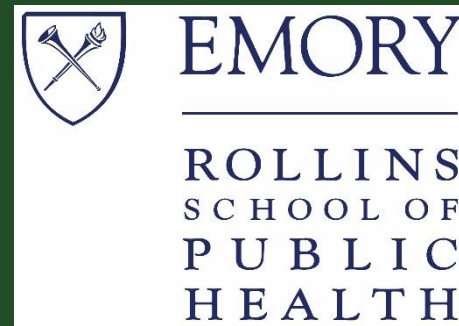# EXPLAINING RACIAL DISPARITIES IN VIRAL SUPPRESSION AMONG MSM LIVING WITH HIV

PRESENTER: JUSTIN KNOX

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BACKGROUND

- Racial disparities at each step of the HIV treatment cascade

- 30% lower likelihood of viral suppression in Black HIV-positive individuals

- Further research exploring these disparities is needed

OUTLINE

- Methods: the Engagement Study at Emory University

- Describe participants and prevalence of baseline viral suppression in a cohort of Black and white MSM living with HIV in Atlanta, GA

- Identify explanatory factors associated with lack of viral suppression

- Assess whether explanatory factors account for racial differences in lack of viral suppression

Community-Based Prospective Cohort Study

- 400 sexually active Black and white MSM in Atlanta

- Ages 18+

- Baseline visits: June 2016 - July 2017

Recruitment for MSM living with HIV

- MSM community events, CBOs/Testing Sites, social media outlets

MEASURES

Outcome:

- Lack of viral suppression (plasma viral load $\geq$40 copies/mL)

Primary indicator:

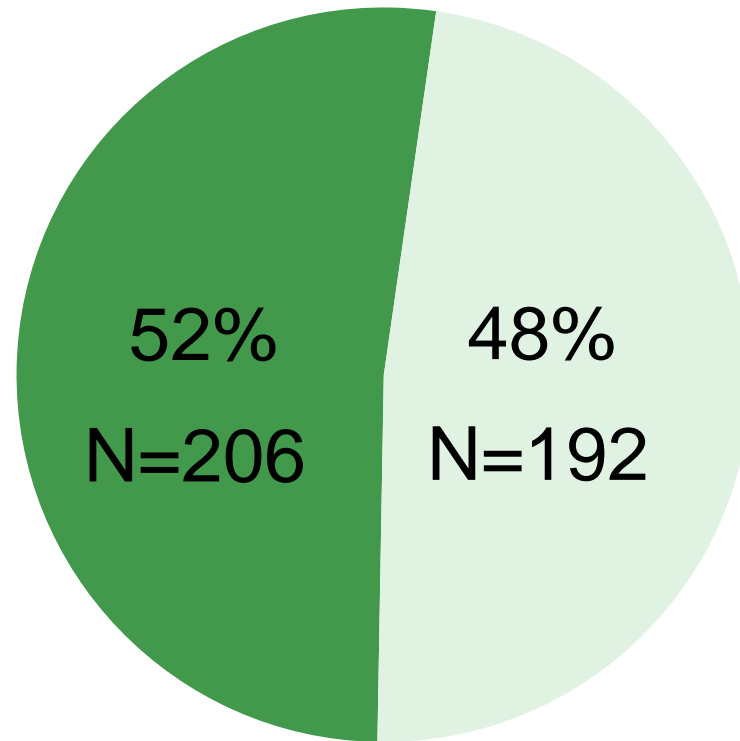- Race (Black compared to white MSM)

Explanatory factors:

- Sociodemographic characteristics
- Psychosocial factors (e.g., insurance, mental health)
- Biomarkers (STIs, substance use)

STATISTICAL ANALYSIS

Explaining racial disparities

- Bivariate model with race and viral suppression using Prevalence Ratios (PR)

- Potential explanatory factors added to model

- Factors that diminish PR for race by ≥5% considered meaningful

- All meaningful explanatory factors included in a multivariable model to determine if they collectively accounted for racial differences in viral suppression
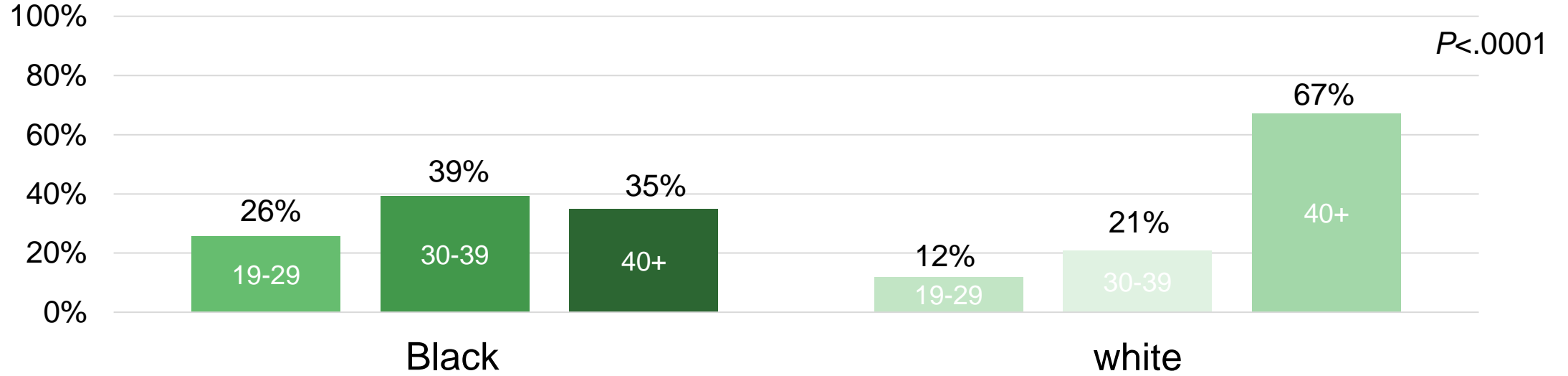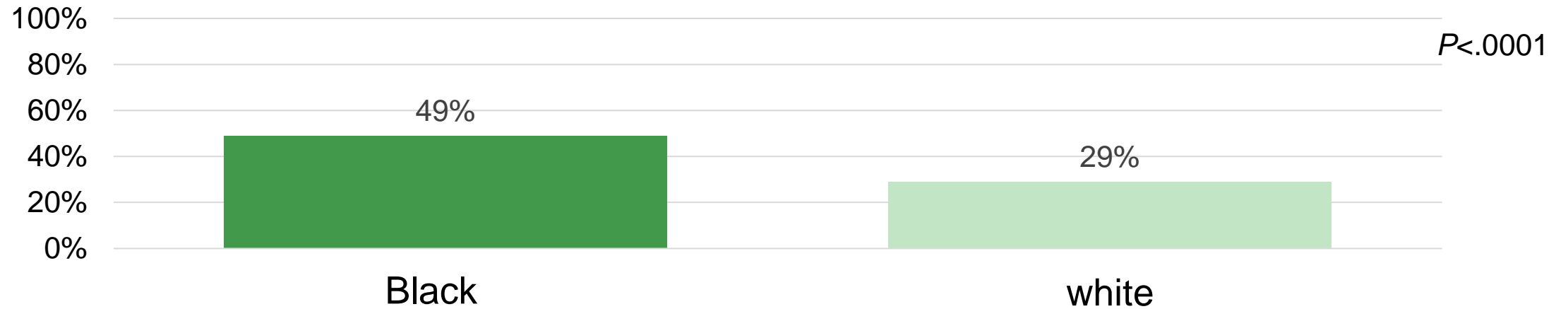
SAMPLE CHARACTERISTICS (N=398)

52%
N=206

48%
N=192

■ Black   □ white

Age range (years)

P<.0001

Black: 19-29: 26%, 30-39: 39%, 40+: 35%
white: 19-29: 12%, 30-39: 21%, 40+: 67%

Low Income (<$20,000)

P<.0001

Black: 49%
white: 29%

Unstably housed/homeless (current)

P<.01

- Black: 30%
- white: 17%
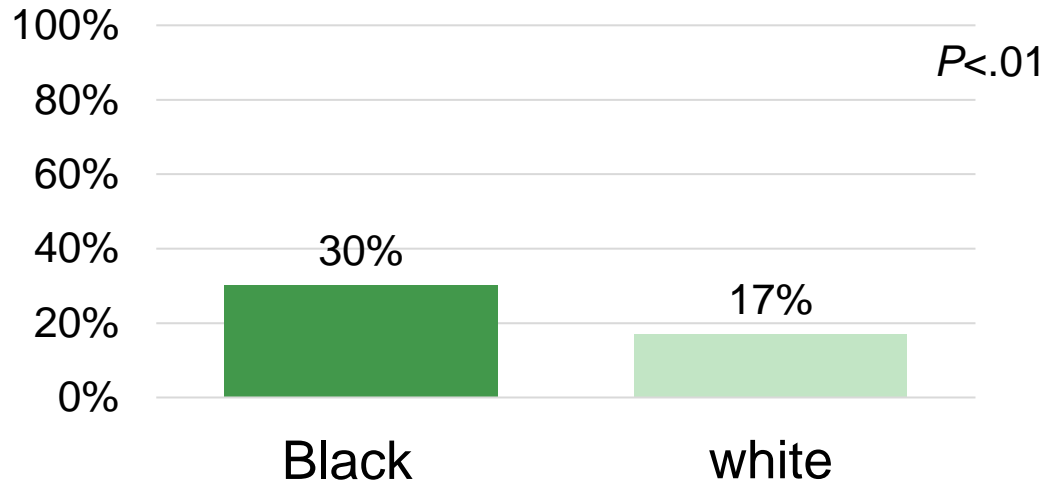
Incarcerated (past year)

P=.02

- Black: 15%
- white: 7%
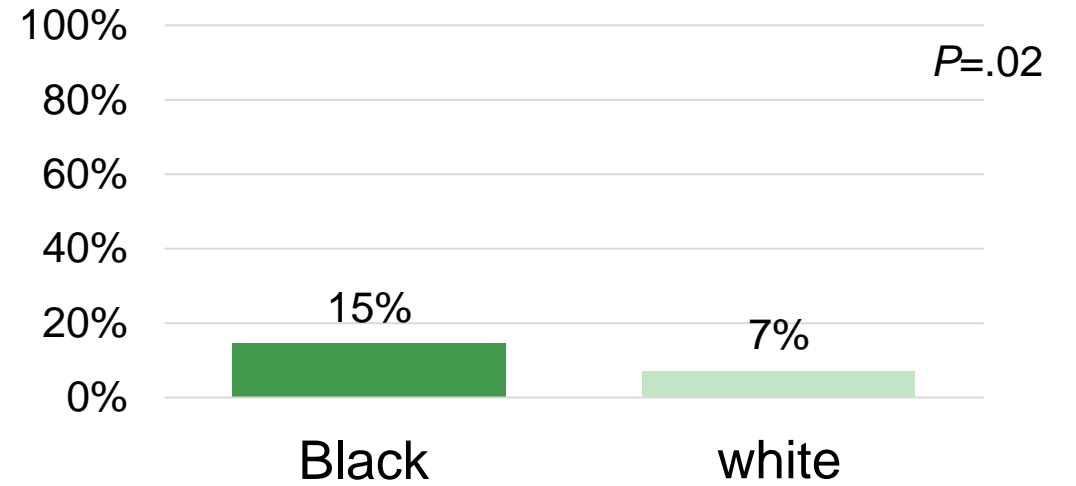
No ART prescription coverage (current)

P<.0001

- Black: 14%
- white: 5%

Marijuana use

P<.0001

62%

37%
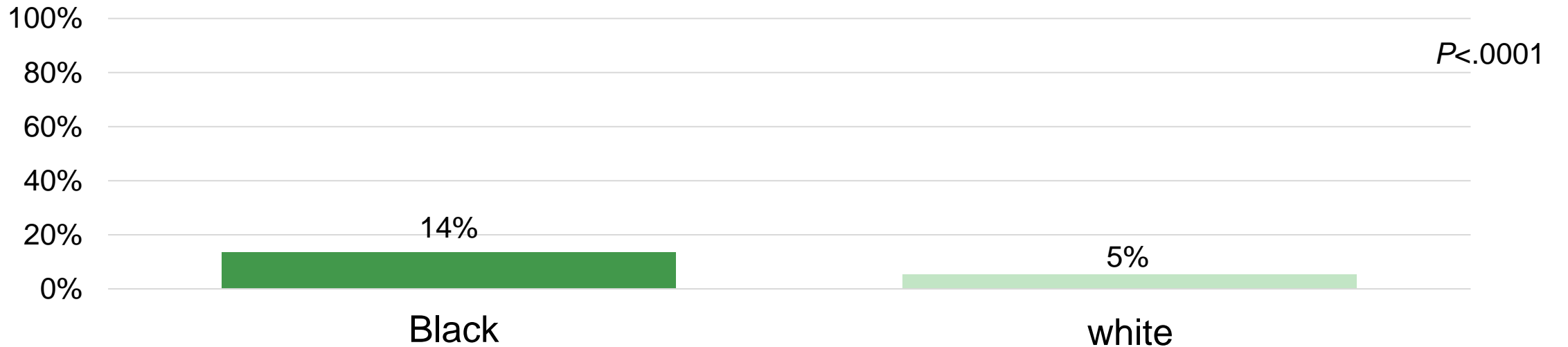
Black   white

Methamphetamine use

P<.01

12%

23%
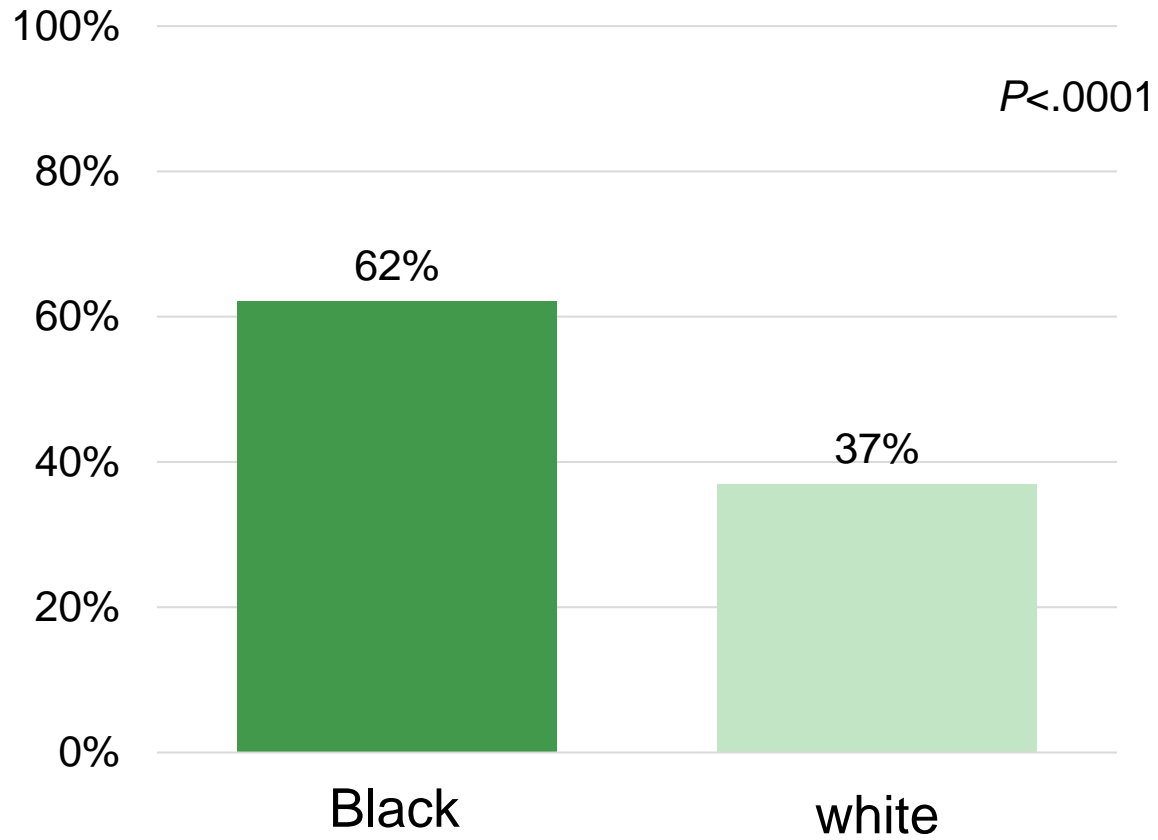
Black   white
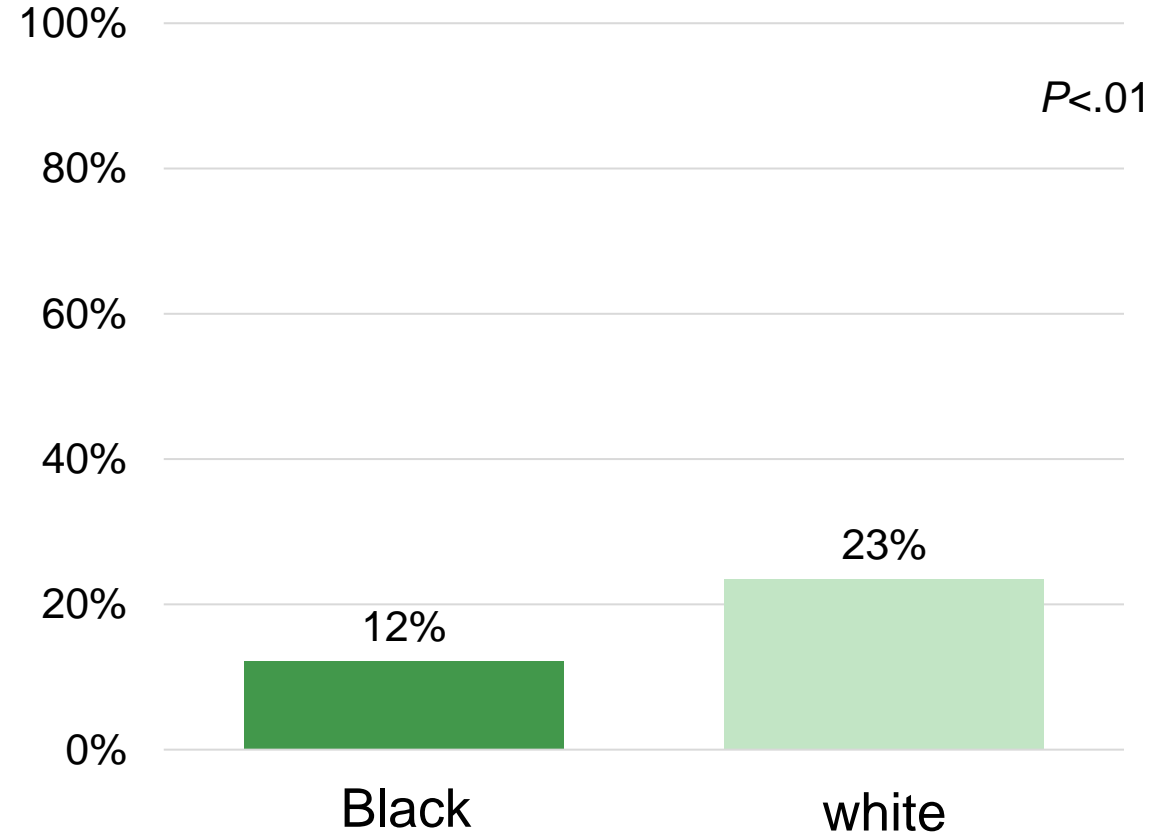
More Black MSM not virally suppressed:
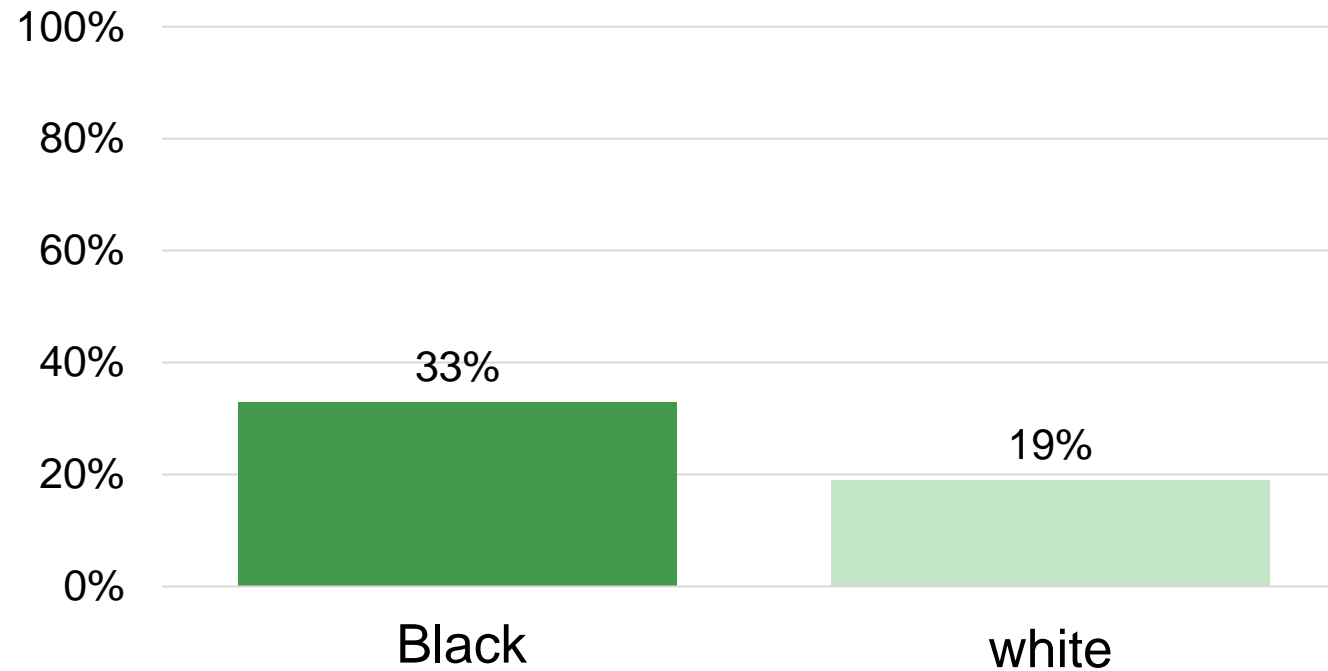
Black (vs. white):   PR = 1.6   95%CI = 1.1-2.5

	PR	95% CI
Ages 18-24	3.2	(1.6-6.4)
Ages 25-29	3.6	(1.9-6.7)
Ages 30-39	2.7	(1.5-4.9)
Ages 40-49	2.1	(1.1-4.0)
Income <$20,000	1.8	(1.3-2.4)
Unstably housed	1.8	(1.2-2.5)
Homeless	3.6	(2.4-5.5)
HIV diagnosis in past 3 months	10.1	(3.0-33.9)
No ART coverage	8.8	(4.2-18.6)
No viral load tests in past year	3.3	(2.4-4.4)
Depression/anxiety	1.7	(1.2-3.3)
Marijuana use	1.7	(1.2-2.5)
Methamphetamine use	1.9	(1.4-2.7)

Age-adjusted black-white PR for lack of viral suppression in multivariable models
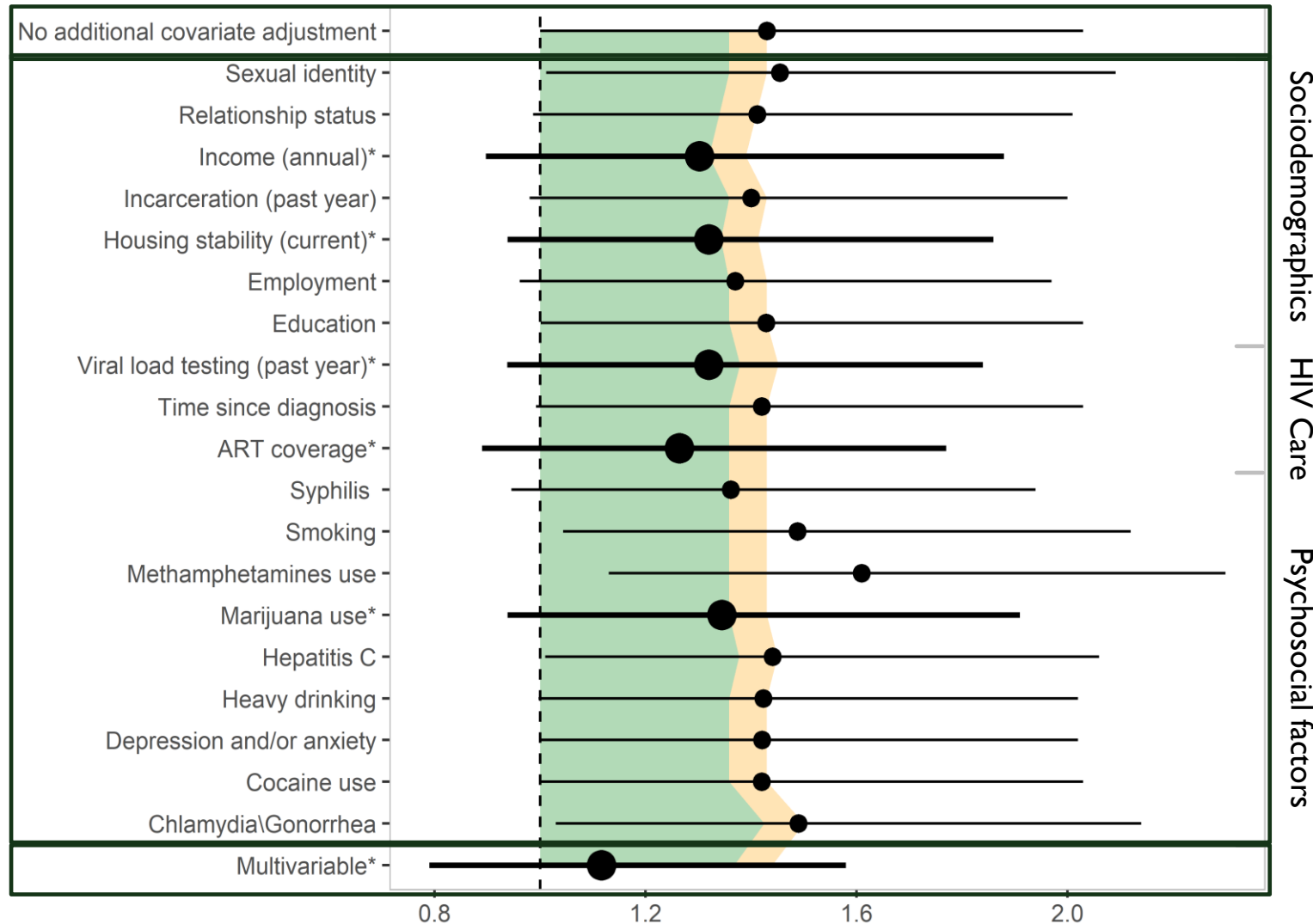
Yellow region: covariate-adjusted PR 0-5% less than PR without covariate adjustment
Green region: covariate-adjusted PR >5% less than PR without covariate adjustment
Multivariable includes income, housing stability, viral load testing, ART coverage, marijuana use

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Explanatory factor	▼ in Race PR
ART coverage	12%
Viral load test in past year	9%
Housing stability	7%
Income	6%
Marijuana use	6%

MULTIVARIABLE DISPARITY ATTENUATION

Multivariable association

Black (vs. white): PR = 1.1   95%CI = 0.8-1.6

Covariates
Age
ART coverage
Viral load testing
Housing stability
Income
Marijuana use

- Association no longer significant

- 23% reduction in age-adjusted PR

SUMMARY

- Black MSM 60% more likely to not be virally suppressed

- Black MSM differed on many explanatory factors

- Five modifiable factors meaningfully accounted for racial disparity

- Combined, explanatory factors completely accounted for the racial disparity

DISCUSSION

- Explanatory factors are modifiable and/or could be targeted to reduce racial disparities

- Further research

- Policy and interventions implications

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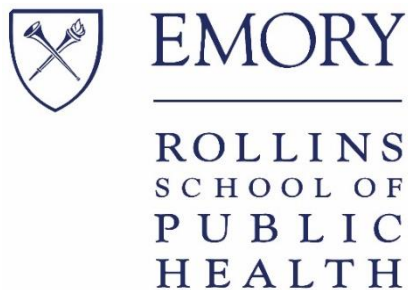
QUESTIONS?

SUPPLEMENTARY SLIDES