

Distribution Agreement

In presenting this thesis or dissertation as a partial fulfillment of the requirements for an advanced degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis or dissertation in whole or in part in all forms of media, now or hereafter known, including display on the world wide web. I understand that I may select some access restrictions as part of the online submission of this thesis or dissertation. I retain all ownership rights to the copyright of the thesis or dissertation. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

Signature:

Ashanté Dobbs-Cooper

Date

Corner Stores in an Urban Food Desert:
An Assessment of Healthy Food Availability at Small Food Retailers in Northwest Atlanta

By

Ashanté Dobbs-Cooper
Master of Public Health

Prevention Science

Amy Webb Girard, PhD
Committee Chair

Charles E. Moore, MD
Committee Member

Corner Stores in an Urban Food Desert:
An Assessment of Healthy Food Availability at Small Food Retailers in Northwest Atlanta

By

Ashanté Dobbs-Cooper

M.S.J., Northwestern University, 2003

B.A., Emory University, 2002

Thesis Committee Chair: Amy Webb Girard, PhD

An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health
in Prevention Science
2015

Abstract

Corner Stores in an Urban Food Desert:
An Assessment of Healthy Food Availability at Small Food Retailers in Northwest Atlanta
By Ashanté Dobbs-Cooper

The purpose of this study was to assess the availability of healthy foods sold at small food retail stores operating in Northwest Atlanta food deserts. This study also sought to evaluate if small food stores that participate in the federal Supplemental Nutrition Assistance Program (SNAP) meet retail stocking requirements proposed in the 2014 U.S. Agricultural Act (also known as the U.S. Farm Bill).

A food assessment was conducted to 1) identify and map the number and types of small food stores in the study area and 2) survey a sample of stores to determine whether they sold selected healthy foods. A total of 92 food retailers were mapped. Seventeen of these retailers were surveyed between August and September 2015 using a purposive sampling plan to reach saturation across various neighborhoods and store types. Thirteen of the 17 stores sampled are authorized SNAP retailers.

Nearly half of stores surveyed did not sell *any* fresh fruits or vegetables (47.1%). Even fewer stores sold frozen fruits or vegetables (17.6%). Only two of the 17 stores (11.8%) sampled sold any healthy low-fat dairy item (e.g. low-fat milk, low-fat yogurt, low-fat cheese). Nearly two-thirds of stores (64.7%) did not sell lean meat or protein. All stores surveyed sold some variety of snack foods. Of the 13 SNAP-authorized retailers, only one met the program's proposed stocking criteria and sold at least seven items in each of four basic food categories.

Small food retailers are an important food access point for low-income residents living in Northwest Atlanta food deserts. It would be ideal if these stores could sell a variety of healthy foods. The feasibility of establishing a healthy corner store network in Northwest Atlanta to increase healthy food availability should be explored. In addition, since the majority of SNAP-authorized retailers sampled for this study failed to meet proposed stocking criteria, supporting expansion and/or renovation of these stores could not only help storeowners to increase their healthy food offerings for customers, but also maintain compliance with SNAP requirements.

Corner Stores in an Urban Food Desert:
An Assessment of Healthy Food Availability at Small Food Retailers in Northwest Atlanta

By

Ashanté Dobbs-Cooper

M.S.J., Northwestern University, 2003
B.A., Emory University, 2002

Thesis Committee Chair: Amy Webb Girard, PhD

A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health
in Prevention Science
2015

Acknowledgments

It truly took a village to complete this study...

Many thanks to my Thesis Committee Chair Dr. Amy Webb Girard and Field Advisor Dr. Charles Moore for helping me to design and execute the corner store study...and for talking me off the ledge when I began to panic. I couldn't have asked for better guides to lead me on this academic, professional and personal journey. I am inspired by your tireless work to address food access issues in Northwest Atlanta and your commitment to turn this community – the very community where I grew up – from a food desert into a food oasis.

I would also like to thank Rollins School of Public Health (RSPH) graduate student Ina “Gracie” Storm for serving as my research assistant and helping me to conduct the in-store surveys. You were the calm in the “storm,” and I could not have completed this study without you.

A heartfelt thanks to my sagacious colleagues and friends, Sarah Hines, Cindy Hockaday-Hinsley, Linda Marlette, Marcus Stanley, Karletta Thomas and Belinda Ware. You all gave me a shoulder to cry on and Yoda-like advice when I wanted to give up.

And finally, I am thankful for the support of my unofficial “research assistants” and biggest fans – my husband, Ricky Cooper, and my mother, Darlene Dobbs. Whether it was riding shotgun to make sure I was safe during my treks to the corner stores, or accompanying me inside of the stores to help me make my sales pitch to storeowners, you both gave me the push I needed to see this study and the Emory MPH program through. I love you!

Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Food and Agriculture Organization of the United Nations, 1996

Table of Contents

| | |
|---|----|
| Executive Summary | 1 |
| Introduction | 4 |
| Background | 6 |
| Methods | 12 |
| Results | 18 |
| Discussion | 29 |
| Recommendations | 32 |
| References | 36 |
| Appendices | 40 |
| Appendix A: Definition of Store Terms | 40 |
| Appendix B: Letter to Corner Storeowners | 41 |
| Appendix C: Corner Store Survey Tool | 42 |
| Appendix D: USDA Retail Store Eligibility Criteria & Definition of Terms | 46 |
| Appendix E: Updates to retail stocking criteria per 2014 Agricultural Act | 47 |

Executive Summary

The U.S. Department of Agriculture (USDA) has designated some areas of Northwest Atlanta, Georgia, as “food deserts,” which means they encompass low-income Census tracts where a significant number of residents have either limited or no access to fresh, healthy foods. Studies have shown that people who live in food deserts suffer worse health outcomes, including diabetes, cancer, obesity, and heart disease (CDC, 2012). For many Northwest Atlanta residents, small food retailers such as corner stores, convenience stores, and gas stations are the only places where they can buy food within a 1-mile walking distance of their homes. However, an observational study conducted in Philadelphia, Pennsylvania found that just 11% of the food inventory sold in corner and convenience stores qualifies as “healthy” (Borradaile et al., 2009). It is not known to what extent these types of small stores in Atlanta, Georgia, carry healthy food.

The purpose of this study was to assess the availability of healthy foods sold at small food retail stores operating in Northwest Atlanta food deserts. Food availability refers to what healthy foods and beverages are sold or served at retail food outlets (Azuma et al., 2010). Increased availability of healthy foods has been associated with eating a healthier diet (Mikkelsen et al., 2007). This study also sought to evaluate if small food stores in Northwest Atlanta that participate in the federal Supplemental Nutrition Assistance Program (SNAP) meet proposed retail store requirements for the number and types of foods stores must sell in order to maintain their eligibility in the program. These criteria were strengthened in revisions to the 2014 Agricultural Act (also known as the U.S. Farm Bill).

For this study, a food assessment was conducted to 1) identify and map the number and types of small food stores in a defined area and 2) survey a sample of stores to determine whether they sold selected healthy foods.

A total of 92 food retailers were mapped in the study area. Of the 92 food retailers, 70 met the criteria of “small food retailer.” The most common types of small food retailers were convenience stores (41.3%) and gas stations with convenience stores (26.1%). Large grocery stores and supermarkets made up 3.3% of the total.

Seventeen stores were surveyed between August and September 2015 using a purposive sampling plan to reach saturation across various neighborhoods and store types. Thirteen of the 17 stores sampled are authorized SNAP retailers.

The USDA’s Community Food Security Assessment Toolkit and Thrifty Food Plan were used to develop the survey tool to assess the availability of healthy foods at small food stores operating in the study area (Cohen, 2002).

Nearly half of stores surveyed did not sell *any* fresh fruits or vegetables (47.1%). Even fewer stores sold frozen fruits or vegetables (17.6%). Only two of the 17 stores (11.8%) sampled sold any healthy low-fat dairy item (e.g. low-fat milk, low-fat yogurt, low-fat cheese). Nearly two-thirds of stores (64.7%) did not sell lean meat or protein. All stores surveyed sold some variety of snack food items.

Of the 13 SNAP-authorized retailers, only one met the federal program’s proposed stocking criteria for retail stores and sold at least seven items in each of four basic food categories. Two of the 13 stores also failed to meet proposed SNAP criteria and offer perishable items in at least three food categories.

Eight stores surveyed were identified as potential partners and champions for future corner store scale-ups based on one or more of the following criteria: 1) have capacity to stock healthy food items, including extra refrigeration and/or freezer space, 2) currently stock healthy food items, 3) owner expressed interest in offering more healthy food items as part of store inventory.

Small food retailers are an important food access point for low-income residents living in Northwest Atlanta food deserts. It would be ideal if these stores could sell a variety of healthy foods. In addition, since the majority of SNAP-authorized retailers sampled for this study failed to meet proposed stocking criteria, supporting expansion and/or renovation of these small food stores could help storeowners to increase their healthy food offerings for customers and maintain compliance with SNAP requirements.

It is recommended that the next phase of this study explore the feasibility of establishing a healthy corner store network in Northwest Atlanta to increase healthy food availability in this community.

Introduction

Imagine walking into your neighborhood food store and finding that the dairy section has no low-fat milk (but sugary sodas are plentiful), and that the only fresh fruits and vegetables available are over-ripened bananas and sprouting potatoes. Or, picture walking 3.5 miles round trip to get to the nearest supermarket because you don't own a car. This is a reality for many low-income residents of Northwest Atlanta who live in an area designated by the U.S. Department of Agriculture (USDA) as a food desert. In these food desert communities, the closest "grocery store" is actually a convenience store or gas station food-mart that primarily sells sodas and snack foods high in fat, sugar, and salt (McLaughlin et al., 2012). Low access to healthy foods and limited availability of healthful foods is associated with obesity and chronic diseases such as heart disease, Type 2 diabetes, and some cancers (McLaughlin et al., 2012).

The USDA has designated a 26-square-mile area of Northwest Atlanta, Georgia, as a food desert because it encompasses low-income Census tracts where a substantial number of residents have either limited or no access to fresh, healthy food. Obesity and preventable chronic diseases also disproportionately burden Northwest Atlanta residents. A needs assessment conducted in Northwest Atlanta revealed (Austin et al., 2012):

- A high prevalence of Type 2 diabetes among residents (20.2%), which is almost double the national average (11.3%).
- Residents cited lack of adequate transportation (35.1%) and low income (25.5%) as the primary barriers to accessing healthy food.
- An estimated 21% of residents reported eating less than one serving of fruits or vegetables each day.
- More than two-thirds of residents (67.7%) reported eating fast food one to two times per week, while another 19.4% ate fast food three to four times per week.
- More than half (55.3%) of residents in the community said they worried that their household would not have enough food.

The purpose of this study was to assess the availability of healthy foods sold at small food stores operating in Northwest Atlanta, including convenience stores, corner stores, gas stations with convenience stores, and small grocery stores. The study explored the following research questions:

- How many small food retail stores are currently operating in Northwest Atlanta food deserts?
- What types of small food retailers are most prominent in the community?
- What varieties of healthy foods do these small food stores sell?

It also sought to evaluate to what extent Northwest Atlanta small food stores participating in the federal Supplemental Nutrition Assistance Program (SNAP) adhere to SNAP's retail store criteria for stocking food items. These criteria were strengthened in revisions to the 2014 U.S. Agricultural Act (also known as the U.S. Farm Bill) and require that stores sell at least seven items in each of four basic food categories (fruits & vegetables, bread & cereals, dairy, and meat, poultry, or fish), and offer perishable items in at least three of these categories.

Background

The term “food desert” first appeared in a 1995 United Kingdom government report describing the limited “viable” food shopping options available to residents of a newly built public housing unit in Scotland (New York Law School, 2012). Since then, “food desert” has been used by researchers, policymakers, and community advocates to characterize low-income rural and urban communities in the United States that lack convenient access to healthy food.

The U.S. Department of Agriculture (USDA) defines a food desert as urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food (USDA, 2015). Instead of supermarkets and grocery stores, these communities may have no food access or are only served by fast-food restaurants and convenience stores that offer few healthy, affordable food options. For residents of food deserts, the closest supermarket could be more than 10 miles away. In most cases, residents must travel more than one mile, often without a car, to get to the nearest supermarket (Raja et al., 2008). More than 2 million Americans live in a community designated by the USDA as a food desert (Raja et al., 2008).

Race and food deserts have been linked. Race and ethnicity are, in fact, social determinants associated with living in a food desert community. According to the USDA, urban minority neighborhoods are the most disadvantaged in terms of the availability of healthy foods such as fresh fruits and vegetables (Wang et al., 2007). African Americans, in particular, are more likely to live in a food desert with low or no access to supermarkets or large grocery stores (Alwitt et al., 1997). A report commissioned by the New York Law School and American Civil Liberties Union

provides historical context for the proliferation of food deserts in communities of color. The report cites federal policies such as President Franklin Roosevelt's New Deal that fostered the migration of more affluent, white families from cities to the suburbs. As supermarkets followed these families to the 'burbs and set up shop outside of city centers, their absence left poorer, city-dwelling minorities with fewer or no options for purchasing food from large grocery stores (The New York Law School, 2012):

During the 1940s, low-interest home loans offered to middle-class white families through the Federal Housing Administration and the Veterans Administration enabled them to move from cities to suburbs. Supermarkets, along with many other types of businesses, followed white middle-class incomes to the suburbs. African American families were unable to access the same low-interest home loans as white families due to government sanctioned redlining, restrictive housing covenants, and discrimination, and were left stranded in the cities. The scarcity of supermarkets within the inner city continues to impact minorities living in low-income urban neighborhoods. African Americans, Latinos, and Native Americans living in these neighborhoods travel farther, have fewer choices, and pay more for food than their counterparts. When minority families shop locally for groceries they find a grocery store that is "2.5 times smaller than the average grocery store in a higher income neighborhood" with higher priced food, less fresh produce, and more processed food.

Lack of adequate private or public transportation exacerbates the problem of healthy food availability for residents of food deserts (Rose et al., 2004). Many residents do not own a car or have access to public transportation. The need to address food access issues in low-income communities is supported by studies that show that people who live in neighborhoods with access to a supermarket within walking distance of their homes (defined by the USDA as one mile) are more likely to eat healthy and maintain a healthy weight compared to those who live further away from a grocery store (Bodor et al., 2010).

While many low-income, food desert communities lack large supermarkets or big-box grocers, small food stores such as corner stores and convenience stores are ubiquitous. However, these smaller food retailers sell a large amount of high-caloric

snacks and sugary drinks while offering limited varieties and quantities of fresh fruits and vegetables (Bodor et al., 2010b). For example, an observational study conducted in Philadelphia, Pennsylvania found that just 11% of the food inventory in corner and convenience stores actually qualifies as “healthy” (Borradaile et al., 2009).

A number of studies have suggested that since small food stores such as corner stores are prevalent in low-income food desert communities, they should be the focal point of interventions to increase healthy food availability (Bodor et al., 2010c). For example, a study conducted in Hartford, Connecticut found that customers were more likely to purchase fresh fruits and vegetables (F&V) at corner stores that stocked a variety of F&V (Martin et al., 2012).

In another study, small food storeowners participating in a corner store intervention in Baltimore, Maryland reported an uptick in sales of healthy foods such as fresh fruits and vegetables after they increased the number and variety of healthy food items they stocked (Hee-Jung et al., 2009).

A formative evaluation of a healthy corner store initiative in Pitt County, North Carolina also lends support for interventions targeting small food retailers. Corner store customers in Pitt County reported that they would be more likely to purchase fresh produce at their neighborhood corner store if the stores offered it (Pitts et al., 2013).

There has been a movement in recent years to turn urban food deserts into food oases, where low-income individuals and families have readily available access to healthy and affordable foods. National nonprofit, The Food Trust, has championed the healthy corner store movement in urban communities such as Philadelphia (The Food Trust, 2014). In 2004, The Food Trust created the Healthy Corner Store Initiative to

support Philadelphia corner storeowners committed to increasing healthy food inventory in their stores and encouraging their customers to make healthier choices. The Healthy Corner Store Initiative addresses healthy food access and availability in Philadelphia corner stores using a multifaceted approach, including increasing store capacity to sell and market healthy items, offering training and technical assistance to storeowners to equip them with the skills needed to make healthy changes profitable, marketing healthy messages to youth and adults to encourage healthy eating choices, hosting in-store community nutrition education lessons, and linking corner storeowners to community partners, local farmers, and fresh food suppliers to create and sustain healthy corner stores (The Food Trust, 2014).

The Food Trust's work with Philadelphia's corner stores provides insight and lessons learned for other communities seeking to implement healthy corner store initiatives (The Food Trust, 2014):

1. Partnering with corner stores is an effective strategy to improve healthy food access in underserved communities. Storeowners have positively responded to the initiative, expressing a concern for the health of the communities they serve and a belief that selling healthy foods can be profitable.
2. Corner storeowners are willing to introduce healthy inventory, but they need support and simple steps to follow. Asking storeowners to make small, gradual changes and giving them simple steps to follow can help overcome the challenge of introducing new inventory and taking on new risk. To build profitability and sustainability, training on selling healthy, perishable products was provided to many storeowners.
3. Making small investments in equipment can significantly increase corner stores' capacity to sell healthy products.
4. Corner stores often lack the equipment to stock perishable goods, although typically this equipment does not require large investments or renovations in order to accommodate new products.

The Food Trust's Healthy Corner Store Initiative is also active in other communities throughout the state of Pennsylvania and in New Jersey. The organization's

work has served as a model for improving food access across the United States.

A healthy corner store network has also been established in Los Angeles, California. The Los Angeles Food Policy Council hosts the Healthy Neighborhood Market Network, a project that builds the capacity of corner store and neighborhood market owners to operate as successful healthy food retailers in under-served communities (LA Food Policy Council, 2015). Through a series of free business and leadership development trainings, the project organizes the sector of small markets, corner stores and other small food enterprises around resources for healthy food retail. The Healthy Neighborhood Market Network is a multi-lingual, multicultural resource network made up primarily of immigrant, small business owners operating in under-served communities. A diverse range of food industry experts, community groups and independent food business operators share their experience and expertise in the Network space. More than 600 neighborhood market owners and food storeowners in South Los Angeles and Boyle Heights have been impacted by outreach efforts as a result of the Healthy Neighborhood Market Network.

A review of the literature and corner store initiatives implemented by nonprofits such as The Food Trust and the Los Angeles Food Policy Council support the need for interventions targeting small food stores operating in low-income food desert communities, particularly stores operating in urban areas. Increasing the availability of healthy foods at corner stores and convenience stores, which dominate the urban food landscape, could help to improve healthy food access and availability (Levi et al., 2011).

In addition, recent changes to the 2014 U.S. Agricultural Act (also known as the U.S. Farm Bill), which impact the Supplemental Nutrition Assistance Program (SNAP),

provide compelling rationale to focus on improving the inventories of small food retail stores that participate in SNAP, so that these stores can meet program stocking requirements and increase their offerings of healthy and diverse food options to their customers. The proposed Farm Bill contains several provisions that impose additional obligations on retailers that redeem SNAP benefits, including an increase in the variety of food items that retailers must sell as well as the number of perishable items they must make available (USDA, 2014). These changes are currently under federal review and rulemaking.

Evaluating food availability at small food stores in Northwest Atlanta, as this study sought to do, is the first step toward altering the retail food environment in this food desert community.

Methods

A food assessment systematically examines a broad range of community food issues and assets to learn what actions are needed to make the community more food secure (Azuma et al., 2010). Through such assessments, interested community members can work together to research what is happening with a community's food system, to communicate those findings, and to support policy changes based on those findings. According to Ohri-Vachaspati et al., there are five primary purposes for conducting a food assessment, including:

1. Needs assessment and planning to identify priorities for action in a particular community.
2. Population-level surveillance to monitor trends in access, availability, quality, and affordability of food.
3. Research to gain a better understanding of the most important factors in environments affecting obesity and chronic disease.
4. Evaluation to improve programs or policies and to assess their effectiveness.
5. Advocacy to engage stakeholders and decision makers to affect policy and environmental changes in the food environment.

A food assessment can also help drive decisions about who should be involved in the assessment, what information is needed, how much time should be devoted to the process, what type of data to collect, and how to share the findings (Ohri-Vachaspati et al., 2010).

The study area for this food assessment included seven Census tracts in Northwest Atlanta classified by the U.S. Department of Agriculture (USDA) as food deserts (USDA, 2015). A community must meet the following USDA criteria to be designated as a food desert:

1. The community has a poverty rate of 20% or greater, or a median family income at or below 80% of the area median family income, and
2. At least 500 persons in that community and/or at least 33% of the Census tract's population live more than 1 mile from a supermarket or large grocery store.

The Census tracts covered in the study area encompassed three unique Fulton County, Georgia zip codes (30318, 30310 and 30314) with 8,794 households. The Census tracts have similar economic and demographic profiles: high levels of poverty with predominately African American populations. An estimated 31.1% of households in these Census tracts do not own a car and live more than 1/2 mile from a supermarket.

Table 1 highlights characteristics of each Census tract included in the study.

Table 1. Northwest Atlanta food desert Census tracts

| Census Tract ID | Total # of Households | Households without a car that are more than ½ mile from a supermarket |
|-----------------|-----------------------|---|
| 13121008700 | 1,837 | 702 (38.2%) |
| 13121008602 | 489 | 174 (35.5%) |
| 13121008202 | 702 | 202 (28.7%) |
| 13121007807 | 998 | 280 (28.1%) |
| 13121008201 | 2,584 | 478 (18.5%) |
| 13121008302 | 691 | 214 (31%) |
| 13121011800 | 1,493 | 685 (45.9%) |

This community food assessment modeled a similar assessment conducted by Azuma et al. in Los Angeles, California and consisted of 1) food mapping to identify the number and types of all retail food outlets and 2) store surveys to assess availability of foods from a purposive sampling of four types of small food stores (convenience stores, corner stores, gas stations with convenience stores, and small grocery stores).

USDA Census tract data and street canvassing were used to map food retailers operating in Northwest Atlanta. A census was taken of food retailers in the study area, including convenience stores, corner stores, farmer's markets, gas stations with convenience stores, large grocery stores, mom & pop restaurants, package stores, small grocery stores, specialty food stores, and supermarkets. Fast-food restaurants were excluded from the census. Stores were categorized according to characteristics defined in

the “Guide to Healthy Small Food Retailer Certification Programs” developed by Change Lab Solutions (2013).

Of the total 92 food retailers mapped for this study, 70 met the criteria of “small food retailer.” Twenty-three stores were selected for surveying using a purposive sampling plan to reach saturation across various neighborhoods and store types. These stores included convenience stores, corner stores, gas stations with convenience stores, and small grocery stores. Letters were delivered to owners of the 23 stores to request permission to conduct surveys of their store inventory. Seventeen storeowners agreed to have their stores surveyed. Thirteen of these stores are authorized Supplemental Nutrition Assistance Program (SNAP) retailers. All stores were surveyed between August and September 2015.

The USDA’s Community Food Security Assessment Toolkit and Thrifty Food Plan were used to develop the survey tool to assess the availability of healthy foods in the study area (Cohen, 2002). Stores were assigned a unique identification number and were referenced in the analysis by their ID number and store type.

The survey tool for this study measured the availability of 108 specific food items across seven categories. The categories followed classification used by the USDA in its Community Food Security Assessment Toolkit and included:

1. Fresh fruits and vegetables
2. Frozen fruits and vegetables
3. Canned fruits and vegetables (including “mature legumes” or beans)
4. Breads, cereals and other grains
5. Dairy
6. Meats and other proteins
7. Snack food items

The availability of the five most commonly stocked types of foods in each category were summarized. The least commonly available food items were also noted. Analyses was conducted using Quick Tap Survey. Data were stratified across food categories, food items and store type. Survey data were also extracted for the 13 SNAP-authorized retailers to assess if these small food retailers were in compliance with proposed changes to SNAP's stocking requirements.

The U.S. Supplemental Nutrition Assistance Program (SNAP) provides nutrition assistance to more than 42 million low-income Americans each month (USDA, 2014). About 20% of all SNAP transactions nationwide occur in small food stores such as corner stores or convenience stores (Castner et al., 2011). Benefit redemptions at small stores are also more frequent in areas with poorer health outcomes, including low-income and non-metropolitan areas, as well as among single-adult and minority households (Castner et al., 2011).

The Agricultural Act of 2014, also known as the U.S. Farm Bill, mandates changes to stocking requirements for authorized SNAP retailers, which increase the variety of food items retailers must sell as well as the number of perishable items they must offer (USDA, 2014). The proposed Farm Bill requires SNAP retailers to stock at least *seven* different “varieties” of food items in each of the four “staple food” categories on a “continuous basis.” Current USDA regulations (pre-dating the 2014 Farm Bill) require SNAP retailers to stock at least *three* different items in each food category on a continuous basis. Under statutory requirements pre-dating the 2014 Farm Bill, the four staple food categories are:

- 1) Meat, poultry, or fish
- 2) Bread or cereals

- 3) Vegetables or fruits
- 4) Dairy products

USDA regulations stipulate that “staple food” means those items intended for home preparation and consumption (USDA, 2014). Commercially processed foods and prepared mixtures with multiple ingredients are only counted in one staple food category. For example, foods such as cold pizza, macaroni and cheese, multi-ingredient soup, or frozen dinners, are only counted as one staple food item and will normally be included in the staple food category of the main ingredient as determined by USDA. Hot foods are not eligible for purchase with SNAP benefits and, therefore, do not qualify as staple foods. Accessory food items including, but not limited to, coffee, tea, cocoa, carbonated and uncarbonated drinks, candy, condiments, and spices are not considered staple foods, but they may be purchased with SNAP benefits.

To stock food on a “continuous basis,” USDA regulations pre-dating the 2014 Farm Bill stipulate that the SNAP retailer must, on any given day of operation, offer for sale and normally display an item in a public area (USDA, 2014).

Different “varieties” means different types of foods (such as apples, cabbage, tomatoes, and squash in the fruit or vegetable category, or milk, cheese, butter, and yogurt in the dairy category), rather than different brands, nutrient values, or packaging (USDA, 2014).

The 2014 Farm Bill also requires SNAP retailers to stock at least one “perishable” food item in at least *three* of the four food categories (USDA, 2014). Prior to the 2014 Farm Bill changes, SNAP retailers were required to stock at least one perishable food item in at least two of the four food categories. “Perishable” foods are items which are either frozen staple food items or fresh, unrefrigerated or refrigerated staple food items

that will spoil, or suffer significant deterioration in quality within 2-3 weeks (USDA, 2014).

The SNAP retail stocking requirements proposed in the 2014 Farm Bill will not be implemented until the USDA undertakes a formal rulemaking. This means that the stocking provisions for authorized SNAP retailers will not be enforced until after the rulemaking process concludes. Although a date for retailers to implement these changes in their stores has not been established at the time this study was conducted, the USDA advises that any current or prospective SNAP retailer begin planning to comply with the Farm Bill's new stocking requirements.

While current and proposed SNAP regulations require retailers to offer a specific number and variety of food items, the criteria do *not* specify what types of food items these must be in any given category, or require that stores stock "healthy" foods such as fresh fruits or vegetables, low-fat dairy products, whole grains, or lean meats. For example, canned fruits and vegetables as well as dry and canned beans (also known as "mature legumes") are considered "vegetables and fruits" and can be counted toward a store's required offerings in this category (USDA, 2011). In addition, frozen fruits and vegetables are categorized as "vegetables and fruits." The SNAP requirements also don't specify the types of "bread or cereal" items a store must offer as part of its required grain items. Foods such as white bread and Ramen noodles are considered "bread or cereal." Dairy products don't have to be low-fat, and ice cream is categorized as a dairy item. There also aren't any requirements that lean meats and proteins be offered under the category of "meat, poultry or fish."

Results

A total of 92 retail food outlets were mapped for the study area (excluding fast-food restaurants). The most common types of food retailers operating in the study area were convenience stores (41.3%) and gas stations with convenience stores (26.1%). There were three large grocery stores making up 3.3% of the total. One farmer's market was observed in the study area located at 678 Joseph E. Boone Boulevard. The market is operational one day a week (Saturdays from 9 a.m. to 1 p.m.) from June-October. The market is sponsored by the Georgia Food Oasis, which seeks to bring fresh, healthy and affordable foods to residents of food deserts throughout the city of Atlanta. Shoppers can purchase healthy produce items at the market using 2-for-1 Supplemental Nutrition Assistance Program (SNAP) benefits.

Of the total 92 food retailers, 70 met the criteria of "small food retailer." A total of 17 stores were surveyed and included:

- 9 convenience stores
- 2 corner stores
- 2 gas stations with convenience stores
- 4 small grocery stores

Grocery-Related Services

Thirteen of the 17 stores (76.5%) surveyed participate in the federal Supplemental Nutrition Assistance Program (SNAP) and accept Electronic Benefits Transfer (EBT) and/or Special Supplemental Nutrition Program for Women, Infants and Children (WIC) vouchers as payment for qualifying food and beverage items. While three stores had outdoor signage advertising that they accepted WIC, storeowners and clerks at those stores confirmed that they do *not* participate in the WIC program.

Three stores (17.7%) had kitchens, with one kitchen operational. One convenience storeowner noted that she is planning to install a kitchen in the future to prepare food onsite for customers.

All of the stores sampled sold tobacco products, including cigarettes, cigarillos and cigars. Alcoholic beverages were sold at 11 of the stores (64.7%), and lottery tickets were sold at 15 stores (88.2%).

Eight of the stores surveyed had extra refrigeration space, and four stores had extra freezer space. None of the extra refrigeration or freezer units was operational at the time of the survey.

Fresh Fruits & Vegetables

Nearly half of stores sampled did not sell any fresh fruits or vegetables (47.1%). No corner stores sold fresh fruits and vegetables, and only one gas station with convenience store offered fresh fruits and vegetables.

The most commonly sold fresh fruit items were bananas (47.1%), apples (29.4%), and oranges (23.5%) Grapes, melons, and peaches were the least commonly sold fresh fruits.

The most commonly sold fresh vegetable items were onions (35.3%), potatoes (29.4%), and tomatoes (23.5%). When potatoes, onions, and tomatoes were excluded, the most commonly sold vegetable items were bell peppers (17.6%) and iceberg lettuce (17.6%). Celery, carrots, broccoli, and leafy green lettuce were the least commonly sold fresh vegetables. Fresh pears, green beans, and green peas weren't offered at any store.

All of the small grocery stores sold some variety of fresh fruits and vegetables. The quality of these items varied from store-to-store. At one of the small grocery stores,

while overall quality was average, rotten iceberg lettuce and tomatoes were noted. One convenience storeowner stated that she sometimes sells more fruits and vegetables such as potatoes, but she has limited refrigeration at this time to consistently offer fresh produce.

Frozen Fruits & Vegetables

The small grocery stores (n=3) were the only store type surveyed that offered any frozen fruits and vegetables. Frozen French fries were the most commonly sold frozen fruit or vegetable item. Frozen broccoli and frozen green peas were sold at 2 of the 3 small grocery stores.

The least commonly sold frozen fruit or vegetable item was frozen green beans (5.9%). Frozen orange juice was not sold at any store.

Canned Fruits & Vegetables

Cranberry sauce was the most commonly sold canned fruit item (64.7%). Canned peaches, pineapple and fruit cocktail were also sold at eight of the stores surveyed (47.1%).

The most commonly sold canned vegetable items were tomato sauce (94.1%), spaghetti sauce (88.2%), and green beans (76.5%). Sauerkraut was the least commonly sold canned vegetable with only three stores (17.6%) offering it.

Breads, Cereals & Other Grain Products

Almost two-thirds of stores (64.7%) offered healthy whole grain items, such as whole wheat bread, oatmeal, and/or brown rice. Whole wheat bread was sold at 47.1% of stores, oatmeal at 52.9% of stores, and brown rice at 23.5% of stores. Some variety of

grits (instant and/or slow-cooking) were sold at 64.7% of stores. No gas stations with convenience stores sold any healthy whole grain items.

Nearly all stores sold highly processed/refined grains, including white/polished rice (82.4%), white flour (82.4%), sugary breakfast cereal (76.5%), macaroni noodles (76.5%), and white bread (70.6%).

Dairy

Only two of the 17 stores sampled (11.8%) sold any healthy low-fat dairy item (e.g. low-fat milk, low-fat yogurt, low-fat cheese). These included one small grocery store and one convenience store.

Whole milk was available at 88.2% of the stores surveyed. Cheddar cheese (70.6%) and evaporated milk (64.7%) were also commonly sold. Flavored milk was sold across all store types except corner stores, including flavored whole milk, flavored 2% milk, and flavored 1% milk or skim.

The least commonly sold dairy items were 2% plain milk (5.9%), 1% plain milk or skim (5.9%), low-sugar yogurt (5.9%), mozzarella cheese (5.9%), and low-fat cheese (5.9%). One convenience store sold two of these items (low-sugar yogurt and low-fat cheese). The remaining items were sold at two small grocery stores (one small grocer sold both 2% plain milk and 1% plain milk or skim; the other small grocer sold mozzarella cheese).

None of the stores surveyed sold soy milk, almond milk, or string cheese of any variety.

Meats & Other Proteins

The most commonly sold meats/proteins were eggs (70.6%), hot dogs (70.6%), peanut butter (70.6%), and bologna (58.8%). Bologna was sold more frequently than

leaner lunch meat such as turkey (29.4%). Regular pork bacon was sold at 35.3% of stores surveyed compared to only 11.8% of stores that sold turkey bacon.

More than one-third of stores (35.3%) sold lean meat/protein, including chicken breast, ground turkey, turkey lunch meat, and/or turkey bacon. No corner stores or gas stations with convenience stores sold lean meat/protein.

None of the stores sampled sold fresh fish, but canned tuna fish was offered at 76.5% of stores and sardines were sold at 58.8% of sampled stores.

Canned and dried beans were offered at a number of stores, including pork ‘n beans (70.6%), pinto beans (64.7%), black beans (58.8%), baked beans (52.9%), and kidney beans (52.9%).

Snack Food Items

All stores sampled sold some variety of snack food items, including potato chips and ice cream.

Popcorn (94.1%), sunflower seeds (94.1%), granola bars (82.4%), and pretzels (76.5%) were also available at the majority of stores surveyed. Frozen pizza was offered at 29.4% of stores. No stores sold rice cakes.

Additional snack food items that were not included on the survey but were sold frequently across all store types included mixed nuts (17.6%), pork rinds (17.6%), and trail mix (11.8%).

Table 2. Commonly Sold Items across All Food Categories & Store Types

| | |
|------------------|---|
| Fresh Fruits | Bananas, apples, oranges |
| Fresh Vegetables | Onions, potatoes, tomatoes |
| Grains | Ramen noodles, white rice, white flour |
| Proteins | Eggs, hot dogs, peanut butter |
| Dairy | Plain whole milk, cheddar cheese, evaporated milk |
| Snack Food | Popcorn, sunflower seeds, granola bars |

Table 3. A Snapshot of Food Availability by Store Type, 2015

| Food Item | Convenience Store | Corner Store | Gas Station w/ Convenience Store | Small Grocery Store | % of Total Stores Surveyed |
|------------------|-------------------|--------------|----------------------------------|---------------------|----------------------------|
| Apples | 1 | 0 | 0 | 4 | 29.4% |
| Bananas | 3 | 0 | 1 | 4 | 47.1% |
| Oranges | 1 | 0 | 0 | 3 | 23.5% |
| Onions | 3 | 0 | 0 | 3 | 35.3% |
| Potatoes (fresh) | 2 | 0 | 0 | 3 | 29.4% |
| Tomatoes | 1 | 0 | 0 | 3 | 23.5% |
| Ramen noodles | 9 | 2 | 2 | 4 | 100% |
| White rice | 7 | 2 | 1 | 4 | 82.4% |
| White flour | 9 | 1 | 0 | 4 | 82.4% |
| Eggs | 6 | 1 | 1 | 4 | 85.7% |
| Hot dogs | 6 | 1 | 1 | 4 | 85.7% |
| Peanut butter | 7 | 1 | 0 | 4 | 85.7% |
| Whole milk | 8 | 1 | 2 | 4 | 88.2% |
| Cheddar cheese | 6 | 1 | 1 | 4 | 70.6% |
| Evaporated milk | 6 | 1 | 0 | 4 | 64.7% |
| Popcorn | 9 | 2 | 2 | 3 | 94.1% |
| Sunflower seeds | 8 | 2 | 2 | 4 | 94.1% |
| Granola bars | 8 | 2 | 2 | 2 | 82.4% |

Table 4. A Contrast of Food Availability by Store Type, 2015

| Food Item | Convenience Store | Corner Store | Gas Station w/ Convenience Store | Small Grocery Store | % of Total Stores Surveyed |
|--------------------------|-------------------|--------------|----------------------------------|---------------------|----------------------------|
| White bread | 7 | 1 | 1 | 3 | 70.6% |
| Whole wheat bread | 4 | 1 | 0 | 3 | 47.1% |
| White rice | 7 | 2 | 1 | 4 | 82.4% |
| Brown rice | 1 | 1 | 0 | 2 | 23.6% |
| Whole milk | 8 | 1 | 2 | 4 | 88.2% |
| Low-fat milk | 0 | 0 | 0 | 1 | 5.9% |
| Ground beef | 0 | 0 | 0 | 3 | 17.6% |
| Ground turkey | 0 | 0 | 0 | 1 | 5.9% |
| Chicken thighs | 0 | 0 | 0 | 2 | 11.8% |
| Chicken breast | 0 | 0 | 0 | 3 | 17.6% |
| Regular bacon | 2 | 0 | 0 | 4 | 35.3% |
| Turkey bacon | 2 | 0 | 0 | 0 | 11.8% |
| Lunch meat (bologna) | 5 | 0 | 1 | 4 | 58.8% |
| Lunch meat (lean turkey) | 3 | 0 | 0 | 2 | 29.4% |

Analysis of Current SNAP Stocking Requirements

Six of the 13 authorized SNAP retailers failed to meet current SNAP stocking requirements for retail stores and offer at least three items in each of the four basic food categories (Table 5). The six stores included four convenience stores and two gas stations with convenience stores.

Three of the four convenience stores failed to meet SNAP stocking requirements for dairy items. The fourth convenience store did not meet current SNAP retail criteria in two categories – 1) dairy and 2) meat, poultry or fish.

One of the two gas stations did not offer a minimum of three items in either the 1) vegetables and fruit or 2) bread or cereal category. The other gas station failed to meet SNAP standards for meat, poultry or fish.

All of the SNAP authorized stores met current requirements for perishable food, offering at least one perishable item in at least two of the four basic food categories.

Analysis of Proposed SNAP Stocking Requirements for Items in Basic Food Categories

Of the 13 authorized SNAP retailers, only one store – a small grocery store (ID #31) – met all of the proposed SNAP stocking requirements for retail stores and sold at least seven items in each of the four basic food categories (Table 5).

Two of the 13 SNAP stores failed to meet proposed criteria for fruits & vegetables (F&V). Both of these stores were gas stations with convenience marts attached. Only six SNAP stores sold fresh fruits and vegetables – less than half of all the SNAP-authorized stores sampled. The majority of the stores were able to meet the SNAP requirements for vegetables and fruit by stocking canned goods. In fact, the most commonly sold F&V items were canned tomato sauce (12 stores), spaghetti sauce (12 stores), and canned green beans (11 stores).

Four of the 13 SNAP stores failed to meet standards for grains, including (1) convenience store, (2) gas stations with convenience stores, and (1) small grocery store. Healthy whole grains were limited. Whole wheat bread was sold at six stores, and brown rice was only offered at three SNAP stores. However, most stores sold highly processed/refined grains, including white/polished rice (11 stores), white flour (11 stores), sugary breakfast cereal (10 stores), and white bread (9 stores). All 13 SNAP-authorized retailers offered high-sodium packaged Ramen noodles as a grain item.

Twelve of the 13 participating SNAP stores failed to meet standards for dairy products. Only one of the SNAP stores sold low-fat milk. Whole milk was available at almost all of the stores (12 stores). Cheddar cheese and evaporated milk were also commonly sold dairy items (each was sold at 9 SNAP-authorized stores). None of the SNAP stores sold soy milk, almond milk, low-sugar yogurt, or string cheese.

Eight of the 13 stores failed to meet SNAP standards for meat, poultry or fish. The most commonly sold meats/proteins were eggs, hot dogs and canned tuna fish (each was sold at 10 SNAP stores). Bologna was offered more frequently than leaner lunch meat such as turkey (8 stores and 1 store, respectively). Regular pork bacon was sold at six SNAP-authorized stores; only one SNAP store sold turkey bacon. None of the SNAP-authorized retailers sold fresh fish, but canned tuna fish was offered at 10 stores.

Analysis of Proposed SNAP Stocking Requirements for Perishable Food Items

Two of the 13 SNAP-authorized stores failed to meet proposed stocking criteria for offering perishable items in at least three of the basic food categories (Table 6). One store was a gas station with convenience store attached and it sold perishable items in two

categories: 1) dairy and 2) meat, poultry or fish. The other store was a convenience store and only offered one perishable item in the “bread and cereal” food category.

Table 5. SNAP Retail Inventory in Four Basic Food Categories

| Store ID # | Store Type | # of Fruit or Vegetable Items Sold | # of Bread or Cereal Items Sold | # of Dairy Items Sold | # of Meat, Poultry, or Fish Items Sold |
|------------|----------------------------------|------------------------------------|---------------------------------|-----------------------|--|
| 11 | Convenience store | 10 | 8 | 2 | 8 |
| 14 | Gas station w/ convenience store | 2 | 2 | 3 | 3 |
| 18 | Convenience store | 14 | 11 | 4 | 3 |
| 20 | Convenience store | 15 | 11 | 4 | 6 |
| 25 | Small grocery store | 32 | 15 | 4 | 10 |
| 28 | Convenience store | 18 | 9 | 3 | 4 |
| 31 | Small grocery store | 40 | 13 | 7 | 14 |
| 54 | Small grocery store | 13 | 5 | 5 | 8 |
| 63 | Small grocery store | 27 | 15 | 5 | 17 |
| 76 | Gas station w/ convenience store | 4 | 4 | 3 | 1 |
| 77 | Convenience store | 7 | 7 | 2 | 3 |
| 84 | Convenience store | 17 | 6 | 0 | 2 |
| 87 | Convenience store | 15 | 8 | 2 | 4 |

Table 6. SNAP Retail Inventory for Perishable Items in Four Basic Food Categories

| Store ID # | Store Type | # of Perishable Fruit or Vegetable Items Sold | # of Perishable Bread or Cereal Items Sold | # of Perishable Dairy Items Sold | # of Perishable Meat, Poultry, or Fish Items Sold | Total # of Food Categories that Included Perishable Items |
|------------|----------------------------------|---|--|----------------------------------|---|---|
| 11 | Convenience store | 0 | 1 | 1 | 5 | 3 |
| 14 | Gas station w/ convenience store | 0 | 0 | 3 | 2 | 2 |
| 18 | Convenience store | 2 | 3 | 3 | 3 | 4 |
| 20 | Convenience store | 0 | 2 | 3 | 4 | 3 |
| 25 | Small grocery store | 17 | 4 | 3 | 8 | 4 |
| 28 | Convenience store | 5 | 2 | 2 | 4 | 4 |
| 31 | Small grocery store | 25 | 4 | 6 | 12 | 4 |
| 54 | Small grocery store | 3 | 0 | 4 | 6 | 3 |
| 63 | Small grocery store | 10 | 4 | 4 | 14 | 4 |
| 76 | Gas station w/ convenience store | 1 | 1 | 3 | 1 | 4 |
| 77 | Convenience store | 1 | 0 | 1 | 1 | 3 |
| 84 | Convenience store | 0 | 1 | 0 | 0 | 1 |
| 87 | Convenience store | 0 | 1 | 2 | 2 | 3 |

Potential Corner Store Partners & Champions

Eight stores surveyed for this study were identified as potential partners and champions for future corner store scale-ups based on one or more of the following criteria:

1. Have capacity to stock healthy food items, including extra refrigeration and/or freezer space
2. Currently stock healthy food items
3. Owner expressed interest in offering more healthy food items as part of store inventory

Table 7 lists these eight stores by unique identification number and store type, and highlights the criteria each met for selection as a potential corner store partner/champion.

Table 7. Potential Corner Store Partners & Champions

| Store ID # | Store Type | Criteria #1 (capacity) | Criteria #2 (current stock) | Criteria #3 (owner buy-in) |
|------------|-------------------------------------|---------------------------|--------------------------------|-------------------------------|
| 1 | Corner store | X | | |
| 11 | Convenience store | | | X |
| 25 | Small grocery store | X | X | |
| 31 | Small grocery store | | X | X |
| 46 | Convenience store | X | X | X |
| 54 | Small grocery store | X | X | |
| 63 | Small grocery store | X | X | X |
| 76 | Gas station w/ convenience store | X | | X |

Discussion

“All we sell is junk food!” These were the matter-of-fact sentiments of a store clerk working at one of the convenience stores surveyed for this study. Her remarks paint a sobering picture of the problem of healthy food availability in Northwest Atlanta and align with the realities of millions of Americans who live, work, and play in food desert communities and have limited or no access to healthy and affordable foods. Over the last 20 years, literature on the impact of food deserts has begun to take shape, and there have been calls for movements to address the issue of healthy food access and availability. Healthy corner store initiatives have cropped up throughout the country to help address the food availability gap in many food desert communities.

Results of this study found that healthy foods such as fresh fruits and vegetables, whole grains, and lean proteins were limited at small food stores that are ubiquitous in this community. However, high-sugar and calorie-dense snacks were readily available. Increasing the availability of healthy foods at corner stores and convenience stores, which dominate the food landscape in Northwest Atlanta, could help to improve the diets of residents who live in this community and reduce their risks for chronic diseases associated with poor diet such as obesity, Type 2 diabetes, heart disease, and some cancers.

An Emory University team has already developed key partnerships in Northwest Atlanta to establish community gardens and conduct in-store cooking demonstrations and tours at one of the two large grocery stores operating in this area. This study brings smaller food retailers into the mix as potential partners to address food insecurity issues in the community.

This study benefited from the use of the U.S. Department of Agriculture's Community Food Security Assessment Toolkit and Thrifty Food Plan, which were used to develop the survey tool to assess the availability of healthy foods at small food stores in Northwest Atlanta.

This study also served as a litmus test to gauge if small food stores are complying with current and proposed federal guidelines for stocking foods. Findings from this study indicate that a significant number of small food stores operating in Northwest Atlanta that participate in the Supplemental Nutrition Assistance Program (SNAP) did not offer a variety of healthy foods, such as fresh or frozen vegetables, whole grain rich bread or brown rice, low-fat dairy such as fat-free or skim milk, or lean meats and proteins like chicken breast or ground turkey. If an inventory audit were conducted today for SNAP vendors operating in Northwest Atlanta, six of the 13 SNAP-authorized retailers sampled for this study could face losing their SNAP eligibility based on current SNAP stocking criteria; and all but one could be disqualified from the program based on the proposed SNAP stocking requirements. Removing these small food stores from the Supplemental Nutrition Assistance Program would mean that thousands of SNAP beneficiaries who live in this "food desert" community would have even fewer options to buy healthy food.

The findings of this study should be interpreted in the context of several limitations. First, these data were collected from a specific geographic region in Atlanta, Georgia (Northwest Atlanta) and results may not be generalizable to other food desert communities.

Although purposive sampling to achieve saturation was used, the sample size was also small (n=17) and provided only a snapshot of food availability in Northwest Atlanta.

It is recommended that additional small food stores in the study area be surveyed to validate the findings of this study.

In addition, while diligent efforts were made to map and identify food retailers operating in the study area using Census tract data and street canvassing, it is possible that not all stores were captured.

Finally, the quantitative study design did not represent the perspectives of storeowners or consumers. Future studies should interview Northwest Atlanta storeowners and residents to gauge their attitudes and beliefs about the availability of healthy food in this community.

Recommendations

Small retail stores such as convenience stores, corner stores, gas stations with convenience stores, and small grocery stores are an important food access point for low-income residents living in Northwest Atlanta food deserts. It would be ideal if these stores could sell a variety of healthy foods. It is recommended that the next phase of this study explore the feasibility of establishing a healthy corner store network in Northwest Atlanta to increase healthy food availability in this community. The Food Trust's Healthy Corner Store Initiative in Philadelphia and the Los Angeles Food Policy Council's work with corner storeowners in South Los Angeles provides encouraging evidence for interventions targeting small food stores. To-date, the Philadelphia health department, in collaboration with The Food Trust, has successfully recruited 632 corner stores -- more than 25% of corner stores in the city's high-poverty neighborhoods, to participate in its Healthy Corner Store initiative (Kliff, 2012). Of those, 122 have received intensive support and technical assistance, been supplied with new refrigerators to store produce, and connected with wholesalers from whom they can purchase food at lower prices (Kliff, 2012).

A similar healthy corner store network could be launched for Northwest Atlanta small food stores. Eight stores surveyed for this study were identified as potential partners and champions for future corner store scale-ups based on one or more of the following criteria:

1. Have capacity to stock healthy food items, including extra refrigeration and/or freezer space
2. Currently stock healthy food items
3. Owner expressed interest in offering more healthy food items as part of store inventory

These stores represent a variety of small store types across all neighborhoods in the study area, including (3) convenience stores, (1) corner store, (1) gas station with convenience store, and (3) small grocery stores. The stores could be invited to join a healthy corner store network and serve as its inaugural members.

In addition, qualitative interviews with storeowners of these stores and other stores mapped for this study should be conducted to gauge barriers they face to stock healthy food items in their stores. Interviews should also be conducted with residents to gauge their perspectives about the availability of healthy food in their community. Storeowner and consumer perspectives will augment the quantitative findings of this study.

Finally, the results from this study could be used to inform and update the U.S. Department of Agriculture's (USDA) stocking requirements for authorized retailers of the Supplemental Nutrition Assistance Program (SNAP), which are proposed in the 2014 U.S. Farm Bill. There have been increasing calls-to-action to improve healthy food choices among SNAP beneficiaries as an opportunity to prevent obesity and reduce their risk for other debilitating chronic diseases. Strengthening the minimum SNAP stocking requirements for healthy foods could help to improve the nutritional quality of food that SNAP beneficiaries purchase. As such, it is strongly recommended that the USDA, which oversees SNAP, incorporate specificity into its proposed retail stocking criteria outlined in the 2014 Farm Bill. In addition to mandating the number of food items retailers must offer, the USDA should require SNAP-authorized retailers to sell minimum quantities of "healthy" foods in each of the four food categories, including:

- "Fresh" fruits and vegetables (limiting the percent of fruit and vegetable items that can be canned)

- Frozen fruits and vegetables
- Whole grains (e.g. whole wheat bread instead of white bread; brown rice in lieu of white rice; Ramen noodles should be excluded)
- Low-fat dairy (e.g. fat-free milk or skim)
- Lean meats & proteins (e.g. chicken breasts and ground turkey; bologna and hot dogs should be excluded)

The USDA should also consider issues that small food retailers may initially encounter to implement these changes and establish a mechanism to provide technical assistance and support to these stores. For example, stocking perishable items, including fresh fruits and vegetables and low-fat milk, could present challenges for some storeowners (Gittelsohn et al., 2012). Owners of smaller stores have reported difficulty identifying distributors to deliver fresh food items with consistent frequency and in smaller quantities at a reasonable cost. However, SNAP policies mandating that authorized retailers offer these types of healthy items could open a new market for food distributors, and potentially make it profitable to provide these products to smaller stores. In addition, small storeowners may need training on handling fresh produce, storing perishable food items, and merchandizing to extend shelf life and improve their overall sales (Gittelsohn et al., 2014). Authorized retailers may also need to make significant infrastructural changes to their stores to comply with the proposed stocking changes, including adding new refrigeration and freezer units. The USDA could establish a mechanism to offer technical assistance and support, including identifying available funding streams, to help small food storeowners increase their healthy food offerings for customers.

The USDA can implement these recommendations by exercising its authority to add specificity to the retail store stocking requirements as part of the federal review and rulemaking process for the 2014 Farm Bill, currently underway. While the proposed

stocking criteria aim to increase the quantity of items sold in each of the basic food categories, they don't go far enough and fail to mandate that these items be "healthy" foods. If the goal of the Supplemental Nutrition Assistance Program is to increase low-income Americans' access to healthier foods, then the current criteria must incorporate specific requirements and guidance for healthy foods. Asking stores to offer seven varieties of fruits and vegetables, when four of the seven items can be canned cranberry sauce, canned peaches in heavy syrup, frozen French fries, and iceberg lettuce, isn't achieving SNAP programmatic objectives to increase "healthy" food availability. While the USDA isn't obligated to help these businesses, the agency's support of small food stores in making policy and environmental changes could go a long way toward transforming food deserts all across the country into food oases.

References

Alwitt, L.F., & Donley, T.D. (1997). Retail stores in poor urban neighborhoods. *Journal of Consumer Affairs*, 31, 139-164.

Austin, C., Dijkerman, S. Hartrampf, A., Thummalapally, S., & Tran, K. (2012). Local food assessment in Northwest Atlanta. Rollins School of Public Health, Emory University.

Azuma, A.M., Gilliland, S., Vallianatos, M., & Gottlieb, R. (2010). Food access, availability, and affordability in 3 Los Angeles communities, Project CAFÉ, 2004-2006. *Preventing Chronic Disease*, 7(2):A27.

Bolen, E., Rosenbaum, D., & Dean, S. (2014). Summary of the 2014 Farm Bill Nutrition Title: Includes Bipartisan Improvements to SNAP While Excluding Harsh House Provisions. Center on Budget and Policy Priorities. Retrieved from <http://www.cbpp.org/research/summary-of-the-2014-farm-bill-nutrition-title-includes-bipartisan-improvements-to-snap>

Bodor, J., Rice, J., Farley, T., Swalm, C., & Rose, D. (2010). The association between obesity and urban food environments. *Journal of Urban Health*, 87(5), 771-781.

Bodor, J.N., Rice, J.C., Farley, T.A., Swalm, C.M., & Rose D., (2010b). Disparities in food access: Does aggregate availability of key foods from other stores offset the relative lack of supermarkets in African-American neighborhoods? *Preventive Medicine*, 51(1), 63-67.

Bodor, J.N., Ulmer, V.M., Futrell, L.F., Farley, T.A. & Rose, D. (2010c). The rationale behind small food store interventions in low-income urban neighborhoods: Insights from New Orleans. *Journal of Nutrition*, 140(6), 1185-1188.

Borradaile, K.E., Sherman, S., Vander Veur, S.S., McCoy, T., Sandoval, B., Nachmani, J., Karpyn, A., & Foster, G.D. (2009). Snacking in children: The role of urban corner stores. *Pediatrics*, 124(5).

Castner, L., & Henke, J. (February 2011). Benefit redemption patterns in the Supplemental Nutrition Assistance Program. U.S. Department of Agriculture (USDA), Food and Nutrition Service. Retrieved from <http://www.fns.usda.gov/sites/default/files/ARRASpendingPatterns.pdf>

Centers for Disease Control and Prevention (CDC). (2012). How to use fruits and vegetables to help manage your weight. Retrieved from http://www.cdc.gov/healthyweight/healthy_eating/fruits_vegetables.html

Centers for Disease Control and Prevention (CDC). (2015a). Adult obesity facts. Retrieved from <http://www.cdc.gov/obesity/data/adult.html>

Change Lab Solutions (2013). Health on the shelf: A guide to healthy small food retailer certification programs. Retrieved from http://www.changelabsolutions.org/sites/default/files/Health_on_the_Shelf_FINAL_2013_0322-web_0.pdf

Cohen, B. (2002). Community food security assessment toolkit. Retrieved from <http://ers.usda.gov/publications/efan-electronic-publications-from-the-food-assistance-nutrition-research-program/efan02013.aspx>

The Food Trust. (2014). Healthy corner store initiative overview. Retrieved from http://thefoodtrust.org/uploads/media_items/healthy-corner-store-overview.original.pdf

Gittelsohn, J., Rowan, M., Gadhoke, P. (2012). Interventions in small food stores to change the food environment, improve diet, and reduce risk of chronic disease. *Preventing Chronic Disease*, 9:E59.

Gittelsohn, J., Laska, M.N., Karpyn, A., Klingler, K., & Ayala, G.X. (2014). Lessons learned from small store programs to increase healthy food access. *American Journal of Health Behavior*, 38(2):307-15.

Hee-Jung, S., Gittelsohn, J., Miyong, K., Suratkar, S., Sharma, S., & Anliker, J. (2009). A corner store intervention in a low-income urban community is associated with increased availability and sales of some healthy foods. *Public Health Nutrition*, 12(11), 2060-2067.

Kliff, S. (2012, June 8). Will Philadelphia's experiment in eradicating 'food deserts' work? Washington, D.C.: *The Washington Post*. Retrieved from http://www.washingtonpost.com/blogs/wonkblog/post/will-philadelphias-experiment-in-eradicating-food-deserts-work/2012/06/08/gJQAU9snNV_blog.html

Levi, J., Segal, L., St. Laurent, R., Kohn, D. (2011). F as in fat: How obesity threatens America's future. Trust for America's Health.

Los Angeles Food Policy Council (2015). Programs and policy: Healthy Neighborhood Market Network. Retrieved from <http://goodfoodla.org/policymaking/healthy-neighborhood-market-network/>

Martin, K.S., Havens, E., Boyle, et al. (2012). If you stock it, will they buy it? Healthy food availability and customer purchasing behavior within corner stores in Hartford, CT, USA. *Public Health Nutrition*, 10, 1-6.

McLaughlin, I., & Kramer, K. (2012). Food retailer licensing: An innovative approach to increasing access to healthful foods. *Preventing chronic Disease*, 9:120127.

Mikkelsen, L., & Chehimi, S. (2007). The links between the neighborhood food environment and childhood nutrition. *Prevention Institute*.

New York Law School Racial Justice Project. (2012). Unshared bounty: How structural racism contributes to the creation and persistence of food deserts. Retrieved from <http://www.racialjusticeproject.com/wp-content/uploads/sites/30/2012/06/NYLS-Food-Deserts-Report.pdf>

Ohri-Vachaspati, P. & Leviton, L.C. (2010). Measuring food environments: A guide to available instruments. *American Journal of Health Promotion* 24 (6): 410-424.

O'Malley, K., Gustat, J., Rice, J. & Johnson, C.C. (2013). Feasibility of increasing access to healthy foods in neighborhood corner stores. *Journal of Community Health*, 38, 741-749.

Pitts, S.B., Bringolf, K.R., Lloyd, C.L. McGuirt, J.T., Lawton, K.K., Morgan, J. (2013). Formative evaluation for a healthy corner store initiative in Pitt County, North Carolina: Engaging stakeholders for a healthy corner store initiative, part 2. *Preventing Chronic Disease*, 10:120319.

Powell, L.M., Slater, S., Mirtcheva, D., Bao, Y., & Chaloupka, F.J. (2007). Food store availability and neighborhood characteristics in the United States. *Preventive Medicine*, 44(3), 189-195.

Raja, S., Ma, C., Yadav, P. (2008). Beyond food deserts: Measuring and mapping racial disparities in neighborhood food environments. *Journal of Planning Education and Research*, 27(4):469–82.

Rose, D., & Richards, R. (2004). Food store access and household fruit and vegetable use among participants in the US Food Stamp Program. *Public Health Nutrition*, 7(8), 1081-1088.

U.S. Department of Agriculture (USDA), Food and Nutrition Service, Office of Policy Support. (July 2014). Trends in Supplemental Nutrition Assistance Program participation rates: Fiscal year 2010 to fiscal year 2012 – summary. Retrieved from <http://www.fns.usda.gov/sites/default/files/ops/Trends2010-2012-Summary.pdf>

U.S. Department of Agriculture (USDA). (2015). Food deserts. Retrieved from <http://apps.ams.usda.gov/fooddeserts/fooddeserts.aspx>

U.S. Department of Agriculture (USDA). (2008). Food and nutrition act of 2008. Retrieved from <http://www.fns.usda.gov/sites/default/files/snap/Food-And-Nutrition-Act-2008.pdf>

U.S. Department of Agriculture (USDA). (2011). Requirements and specifications for SNAP HIP fruit and vegetable purchases. Retrieved from http://www.fns.usda.gov/sites/default/files/purchase_list.pdf

U.S. Department of Agriculture (USDA). (2013). Retail Store Eligibility USDA Supplemental Nutrition Assistance Program. Retrieved from

<http://www.fns.usda.gov/snap/retail-store-eligibility-usda-supplemental-nutrition-assistance-program>

U.S. Department of Agriculture (USDA). (2014, March 21). Supplemental Nutrition Assistance Program provisions of the Agricultural Act of 2014: Implementing memorandum. Retrieved from

<http://www.fns.usda.gov/sites/default/files/SNAP%20Provisions%20of%20the%20Agricultural%20Act%20of%202014%20-%20Implementing%20Memo.pdf>

Wang, Y., & Beydoun, M.A. (2007). The obesity epidemic in the United States – gender, age, socioeconomic, racial/ethnic, and geographic characteristics: A systematic review and metaregression analysis. *Epidemiologic Reviews*, 29, 6-28.

Appendix A: Definition of Store Terms

The definitions for “large food retailers” and “small food retailers” used in this study were adopted from Change Lab Solutions, which based its definitions on interviews with healthy food retail program coordinators, a scan of peer-reviewed food retail studies, and a review of government agency and major food industry organization websites.

Large Food Retailers

Stores that offer a wide selection of grocery items in addition to nonfood items and have four or more cash registers.

- **Supermarket:** Sells nonfood and grocery items, including canned and frozen foods, fresh produce, fresh and prepared meat and fish, dairy, and dry goods. Typically includes service deli/butcher counter, bakery, and produce department. Offers a large selection of moderately priced goods. Part of large chain (five or more stores). \$2 million or more in annual sales. Median square footage in the United States is 46,000.
- **Large Grocery Store:** Sells mostly grocery items, including canned and frozen foods, fresh produce, fresh and prepared meat and fish, dairy, and dry goods. Typically includes service deli/butcher counter, bakery, and produce department. Independently owned or part of small chain (fewer than five stores). Sometimes referred to as “full-service grocery stores.”

Small Food Retailers

Stores that offer a limited selection of grocery items in addition to convenience (ready-to-eat) food and beverages, may not offer any fresh produce, and have three or fewer cash registers.

- **Small Grocery Store:** Sells mostly grocery items, including canned and frozen foods, fresh produce, fresh and prepared meat and fish, dairy, and dry goods. Three or fewer cash registers. Usually independently owned. Sometimes referred to as “neighborhood groceries,” “small food stores,” “markets,” and “independent grocery stores.”
- **Convenience Store:** Sells mostly convenience food items (including prepared and ready-to-eat foods, bread, milk, snacks, and soda). No fresh meat and limited or no fresh produce and other staple food items. May sell alcohol, tobacco, and gas. May be independently owned or part of a chain. Two or fewer cash registers. 2,000-3,000 square feet. Sometimes referred to as “food marts,” “mini-marts,” “mom and pops,” “bodegas,” and “corner stores.”
 - **Corner Store:** An urban convenience store that is independently owned and often sell alcohol and tobacco products. Sometimes referred to as “convenience stores” but are usually associated with a specifically urban environment. In this study, corner stores were isolated in densely populated areas and not part of a strip mall or anchored in a shopping center.
- **Specialty Food Store:** Primarily sells a single food category, such as meat and seafood markets, produce markets and stands, dairy stores, candy and nut stores, and bakeries.

Appendix B: Letter to Corner Storeowners

August 15, 2015

Dear Storeowner:

My name is Ashante' Dobbs-Cooper and I am a public health student at Emory University. I am conducting a research project on healthy food availability in Northwest Atlanta. Gracie Storm is also a student at Emory and is helping me with this project. I would like to request your permission to visit your store and conduct an in-store survey of the foods you sell.

I grew up just a few miles from your store (off Baker Road) and attended high school in this area (Frederick Douglass High School), so I know how important your store is to members of this community. It would be an honor to survey your store for my project.

I understand that you may have concerns about allowing me to visit your store and take a survey of your food items. Please be assured that I will *not* be evaluating or spying on your store. I will not publish any information listing your store's name, policies, or prices. I will not interview or question your employees or customers or interrupt the normal flow of business in your store. The information I collect from the store survey will be completely confidential. The findings of the survey will not reference your specific store or store name.

If you would like more information about my project, please feel free to contact my Emory University advisor Dr. Amy Webb Girard. Dr. Girard can be reached at 404-727-8807 or awebb3@emory.edu.

I will follow up with you to confirm if I can visit your store to conduct the survey and schedule a date and time that is convenient for you.

Thank you in advance for considering my request.

Kind regards,

Ashante' Dobbs-Cooper
Emory University
Rollins School of Public Health
adobbs2@emory.edu

Appendix C: Corner Store Survey Tool

Store Demographics

Store ID
 Store Address
 Store Phone #
 Name of Store Owner/POC
 Store Type

Grocery-Related Services

| | | |
|--|-----|----|
| Accepts EBT | Yes | No |
| Accepts WIC | Yes | No |
| Has a kitchen | Yes | No |
| Has a deli | Yes | No |
| Sells alcoholic beverages | Yes | No |
| Sells cigarettes/tobacco products | Yes | No |
| Sells lottery tickets | Yes | No |
| Has an ATM | Yes | No |
| Store insights (e.g. storeowner has applied for EBT) | | |

**Availability
(Yes)**

Availability (No)

Fresh Fruits & Vegetables

| | | |
|--|-----|----|
| Apples | Yes | No |
| Bananas | Yes | No |
| Grapes (green or red) | Yes | No |
| Melons (cantaloupe, watermelon, honeydew, other) | Yes | No |
| Oranges | Yes | No |
| Peaches | Yes | No |
| Pears | Yes | No |
| Celery | Yes | No |
| Bell peppers | Yes | No |
| Lettuce (leafy green) | Yes | No |
| Lettuce (iceberg) | Yes | No |
| Onions | Yes | No |
| Potatoes | Yes | No |
| Tomatoes | Yes | No |
| Carrots (whole, bagged or loose) | Yes | No |
| Broccoli | Yes | No |
| Green beans | Yes | No |

| | | |
|--|-----|----|
| Green peas | Yes | No |
| Other fresh fruit or vegetable (write in) | Yes | No |
| Fresh Fruits & Vegetable Insights (e.g. quality) | | |

Frozen Fruits & Vegetables

| | | |
|--|-----|----|
| Orange juice (from concentrate) | Yes | No |
| Frozen broccoli | Yes | No |
| Frozen green beans | Yes | No |
| Frozen green peas | Yes | No |
| Frozen French fries | Yes | No |
| Other frozen fruit or vegetable (write in) | Yes | No |

Canned Fruits & Vegetables

| | | |
|--|-----|----|
| Canned green beans | Yes | No |
| Canned mixed vegetables | Yes | No |
| Canned collard greens | Yes | No |
| Canned spinach | Yes | No |
| Canned carrots | Yes | No |
| Sauerkraut | Yes | No |
| Canned mandarin oranges | Yes | No |
| Canned peaches | Yes | No |
| Canned pineapple | Yes | No |
| Fruit cocktail | Yes | No |
| Cranberry sauce | Yes | No |
| Canned mushrooms | Yes | No |
| Spaghetti sauce | Yes | No |
| Tomato sauce | Yes | No |
| Baby food | Yes | No |
| Other canned fruit or vegetable (write in) | Yes | No |

Breads, Cereals & Other Grain Products

| | | |
|-------------------------|-----|----|
| White bread | Yes | No |
| Whole wheat bread | Yes | No |
| Hamburger buns | Yes | No |
| Hot dog buns | Yes | No |
| Dinner rolls | Yes | No |
| French or Italian bread | Yes | No |
| Bagels | Yes | No |
| Bread crumbs | Yes | No |

| | | |
|------------------------------|-----|----|
| Cereal (e.g. Corn Flakes) | Yes | No |
| Oatmeal | Yes | No |
| Flour | Yes | No |
| Macaroni (elbow-style) | Yes | No |
| Noodles (yolk-free) | Yes | No |
| Spaghetti noodles | Yes | No |
| Ramen noodles | Yes | No |
| White rice | Yes | No |
| Brown rice | Yes | No |
| Grits | Yes | No |
| Other grain items (write in) | Yes | No |

Dairy

| | | |
|------------------------------|-----|----|
| Whole milk (plain) | Yes | No |
| Whole milk (flavored) | Yes | No |
| 2% milk (plain) | Yes | No |
| 2% milk (flavored) | Yes | No |
| 1% milk or skim (plain) | Yes | No |
| 1% milk or skim (flavored) | Yes | No |
| Evaporated milk | Yes | No |
| Soy milk | Yes | No |
| Almond milk | Yes | No |
| Yogurt (single-serving) | Yes | No |
| Yogurt (low-sugar) | Yes | No |
| Cheddar cheese | Yes | No |
| Mozzarella cheese | Yes | No |
| String cheese | Yes | No |
| Low-fat cheese | Yes | No |
| Other dairy items (write in) | Yes | No |

Meats & Other Proteins

| | | |
|----------------------------------|-----|----|
| Ground beef | Yes | No |
| Chicken (fryer, cut up or whole) | Yes | No |
| Chicken breast | Yes | No |
| Chicken thighs | Yes | No |
| Ground turkey | Yes | No |
| Chicken nuggets | Yes | No |
| Ground pork | Yes | No |
| Lunch meat (turkey) | Yes | No |
| Lunch meat (ham) | Yes | No |

| | | |
|-----------------------------------|-----|----|
| Lunch meat (bologna) | Yes | No |
| Hot dogs | Yes | No |
| Bacon | Yes | No |
| Turkey bacon | Yes | No |
| Eggs | Yes | No |
| Fresh fish | Yes | No |
| Frozen fish (i.e. fish sticks) | Yes | No |
| Tuna fish | Yes | No |
| Sardines | Yes | No |
| Pink salmon | Yes | No |
| Garbanzo beans (i.e. chick peas) | Yes | No |
| Kidney beans | Yes | No |
| Black beans | Yes | No |
| Pinto beans | Yes | No |
| Lima beans | Yes | No |
| Baked beans | Yes | No |
| Pork 'n beans | Yes | No |
| Peanut butter | Yes | No |
| Other meats & proteins (write in) | Yes | No |

Snack Food Items

| | | |
|----------------------------------|-----|----|
| Pretzels | Yes | No |
| Potato chips | Yes | No |
| Granola bars | Yes | No |
| Popcorn (bagged or microwavable) | Yes | No |
| Pudding | Yes | No |
| Rice cakes | Yes | No |
| Sunflower seeds | Yes | No |
| Ice cream | Yes | No |
| Frozen pizza | Yes | No |
| Other snack foods (write in) | Yes | No |

Appendix D: USDA Retail Store Eligibility Criteria & Definition of Terms (previous to updates made in 2014 Agricultural Act)

RETAIL STORE ELIGIBILITY

USDA SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM

To be eligible as a store in the Supplemental Nutrition Assistance Program (SNAP), your store(s) must sell food for home preparation and consumption and meet one of the criteria below:

- (A) Offer for sale, on a continuous basis, at least **three** varieties of qualifying foods in each of the following four staple food groups, with perishable foods in at least **two** of the categories:
- meat, poultry or fish
 - bread or cereal
 - vegetables or fruits
 - dairy products

OR

- (B) More than one-half (50%) of the total dollar amount of all retail sales (food, nonfood, gas and services) sold in the store must be from the sale of eligible staple foods.

Definitions:

Continuous basis means that on any given day of operation, a store must offer for sale and normally display in a public area, qualifying staple food items, with no fewer than three different varieties of food items in each of the four staple food categories.

Perishable foods are items that are either frozen staple food items; or, fresh, un-refrigerated or refrigerated staple food items that will spoil or suffer significant deterioration in quality within 2 to 3 weeks.

Variety means different types of foods, such as apples, cabbage and squash in the fruit or vegetable category; or, milk, cheese and butter in the dairy category. The following does not meet the variety requirement: having different brands and sizes; having the same item but with varying ingredients (e.g., plain sausage and spicy sausage); or having the same item but offering different types of the item (e.g., Granny Smith and Red Delicious apples). Food items with multiple eligible ingredients (e.g., pizza, frozen dinners) will be counted only once as a staple food, in the category of the main ingredient.

Retail sales include all retail sales of the firm including food, non-food, gas and services (such as rental fees, games, dry cleaners, lottery). However, fees directly connected to the processing of staple foods such as raw meat, poultry, and fish may be calculated as staple food sales under Criterion B.

Staple foods do not include accessory foods such as coffee; tea; cocoa; soda; non-carbonated drinks such as sports drinks, punches, and flavored waters; candy; condiments; spices; hot foods; or, foods ready to go or made to take out, like prepared sandwiches or salads.

**Appendix E: Updates to retail stocking criteria per 2014 Agricultural Act
(not to be implemented until federal rulemaking occurs)**

Provisions that are not to be implemented until Federal rulemaking occurs

Section 4002. Retailers.

This Section makes many changes to SNAP retailer qualifications and administration of SNAP EBT. The following provisions are not to be implemented until Federal rulemaking occurs, whereas other provisions, listed in categories A and D, must be implemented as directed or, in the latter case, are already SNAP policy.

- 1) In order to meet SNAP retailer eligibility criteria A, which currently requires stocking perishable items in 2 staple food categories and stocking 3 varieties of staple foods in 4 categories, **this provision requires stocking at least 7 varieties of staple foods in each of the 4 staple food categories and stocking perishable foods in at least 3 categories;**
- 2) Requires a unique Terminal ID for each EBT transaction;
- 3) Requires retailers to employ scanning or product look-up systems that also prohibit manually entered sales of ineligible items in SNAP authorized locations to ensure that only SNAP eligible items are sold; exceptions to scanning requirements are limited to firms determined by the Secretary to be located in an areas with limited access to food; and
- 4) Allows discretion in the approval of retailers who do not meet the statutory and regulatory eligibility requirements to participate, but are located in areas with limited access to food.