Relationship between Chronic Disease and Opioid Use Disorder in the United States, NSDUH 2015-2019

Jonathan T. Lancaster[1], Caitlin R. Johnson[2], Anne K. Monroe[1], John K. Chan[2]

[1]George Washington University; [2]California Pacific Medical Center Research Institute

Contact: jtlanca@gwu.edu

Background:

- The opioid epidemic has seen increasing mortality in recent years, with deaths compounded by the effects of the COVID-19 pandemic.
- To better understand risk factors for the evolving epidemic, associations between chronic diseases and opioid use disorder (OUD) was investigated.

Objectives:

- **Aim 1:** To evaluate the association between previous chronic disease diagnosis and OUD.
- **Aim 2:** To examine income as an effect modifier on the association between OUD and chronic disease status.

Methods:

Dataset

- Opioid use and chronic disease data was collected from the National Survey on Drug Use and Health (NSDUH) from 2015 to 2019.

Exposure

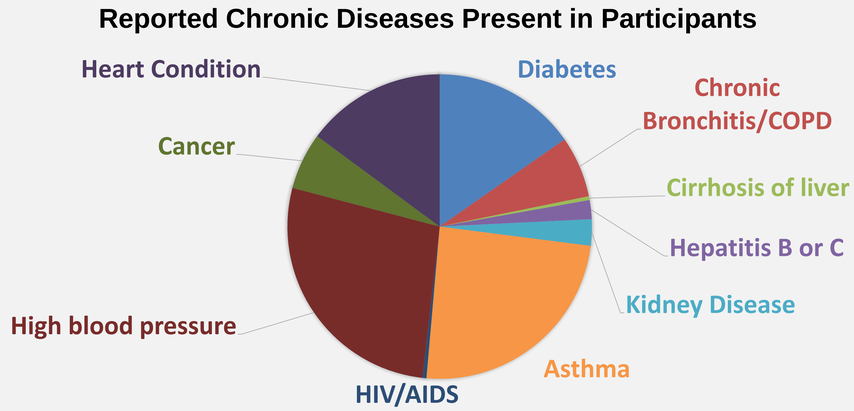
- The exposure consisted of 10 dichotomous self-report chronic disease variables analyzed individually.

Outcome

- OUD was defined as self-reported opioid use in any way not directed by a healthcare provider in the past 12 months.

Results:

- Univariate, Chi-Square, and multivariate analyses were run to determine different associations and effect modification.
- Of the **67,180** participants included in this study, **98.4%** of participants were suffering from at least one chronic disease.
- **Hepatitis** (OR 4.70; 95% CI: 3.12, 7.07; p=<0.0001) showed the strongest positive association with opioid misuse, while **HIV/AIDS** (OR 1.77; 95% CI: 1.07, 2.93; p=0.03) and **COPD** (OR 1.27; 95% CI: 1.07, 1.50; p=0.06) were moderately associated.
- **Diabetes** (OR 0.68; 95% CI: 0.53, 0.87; p=0.0028) displayed an inverse association.



Conclusion:

- **Hepatitis, HIV/AIDS, and COPD** were associated with increased odds of OUD while **diabetes** was inversely associated with odds of OUD.
- **Income** acted as an effect modifier in the associations between OUD and diabetes along with OUD and hepatitis B/C.
- Individuals suffering from these chronic diseases should not automatically be withheld pain-relieving opioids due to their chronic disease status since OUD is a complex disease that cannot be solely predicted by one factor.
- Future research is warranted to determine different specific factors among chronic diseases that lead to such varying associations with OUD.

Results:

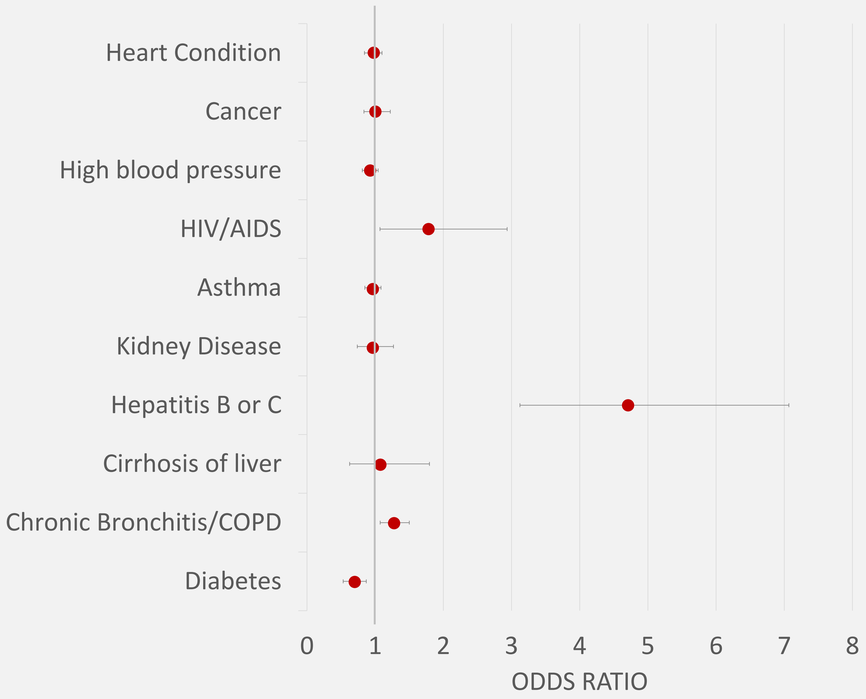


Figure 1: Adjusted Odds Ratios for Chronic Disease-Opioid Use Association

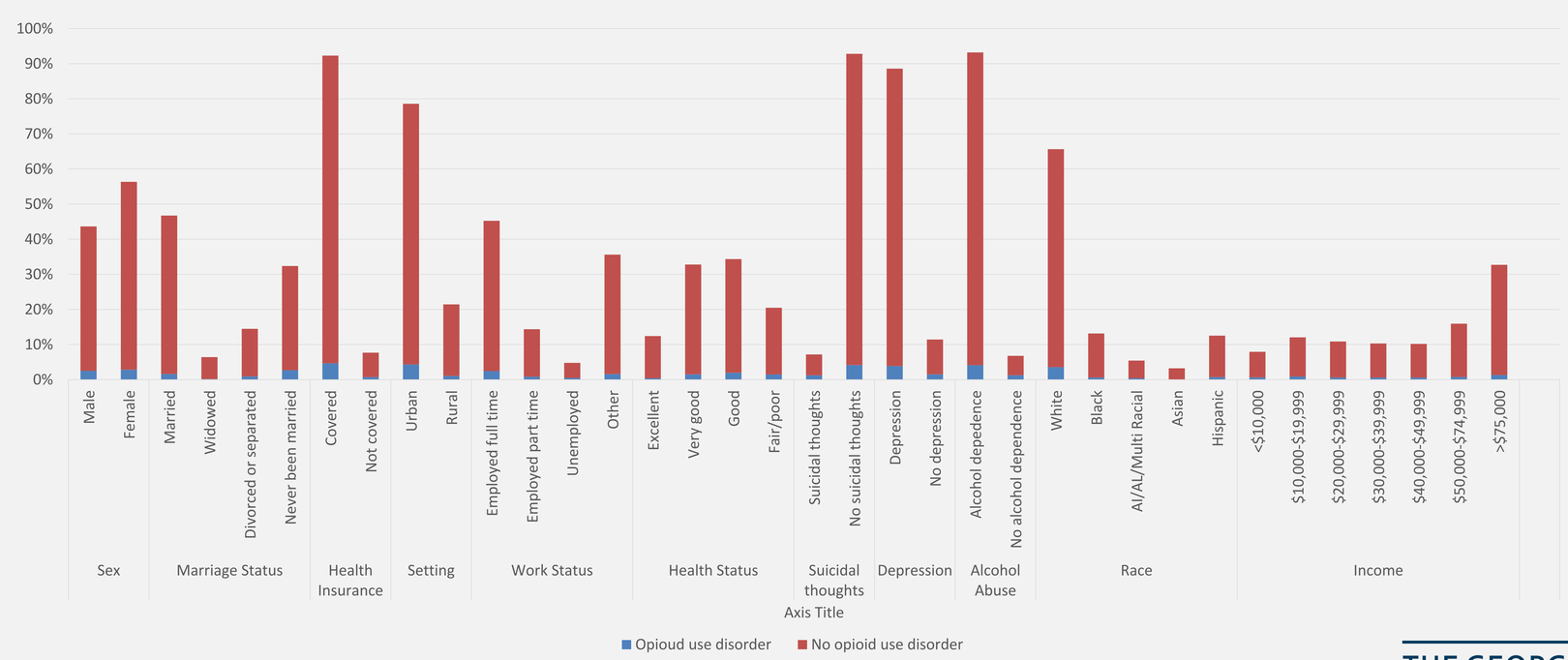


Figure 2: Opioid Use Status, Examined by Demographic and Clinical Characteristics*

*All variables included in this figure were significant following Chi-Square Analysis.

Sutter Health CPMC

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC