

REGIONAL STEMM WORKFORCE NEEDS IN THE WAKE OF COVID-19: BOSTON

Oct 14, 2020
12:30 – 4:30PM ET

Data Overview - Boston

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

City of Boston vs. Boston Metro

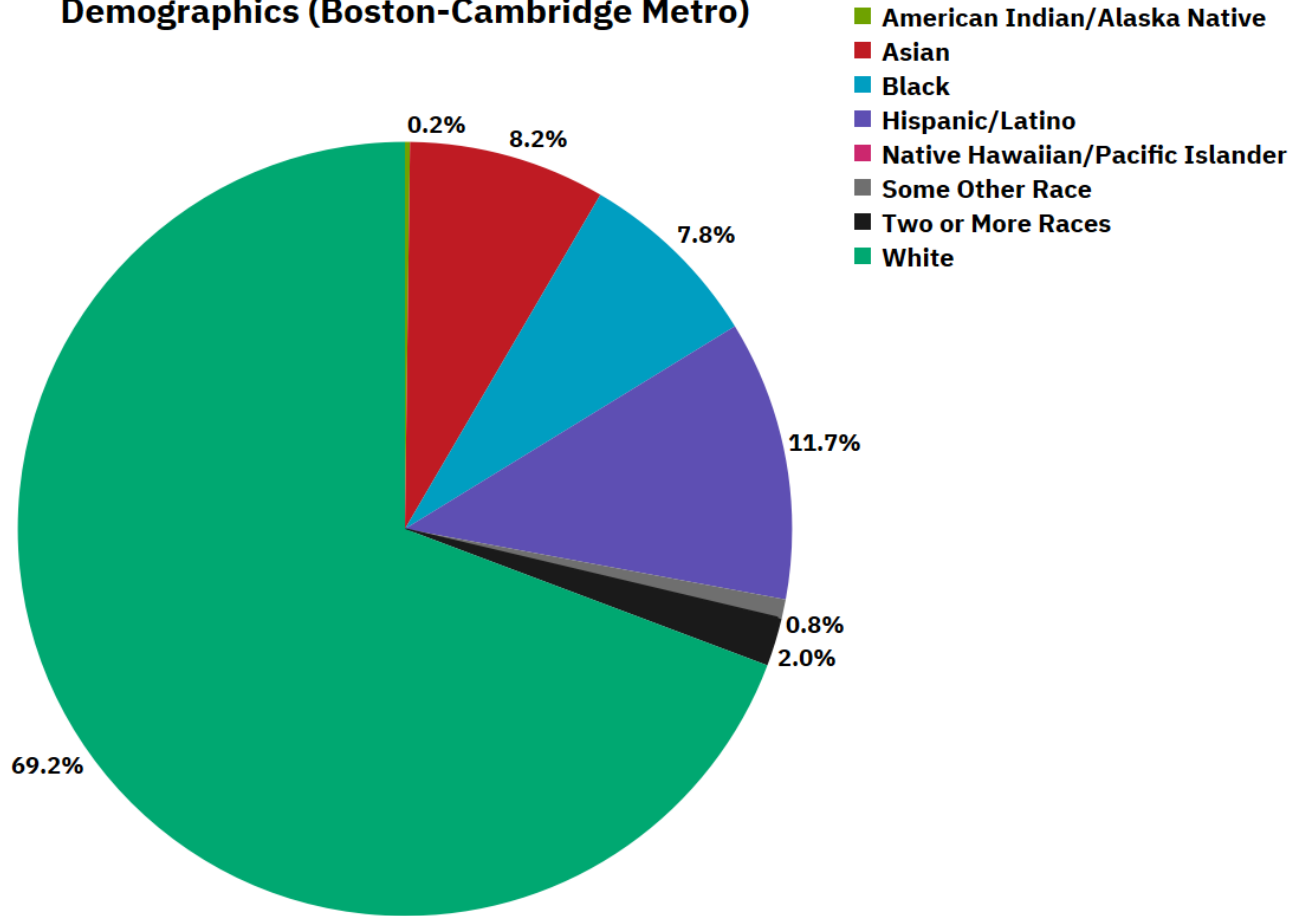
- **Poverty Rate**
- Boston Metro– 8.6%
- City of Boston – 17.1%

- **Median wages (population 16 and over)**
- Boston Metro – \$49,592
- City of Boston - \$45,046

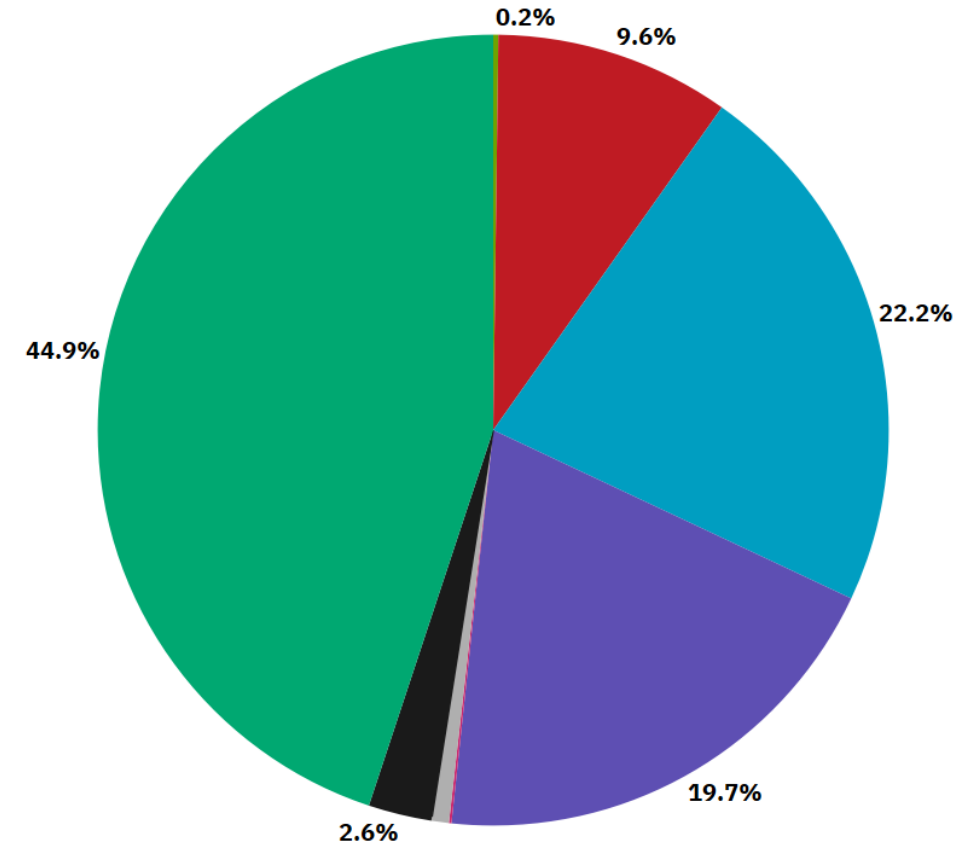
*Source: U.S. Census Bureau American Community Survey
2019 1-Year Estimates*

Greater Boston Demographics

Demographics (Boston-Cambridge Metro)

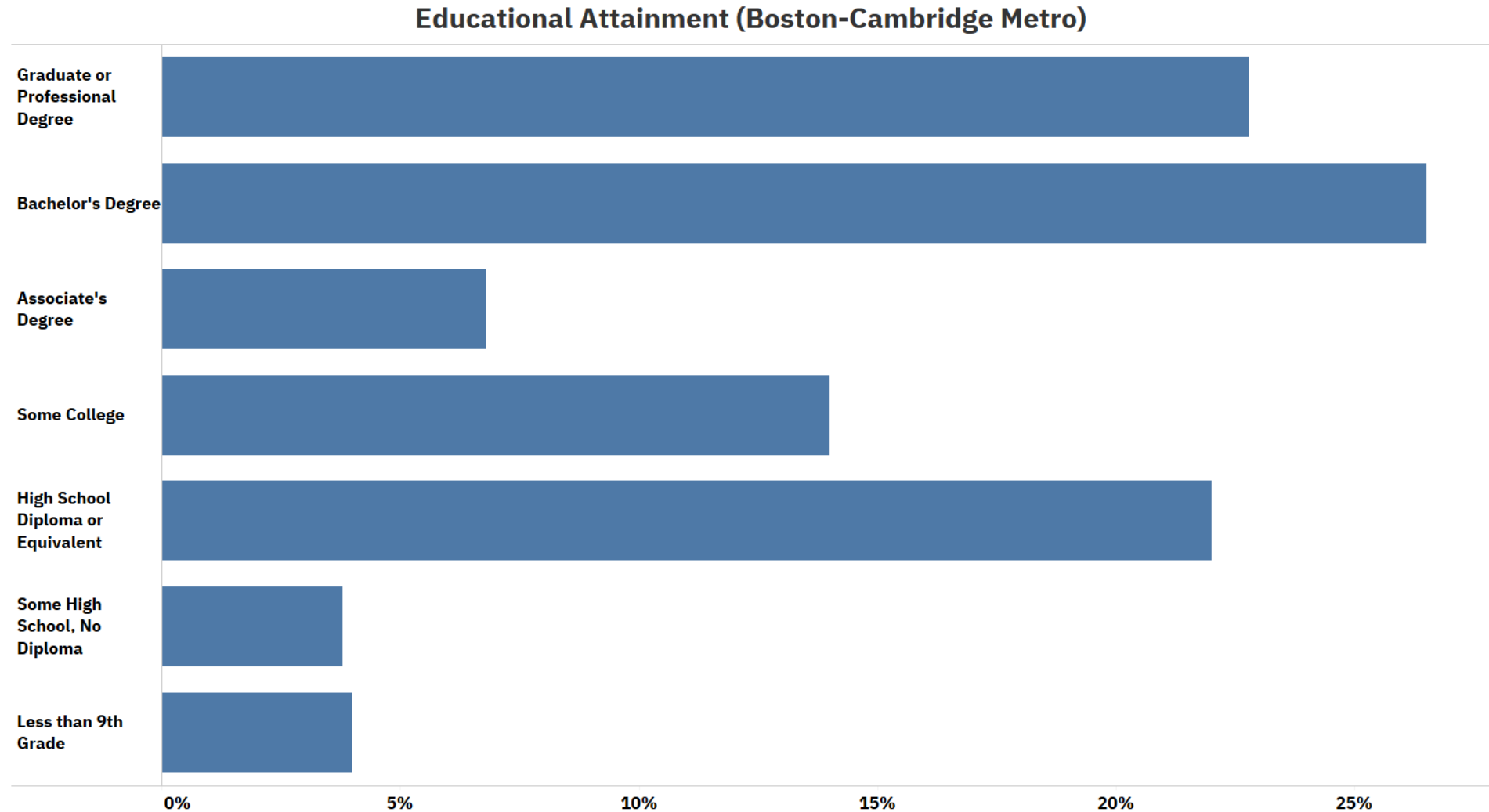


Demographics (City of Boston)



Source: U.S. Census Bureau American Community Survey 2019
1-Year Estimates

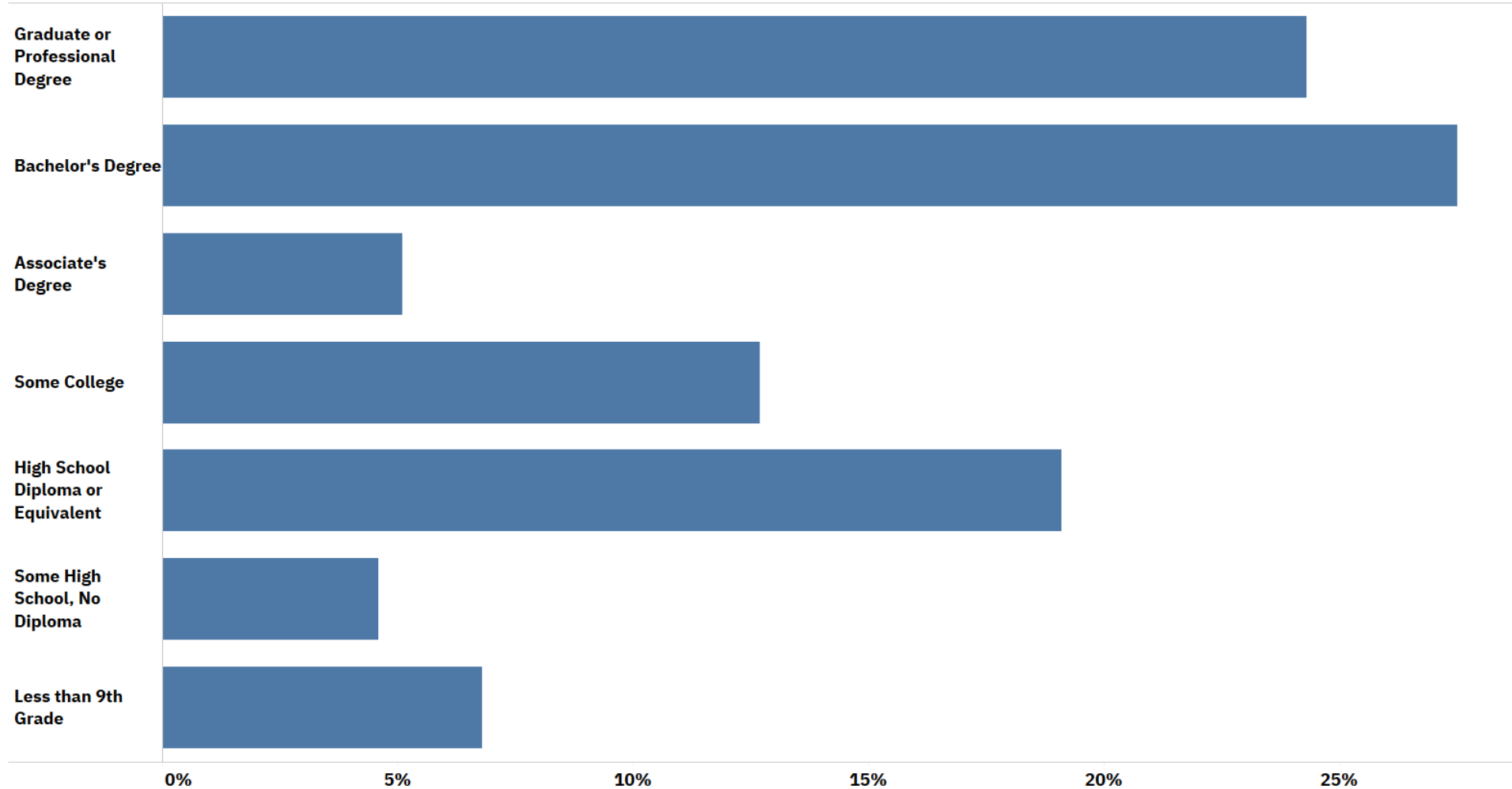
Boston Metro Educational Attainment



Source: U.S. Census Bureau American Community Survey 2019
1-Year Estimates

City of Boston Educational Attainment

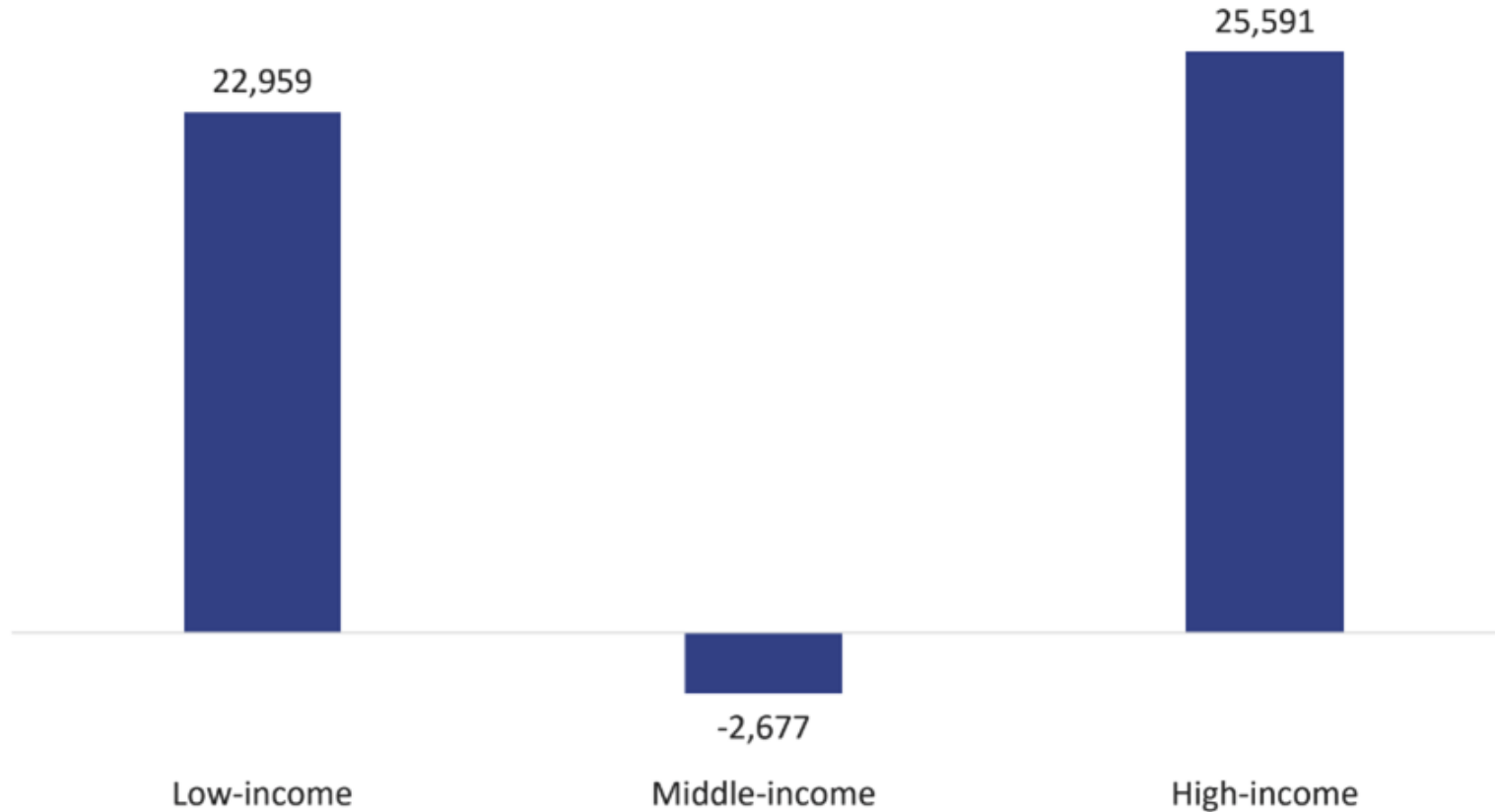
Educational Attainment (City of Boston)



Source: U.S. Census Bureau American Community Survey 2019
1-Year Estimates

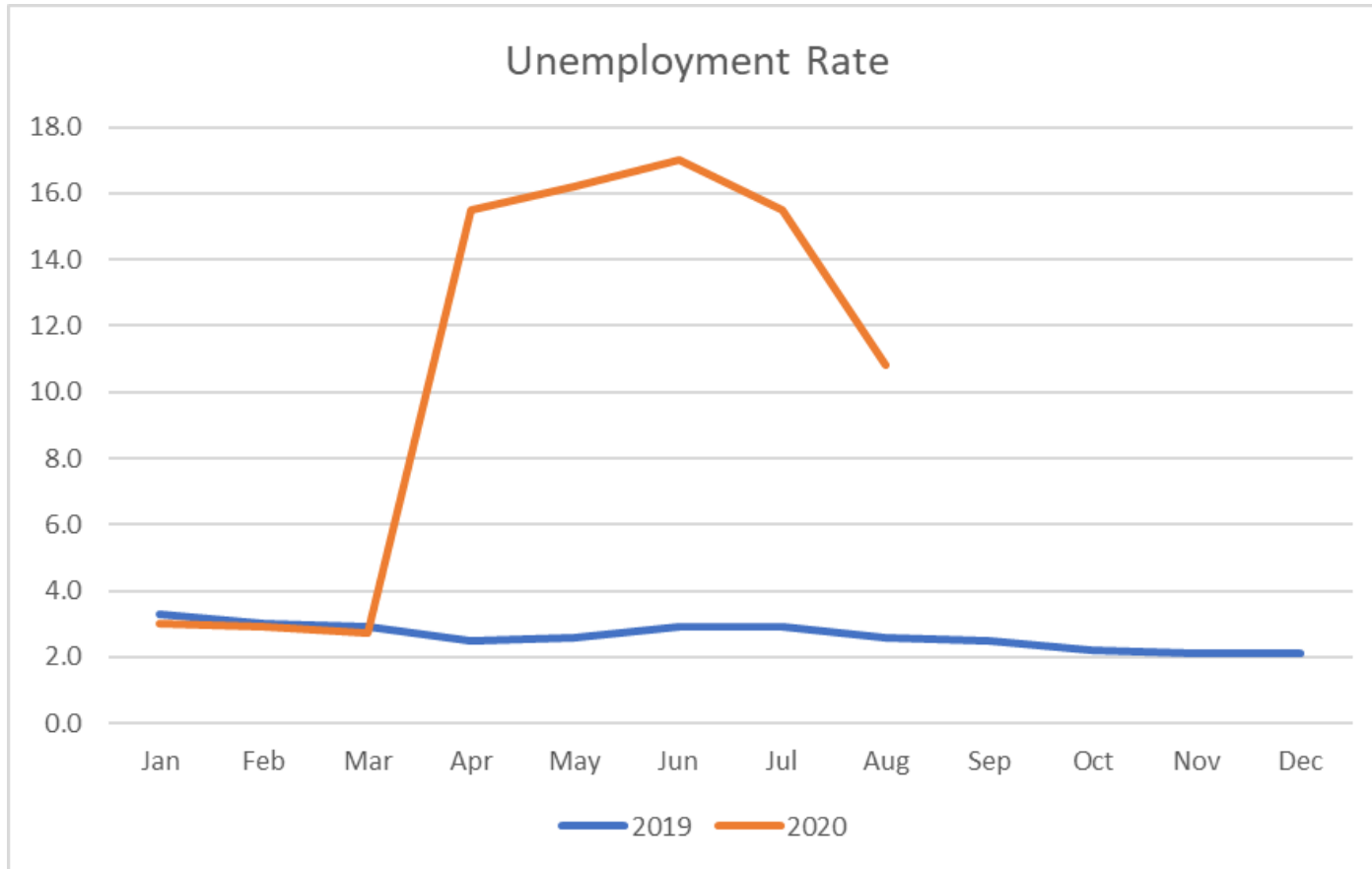
Pre-pandemic: Boston's middle hollowing out

Change in number of households by household income bucket. Boston, 1980-2017.



Unemployment remains significantly higher post-COVID 19

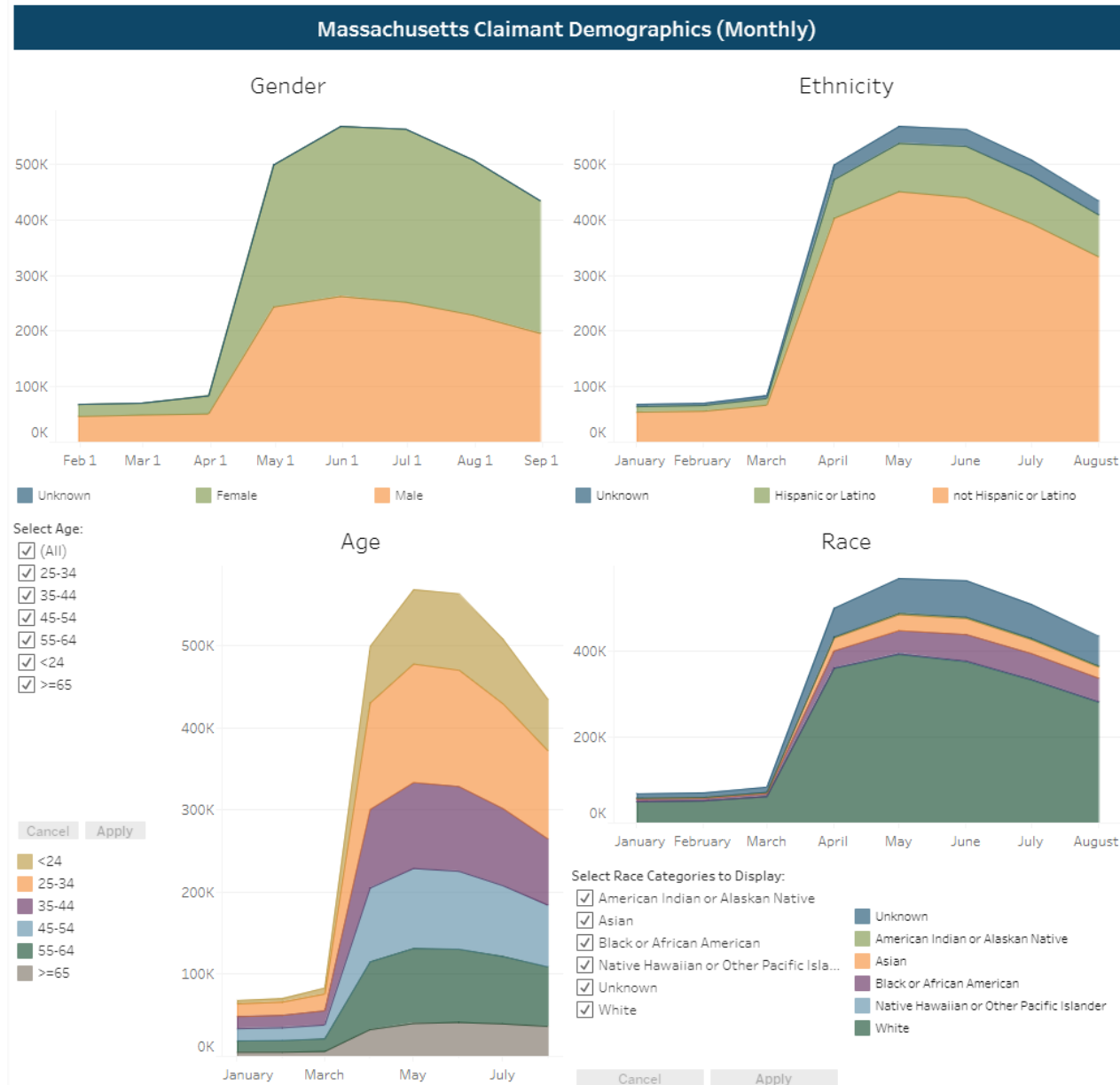
Metro Boston Unemployment Rate



Like much of the rest of the country, Metro Boston experienced a significant spike in unemployment in April and unemployment rates have not returned to pre-crisis levels.

Source: Bureau of Labor Statistics Local Area Unemployment Statistics

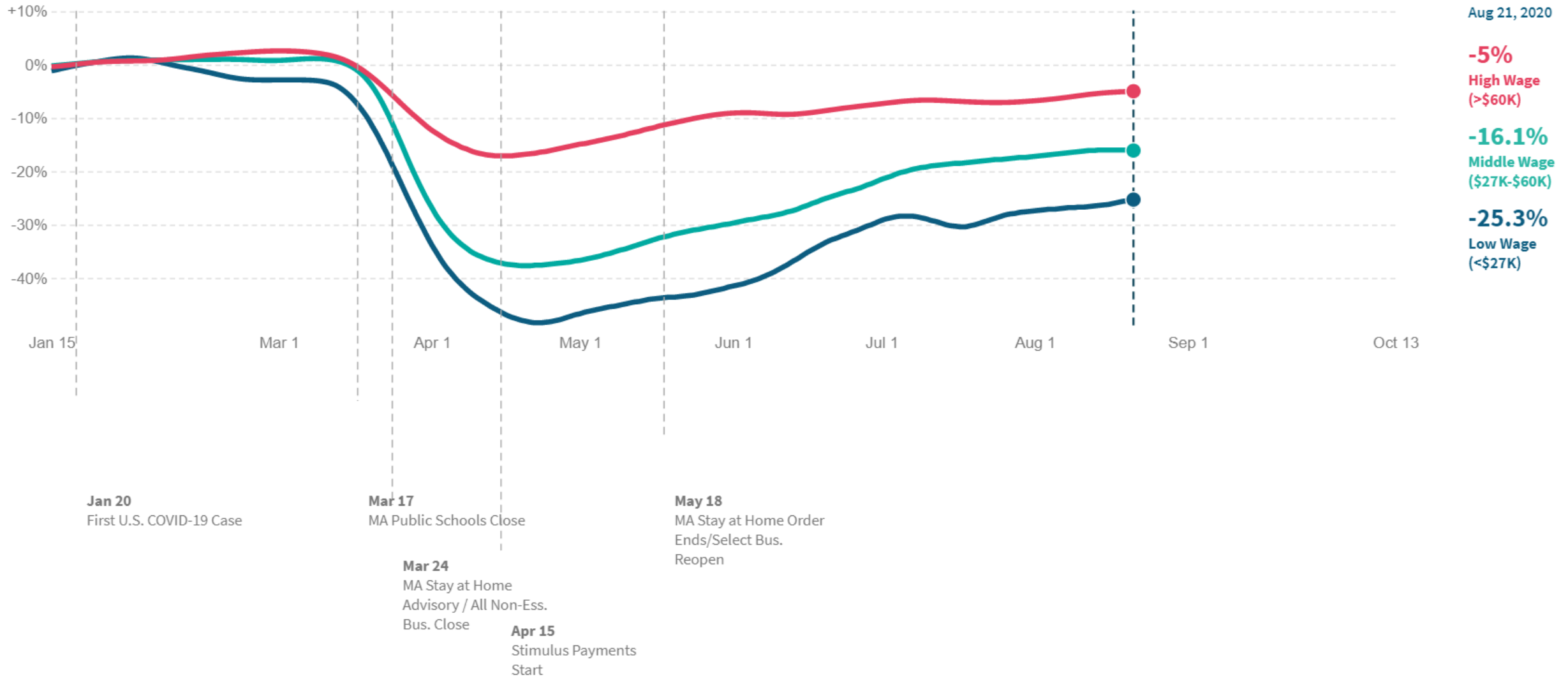
Unemployment Claims – Massachusetts



- Women have fared worse –
 - 55% of claimants were women compared to 45% of the workforce
- 39.1% of claimants were under 35 years old compared to 35.4% of the workforce
- 12.6% of claimants were Black or African American compared to 8.7% of the workforce
- During the week of September 19, fewer workers (10,991) were on the new Pandemic Unemployment Assistance Program than the traditional (28,724)

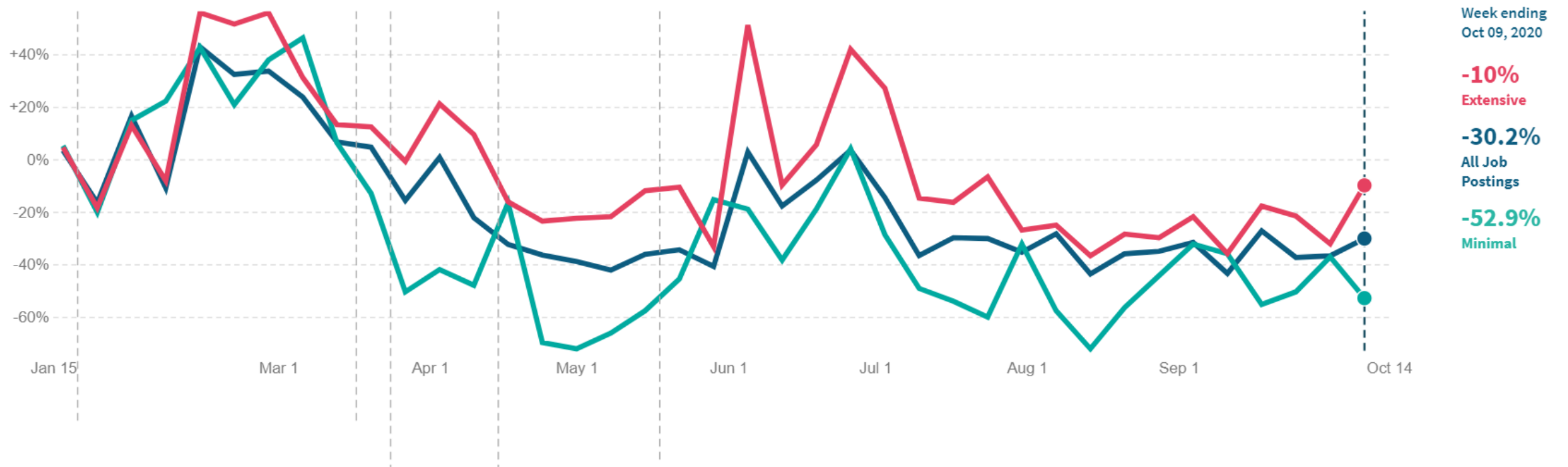
*Percentages are from September 2020 Claims

Percent change in employment- Boston metro



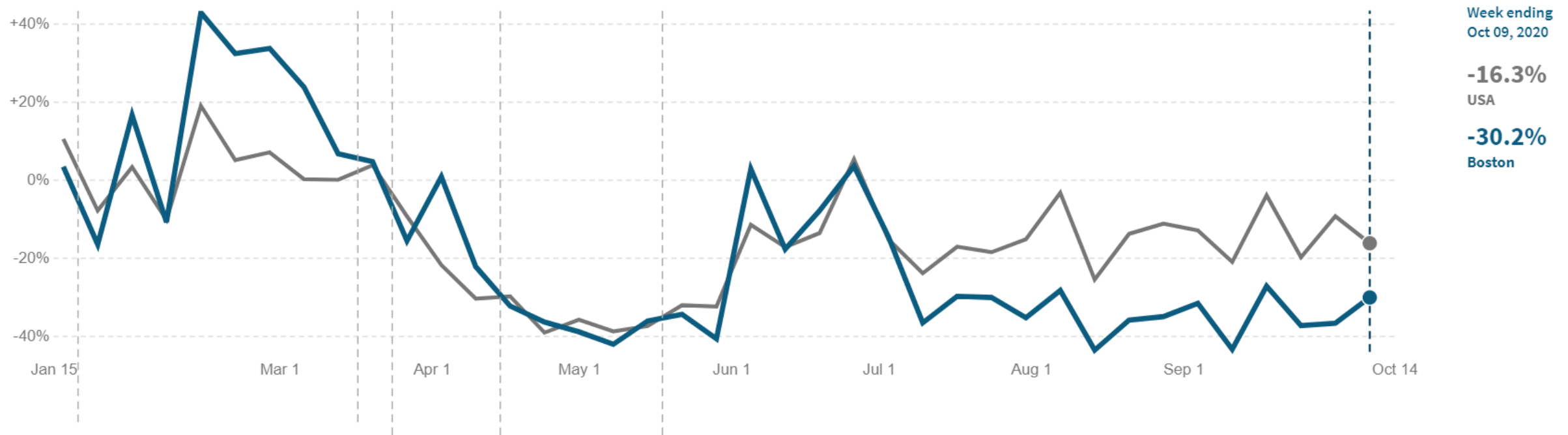
SOURCE: Opportunity Insights; tracktherecovery.org

Percent change in job postings by education Boston metro



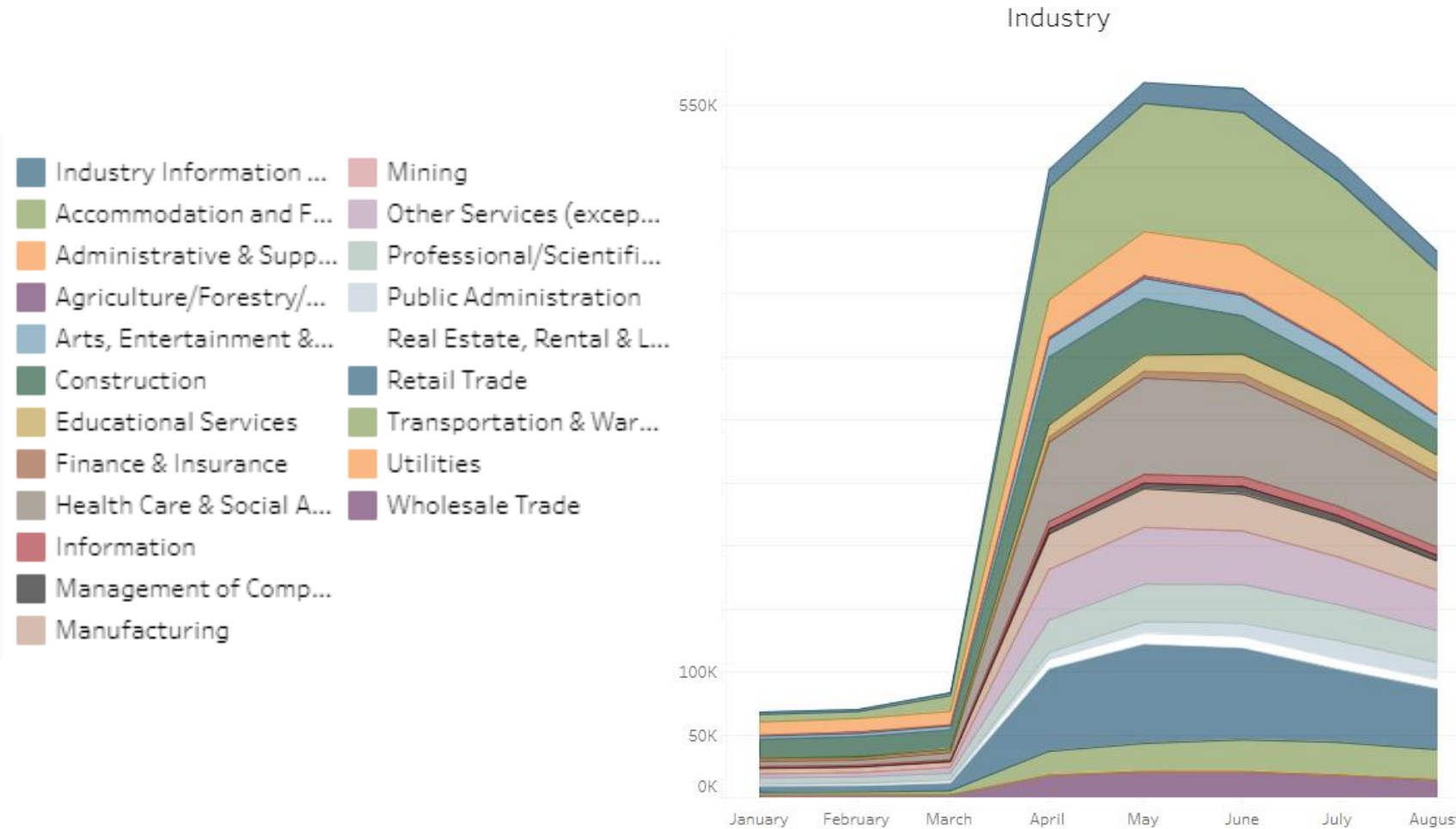
*Change in weekly unique job postings, indexed to January 4-31 2020. This series is based on data from Burning Glass Technologies.

Percent change in job postings: Boston metro vs. nation



*Change in weekly unique job postings, indexed to January 4-31 2020. This series is based on data from Burning Glass Technologies.

Massachusetts Unemployment Claims by Industry

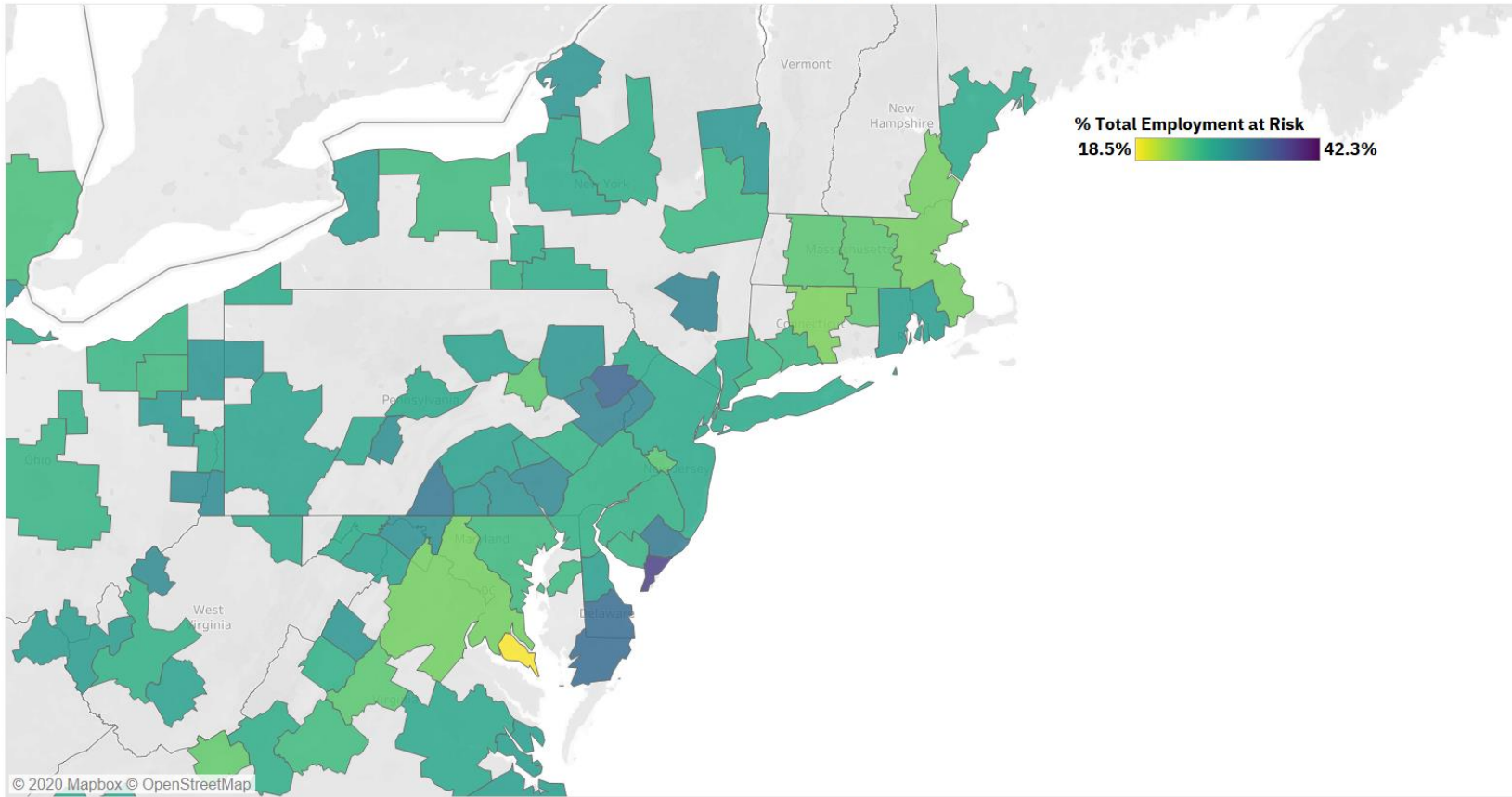


- 18.4% - Accommodation and Food Services
- 7.8% - Administrative Support and Waste Management
- 11.2% - Retail Trade
- 5.3% - Manufacturing
- 12.1% - Healthcare
- 4.6% - Construction

*Percentages are from September 2020 Claims

Boston Employment at Risk of Automation

Percentage of Total Employment at Risk

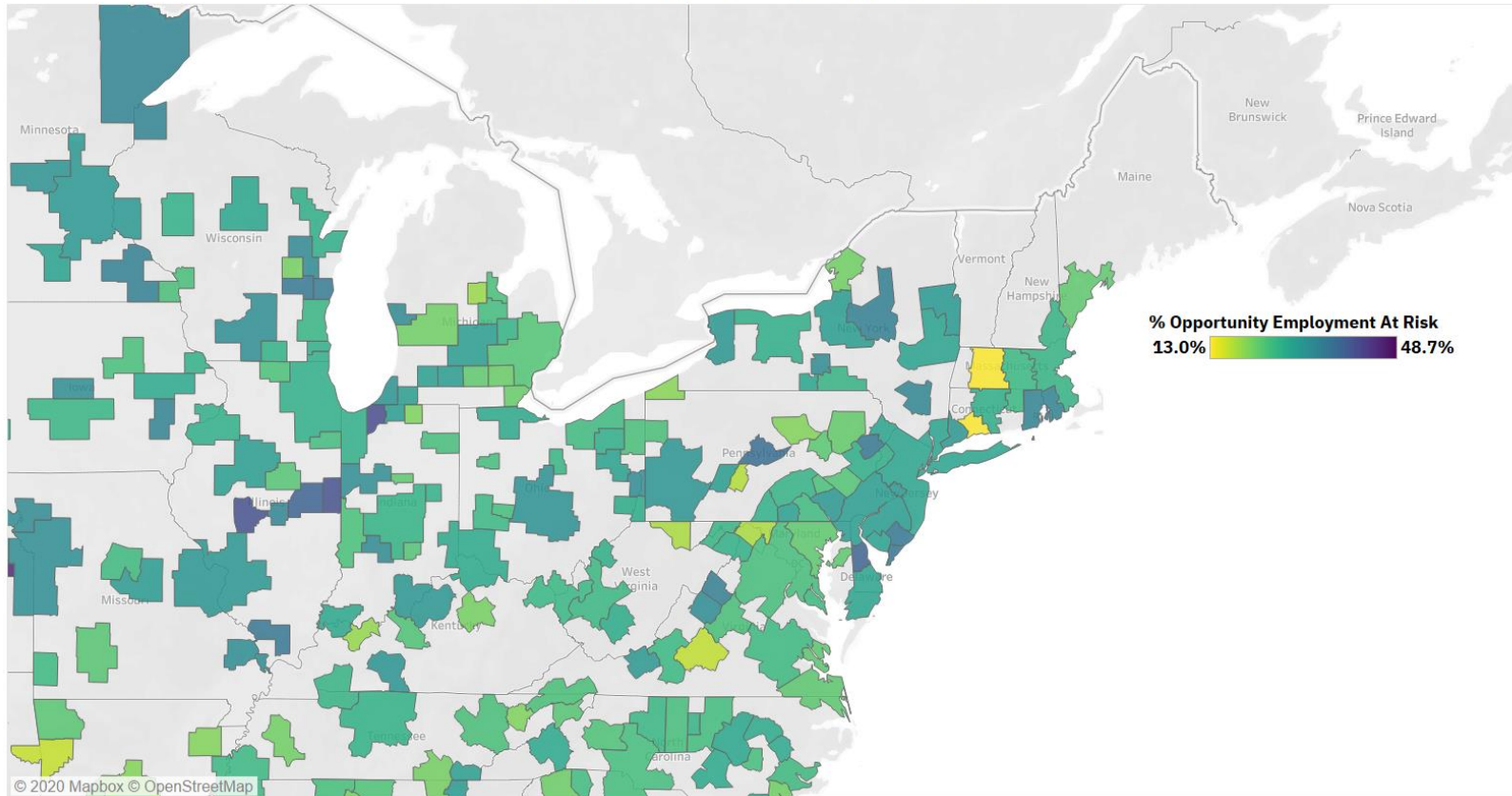


Source:

Atlanta Fed Center for
Workforce and Economic
Opportunity Analysis of
McKinsey Global Institute
Automation Risk Index and
COVID Exposure Index
using BLS Occupational
Employment Statistics Data
in the [Opportunity
Occupations Monitor](#)

Boston Opportunity Employment

Percentage of Opportunity Employment at Risk



Source:

Atlanta Fed Center for Workforce
and Economic Opportunity Analysis
of McKinsey Global Institute
Automation Risk Index and COVID
Exposure Index using BLS
Occupational Employment
Statistics Data in the [Opportunity
Occupations Monitor](#)

Note: Opportunity
occupations/employment are jobs
that pay above regional median
wage but do not require a
bachelors degree, see more at the
[Atlanta Fed CWEO Opportunity
Occupations Monitor](#)

Boston Metro: Jobs with Automation Risk

Top Ten Jobs at Risk

	Total Employment	Opportunity Employment
Retail Salespersons	72,710	0
Cashiers	57,830	0
Waiters And Waitresses	52,090	0
Office Clerks, General	42,550	0
Bookkeeping, Accounting, And Auditing Clerks	33,730	15,425
Secretaries And Administrative Assistants, Except Legal, Medical, And Executive	33,390	22,555
Laborers And Freight, Stock, And Material Movers, Hand	31,100	0
Cooks, Restaurant	23,160	0
First-Line Supervisors Of Retail Sales Workers	19,500	12,900
Maintenance And Repair Workers, General	18,490	18,490

Top Ten Opportunity Jobs at Risk

	Opportunity Employment	Total Employment
Secretaries And Administrative Assistants, Except Legal, Medical, And Executive	22,555	33,390
Maintenance And Repair Workers, General	18,490	18,490
Bookkeeping, Accounting, And Auditing Clerks	15,425	33,730
Construction Laborers	14,310	14,310
First-Line Supervisors Of Retail Sales Workers	12,900	19,500
Carpenters	12,750	12,750
Dining Room And Cafeteria Attendants And Bartender Helpers	7,310	7,310
Securities, Commodities, And Financial Services Sales Agents	6,200	10,030
Operating Engineers And Other Construction Equipment Operators	5,400	5,400
Painters, Construction And Maintenance	3,700	3,700

Source:

Atlanta Fed Center for Workforce and Economic

Opportunity Analysis of McKinsey Global Institute Automation Risk Index and COVID Exposure Index using BLS Occupational Employment Statistics Data in the

[Opportunity Occupations Monitor](#)

Boston Metro's industry mix affects the total number of potential jobs affected

CBO Estimates

- 41.1% of Boston's industry employment demand expected to be impacted compared with 42.7% statewide

Work from home estimates (pre-pandemic)

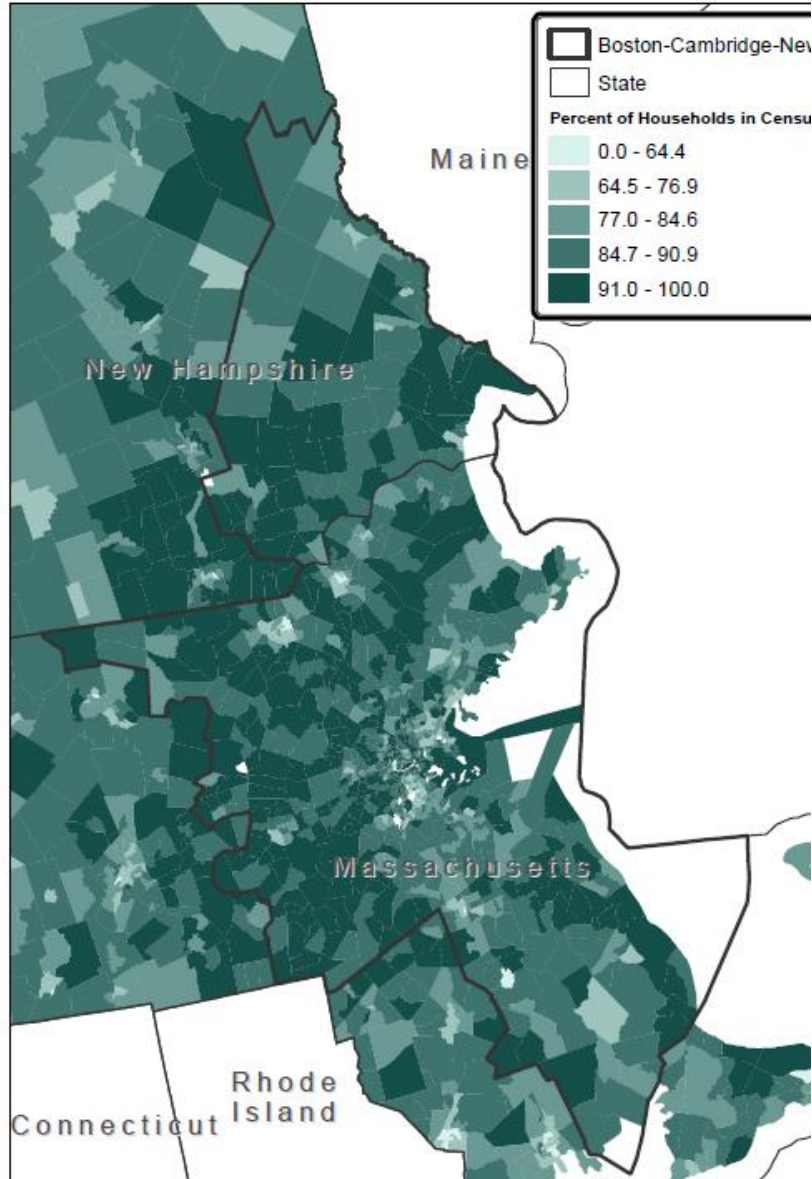
- 30.9% of Boston's workers predicted to be able to work from home compared with 29.9% statewide

Source: Federal Reserve Bank of Atlanta, [*The Digital Divide and the Pandemic: Working from Home and Broadband and Internet Access*](#)

Sources: [Congressional Budget Office 2006, A Potential Influenza Pandemic: Possible Macroeconomic and Policy Issues](#); U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages, 2019 Q1–Q3 data; and U.S. Bureau of Labor Statistics' American Time Use Survey: 2018 Results.

% Households with Broadband

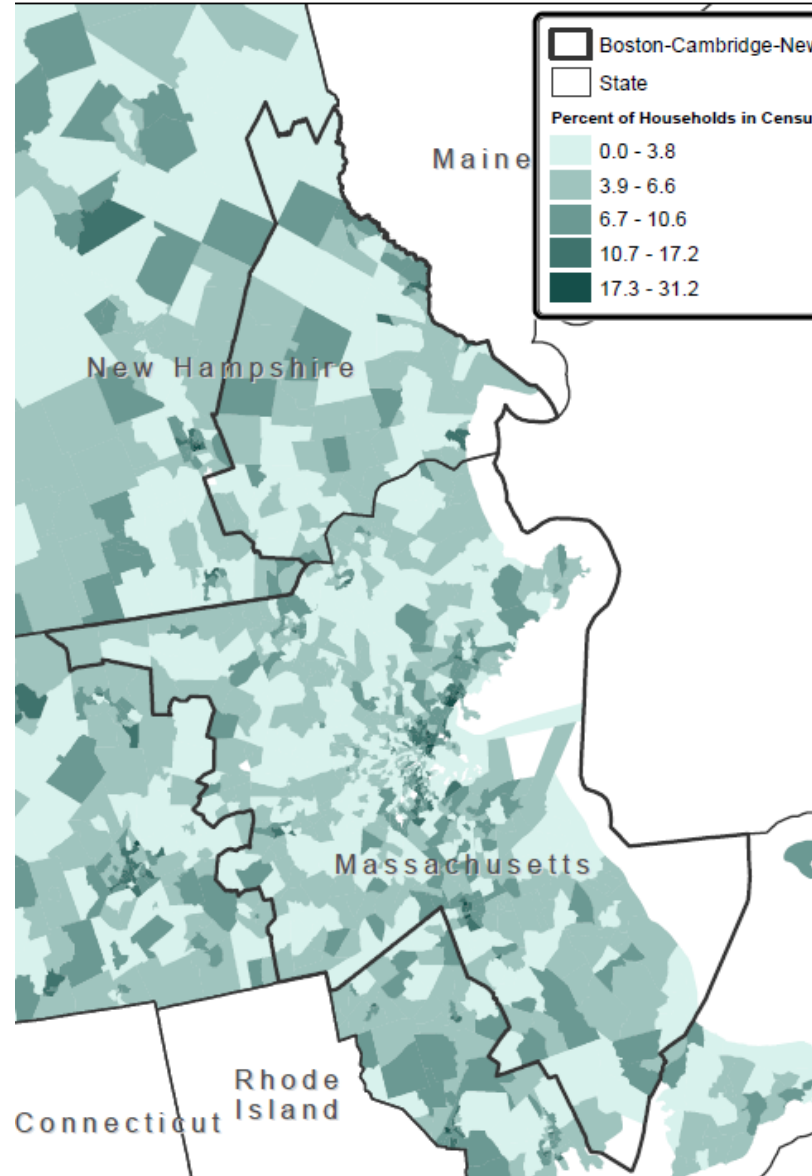
By Census Tract 2014-2018



Source: Institute for Policy & Social Research, The University of Kansas;
data from U.S. Census Bureau, 2014-2018 American Community Survey.

% Households with Broadband- Cellular Only

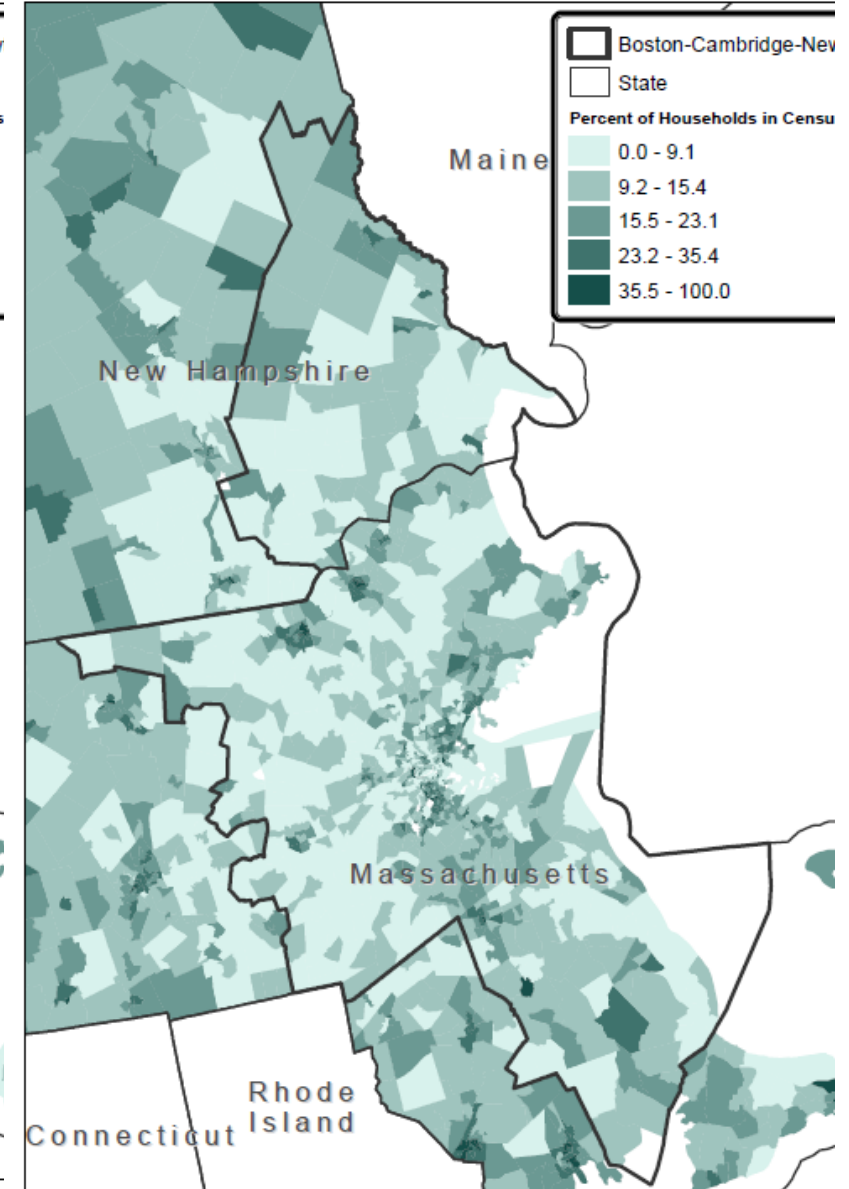
By Census Tract 2014-2018



Source: Institute for Policy & Social Research, The University of Kansas;
data from U.S. Census Bureau, 2014-2018 American Community Survey.

% Households with no internet or dial up

By Census Tract 2014-2018



Source: Institute for Policy & Social Research, The University of Kansas;
data from U.S. Census Bureau, 2014-2018 American Community Survey.

Boston-Cambridge Metro Internet Access Overview

Internet Access

- 81.2% of all households have a high-speed internet subscription
- 8.1% of all households have internet access through cellular data plans only
- 9.5% of all households have no internet subscription
- 32.5% of households earning less than \$20,000 have no internet subscription

Computing Devices

- 83.2% of all households have a desktop or laptop computer
- 6.2% of all households have a smartphone with no other device
- 5.7% of all households have no computing device

City of Boston Internet Access Overview

Internet Access

- 87.5% of all households have an internet subscription
- 77.2% of all households have a high-speed connection
- 9.2% of all households have internet access through cellular data plans only
- 12.5% of all households have no internet subscription
- 38.4% of households earning less than \$20,000 have no internet subscription

Computing Devices

- 79.3% of all households have a desktop or laptop computer
- 9.2% of all households have a smartphone with no other device
- 7.3% of all households have no computing device