

Citywide Mobility Survey: Transportation Impacts of COVID-19

May 2020 Panel Results - Prepared for NYC DOT by RSG



SURVEY OBJECTIVES

1

Develop a longitudinal panel of participants from the 2019 Citywide Mobility Survey (CMS) to understand the impacts of COVID-19 on citywide travel behavior.

2

Compare current behavior to participants' behavior in spring 2019 and measure changes from spring 2020 through fall 2020.

3

Measure attitudes toward current transportation issues and topics.

COVID-19 PANEL SURVEY DESIGN

Invitation criteria for the COVID-19 spring panel survey:

1. Completed the 2019 CMS conducted from May 2019 through June 2019.
2. Agreed to participate in future NYC DOT surveys.
3. Provided an email address.

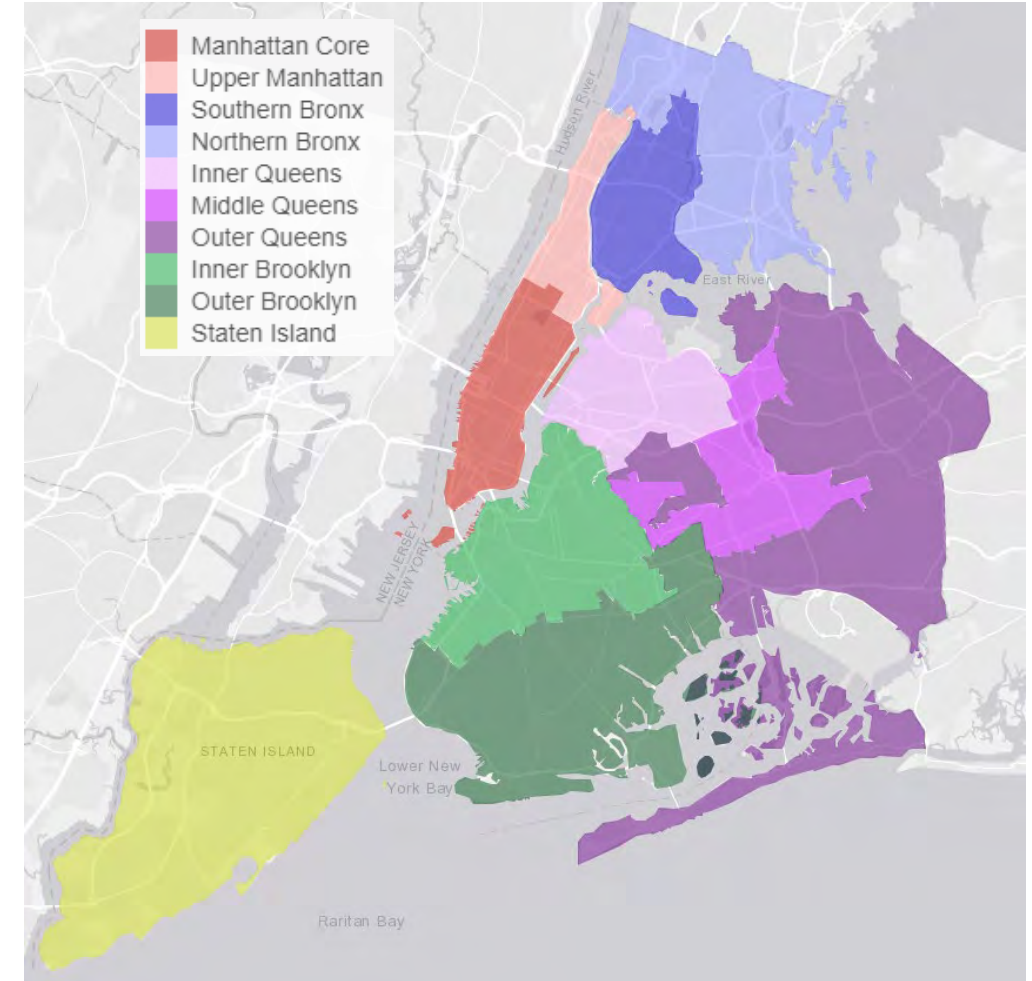
Spring panel fielding period began on May 4, 2020 and concluded on May 8, 2020.



SPRING SURVEY RESPONSE

CMS ZONE	INVITED	COMPLETED	COMPLETE RATE ¹
Manhattan Core	273	100	36.6%
Upper Manhattan	253	106	41.9%
Inner Brooklyn	272	112	41.2%
Outer Brooklyn	237	92	38.8%
Inner Queens	234	87	37.2%
Middle Queens	240	102	42.5%
Outer Queens	258	109	42.2%
Southern Bronx	276	93	33.7%
Northern Bronx	301	126	41.9%
Staten Island	273	110	40.3%
Outside of New York City	--	26	--
Total	2,617	1,063	40.6%

¹Complete Rate = Completed / Invited



EXECUTIVE SUMMARY OVERVIEW

- 1 Sample Profile
- 2 Employment Information
- 3 Travel Behavior Over Last 7 Days
- 4 Travel Behavior Changes Since COVID-19 Outbreak
- 5 Attitudinal Questions

WEIGHTING KEY:

All figures are weighted to represent the population of New York City unless noted otherwise.



Sample Profile

SAMPLE PROFILE

Demographic Breakdown		Unweighted Sample	Weighted Sample	ACS 5-Year Average (2013-2017)
Age	18 – 24	7%	11%	12%
	25 – 44	49%	40%	40%
	45 – 64	32%	31%	31%
	65 and older	12%	18%	17%
Gender	Female	58%	53%	53%
	Male	42%	47%	47%
Race	American Indian or Alaska Native	1%	0%	0%
	Asian	16%	18%	14%
	Black or African American	16%	19%	24%
	Native Hawaiian or other Pacific Islander	0%	0%	0%
	White	57%	44%	43%
	Two Races or More	4%	6%	3%
	Other	7%	12%	15%
Ethnicity	Hispanic, Latino, or Spanish Origin	20%	27%	29%
	Not of Hispanic, Latino, or Spanish Origin	80%	73%	71%
Income	Under \$25,000	18%	28%	25%
	\$25,000-\$49,999	20%	23%	19%
	\$50,000-\$100,000	35%	27%	26%
	\$100,000-\$199,999	23%	17%	20%
	\$200,000 or more	5%	6%	9%
Borough	Manhattan	20%	22%	21%
	Brooklyn	20%	27%	30%
	Queens	29%	27%	28%
	Bronx	21%	18%	16%
	Staten Island	11%	6%	5%
Employment Status	Employed	61%	54%	64%
	Not employed	39%	46%	36%
Disability	Any disability	9%	14%	13%
	Ambulatory – Difficulty walking or climbing stairs	5%	6%	8%
	Vision disability – Blind or have difficulty seeing	1%	1%	3%
	Hearing disability – Deaf or have difficulty hearing	2%	5%	3%

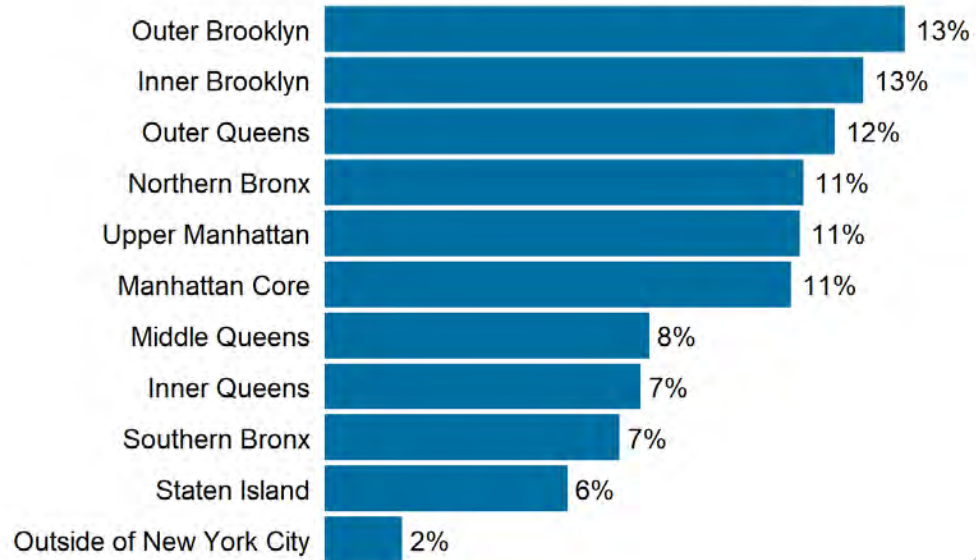
Note: For variables where “Prefer not the answer” was an option, respondents who selected that answer have been excluded from these calculations.

CURRENT RESIDENCE

13% of New Yorkers were currently residing somewhere other than their primary home as of May 4 – 8, 2020.

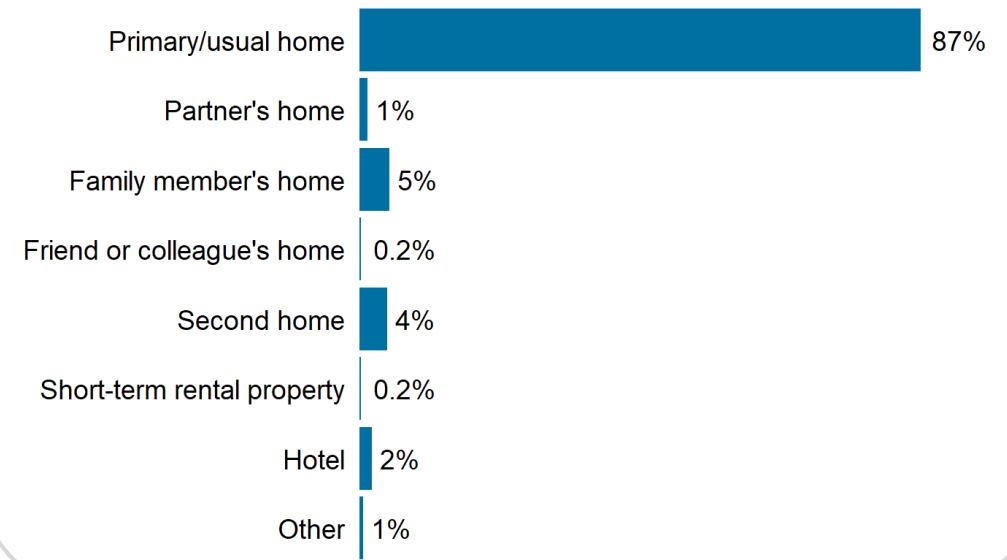
CURRENT HOME CMS ZONE

UNWEIGHTED N = 1,063, WEIGHTED N = 6,669,362



CURRENT RESIDENCE TYPE

UNWEIGHTED N = 1,063, WEIGHTED N = 6,669,362





**CITYWIDE
MOBILITY**
SURVEY

Employment Information

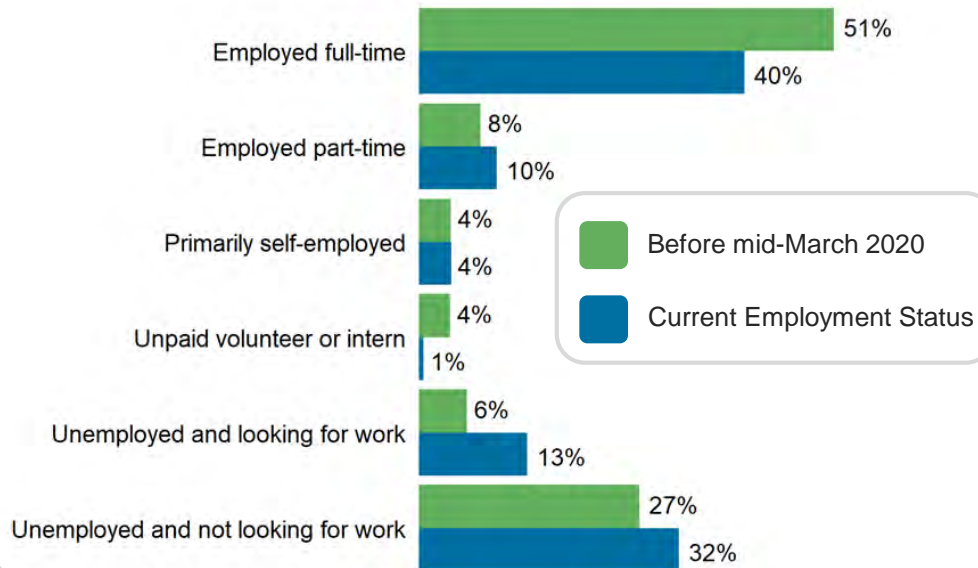
EMPLOYMENT STATUS

The full-time employment rate dropped by 11 percentage points since mid-March 2020.

48% of workers experienced a change to their employment status during the COVID-19 pandemic.

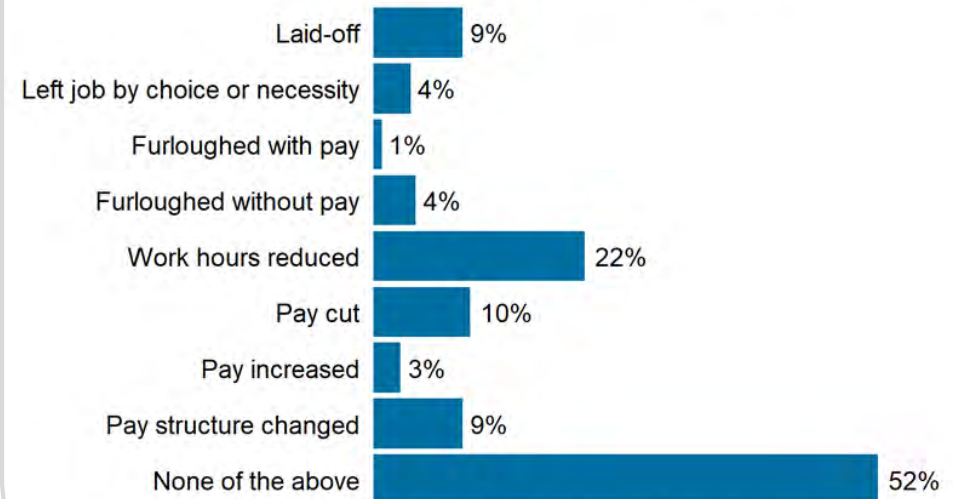
EMPLOYMENT

UNWEIGHTED N = 1,063, WEIGHTED N = 6,669,362



EMPLOYMENT CHANGE

UNWEIGHTED N = 812, WEIGHTED N = 4,516,621



Note: respondents could select more than one answer to this question.

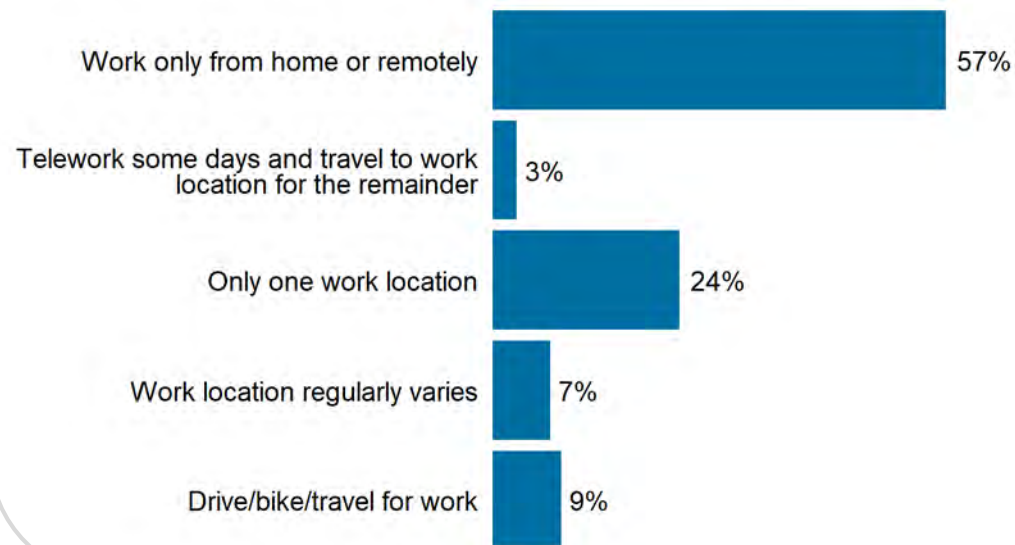
WORK LOCATION

57% of workers are currently working from home or remotely.

Before mid-March 2020, 40% of workers sometimes teleworked, and 11% worked remotely at least 5 days a week.

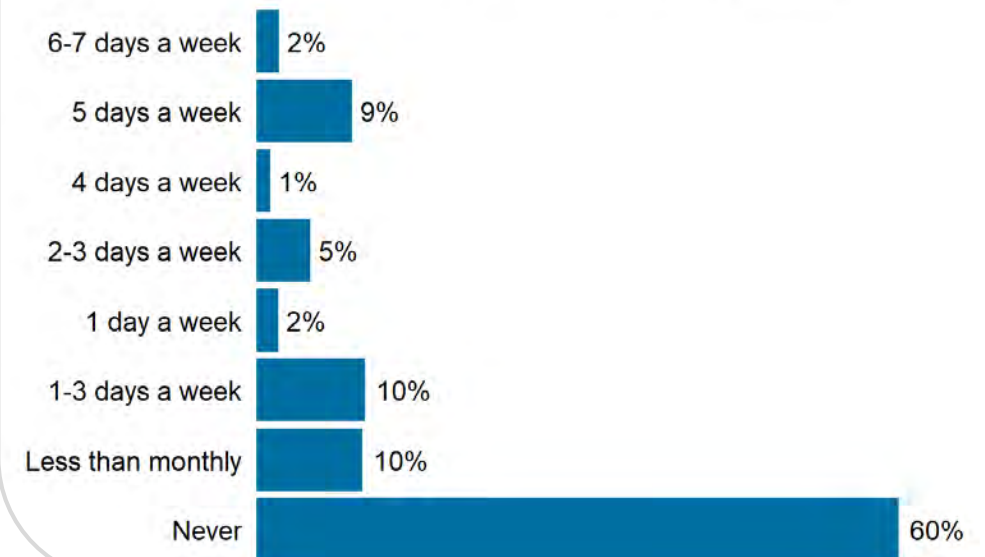
CURRENT WORK LOCATION

UNWEIGHTED N = 651, WEIGHTED N = 3,629,716



TELEWORK FREQUENCY BEFORE MID-MARCH 2020

UNWEIGHTED N = 809, WEIGHTED N = 4,453,431



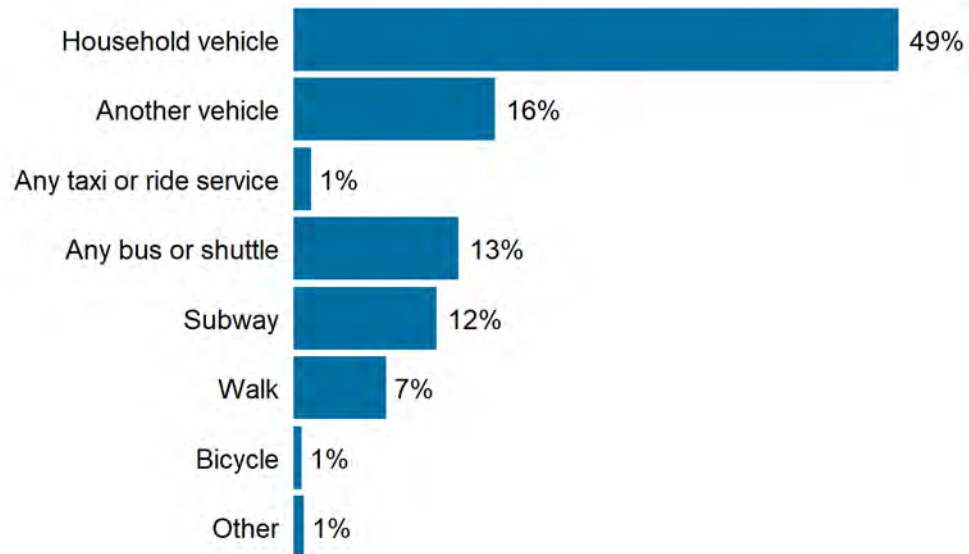
WORK MODE

25% of workers who are currently commuting to their workplace are taking a bus or the subway.

In the 2019 CMS, 38% of these workers who traveled to their workplace commuted by public transit.

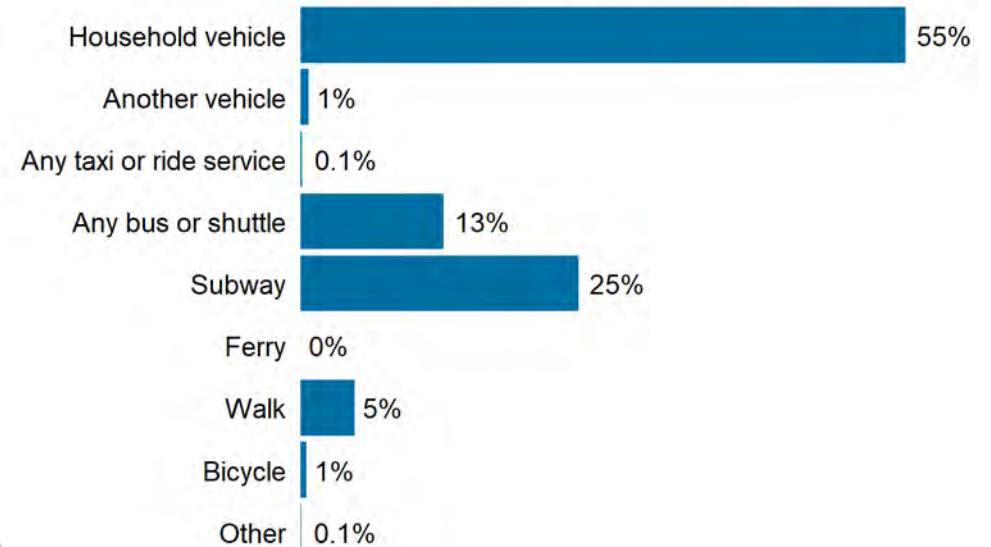
CURRENT WORK MODE

UNWEIGHTED N = 183, WEIGHTED N = 1,544,384



WORK MODE FROM THE 2019 CMS

UNWEIGHTED N = 163, WEIGHTED N = 1,481,989



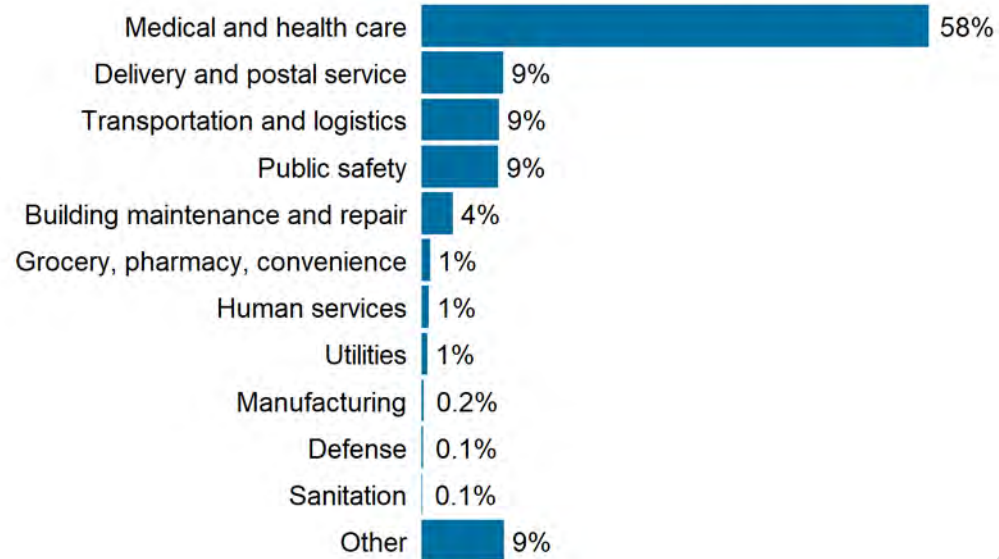
ESSENTIAL WORKERS

More than half of essential workers work in the medical and health care industry.

The largest share of essential workers live in Outer Queens, followed by Outer Brooklyn.

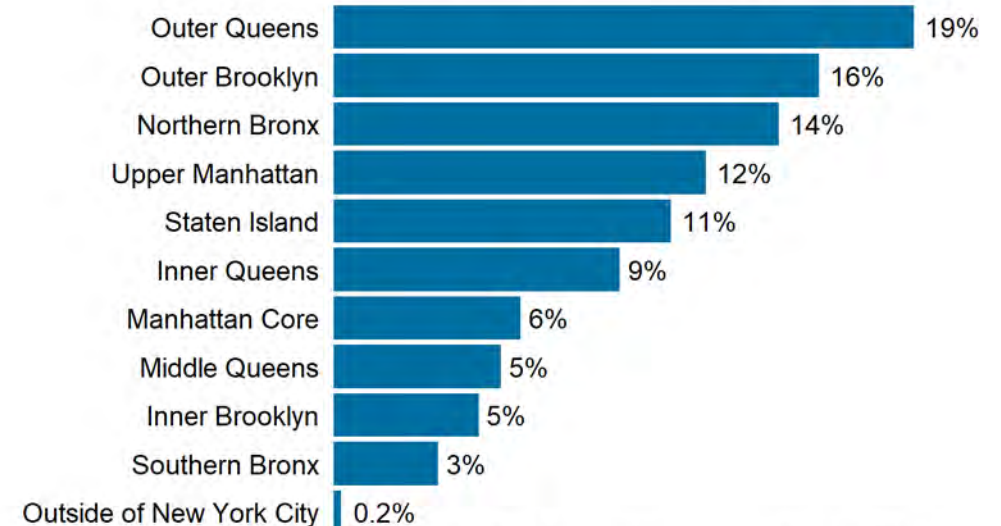
ESSENTIAL WORKERS - INDUSTRY

UNWEIGHTED N = 209, WEIGHTED N = 1,573,322



ESSENTIAL WORKERS - HOME CMS ZONE

UNWEIGHTED N = 209, WEIGHTED N = 1,573,322



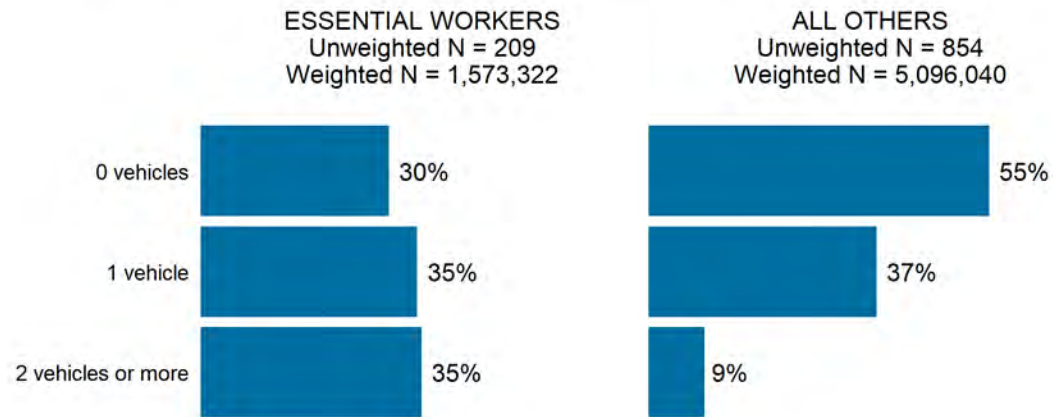
Note: this figure shows current home CMS zone.

ESSENTIAL WORKERS – TRAVEL BEHAVIOR

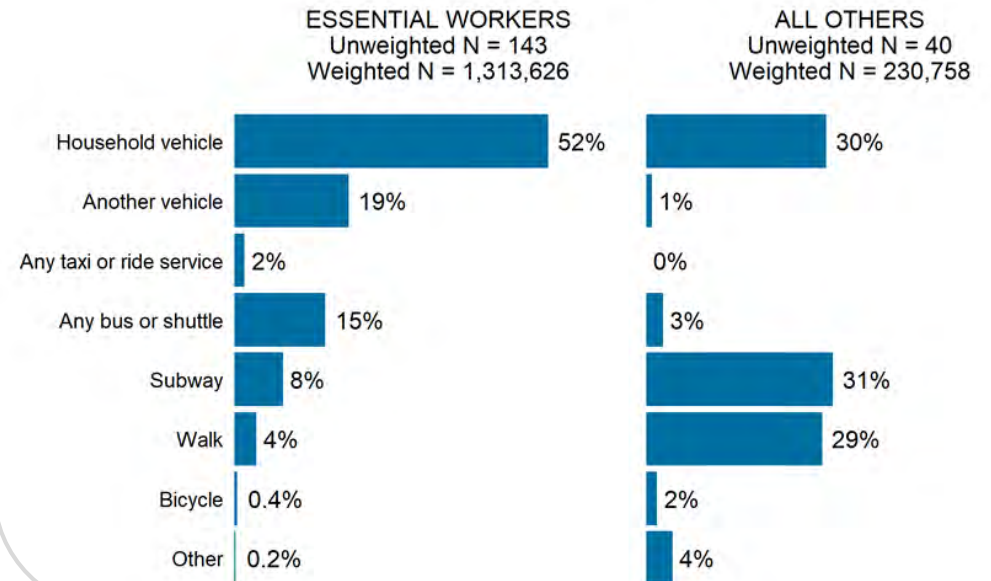
70% of essential workers have at least one household vehicle, compared to 46% of the general population.

Essential workers are more likely than other commuters to commute in a personal vehicle or by bus.

VEHICLE OWNERSHIP BY ESSENTIAL WORKER STATUS



WORK MODE BY ESSENTIAL WORKER STATUS

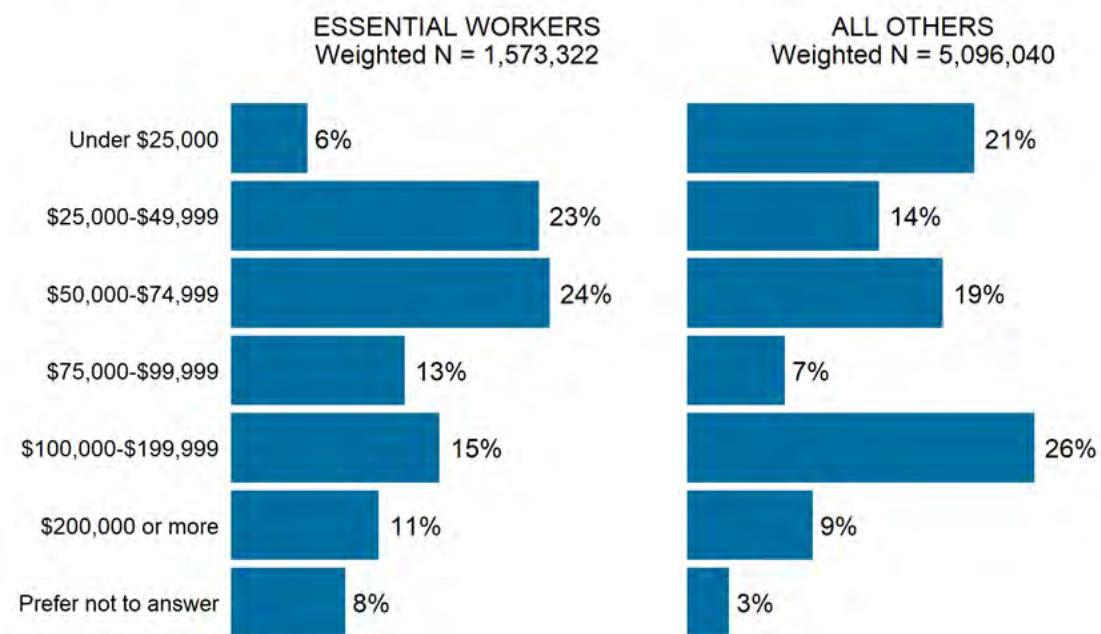


ESSENTIAL WORKERS – HOUSEHOLD INCOME

47% of essential workers have a household income between \$25,000 and \$75,000.

26% of essential workers have a household income greater than \$100,000, compared with 35% of other New Yorkers.

HOUSEHOLD INCOME BY ESSENTIAL WORKER STATUS

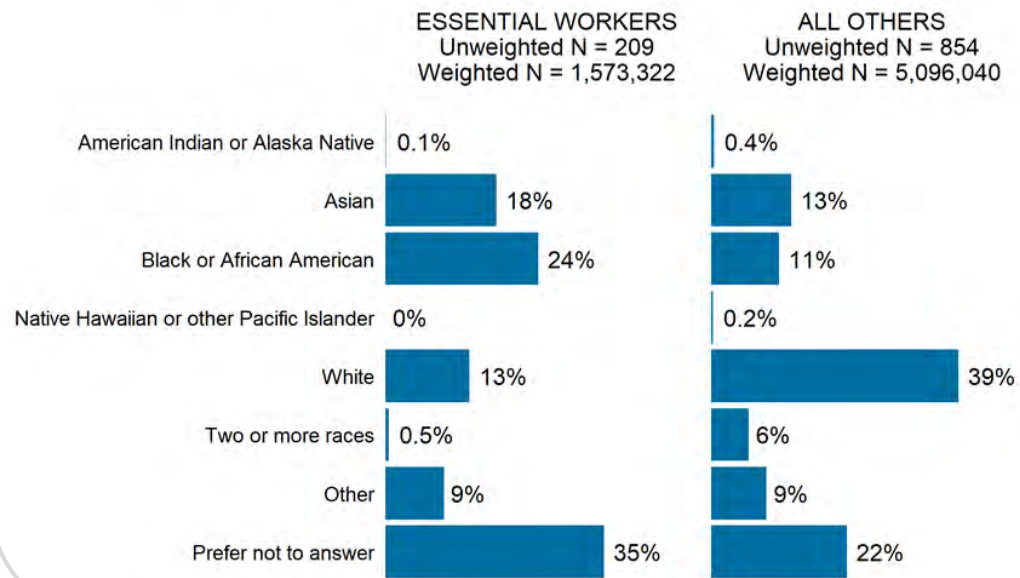


ESSENTIAL WORKERS – DEMOGRAPHICS

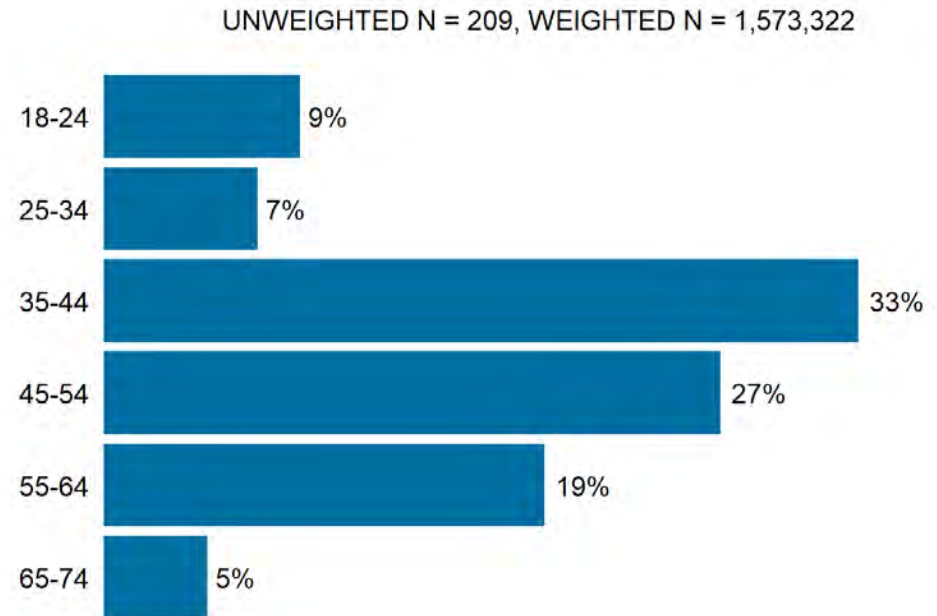
24% of essential workers are Black or African American. Essential workers are significantly less likely to be white than other New Yorkers.

The largest share of essential workers are between the ages of 35 and 44.

RACE BY ESSENTIAL WORKER STATUS



ESSENTIAL WORKERS - AGE



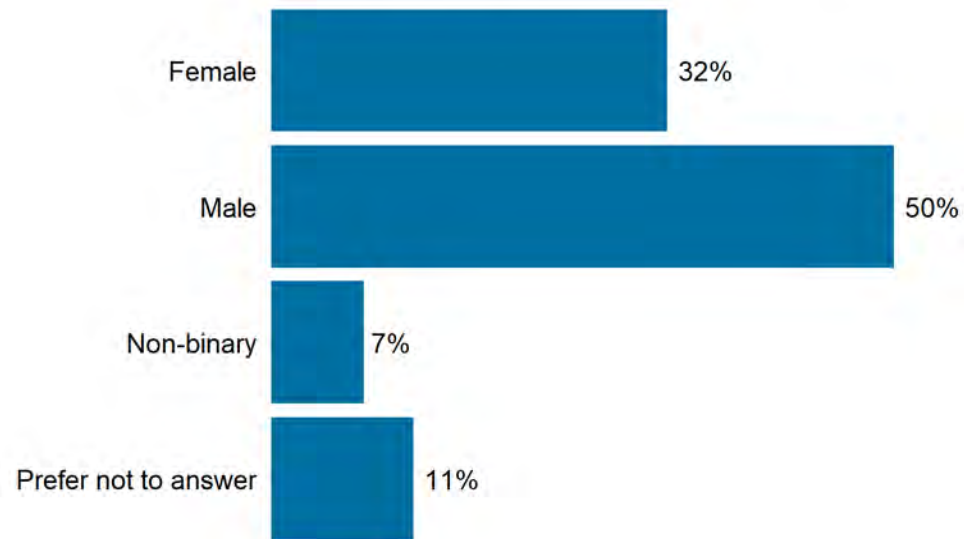
ESSENTIAL WORKERS – DEMOGRAPHICS

32% of essential workers are female. 11% declined to report their gender in the 2019 CMS.

60% of essential workers have a bachelor's degree or higher.

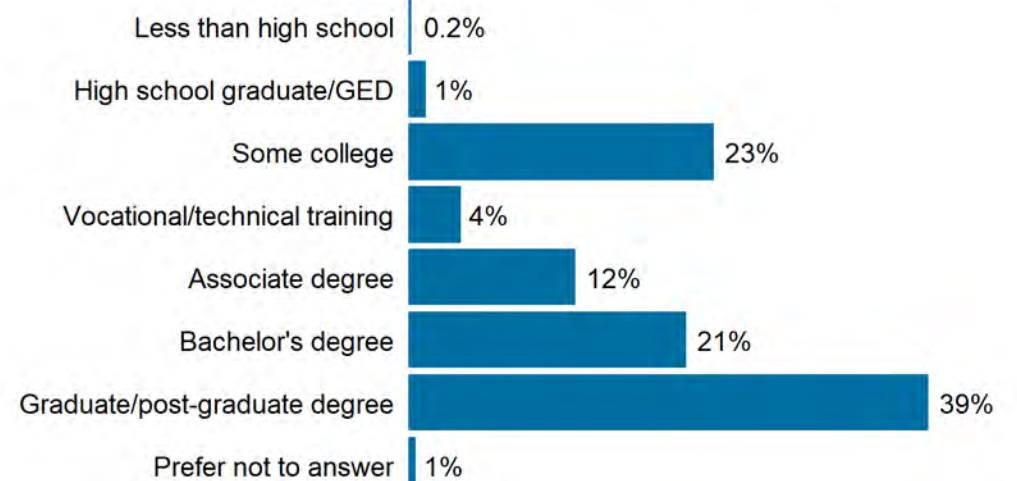
ESSENTIAL WORKERS - GENDER

UNWEIGHTED N = 209, WEIGHTED N = 1,573,322



ESSENTIAL WORKERS - EDUCATIONAL ATTAINMENT

UNWEIGHTED N = 200, WEIGHTED N = 1,406,914



Note: the sample size for this figure is smaller due to non-response in the 2019 CMS.



Travel Behavior Over the Last 7 Days

*The spring panel fielding period began on May 4, 2020 and concluded on May 8, 2020.
The "Last 7 Days" refers to April 28, 2020 through May 8, 2020.*

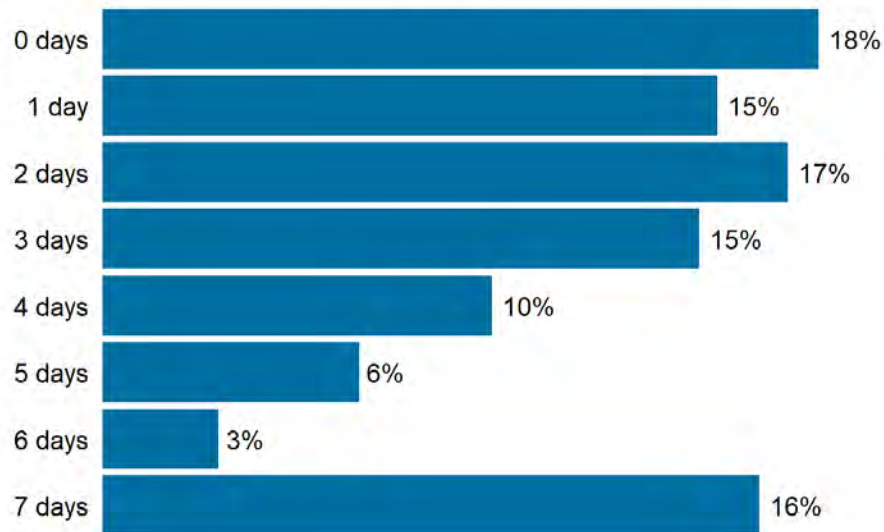
OUTDOOR EXERCISE

82% of New Yorkers walked or jogged outside for exercise in the last 7 days.

25% of New Yorkers exercised outside on 5 or more days in the last week.

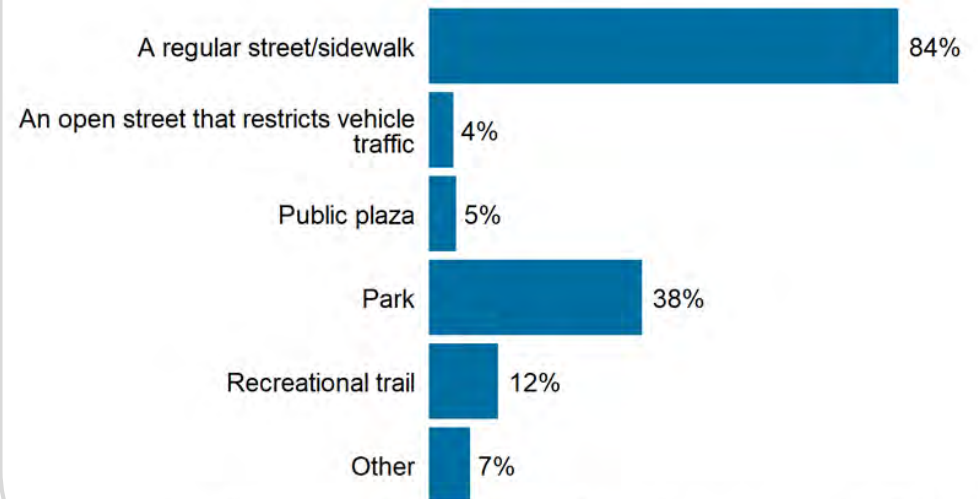
OUTDOOR EXERCISE FREQUENCY IN THE LAST 7 DAYS

UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



EXERCISE LOCATION IN THE LAST 7 DAYS

UNWEIGHTED N = 830, WEIGHTED N = 5,385,750



Note: respondents could select more than one answer to this question.

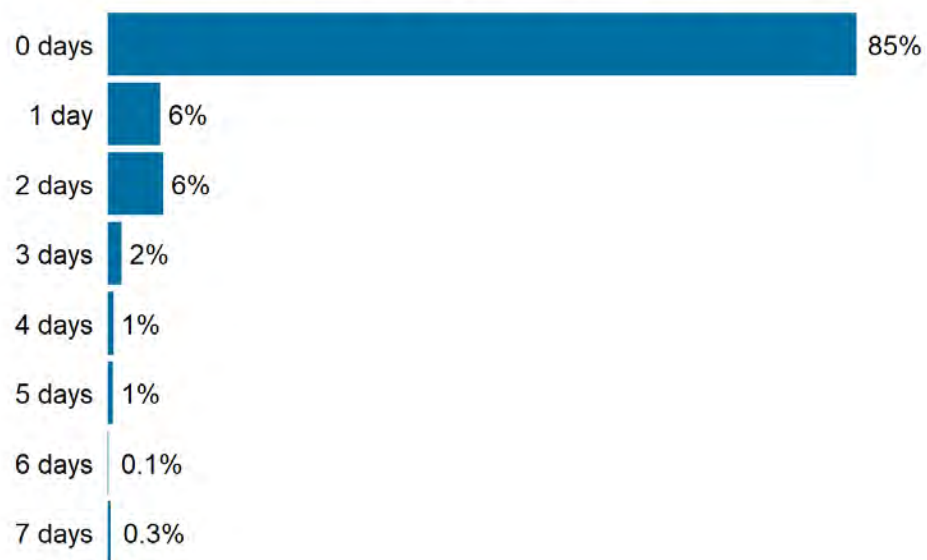
BICYCLE FREQUENCY

15% of New Yorkers rode a bike in the last 7 days.

In the 2019 CMS, 11% of New Yorkers had ridden a bike in the last 7 days.

BICYCLE USE FREQUENCY IN THE LAST 7 DAYS

UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



BICYCLE USE FREQUENCY IN THE LAST 7 DAYS FROM THE 2019 CMS

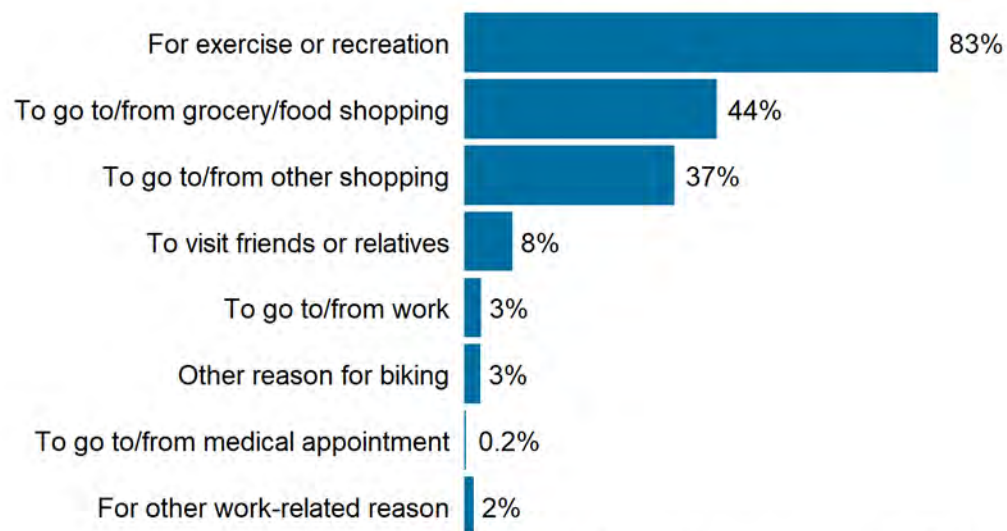
UNWEIGHTED N = 476, WEIGHTED N = 3,170,428



BICYCLE TRIP PURPOSES

BICYCLE TRIP PURPOSE IN THE LAST 7 DAYS

UNWEIGHTED N = 132, WEIGHTED N = 1,003,105



Note: respondents could select more than one answer to this question.

In the 2019 CMS:

- 89% of New Yorkers who used a bicycle in the city made exercise or recreation trips by bicycle.
- 44% of New Yorkers who used a bicycle in the city ran errands using a bicycle.

Based on 2019 CMS question: “Why do you ride your bicycle in New York City? Select all that apply.” which was asked of anyone who reported riding a bike in the city.

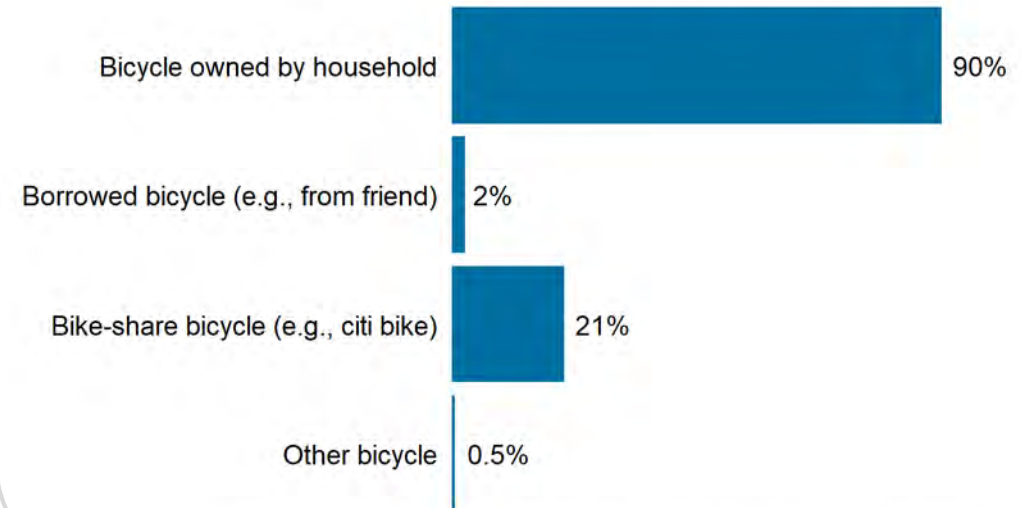
BICYCLE TYPE

90% of New Yorkers who rode a bicycle in the last 7 days rode their personal bicycle.

21% used a bike-share bicycle, such as Citi Bike.

BICYCLE TYPE USED IN LAST 7 DAYS

UNWEIGHTED N = 132, WEIGHTED N = 1,003,105

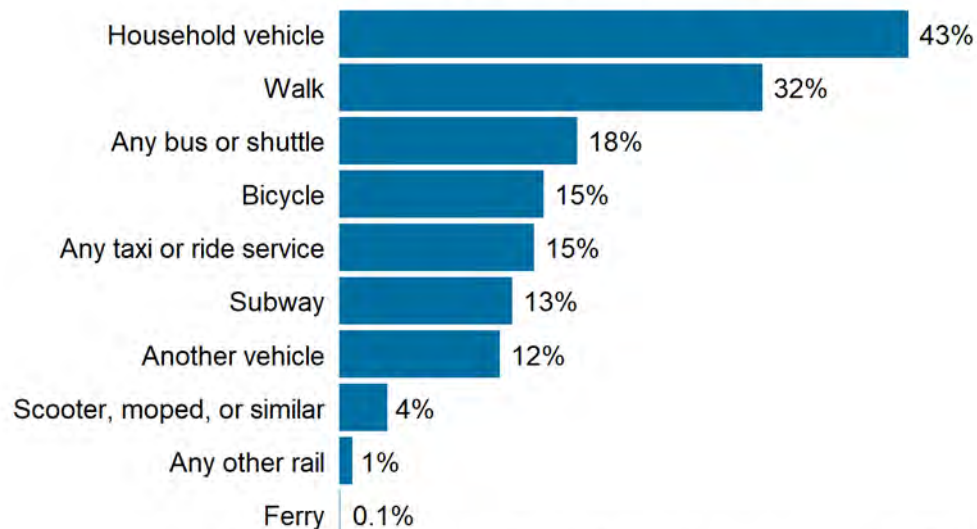


Note: respondents could select more than one answer to this question.

MODES USED IN THE PAST WEEK

MODES USED IN THE LAST 7 DAYS

UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



Note: respondents could select more than one answer to this question.

- Among New Yorkers who used a household vehicle in the last 7 days, 29% used a household vehicle on 1 day, and 16% made a vehicle trip on all 7 days.
(unweighted N = 452, weighted N = 2,794,007)
- 74% of New Yorkers who rode the bus in the last week, rode the bus on only 1 of those 7 days.
(unweighted N = 135, weighted N = 1,168,312)
- 75% of New Yorkers who rode the subway in the last week, rode the subway on only 1 of those 7 days.
(unweighted N = 103, weighted N = 850,136)

TRIP PURPOSE IN THE PAST WEEK

TRIP PURPOSES IN THE LAST 7 DAYS

UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



Note: respondents could select more than one answer to this question.

Of the 75% of New Yorkers who made a trip for an appointment, shopping, or errands, 43% made such a trip on 1 day, and 28% on 2 days in the last 7 days.

(unweighted N = 777, weighted N = 4,887,164)

59% of New Yorkers who made a work trip made work trips on 5 days in the last week.

(unweighted N = 224, weighted N = 1,573,279)

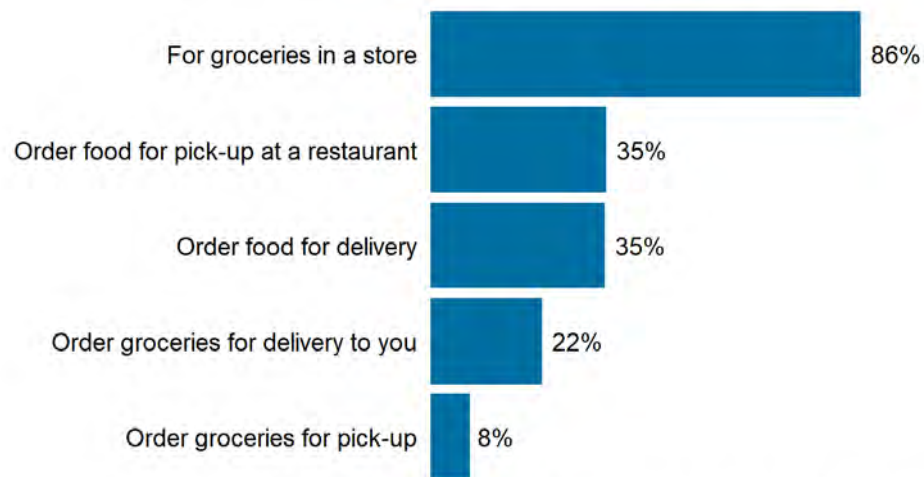
SHOPPING FOR FOOD OR GROCERIES IN THE PAST WEEK

Of the 86% of New Yorkers who shopped for groceries in a store in the last 7 days, 73% shopped for groceries on 1 or 2 days.

5% of New Yorkers who shopped for groceries in a store in the last week shopped for groceries every day.

FOOD SHOPPING IN THE LAST 7 DAYS

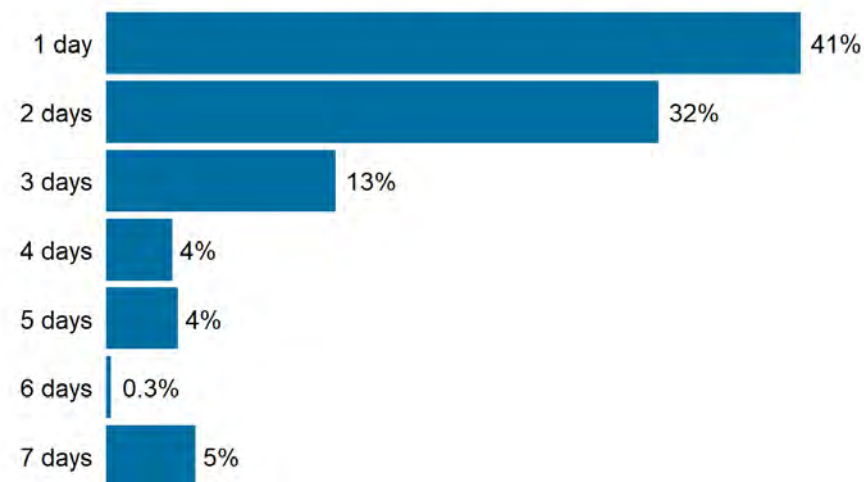
UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



Note: respondents could select more than one answer to this question.

IN-STORE GROCERY SHOPPING FREQUENCY IN THE LAST 7 DAYS

UNWEIGHTED N = 839, WEIGHTED N = 5,626,658



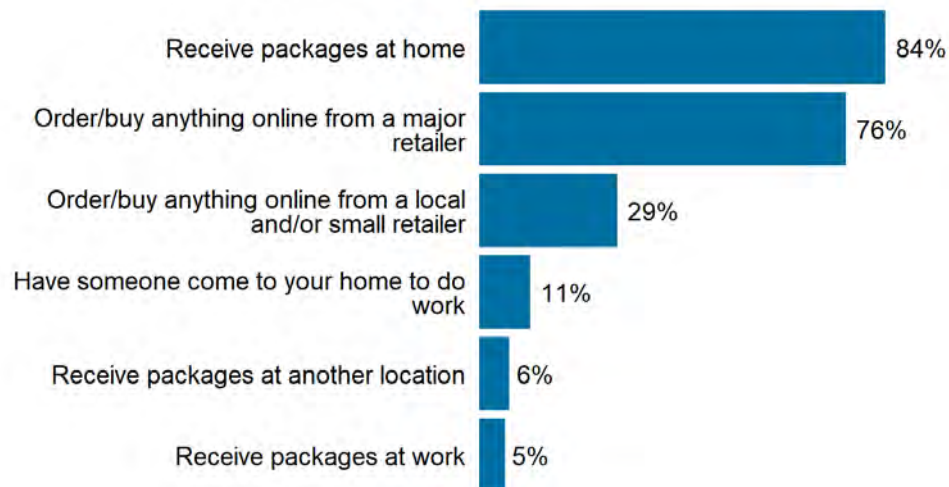
ONLINE PURCHASES AND DELIVERIES IN THE PAST WEEK

Of the 84% of New Yorkers who received a package at home in the last 7 days, 18% received packages on 4 or more days.

In the 2019 CMS, 49% of New Yorkers received a package at home during their travel period.

DELIVERIES IN THE LAST 7 DAYS

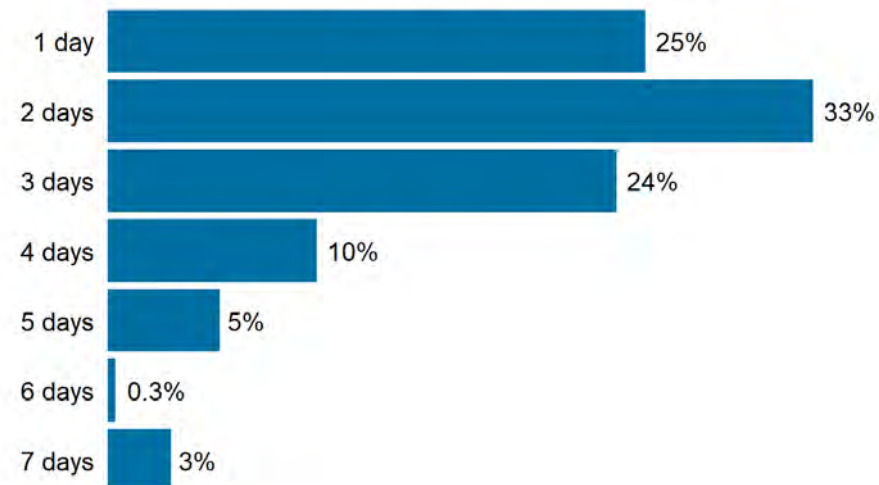
UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



Note: respondents could select more than one answer to this question.

HOME PACKAGE DELIVERY FREQUENCY IN THE LAST 7 DAYS

UNWEIGHTED N = 872, WEIGHTED N = 5,511,091





Travel Behavior Changes Since the COVID-19 Outbreak

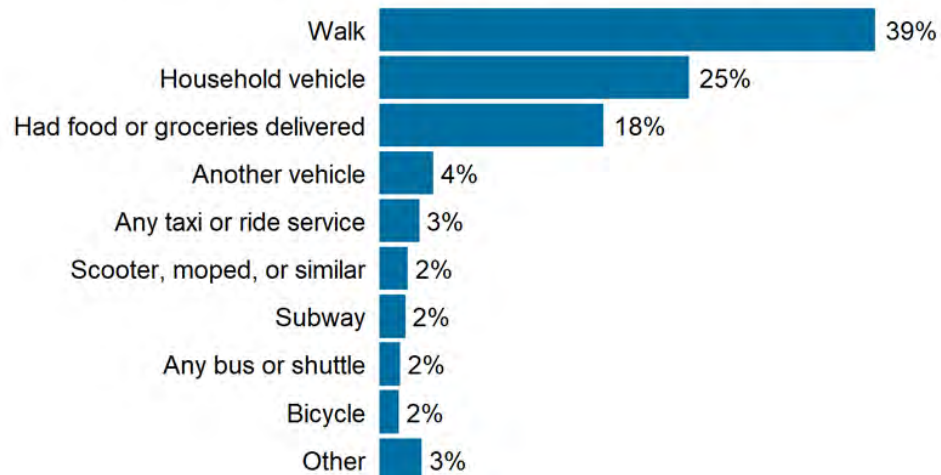
MODE CHANGES

During the COVID-19 pandemic:

- 60% of New Yorkers changed their typical travel mode for picking up groceries and/or takeout.
- 59% of New Yorkers changed their typical travel mode for running errands.

MODE LAST USED TO SHOP FOR OR PICK UP FOOD

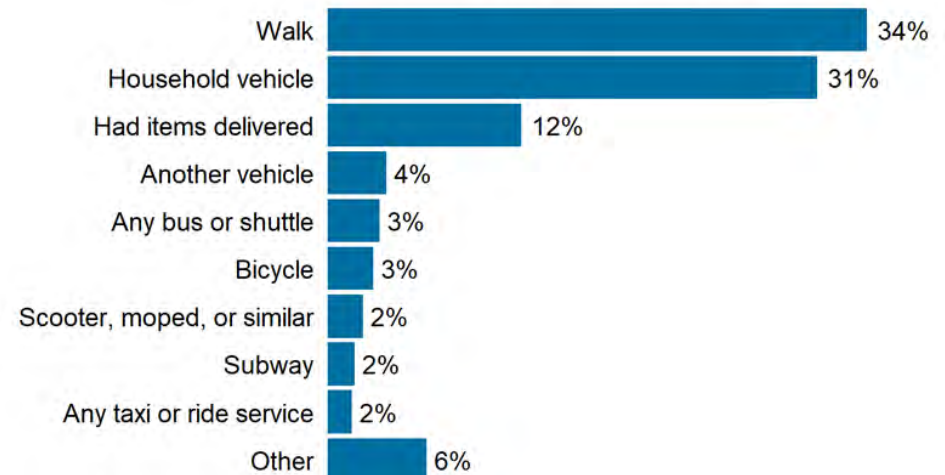
UNWEIGHTED N = 555, WEIGHTED N = 3,931,871



Note: only respondents who changed their typical mode to shop for or pick up food were asked this question.

MODE LAST USED TO RUN ERRANDS

UNWEIGHTED N = 565, WEIGHTED N = 3,860,154



Note: only respondents who changed their typical mode to run errands were asked this question.

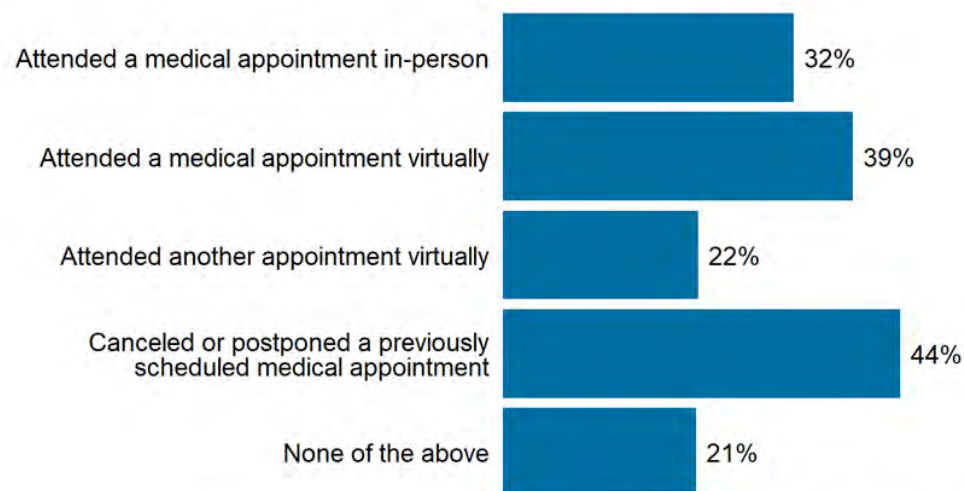
MEDICAL APPOINTMENTS SINCE MID-MARCH 2020

Among the 32% of New Yorkers who attended an in-person medical appointment since mid-March 2020, 29% attended their last appointment using a household vehicle.

11% attended their last appointment virtually.

MEDICAL ACTIVITY

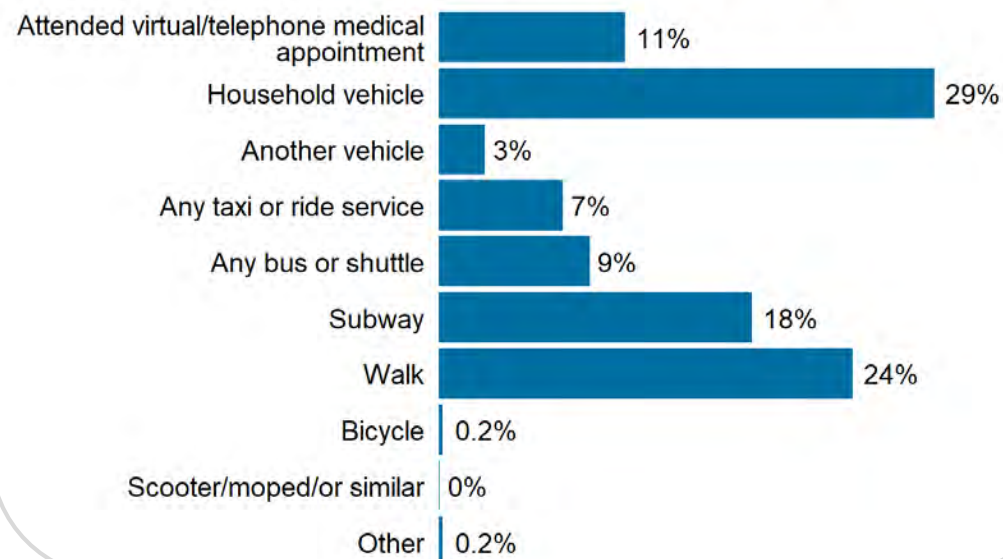
UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



Note: respondents could select more than one answer to this question.

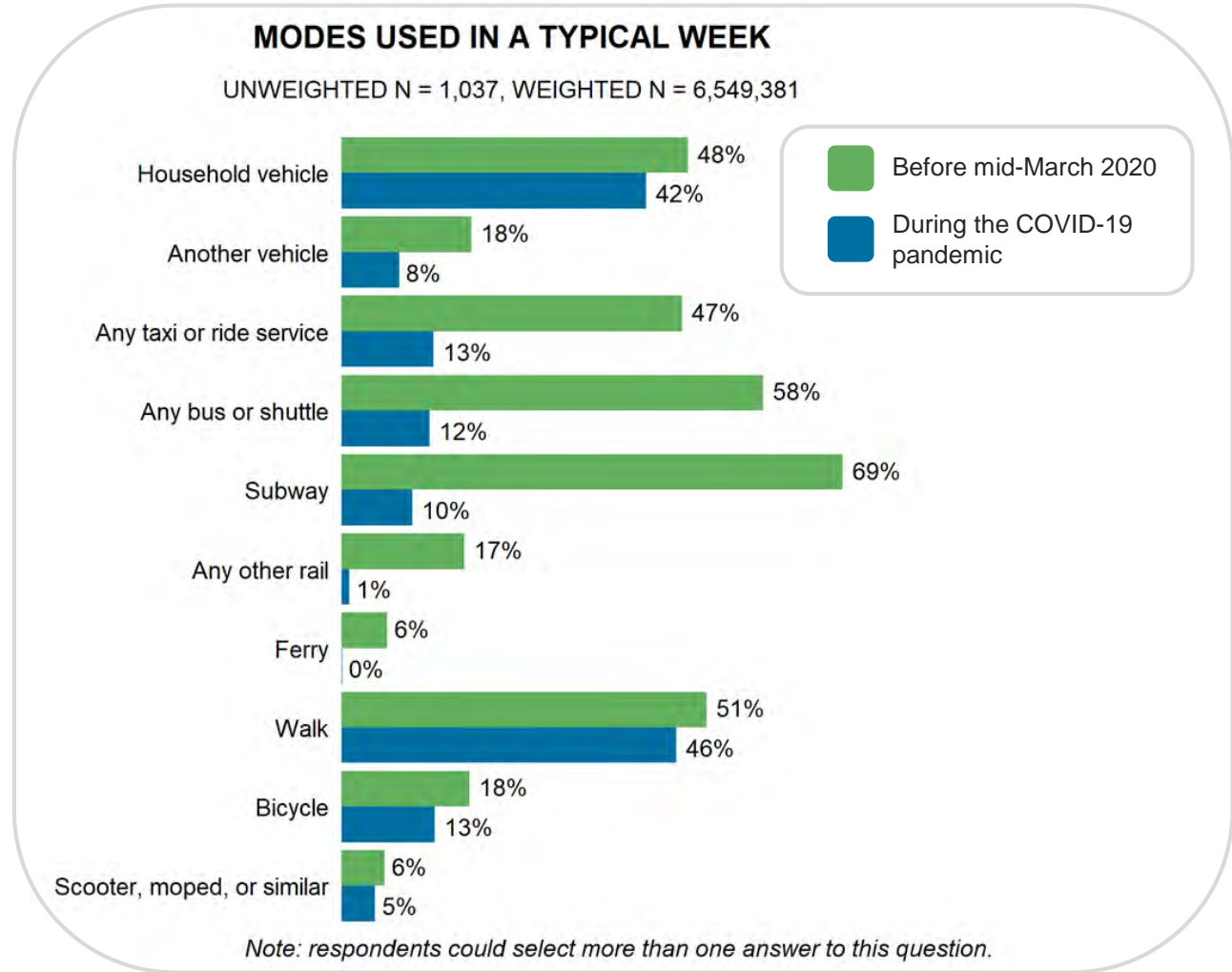
MODE LAST USED TO ATTEND MEDICAL APPOINTMENT

UNWEIGHTED N = 225, WEIGHTED N = 2,109,169



MODES USED BEFORE AND DURING THE COVID-19 PANDEMIC

- 49% of New Yorkers who have used a personal vehicle during the COVID-19 pandemic are using a personal vehicle to take trips they previously would have taken using another mode.
- Before mid-March 2020, 69% of New Yorkers used the subway and 58% used the bus in a typical week.
- 10% of New Yorkers currently use the subway and 12% use the bus in a typical week.

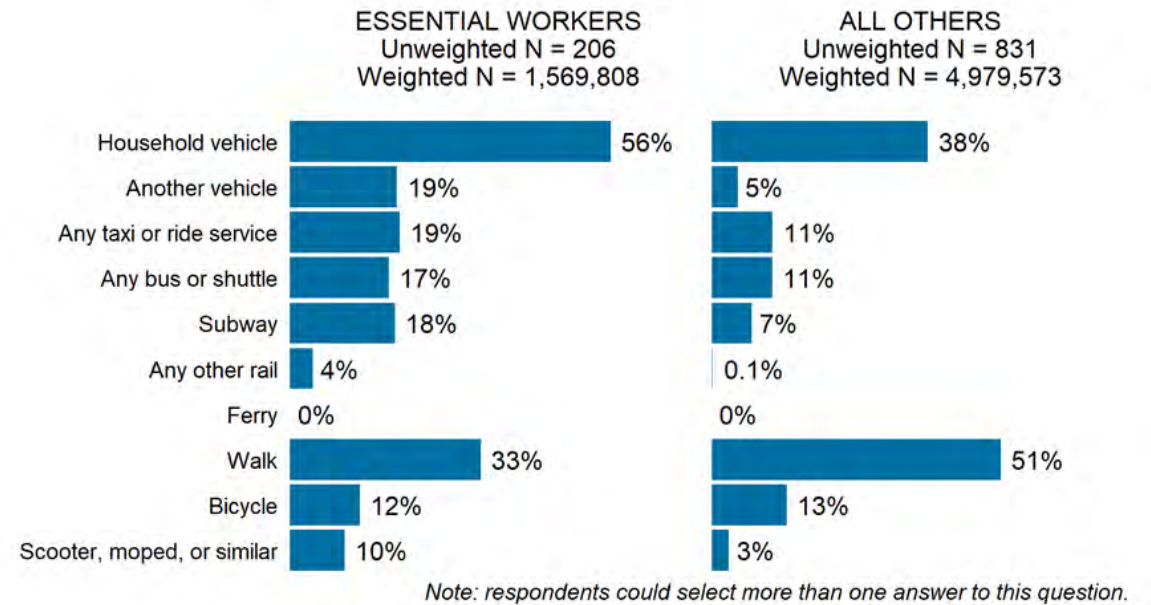


MODES USED DURING THE COVID-19 PANDEMIC BY EMPLOYMENT STATUS

Essential workers are more likely to travel in a personal vehicle, using a taxi or ride service, or by transit compared to other New Yorkers.

Essential workers are less likely to walk than other New Yorkers.

MODES USED IN A TYPICAL WEEK BY ESSENTIAL WORKER STATUS

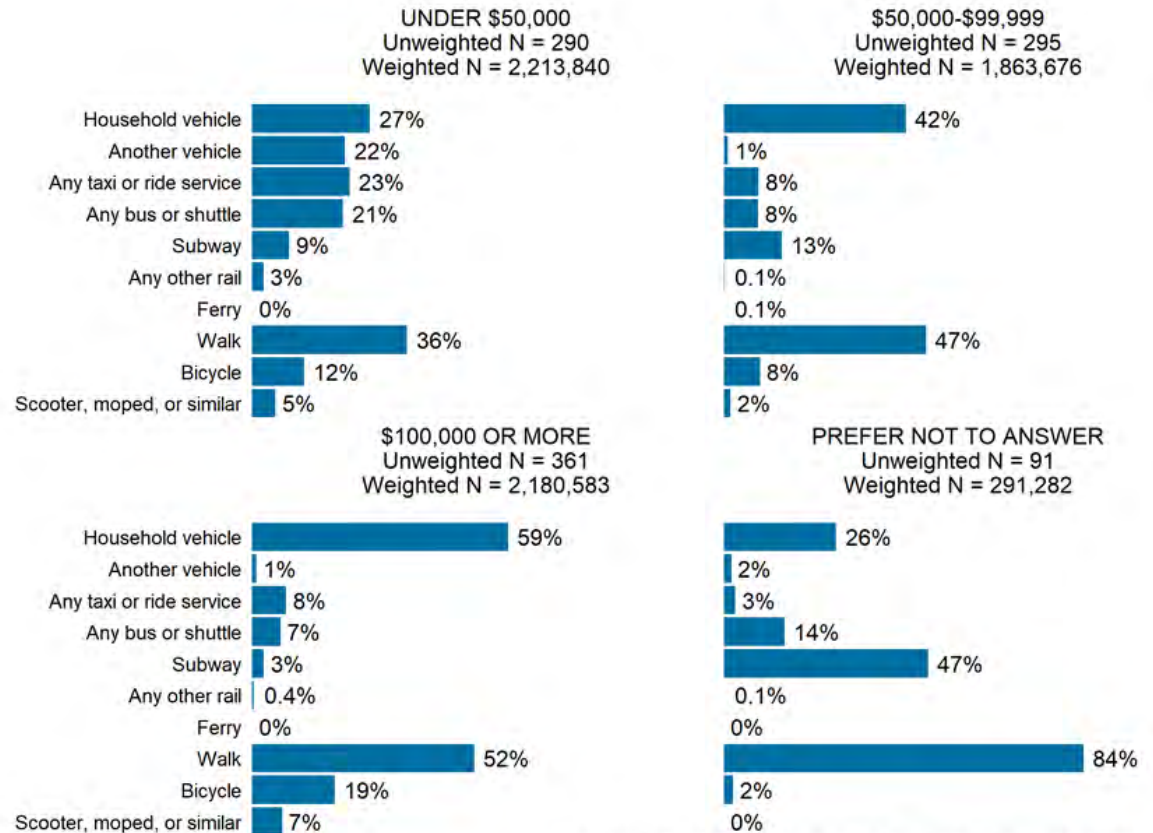


MODES USED DURING THE COVID-19 PANDEMIC BY HOUSEHOLD INCOME

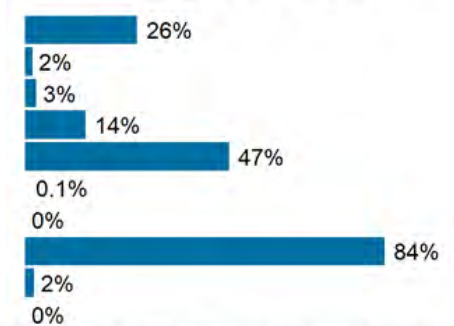
New Yorkers in high-income households are more likely to make household vehicle and walk trips in a typical week during the COVID-19 pandemic.

New Yorkers with a household income under \$50,000 are more likely to use a taxi or ride service or a bus or shuttle in a typical week.

MODES USED IN A TYPICAL WEEK BY INCOME



PREFER NOT TO ANSWER (Unweighted N = 91, Weighted N = 291,282)



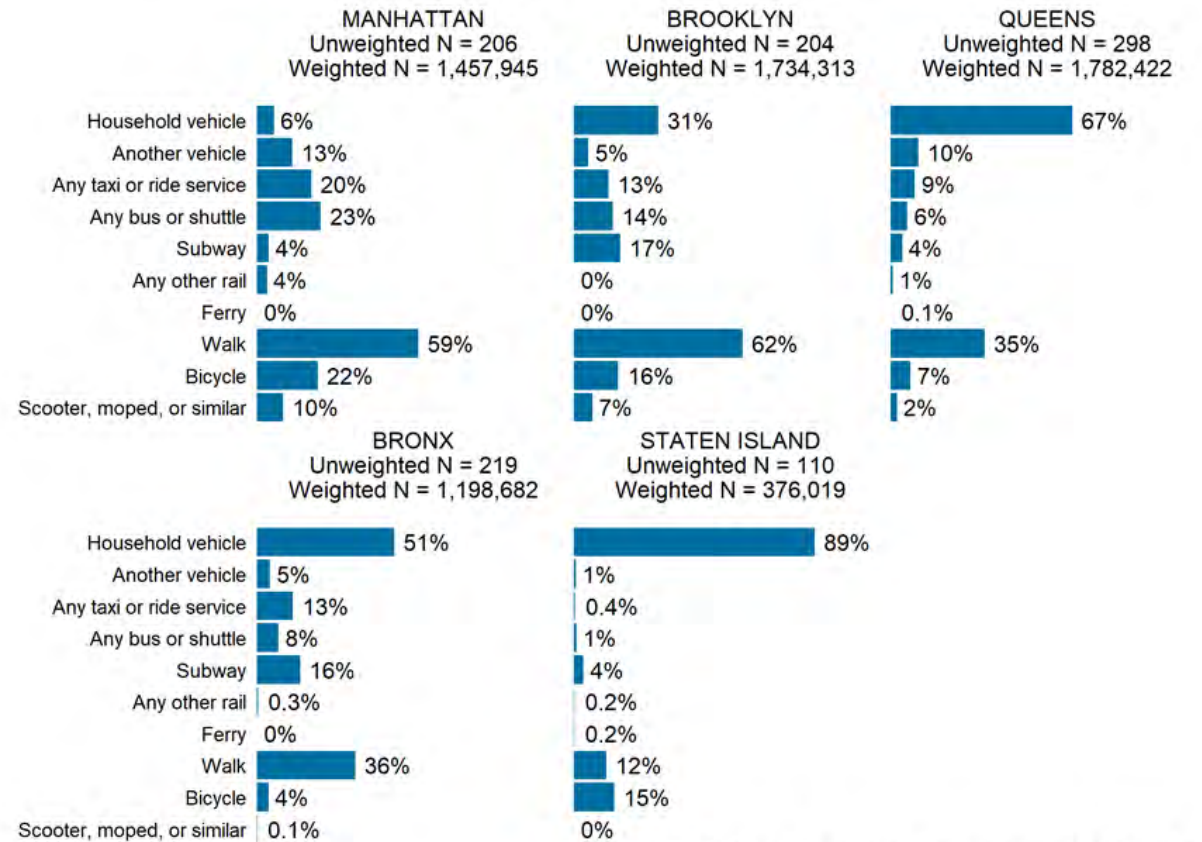
Note: respondents could select more than one answer to this question.

MODES USED DURING THE COVID-19 PANDEMIC BY BOROUGH

Manhattan and Brooklyn residents are more likely than other New Yorkers to make walk trips in a typical week during the COVID-19 pandemic.

Staten Island residents are the most likely to make household vehicle trips in a typical week, followed by Queens residents.

MODES USED IN A TYPICAL WEEK BY BOROUGH



Note: respondents could select more than one answer to this question.

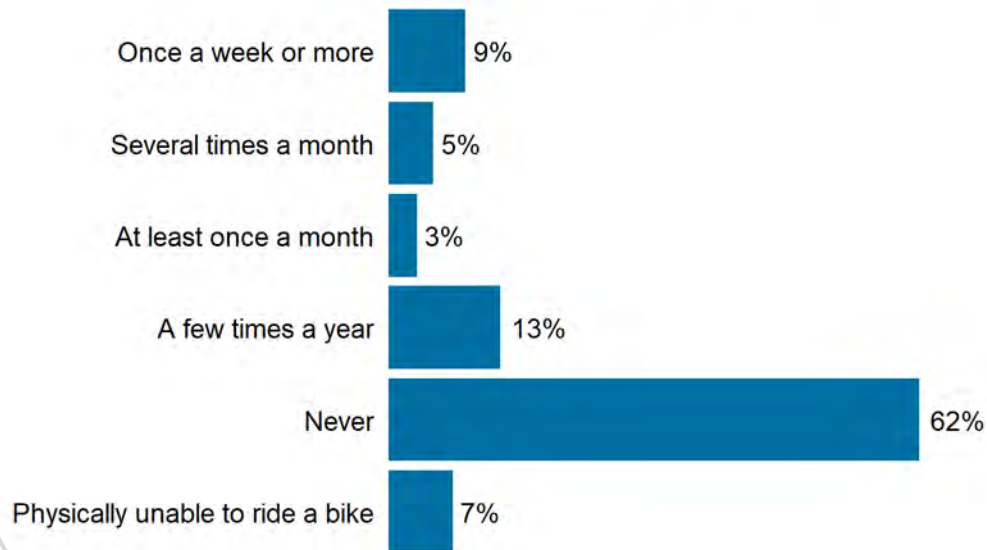
BICYCLE FREQUENCY

30% of New Yorkers have ridden a bicycle in New York City in the past 12 months.

9% of New Yorkers ride a bicycle at least once a week.

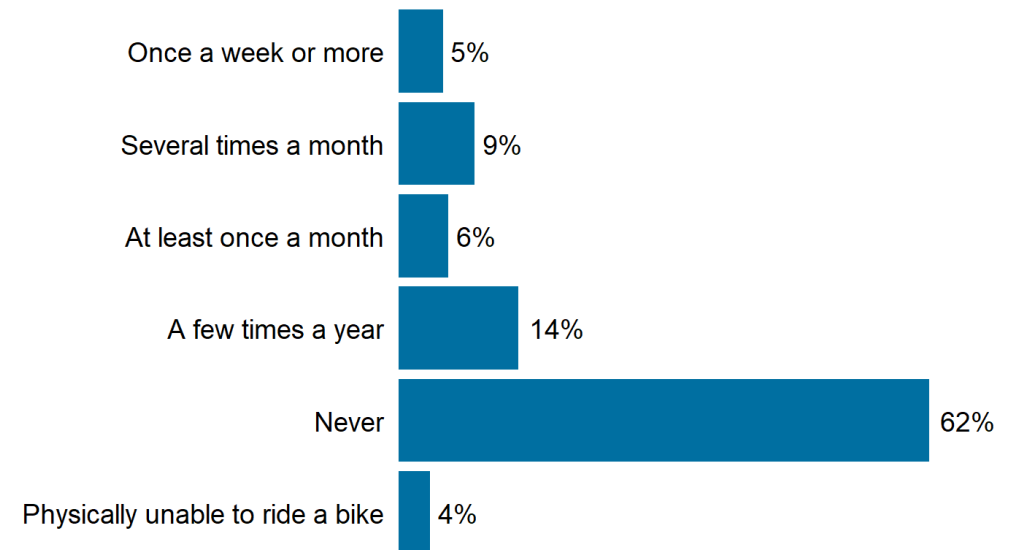
BICYCLE FREQUENCY FROM 2020 SPRING PANEL

UNWEIGHTED N = 1,037, WEIGHTED N = 6,549,381



BICYCLE FREQUENCY FROM 2019 CMS

UNWEIGHTED N = 1,020, WEIGHTED N = 6,462,218





Attitudinal Questions

CURRENT ATTITUDES TOWARD SHARED MODES WHEN THERE IS NO COVID-19 VACCINE: BUS

Respondents were grouped into three categories:

1. Respondents who are unlikely to take the bus if no additional policies are implemented and if all policies are implemented.
2. Respondents who are neutral or likely to take the bus if no additional policies are implemented and if all policies are implemented.
3. Respondents who are unlikely to take the bus if no additional policies are implemented, but neutral or likely to take the bus if all policies are implemented.

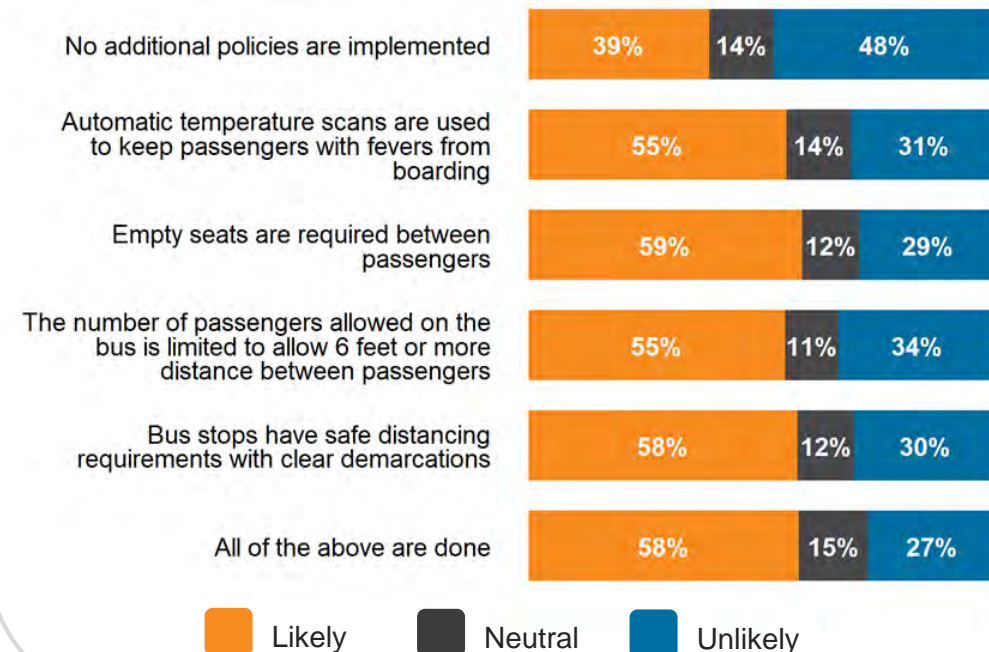
New Yorkers with a household vehicle are 1.9 times more likely than New Yorkers without a vehicle to be in the first category.

New Yorkers under 65 years old are more than 3 times more likely than New Yorkers 65+ to be in the third category.

Note: These statements are based on a multinomial logistic regression model.

BUS ATTITUDES

UNWEIGHTED N = 531, WEIGHTED N = 3,291,524



CURRENT ATTITUDES TOWARD SHARED MODES WHEN THERE IS NO COVID-19 VACCINE: SUBWAY

Respondents were grouped into three categories:

1. Respondents who are unlikely to take the subway if no additional policies are implemented and if all policies are implemented.
2. Respondents who are neutral or likely to take the subway if no additional policies are implemented and if all policies are implemented.
3. Respondents who are unlikely to take the subway if no additional policies are implemented, but neutral or likely to take the subway if all policies are implemented.

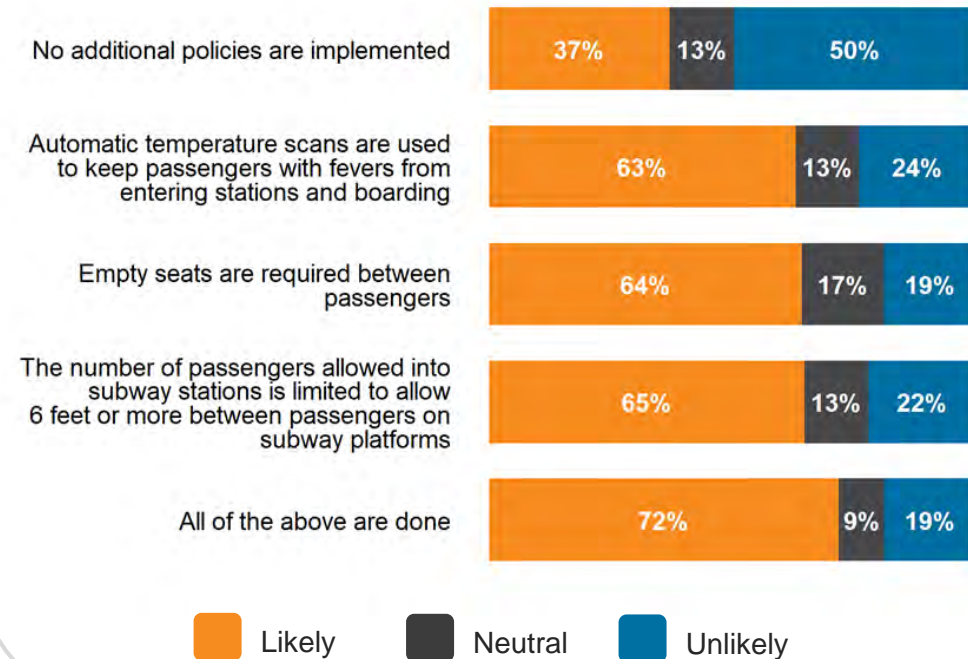
New Yorkers with a household vehicle are 1.8 times more likely than New Yorkers without a vehicle to be in the third category.

Males are 1.6 times more likely to be in the second category.

Note: These statements are based on a multinomial logistic regression model.

SUBWAY ATTITUDES

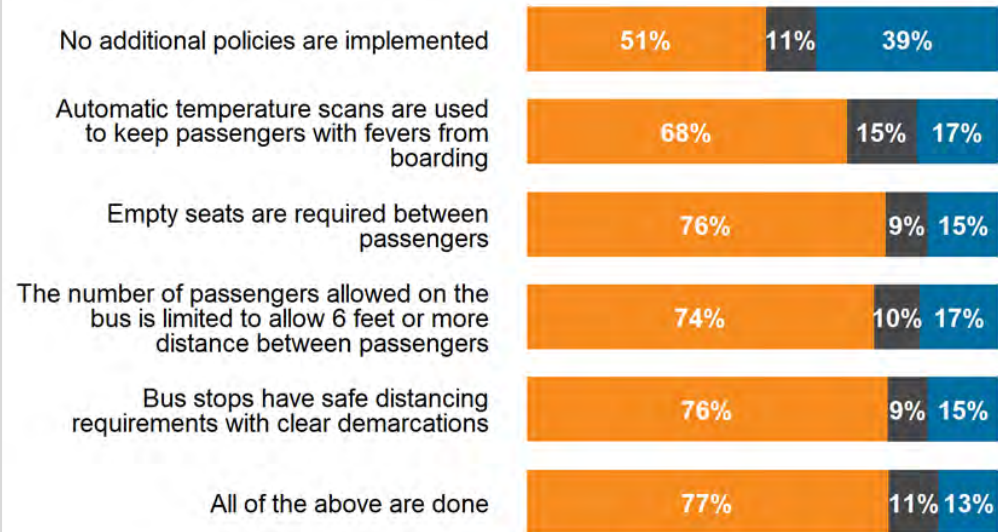
UNWEIGHTED N = 532, WEIGHTED N = 3,377,838



CURRENT ATTITUDES TOWARDS SHARED MODES FOR TYPICAL TRANSIT USERS

FREQUENT BUS RIDERS: BUS ATTITUDES

UNWEIGHTED N = 415, WEIGHTED N = 2,343,438

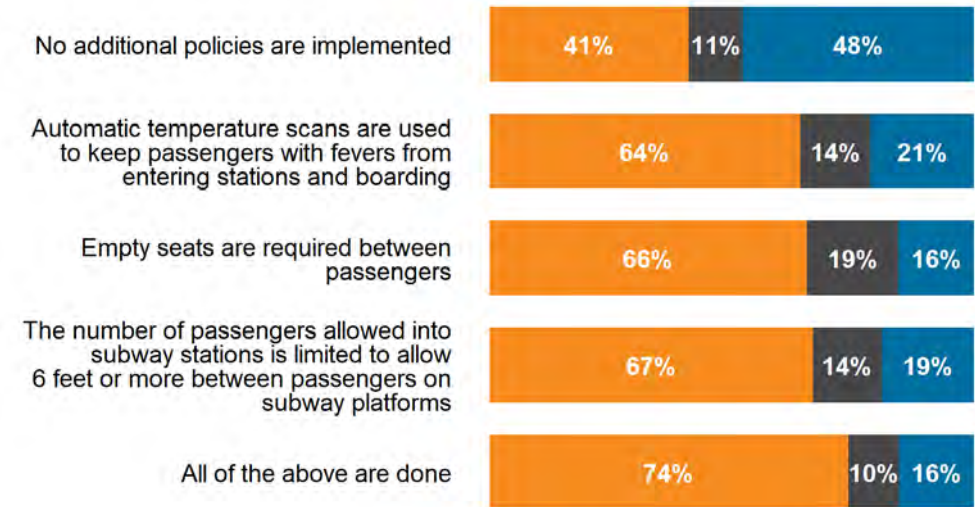


Note: this figure only includes respondents who reported using a bus or shuttle in a typical week before mid-March 2020.

■ Likely
 ■ Neutral
 ■ Unlikely

FREQUENT SUBWAY RIDERS: SUBWAY ATTITUDES

UNWEIGHTED N = 456, WEIGHTED N = 2,956,390



Note: this figure only includes respondents who reported using the subway in a typical week before mid-March 2020.

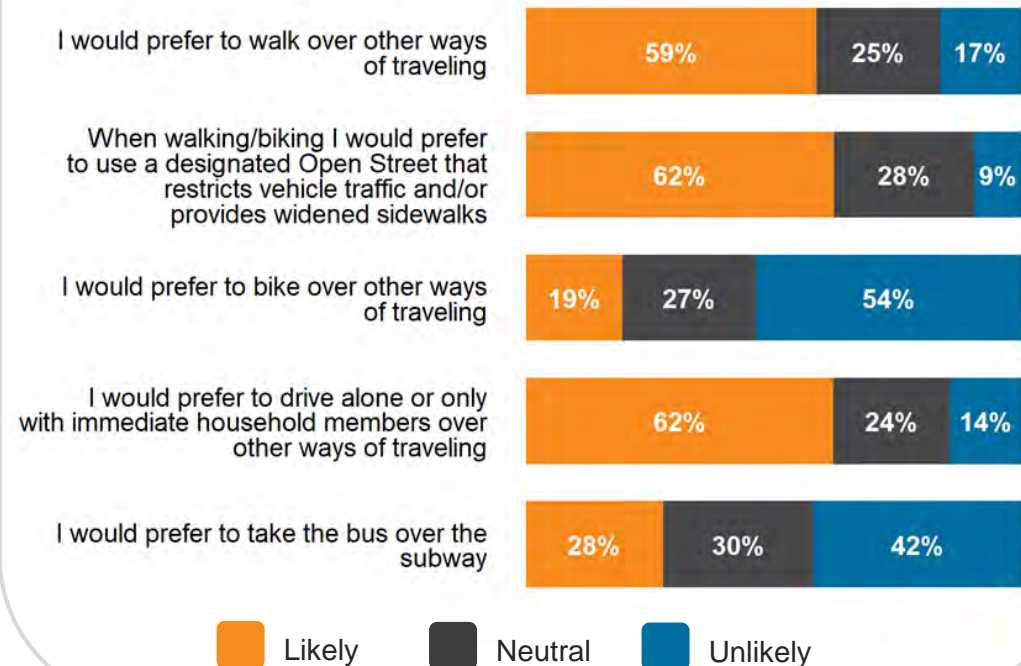
■ Likely
 ■ Neutral
 ■ Unlikely

CURRENT ATTITUDES TOWARD TRAVELING WHEN THERE IS NO COVID-19 VACCINE

- 77% of New Yorkers **with a household vehicle** would prefer to drive alone or with household members.
- 47% of New Yorkers **without a household vehicle** stated that would prefer to drive alone.

ATTITUDES TOWARD TRAVEL MODES

UNWEIGHTED N = 1,063, WEIGHTED N = 6,669,362



CURRENT ATTITUDES TOWARD TRAVELING WHEN THERE IS NO COVID-19 VACCINE

ATTITUDES TOWARD TRAVEL

UNWEIGHTED N = 1,063, WEIGHTED N = 6,669,362

