Healthy Food Availability in Four Ohio Neighborhoods:
Findings from Nutrition Environment Measures Surveys, 2015-2019

Food Store Assessments

Beginning in 2015, food retail assessments were conducted annually in grocery stores, corner stores, pharmacies and dollar stores located in **four Ohio neighborhoods.** Food store assessments were used to systematically examine food availability, pricing, variety and quality *(1)*. These assessments were led by Case Western Reserve University's Swetland Center for Environmental Health, in collaboration with the Nationwide Children's Hospital in Columbus.

These assessment results will inform the broader study (Modeling the Future of Food in Your Neighborhood [foodNEST 2.0])." foodNEST 2.0 works to develop tools to provide trustworthy and practical decision-making tools that offer a systems lens within an equity framework to guide future community-driven food systems change.

Methods

Assessments and store site visits were conducted in the St. Clair-Superior (Cleveland) and Southside (Columbus) neighborhoods from 2015 to 2019. The Hough and Buckeye-Shaker neighborhoods in Cleveland were added for 2018-2019. Assessments were conducted by teams of two research staff. Some stores were visited twice per year for data validation.

Results

In total, 102 stores were visited. An average of 23 stores were visited per neighborhood per year and audited using the Nutrition Environment Measures Survey (NEMS). The neighborhood with the most stores visited and audited was St. Clair-Superior, while Buckeye-Shaker had the least. 67 stores were visited all five years.

The number of stores visited each year decreased in part due to stores closing. For instance, one grocery and two large dollar stores in St. Clair-Superior closed between 2018 and 2019.
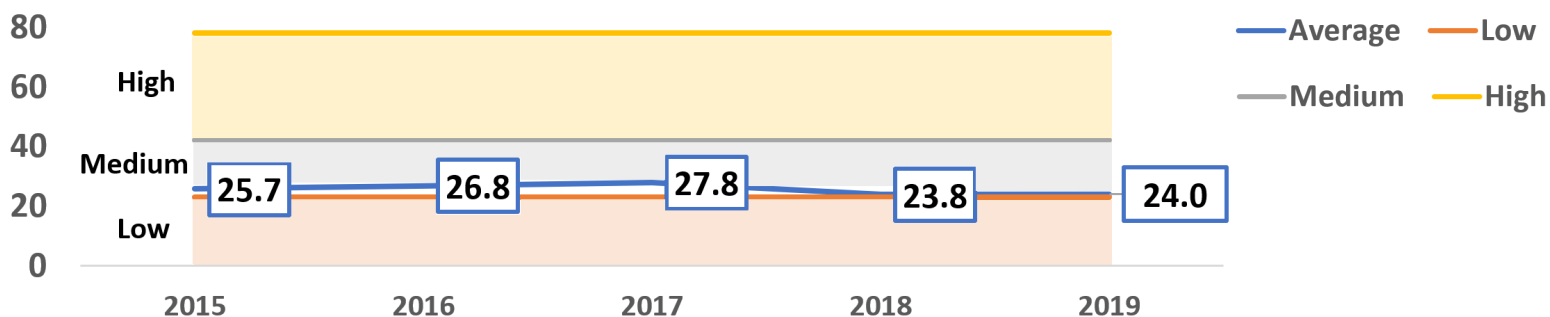
Figure 1. Stores Assessed Each Year

Year	Stores
2015	55
2016	55
2017	53
2018	84
2019	73

Access to Fresh and Healthy Food Scores

Stores' food availability, pricing, variety and quality were scored based on 12 measures: both standard measures (milk, soda, chips, etc.) and an added section on advertising *(1)*. Total possible scores ranged from -13 to 65 points.

Figure 2. Average NEMS Scores (calibrated 0-78), 2015-2019

Year	Average
2015	25.7
2016	26.8
2017	27.8
2018	23.8
2019	24.0

Legend: Average, Low, Medium, High

Healthy Food Availability
Findings from Food Store Assessments, 2015-2019

Most common

Convenience stores

Pharmacies

Dollar stores

Grocery stores

Specialty stores

Least common

Every year of data collection, the most common stores in all neighborhoods were convenience stores/gas stations. However, all neighborhoods had at least one grocery store or supermarket. Dollar variety stores and pharmacies could also be found in all neighborhoods, but Southside lacked specialty stores, which could include meat markets or ethnic grocers.

Grocery stores scored **2x** higher than convenience stores in food availability and **9x** higher in food quality. Higher scores mean higher availability and quality of foods like fruit, whole wheat bread and low-fat meat.

Supplemental Food Assistance

The Supplemental Nutrition Assistance Program (SNAP) can help low-income households pay for food at local stores.

79.5%
of stores accepted SNAP payment in 2019

Additional Highlights (2019)

74% of stores sold fresh fruit

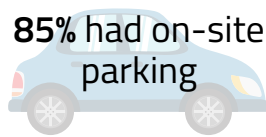(bananas were the most common fruit)

25% sold fresh vegetables

(potatoes were the most common veggie)
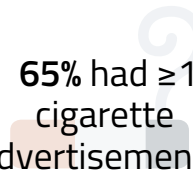
80% were near a bus stop

85% had on-site parking

99% were near a sidewalk

65% had ≥1 cigarette advertisements

Key Takeaways

Grocery stores have the highest **food availability** and **quality** scores. Having one nearby can improve local food access.

Across the four neighborhoods, **average scores** for access to fresh and healthy foods stayed similar over five years.

Most stores accepted **SNAP payment**. These represent targets for ensuring a variety of fresh and healthy foods are available at low cost.

(1) Glanz K, Sallis J, Saelens B, Frank L. Nutrition Environment Measures Survey in Stores (NEMS-S) Development and Evaluation. Am J Prev Med. 2007;32(4):282-289. doi:10.1016/j.amepre.2006.12.019

food NEST 2.0 — MODELING the FUTURE of FOOD in your NEIGHBORHOOD STUDY

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