



Epi Data Brief

New York City Department of Health and Mental Hygiene

August 2014, No. 48

Green Cart Evaluation, 2008-2011

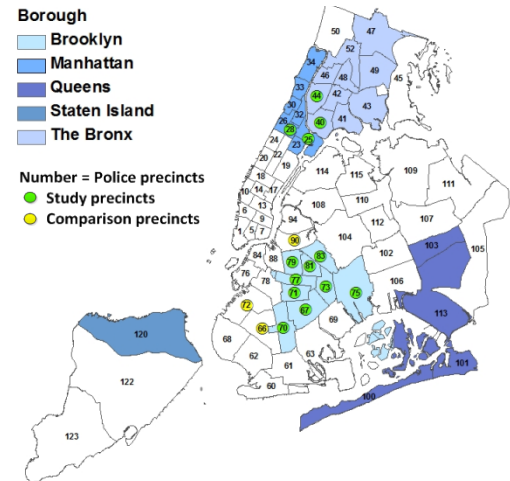
What are Green Carts?

- Green Carts are mobile food carts, selling whole fresh fruits and vegetables in New York City neighborhoods with low levels of fruit and vegetable consumption.
- In 2008, a law was passed establishing 1,000 Green Cart permits: 350 each for the Bronx and Brooklyn, 150 for Manhattan, 100 for Queens, and 50 for Staten Island. By the end of August 2011, 501 of these permits were active: 171 in Brooklyn, 197 in the Bronx, and 90 in Manhattan.
- The Green Carts program evaluated change in produce availability, quality and variety in a sample of establishments (supermarkets, fruit and vegetable stores, small grocery stores, bodegas and mobile carts) in selected Green Cart and non-Green Cart neighborhoods using a standard survey. Non-Green Cart neighborhoods were selected based on demographic similarities to Green Cart neighborhoods. Data were collected over three summers, in 2008 before implementation and twice after implementation in 2009 and 2011. Carts in all evaluation precincts were counted, and stores and carts were surveyed each year.

Availability of Fruits and Vegetables

- In 2008, 50% of establishments in Green Cart neighborhoods and 57% in non-Green Cart neighborhoods sold both fruits and vegetables.
- The percent of establishments selling both fruit and vegetables in Green Cart neighborhoods increased from 2008 to 2009 (50% to 68%) and this increase was maintained in 2011 (69%). There were no changes in availability in non-Green Cart neighborhoods between 2008 and 2011. Green Cart neighborhood availability increases were also seen when Green Carts themselves were excluded from the analyses.
- Increases in availability at bodegas mainly accounted for the overall increased produce availability in Green Cart neighborhoods. The proportion of bodegas selling both fruits and vegetables increased from 45% to 65%, compared with no change (52% and 59%) in non-Green Cart neighborhoods.

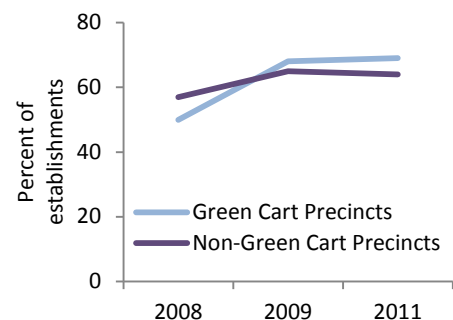
NYC Green Carts



Green Carts are allowed only in designated police precincts, highlighted in color on map.

Source: Bureaus of Chronic Disease Prevention and Tobacco Control and Epidemiology Services

Percent of establishments selling both fruits and vegetables, 2008-2011



Source: Green Cart Evaluation Availability Survey, 2008, 2009, 2011

Data Sources: The Green Cart Evaluation Availability Survey was conducted in all Brooklyn Green Cart precincts (67, 70, 71, 73, 75, 77, 79, 81, and 83), Manhattan precincts 25 and 28 in East and Central Harlem, precincts 40 and 44 in the South Bronx, and in the Brooklyn comparison precincts (66, 72 and 90), selected for their demographic similarity to the Green Cart precincts. Availability, quality (great, average, or poor), variety, and price of fruits and vegetables were documented in a random sample of bodegas, small grocery stores, supermarkets, fruit and vegetable stores, and carts, stratified by precinct and store type in 2008, 2009, and 2011. Although crude proportions are reported, analyses adjusted for neighborhood characteristics produced the same results.

The Community Health Survey (CHS) is a telephone health survey of approximately 9,000 adults ages 18 and older, conducted annually by the Health Department. Data presented in this brief from 2008, 2009 and 2011 are age adjusted to the US 2000 Standard population. Participants were asked, "How many total servings of fruits and/or vegetables did you eat yesterday?" The CHS has included adults with landline phones since 2002 and, starting in 2009, also has included adults who can be reached only by cell phone. Starting in 2011, CHS weighting methods were updated to incorporate Census 2010 data and additional demographic characteristics. For more survey details, visit www.nyc.gov/health/survey.

Variety and quality of fruits and vegetables in Green Cart and Non-Green Cart neighborhoods in New York City

- The proportion of establishments selling more than 10 types of fruits and vegetables rose from 31% to 38% in Green Cart neighborhoods, but did not change significantly in non-Green Cart neighborhoods (52% to 47%).

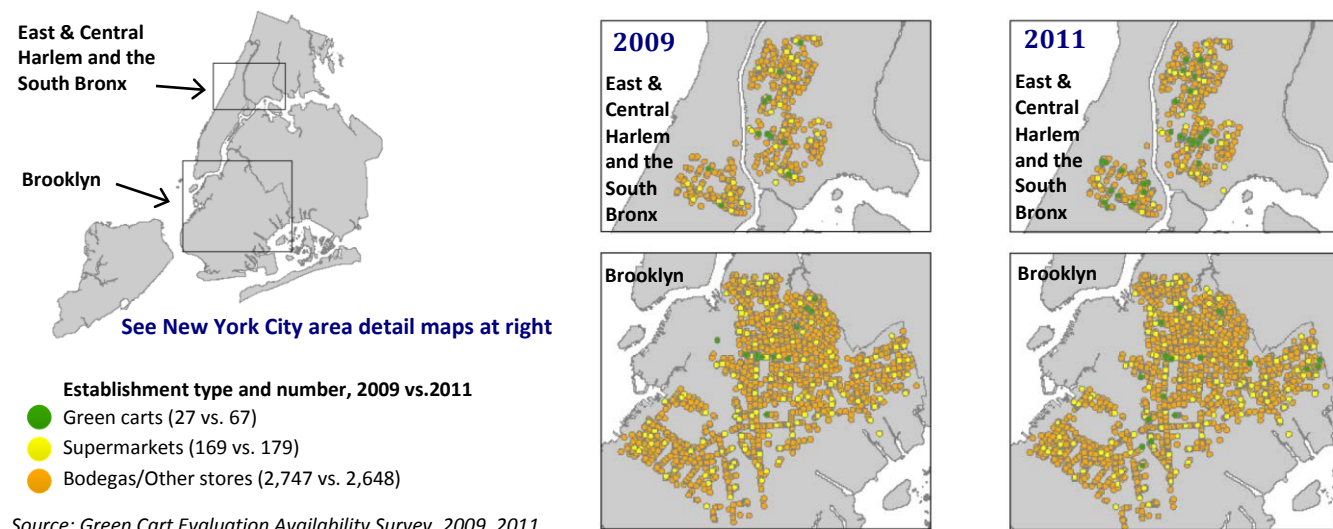
	Green Cart neighborhoods			Non-Green Cart neighborhoods		
	2008	2009	2011	2008	2009	2011
Percent of establishments with more than 10 types of fruits and vegetables	31	40	38	52	50	47
Percent of fruits and vegetables rated as great or average quality	96	96	88	95	95	94

Source: Green Carts Evaluation Availability Survey, 2008, 2009, 2011

- Overall, supermarkets consistently had the greatest variety of produce available on average compared with all other vendors (84 types vs. 12 types). In 2011, Green Carts had 19 types of produce available on average.
- Great- or average-quality produce was more common than poor quality produce across neighborhoods. Produce quality was consistent in non-Green Cart neighborhoods from 2008 to 2011, but decreased in Green Cart neighborhoods (96% to 88% great- or average-quality produce).
- Overall 94% of vendors in Green Cart and non-Green Cart neighborhoods offered great- or average-quality produce; bodegas were less likely to offer high quality produce (93%) than all other types of vendors (98%).

Impact of Green Carts on Local Food Establishments, 2009-2011

Green Carts, supermarkets and food stores in Green Cart neighborhoods, NYC 2009 and 2011



Source: Green Cart Evaluation Availability Survey, 2009, 2011

- There was no significant change in the number of supermarkets and bodegas between 2009 (2,916) and 2011 (2,827) in the areas studied.
- Before Green Carts, many varieties of non-traditional produce carts were found on the streets. However, the number of Green Carts increased (27 to 67) while the number of non-traditional carts, such as unlicensed carts, decreased (79 to 30).
- Data on consumption of fruits and vegetables the previous day, while not statistically significant, suggest an increase between 2008 and 2011 in the Green Cart neighborhoods, with no change among the non-Green Cart neighborhoods.

Authored by: Bonnie Kerker, Shannon Farley, Michael Johns, Peggy Leggat, Cathy Nonas, Hilary Parton

MORE New York City Health Data and Publications

- For complete tables of data prepared for this Brief, visit nyc.gov/html/doh/downloads/pdf/epi/datatable48.pdf
- Visit EpiQuery – the Health Department’s online, interactive health data system at nyc.gov/health/EpiQuery

Data & Statistics at nyc.gov/health/data