

FRESH PRODUCE ACCESS

Among Small Food Stores in
the City of Atlanta



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HEALTH

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Introduction

Key Takeaways

- **Small food stores are abundant in Atlanta, with higher concentrations in majority-Black and low-income, low-supermarket-access neighborhoods.**
- **Fresh produce was available in less than half (44%) of small stores overall and stark disparities in availability existed across neighborhoods.**
- **Among stores offering produce, we encouragingly found consistent quality, promotion, and prices across neighborhoods.**

Consuming fresh fruits and vegetables is broadly recognized as essential to a balanced diet and healthy lifestyle. The Dietary Guidelines for Americans 2020-2025 recommends fresh fruit and vegetable intake as part of a healthy

dietary pattern to promote health, reduce the risk of chronic disease, and meet nutrient needs.¹ However, **only 1 in 10 U.S. adults meet their fruit and vegetable intake recommendations,**² with similar rates found across Georgia.²

A key barrier to fruit and vegetable intake is having limited access to fresh produce. Distance to grocery stores, where fresh produce is most common, and lack of transportation have been cited as common barriers.^{3,4} Additionally, these barriers tend to disproportionately affect low-income neighborhoods and communities of color where fewer grocery stores exist, and convenience stores are abundant.⁴⁻⁷

The City of Atlanta has recently made substantial progress in expanding fresh food access to meet the goal of having at least 85% of Atlanta residents live within a half-mile of fresh affordable food by 2022. According to the City of Atlanta Fresh Food Access 2020 report, 75% of the city's residents lived within a half-mile of fresh produce in 2020 compared to 52% in 2015.⁸ Most of the expansion has been achieved via residents gaining access through new neighborhood markets, grocery stores, and farmer's markets. Although impressive, **progress across the city was achieved unevenly** with improved produce access occurring primarily in neighborhoods with higher proportions of White residents.⁸



This report provides several recommendations to transform the abundance of small food stores from being a barrier to fresh produce to an asset that can expand access.

While introducing new farmer’s markets and grocery stores has shown success in increasing access in Atlanta, **small food retail** presents an important opportunity to further accelerate progress towards Atlanta’s fresh produce goals. **Small food retailers, such as corner stores, convenience stores, gas-marts, dollar stores, and pharmacies offer several important advantages in carrying fresh produce compared to traditional channels.** First, these venues are more abundant than grocery stores and supermarkets, especially in low-income and minority neighborhoods,⁹⁻¹² making them both more accessible and less car-dependent.^{11, 13} Second, most convenience stores have extended hours, many of which are open 24/7, while most farmer’s markets have limited hours of operation; for instance, while popular, many Marta Markets are only open for 4 hours on a single weeknight.¹⁴ Moreover, selling fresh produce at convenience stores not only offers an opportunity to serve customers looking for fresh produce to prepare at home, but also customers on-the-go looking for a convenient option. Product companies are increasingly expanding their portfolios to include pre-packaged, on-the-go fresh produce snacks,¹⁵⁻¹⁷ and prior work by Morehouse School of Medicine¹⁸ highlights broad support for such items among Atlanta corner store customers. Despite small food stores’ potential, current initiatives have largely focused on introducing more grocery stores and farmer’s markets, which may or may not fit the community’s needs.

This report explores the current landscape of fresh produce access among convenience and other small food stores in the City of Atlanta by assessing fresh produce availability, variety, quality, pricing, and promotional strategies among 150 randomly selected small food stores. Building upon the City of Atlanta Fresh Food Access 2020 report⁸ and the prior corner store work of Morehouse School of Medicine,¹⁸ the current report highlights the economic and racial inequalities that persist in fresh produce access among Atlanta neighborhoods and explores the opportunities small food retail provides for equitable and sustainable change. We conclude with several recommendations for government officials, civil society, and local businesses to consider to further improve fresh produce access.



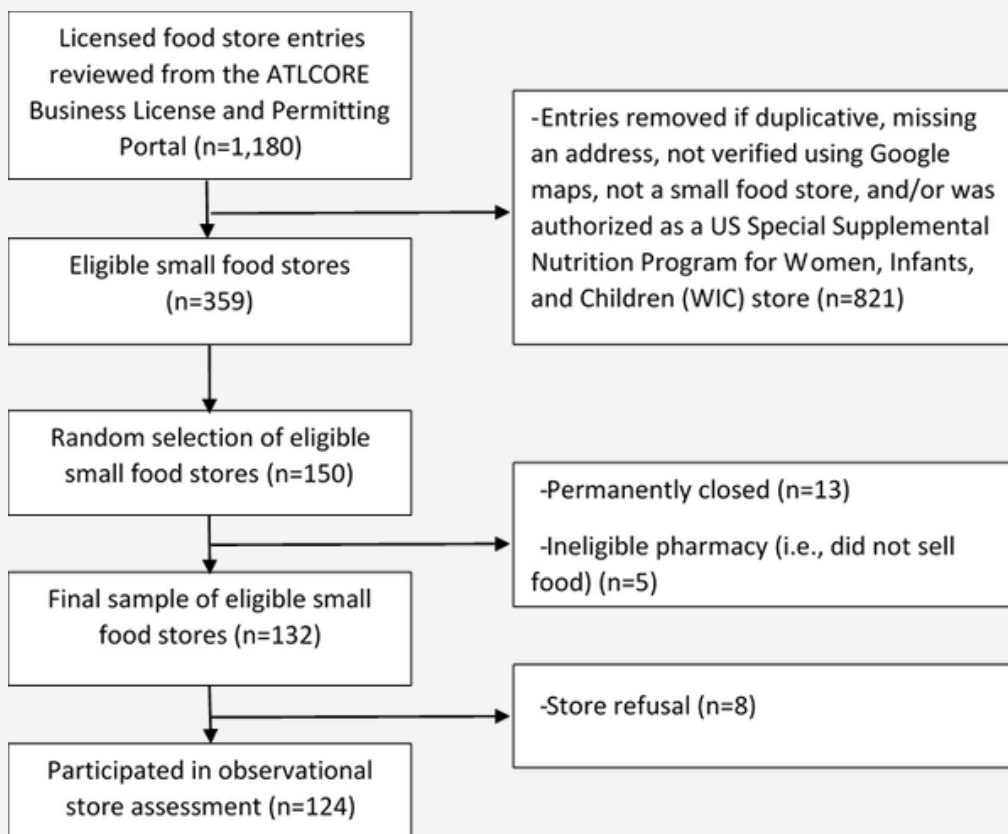
Methods

Store Sample

This project was led by the Healthy Food Retail Research Team at Emory University and consisted of visiting over 225 small-format food retailers across the City of Atlanta during the spring of 2022.

Stores were identified using a systematic enumeration and sampling strategy (Figure. 1). We conducted searches through the [ATLCORE Business License & Permitting Portal](#), where public licensing records can be identified via keywords, such as business type (e.g., dollar, food mart) and company names (e.g., Circle K, Walgreens). All identified entries were screened and verified using Google Maps and other web tools (e.g., [Georgia Department of Health Women, Infants, and Children \[WIC\] authorized vendor list](#)). Entries were removed if duplicative, missing an address, shown as permanently closed, or not a small food store (e.g., supermarket, butcher shops, authorized WIC store).

Figure 1. Sampling strategy



Of the 359 eligible small food stores identified, we randomly sampled 150 stores to examine fresh produce access. We used a stratified random sampling approach to ensure the proportions of convenience stores, gas-marts, dollar stores, and pharmacies matched that of the original eligible sample (n=359).

Data Collection

To assess food and beverages available in stores, a 4-page [assessment tool and protocol](#) were developed. The tool was adapted from previously validated store assessment forms¹⁹⁻²¹ and collected information on product availability, variety, prices, promotional placement, quality, and shelf space. (See Table 1 for a summary of measures). Multiple product categories were assessed, including fresh fruits and vegetables—the focus of this report.

Table 1. Fresh produce outcome measures

Fresh produce outcome measure	Description
Availability	Whether any fresh fruits/vegetables were carried at a store along with presence of specific items (e.g., bananas)
Product promotion	Whether fresh produce (fruits and/or vegetables) was seen from the entrance of the store
Pricing information	1. Whether price (regular and/or sale) was shown at the point of sale
	2. The average lowest price
Shelf space	Measured for fresh fruits and vegetables separately using a standard tape measure and rounded to the nearest foot
Produce variety	# of varieties of fruits and vegetables carried at a store
Produce quality	Fresh produce quality ok or poor

Store assessments were carried out by trained data collector(s) from March-May 2022 and lasted an average of 15-30 minutes. Out of the 132 eligible stores, 8 refused to participate, resulting in 124 stores with data successfully collected (93.9% of the final eligible random sample, see Figure 1).

Store and Neighborhood Characteristics

SNAP and Ownership Status



We linked store assessments with additional store information. Specifically, we identified each store's **Supplemental Nutrition Assistance Program (SNAP)** status as recorded by the U.S. Department of Agriculture (USDA)'s [SNAP Retailer Locator](#); and **the store ownership status** (corporate/chain versus independently owned) determined via previous protocols,²² which used publicly available information to make the determination.



Majority-Black and LILA Neighborhoods

Stores were also geocoded in ArcGIS Pro 3.0.3 and mapped onto census tracts to determine the socio-demographic characteristics of a store's neighborhood. We used the 2019 US Census Bureau's American Community Survey to determine whether a store is located in a **majority-Black neighborhood** (i.e., census tracts with $\geq 50\%$ non-Hispanic Black or African

American). We took an explicit racial equity lens given the persistent segregation of Black residents across Atlanta, which is some of the highest in the nation.²³ This ongoing legacy of residential segregation and redlining systematically shapes the resources and opportunities of neighborhoods, including those related to fresh produce access.

We also used USDA's Food Access Research Atlas 2019 to assess if stores were located in **low-income low-access (LILA) areas**, which are neighborhoods that are not only economically impoverished, but also have limited access to supermarkets.²⁴ We selected to examine LILA areas to ensure our work maps onto the City of Atlanta Fresh Food Access 2020 report⁸ and highlight that nationwide poor access to healthy food is an economic inequality problem affecting multiple racial groups.



NPUs

Additionally, we connected stores to their **Neighborhood Planning Unit (NPU)**. The City of Atlanta is divided into 25 NPUs, each consisting of several neighborhoods with unique histories.²⁵ Established in 1974, the NPUs are civic groups that make recommendations to the city government on matters such as zoning, land use, and other neighborhood concerns.²⁶

Data Analysis

In this descriptive analysis, we first examined how store locations and characteristics (e.g., SNAP status) mapped onto majority-Black and LILA neighborhoods. We then compared the availability of fresh produce across all neighborhood and store characteristics to identify whether disparities in fresh produce availability existed.

For stores that carried fresh produce, we further examined whether there were differences in produce quality, variety, shelf space, and front-of-store promotion across majority-Black and LILA neighborhoods. We compared variation in pricing information (e.g., whether price was shown at point of sale) among specific produce products commonly made available, such as apples and bananas.



Results

Small Food Stores are Abundant in Majority-Black and Low-Income, Low-Access (LILA) Neighborhoods

While small food stores are plentiful in the city of Atlanta, they are **distributed unevenly** across different neighborhoods. **Majority-Black neighborhoods have a greater number and concentration of small food stores compared to non-majority-Black neighborhoods** with a similar pattern observed among LILA neighborhoods (Figure 2). In fact, 89% of stores located in majority-Black neighborhoods were also located in a LILA area.

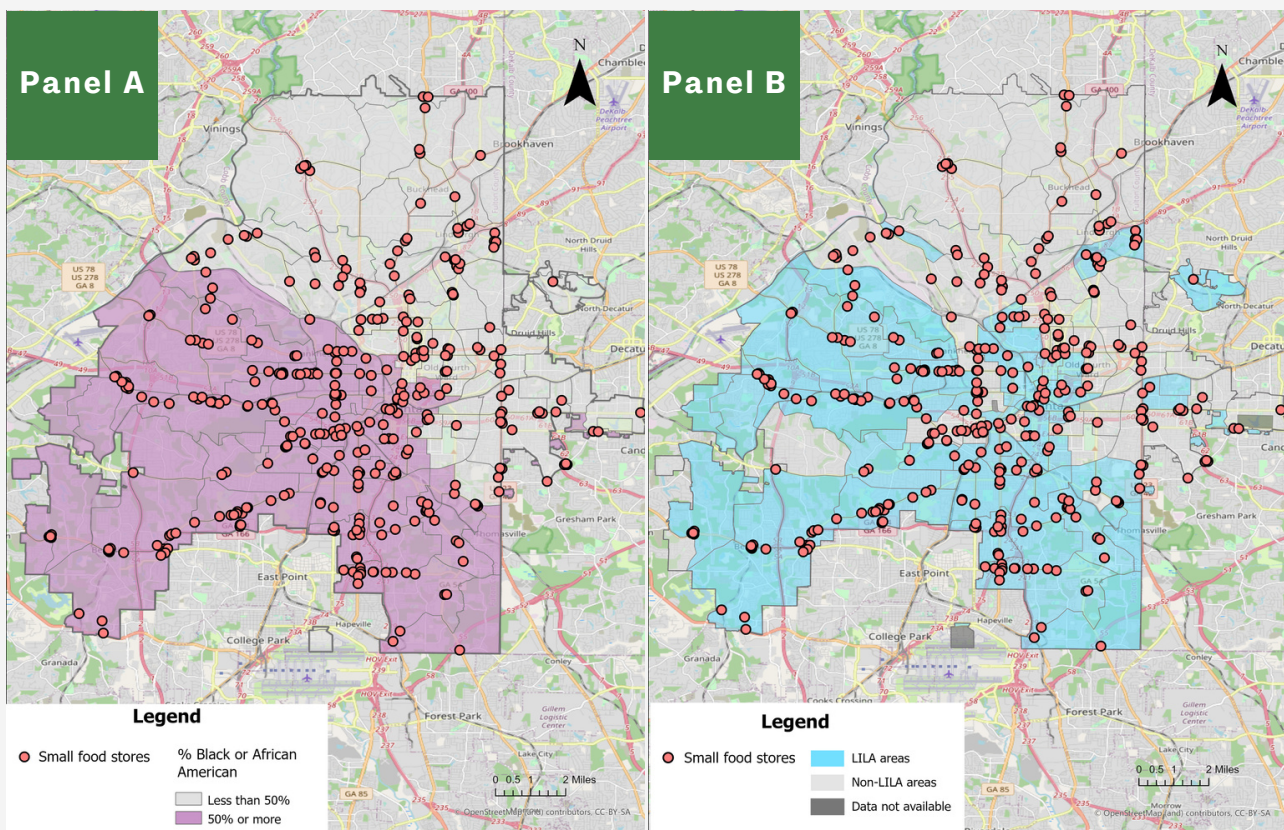
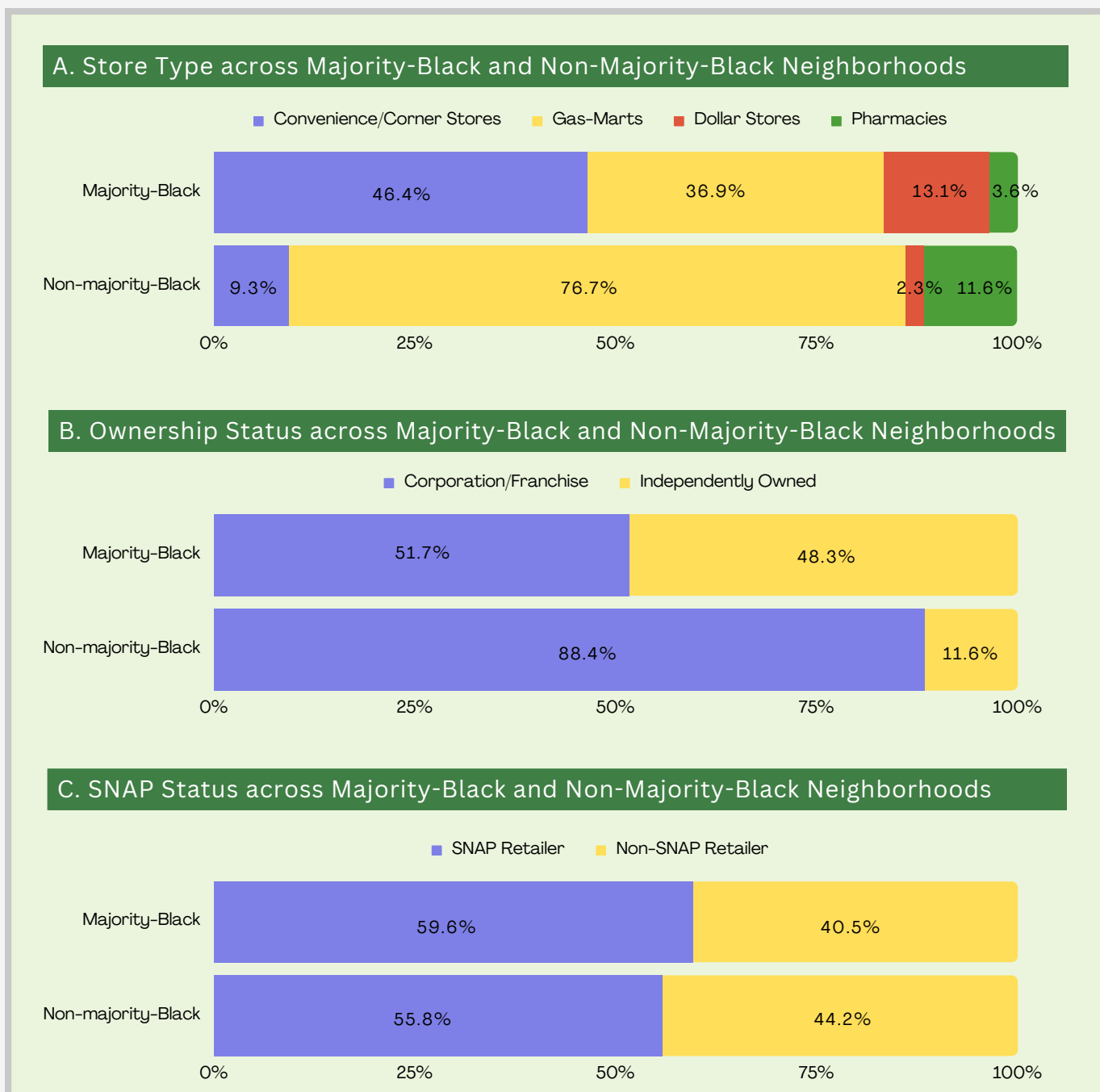


Figure 2. The distribution of small food stores (n=359) in Atlanta by majority- vs. non-majority-Black neighborhoods (Panel A), and by LILA vs. non-LILA areas (Panel B)
Note. LILA data is based on USDA's [2019 Food Access Research Atlas](#) (Initial release: April 2021) to align with data used in the [City of Atlanta Fresh Food Access Report](#).⁸

Small Food Store Types and Ownership Varies across Majority-Black and LILA Neighborhoods

In addition to an uneven distribution of small food store locations, store characteristics also varied across neighborhoods. Specifically, we observed that **majority-Black neighborhoods, compared to non-majority-Black, were more likely to have convenience and dollar stores, less likely to have stores with a corporate/franchise ownership model, but had similar rates of SNAP retailers** (Figure 3). We found similar patterns across LILA and non-LILA areas.

Figure 3. Store characteristics by majority- vs. non-majority-Black neighborhoods (n=132)



Fresh Produce Availability is Uncommon in Small Food Stores and Stark Disparities in Access Exist

Although small food stores are easily accessible across Atlanta and more common in majority-Black and LILA neighborhoods, **less than half (44%) carried fresh produce overall** with even worse availability among stores in majority-Black and LILA neighborhoods. **Only 36% of stores in majority-Black neighborhoods carried fresh produce compared to 61% in non-majority-Black neighborhoods**, which was a statistically significant difference. A similar pattern was observed across stores in LILA (40%) versus non-LILA areas (52%) (Figure 4).

Across the 25 NPUs in Atlanta, we observed high variation in fresh produce availability, ranging from none of the randomly-sampled stores in NPU-H or NPU-P carrying fresh produce to 86% of the randomly-sampled stores in NPU-F offering it. (See Appendix).

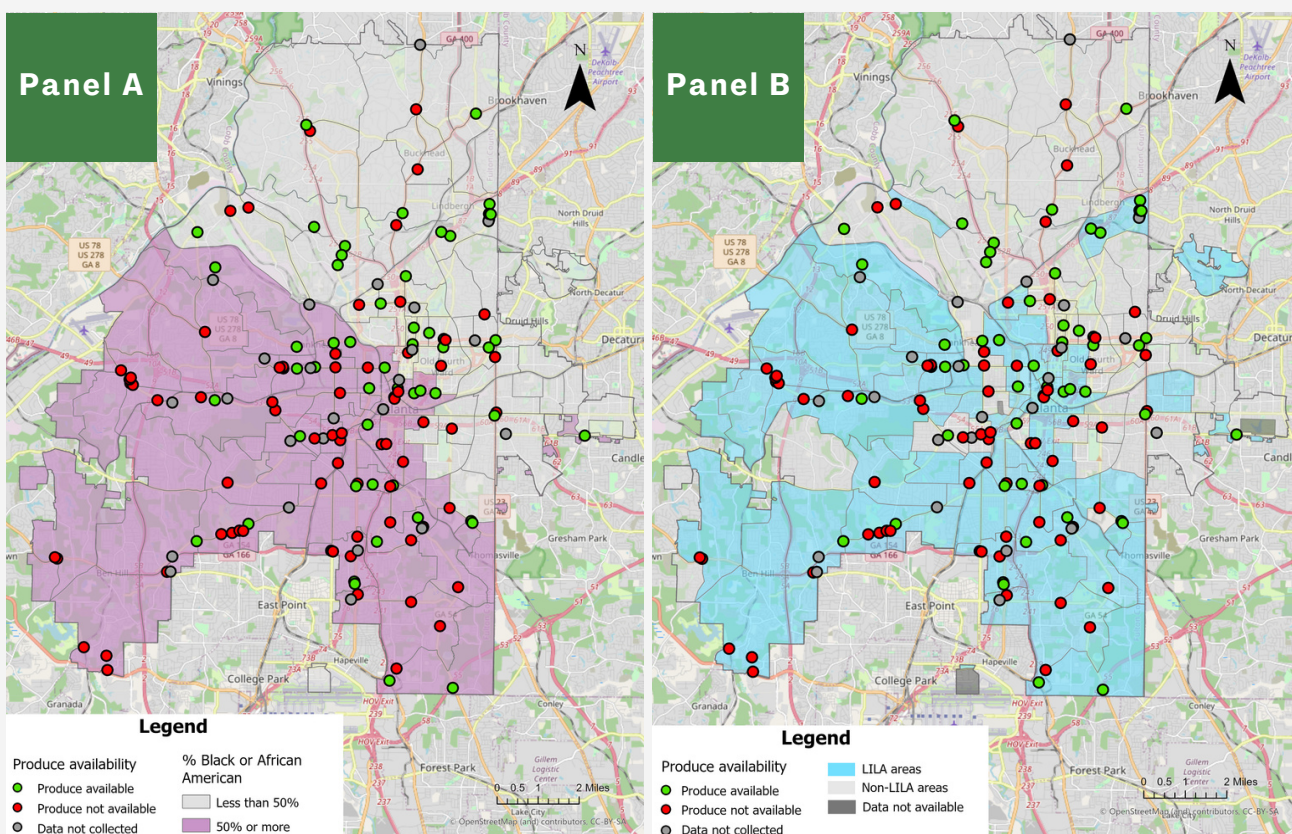
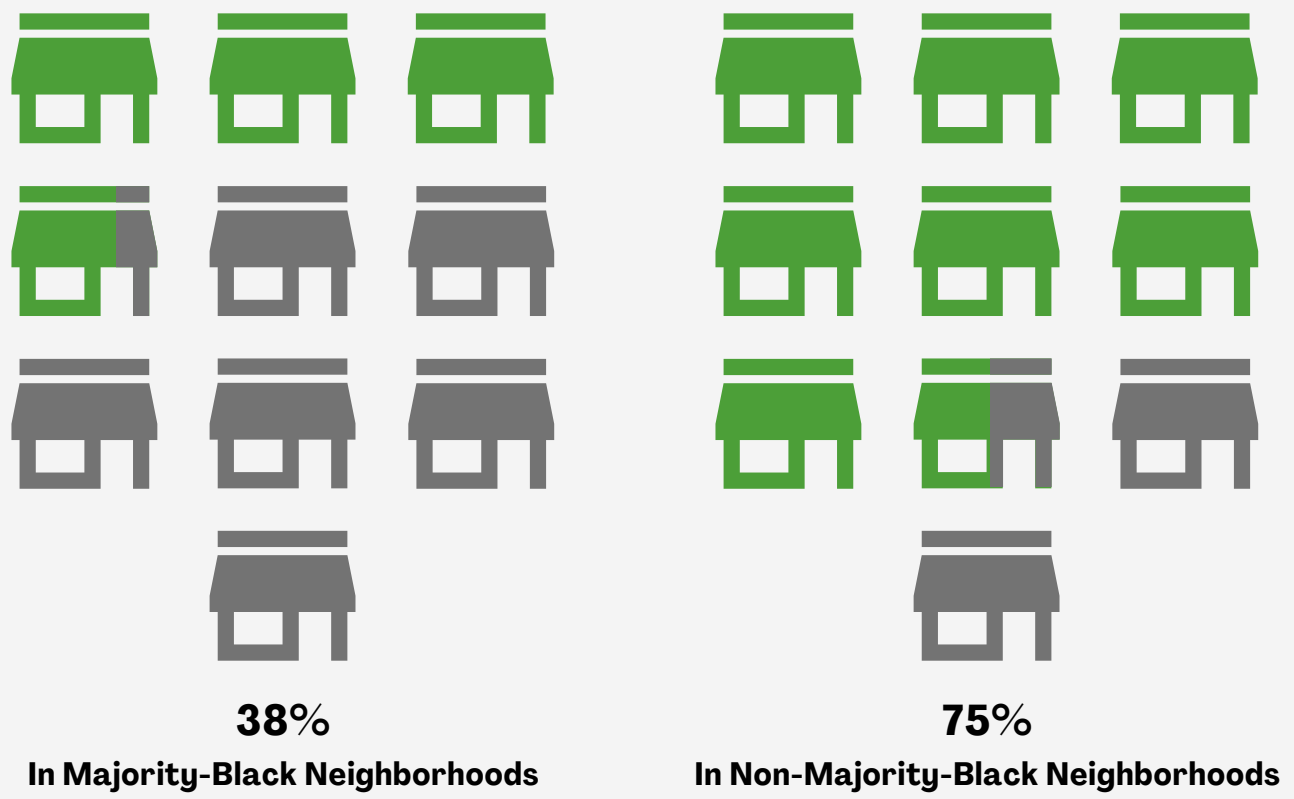


Figure 4. Produce availability among stores (n=150) in the city of Atlanta by majority- vs. non-majority-Black neighborhoods (Panel A), and by LILA vs. non-LILA areas (Panel B)
 Note. Stores that were permanently closed (n=10), not open (n=3), pharmacies without food (n=5), or refused to participate (n=8) are shown in gray.



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Figure 5. Percent of SNAP retailers that carried fresh produce in majority-Black neighborhoods compared to non-majority-Black neighborhoods (n=71)



In addition to the disparities observed across neighborhoods, produce availability also varied by store characteristics. Two notable findings were: (1) **none of the randomly-sampled dollar stores nor pharmacies offered any fresh produce** and (2) **SNAP retailers also had inadequate availability**, with almost half **NOT** offering any options. Discouragingly, we found even greater disparities when we examined fresh produce availability among SNAP retailers by neighborhood--**only 38% of SNAP retailers in majority-Black neighborhoods made produce available compared to 75% of SNAP retailers in non-majority-Black neighborhoods (Figure 5).**

Fruit Products were Popular, but Varieties Limited - Produce Quality and Promotion was Adequate

Among the 55 stores offering produce, we found fruit options to be most popular with nearly all stores (98%) offering at least one type of fruit, whereas only one-fifth (18%) offered any vegetables. Bananas were most common (91% of stores) followed by apples (62% of stores). In comparison, on-the-go snack packs of raw vegetables were rarely seen (2% of stores). We also noted the number of fruit and vegetable varieties were limited (2-3 choices on average), and shelf space was highly constrained to 2-3 feet.

Encouragingly, we found front store promotion of produce to be common (86%) and poor quality produce to be infrequent (15%). We also did not observe any apparent variation in varieties, promotion or quality across neighborhoods.

Consumers have Limited Price Information at the Point of Sale

We surveyed the price and consumer information for the two most common produce snacks—bananas and apples. Among stores that carried fruits, only 24% displayed prices for apples at the point of sale with even fewer (10%) displaying prices for bananas. This means well-informed decision-making for healthy products is more challenging among consumers.



The average price of an apple:

85¢

in majority-Black neighborhoods

\$1.1

in non-majority-Black neighborhoods

However, among the few stores with pricing information at the point of sale, stores in majority-Black and LILA neighborhoods tended to offer better prices for fresh fruits than stores in non-LILA and non-majority-Black neighborhoods.

Discussion

This report highlights the reality of fresh produce access among small food retailers (e.g., convenience/corner stores, gas-marts, dollar stores, and pharmacies) in the City of Atlanta. **Despite the high prevalence and accessibility of small food stores, the availability of fresh fruits and vegetables at these retail outlets is underwhelming, and geographic, socioeconomic, and racial disparities exist.** Access to fresh produce was significantly worse in neighborhoods with a higher concentration of poverty and proportion of Black residents compared to their wealthier, predominantly White counterparts. Such findings, while perhaps well known among residents living in southwest Atlanta, help to provide **quantitative evidence that illustrates** the ongoing ramifications that **both** economic inequality and structural racism play and how these manifest in the lack of access to foods that promote health and wellbeing.

Our motivation for preparing this report stemmed from multiple sources, including the prior corner store work of Morehouse School of Medicine,¹⁸ several informational meetings with community members from different sectors, and the City of Atlanta Fresh Food Access 2020 report.⁸ In particular, the 2020 report highlighted key improvements in resident access to fresh food through the increase of traditional venues, including supercenters, grocery stores, farmers markets, and other neighborhood markets⁸; yet, other sources of information suggested additional work might be needed.





The current report showcases the potential of leveraging small food retailers as an **additional asset** for fresh produce access expansion and one that could make equitable progress given (a) the ubiquity of these venues in marginalized neighborhoods and (b) that few differences in quality, promotion, and prices exist once produce is made available. Such work is not only beneficial to health, but potentially to the local economy, as studies show that healthy food retail outlets can have profound impacts on stimulating economic growth of minority-owned businesses and ensuring that dollars spent stay within the community.²⁷⁻²⁹ Therefore, initiatives that invest in small food stores have the potential to generate long-lasting transformation to local communities.



However, such work to transform these settings has been previously attempted in Atlanta¹⁸ with varying success. Thus, **we hope the findings in this report help to reinvigorate the action necessary to disrupt the current status quo and overcome the historical and present-day structures that impede fresh produce access.** Because such work will require support from multiple groups, we identify several specific actions for policymakers, retailers, suppliers, organizations, and other community members to consider to further accelerate equitable fresh produce access for Atlanta residents.

Recommendations

1. Enact a City ordinance mandating dollar stores to carry fresh fruits and vegetables

This project found that while dollar stores are more prevalent in LILA and majority-Black neighborhoods, **none carried produce**. Local governments should consider **exercising their licensing authority to require dollar stores to stock** a minimum amount and varieties of **fresh produce products** and promote better access in low-income and Black communities.³⁰

2. Offer tax incentives to increase the supply of fresh produce and healthy snack options

Local and State government could also consider **a reward approach** by offering tax exemptions,³⁰ or other incentive-based tax structures, to 1) **independently-and/or minority-owned small food retailers** who carry fresh produce and 2) **produce distributors** capable of supplying corner stores with small orders as well as on-the-go fresh produce snacks (e.g., fresh fruit cups, carrot/celery sticks with dips) that align healthier options with the convenience store business model.

3. Update SNAP retailer requirements to mandate the stocking of fresh produce

The high proportion of **SNAP retailers** in majority-Black Atlanta neighborhoods that **did not carry fresh produce** highlights the need for a fresh produce (i.e. perishable) requirement to be added to the current SNAP program. Local authorities and community groups can advocate for the federal government to update the SNAP retailer eligibility requirements to include stocking fresh produce.

4. Provide infrastructure and technical assistance to stores

The City can consider supports to independently-owned stores who are willing to stock fresh produce by **providing free or discounted refrigeration and coolers and offering free training** on marketing and promotion of fresh produce.³³

Recommendations

5. Connect urban and regional farms (and their surplus) to corner stores to ensure consistent supply and distribution

The City should consider working with local organizations (e.g., [Food Well Alliance](#)) to **develop and subsidize a distribution program** that sources fresh produce from local and regional farms and delivers it to independent small food stores. The City and State should also consider: 1) investments in **gleaning programs**³¹ that can rescue the thousands of pounds of produce waste left in Georgia fields³² and 2) **updating sales permits and other low-barrier agreements** to allow farmers to set up produce stands/trucks in front of stores.³⁰

6. Develop creative ways to encourage retailer stocking of fresh produce

Local retailers associations (e.g., [Atlanta Retailers Association](#)) should explore **creating agreements with regional produce distributors**, like those used for packaged beverages and snacks, to **supply fresh produce snacks** to independently-owned stores as well as **support the promotion of these products** through signage and front-of-store displays. Such groups should also explore innovative digital applications that allow stores to leverage their collective purchasing power to incentivize distribution and minimize their costs.³⁴

7. Initiate community-specific promotional campaigns and incentive programs to increase consumer demand

The City and community organizations (e.g., [Open Hand](#)) can launch and expand their education and other promotional campaigns to: 1) increase knowledge in **easy ways to prepare fresh produce**, and 2) target convenience store customers to **replace unhealthy, ultra-processed snacks with fresh fruit/veggie options**.³³ Stores can also partner with local organizations (e.g., [Wholesome Wave](#)) in programs that allow customers to receive a dollar-to-dollar match on their produce purchases.

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Authorship:

This report was authored by Angela Zhang, MPH and Megan Winkler, PHD, RN.

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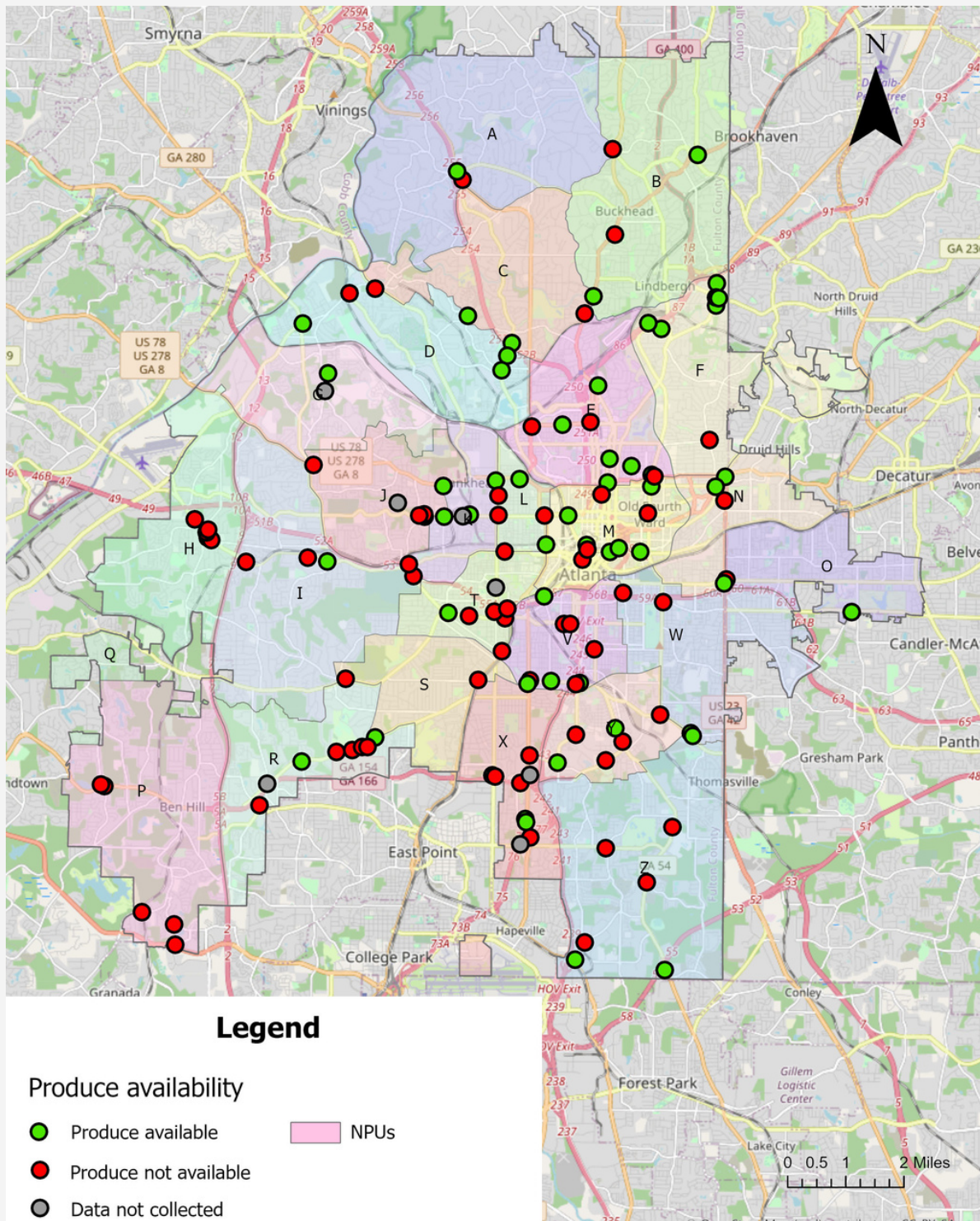
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Appendix

Produce availability among small food stores (N=132) across 25 NPUs in the city of Atlanta



NPU name	# of stores surveyed	Stores with any produce available	
		n	%
NPU-A	3	1	33.3
NPU-B	3	2	66.7
NPU-C	1	1	100.0
NPU-D	6	4	66.7
NPU-E	9	6	66.7
NPU-F	7	6	85.7
NPU-G	1	1	100.0
NPU-H	5	0	0.0
NPU-I	5	1	20.0
NPU-J	3	0	0.0
NPU-K	5	4	80.0
NPU-L	5	2	40.0
NPU-M	12	7	58.3
NPU-N	4	3	75.0
NPU-O	2	1	50.0
NPU-P	5	0	0.0
NPU-Q	0	0	0.0
NPU-R	6	1	16.7
NPU-S	3	1	33.3
NPU-T	7	1	14.3
NPU-V	9	4	44.4
NPU-W	5	2	40.0
NPU-X	7	3	42.9
NPU-Y	5	2	40.0
NPU-Z	6	2	33.3

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