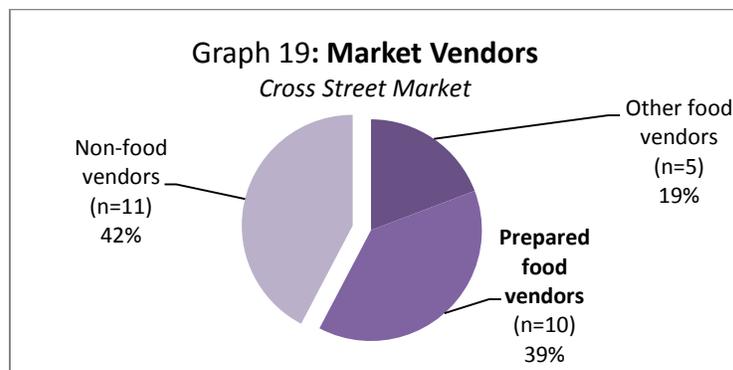
## 4. HEALTHY FOOD ASSESSMENT: CROSS STREET MARKET

Cross Street Market is located in the heart of the historic Federal Hill neighborhood, a few blocks south of the Inner Harbor. The market is very accessible to the neighborhood and a vital component of the community and culture of Federal Hill. Compared to the local communities of the five other markets, this market's local community is predominantly Caucasian, has the smallest percent of households living under \$25,000 per year (28%) and the highest percent living above \$75,000 (32%).<sup>1</sup> It is the city's third most visited market, serving around 420,000 customers per year. In July 2011, a food environmental assessment was taken of all ten carryouts in Cross Street Market to identify the availability of healthy foods and the types of health promotion used as the third largest public market.



### A) CARRYOUTS

As a result of its central location in Federal Hill, Cross Street Market serves prepared foods, produce, seafood, and other goods to consumers of various ages and demographics. Carryouts (n=10) represent 67% of all 15 food vendors and almost 38% of all 26 market vendors (Graph 19). Most of the prepared food vendors are either take-out or take-out with seating (see Table 1). Seating is either in an adjacent location or in the back or side of stall with tall tables or counters and chairs, allowing customers to eat their meal at the market. Due to this setting, healthy promoting factors or educational materials can have a higher visibility and impact in the seating area than in other public markets.

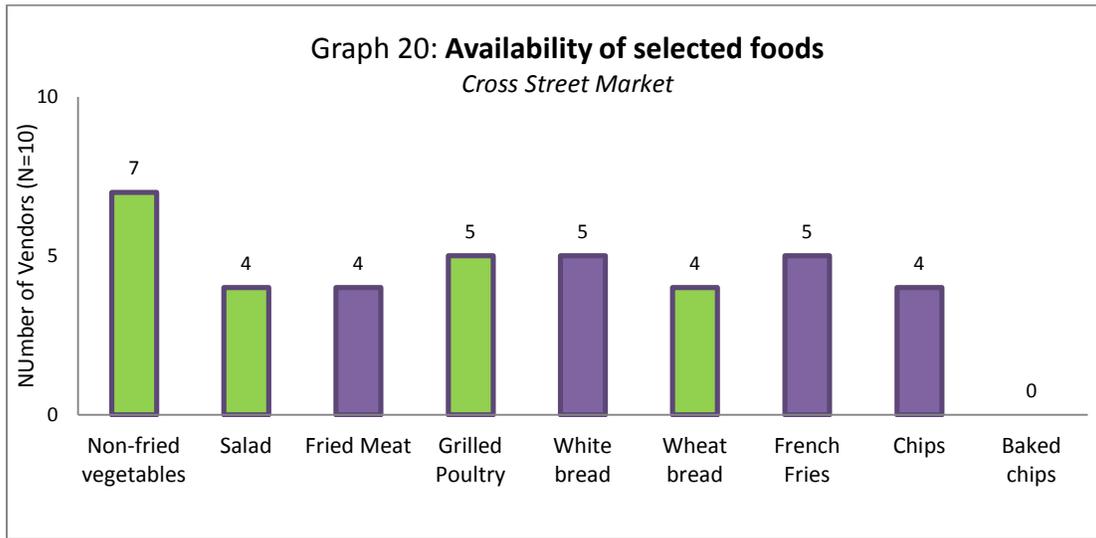


### B) FOOD AVAILABILITY

#### (1) FOODS SOLD

Seven vendors (70%) offered non-fried vegetables and five (50%) sold grilled poultry (Graph 20, *healthier options are in light green*). Fried meat was only sold in four carryouts and French fries at five. Of the five vendors that sold white bread, four of them also sold whole wheat bread and

two gave the option of wraps. Salads could be ordered at four of the carryouts. A detailed table of selected foods and drinks can be found in Appendix A.



(2) *ASSESSMENT OF LEASES: HEALTHY FOODS NOT SOLD AS PROMISED*

An assessment of the menu abstractions of the carryout leases revealed that Cross Street Market could have had a higher availability of vegetables and fruits. Of the ten vendors, 60% of vendors (n=6) did not sell the healthy items as listed on their lease agreements. Out of those, five had specifically stated that broccoli, corn, garden salad and fruit salads would be sold, but at the time of the assessment, none of these were offered.

C) **FOOD MARKETING**

At the time of the assessment in July 2011, one vendor mentioned that Coca-Cola had come to the market and surrounding area one month earlier to provide new beverage coolers. Most of the carryouts had also accepted the offer to print Coca-Cola branded menu and combination meal advertisements, which typically offered a main course, side of French fries and soda. Combination meals at two vendors highlighted healthier options like turkey burgers and kabobs with a vegetable dish on the side. The assessment showed that six vendors used less oil in preparing their food and three vendors sold healthy sides but only three of these vendors, most of which had the help of Coca-Cola, highlighted these options on their menu or store front. Although the process that Coca-Cola went through to get the vendors' agreement to create menus is not known, the vendors were evidently willing to accept because they benefited from the new beverage coolers that the company provided. At Cross Street Market or any of the public markets, it will be crucial to consider what support vendors would need and benefit from as they try to include healthier items into their menus.

## D) ASSESSMENT BY TYPE OF CARRYOUT

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Although Cross Street Market only has one delicatessen, assessment by type of carryout was conducted in order to create consistency with Baltimore's five other public markets. Availability of foods and healthy eating promoting factors by type of store is detailed below.

### (1) TAKE-OUT CARRYOUTS

There are nine take-out type carryouts, six of which have a seating area for customers. Out of the seven stores where cooking preparation equipment could be seen, five vendors had food warmers, four had stoves and/or grills and three had fryers. 67% of the take-out type carryouts baked, broiled, or boiled at least one item on their menus; future initiatives should include encouraging vendors to prepare additional items in similar low-fat cooking methods.

### (2) DELICATESSEN CARRYOUTS

Big Jim's Deli, the only delicatessen in Cross Street Market, sold a large variety of meats for their sandwiches. Customers could choose from traditional cold cut meats, low-fat deli meats like turkey or chicken breast, chicken salad, tuna salad, or seafood salad. Big Jim's also sold these meat-based salads or green salads for separate purchase, by the pound. Unlike other deli-only type carryouts in other markets, this vendor had a stove. Since most deli-only carryouts do not have any cooking equipment, a future intervention could encourage this vendor to use their grill to introduce other items such as grilled chicken or vegetables into their sandwiches and subs.

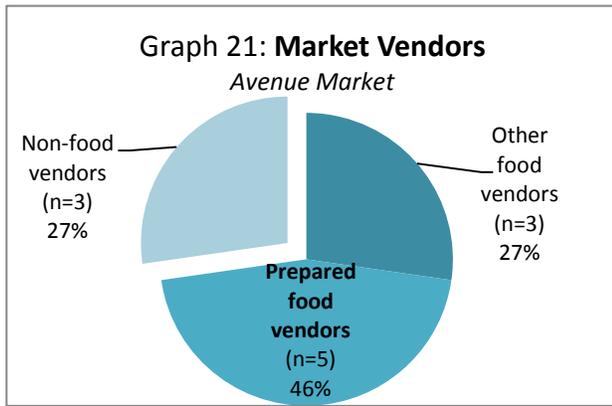
## E) DISCUSSION

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The assessment showed that Cross Street Market had a smaller fraction of vendors (n=4 out of 10) that sold fried meats and the most commonly sold item throughout the market was non-fried vegetables, which was sold at seven carryouts. The market environment is also different than the other markets; seven out of ten vendors have seating areas near or adjacent to the carryout, reflecting a public market environment that is centered on customers. While this market does not have as high availability of unhealthy items as other markets, carryouts should use menus to specifically promote the existing healthy items and be encouraged to add more. Although future policies should focus on ensuring that industries are prevented from doing a sweep through of the market, the presence of Coca-Cola branded combination meal advertisements showed that vendors are willing to include point-of-purchase promotion as part of their storefront. Further initiatives should work closely with vendors and community members, providing the necessary support to most effectively emphasize the healthy options in the market and positively impact consumer purchasing behaviors.

## 5. Healthy Food Assessment: Avenue Market

Avenue Market opened in 1871 and serves about 67,000 customers annually. It is located in the community south of Druid Hill Park, at the Uptown/Avenue Market metro subway station. There are over 10,000 residents in this predominantly African-American (95%) and low-income community (68% of the households make under \$25,000 per year).<sup>1</sup> The market was once known as Lafayette Market until renovations in 1996. Like many of the other public markets in the City, the building burned down around 1953, but was rebuilt and reopened in 1957. In July 2011, a food environmental assessment was taken of all five carryouts open in Avenue Market to identify the foods, drinks, food preparation equipment, and types of menu labeling used. The market was only half occupied and is expecting around five more vendors to open in the fall of 2011. The market currently leases out its largest space to Murry's Food, which sells frozen foods and some groceries.



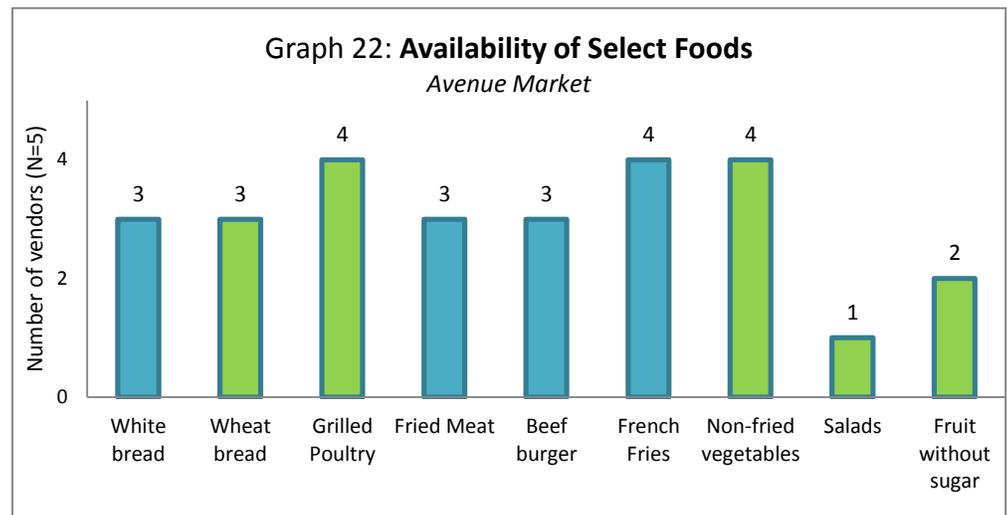
### A) CARRYOUTS

At the time of the assessment, carryouts represented 63% of the eight food vendors and 45% of the 11 market vendors (Graph 21). All five prepared food vendors at Avenue Market were take-out carryouts and offered a range of hot foods. There is currently no seating area in the market and only a few standing tables near the front.

### B) FOOD AVAILABILITY

#### (1) FOODS SOLD

The food and drinks offered at the market vary from a vendor who sold almost all fried items to another carryout that offered home-style foods low in sodium and oils.<sup>9</sup> All five vendors offered healthier sides and four out of five vendors sold grilled poultry and non-fried vegetables (Graph 22). Three vendors offered fried meat and four sold French fries. Vendors should be encouraged to promote the existing healthier items through menu labeling.



<sup>9</sup> A detailed table of selected foods and drinks can be found in Appendix A.

## (2) ASSESSMENT OF LEASES: HEALTHY FOODS NOT SOLD AS PROMISED

An evaluation of the menu abstractions showed that there was supposed to be a higher availability of vegetables. Of three menu abstractions available, all three mentioned either garden salads or collard greens but did not sell these items during the assessment. The evaluation showed that vendors intended to sell specific vegetable dishes but face barriers that prevented them; efforts should be made to support these vendors in fulfilling their promises.

### C) FOOD MARKETING

No carryouts used menus to display health information such as low fat, low calorie, or reduced size options. Four vendors sold foods that were prepared in low-fat cooking methods, such as baked or boiled, and all of five carryouts offered a choice of healthier sides on their menus. Despite this, none used point-of-purchase marketing to draw consumer attention to these healthier items. Updated menu labeling of healthy food options could promote healthier food purchases and increase sales of these items.

#### *Qualitative Data of the carryouts*

Out of the five carryouts, All Together Eatery, which serves home-style, pork-free items, stood out in its efforts to promote healthy, low-sodium foods. Qualitative research revealed some of the challenges in introducing healthier items into the surrounding community; dissatisfied customers commonly complain that their food is not salty enough because they are accustomed to how foods are typically prepared. This store, as a rule, uses cooking spray and unsalted Ms. Dash seasoning and adds very little salt, allowing customers to self-administer more if desired.

Another carryout, Mary's Lunch, mentioned that turkey burgers are popular among customers since there is a large Muslim population. Whole wheat bread is also popular and frequently requested. Informal interviews with the owner, who also owns Mary's Kitchen which predominantly sells fried items, suggested that the assumed barrier to introducing foods with less oil was that customers will continue to demand fried items more than other foods. These two qualitative interviews support the need to increase customer demand and awareness of the benefits of fresh, healthy foods through menu labeling and point-of-purchase marketing. By increasing demand, it will be easier to introduce more healthy items since the interviews and evaluation of leases strongly suggest the intention of three stores to improve the healthiness of their menu offerings.

### D) DISCUSSION

The assessment of Avenue Market suggests that this market has a lot of opportunities to greatly improve the market food environment. Overall, the current food environment at Avenue Market allows customers to order healthier alternatives like grilled chicken and vegetables. But like the other markets, these items are neither promoted nor included in many combination meals. Although the market was only half occupied, the results reported here show that there are vendors who are interested or already



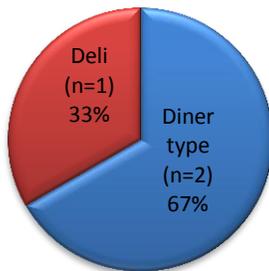
committed to providing healthier items. These vendors should be invited to become market leaders that campaign the need to better serve and care for the dietary health of their local community. Their input, particularly from All Together Eatery, will be crucial to making market improvements that are both economically acceptable to vendors and culturally acceptable and affordable for customers. Through partnership with these market leaders, it may be easier to gain support from other vendors to introduce healthier food options and increase customer demand through promotion and marketing.

## 6. Healthy Food Assessment: Broadway Market

Broadway Market is located in the heart of Fell's Point and serves about 100,000 customers annually. The distribution of income in this predominantly Caucasian population is parallel to the income disparity witnessed in Cross Street Market's Federal Hill community, with 28% of the households making less than \$25,000 and 20% making more than \$75,000.<sup>1</sup> In May 2011, a food environmental assessment was taken of the three carryouts still opened before major renovations during the summer.



**Graph 23: Carryout Type**  
*Broadway Market*



### A) CARRYOUTS

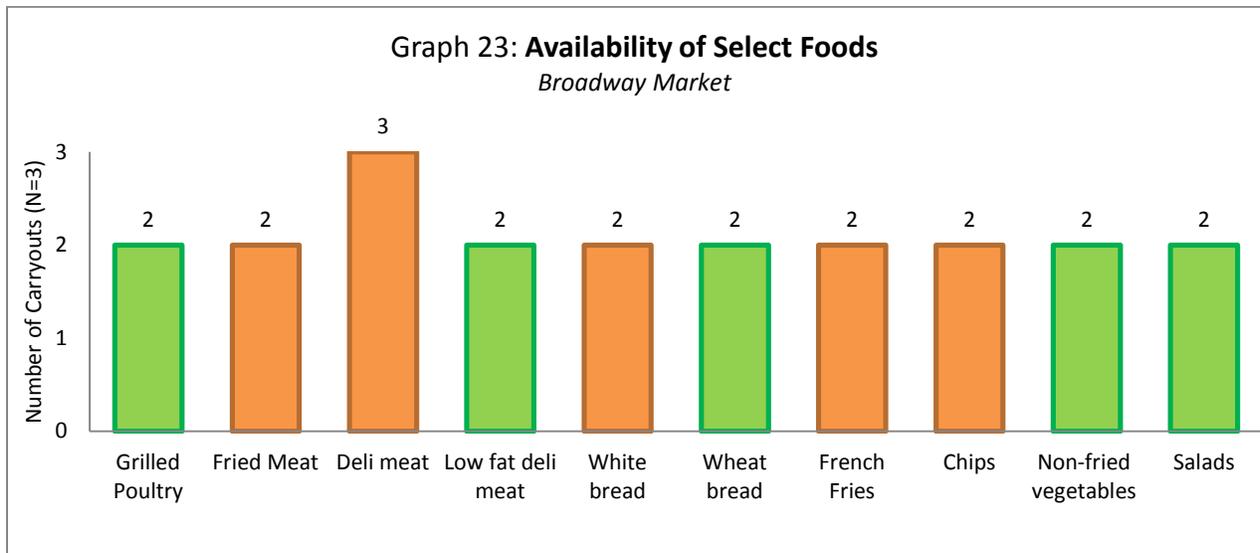
There were a total of three carryouts: two diner types and one deli-only type. At the time of the assessment, prepared food vendors (n=3) represented 60% of five food vendors and 50% of the six market vendors (Graph 23).

### B) FOOD AVAILABILITY

#### (1) FOODS SOLD

Three carryouts sold at Broadway Market ranged based on the type of foods it sold. Lucia's had two stalls, selling both breakfast and lunch platters as well as pizzas. Vikki's had an extensive breakfast and lunch menu, serving a range of diner type entrées. Sophia's Place not only sold deli sandwiches with European style deli meat and cheeses but also had a pastry section and shelves full of European goods for purchase. More specifically, fried meat and grilled meat, a healthier alternative, were both sold at the Lucia's and Vikki's (Graph 24). All three vendors offered deli meats but only two of them sold low-fat deli meats like oven roasted turkey breast. Of the two carryouts that sold white bread, whole wheat bread was also sold. Salads and vegetable sides were available in two vendors; all vendors should be encouraged to incorporate these vegetable dishes into combination meals and promote them on their menus.





(2) ASSESSMENT OF LEASES: HEALTHY FOODS NOT SOLD AS PROMISED

An assessment of the menu abstractions of the carryout leases revealed that the market could have had a higher availability of fruits. Of the three vendors, two vendors promised to sell fruit salads but did not have these items at the time of the assessment.

C) FOOD MARKETING

Two vendors at Broadway Market included healthy sides on their menus, like vegetables, but no carryout used menus to promote these options or informed customers of the health benefits of choosing these sides. Updated menus with labeling could better promote and increase sales of these healthier foods among customers.

D) DISCUSSION

Broadway Market, similar to Cross Street Market, serves a predominantly Caucasian population of the Fells Point community.<sup>1</sup> As the results suggest, the vendors at this market are more similar to diners, allowing vendors to sell a range of items that can be served on a plate as opposed to take-out boxes. The assessment also showed that at least two of the three carryouts offered vegetables sides and even a chicken salad entrée. This particular prepared food setting provides an opportunity for high visibility and impact of any initiative, particularly menu labeling, to highlight healthier items and inform customers that these options support a healthy diet.

## 7. OVERALL HEALTHY FOOD ASSESSMENT FINDINGS

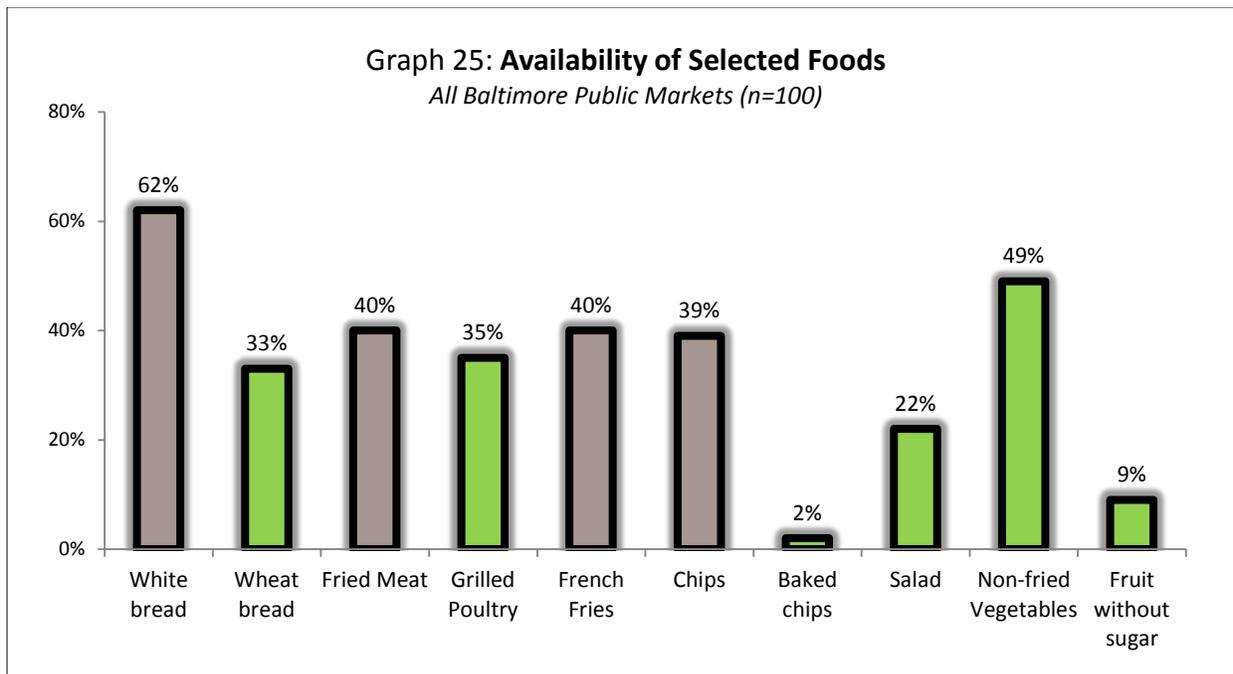
### A) CARRYOUTS

Prepared food vendors made up 70% of food vendors across all six Baltimore public markets. Lexington Market had the largest fraction of carryouts, making up 75% of all food vendors. Out of the 100 carryouts assessed at all markets, 80% were take-out carryout types while 20% were delicatessens. With over 4.2 million visits made annually to these markets, it is critical that these carryouts serve healthy choices.



### B) FOOD AVAILABILITY AND FOOD MARKETING

Each market offered an array of foods, groceries, and small shops, but overall there was a lack of low-fat and balanced meal options provided among carryout vendors (n=100). A majority of prepared food sources sold white bread (n=62) but only half offered the healthier, whole grain option of whole wheat bread (n=33) (Graph 25). Fried meats were sold in 40 carryouts and grilled chicken, a healthier alternative, were available in 35. 40 vendors sold French fries and 39 sold chips, most included these sides as part of combination meals; only 2 offered a bag of baked chips, which has approximately half the calories of French fries and less grams of fat than regular chips.



There were 49 out of 100 vendors that offered at least one side, typically a vegetable dish, and 22 vendors that had prepared salads but only 3 vendors included any form of health promotion anywhere on their menus or storefront. Even with the current prevalence of vegetable dishes, little customer attention is drawn to these dishes. Although these healthier items are available, the lack of promotion may have resulted in little customer awareness, adversely affecting sales. Many carryouts throughout the market had menu boards composed of several old papers posted in various places; few had updated

storefronts. Strategic point-of-purchase marketing such as menu labeling could improve the overall storefront, allowing customers to make informed dietary decisions. Subsequent increased sales of the highlighted items may also make it easier to encourage and appropriately support vendors to include more healthy items that are prepared in less oil and use fresher produce.

In addition to working with vendors who already sell at least one healthy dish or side, the ultimate goal is to work with all vendors throughout the market to introduce items that are feasible in each carryout



type settings and promote a healthy diet for consumers. The evaluation of leases showed that vegetables should have been much more prevalent than observed. Out of 100 carryouts, 49 had planned to sell vegetables, fruits and/or meats prepared in low-fat cooking methods; some even had an extensive list of healthy entrées and sides on their leases but did not offer or include them on their menus. Vendors clearly intend to include healthier items; further research is needed to identify these barriers and see how they can be supported in their efforts to broaden their food selection.

## VI. RECOMMENDATIONS & NEXT STEPS:

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Although each market is located in different geographical locations of Baltimore, the assessment showed that little is done at each market to promote healthier items to local customers. By increasing sales of healthier items through increasing customer attention to them, vendors may be more inclined to sell many of the healthy vegetable dishes they intended to when signing their leases. Next steps should include working with vendors and providing support and a financial incentive for them to include these items permanently on their menus.

A multi-pronged strategy should be used to transform public markets into a central place where the community can access healthy foods. It should be modeled closely after evidence-based strategies from Dr. Joel Gittelsohn's Baltimore Healthy Carryouts (BHC) project. The strategy should be centered on vendors and customers since the support of both will be critical to its success. The first recommendation is to design and create menus for the vendors; informing customers of healthier choices and providing vendors with updated menu boards that will improve their overall storefront. These new menus will not only increase customer demand but also serve as a segway to build relationships with vendors. Other recommendations include conducting focus groups with customers to build community support and providing vendors with incentives to purchase healthier food items through their distributor.

### A. **PREPARED FOOD VENDORS:**

1. Design and create menus that emphasize healthier options with a symbol (Image 4), involving vendor, graphic designer, and registered dietician in the process.
2. Change exterior and reduce number of paper menus, drawing attention to the new menus and healthier options highlighted.



**Image 4:** Green Leaf Symbol

### Specific recommendations for carryout type:

The two main types of carryouts require different recommendations that are specific and practical to the foods sold and equipment available at each carryout type. The high fraction of take-out carryouts suggest that there is a demand for hot prepared foods more than deli meats in most markets. Healthier options for foods compatible with hot prepared foods will need to be explored and evaluated for acceptability among customers.

### **Take-Out Carryouts:**

1. Encourage addition of non-fried vegetable options
2. Promote healthier cooking styles that use less oil, such as grilling, baking, boiling or broiling
3. Provide diet iced tea and diet fountain drink mixes
4. Provide baked chips and cooked vegetables as a healthier compliment to French fries

### **Delicatessen Carryouts:**

1. Add salads or fresh fruit cups and advertise as part of healthy combination meals
2. Use of self or store administered low fat mayonnaise, saving a range of 85-170 calories per sandwich.
3. Introduce low sodium, 95% fat free deli meats
4. Promote turkey and chicken deli meats



### **B. BUILDING VENDOR AND CUSTOMER SUPPORT**

In order to best support vendors and encourage them to include healthier items, incentives are needed to encourage them to try selling healthier items. Also, in order to increase customer demand, focus groups and taste tests will be conducted to determine what items are culturally acceptable in the local community. Incentives are particularly important for carryout owners, whose main focus is to maintain or increase business. The assessment of carryout leases suggests that many vendors had wanted to sell healthier items, such as vegetables and fruits, but did not during the assessment. This may have resulted from difficulties in overcoming barriers to invest in new, healthy items without the guarantee of profitability. In order to better understand how to create healthy carryouts in the public markets and promote healthier food purchasing behaviors in customers, these are some of the next steps:

1. Conduct customer focus groups

Customer focus groups will ensure that the changes implemented are culturally acceptable and will also help engage customers to play an informed and active role in improving their public markets. Appropriate taste testing will help determine if potential healthy sides and entrées are agreeable with consumer preference. Focus groups will also help evaluate the intervention's impact.

2. Provide healthier sides (salads, produce, fruits, fruit cups) for the first few weeks and then ask vendors to continue to stock items

The initiative should include provision of the first stocking of healthier sides and food preparation items for vendors. This will allow owners to try selling without the burden of monetary investment. By providing initial financial support and new menus, vendors will ideally be encouraged to continue and make those items part of their permanent menu offerings.

3. Provide healthier food preparation items such as low-fat mayonnaise and cooking spray for the first few weeks
4. Work with vendors in reducing drink sizes for sugar-sweetened beverages

After working with vendors and customers and gaining a thorough understanding of what cost-neutral, culturally-acceptable items are feasible in carryout settings, criteria for healthy carryout certification will be developed and formalized with the help of Dr. Gittelsohn and his team. Carryouts in public markets and city-wide must meet the criteria to be certified or renew their certification as healthy carryouts; the criteria may include the use of point-of-purchase marketing, such as menu labeling, and healthy side options.

**C. HEALTHY FOOD HUB DAY STALLS:**

As a part of the Healthy Food Hub concept proposed in detail for Northeast Market by Project for Public Spaces, empty stalls could be used as Healthy Food Hub Day Stalls (Image 5). The main goals are to promote healthy diets through taste-testing of the healthier items sold throughout the market and provide the market customers an opportunity to purchase local produce.



**Image 5:** Cooking Demonstrations at Lexington Market

**ACKNOWLEDGEMENTS**

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## VII. APPENDIX A: TABLES

Breakdown of carryout vendors at Baltimore City's Public Markets<sup>10</sup>

Market	Vendors	Carryouts			Capacity used	Empty Stalls
		Number	Take-out type	Deli only		
Lexington	109	54	45	9		
Northeast	41	20	14	6	83%	46
Hollins	16	8	5	3	85%	6
Cross Street	26	10	9	1	91%	8
Avenue Market	11	5	5	0	47%	18
Broadway	6	3	2	1	53%	14
<b>TOTAL</b>	<b>209</b>	<b>100</b>	<b>80</b>	<b>20</b>		

### (1) LEXINGTON MARKET

TABLE 1: Food offered in Lexington Market (N=54)

Foods offered	Total	
	n	%
White bread	30	56%
Non-fried vegetables	23	43%
Fried Meat	18	33%
White rice	19	35%
French Fries	17	31%
Grilled Poultry	15	28%
Chips	15	28%
Grilled seafood	13	24%
Cooked greens	13	24%
Deli meat	12	22%
Low fat deli meat	11	20%
Stir-fry including vegetables	11	20%
Whole wheat bread	11	20%
Coleslaw	9	17%
Salads	8	15%
Beef burger	5	9%
Wrap	4	7%
Fruit without sugar	3	6%
Turkey burger	1	2%
Baked chips	1	2%
Brown rice	1	2%

TABLE 2: Drinks offered in Lexington Market (N=54)

Drinks	Total	
	n	%
Regular soda	43	80%

<sup>10</sup> "Capacity used" is defined by BPMP as occupancy rate= space occupied/total space. "Empty stalls" is defined by market spaces not leased. Note that most vendors lease one to two adjacent spaces.

Diet soda	37	69%
Juice/lemonade	41	76%
Water	40	74%
Iced tea	36	67%
Fountain drink	34	63%
Diet fountain drink	15	28%

TABLE 3: Food environment in Lexington Market (N=54)

Healthy eating promoting factors	Total	
	n	%
Choice of healthy side on menus	22	41%
Vegetable toppings	20	37%
Healthy cooking method (e.g. baked, broiled, boiled)	17	31%
Prepared Salads or Salad bar	8	15%
Any health information on menu	3	6%
Self administered low-fat condiments	3	6%
Reduced size portions offered on the menu	1	2%
Healthy food options defined on menu	1	2%
Calorie posting	0	0%

Table 4: Food preparation equipment in Lexington Market

	Take-out* (n=45)		Deli (n=9)	
	n	%	n	%
Food Warmers	29	64%	0	0%
Fryer	21	47%	0	0%
Stove	17	38%	0	0%
Grill	16	36%	0	0%
Ovens/Rotisseries	4	9%	0	0%

Table 5: Select Drinks Sold Lexington Market (N=54)

	Take-out* (n=45)		Deli (n=9)	
	n	%	n	%
Regular soda	35	78%	8	89%
Juice/lemonade	32	71%	9	100%
Fountain drink	29	64%	5	56%
Water	31	69%	9	100%
Diet soda	30	67%	7	78%
Iced tea	28	62%	8	89%
Diet fountain drink	15	33%	0	0%
Coffee	14	31%	1	11%
Diet iced tea	1	2%	0	0%
Low-fat milk	0	0%	0	0%

## (2) NORTHEAST MARKET

TABLE 6: Food offered in Northeast Market (N=20)

Foods offered	Total	
	<i>n</i>	%
White bread	15	75%
Chips	13	65%
Potatoes	12	60%
Non-fried vegetables	10	50%
Fried Meat	9	45%
Grilled Poultry	9	45%
French Fries	9	45%
Deli meat	8	40%
Low fat deli meat	7	35%
Whole wheat bread	7	35%
White rice	7	35%
Stir-fry including vegetables	6	30%
Cooked greens	6	30%
Salads	5	25%
Beef burger	4	20%
Wrap	4	20%
Turkey burger	3	15%
Corn	3	15%
Fruit without sugar	2	10%
Baked chips	1	5%
Brown rice	0	0%

TABLE 7: Food environment in Northeast Market (N=20)

Healthy eating promoting factors	Total	
	<i>n</i>	%
Vegetable toppings	14	70%
Healthy cooking method (e.g. baked, broiled, boiled)	11	55%
Choice of healthy side on menus	11	55%
Salad bar	2	10%
Healthy food options defined on menu (low fat/calorie)	1	5%
Any health information on menu	0	0%
Calorie posting	0	0%

Table 8: Select Drinks at Northeast Market (N=20)

	Take-out ( <i>n</i> =14)		Deli ( <i>n</i> =6)	
	<i>n</i>	%	<i>n</i>	%
Regular soda	14	100%	6	100%
Water	14	100%	6	100%
Juice/lemonade	14	100%	6	100%
Diet soda	12	86%	6	100%
Iced tea (sweetened)	12	86%	6	100%
Fountain drinks	10	71%	4	67%
Diet iced tea	3	21%	3	50%
Diet options for fountain drinks	2	14%	1	17%

### (3) HOLLINS MARKET

TABLE 9: Food offered in Hollins Market (N=8)

Foods offered	Total	
	<i>n</i>	%
White bread	7	88%
Whole wheat bread	6	75%
Deli meat	5	63%
Low fat deli meat	5	63%
Fried Meat	4	50%
Chips	4	50%
French Fries	3	38%
Non-fried vegetables	3	38%
Coleslaw	3	38%
Beef burger	2	25%
Salads	2	25%
Fruit without sugar	2	25%
Turkey burger	1	13%
Wrap	1	13%
Stir-fry including vegetables	1	13%
Cooked greens	1	13%
White rice	1	13%
Grilled Poultry	0	0%

TABLE 10: Drinks offered in Hollins Market (N=8)

Drinks	Total	
	<i>n</i>	%
Regular soda	8	100%
Juice/lemonade	8	100%
Diet soda	7	88%
Iced tea	7	88%
Water	6	75%
Fountain drinks	3	38%
Diet options for fountain drinks	1	13%

Table 11: Food Preparation Equipment in Hollins Market (N=8)

	Take-out* ( <i>n</i> =5)		Deli ( <i>n</i> =3)	
	<i>n</i>	%	<i>n</i>	%
Fryer	3	60%	0	0%
Stove	1	20%	0	0%
Grill	2	40%	0	0%
Food Warmers	4	80%	0	0%
Ovens/Rotisseries	0	0%	0	0%

Table 12: Select Drinks sold in Hollins Market (N=8)

	Take-out* ( <i>n</i> =5)		Deli ( <i>n</i> =3)	
	<i>n</i>	%	<i>n</i>	%
Regular soda	5	100%	3	100%
Diet soda	5	100%	2	67%
Juice/lemonade	5	100%	3	100%

Water	4	80%	2	67%
Iced tea	4	80%	3	100%
Fountain drinks	2	40%	1	33%
Tea	2	40%	0	0%
Coffee	2	40%	0	0%
Diet options for fountain drinks	1	20%	0	0%
Low-fat milk	0	0%	0	0%

TABLE 13: Food Environment in Hollins Market (N=54)

Healthy eating promoting factors	Total	
	<i>n</i>	%
Choice of healthy side on menus	4	50%
Vegetable toppings	3	38%
Entrée Salad or Salad bar	2	25%
Any health info on menu	0	0%
Calorie posting	0	0%
Reduced size portions offered on the menu	0	0%
Healthy food options defined on menu (low fat/calorie label)	0	0%
Healthy cooking method (e.g. baked, broiled, boiled)	0	0%

#### (4) CROSS STREET MARKET

TABLE 14: Food Offered in Cross Street Market (N=10)

Foods offered	Total	
	<i>n</i>	%
Non-fried vegetables	7	70%
Grilled Poultry	5	50%
White bread	5	50%
French Fries	5	50%
White rice	5	50%
Fried Meat	4	40%
Whole wheat bread	4	40%
Chips	4	40%
Salads	4	40%
Grilled seafood	3	30%
Deli meat	2	20%
Low fat deli meat	2	20%
Beef burger	1	10%
Turkey burger	1	10%
Stir-fry with vegetables	1	10%
Corn	1	10%
Cooked greens	1	10%
Baked chips	0	0%
Brown rice	0	0%
Fruit without sugar	0	0%

**TABLE 15: Drinks offered in Cross Street Market (N=10)**

Drinks	Total	
	<i>n</i>	%
Regular soda	10	100%
Diet soda	10	100%
Juice/lemonade	10	100%
Water	9	90%
Iced tea	9	90%
Fountain drink	8	80%
Diet fountain drink	7	70%
Diet iced tea	3	30%
Tea	3	30%
Coffee	3	30%
100% juice	2	20%
Low-fat milk	0	0%

**Table 16: Food preparation equipment in Cross Street Market (N=10)**

	Take-out* ( <i>n=9</i> )		Deli ( <i>n=1</i> )	
	<i>n</i>	%	<i>n</i>	%
Food Warmers	5	56%	0	0%
Stove	4	44%	1	100%
Grill	4	44%	0	0%
Fryer	3	33%	0	0%
Ovens/Rotisseries	1	11%	0	0%

## (5) AVENUE MARKET

**TABLE 17: Foods Offered in Avenue Market (N=5)**

Foods offered	Total	
	<i>n</i>	%
Grilled Poultry	4	80%
French Fries	4	80%
Non-fried vegetables	4	80%
Fried Meat	3	60%
Beef burger	3	60%
White bread	3	60%
Whole wheat bread	3	60%
Cooked greens	3	60%
Fruit without sugar	2	40%
Grilled seafood	1	20%
Veggie burger	1	20%
Turkey burger	1	20%
Stir-fry including vegetables	1	20%
Chips	1	20%
Salads	1	20%

Corn	1	20%
Sweet potatoes	1	20%
Deli meat	0	0%
Baked chips	0	0%

TABLE 18: Drinks offered in Avenue Market (N=5)

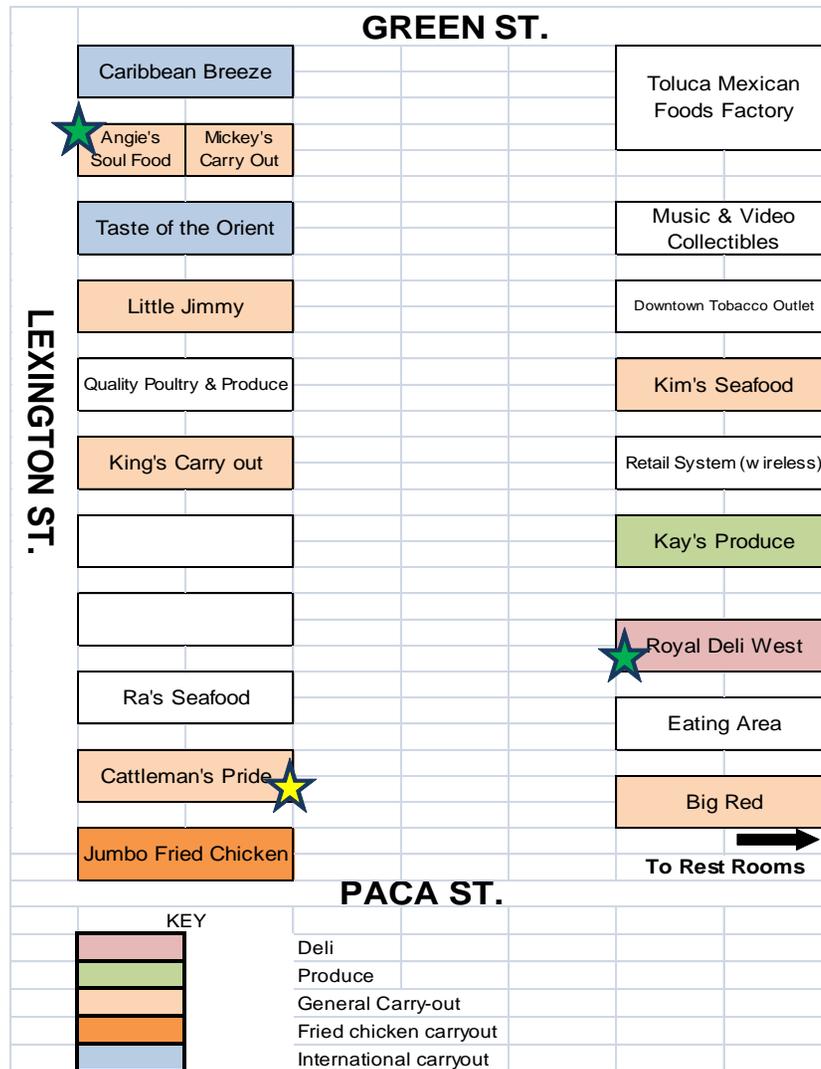
Drinks	Total	
	<i>n</i>	%
Regular soda	5	100%
Juice/lemonade	5	100%
Fountain drinks	4	80%
Diet soda	4	80%
Water	3	60%
Iced tea	3	60%
Tea	2	40%
Diet iced tea	1	20%
Low-fat milk	1	20%
Coffee	1	20%

TABLE 19: Food environment in Avenue Market (N=5)

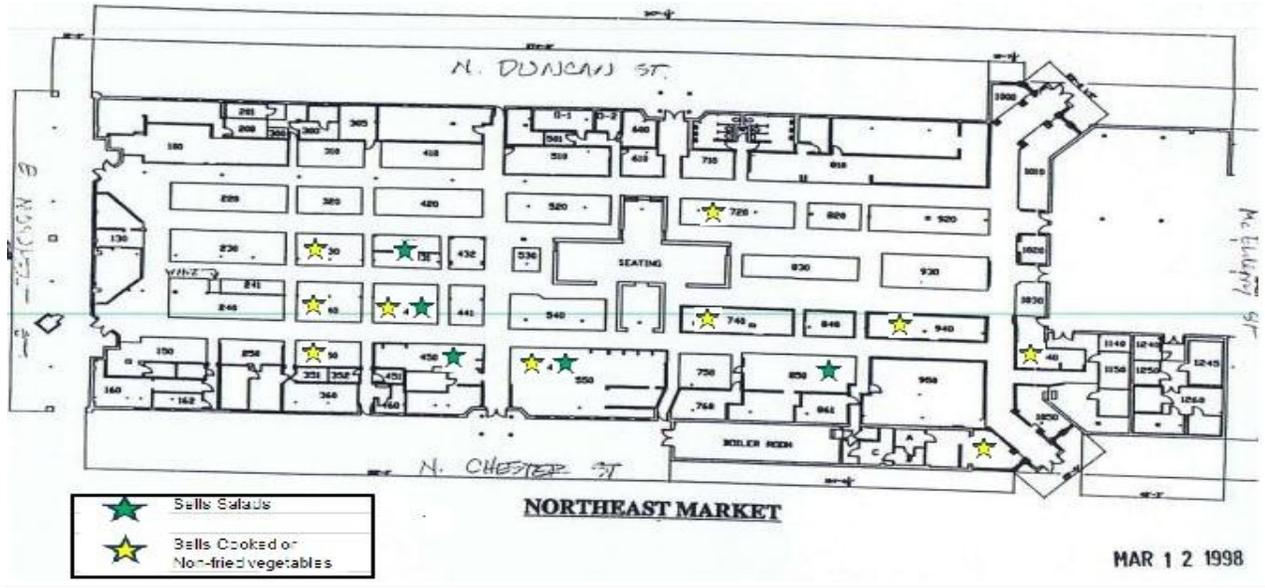
Healthy eating promoting factors	Total	
	<i>n</i>	%
Choice of healthy side on menus	5	100%
Healthy cooking method (e.g. baked, broiled, boiled)	4	80%
Reduced size portions offered on the menu	2	40%
Any health info on menu	0	0%
Healthy food options defined on menu	0	0%



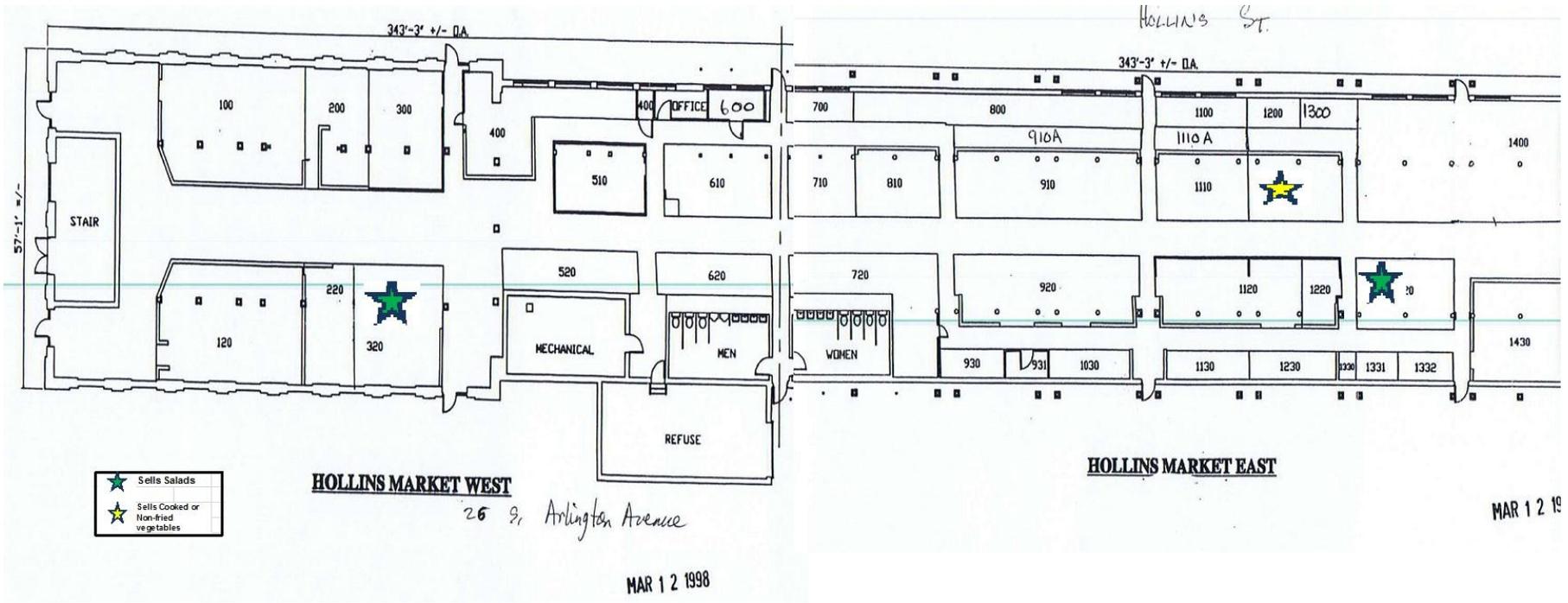
(2) LEXINGTON WEST MARKET



(3) NORTHEAST MARKET



(4) HOLLINS MARKET



**HOLLINS MARKET WEST**

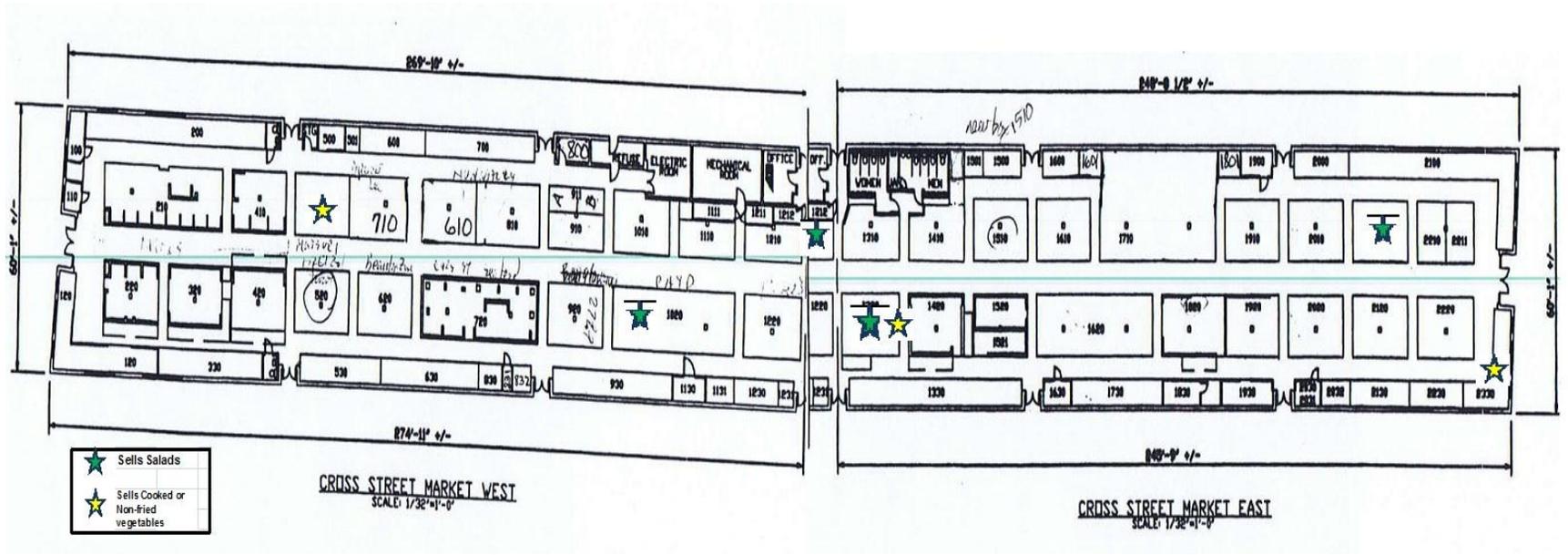
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MAR 12 1998

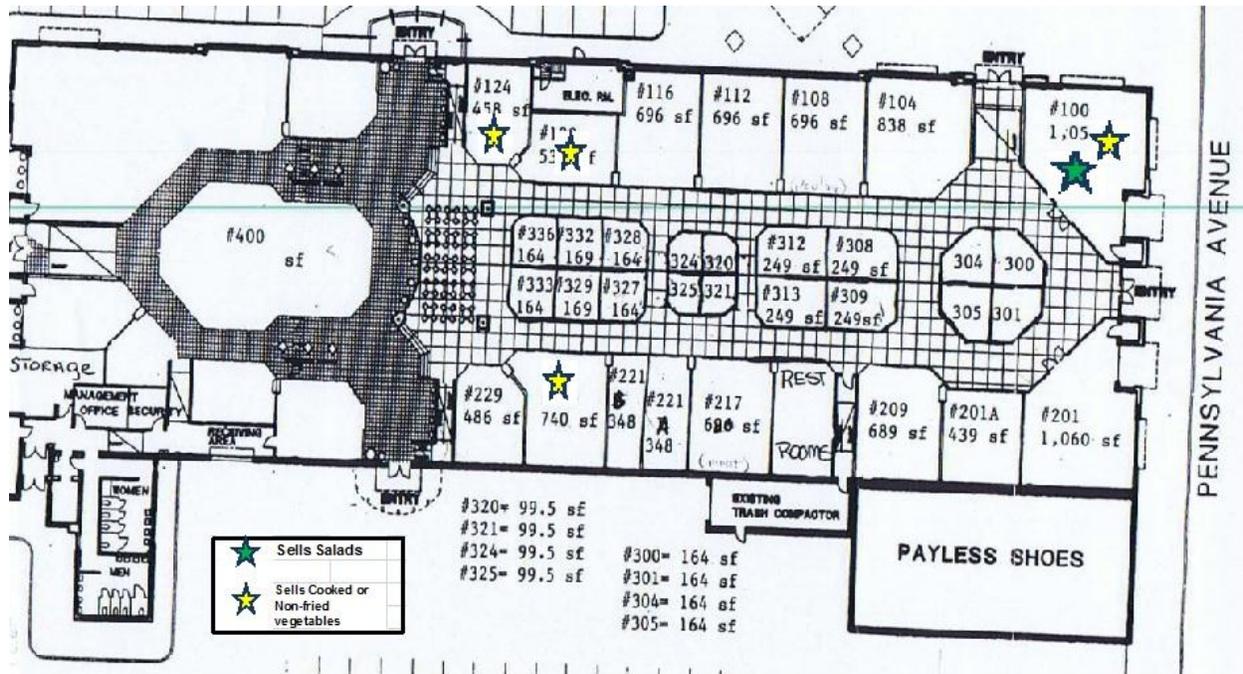
**HOLLINS MARKET EAST**

MAR 12 1998

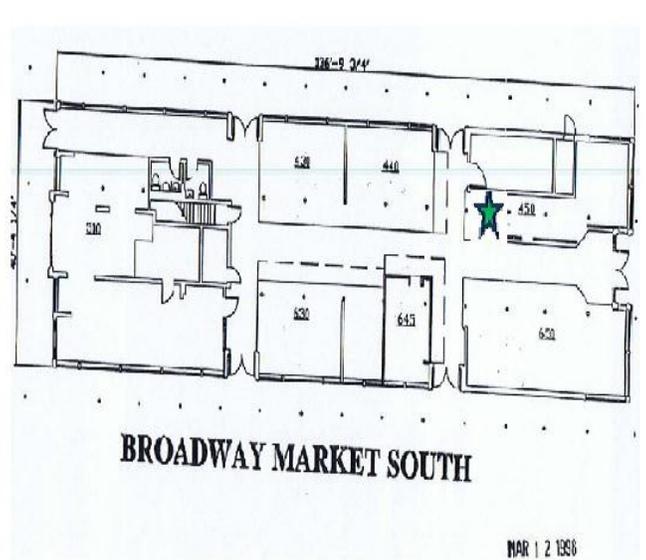
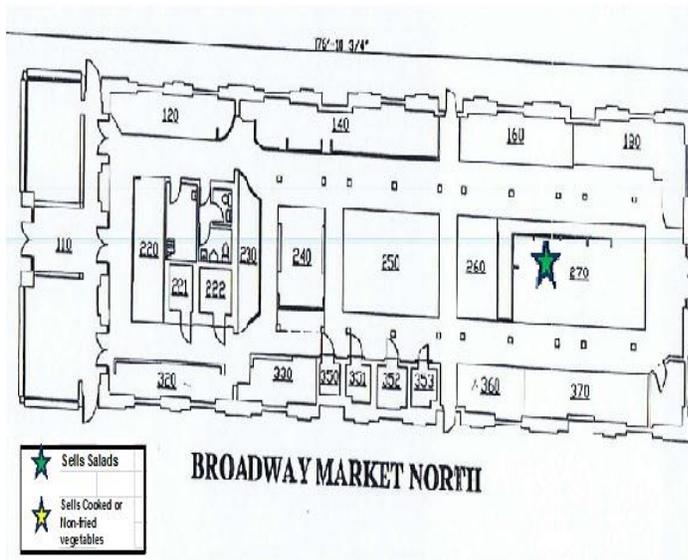
(5) CROSS STREET MARKET



(6) AVENUE MARKET



(7) BROADWAY MARKET





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