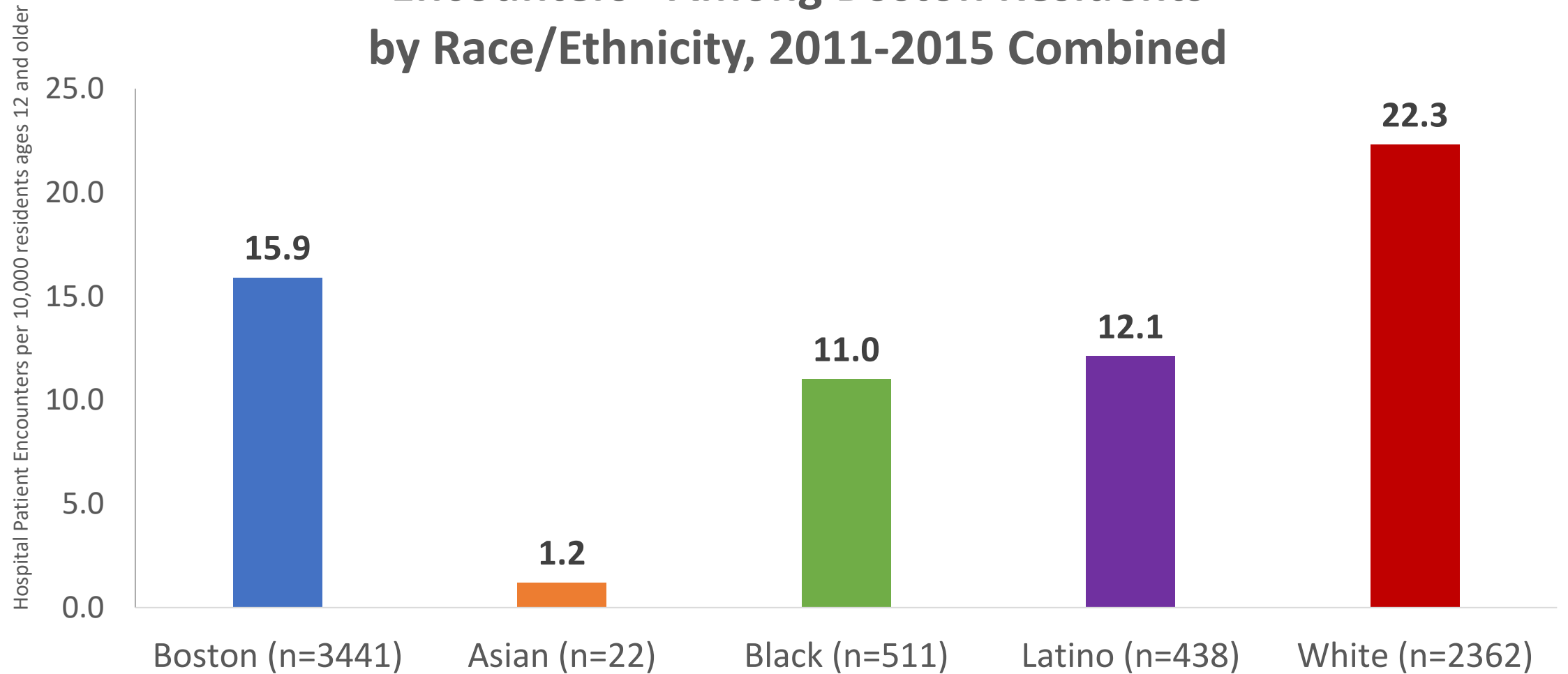# Accessing Treatment Post-Opioid Overdose: A Health Equity Study

Dan Dooley

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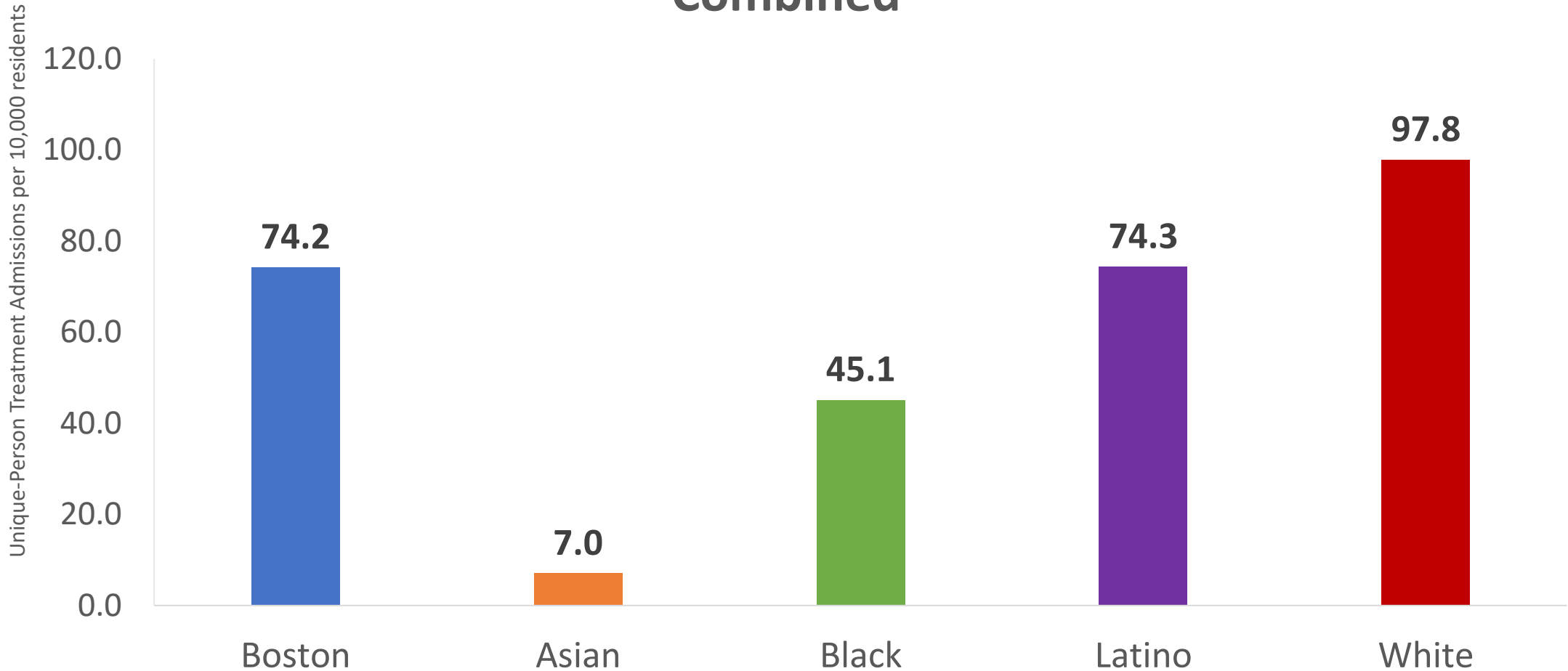
Boston Public Health Commission

Unintentional Opioid Overdose Hospital Patient Encounters† Among Boston Residents by Race/Ethnicity, 2011-2015 Combined

†Age-Adjusted Rates per 10,000 residents ages 12 and over
DATA SOURCE: Acute hospital case-mix databases, Massachusetts Center for Health Information and Analysis

Unique-Person Opioid Treatment Admissions† Amongst Boston residents by Race/Ethnicity, 2011-2015 Combined

†Age-Adjusted Rates per 10,000 residents ages 12 and over
DATA SOURCE: Bureau of Substance Abuse Services, Massachusetts Department of Public Health

SUD Treatment Equity Goal

No significant difference in treatment access among those in need of treatment

Equity Study Goal

Assess SUD treatment access relative to need for SUD treatment

Chapter 55 to PHD Warehouse

In 2015, legislation responding to the opioid epidemic was signed into law that **enabled the linkage and analysis** of various data sets from agencies across state government (Chapter 55)

In 2017, a new statute was promulgated to establish the Public Health Data (PHD) Warehouse authorizing the MDPH Commissioner to oversee studies that continue to examine data and trends in opioid overdoses and address new public health topics

We acknowledge the Massachusetts Department of Public Health for creating the unique, cross-sector database used for this project and for providing technical support for the analysis

Our Study

Assessing Racial Differences In Accessing SUD Treatment Subsequent To (within 30 days) A Non-fatal Opioid Overdose Hospital Patient Encounter
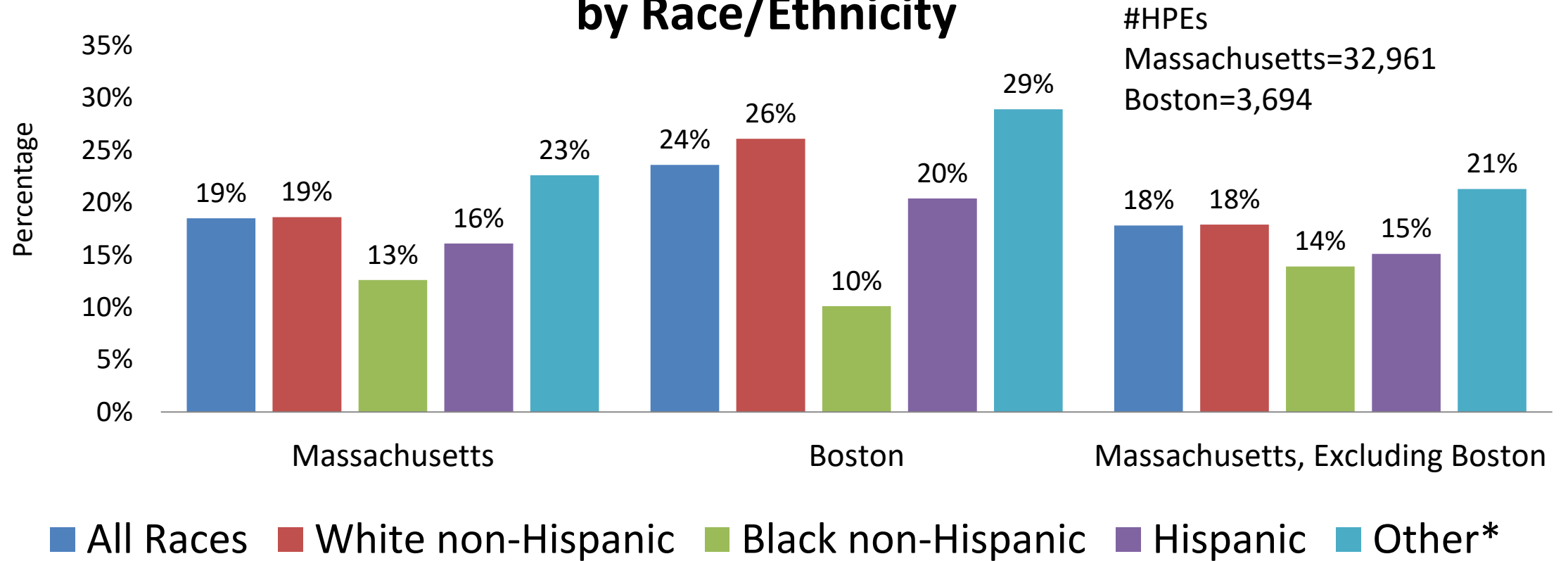
- Collaboration among BPHC, NEU, and MDPH researchers
- Specifically, to assess whether race and other factors in the hospital record **predict** follow-up substance use disorder treatment among individuals who experienced a non-fatal opioid overdose (proxy measure of SUD treatment need)
- Analyzed 2011-2015 hospital and substance use treatment data as well as data from other sources
- Conducted a Retrospective Cohort Study

Cohort

Opioid Poisoning/Overdose in Acute Care Hospital
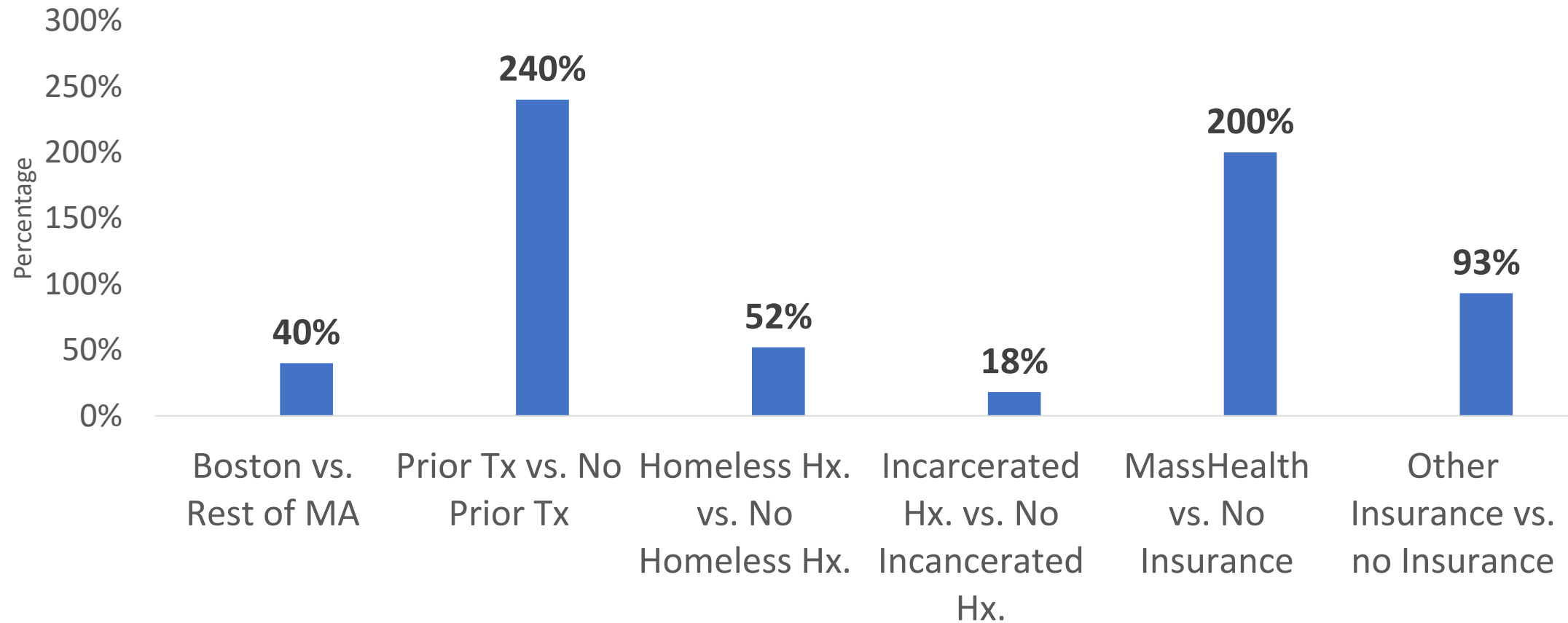## Case Mix Data (CHIA)

- ICD 9 CM Codes 965.00, 96.501, 965.02, 965.99, E850.0, E850.1, E850.2 across multiple diagnosis codes
- Includes noise (suicidal intent=approx. 10%, undetermined intent=approx. 33% based on non-CH55 Boston resident Case Mix comparison)
- Racial ethnic group self-identification within Case Mix data (97% complete for Boston residents based on non-CH55 Case Mix comparison)
- Latino presentation in Case Mix data approx. 2/3 Latino 1/3 Other
- Boston definition=Boston resident Case Mix, Tx zip could have non-Boston residential zip.

Substance Misuse Treatment Within 30 Days of an Opioid Overdose Hospital Patient Encounter by Race/Ethnicity

#HPEs
Massachusetts=32,961
Boston=3,694

*Other includes Asian/Pacific Islander non-Hispanic, American Indian non-Hispanic and other. Groups were combined due to small counts.

DATA SOURCE: Massachusetts Department of Public Health, Public Health Data Warehouse, 2011-2015. Study results updated
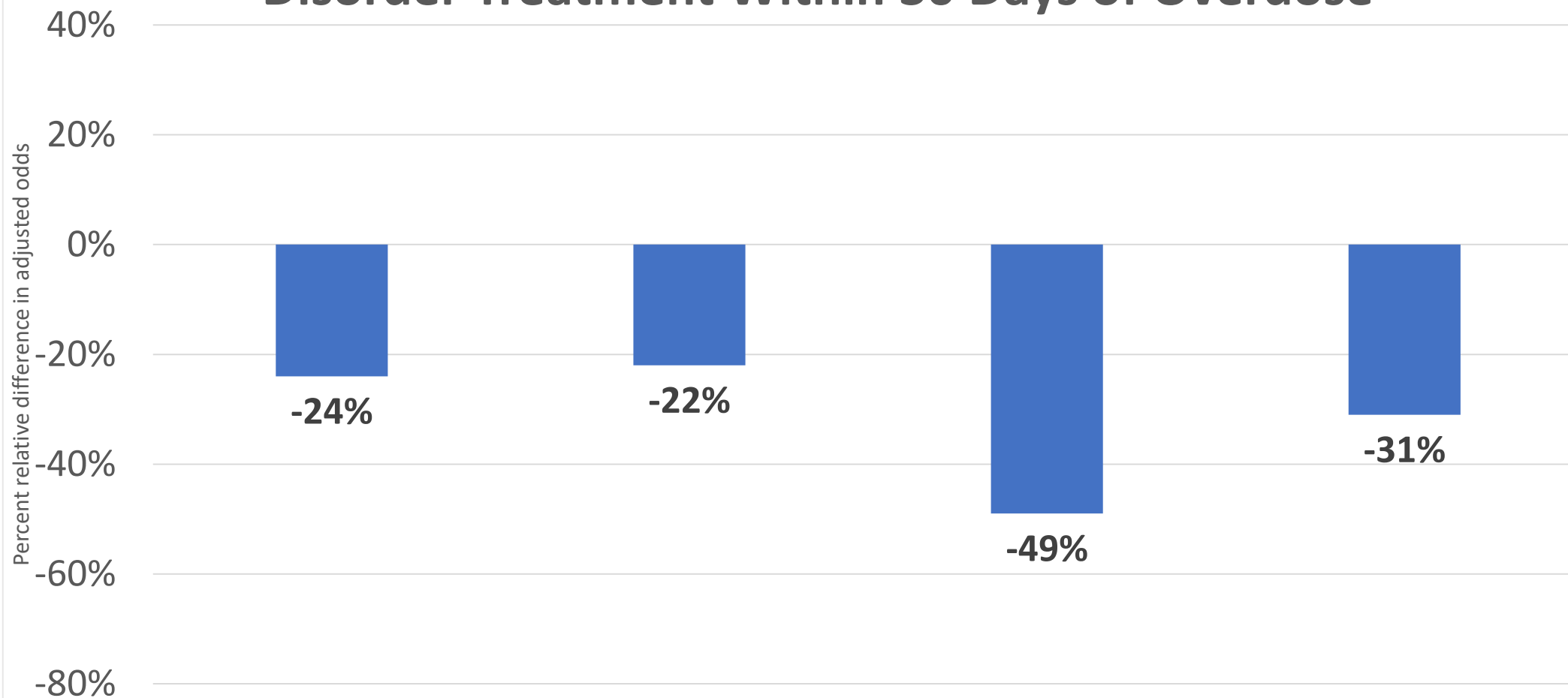
Increased Likelihood of Accessing Substance Use Disorder Treatment Within 30 days of Opioid Overdose

Note: All results statistically significant, p<.05. In addition, younger age presented with increased likelihood (data not shown)
DATA SOURCE: Massachusetts Department of Public Health, Public Health Data Warehouse, 2011-2015. Study results updated

Decreased Likelihood* of Receiving Substance Use Disorder Treatment Within 30 Days of Overdose

Percent relative difference in adjusted odds

Massachusetts Black vs. White	Massachusetts Latino vs. White	Boston Black vs. White	Boston Latino vs. White**
-24%	-22%	-49%	-31%

* Significant p<.05 ** Borderline significant p=.0542
DATA SOURCE: Massachusetts Department of Public Health, Public Health Data Warehouse, 2011-2015. Study results updated

Conclusions

After adjusting for important covariates, Black and Latino residents of Boston and Massachusetts overall were significantly less likely than their White counterparts to access SUD treatment within 30 days of a non-fatal opioid overdose hospital patient encounter

Differences for racial ethnic group "Other" were not statistically significant

Implications

Differences in accessing SUD Treatment could be driven by many known and unknown factors that influence the pathway to treatment including

- Strength of the Referral System (whether referrals are made/followed-up)
- Treatment Seeking Behaviors (whether individuals attempt to access services)
- Treatment Availability (whether appropriate services are available and affordable)

This study highlights the need to better understand these pathways using a health equity lens

Policy/Practice

- Boston Cambridge Hospital Opioid Workgroup

Future Analyses

- First overdose and multiple overdose consideration

- Treatment modalities

- Repeat analysis using OUD and SUD

- PHD Warehouse RFP in fall (2016 and 2017) hopefully with enhanced drug and intent delineation

Acknowledgments

- BPHC Research Team: Roy Wada, Amar Mehta, Johnna Murphy, and John Griffith (NEU consultant)

- MDPH: Dana Bernson, Elizabeth Erdman, Sabrina Selk