

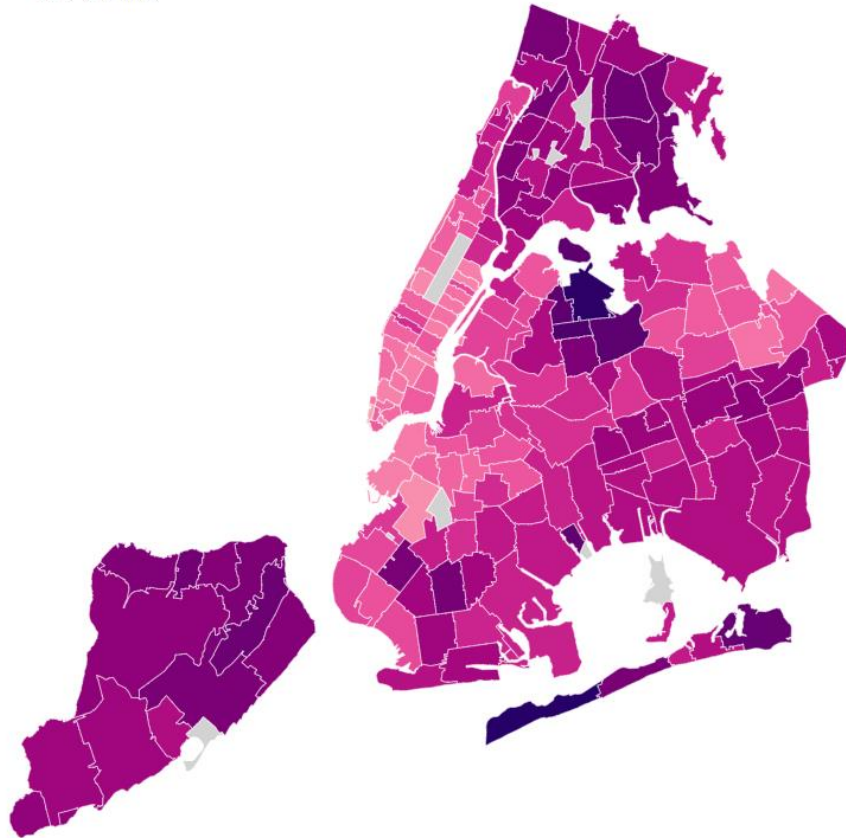
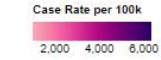
# COVID-19 in New York City: Considerations for NYC Essential Workers

New York City Department of Health and Mental Hygiene |  
COVID-19 Response

# COVID-19 cases and deaths are not evenly distributed in NYC

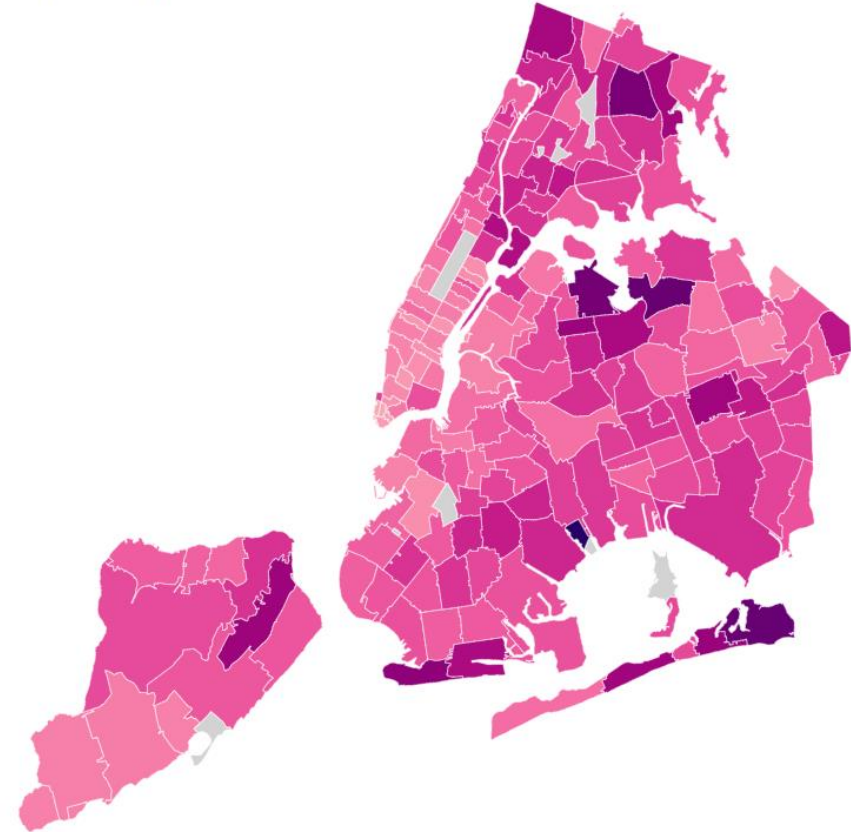
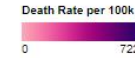
## Rate per 100,000 residents of reported COVID-19 cases in NYC

Data through December 4, 2020



## Rate per 100,000 residents of reported COVID-19 deaths in NYC

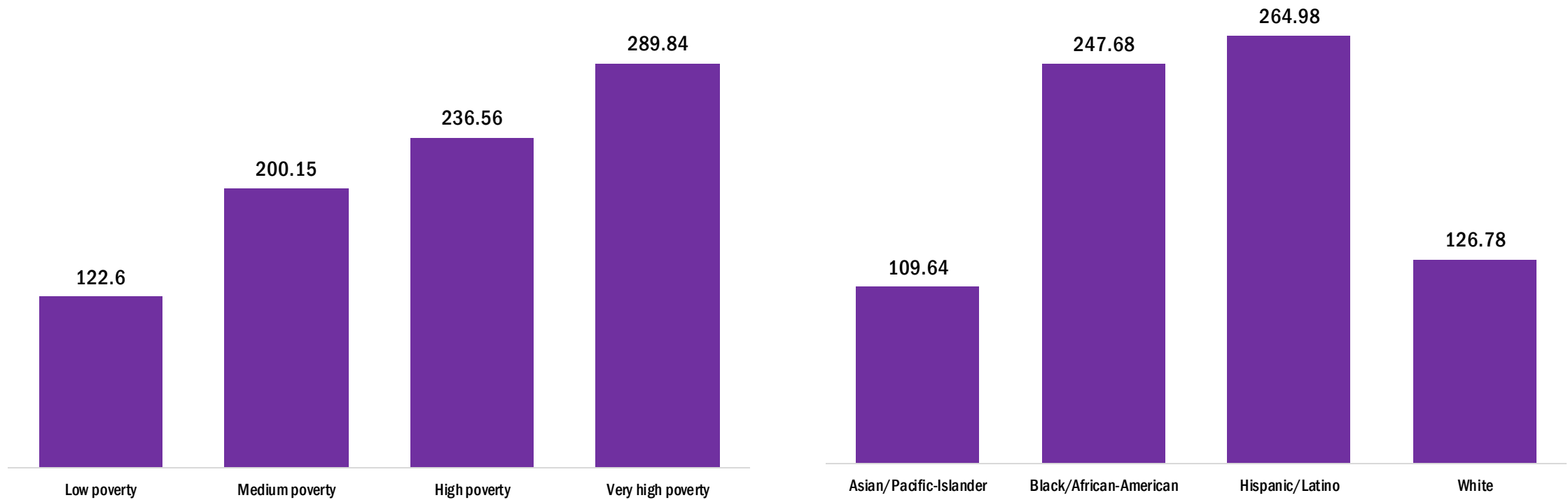
Data through December 4, 2020



# Black, Latino/a and high poverty communities experience higher rates of death from COVID-19

Age-adjusted rate (per 100,000 people) of COVID-19 deaths by poverty level

Age-adjusted rate (per 100,000 people) of COVID-19 deaths by race and ethnicity



<sup>1</sup>Neighborhood poverty is the percent of a ZIP code's population living below the Federal Poverty Level, per the 2014-2018 American Community Survey. Low poverty: under 10%; Medium poverty: 10% to 19.9%; High poverty: 20% to 29.9%; Very high poverty: 30% and over.

# COVID-19 case, death, and hospitalization rates increase with age

## New York City Daily COVID-19 Report | Data as of 11/26 6 PM

**Cases**  
Confirmed  
**287,752**

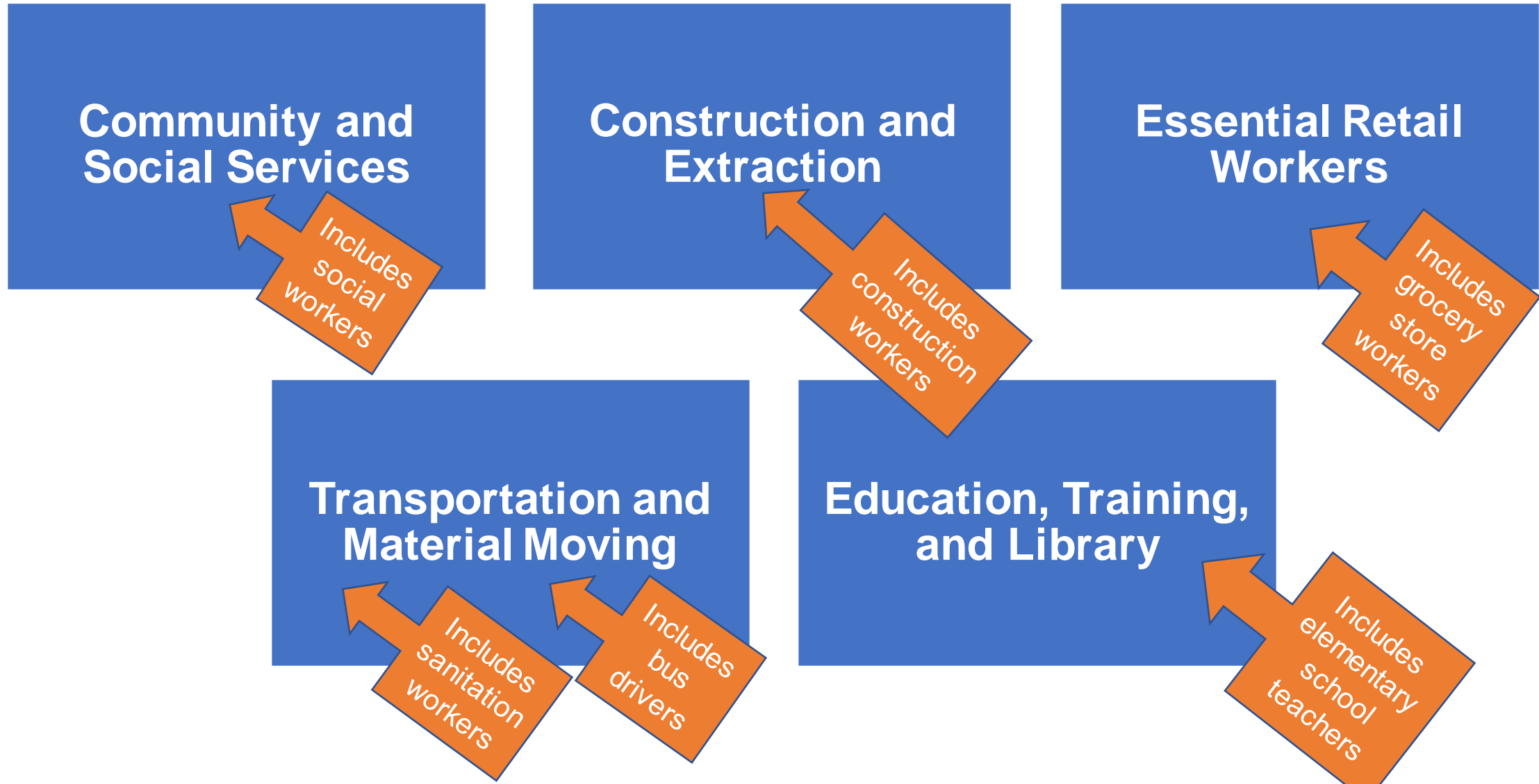
**Deaths**  
Confirmed  
**19,575**  
Probable  
**4,681**

**Hospitalizations**  
Estimated  
**61,135**

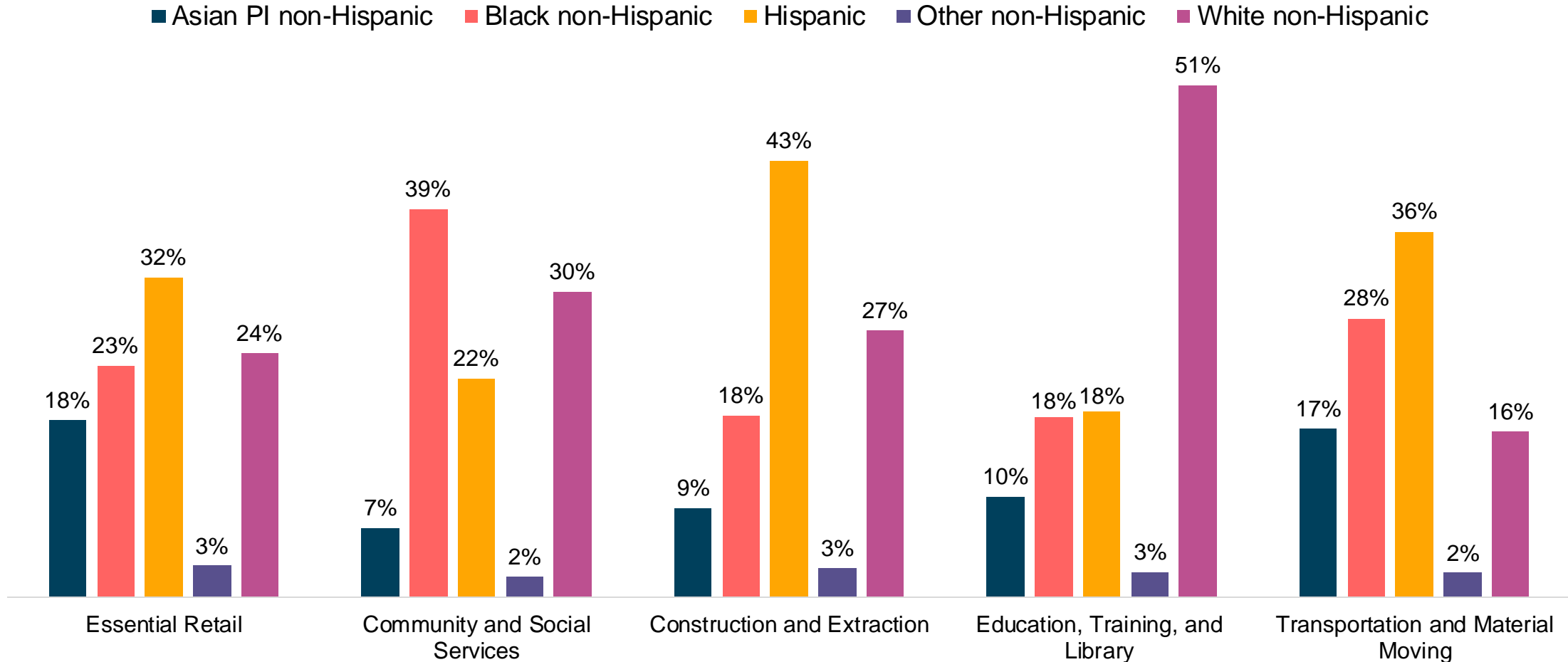


# **Frontline Workers**

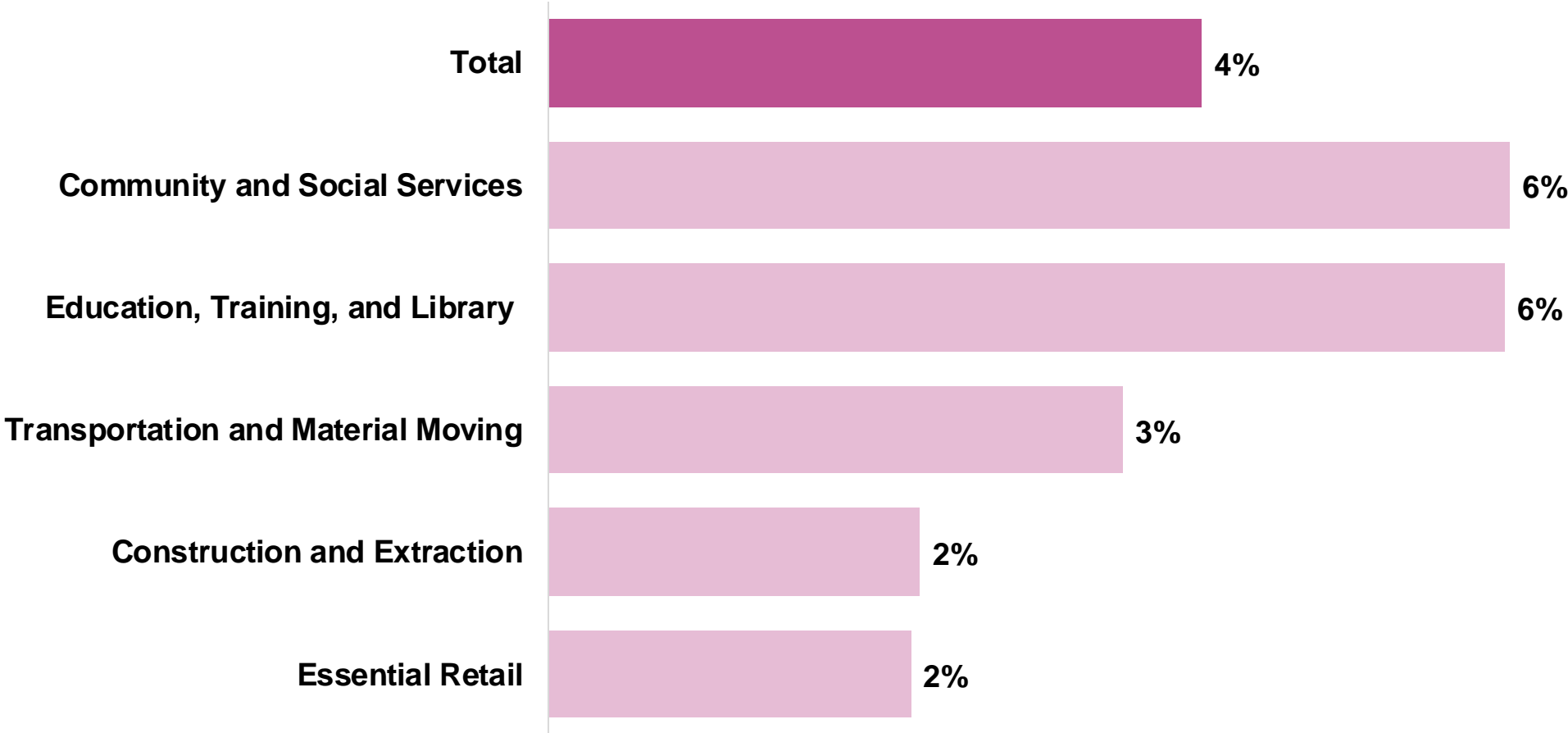
# Occupation sectors of focus



# Proportion of labor force ages 16 and over by occupation sector and race and ethnicity, NYC, 2014–2018



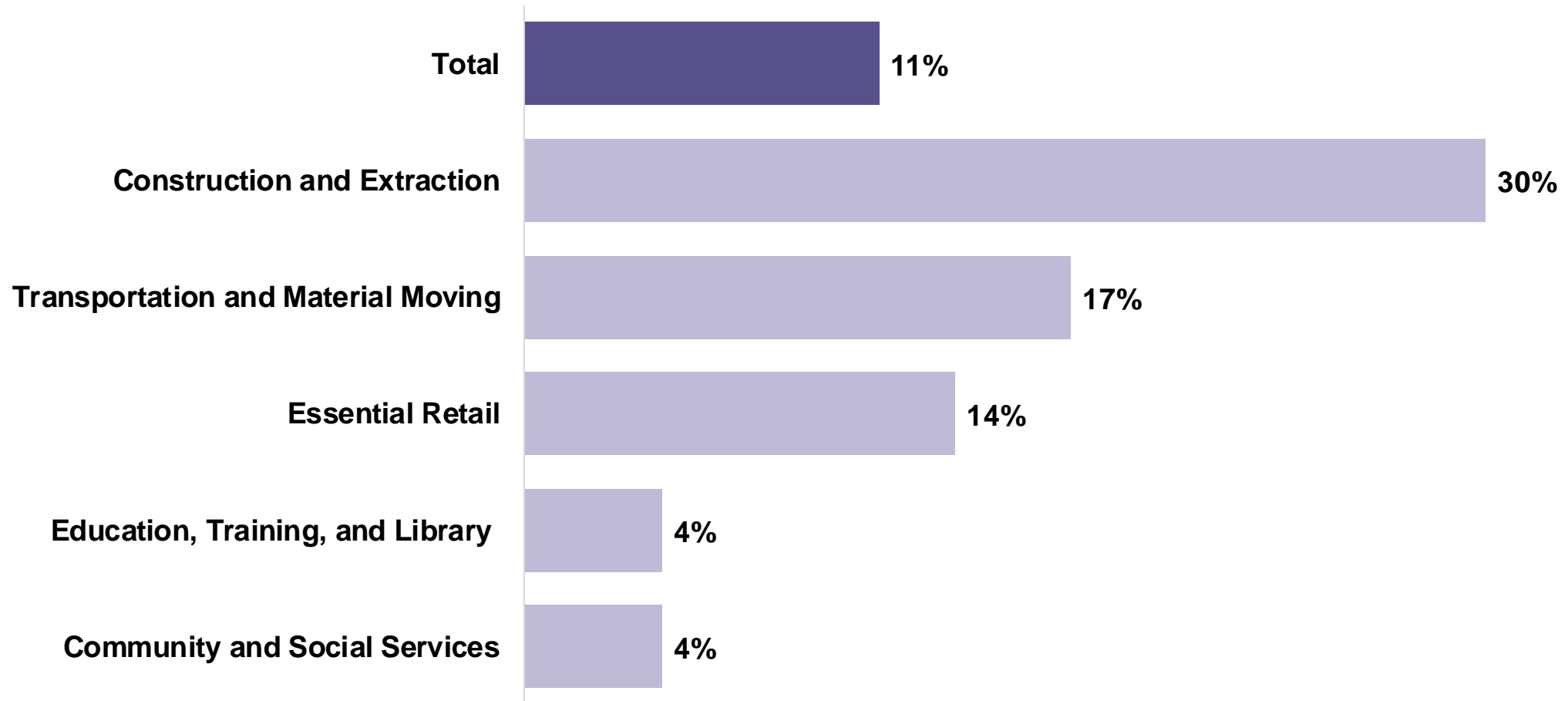
# Proportion of the labor force who are 65 and older by work sector, NYC, 2014–2018



Source: U.S. Census Bureau, American Community Survey, 2014-2018 5-year estimates.



# Proportion of the labor force ages 16+ without health insurance by sector, NYC, 2014–2018

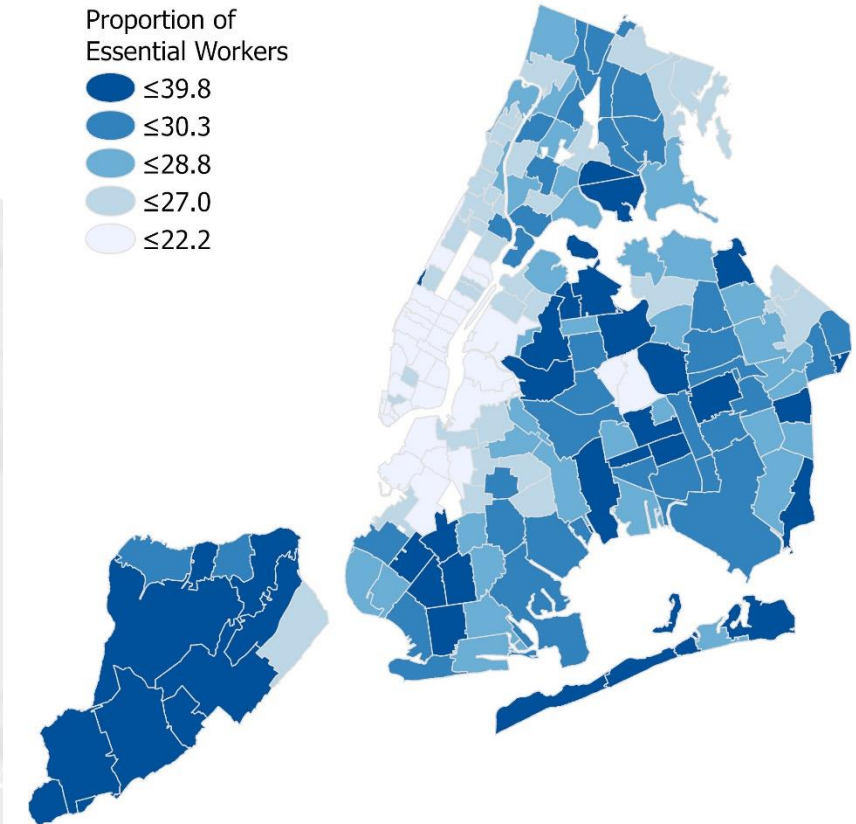
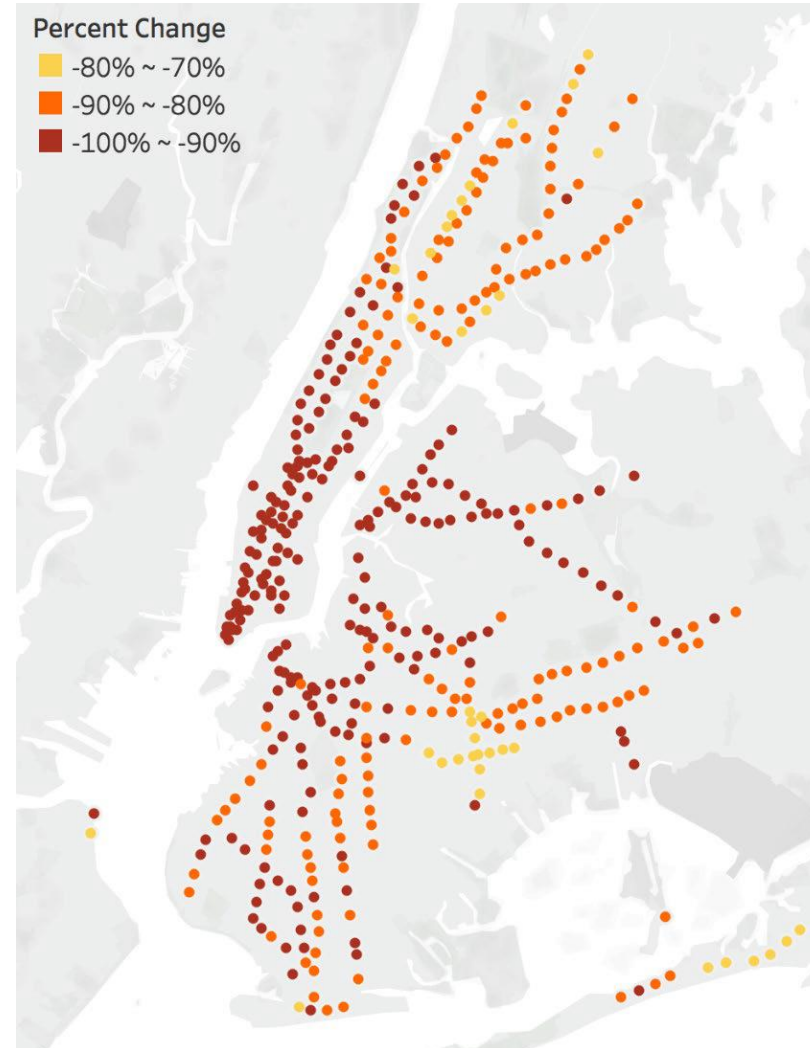


**Source:** U.S. Census Bureau, American Community Survey, 2014-2018 5-year estimates.

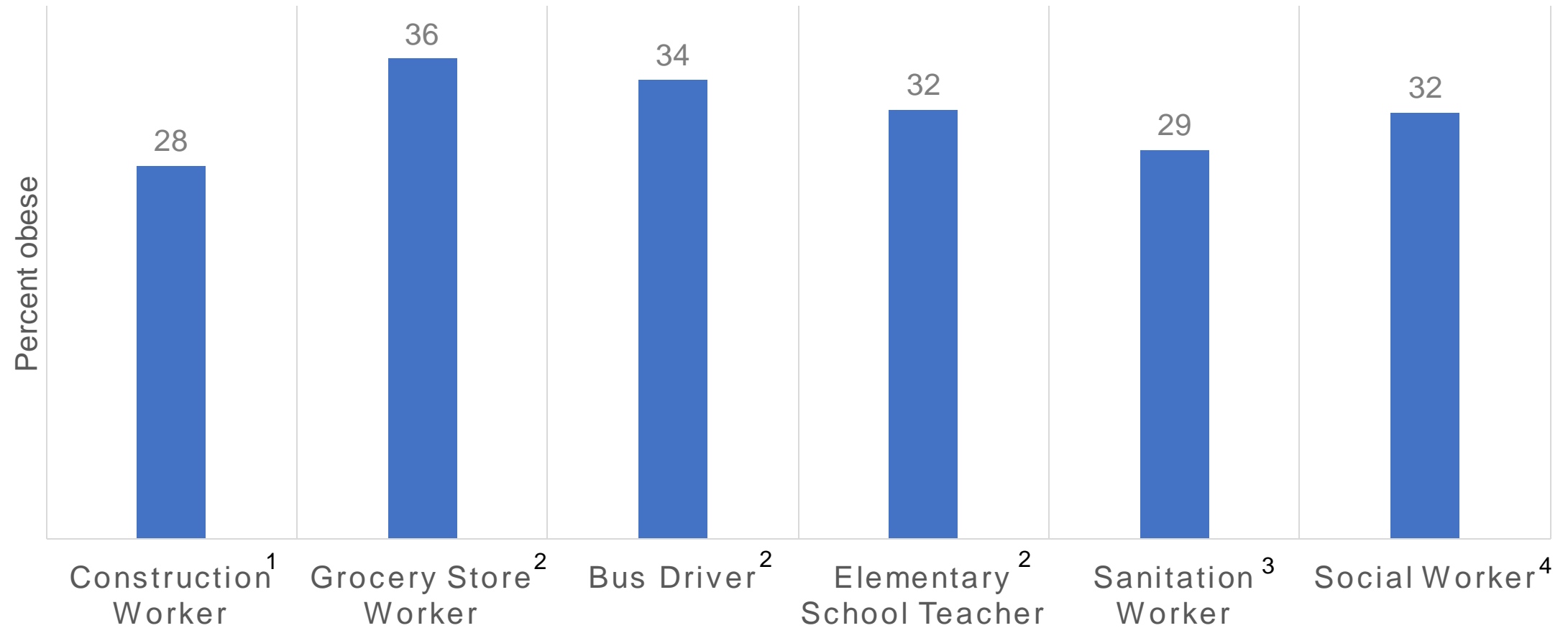
# Percent Change of MetroCard Swipes

April 11 to 17, 2020 versus January 4 to February 28, 2020

- The week of April 11, every subway station saw MetroCard swipe declines of at least 70% compared with week of January 4<sup>th</sup>
- The Bronx, eastern Brooklyn and the Rockaways still showed a relatively high number of riders compared with the week of January 4<sup>th</sup>
- A high proportion of frontline workers live in the Bronx, eastern Brooklyn and the Rockaways



# Obesity in Essential Workers



Data is from external sources. See citations at the end of this presentation.

# Experiences with COVID-19 Among Essential Workers

## Construction Workers<sup>5</sup>

23 separate clusters or outbreaks across the country, each involving 6 to 116 people

## Grocery Store Workers<sup>6</sup>

Among 104 workers tested, 21 (20%) had positive viral assays. Seventy-six per cent positive cases were asymptomatic

## Bus Drivers<sup>7</sup>

A survey of New York City's bus and subway workers found that 24% reported having contracted COVID-19

## Elementary School Teachers<sup>8</sup>

Among more than 200,000 students and 63,000 staff who had returned to school, there were infection rates of 0.13% (students) and 0.24% (staff)

## Sanitation Workers<sup>9</sup>

9.1% were exposed more than once a month

## Social Workers<sup>9</sup>

32.4% were exposed more than once a month

Data is from external sources.  
See citations at the end of this  
presentation.

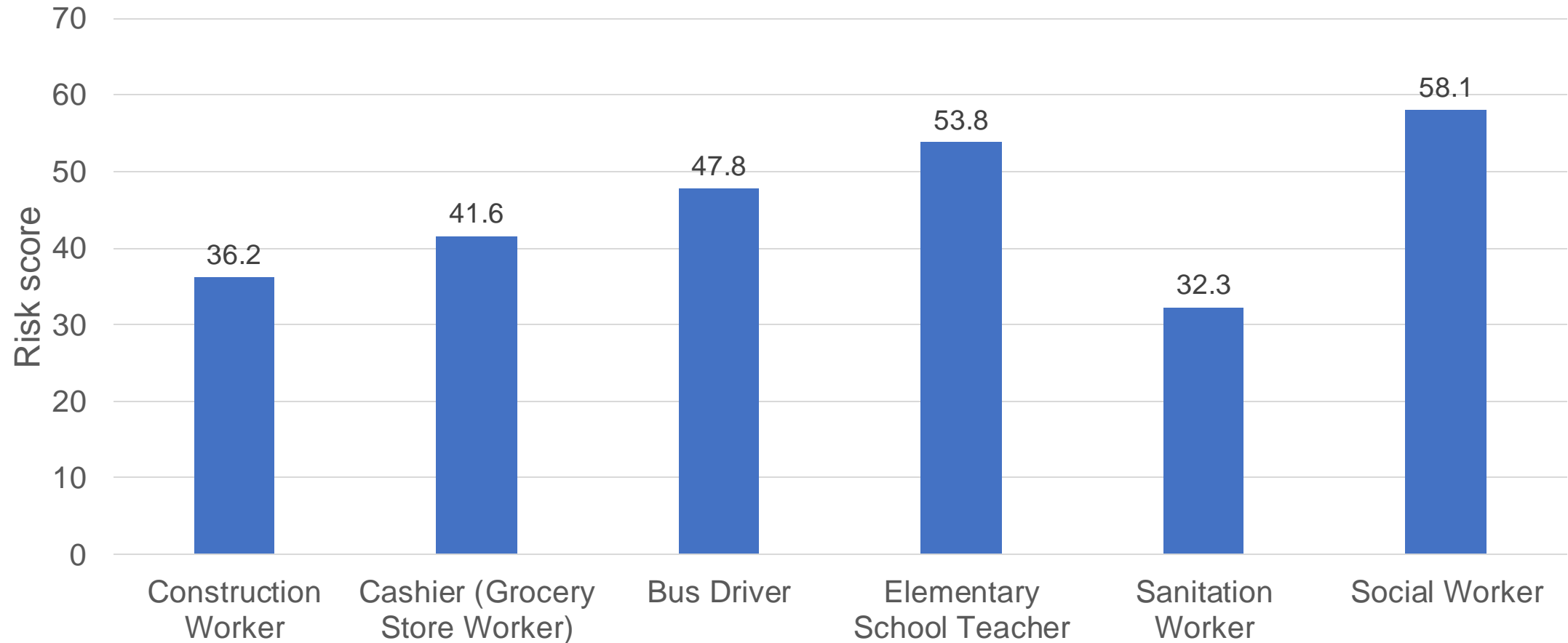
# Occupational Risk Score

Risk scores are determined by:

- **Contact With Others:**  
How much does this job require the worker to be in contact with others in order to perform it?
- **Physical Proximity:**  
To what extent does this job require the worker to perform tasks in close physical proximity to others?
- **Exposure to Disease and Infection:**  
How often does this job require exposure to hazardous conditions?

100 represents the highest possible risk

# Risk Score for Essential Workers



# Citations

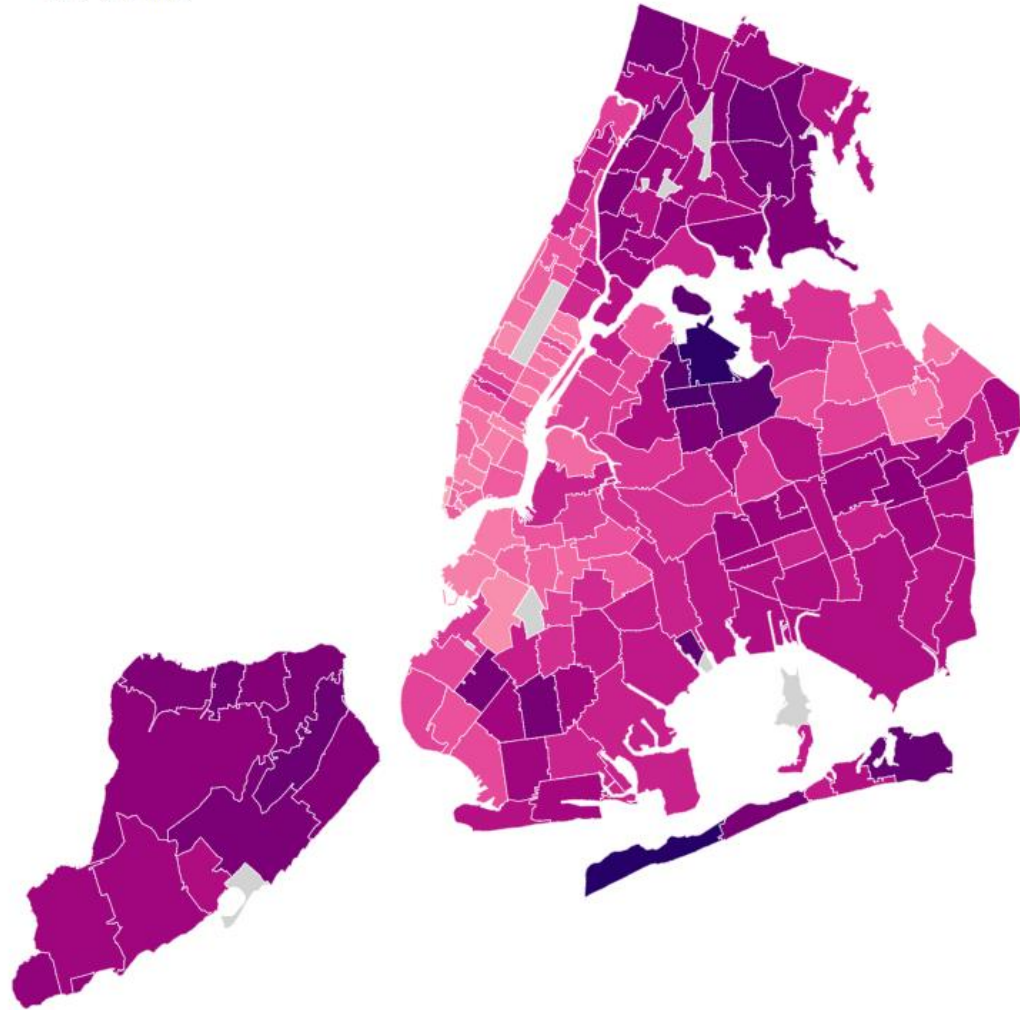
- <sup>1</sup> Strickland et al. (2017) Prevalence and Perception of Risky Health Behaviors Among Construction Workers. Journal of Occupational and Environmental Medicine. [https://journals.lww.com/joem/Abstract/2017/07000/Prevalence\\_and\\_Perception\\_of\\_Risky\\_Health.10.aspx](https://journals.lww.com/joem/Abstract/2017/07000/Prevalence_and_Perception_of_Risky_Health.10.aspx).
- <sup>2</sup> Silver et al. (2020) Prevalence of Underlying Medical Conditions Among Selected Essential Critical Infrastructure Workers. Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report. <https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6936a3-H.pdf>.
- <sup>3</sup> Garrido et al. (2015) Health Status and Health-related Quality of Life of Municipal Waste Collection Workers – A Cross-sectional Survey. Journal of Occupational Medicine and Toxicology. <https://occup-med.biomedcentral.com/articles/10.1186/s12995-015-0065-6>.
- <sup>4</sup> Luckhaupt et al. (2014) Prevalence of Obesity Among U.S. Workers and Associations with Occupational Factors. American Journal of Preventative Medicine. [https://www.ajpmonline.org/article/S0749-3797\(13\)00617-X/fulltext](https://www.ajpmonline.org/article/S0749-3797(13)00617-X/fulltext).
- <sup>5</sup> Goodman and Bosquin. (2020) A Roundup of Coronavirus Outbreaks on Construction Sites. Construction Dive. <https://www.constructiondive.com/news/a-roundup-of-coronavirus-outbreaks-on-construction-sites/589233/>.
- <sup>6</sup> Lan et al. (2020) Association Between SARS-CoV-2 Infection, Exposure Risk and Mental Health Among a Cohort of Essential Retail Workers in the USA. Occupational and Environmental Medicine. <https://oem.bmj.com/content/early/2020/10/11/oemed-2020-106774>.
- <sup>7</sup> Gershon, Robyn. (2020) Impact of COVID-19 Pandemic on NYC Transit Workers: Pilot Study Findings. NYU School of Public Health. <https://www.nyu.edu/content/dam/nyu/publicAffairs/documents/PDF/GershonTransitWorkerPilotStudy>.
- <sup>8</sup> Boyle, Patrick. (2020) Kids, School, and COVID-19: What We Know — And What We Don't. Association of American Medical Colleges. <https://www.aamc.org/news-insights/kids-school-and-covid-19-what-we-know-and-what-we-don-t>.
- <sup>9</sup> Baker et al. (2020) Estimating the Burden of United States Workers Exposed to Infection or Disease: A Key Factor in Containing Risk of COVID-19 Infection. PLOS One. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7188235/>.

# Appendix

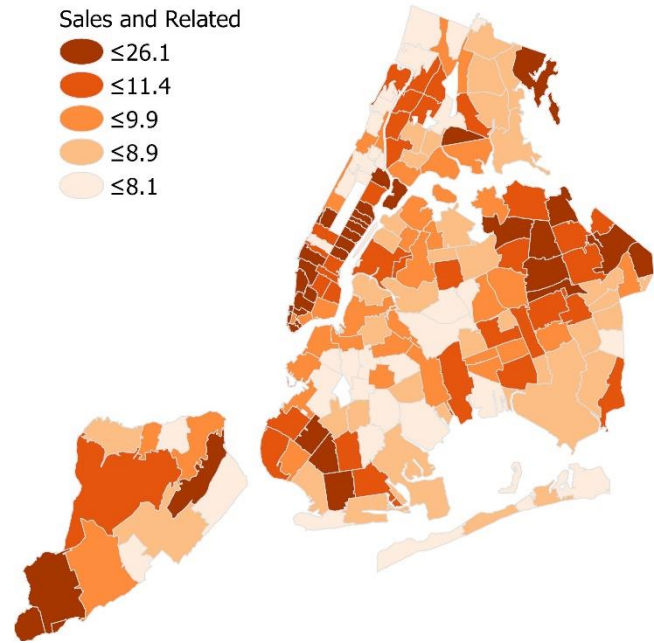


# COVID-19 case rate versus occupation sectors

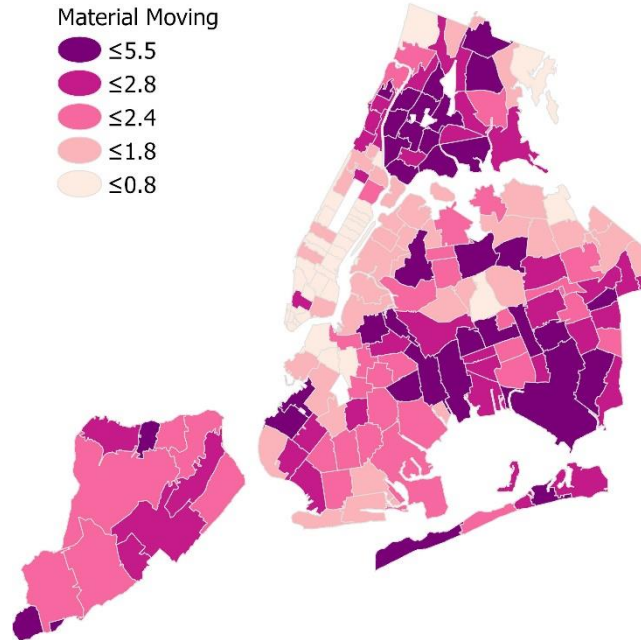
Case Rate per 100k  
2,000 4,000 6,000



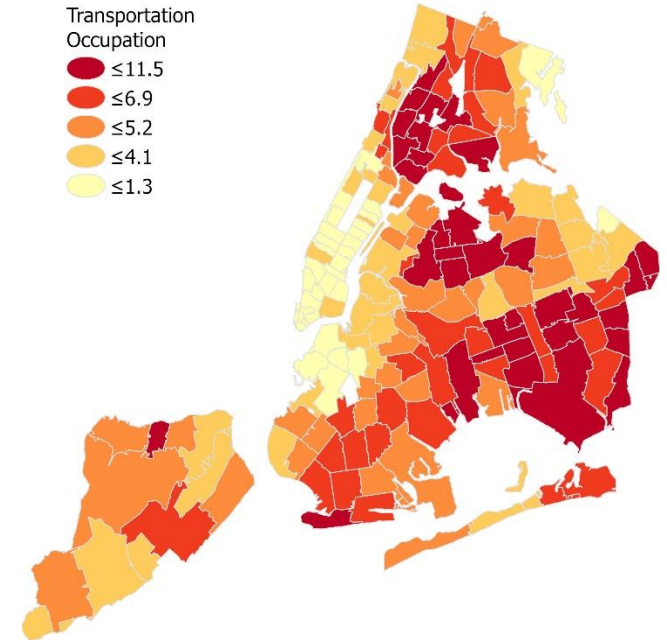
Sales and Related  
≤26.1  
≤11.4  
≤9.9  
≤8.9  
≤8.1



Material Moving  
≤5.5  
≤2.8  
≤2.4  
≤1.8  
≤0.8



Transportation Occupation  
≤11.5  
≤6.9  
≤5.2  
≤4.1  
≤1.3



# COVID-19 case rate versus occupation sectors

