ESSENTIAL, FRONTLINE, & HIGH RISK:

How COVID-19 Prioritized Low-wage Workers while Heightening their Disadvantage

By Lindsay M. Monte & Lynda Laughlin, Social, Economic & Housing Statistics Division, U.S. Census Bureau

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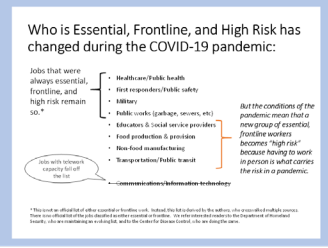
The Contribution of this Work

In this analysis, we attempt to articulate a definition of essential workers in the COVID-19 pandemic. We argue that it is the combination of three distinct classifications of the work environment – essential, frontline, and high-risk - that should inform policy around essential work, and using those classifications, we demonstrate the significant needs faced by many in such occupations.

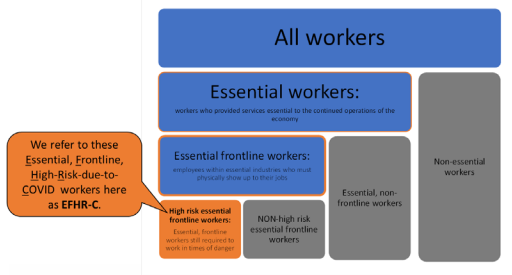


Background

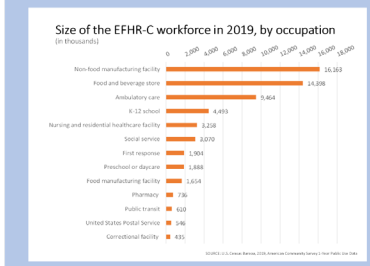
Defining the essential workforce during the global health pandemic presents several challenges for researchers and policy makers.

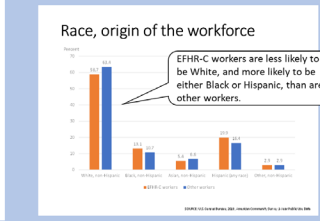
The size of the essential workforce ranges anywhere from 31 to 97 million (Tomer & Kane 2020; Laughlin & Wisniewski 2021). Past approaches used to classify this workforce include identifying workers in essential occupations that require face to face contact and cannot be performed at home (Dingel & Neiman 2020; Tomer & Kane 2020). Others have used very broad definitions that combine industry and occupation descriptions to include workers in jobs that are critical to maintaining the core functions of public health, society, and the economy (Geary, Palacios, & Tatum 2020).

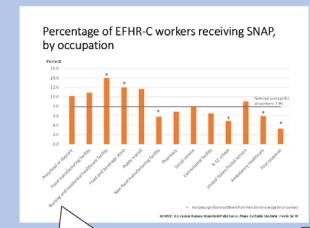
As the pandemic evolves, different sectors of the economy are being pushed and pulled to meet consumer demands and basic public services, raising the question of who are the essential workers? Using a variety of data sources, we provide an occupational crosswalk between detailed Census Bureau occupations, Department of Homeland Security (DHS) categories, telework ability, and selected workplace professions from an experimental survey administered by the U.S. Census Bureau.



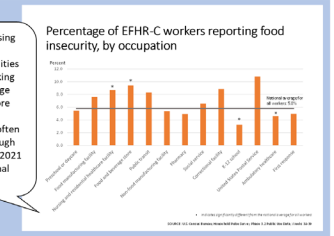
Together, the ACS and the HPS paint a complicated picture of EFHR-C workers during the pandemic:

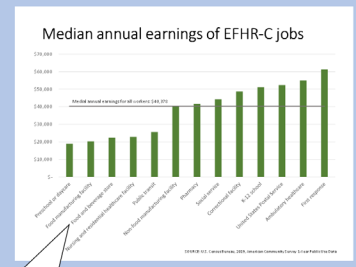


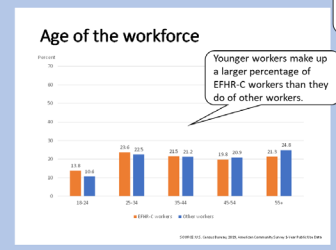


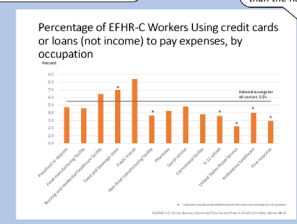


Workers in nursing or residential healthcare facilities and those working in Food/Beverage stores were more likely to report sometimes or often not having enough to eat in fall of 2021 than the national average.

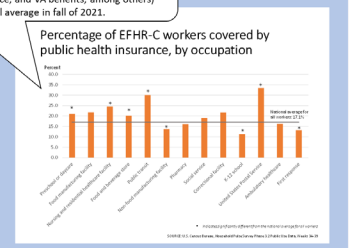


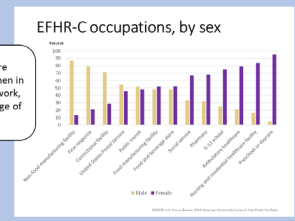


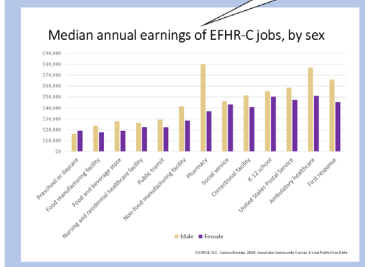


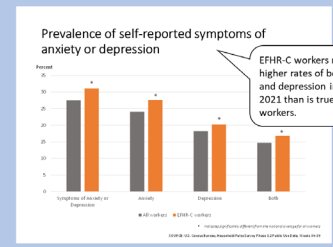


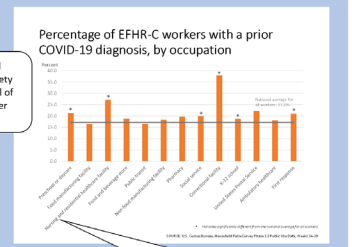
Four of the five categories of EFHR-C workers with the lowest median earnings were more likely to report public health insurance (including Medicaid, Medicare, Medical Assistance, and VA benefits, among others) than the national average in fall of 2021.











COVID-19 diagnoses were highest among workers in nursing or residential healthcare facilities, and workers in correctional facilities.
NOTE: Nursing is not significantly different from USPS.

What is going on with HPS respondents who report that they work for the "U.S. Postal Service"?

- 10% of them report sometimes or often not having enough to eat, even though data from the ACS show such employees having median income that is above the national average.
- One-third of them report having public health insurance, even though the USPS provides health insurance for employees.
- Roughly a quarter of them report that they DON'T work for the U.S. government, even though the USPS is a federal government employer.

➢ *We suspect that workers for other delivery services are including themselves as "U.S. Postal Service employees" on the HPS list of essential occupations. Such workers would not have had a telework option, would likely understand their work to be essential, and would not have another category on the HPS list in which to classify themselves.*

➢ *Preliminary analysis of ACS Industry and Occupation write-in data suggest that non-USPS jobs classified as either "Drivers/sales workers & truck drivers" or "Packers and packagers, hand" would include job duties such as handling and delivering packages. Median annual earnings for workers in these two occupations in 2021 were $40,699 and $26,678, respectively.*

Constraints:

- HPS data are experimental, and the EFHR-C occupational categories are not well defined.
- The EFHR-C occupation measures were not available in the HPS prior to the fall of 2021; whether current findings would also exist earlier in the pandemic is unknown.
- Income measures are also vague, which prevents more detailed analyses of the variation within the occupations profiled here.
- Discussion of known gender and race differences in occupations and incomes are limited by the data.
- Small sample sizes in some key professions such as daycare workers prevent a more nuanced analysis of the individual worker groups.

About the Data

This analysis uses two data sources: The 2019 American Community Survey (ACS), to describe the workforce we define here as EFHR-C, and data from the experimental Household Pulse Survey (HPS) for the fall of 2021, which we use to describe the conditions faced by this workforce during the coronavirus pandemic.

American Community Survey (ACS)

- Nationally representative survey administered to over 3.5 million addresses across the United States
- Collects information on the nation's demographics, housing, and employment
- Includes detailed information on jobs and income from those jobs
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The universe for the current analysis includes the civilian, employed population 18 years and older, living in one of the 50 U.S. states or the District of Columbia.

Household Pulse Survey (HPS)

- Experimental, rapid-response survey administered by the U.S. Census Bureau*
- Collects a variety of demographic and other information, such as education, employment, food security, health, and household spending
- Goal of HPS is to measure the impact of the ongoing coronavirus pandemic
- Data used here are from the fall of 2021

The universe used in HPS estimates mirrors that used in ACS: adults aged 18 and over who reported that they worked in the 7 days prior to the survey.

*For a list of the other federal sponsors of the HPS, refer to www.census.gov/programs-surveys/household-pulse-survey.html

The HPS identifies as many as 17 specific jobs that could be deemed Essential, Frontline, and High Risk during the COVID-19 pandemic (referred to here as EFHR-C). We consider 13 of these professions here. Using a mix of DHS definitions and HPS categories and telework feasibility, we then mapped these occupations onto occupational categories from the ACS to provide information about the demographic composition and median incomes of these occupations pre-COVID.

NOTE: We exclude the five remaining categories for a variety of data reasons. For example, we exclude "Hospital" due to concerns that the category reflects an industry rather than an occupation. We exclude "Other school" professions due to the availability of telework for such professions. We exclude "Agriculture, forestry, fishing, and hunting" due to the general lack of in-person, indoor work. We exclude "Death care" due to small sample size.

Summary

The coronavirus pandemic has been hard on almost everyone, but the pandemic has presented special challenges to the sector of the workforce we have classified here as EFHR-C. In the pre-pandemic era, the risks of essential frontline work were often limited to the cadre of workers most prepared to deal with them – those with health insurance and medical leave and pay commensurate to the risks the jobs entailed. However, unlike the more traditional threats of a wildfire or a hurricane or a riot (which are generally time-limited in their duration), the multi-year span of the pandemic required a sector of the workforce that isn't usually high risk to report to work.

It wasn't just the duration of the threat that changed; it was also the nature of that threat. Many jobs classified as essential and frontline are low-paid and often without benefits (Howell & Kalleberg 2019). However, in a pre-pandemic era, they were not risky in the same way that a police officer or a fire fighter's job is believed to be. This changed in the era of COVID-19. A grocery store clerk may have always been essential to the economy, and without the option of telework, but they weren't high risk until we faced a global pandemic. Now this and other similarly low-wage jobs face additional challenges, but without additional supports to meet them.

CITATIONS:
Dingel, Jonathan I. & Brent Neiman. 2020. "How Many Jobs Can Be Done at Home?" White Paper, Becker Friedman Institute, University of Chicago.
Geary, Chris, Vincent Palacios, & Laura Tatum. 2020. "Who are Essential Workers?: The U.S. Economy Depends on Women, People of Color, and Immigrant Workers." Georgetown Center on Poverty and Inequality Brief.
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Poster prepared for PAA 2022

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Who are essential workers?

Defining the essential workforce during the global health pandemic presents several challenges for researchers and policy makers:

- The size of the essential workforce ranges anywhere from 31 to 97 million (Tomer & Kane 2020; Laughlin & Wisniewski 2021).
- Past approaches used to classify this workforce include identifying workers in essential occupations that require face to face contact and cannot be performed at home (Dingel & Neiman 2020; Tomer & Kane 2020).
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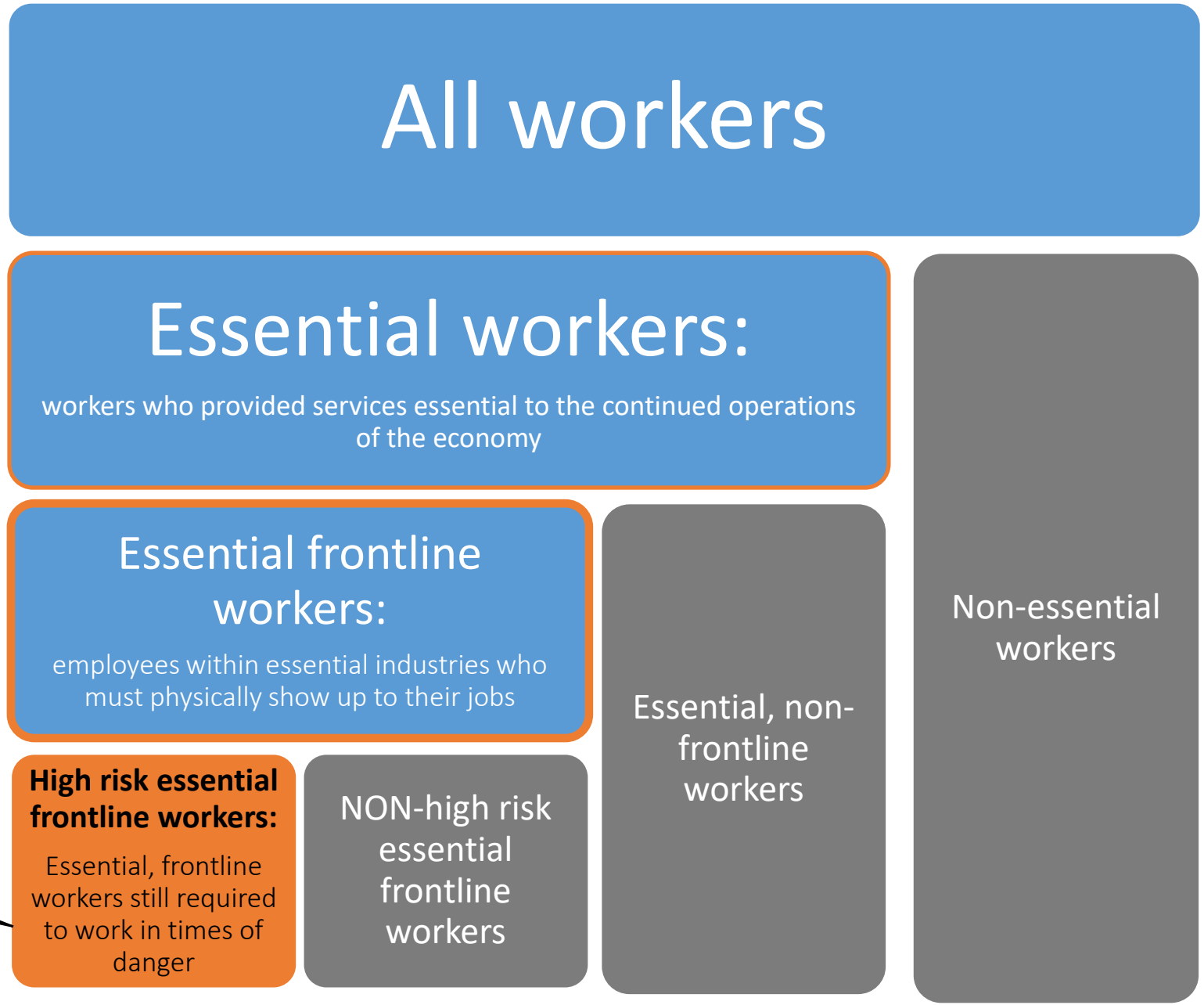
In this analysis, we attempt to articulate a definition of essential workers in the COVID-19 pandemic. We argue that it is the combination of three distinct classifications of the work environment – **essential, frontline, and high-risk** - that should inform policy around essential work, and using those classifications, we demonstrate the significant needs faced by many in such occupations.

We refer to these Essential, Frontline, High-Risk-due-to-COVID workers here as **EFHR-C**.



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Who is Essential, Frontline, and High Risk has changed during the COVID-19 pandemic:

Jobs that were always essential, frontline, and high risk remain so.*

- Healthcare/Public health
- First responders/Public safety
- Military
- Public works (garbage, sewers, etc)
- Educators & Social service providers
- Food production & provision
- Non-food manufacturing
- Transportation/Public transit

But the conditions of the pandemic mean that a new group of essential, frontline workers becomes "high risk" because having to work in person is what carries the risk in a pandemic.

Jobs with telework capacity fall off the list

- ~~Communications/Information technology~~

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*This is not an official list of either essential or frontline work. Instead, this list is derived by the authors, who crosswalked multiple sources. There is no official list of the jobs classified as either essential or frontline. We refer interested readers to the Department of Homeland Security, who are maintaining an evolving list, and to the Center for Disease Control, who are doing the same.

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The HPS identifies as many as 17 specific jobs that could be deemed Essential, Frontline, and High Risk during the COVID-19 pandemic (referred to here as EFHR-C). We consider 13 of these professions here:

- Healthcare/public health
  1. **Ambulatory healthcare workers (e.g. doctor, dentist or mental health specialist office, outpatient facility, medical and diagnostic laboratory, home health care)**
  2. **Pharmacy workers**
  3. **Nursing and residential healthcare facility workers**
- First responders/public safety
  4. **First responders (e.g., police or fire protection, emergency relief services)**
  5. **Correctional facility workers (e.g., jail, prison, detention center, reformatory)**
- Public Works
  6. **"United States Postal Service"**
- Educators & Social Service providers
  7. **Preschool or daycare workers**
  8. **K-12 school workers**
  9. **Social Service workers (e.g., child, youth, family, elderly, disability services)**
- Food production & provision
  10. **Food & beverage store workers (e.g., grocery store, warehouse club, supercenters, convenience store, specialty food store, bakery)**
  11. **Food manufacturing facility workers (e.g., meat-processing, produce packing, food or beverage manufacturing)**
  12. **Non-food manufacturing workers (e.g. metals, equipment and machinery, electronics)**
  13. **Public transit workers (e.g., bus, commuter rail, subway, school bus)**

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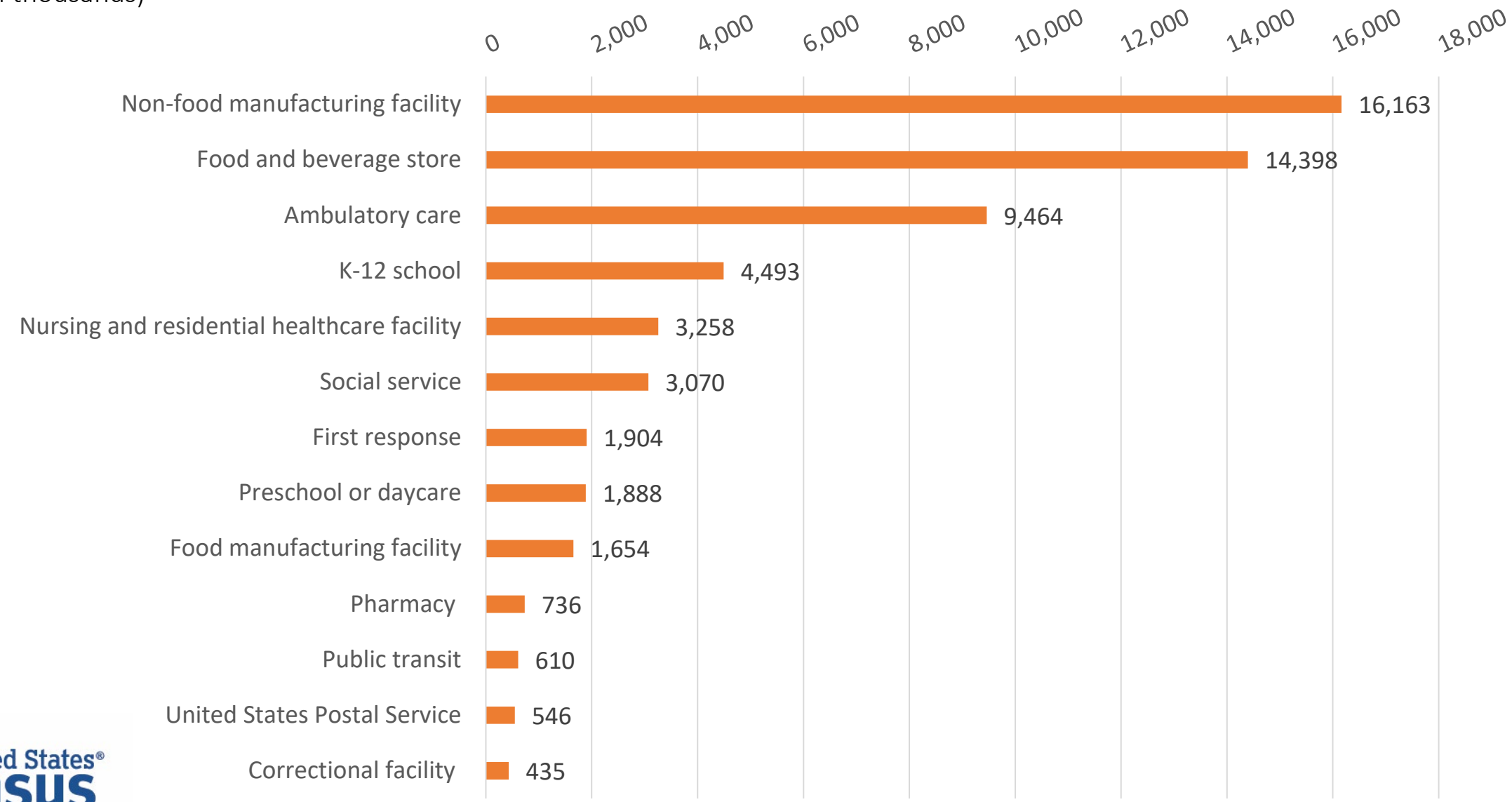
Size of the EFHR-C workforce in 2019, by occupation

(in thousands)



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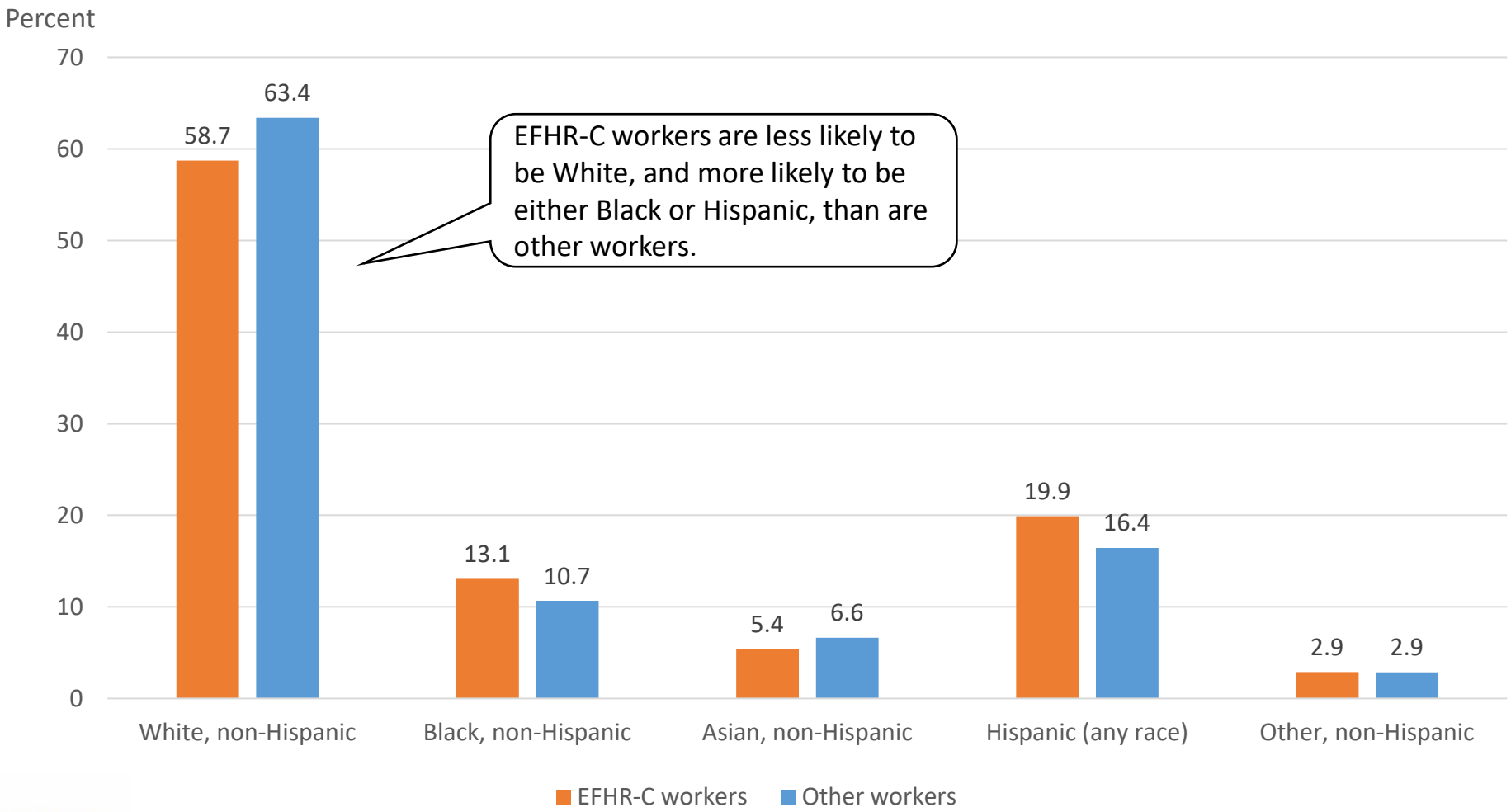
SOURCE: U.S. Census Bureau, 2019, American Community Survey 1-Year Public Use Data

All comparative statements in this report have undergone statistical testing, and, unless otherwise noted, all comparisons are statistically significant at the 10% significance level.

Race, origin of the workforce



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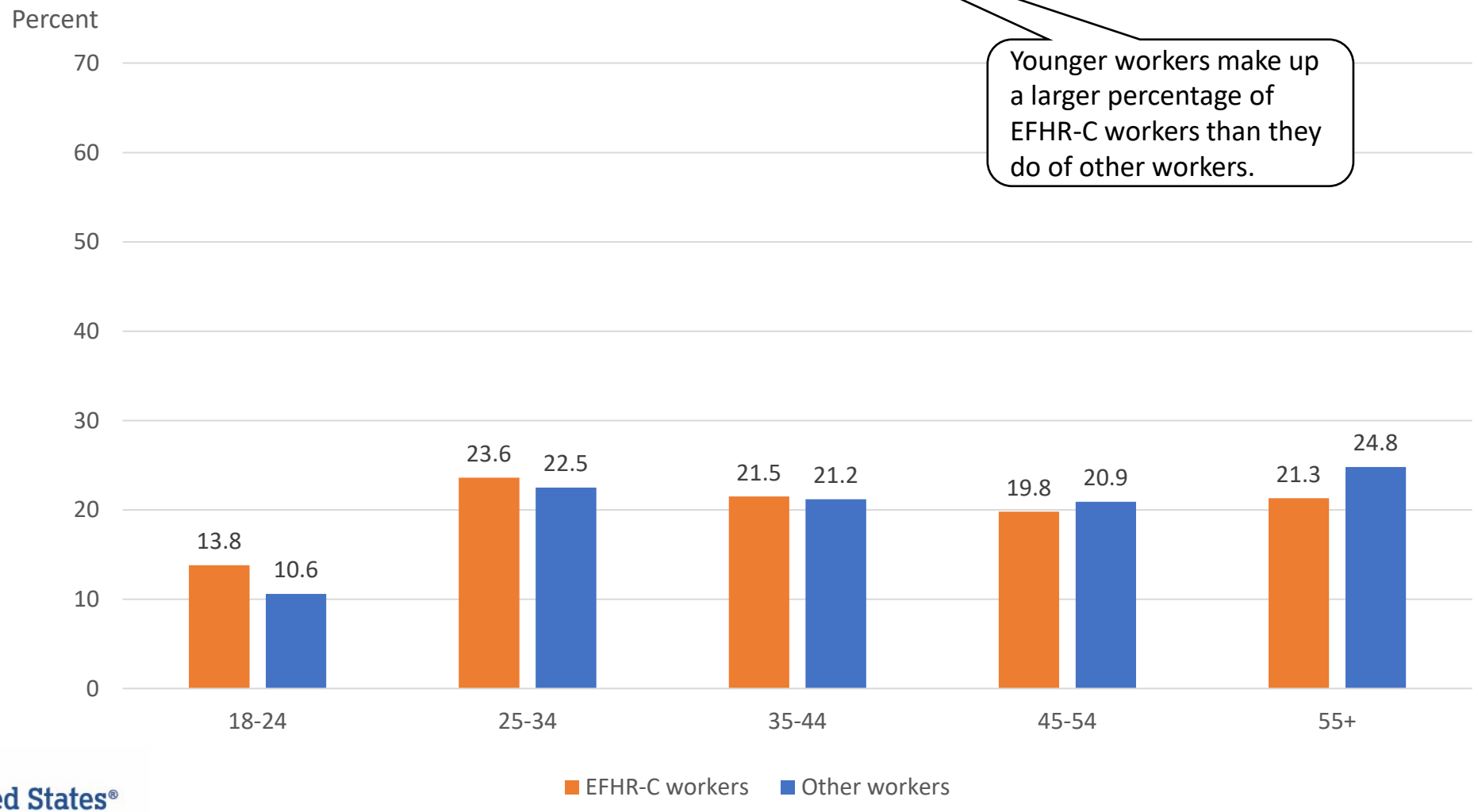
Age of the workforce



Younger workers make up a larger percentage of EFHR-C workers than they do of other workers.

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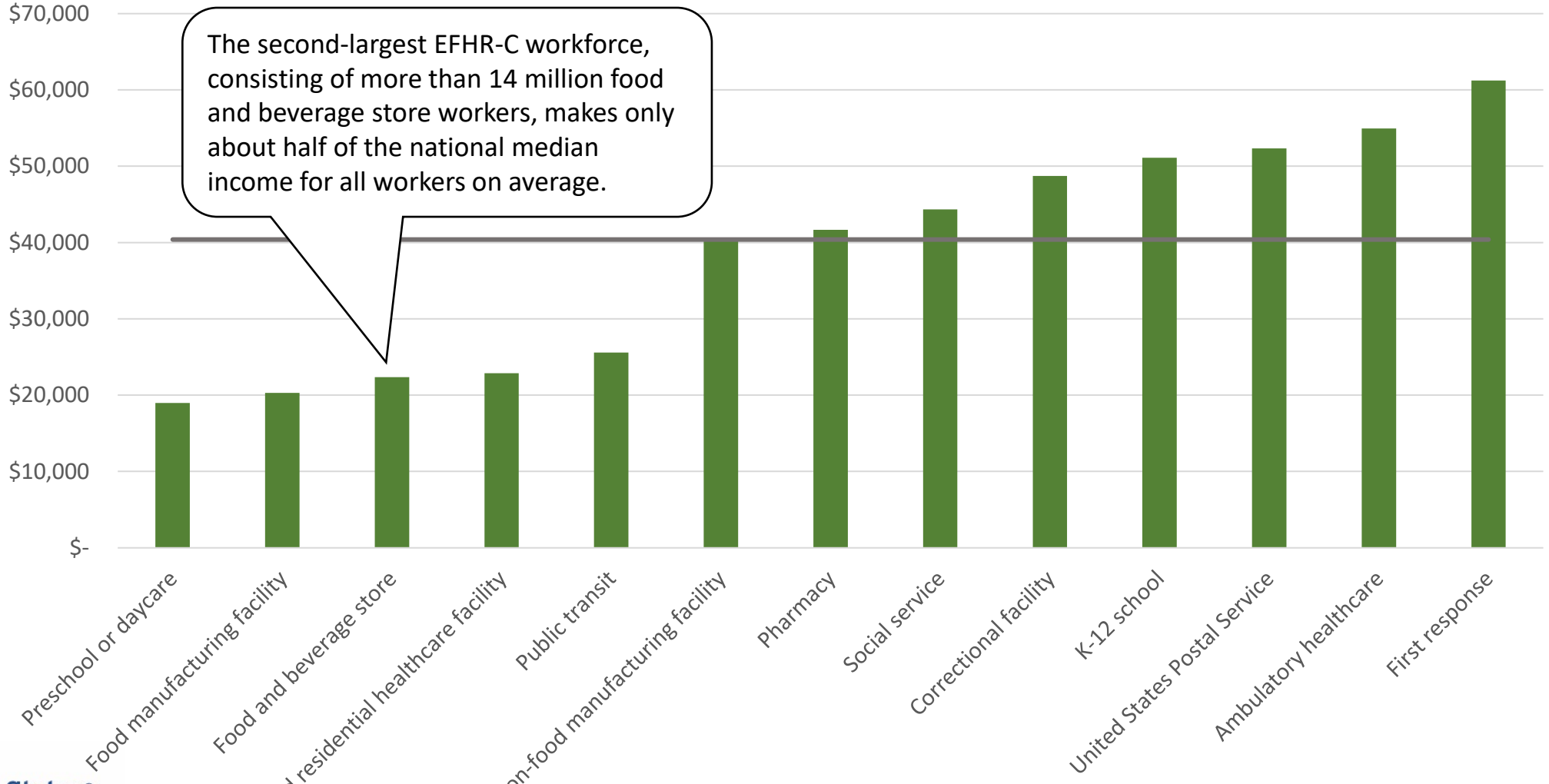
SOURCE: U.S. Census Bureau, 2019, American Community Survey 1-Year Public Use Data

Median annual earnings of EFHR-C jobs



Medial annual earnings for all workers: $40,378

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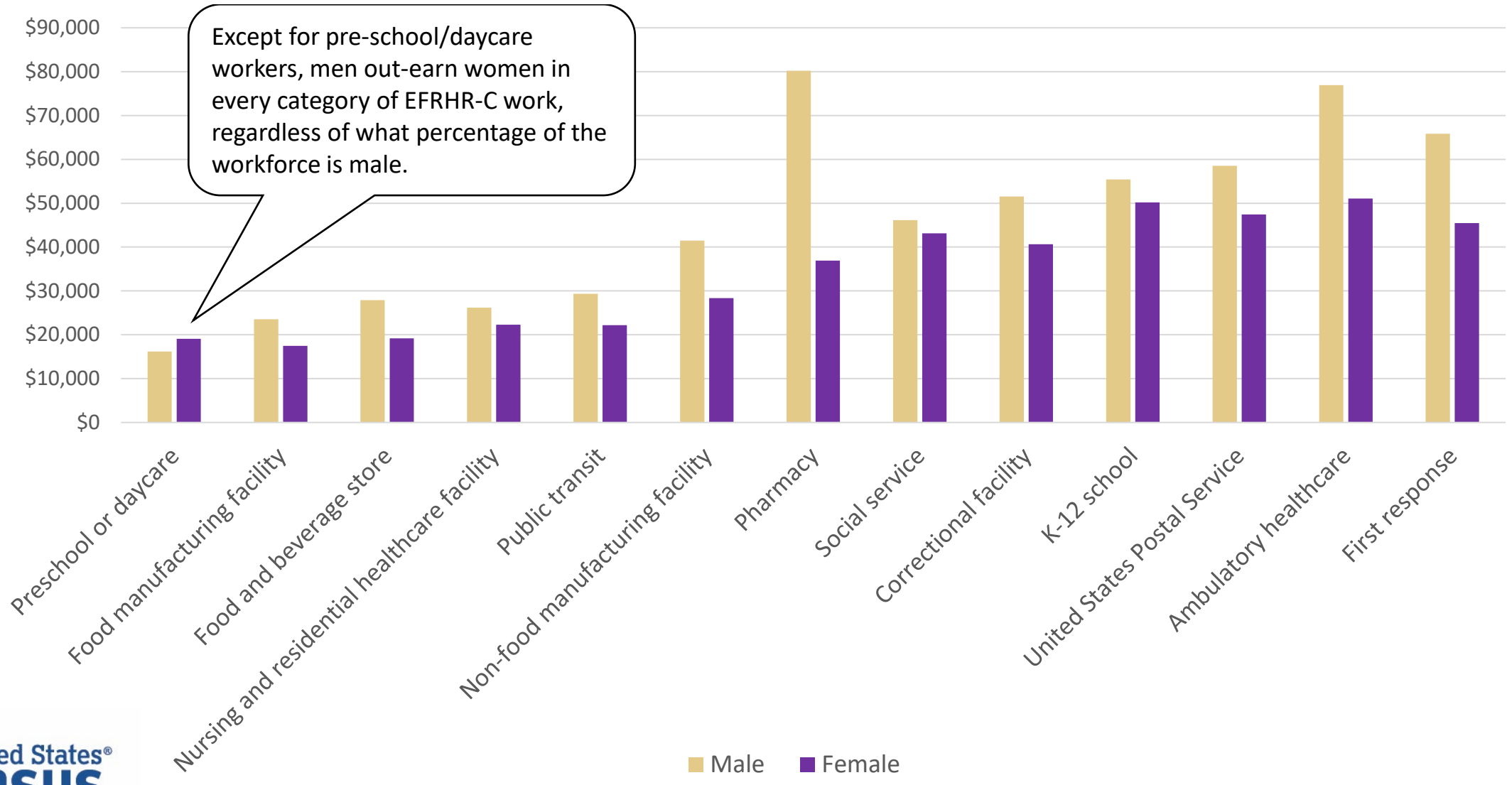
SOURCE: U.S. Census Bureau, 2019, American Community Survey 1-Year Public Use Data

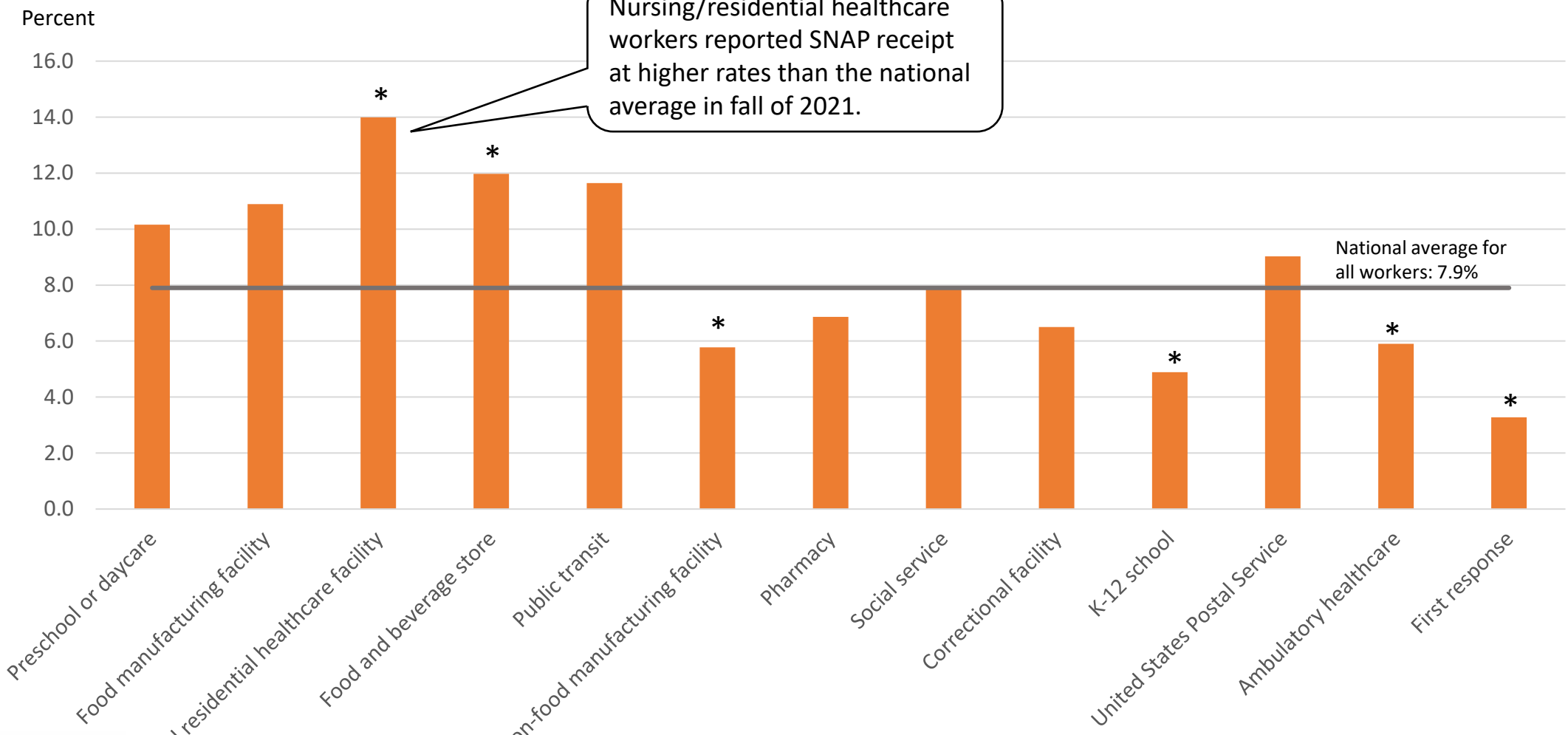
Median annual earnings of EFHR-C jobs, by sex



United States® Census Bureau

SOURCE: U.S. Census Bureau, 2019, American Community Survey 1-Year Public Use Data

Percentage of EFHR-C workers receiving SNAP, by occupation

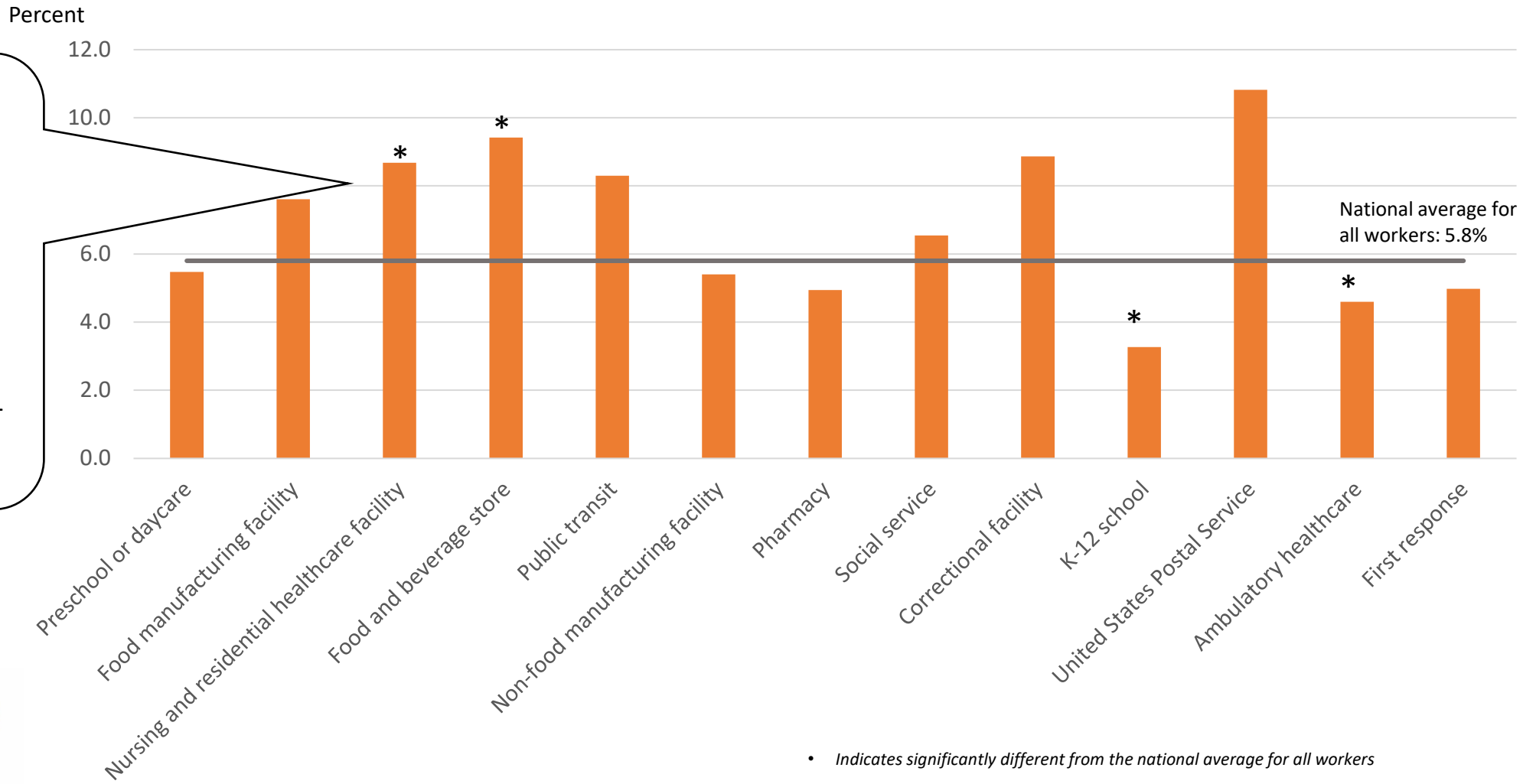


- *Indicates significantly different from the national average for all workers*

SOURCE: U.S. Census Bureau, Household Pulse Survey Phase 3.2 Public Use Data, Weeks 34-39

Percentage of EFHR-C workers reporting food insecurity, by occupation

Workers in nursing or residential healthcare facilities and those working in Food/Beverage stores were more likely to report sometimes or often not having enough to eat in fall of 2021 than the national average.



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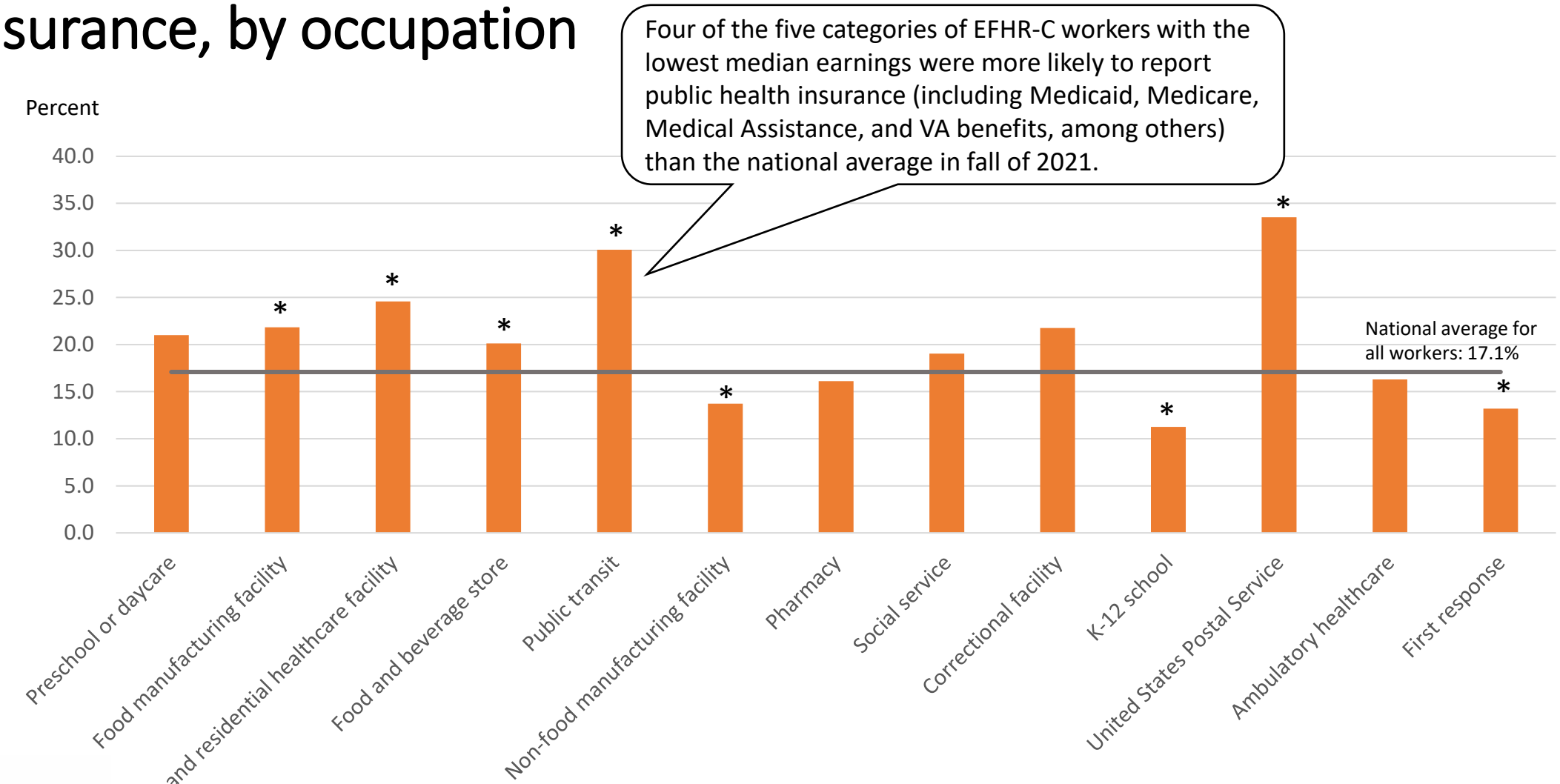
Percentage of EFHR-C workers covered by public health insurance, by occupation



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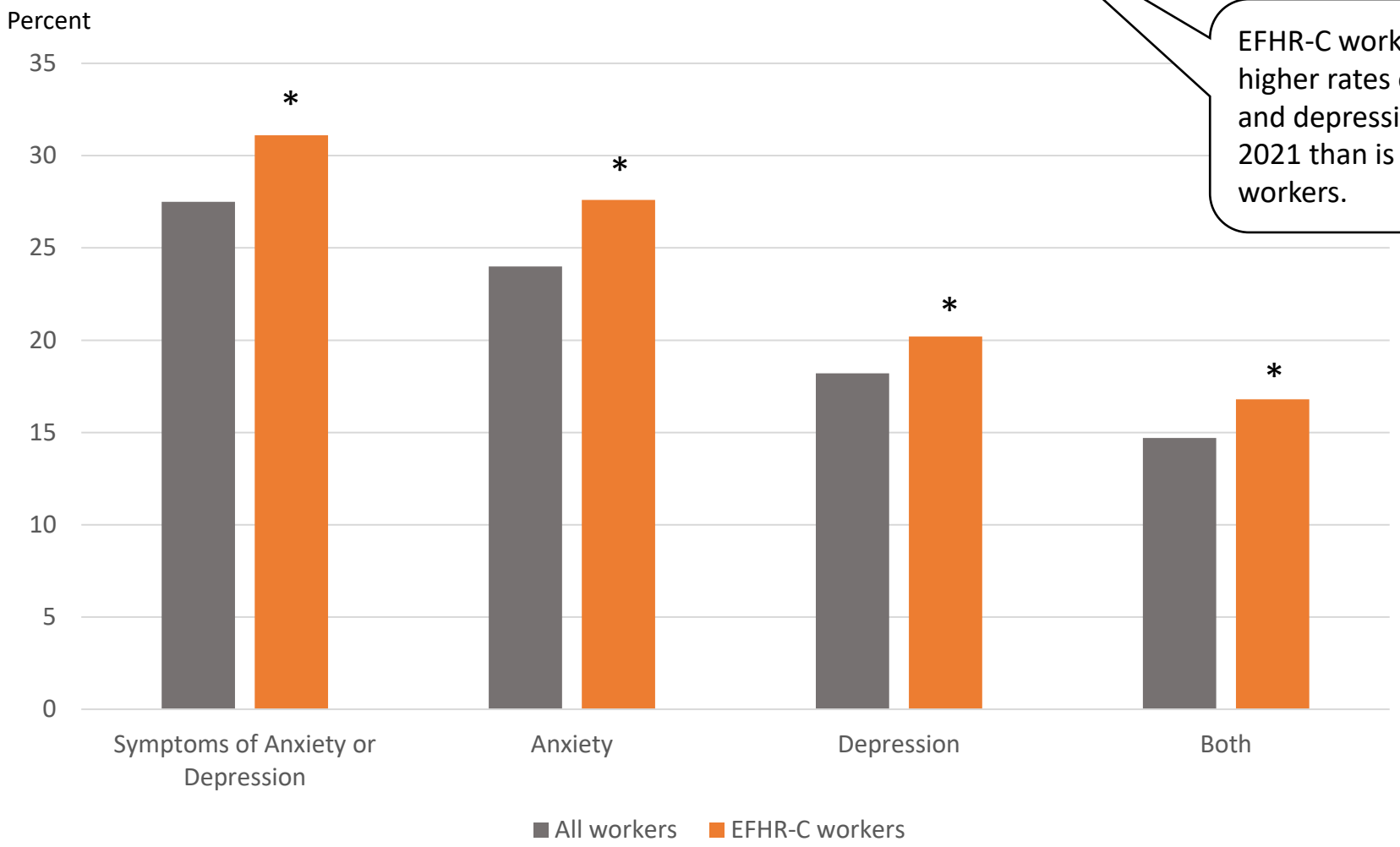
Prevalence of self-reported symptoms of anxiety or depression



EFHR-C workers reported higher rates of both anxiety and depression in the fall of 2021 than is true for other workers.

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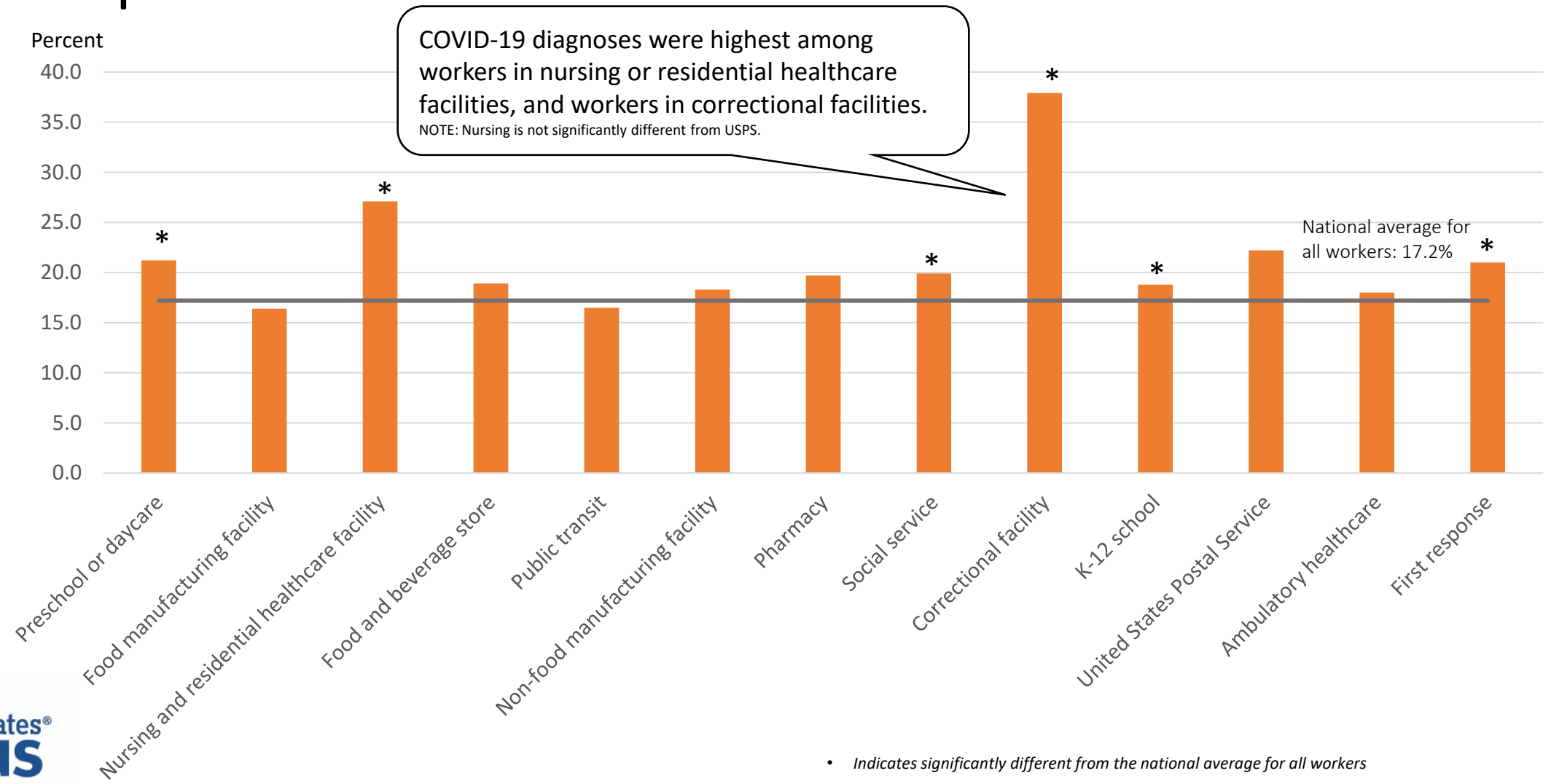
Percentage of EFHR-C workers with a prior COVID-19 diagnosis, by occupation



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The take-aways

- EFHR-C workers come from a diverse set of occupations
    - Some of those jobs have health care and leave options to help workers deal with the risks of COVID-19, but many of them do not.
- As a result, many EFHR-C workers are reliant on public welfare programs like SNAP and Medicaid
- Many have additionally faced mental health concerns and COVID-19 diagnoses
- Low-income work presents its own risks (Kalleberg 2011), but these have been reinforced by the dangers inherent to frontline work in the coronavirus pandemic.

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All data are subject to error arising from a variety of sources, including sampling error, non-sampling error, modeling error, and any other sources of error. For further information on ACS statistical standards and accuracy, refer to https://www2.census.gov/programs-surveys/acs/tech_docs/accuracy/ACS_Accuracy_of_Data_2019.pdf. For further information on HPS statistical standards and accuracy, refer to https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/Phase3-2_Source_and_Accuracy_Week39.pdf.

CITATIONS:

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- One-third of them report having public health insurance, even though the USPS provides health insurance for employees.
- Roughly a quarter of them report that they DON'T work for the U.S. government, even though the USPS is a federal government employer.

➢ *We suspect that workers for other delivery services are including themselves as "U.S. Postal Service employees" on the HPS list of essential occupations. Such workers would not have had a telework option, would likely understand their work to be essential, and would not have another category on the HPS list in which to classify themselves.*

  ➢ *Preliminary analysis of ACS Industry and Occupation write-in data suggest that non-U.S.P.S. jobs classified as either "Drivers/sales workers & truck drivers" or "Packers and packagers, hand" would include job duties such as handling and delivering mail and other goods. Fulltime, median earnings for these two occupations in 2019 were $46,698 and $26,673, respectively.*

United States® Census Bureau