

## Appendix

This Appendix includes data described in [Food Policy in New York City Since 2008: Lessons for the Next Decade](#)

- [Table A](#) A Comparison of Strengths and Limitations of Sources for Report [Page 2](#)
- [Table B](#) Food Metrics Report includes data on 19 indicators and 18 sub-indicators [Page 3](#)
- [Table C](#) 40 Major Food Policies Implemented in New York City in Last Decade [Page 8](#)
- [Table D](#) Adult fruit and vegetable consumption by race/ethnicity, New York City, 2008 [Page 14](#)
- [Table E](#) Adult fruit and vegetable consumption by race/ethnicity, New York City, 2015 [Page 15](#)
- [Table F](#) Adolescent fruit and vegetable consumption by race/ethnicity, New York City, 2008 [Page 16](#)
- [Table G](#) Adolescent fruit and vegetable consumption by race/ethnicity, New York City, 2015 [Page 17](#)
- [Table H](#) Adult sugary beverage consumption by race/ethnicity, New York City, 2007-2015 [Page 18](#)
- [Table I](#) Adult obesity by race/ethnicity, New York City, 2008 and 2015 [Page 19](#)
- [Table J](#) Adult obesity by race ethnicity, New York City, 2008 and 2015 [Page 20](#)
- [Table K](#) Youth obesity rates for New York City, by race/ethnicity, 2008 [Page 21](#)
- [Table L](#) Youth obesity rates for New York City, by race/ethnicity, 2015 [Page 22](#)
- [Table M](#) Adult New Yorkers who have ever been told they have diabetes by race/ethnicity, 2007 [Page 23](#)
- [Table N](#) Adult New Yorkers who have ever been told they have diabetes by race/ethnicity, 2015 [Page 24](#)

**Table A. Strengths and Limitations of Methods and Data Sources**  
 Each of the lenses we have used to study the food policy landscape in New York City has strengths and limitations, briefly summarized in Table A. By using multiple sources of data, we believe we overcome some of the limitations of each component of this report.

Appendix Table A Comparison of Strengths and Limitations of Sources for Report

Approach	Main Purpose	Strengths	Limitations
Review of Recommendations in 20 Major City and State Food Policy Reports	Review publicly available food policy recommendations made by city and state public officials 2008-2017	Creates searchable database of all recommendations from city and state reports that can be expanded in future to monitor implementation, spending, and evaluation; allows comparison of policy maker attention to various food issues; sorts recommendations into discrete goals and sub-goals	May have missed some reports; overlap of categories makes assignment into goals and sub-goals subject to challenge; relies on count of recommendations to assess policy maker interest; does not include recommendations by advocates or academics; does not include policy changes not proposed in any report; Does not distinguish between reports of more and less influential policy makers
Analysis of 5 Annual Food Metrics Reports	Analyze changes in 19 food policy indicators selected by City Council in 2011	Indicators selected by NYC policy makers, measured consistently by data collected by city agencies, provides intersectoral perspective on implementation of selected food policies	Limited information available on standards or quality of data collection, focuses on policy implementation rather than impact, does not provide analysis or context for the changes that are documented
Assessment of 39 Implemented Food Policies	Assess implementation and evaluation status of selected food policies	Provides comprehensive view of implementation of major food policies across sectors, includes both city and state policies, sets stage for future impact analyses	Quality of data available to assess implementation varies widely, use of evidence from multiple sources makes comparability problematic

**Table B An Assessment of Implementation of Municipal Food Initiatives from 2012-2017 based on New York City Food Metrics Report 37 Indicators**

Metric	Policy Goal	2012	2017 <sup>1</sup>	Total 2012-2017	% Change 2012-2017	Comments
1.A. Number of farms participating in DEP watershed agricultural program		58	55	55 to 79 farms per year with no data reported on years of support	5% decline in number of farms participating	New York State has more than 36,000 farms, so few participate in this program.
1.B. Number of acres		18,735	19,799	Number of acres ranged from a high of 26,359 in 2014 to a low of 18,735 in 2012	6% increase in number of acres participating 2012 to 2017	Total acres farmed in NYS in 2016: 7.3 million so protection was added to a tiny fraction of total state farmland. The Croton, Catskill and Delaware watershed systems have combined drainage area of about 1.2 million acres. <sup>2</sup>
1.C. Annual dollar amount of city financial support received by participating farms		\$2.7 million	\$1.1 million	Total \$15.6 million spent 2012-2017	59% decrease in spending between 2012 and 2017	
2. Total DOE expenditure on local milk, yogurt, and produce (not including distribution costs)		\$23.9 million	\$26 million	\$155.2 million	9% increase in annual spending 2012 to 2017	Total value of milk produced in NYS in 2016: \$2.5 billion <sup>3</sup> ; total value of fruits and vegetables produced in NYS, 2016: \$672 million <sup>2</sup> . In 2016, DOE purchases accounted for less than 1% of state production. In 2016, DOE's spending on local food accounted for 12% of its total OTPS expenditures on food services. <sup>4</sup>
3. Registered community gardens on city-owned property (not including DOE Grow to Learn gardens)		413	545	132 increase in number of gardens, 2012 to 2017	32% increase	According to 596 Acres <sup>5</sup> , about 1,200 lots are used as community gardens in NYC, suggesting newly registered community gardens account for about 11% of total. In 2015, NYC's affordable housing plan proposed to build new housing on 14 community gardens. <sup>4</sup>
4.A. Food manufacturers receiving monetary benefits from EDC or IDA		24	23	161 annual awards, some companies with multiple awards	-4%	Between 2005 and 2015, employment in food manufacturing grew by 27% from 13,929 jobs to 17,682. <sup>6</sup> While food manufacturing is the fastest growing manufacturing sector, it is also the one that pays the lowest wages. The average annual wage in the city's food manufacturing industry is \$32,882, which is nearly 40% lower than average manufacturing wage in New York City (\$54,028).
4.B. Total awards in \$		\$2.2 million	\$2.10 million	Total awards \$14.3 million		
5.A. Truck trips daily to or through Hunts Point Market		2753 trucks	547	2206 fewer trucks	80% decline in trucks	A 2002 study found that 96% of food coming into New York City came by truck. <sup>7</sup> A more recent study found that 99% of "last-mile delivery" of food in NYC is done by truck. <sup>8</sup> Declines in traffic into Hunts Point reduce pollution in the South Bronx but may not affect overall pollution from truck deliveries of food.

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5.B. Rail trips daily to or through Hunts Point Market		11 railcars	6 railcars	5 railcars fewer	45% decline in rails	
6. A. Grocery store SF per capita		2011 12.7 million sq. ft. of grocery space in NYC;	Not reported	NA	NA	This metric will be assessed again in 2017-18. The 2015 DOHMH NYC Community Health reported square feet of supermarket space per 100 residents for each community district. <sup>9</sup> The average for NYC was 177 square feet per 100 residents with a high of 450 square feet in South Beach and Willowbrook in Staten Island and a low of 69 square feet in Belmont and East Tremont in the South Bronx, a more than six-fold difference. Recently scholars have questioned the reliance on square feet of store space as a meaningful measure of access to healthy or affordable food, dietary choice or household nutrition. <sup>10</sup>
6.B. Number of grocery stores opened during the past five calendar years		168 new grocery stores opened in NYC between 2007 and 2011				A 2016 study by the CUNY Urban Food Policy Institute found that between 2013 to 2015, the number of traditional supermarkets in New York City increased by nearly 10%. However, in 2016 there was a net loss of 16 stores.
7.A. Grocery stores receiving FRESH benefits		11 projects approved	3 approved	27 approved and 14 completed	2.3 stores were opened per year and another 2.2 were approved but not yet opened in the six years reported.	The 737,000 square feet approved in new or renovated supermarkets by 2017 would add about 6% to NYC's 2011 supermarket space. <sup>11</sup> Estimates are not available for the total number of stores or square feet of supermarket space lost in this time or whether the FRESH incentives made a meaningful difference food access after a store opened.
7.B. Amount invested in FRESH stores		\$40 million invested	\$10 million invested	\$100 million total invested		
8.A Number of stores participating in Shop Healthy		161	1117 Participating 400 agreed to intensive participation	956 more bodegas participated in 2017 than 2012	6-fold increase in number participating	Of an estimated 10 to 13,000 bodegas in New York City, <sup>12,13</sup> 6 to 8% participated in 2016. Although most New Yorkers buy most of their food in supermarkets, not bodegas, in the lowest income neighborhoods, bodegas continue to be an important source of food.
8. B. Number of participating stores agreeing to intensive participation		33% 132 out of 400 (2013)	54% 608 out of 1117	476 more stores participating intensively	Almost 5-fold increase in number of intensive participants	3 to 4% of bodegas in NYC participated intensively

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9. Number of food-related job training programs administered by SBS		275 trainees served (2014)	342 trainees served	24% increase in number of trainees, 2014 to 2017		About 63,000 New Yorkers work in grocery stores and 320,000 in food service and drinking establishment. <sup>14</sup>
10. Number of meals served in public institutional food programs		271 million	242 million	29 million fewer meals served in 2017 than in 2012.	11% overall decline in number of meals served per year between 2012 and 2017	Most of the city programs that serve meals and snacks serve only a portion of those who are eligible. In NYC schools, for example, 250,000 of the 780,000 students who are eligible for free or reduced lunch do not participate. <sup>15</sup>
11. Compliance with food standards		Compliance rate 93%	Compliance rate 92%	Compliance rate declined by 1%		DOHMH reports that Food Standards have been successfully implemented and have made healthier food more available in public institutions. <sup>16,17</sup>
12.A. Number of DOE beverage and snack vending machines		3,438 vending machines	3,163 vending machines	275 fewer vending machines	8% decline in number of machines	In 2015, the % of NYC children ages 6 to 12 who consumed one or more sugary drinks per day was lower than in 2009, dropping from 44% to 36%. This decline was observed in White children ages 6 to 12 (33% in 2009 vs. 20% in 2015), but not among Black, Latino or Asian/Pacific Islander children. In both 2009 and 2015, Black and Latino children had higher rates of sugary drink consumption than White children. <sup>18</sup>
12.B. Revenue generated by DOE beverage and snack vending machines		\$10.9 million	\$9.2 million in revenues	\$1.7 million decline in revenues	16% decline in revenues	
13. Number of seniors receiving SNAP benefits		256,416	321,214	64,798 more seniors getting SNAP	25% increase	Between 2000 and 2014, the number of people aged 65-74 in New York increased by 23.8%, suggesting that some of the observed increase in the number of seniors receiving SNAP benefits may be the result of population growth, not increased enrollment rates. In addition, NYC's older adults experienced an increase in poverty from 16.5% in 1990 to 19.3% in 2014, suggesting that more seniors are eligible for SNAP now than in earlier periods. <sup>19</sup>
14.A. Funds spent on SNAP enrollment by HRA		Spending \$2.4 million	Spending \$2.7 million		12% increase in spending	NYC's anti-hunger organizations have documented higher needs for food assistance in recent than previous years. <sup>20</sup> Increased city spending could provide additional support for enrolling this population. In the last few years, as city spending enrollment increased, SNAP enrollment dropped, a finding that warrants further investigation. Other private organizations have contributed to increased SNAP enrollment. For example, between 2014 and 2017, the Helmsley Charitable Trust awarded almost \$17 million to more than 20 non-profit groups and city agencies involved in the New York City Food Assistance Collaborative to increase SNAP enrollment and reduce food insecurity. <sup>21</sup>

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14.B Number of sites enrolling in SNAP		212	308	96 more sites and 3 new facilitated enrollment sites	45% increase in number of sites	
15. A. Funds HRA spends on nutrition education		\$8.6 million 152,764 SNAP recipients served	HRA no longer administers this program	In 2015, HRA spent \$9.5 million and reached 2.1 million people directly and indirectly	Between 2012-15, spending increased by 10% and SNAP recipients served increased almost 14-fold	In 2016, responsibility for funding SNAP- Ed, known as Eat Smart New York, was shifted to New York State Office of Temporary Disability Assistance which in partnership with Cornell University awarded grants to several New York City anti-hunger organizations.
15 B.1 Funds DOHMH Spends on Nutrition Education at Stellar Farmers' Markets		\$583,000 spent between 2009 and 2012 at a per capita cost of \$5.30	\$562991 to reach at a per capita cost of \$19	Since 2013, annual spending has been flat	Per capita spending increased from \$12.80 in 2013 to \$19 in 2017, a 48% increase	An evaluation of Stellar Farmers' Markets published in 2015 found that attending ≥ 1 classes was associated with more positive attitudes toward consuming FV; attending ≥ 2 classes was associated with greater FV consumption and higher self-efficacy to prepare and consume produce. Respondents attending ≥ 2 classes consumed almost one-half cup more FV daily than others. These associations remained after controlling for age, race/ethnicity, education, and gender.
15.B.2. Number of people reached by Stellar Farmers' Market nutrition education		110,000 people reached between 2009 and 2012	29,640	Compared to 2013, in 2017, 14,360 fewer people were reached.	Between 2013 and 2017, number of people reached per year declined by 33% overall	
15. C.1.Funds DOHMH spends on Eat Well, Play Hard Program		\$1,270,896 spent	\$1,134,642 including farm to preschool	Annual spending decreased by 11 % between 2012 and 2017	Per capita spending increased from \$104 in 2013 to \$167 in 2017, a 61% increase	An evaluation of Eat Well Play Hard in 2012 found that compared to children who had not participated in the program, those who had reported a net increase of 0.12 mean cups of vegetable (but not fruit) consumption and that children in participating centers were about 39 percent more likely than children in the control group to report drinking low or no fat milk.
15.C.2. Number of children reached by Eat Well, Play Hard Program		Reached 40,000 children at 392 child care centers and schools since 2008, about 8,000 per year	6,000 children in 82 centers in FY 17	Between 2013 and 2017, number of children reached per year fell by 6,000, but there was an increase of 34 centers reached	Children reached per year between 2013 and 2017 fell by 50% and number of centers reached increased by 70%	

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15.D. Funds DOHMH spends on Nutrition Education at District Public Health Offices		Total tax levy and other spending in 2011 for 3 DPHOs \$742,296	Total spending in 2017 was \$2.5 million	Annual spending in 2017 \$1,773,292 more than in 2011	Annual spending in 2017 2.4-times higher than in 2011	In 2011, the DPHOs accounted for 0.04% of DOHMH's annual budget of \$1.6 billion. In 2016, the Center for Health Equity and the DPHOs accounted for 0.17% of the DOHMH's \$1.3 billion budget, a more than four-fold increase but still a tiny fraction of the agency's spending.
16. A. Salad bars in schools		1,068	1,476	408	38%	All NYC schools now include salad bars. Evidence is not available documenting changes in consumption of salad in NYC schools.
16.B. Salad bars, made-to-order or prepackaged salads in HHC Hospitals		7	11	4	57%	
17.A. Funds spent by DCAS on 5-gallon containers of bottled water*		\$983,851 spent on bottled water in 5- gallon containers	\$347,717 for bottled water in 5 gal jugs and	Spending on large size bottles declined by 65% between 2012 and 2017	Ratio of spending on large to small- size containers was 6.4 to 1 in 2012 and 1.6 to 1 in 2017	DCAS spending in this time increased for less environmentally sound and waste-reducing bottled water and decreased for the more sustainable purchasing
17.B. Funds spent by DCAS on single serve containers of bottled water*		\$154,244 spent on single serve bottles	\$208,193 for single serve bottles	Spending on single serve bottle increased by 35%		
18. A. Number of Green Cart permits		475	315	160 fewer Green Carts in 2017 than in 2012	33% decline in number of Carts	A 2014 study concluded that Green Cart initiative increased access to healthy food in otherwise underserved high-density and low-income neighborhoods, influenced customers' consumption of fruits and vegetables, and created jobs for immigrant entrepreneurs. <sup>22</sup>
B. Number of operators that accept EBT		28 with EBTs	32 with EBTs	4 more Green Carts had EBTs in 2017 than in 2012, but in 2016, 82 more had EBTs than in 2012	14% increase in number with EBTs	The program has encountered several logistical and administrative problems and the total number of new outlets in any given community is relatively small.
19A. Number of vendors at GrowNYC farmers markets		138 farmers markets	137 farmers markets	1 less vendor at farmers markets in 2017 than in 2012	0.7% decrease in number of farmers markets	Between 2012 and 2017 there was essentially no net change in the number of these outlets. Other organizations sponsor farmers markets and Greenmarkets that are not accounted for here
19B. Number of vendors at GrowNYC farmers markets		54 Green-market locations	51 Greenmarket locations	3 less Greenmarket locations	6% decline in number of Greenmarket locations	

**Table C 40 Major Food Policies Implemented in New York City in Last Decade\***

Policy Action	Year Enacted/ Implemented	Description	Status (the most recent data source available)
1. Improve nutritional well-being Policies that promote health and reduce diet-related diseases			
Expanded number of salad bars in NYC public schools	New salad bars began to be opened in NYC schools in 2005, but were significantly expanded after the 2012 Mayor's Task Force on Obesity which recommended expanding to all NYC public schools	Installed salad bars in schools to increase fruit and vegetable offerings to students	In 2016, there were 1,430 salad bars in 1,100 school buildings. <sup>23</sup> Although no evaluation studies have assessed direct impact of salad bars on vegetable consumption of children in NYC, a review of several changes in school food between 2001 and 2011, including addition of salad bars, concluded that "NYC has successfully improved the quality of its school food environment and shown that healthier food service is possible, even under budgetary constraints. Several broad factors facilitated these efforts: fostering community partnerships and inter-agency collaboration, implementing policies and initiatives that target multiple sectors for greater impact, and working to make incremental improvements each year." <sup>24</sup>
Limited sugary drinks in child care centers (amendment to NYC Health Code Article 47)	2007 <i>Extended to summer camps in 2012</i>	Established nutrition standards for beverages, banning sugary drinks, restricting high-fat milk, requiring portion sizes for juice and that it be 100% juice, and increasing availability of drinking water	A 2014 study found the majority of child care centers compliant with the standards on the type of milk to be served (80%), type of juice to be served (69%), restriction on sugary beverages (79%), and water availability (89%). <sup>25</sup>
Banned artificial trans fat in NYC restaurants (amendment to NYC Health Code Article 81)	2007	Required phase out of artificial trans fats in NYC food service outlets permitted by NYC DOHMH, including restaurants, school, caterers, senior centers, mobile food-vending units, children's institutions, soup kitchens, park concessions, and street-fair food booths	In 2013, 94% of restaurants complied with trans fat regulation at the initial health inspection. <sup>26</sup> A 2014 study found a decrease in the trans fat content of purchases at fast food chains in NYC after the regulation was put into effect. <sup>27</sup> A 2017 study found an additional 6% decline in hospital admissions for heart attack and stroke in residents living in NY counties (including NYC) that implemented the trans fat ban vs. those without the ban. <sup>28</sup>
Installed water jets in many NYC public schools	2008	Increases access to safe drinking water for school children	As of 2016, there were 1,052 water jets in 846 school buildings. <sup>29</sup> No assessment yet of impact on water or soda consumption.
Established NYC Food Standards (Executive Order No. 122)	2008	Set nutrition requirements for City agencies (e.g., schools, senior centers, homeless shelters, public hospitals, correctional facilities), including specific Standards for: Meals/Snacks Purchased and Served, Beverage Vending Machines, Food Vending Machines, Meetings and Events, and Commissaries	As of 2016, eleven City agencies were implementing the standards, serving more than 245 million meals and snacks annually; the average reported compliance rate is 91%. <sup>30</sup> For the most part, we did not find studies documenting changes in food consumption among users of these services. DOHMH reports that Food Standards have been successfully implemented and have made healthier food more available in public institutions. <sup>31</sup> Another report found that implementing NYC Food Standards makes a difference in the food served in hospitals. After hospitals implemented Healthy Hospital Food Initiative, patient meals experienced a 25 % increase in fiber, a 19 % decrease in sodium, a 24 % decrease in the percentage of calories from fat, a 67% increase in fresh fruit servings and a 21 % decrease in the percentage of calories from saturated fat. Fresh fruit servings were reported to increase by 667%. <sup>32</sup>

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Established 1,000 permits for Green Carts (Local Law 9)	2008 <i>Began providing support to equip vendors with EBT machines in 2010</i>	Established Green Carts, mobile food carts that sell fresh produce in underserved neighborhoods with low rates of fruit and vegetable consumption	A 2014 study concluded that Green Cart initiative increased access to healthy food in otherwise underserved high-density and low-income neighborhoods, influenced customers' consumption of fruits and vegetables, and created jobs for immigrant entrepreneurs. <sup>33</sup> The program has encountered several logistical and administrative problems and the total number of new outlets in any given community is relatively small.
Required chain restaurants to post calorie information on menus/menu boards (amendment to NYC Health Code Article 81)	2008 <i>Updated requirements in 2015 (with enforcement beginning in 2017)</i>	Requires chain food establishments and mobile food vendors to post calorie information for all foods and beverages and for all sizes available; Updated rule requires chain convenience stores and grocery stores to post calorie information about prepared foods and requires these retailers and chain restaurants to post a statement on menus about daily calorie needs	The 2008 regulation applied to all restaurants operating in the city that have 15 or more outlets here or across the country, at that time about 10 % of the city's 23,000 restaurants. <sup>34</sup> Several reports have evaluated the impact of New York City's calorie labeling rules on consumer knowledge, consumer choices and sales, with mixed findings. <sup>35</sup>
Piloted Garden to Café program in 20 New York City public schools	2008 <i>Expanded program since its inception</i>	Connects school and community gardens with school meals to teach students about healthy food, farming, and the local food system	As of 2016, 125 schools were registered with this program. <sup>36</sup> While many studies claim a variety of educational, social and health benefits for school gardens, <sup>37</sup> no studies were found documenting impact on diet, health or nutrition knowledge of New York City children.
Launched the Food Retail Expansion to Support Health (FRESH) program	2009	Provides zoning and financial incentives to eligible grocery store operators and developers in underserved areas with limited healthy food access	Since 2009, 24 FRESH projects have been approved for incentives. By mid-2017, 14 projects have been completed and are open to the public. <sup>38</sup> The impact of FRESH projects on local food availability or prices has not been studied.
NYC DOHMH ran several media campaigns to discourage consumption of unhealthy food	2009-2017 <sup>39</sup>	Ad campaigns educated New Yorkers about the health impacts of sugary beverages and other unhealthy products and the benefits of tap water.	A study found that between 2007 and 2013, the first years these campaigns were disseminated, the number of New York City adults consuming one or more sugary drinks a day decreased by 35% and the number of public high school students doing so fell by 27%. <sup>40</sup> While the portion of this decline that can be attributed to these campaigns is not known, it seems reasonable to conclude they played a role.
Established National Salt Reduction Initiative	2009	A public-private partnership among city, state, and national health authorities and organizations to encourage food companies to voluntarily lower sodium levels in packaged and restaurant foods	By 2014, 28 national packaged food, retail, and restaurant companies have committed to NSRI targets. <sup>41</sup> From 2009 to 2015, sodium levels in a sample of top selling packaged foods decreased by about 7%. <sup>42</sup>
Launched Grow to Learn NYC initiative	2011 <i>Expanded to become, a citywide school gardening initiative</i>	Facilitates and promotes school gardens in every public school across the city by providing material and financial support	Since 2011, 581 (of 1,800) schools have registered garden projects. <sup>43</sup> While many studies claim a variety of educational, social and health benefits for school gardens, no studies were found documenting impact on diet, health or nutrition knowledge of New York City children. <sup>44</sup>
Launched Fruit and vegetable prescription pilot program at city hospitals	2013 <i>Expanding to additional sites with 2016 funding from USDA</i>	Health providers at two NYC hospitals 'prescribed' fruits and vegetables to overweight/obese patients, who received a specific number of Health Bucks based on their family size to help them purchase fresh produce at city farmers markets	The 2013 program enrolled 116 patients (551 family members) at 2 city hospitals; participants spent \$43,274 at farmers markets during the 4-month program. An assessment by program developers concluded that the pilot program achieved its goal of improving healthy food access for vulnerable overweight and obese children and their families; was successful in its efforts to increase consumption of fruits and vegetables and knowledge about the importance of fruits and vegetables in the diet. <sup>45</sup>

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Required sodium warning labels on chain restaurant menus	2015 <i>Enforcement began in 2016</i>	Mandates that chain food service establishments post a salt shaker icon next to any food item containing 2,300 mg or more of sodium	As of May 2017, nearly 9 of 10 NYC chain restaurants were in compliance with the rule. <sup>46</sup> Studies on impact on salt intake have not yet been reported.
<b>2. Promote food security</b> Policies that reduce hunger and food insecurity and provide the quality and quantity of food needed to maintain health			
Launched Health Bucks Program	2005 <i>Expanded to all NYC farmers markets in 2012; expanded to a year-round program in 2016 with USDA funding</i>	Provides \$2 coupons for fresh fruits and vegetables at NYC farmers' markets; distributed to CBOs in low-income neighborhoods and as a SNAP incentive (for every \$5 spent in EBT, a shopper receives a \$2 Health Buck)	During the 2015 season, more than 423,400 Health Bucks were distributed; more than 191,000 as a SNAP incentive and more than 85,500 by more than 385 CBOs; 79% were redeemed. <sup>47</sup> An evaluation study showed that resurveyed recipients view Health Bucks as a positive program model and were associated with higher fruit and vegetable access and purchases in low-income communities. <sup>48</sup>
Launched Food Stamp Paperless Office System	2007	Allows residents to apply for food stamps at partner food pantries and soup kitchens	Evidence to evaluate specific impact of these modifications is lacking. In the wake of the Great Recession, NYC's SNAP caseload peaked at more than 1.8 million recipients in 2013, up from 1.1 million in 2007. It has since declined by 8.6%, a larger decline than that observed in New York State or the nation. <sup>49</sup> Evidence on the impact on SNAP enrollment of changes in the economy, changes in HRA, New York State or USDA practices and procedures is not available for New York City. The 2016 Food Metrics Report shows that senior enrollment in SNAP increased by 20% between 2012 and 2016 and by 3% between 2014 and 2015 <sup>50</sup> but these analyses do not consider the increases in the number of older people in NYC.
NY State expanded SNAP eligibility and extended recertification	2008-2016	In several policy announcements between 2008 and 2016, New York State expanded SNAP eligibility. In July 2016, Governor Cuomo made 750,000 additional families eligible for SNAP. This change will bring up to \$688.5 million annually in additional federally-funded SNAP benefits to New York State. <sup>51</sup>	
Implemented online application for NYC public school meal programs	2008	Facilitates enrollment and obviates need for paper forms for students who participate in the school lunch program	Between the 2009/10 and the 2015/16 school years, reports New York State, <sup>52</sup> the number and percentage of public school students enrolled K-12 in NYC public schools who participated in one of New York State's school nutrition programs that provides free or reduced price food fell from 74.9% or 732,012 students to 71.6% or 734,074, a 4% decline in the rate. Overall enrollment increased by 5% in that time. Changes in participation may reflect changes in attendance rates, eligibility or in enrollment procedures.
Opened SNAP call centers	2009	Increases access to information about the SNAP program	Between 2007 and 2011, SNAP enrollment in NYC increased 1.7-fold from 1.09 million to 1.83 million; in that time SNAP participation rates, the number of eligible individuals enrolled, increased by 10%, with 69.4% eligible enrolled in 2007 and 76.4% in 2011. Between 2012 and 2016, SNAP enrollment in NYC decreased by 7% and between 2012 and 2015(the last year for which data are available) SNAP participation rates decreased by 5%, from 76.6% to 72.5%. <sup>53</sup> Other influences on enrollment rates include changing federal eligibility standards and the changes in the economy.
NY State ends requirement for finger imaging for SNAP	2012	Lifts the requirement that SNAP applicants and recipients statewide be fingerprinted, removing barriers to applying, reducing stigma, and reducing administrative costs	
Created the New York City Food Assistance Collaborative	2015	The coalition of organizations, convened by the Mayor's Office of the Director of Food Policy, works to alleviate hunger in New York City by increasing emergency food availability and access and income assistance benefits for eligible New Yorkers; estimated that 10 million pounds of new food will be distributed to over 40 local food programs in 11 underserved neighborhoods each year <sup>54</sup>	No public reports on the Collaborative's impact are available.

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Began rollout to expand the Breakfast in the Classroom program in NYC public schools	2015	Provides free breakfast to elementary school students	In 2015, Breakfast in the Classroom (BIC) was provided in 143 school buildings. <sup>55</sup> A 2013 study found that students offered BIC were less likely to report not eating in the morning (8.7%) than were students not offered BIC (15.0%) and were more likely to report eating in 2 or more locations during the morning (51.1% vs 30%). Overall, students offered BIC reported consuming an estimated 95 more calories per morning than did students not offered BIC. <sup>56</sup>
Implemented universal free school lunch in most New York City middle schools	2015 <i>Expanded to most New York City public schools in 2017</i>	Eliminates eligibility screening for free lunch in New York City schools	Community Food Advocates estimates that the 2017 expansion will provide access to free lunch to an additional 475,000 students in 890 schools bringing the total to 828,000 students (84% of the student population) in 90% of all k-12 schools. <sup>57</sup> An assessment of the middle schools free lunch program by Community Food Advocates concluded that student participation in the program increased by nearly 10% in the first six months of 2014-15 school year compared to the same period the previous year, thus providing an additional 10,000 – 15,000 middle school students with lunch each day. <sup>58</sup>
3. Create food systems that support economic development Policies that promote community economic development through food and improved food production and distribution in region			
Extended the license agreement for city community gardens (also contributes to Goals #1 and #3)	2011	Allows the registration and licensure of community gardens for a period of 4 years (extended from 2 years) by the NYC Department of Parks & Recreation; provides increased protections for new and existing gardens	According to 596 Acres <sup>59</sup> , about 1,200 lots are used as community gardens in NYC, suggesting new registered community gardens account for about 10% of total. In 2015, NYC's affordable housing plan proposed to build new housing on 14 community gardens. <sup>60</sup>
Local Food Procurement Guidelines for NYC Agencies (Local Law 50) (also contributes to Goal #1)	2011	Mandated that the Mayor's Office of Contract Services establish guidelines to assist city agencies in purchasing food products grown, produced, or harvested in New York State	In FY2016, the city reported that 26% of its purchases of food eligible for local sourcing came from New York State. However, locally purchased products included shelf-stable processed food as well as fruits, vegetables, meat and dairy. <sup>61</sup> Between 2012 and 2016, the NYC Department of Education spent \$129.2 million on milk, vegetables and fruit from New York State, 17% of its total food spending. In 2016, DOE purchases accounted for 0.9% of state production of food. In 2016, DOE purchased 17% more local produce, milk, and yogurt than in 2012.
Launched New York City Housing Authority's first large-scale urban farm (also contributes to Goals #1 and #3)	2013 <i>Established the Farms at NYCHA program in 2016</i>	Farms are built and run by 18- to 24-year old NYCHA residents who are Green City Force AmeriCorps members; the program trains young residents in farm management and community programming	As of 2016, four farms were operating on NYCHA property. <sup>62</sup> In 2016, CUNY Institute on Urban Food Policy began a three-year evaluation study of NYCHA's urban farms.
Launched New York Thursdays program in New York City schools	2015	Part of an expanded policy that serves locally grown or produced food items to New York City public school students participating in the school meals program every Thursday	In FY2016, NYC DOE spent \$28 million on produce, milk, and yogurt that was locally or regionally grown or produced. <sup>63</sup>
Invested \$150 million to revitalize the Hunts Point Terminal Produce Market	2015	Allocates \$150 million in NYC support over 12 years to renovate, modernize, and provide infrastructure upgrades to the Market; estimated to create 500 permanent and 900 unionized construction jobs <sup>64</sup>	Implementation to begin in coming year.

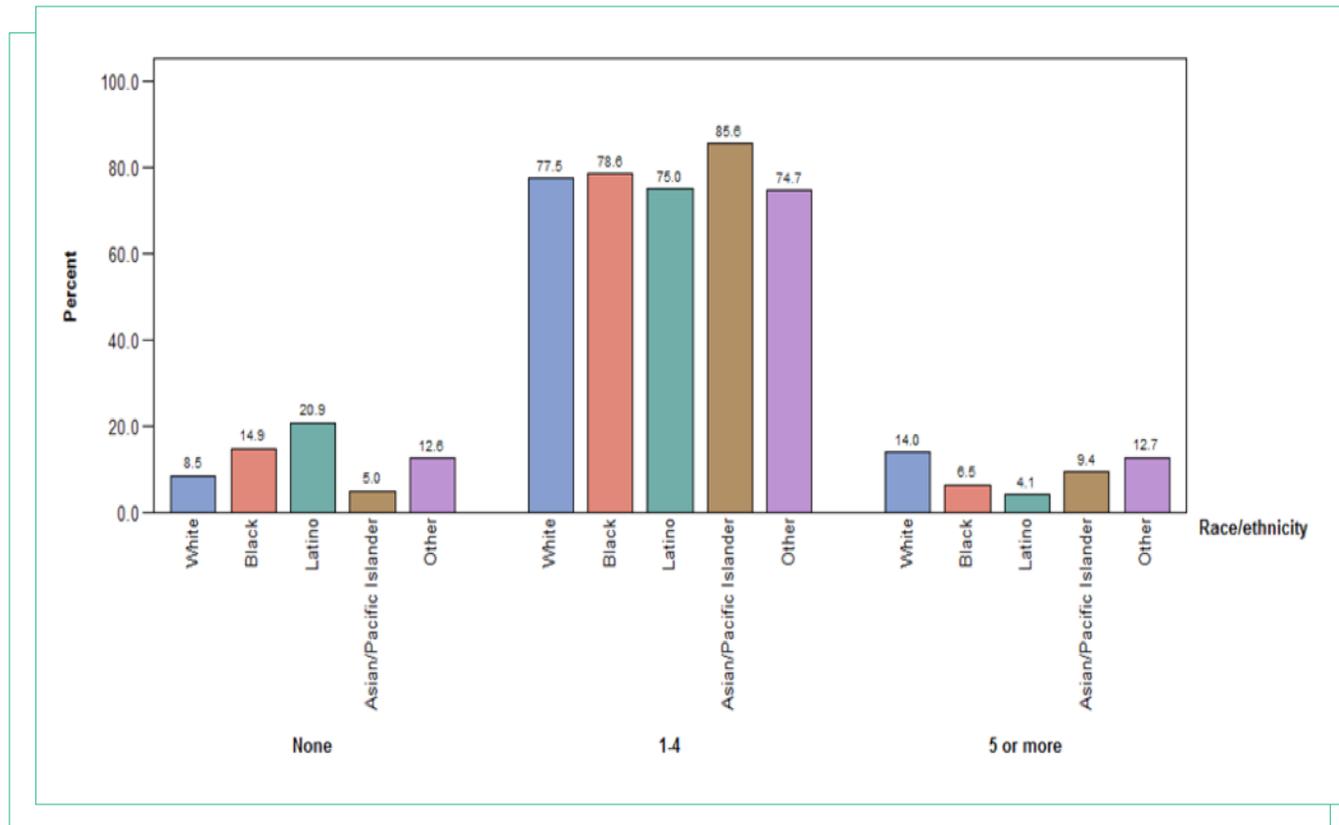
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Invested \$15 million in the development of Greenmarket Regional Food Hub at Hunts Point ( <i>also contributes to Goals #1 and #4</i> )	2016	In August 2017, \$2.5 million in federal funding was awarded for the New York State Greenmarket Regional Food Hub. It will allow GrowNYC to construct a new South Bronx food hub, including a new wholesale farmers market, USDA compliant cold storage facility, a food-processing center, and other infrastructure upgrades to support local food businesses. The new facility will move nearly 20 million pounds of local produce a year and create 95 permanent jobs and 150 construction jobs. <sup>65</sup>	Implementation to begin in coming year
<p>4. Ensure sustainable food systems Policies that reduce food waste and food-related pollution and carbon emissions and protect region's farmland</p>			
Supported preservation of farms in New York City watershed through the Watershed Agricultural Program	Founded in 1992 expanded between 2012 and 2016	The NYC Department of Environmental Protection, created the Watershed Agricultural Council to carry out this program that promotes state farmers to use agricultural best management practices. The program supports well-managed family farms as beneficial land uses to advance water quality protection and rural economic viability.	Between 2012 and 2016, program added 358 farms, 114,967 acres and spent \$14.6 million to expand this program for farmers in city's regional watershed. <sup>66</sup>
Launched the Food Waste Challenge and in 2016 added Mayor's Zero Waste Challenge	2013 expanded in 2016	Invited New York City restaurants to commit to diverting 50% of their food waste from landfills; expansion invited New York City businesses to support the New York City's zero waste goals by working to divert at least 50% of their waste from landfills and incineration by the end of the Food Waste Challenge	By November 2013, half of the 100 restaurants participating achieved the goal by diverting more than 2,500 tons of food waste (25% of which was diverted through food donations). <sup>67</sup> In 2016, 31 businesses participated in the expanded challenge, diverting more than 36,000 tons of material from landfills, including more than 24,000 tons of organic waste. <sup>68</sup>
Established a compost pilot program for curbside collection of organic waste (Local Law 77)	2013 <i>Expanded program in 2017</i>	Pilot program tested the efficacy and cost-efficiency of the curbside collection of food scraps, food-soiled paper, and yard waste	Pilot program started with 3,200 residents in 2013 and expanded to 1 million residents as of March 2017; by the end of 2017 the program will grow to reach 2 million additional residents <sup>69</sup>
Requires heating oil sold or used by the New York City to contain a percentage of biodiesel (Local Law 119)	2016	Requires incremental increases in the amount of biodiesel in heating oil starting with 5% by October 2017 and increasing to 20% by October 2034, stimulating waste oil recycling industry in NYC.	No information; still in implementation phase

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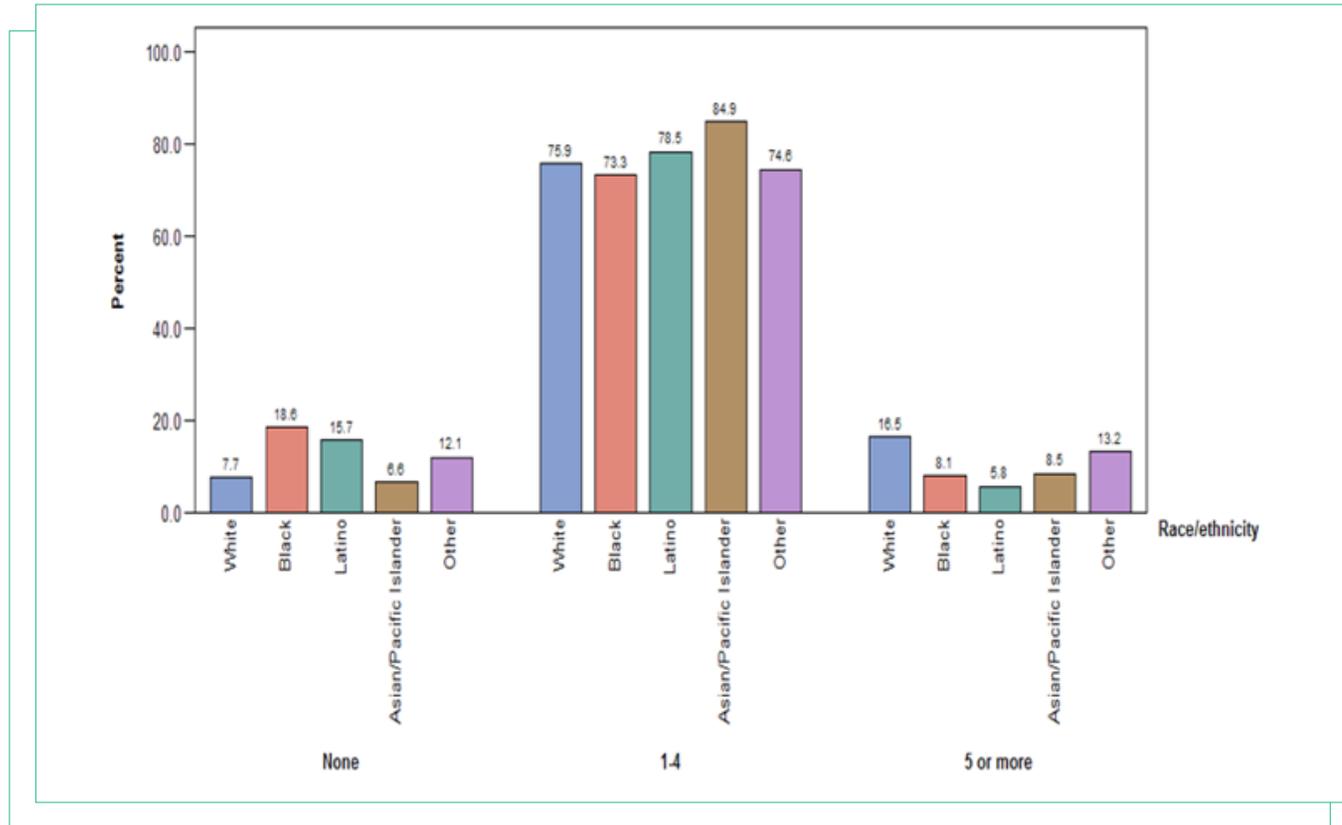
5. Support food workers			
Policies that provide food workers with decent wages and benefits, safe working conditions, and the right to organize			
Increased the minimum wage	2015	Increased the minimum wage across New York State, first for fast food and tipped workers in April 2015, then for State workers in November 2015, and then for all workers across all industries in April 2016; increases are incremental and in NYC will reach \$15 by the end of 2018 or end of 2019 depending on type of business; estimated that 2.3 million workers statewide will be affected.	No information yet on impact in New York City.
Protects employees in large grocery stores from immediately losing their jobs after an ownership transition (Local Law 11)	2016	Requires new grocery store owners to retain the incumbent owner's employees for 90 days; after that period, the new employer must evaluate each employee and may offer continued employment	No information yet on implementation or impact.
Protects fast food workers from unpredictable scheduling and payment (the Fair Work Week legislative package: Local Laws 98, 99, 100, 106, 107)	2016-7	Ensures that fast food and other retail workers will have fair notification of their work hours and predictable schedules for paychecks; estimated to impact 65,000 workers in New York City. <sup>70</sup>	No information yet on implementation or impact
6. Strengthen food governance and food democracy			
Policies that encourage civic engagement in shaping food policy and reduce the influence of special interests			
Established New York State Food Policy Council	2007, renewed in 2011	Develops and recommend food policy for New York State that ensures availability of adequate supply of affordable, fresh, nutritious food; develops and recommends policies to expand agricultural production, including locally-grown and organically-grown food; recommends strategic plan for implementation of State food policy; and offer comments on state regulations, legislation and budget proposals in food policy, to ensure coordinated and comprehensive inter-agency approach to food policy issues.	Prepared Annual Reports and recommendations in 2007-2011 and 2013; held annual meetings 2009 to 2015; in 2016, re-established as New York State Council on Hunger and Food Policy. No assessment yet of impact.
Established first Food Policy Coordinator position in Mayor's Office in 2014	2008 <i>Renamed as the Office of the Director of Food Policy in 2014</i>	Works to increase food security, promote access to/awareness of healthy food, and support economic opportunity and environmental sustainability in food system	Produced Food Metrics Reports 2012 to 2016; staffing increased, no public assessment of impact yet.
Required annual Food Metrics Reports (Local Law 52)	2011	Requires annual reporting on the production, processing, distribution, and consumption of food in and for New York City for the previous fiscal year for New York City agency food-related initiatives	Annual reports have been published from 2012 to 2016 <sup>71</sup>

Table D Daily Fruit and Vegetable Consumption Adults by Race and Ethnicity, 2008



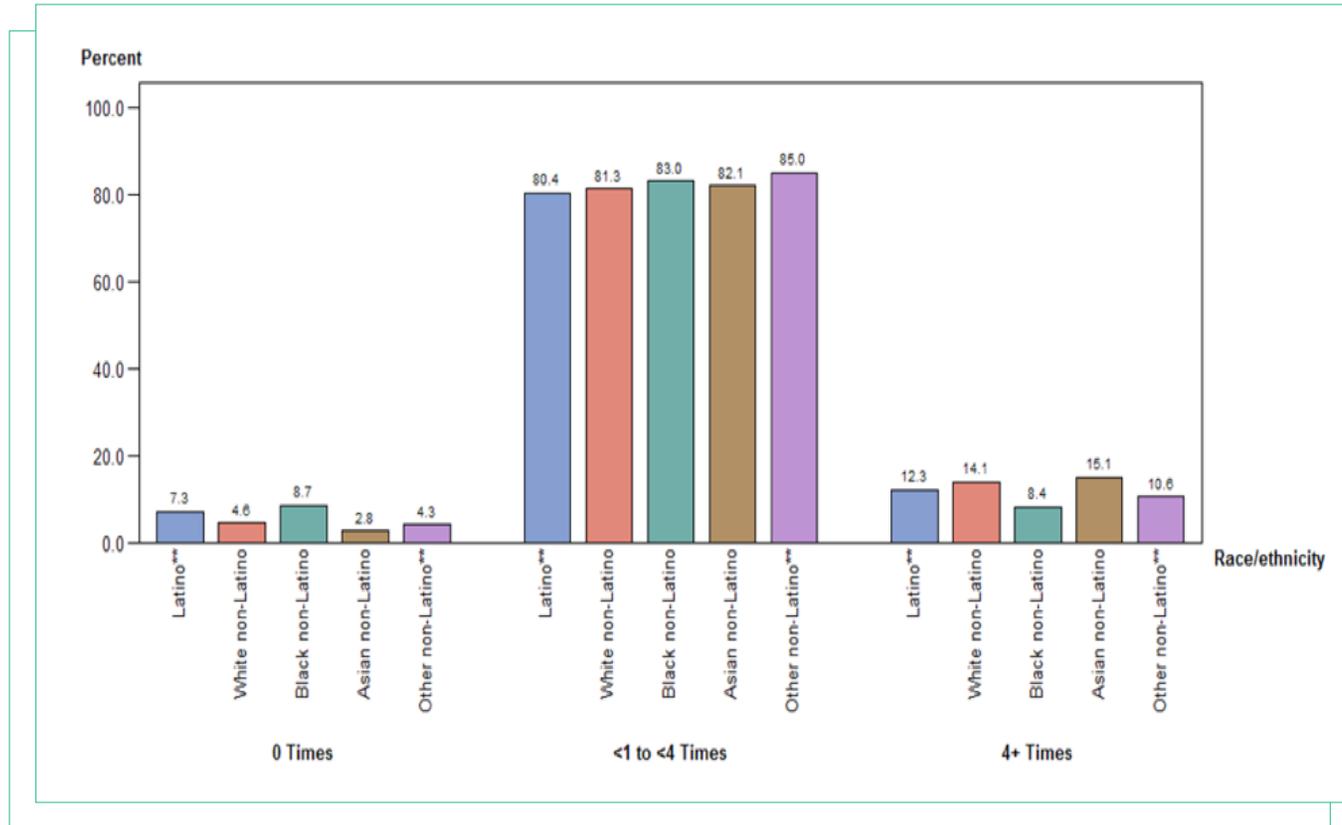
Source:  
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Table E Daily Fruit and Vegetable Consumption Adults by Race and Ethnicity, 2015



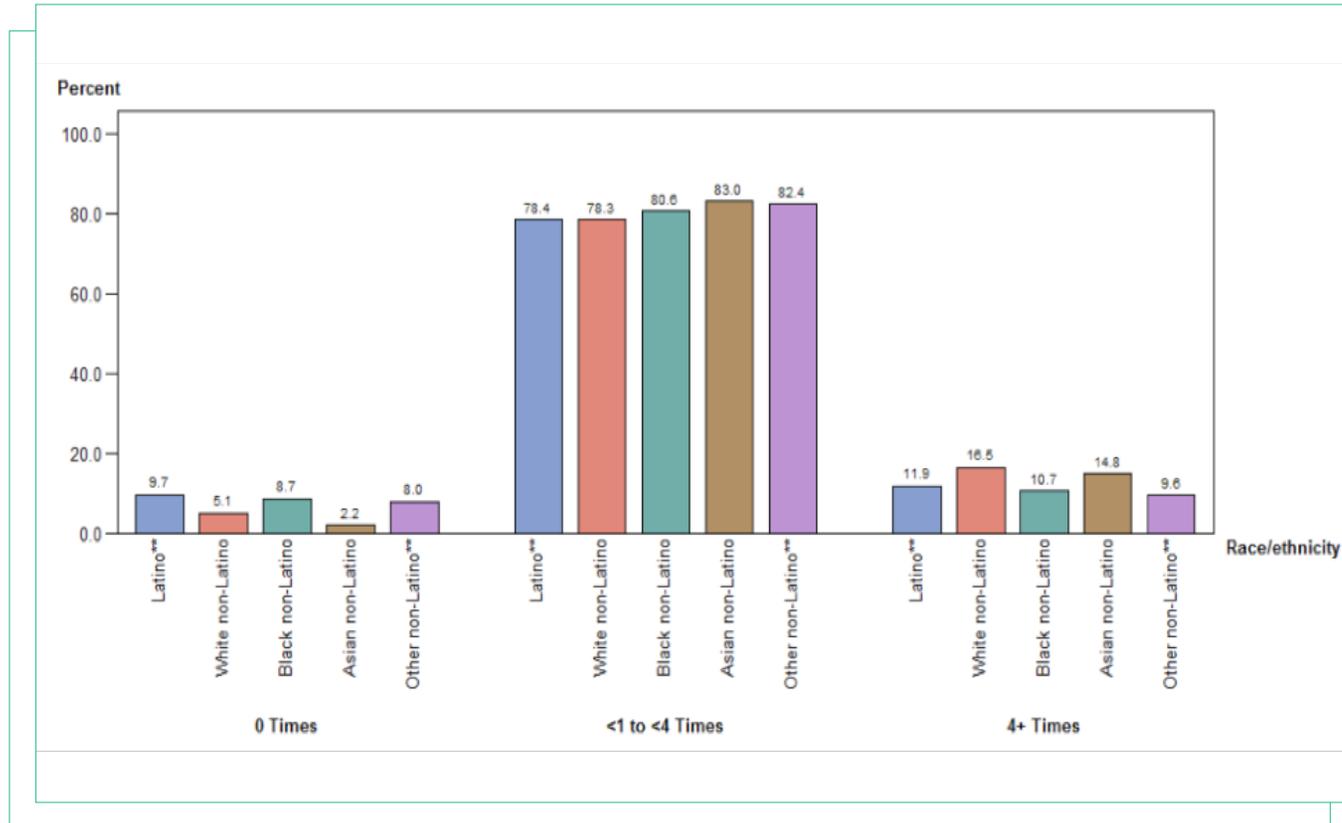
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Table F Adolescent fruit and vegetable consumption by race/ethnicity, New York City, 2007



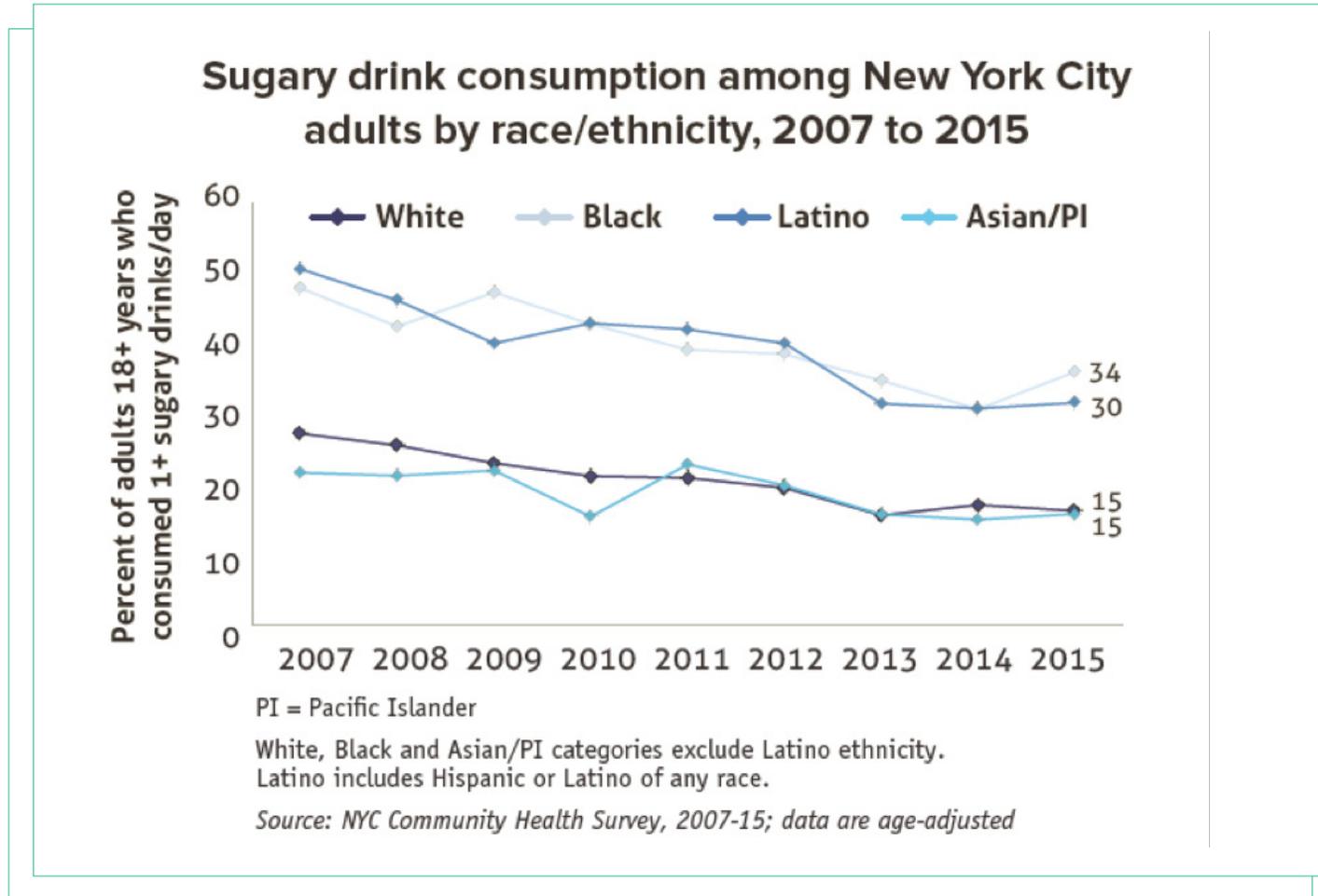
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Table G Adolescent fruit and vegetable consumption by race/ethnicity, New York City, 2015



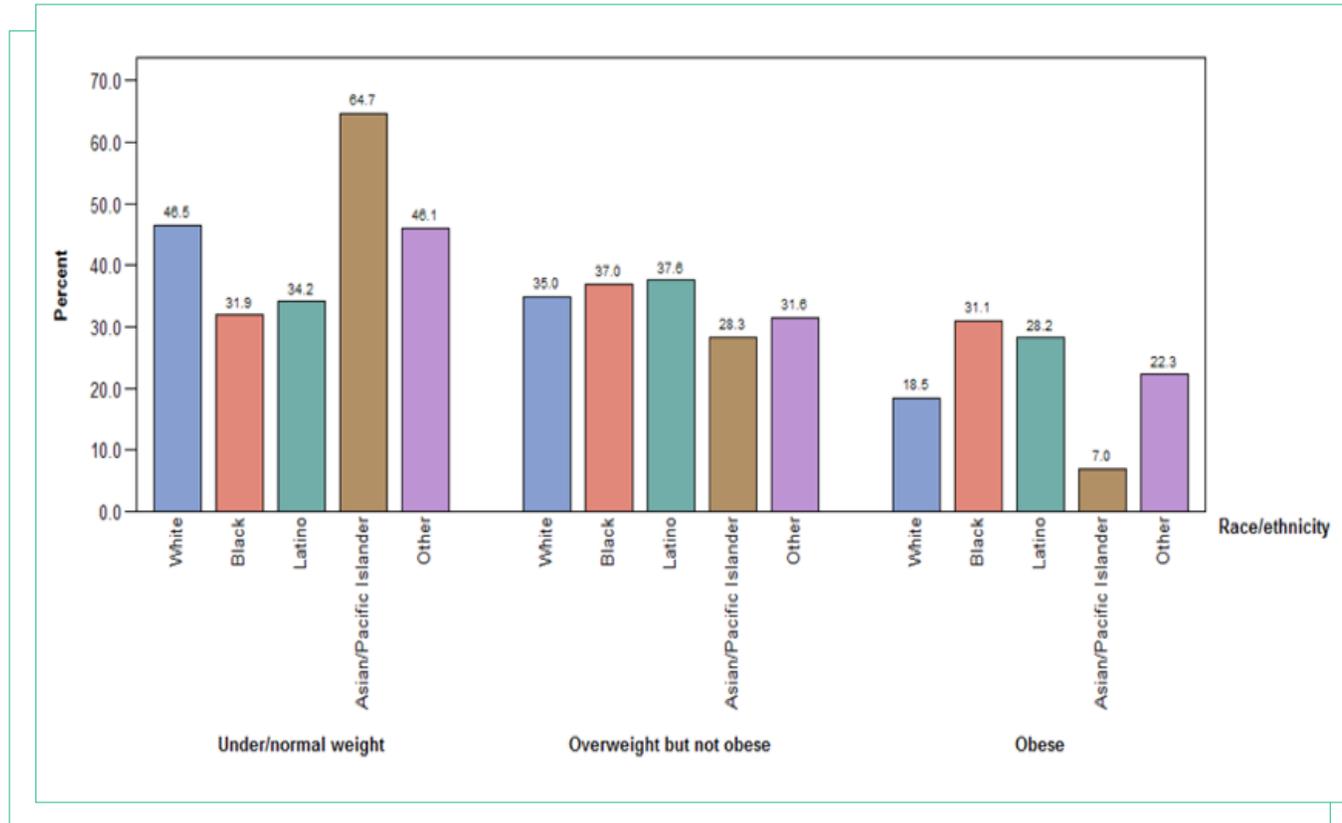
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Table H Adult sugary beverage consumption by race/ethnicity, New York City, 2007-2015



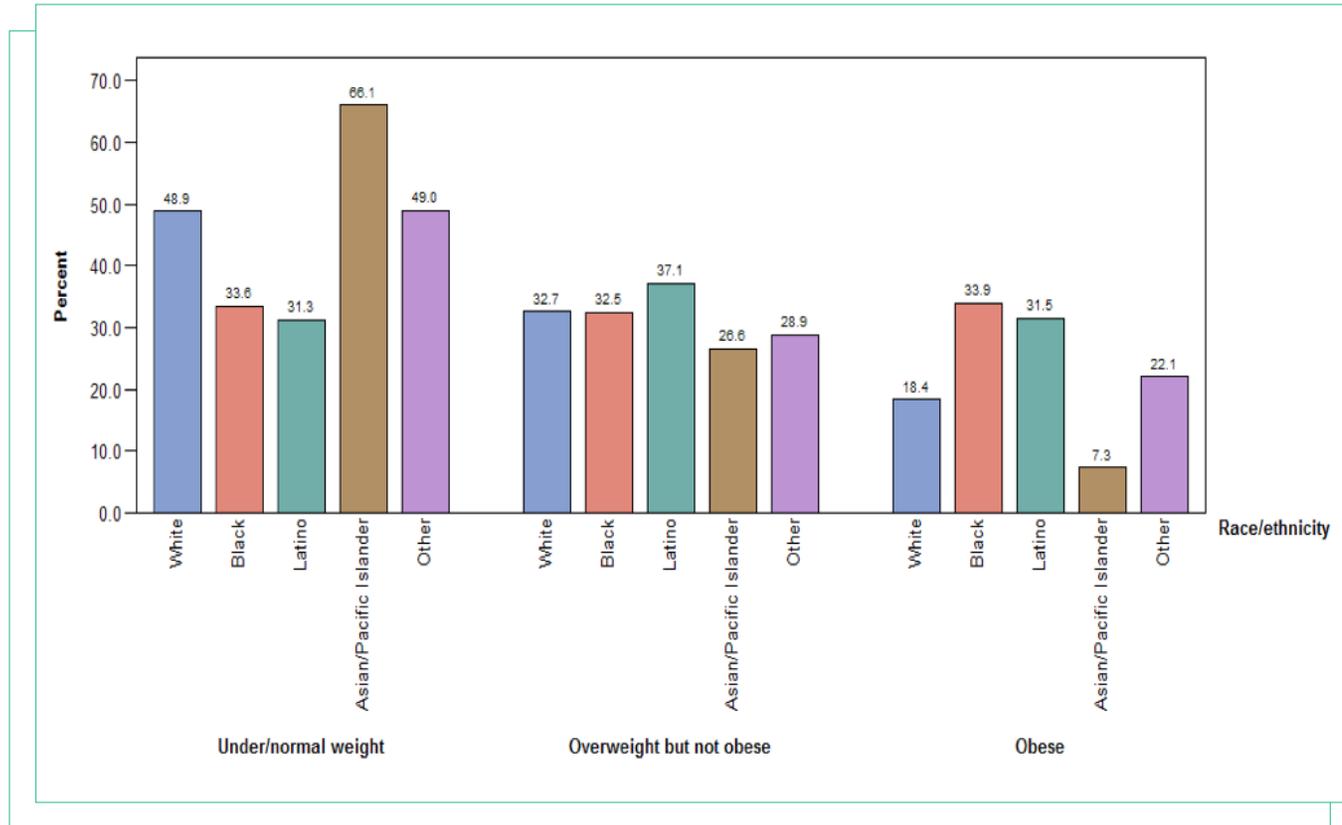
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<https://www1.nyc.gov/assets/doh/downloads/pdf/survey/sugary-drink.pdf>

Table 1 Adult obesity and overweight by race/ethnicity, New York City, 2008



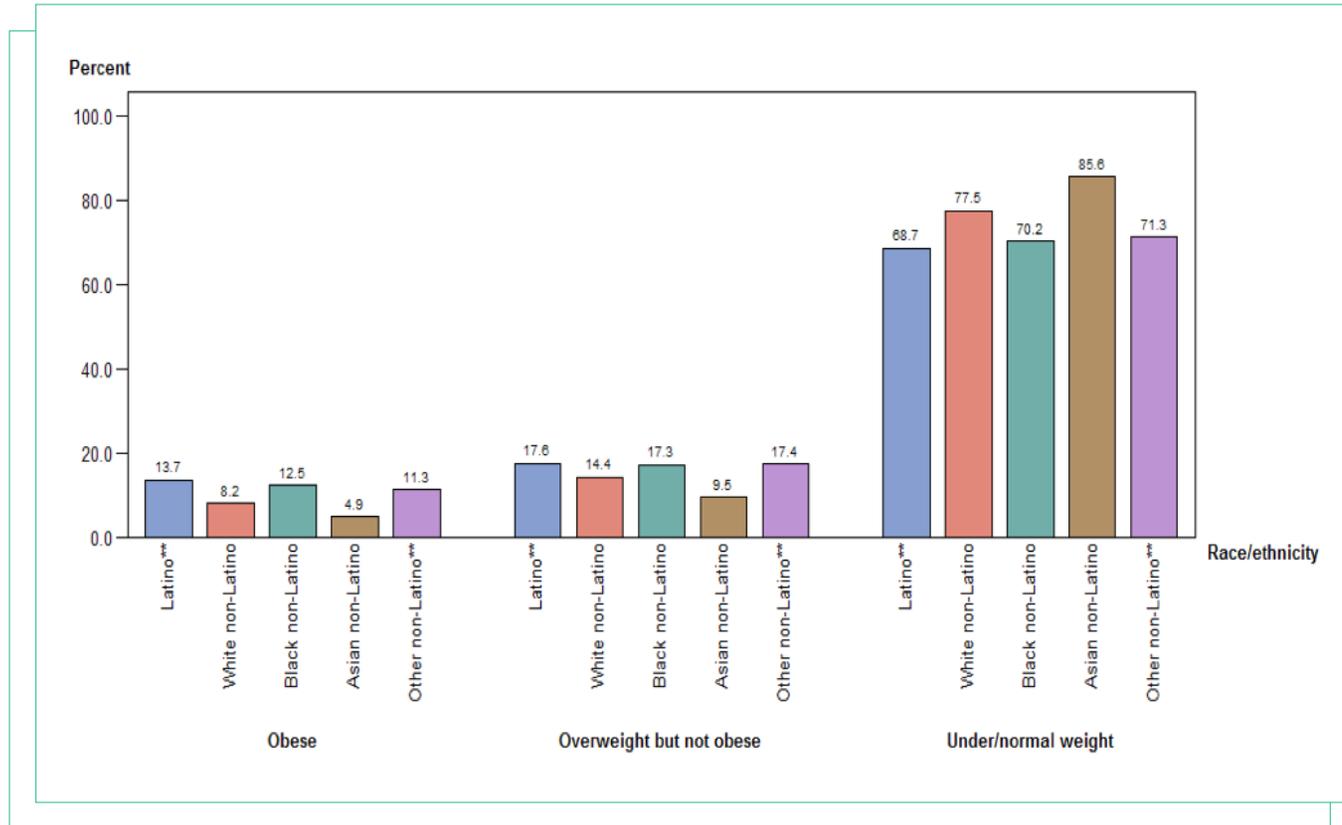
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Table J Adult obesity and overweight by race/ethnicity, New York City, 2015



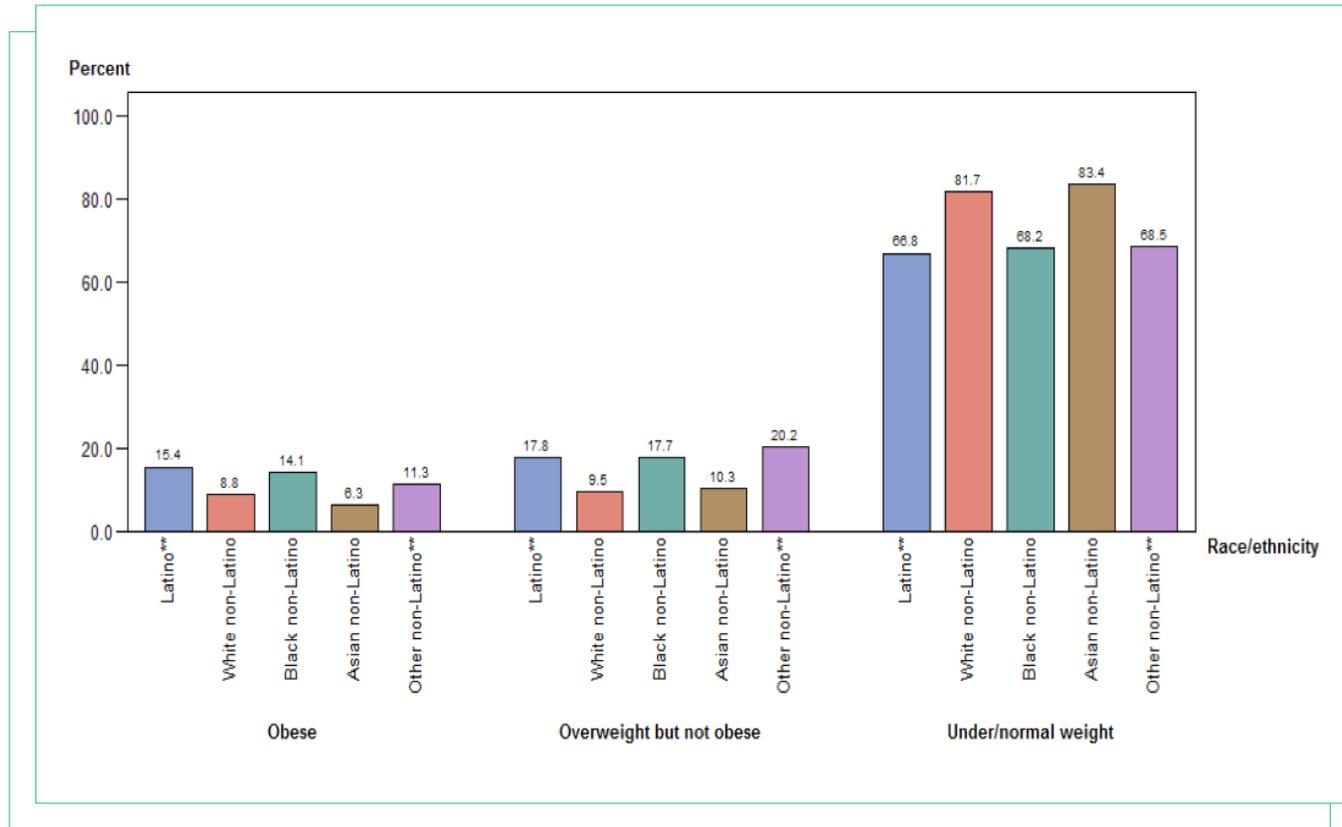
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**Table K** Youth obesity rates for New York City, by race/ethnicity, 2007



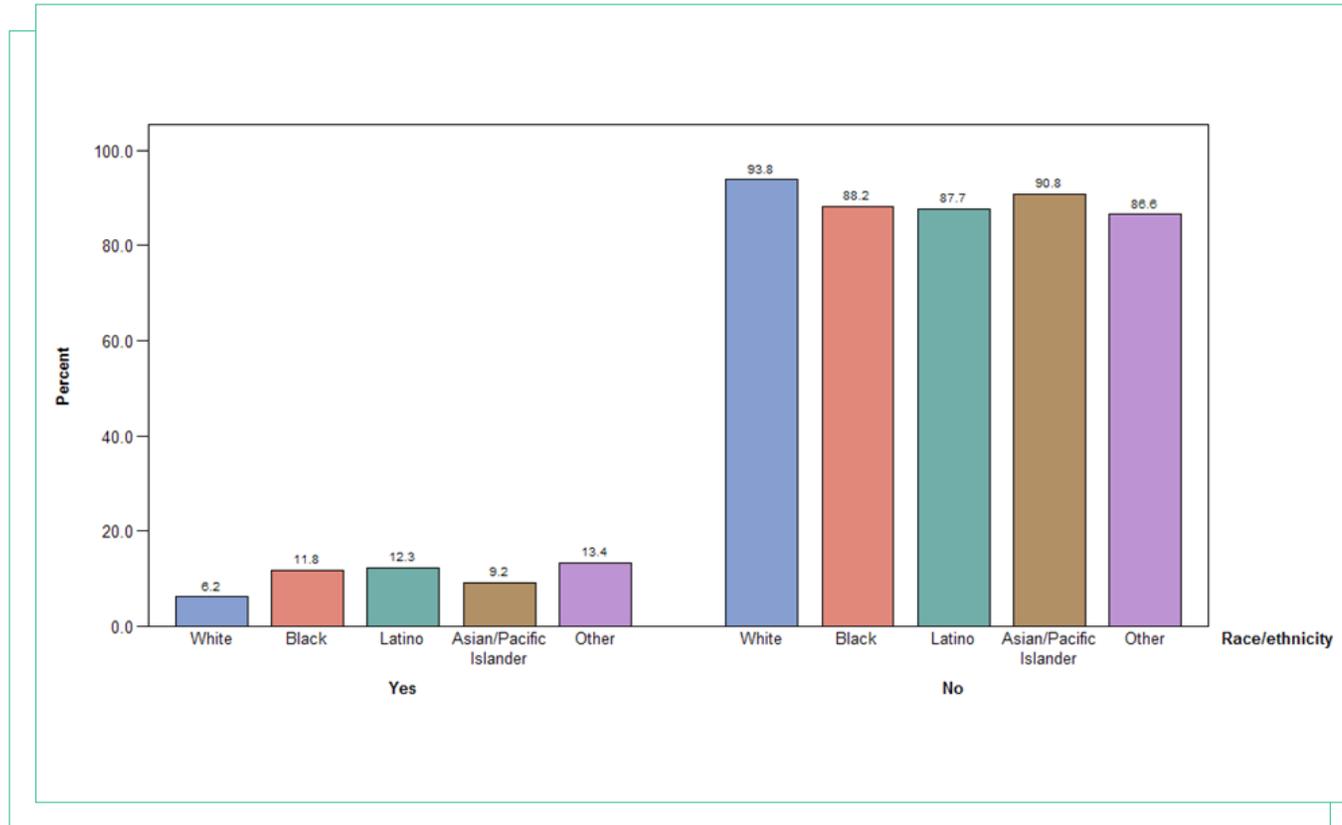
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Table L Youth obesity rates for New York City, by race/ethnicity, 2015  
 Source YRBS



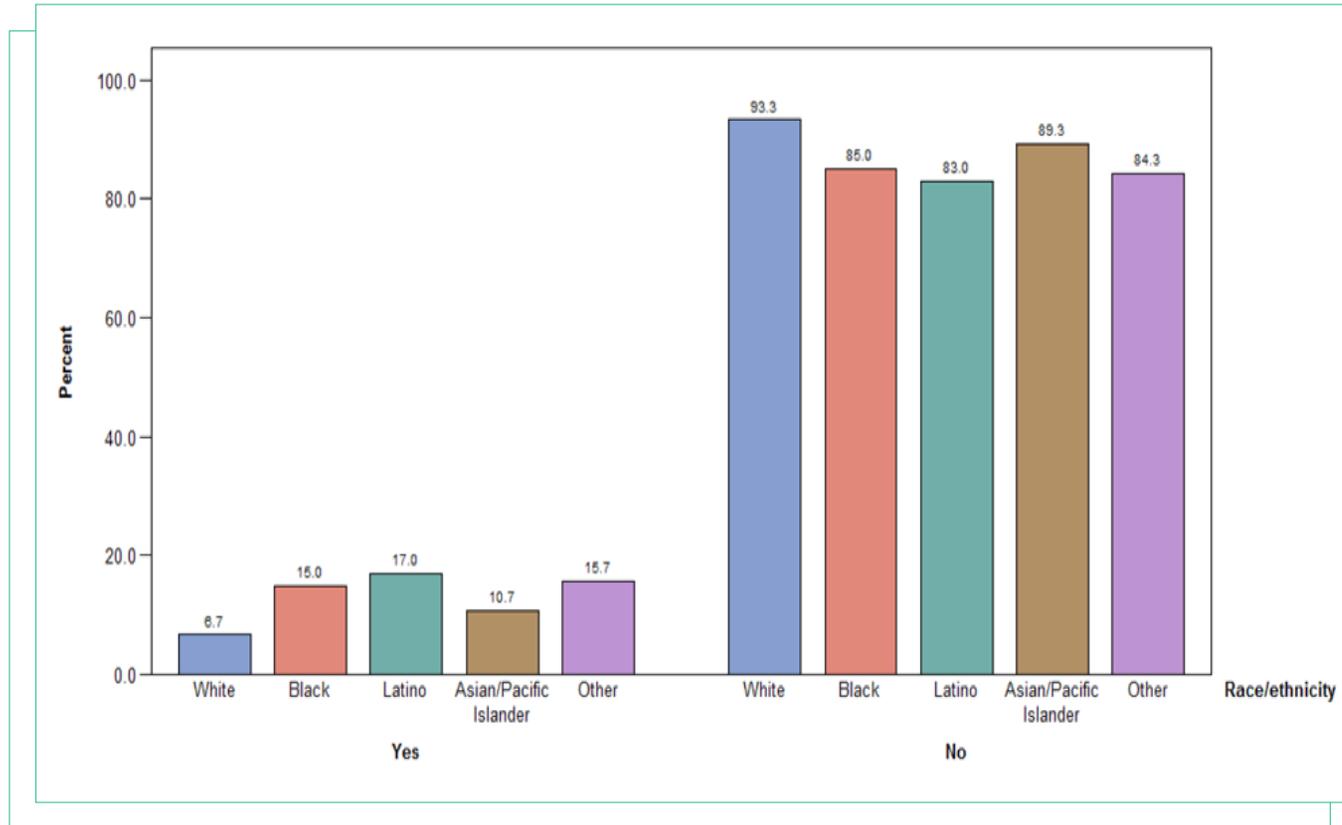
Source:  
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Table M Adult New Yorkers who have ever been told they have diabetes by race/ethnicity, 2007



Source:  
<https://a816-healthpsi.nyc.gov/epiquery/sasresults.jsp>

Table N Adult New Yorkers who have ever been told they have diabetes by race/ethnicity, 2015



Source:  
<https://a816-healthpsi.nyc.gov/epiquery/sasresults.jsp>

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