

Racial and Ethnic Disparities in Emergency Department-Initiated Buprenorphine Across Five Healthcare Systems

Wesley Holland

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Disclosures

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Background

1

The opioid crisis

- Overdose deaths soared to 93K in 2020 (70K opioid)
- >2M Americans have OUD

2

Medication treatment gaps

- Less than 1 in 5 receive medication treatment

3

ED as critical access point

- 5% mortality in year after overdose
- ED OUD visits still rising

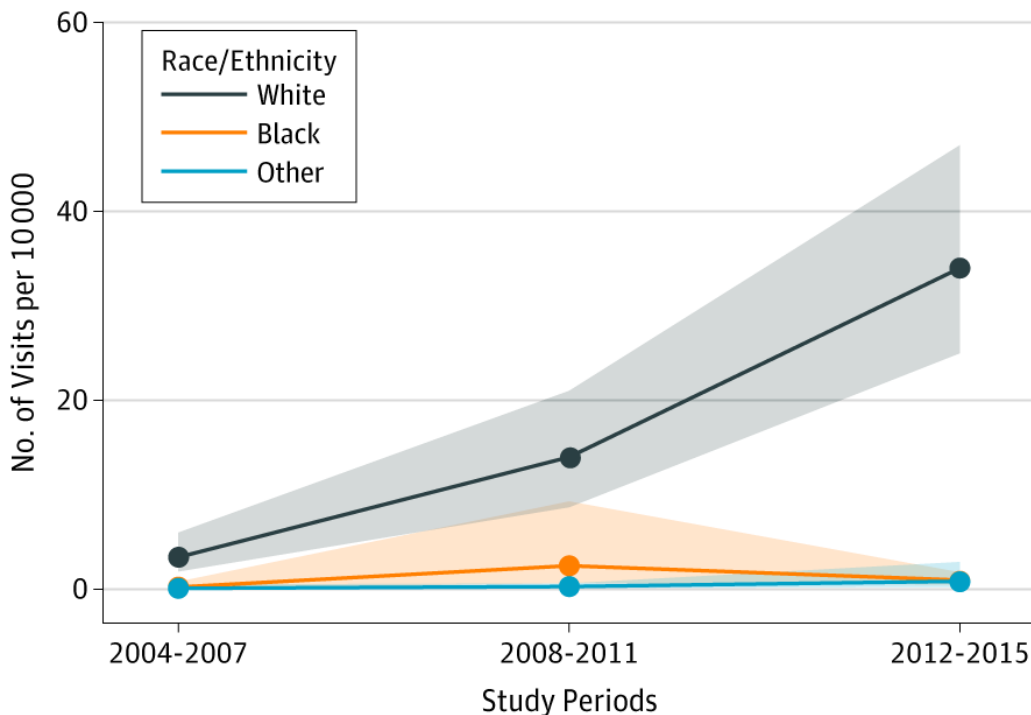
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Buprenorphine initiation in ED

- BUP is safe & doubles engagement in treatment

OUTPATIENT Disparities in BUP Exist

A Visits by race/ethnicity

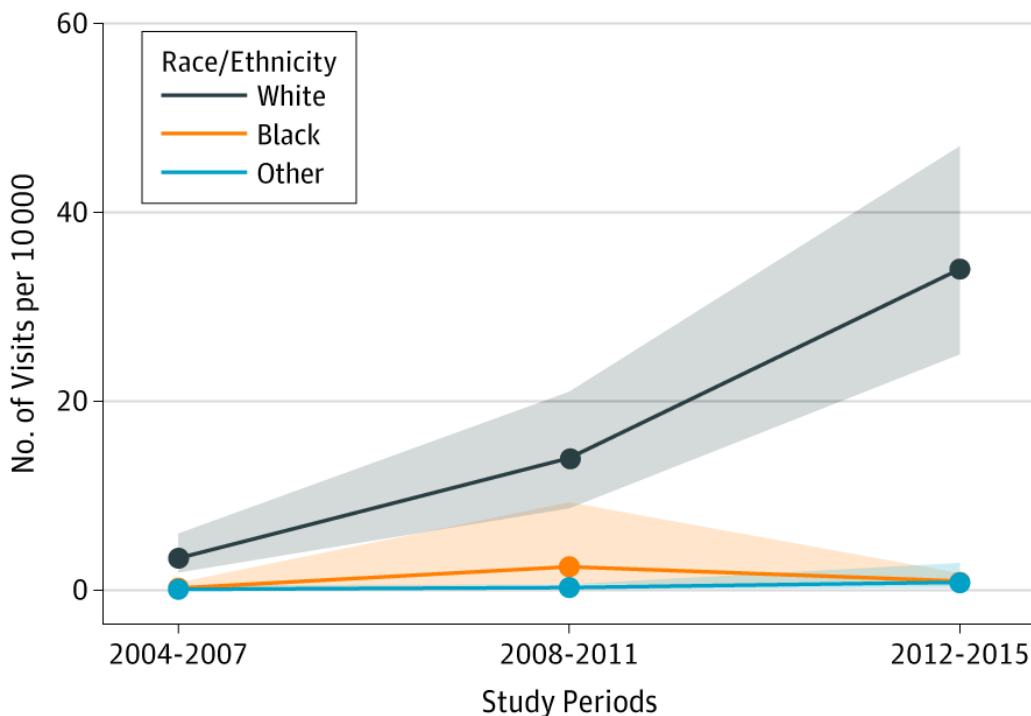


Compared to White patients, Black patients

- 1) Had fewer outpatient BUP visits per capita**
- 2) Had significantly lower odds of receiving BUP at the visits they did have**

OUTPATIENT Disparities in BUP Exist

A Visits by race/ethnicity



**Do racial/ethnic
disparities in BUP
receipt also exist in
the ED?**

Aims

1. Characterize racial and ethnic differences in receipt of BUP in the ED
2. Explore racial and ethnic differences in ED BUP administration by hospital level variables

Data Source: EMBED Trial

MAYO CLINIC

Baystate Health

Yale University School of Medicine

UNC HEALTH CARE

USB HEALTH SYSTEM
Knowledge that will change your world

University of Colorado
Boulder | Colorado Springs | Denver | Anschutz Medical Campus

IT leads
Yale New-Haven Health

Data Team

Design Team

- Large pragmatic trial of IT intervention for initiating BUP in ED
- Conducted across 22 EDs in 5 states (CT, MA, NC, AL, CO)



EMBED:
PRAGMATIC TRIAL OF USER-CENTERED CLINICAL DECISION
SUPPORT TO IMPLEMENT EMERGENCY DEPARTMENT-INITIATED
BUPRENORPHINE FOR OPIOID USE DISORDER

Participants

- 5,047 EMBED trial participants
 - Adults (18+)
 - Discharged from the ED with OUD
 - Not pregnant, not already on medication for OUD
 - Index visit to study ED from November 2019 to May 2021



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Secondary Analysis of EMBED Trial

Outcomes

Primary: Proportion of patients who were administered and/or prescribed BUP on index ED visit by race and ethnicity

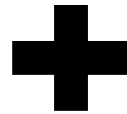
Secondary: BUP receipt by race/ethnicity and ED type (eg, academic vs community ED)

Analysis: Generalized linear mixed models with repeated effects (GLIMMIX) clustered for provider and site

Race & Ethnicity Variables

Race

- White or Caucasian
- Black or African American
- Asian
- American Indian or Alaska Native
- Native Hawaiian or Pacific Islander
- Other



Ethnicity

- Hispanic
- Non-Hispanic



Four Analysis Groups

- Hispanic
- Black (Non-Hispanic)
- White (Non-Hispanic)
- Other

Patient Characteristics

	Black (Non-Hispanic) <i>N=801</i>	White (Non-Hispanic) <i>N=3153</i>	Hispanic <i>N=822</i>
Age (mean, SD)	43.0 (14.4)	38.5 (12.8)	38.3 (12.5)
Gender (N, %)			
Female	247 (30.8)	1183 (37.5)	221 (26.9)
Male	554 (69.2)	1970 (62.5)	601 (73.1)
Insurance (N, %)			
Medicaid	348 (43.4)	1073 (34.0)	388 (47.2)
Medicare	126 (15.7)	368 (11.7)	68 (8.3)
Private	102 (12.7)	732 (23.2)	238 (29.0)
Self-Pay	197 (24.6)	832 (26.4)	99 (12.0)
Diagnosis (N, %)			
Overdose	273 (34.1)	1046 (33.2)	344 (41.8)
Withdrawal	102 (12.7)	564 (17.9)	151 (18.4)

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ED Characteristics

	Black (Non-Hispanic) <i>N=801</i>	White (Non-Hispanic) <i>N=3153</i>	Hispanic <i>N=822</i>
Type of ED (N, %)			
Community	441 (55.1)	1889 (59.9)	425 (51.7)
Academic	360 (44.9)	1264 (40.1)	397 (48.3)
Urbanicity (N, %)			
Rural	67 (8.4)	311 (9.9)	18 (2.2)
Suburban	77 (9.6)	624 (19.8)	168 (20.4)
Urban	657 (82.0)	2218 (70.3)	636 (77.4)

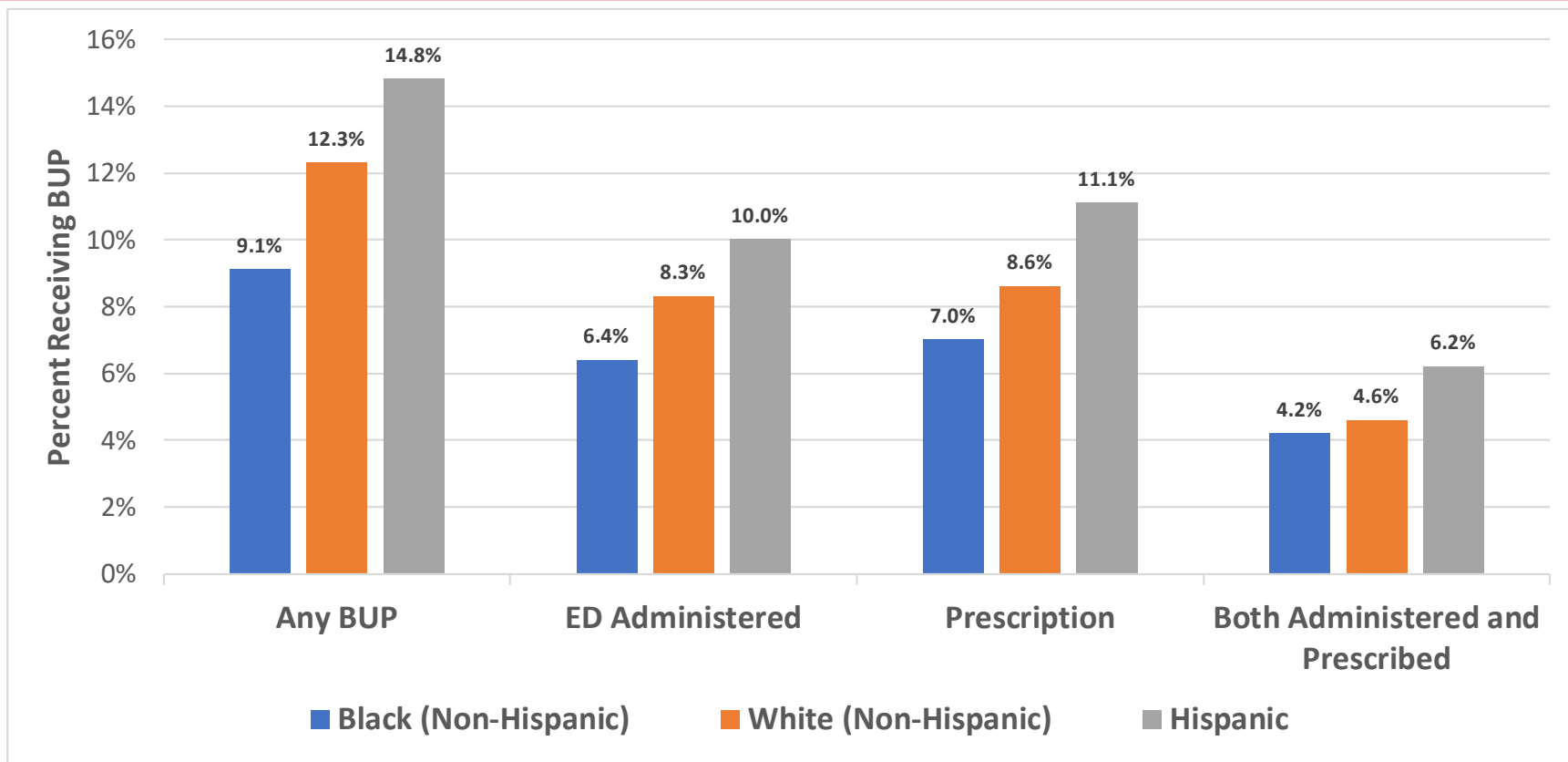
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Receipt of BUP by Race/Ethnicity



Receipt of BUP by Race/Ethnicity

	Adjusted OR (95% CI)	P value
White (Non-Hispanic) vs Black (Non-Hispanic)	1.43 (1.07, 1.91)	0.02
Hispanic vs Black (Non-Hispanic)	1.89 (1.32, 2.72)	0.0006
Hispanic vs White (Non-Hispanic)	1.33 (1.02, 1.74)	0.04

*Adjusted for patient age, gender, insurance, provider X-Waiver status, and type of ED

Community vs Academic ED

- The EMBED *trial* revealed significantly higher rates of BUP initiation in academic EDs (vs community EDs)
- We found no significant difference in BUP initiation by race between community and academic EDs (interaction $p=0.94$)

Analyzing Race Independently

	Adjusted* OR (95% CI)	P value
White vs Black**	1.57 (1.19, 2.08)	0.002

***Adjusted for patient age, gender, insurance, provider X-Waiver status and type of ED**

****Insufficient numbers of patients categorized in other racial groups for analysis
(Asian=15, American Indian or Alaska Native=13, Native Hawaiian or Pacific Islander=7)**

Analyzing Ethnicity Independently

	Adjusted* OR (95% CI)	P value
Hispanic vs Non-Hispanic	1.41 (1.08, 1.83)	0.01

***Adjusted for patient age, gender, insurance, provider X-Waiver status and type of ED**

Limitations

- Generalizability
- Variable and inconsistent recording of race/ethnicity data
- Missing race and/or ethnicity data

Conclusions

- Black patients were significantly less likely to receive BUP in the ED
- Racial disparities in ED-initiated BUP did not differ significantly between community and academic sites



Thank You!

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*EMBED Tools &
Resources for ED
Initiation of
Buprenorphine for
Opioid Use
Disorder Patients*