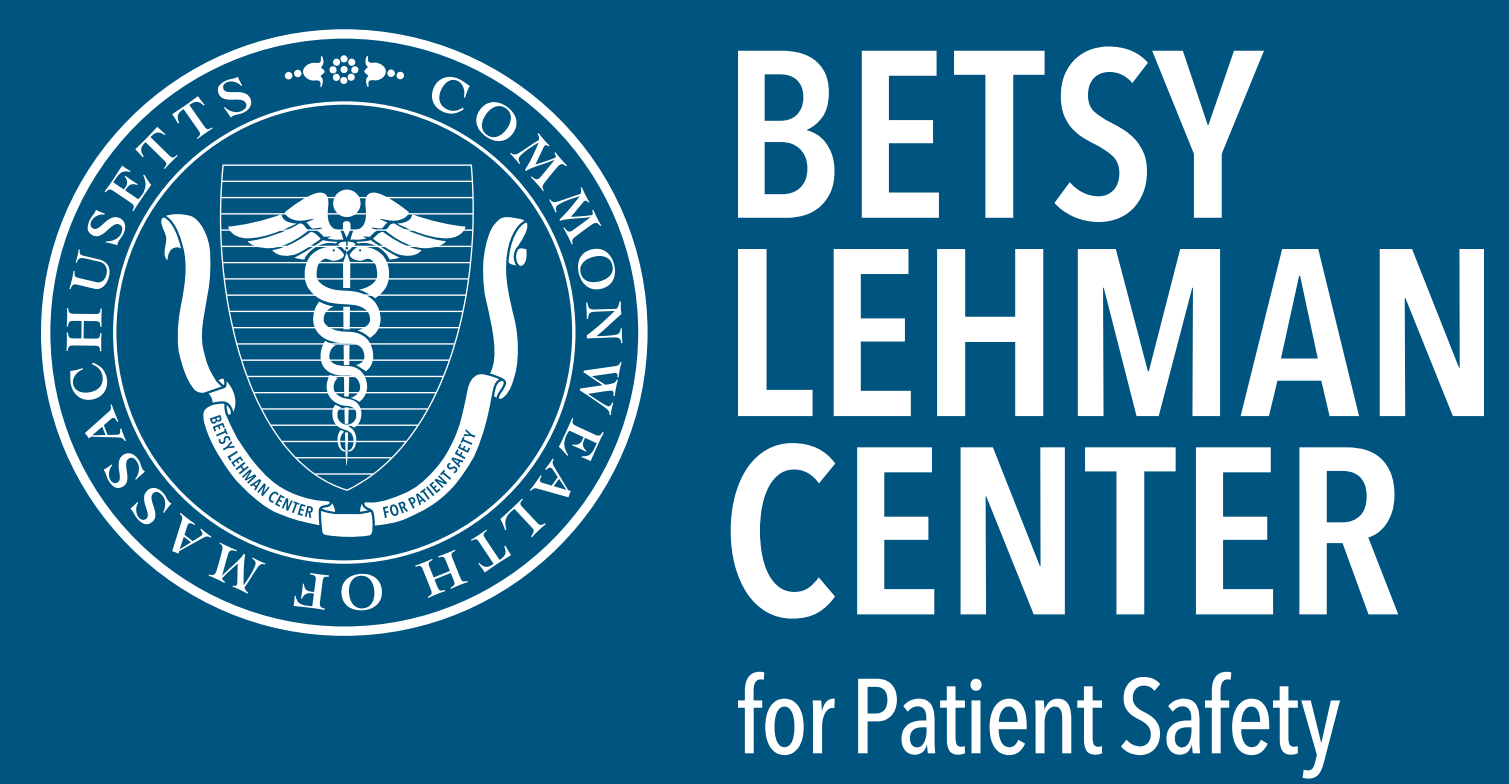


Risk of Severe Maternal Morbidity in Birthing People with Opioid Use Disorder: Population level analysis of hospital discharge data in Massachusetts

Godwin K. Osei-Poku, MBChB, DrPH¹, Julia C. Prentice, PhD^{1,2} Mary Peeler, MD, MPH³, Sarah Bernstein, MD⁴ Ronald E. Iverson, MD, MPH^{2,5} Davida M. Schiff, MD, MSc⁶

¹ Betsy Lehman Center for Patient Safety, Boston, Massachusetts; ² Boston University School of Medicine, Boston, Massachusetts; ³ Johns Hopkins University, School of Medicine, Department of Gynecology and Obstetrics, Baltimore, Maryland; ⁴ Massachusetts General Hospital, Division of Maternal Fetal Medicine, Department of Obstetrics and Gynecology and Reproductive Biology, Boston, Massachusetts; ⁵ Boston Medical Center (BMC), Boston, Massachusetts; ⁶ Mass General Hospital for Children, Division of General Academic Pediatrics and Newborn Medicine, Boston, Massachusetts



INTRODUCTION

There has been a significant rise in pregnancy-associated mortality rates in the United States, largely due to opioid-related overdoses^{1,2}, yet morbidity among pregnant individuals with Opioid Use Disorder (OUD) is less well understood. Racial and ethnic inequities in perinatal OUD treatment utilization and severe maternal morbidity (SMM)^{3,4} are well documented, but the extent to which there are racial and ethnic disparities in SMM rates among mothers with OUD is unknown.

Objective: Examine SMM rates among birthing people with OUD and determine the extent of racial/ethnic disparities

METHODS

Data source: Hospital discharge data collected by the Massachusetts Center for Health Information and Analysis

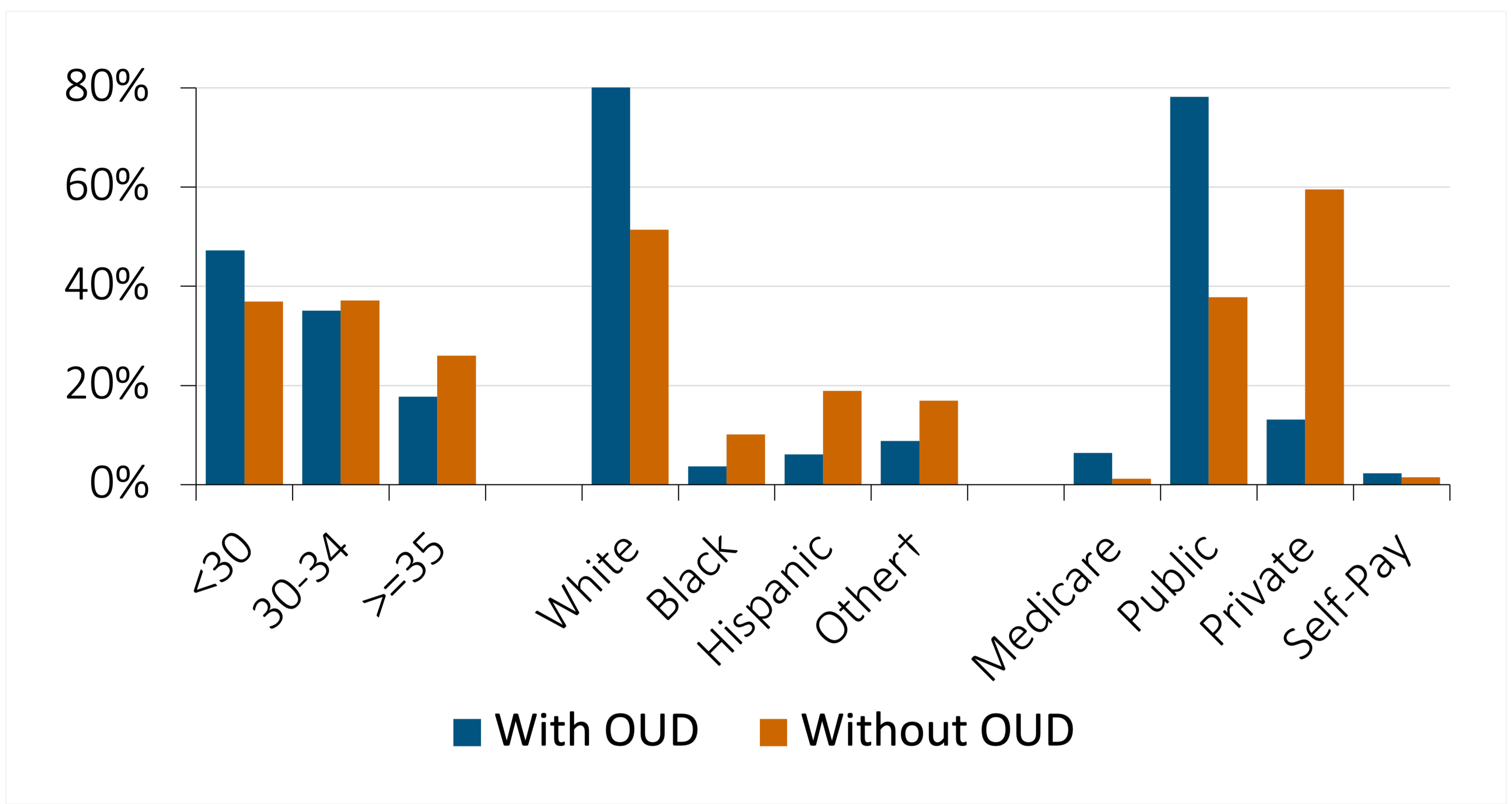
Study population: Birthing people with delivery hospitalization in Massachusetts from January 1, 2016, to September 30, 2020 (*n*=324,012)

Analysis:

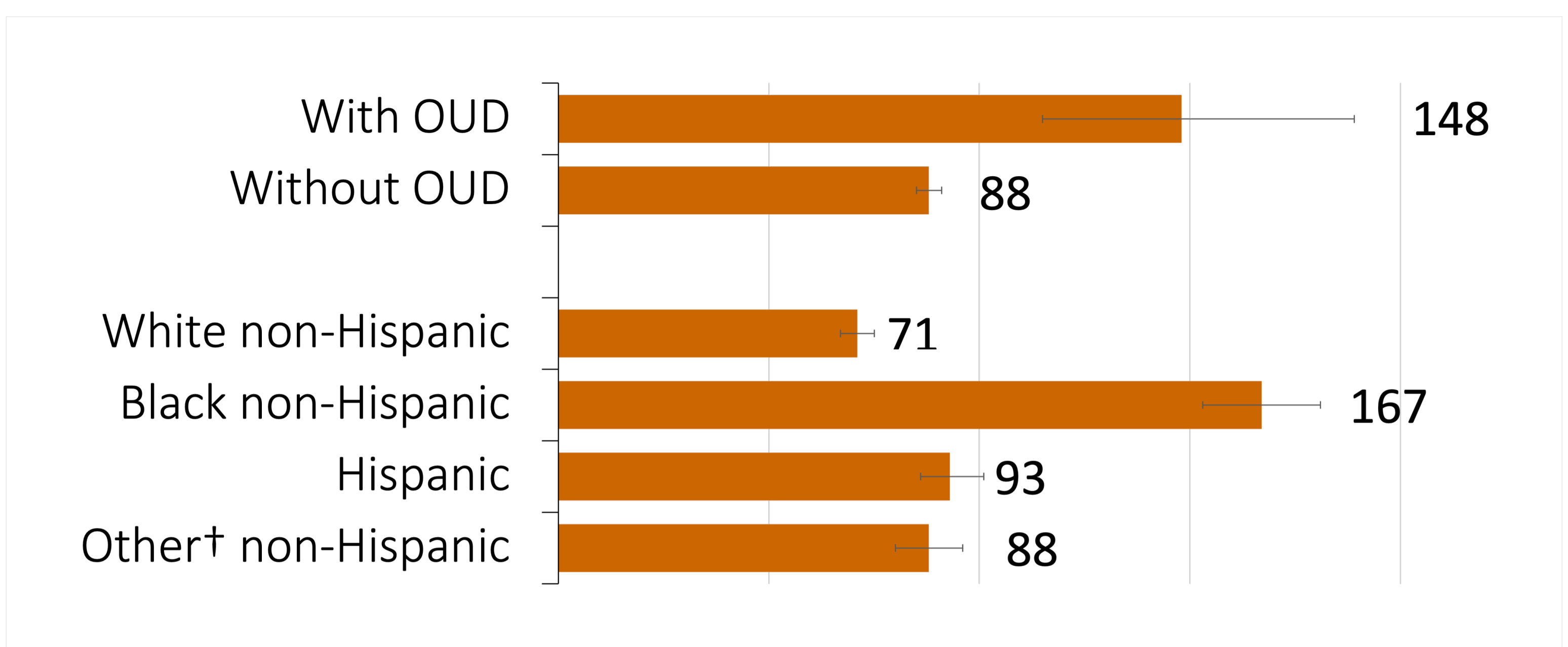
- SMM rates, excluding transfusion, were computed for all deliveries and for those identified with OUD
- Multivariable logistic regression examined the association between SMM and OUD
- Adjusted for patient and hospital level characteristics including race and ethnicity

RESULTS

Birthing people with OUD (1.4% of deliveries) were more likely to be younger than 30 years, non-Hispanic white, and publicly insured.

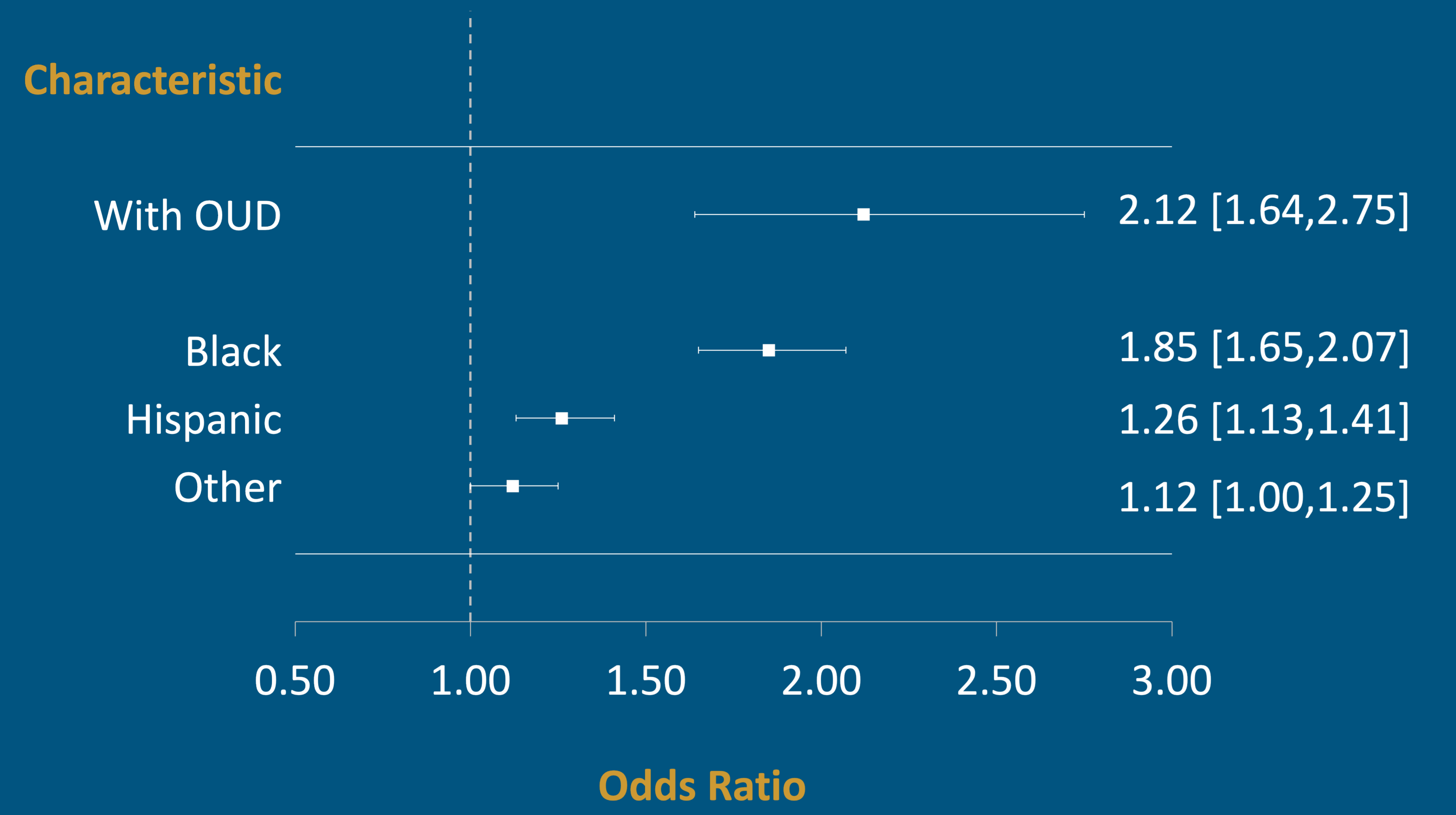


SMM rate* among birthing people with OUD was nearly 2 times higher compared to those without OUD. Black, Indigenous, and people of color (BIPOC) birthing people had SMM rates that were 1.2 to 2.36 times higher compared to non-Hispanic white birthing people.



*Rates are per 10,000 deliveries †Other is defined as Asian/Pacific Islander, American Indian or Alaska Native, and “Other” race

After adjusting for all covariates, both OUD and race/ethnicity were significantly associated with greater odds of SMM



Model was adjusted for age, insurance, delivery volume, teaching status, percent black serving, ownership and region. Not shown

In stratified analyses that were limited to deliveries with OUD, the odds of SMM was not significantly different for BIPOC birthing people compared to non-Hispanic white birthing people.

Characteristic	Adjusted OR (95% CI)
White non-Hispanic	Ref
Black non-Hispanic	1.80 (0.69, 4.68)
Hispanic	0.59 (0.18, 1.93)
Other† non-Hispanic	0.72 (0.26, 1.99)

†Other is defined as Asian/Pacific Islander, American Indian or Alaska Native, and “Other” race

DISCUSSION

OUD during pregnancy and race/ethnicity independently increased the risk of SMM in Massachusetts.

Policy Implications:

- All birthing people with OUD need to be prioritized for early intervention during pregnancy.
- Perinatal quality improvement collaboratives should incorporate SMM in bundles aimed at improving outcomes for birthing people with OUD.

Limitations: Our sample likely underreports the number of birthing people with OUD, given this diagnosis has been shown to be underreported in claims data.

CONTACT

Scan the QR code to download a digital copy of this poster. For more information, reach out to Godwin.Osei-Poku@BetsyLehmanCenterMA.gov.



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