

Centers for Disease Control and Prevention

National Center for HIV, Viral Hepatitis, STD, and TB Prevention



Understanding Disparities in Antiretroviral Therapy Adherence and Sustained Viral Suppression among U.S. Black/African American, Hispanic/Latino, and White Men Who Have Sex with Men

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Introduction



Background

- Racial/ethnic disparities among MSM in new HIV diagnoses (2019)
 - Black MSM: 37%
 - Hispanic/Latino MSM: 32%
 - White MSM: 25%
- Racial/ethnic disparities among MSM for ART adherence (2018)
 - Black MSM: 48%
 - Hispanic/Latino MSM: 59%
 - White MSM: 64%

References: 1. Centers for Disease Control and Prevention. *HIV Surveillance Report, 2019*; vol. 32. <http://www.cdc.gov/reports/hiv-surveillance.html>. Published May 2021; 2. Pitasi MA, Beer L, Cha S, et al. *Vital Signs: HIV Infection, Diagnosis, Treatment, and Prevention Among Gay, Bisexual, and Other Men Who Have Sex with Men—United States, 2010-2019*. *MMWR*. December 3, 2021.

Background

- Social Determinants of Health (SDH)
 - Poverty
 - Food insecurity
 - Health insurance coverage
 - Education
 - Health literacy
 - Unstable housing/homelessness
 - Transportation
 - Incarceration

Objective

- To examine which SDH factors—along with behavioral and clinical characteristics—may explain racial/ethnic disparities in antiretroviral therapy (ART) adherence and sustained viral suppression among Black, Hispanic/Latino, and White MSM with diagnosed HIV

Methods



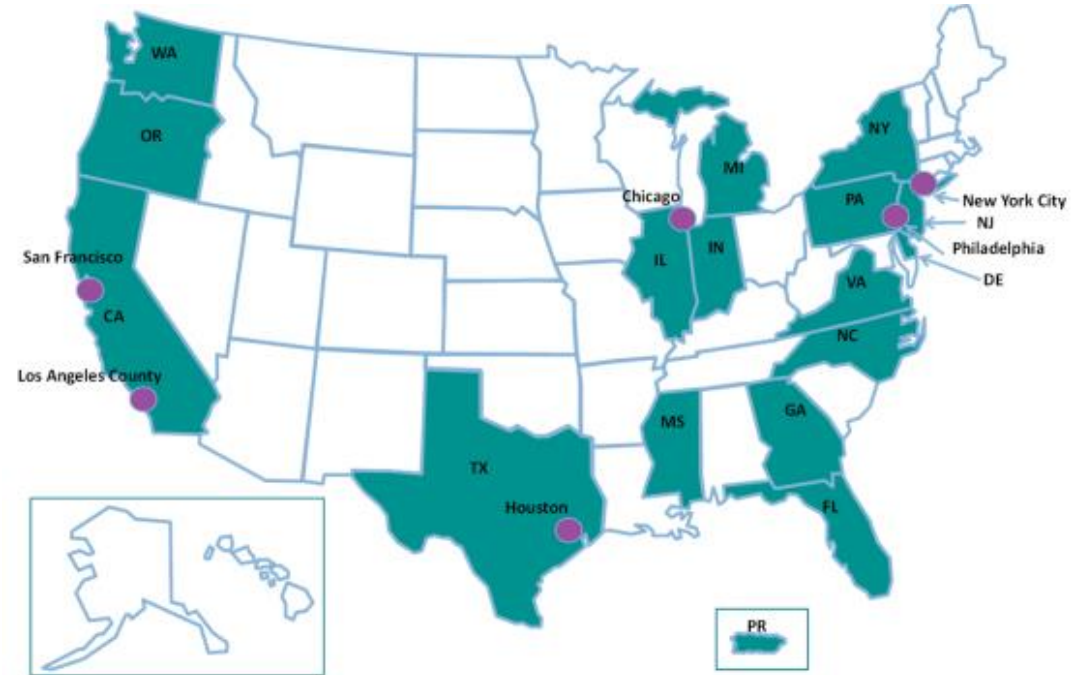
CDC Medical Monitoring Project (MMP)

• MMP Overview

- Annual, cross-sectional interview and medical record abstraction
 - 2-stage sample design
 - 16 U.S. states, Puerto Rico, & 6 jurisdictions
 - Adults with diagnosed HIV
- Produces nationally representative estimates of behavioral and clinical characteristics among adults with diagnosed HIV
- Data are weighted for probabilities of selection, adjusted for non-response, and post-stratified to population totals

• Analysis Sample

- 2015-2019 annual data
- Black/African American, Hispanic/Latino, and White MSM
- N=9,117



Outcomes

- ART Adherence
 - Self-reported 100% dose adherence in the past 30 days
- Sustained viral suppression
 - All viral load measurements documented in the medical record as undetectable or <200 copies/mL during past 12 months

Covariates

■ SDH factors

- Federal poverty level
- Food insecurity*
- Health insurance/coverage*
- Gap in health coverage*
- Educational attainment
- Health literacy
- Homelessness*
- Transportation assistance*
- Incarceration*

■ Behavioral and clinical characteristics

- Age at interview
- ER visit*
- History of sexual/physical intimate partner violence
- Injection or noninjection drug use*
- Binge drinking†
- Symptoms of depression‡
- Symptoms of anxiety‡
- Time since diagnosis
- HIV care engagement*
- Any unmet need for ancillary services*§
- Stigma

*Past 12 months; †past 30 days; ‡past 2 weeks

§HIV case management services, medicine through the AIDS Drug Assistance Program, ART support services, patient navigation services, HIV peer support, dental care, mental health services, drug or alcohol counseling/treatment, SNAP or WIC, transportation assistance, meal or food services, or shelter/housing services

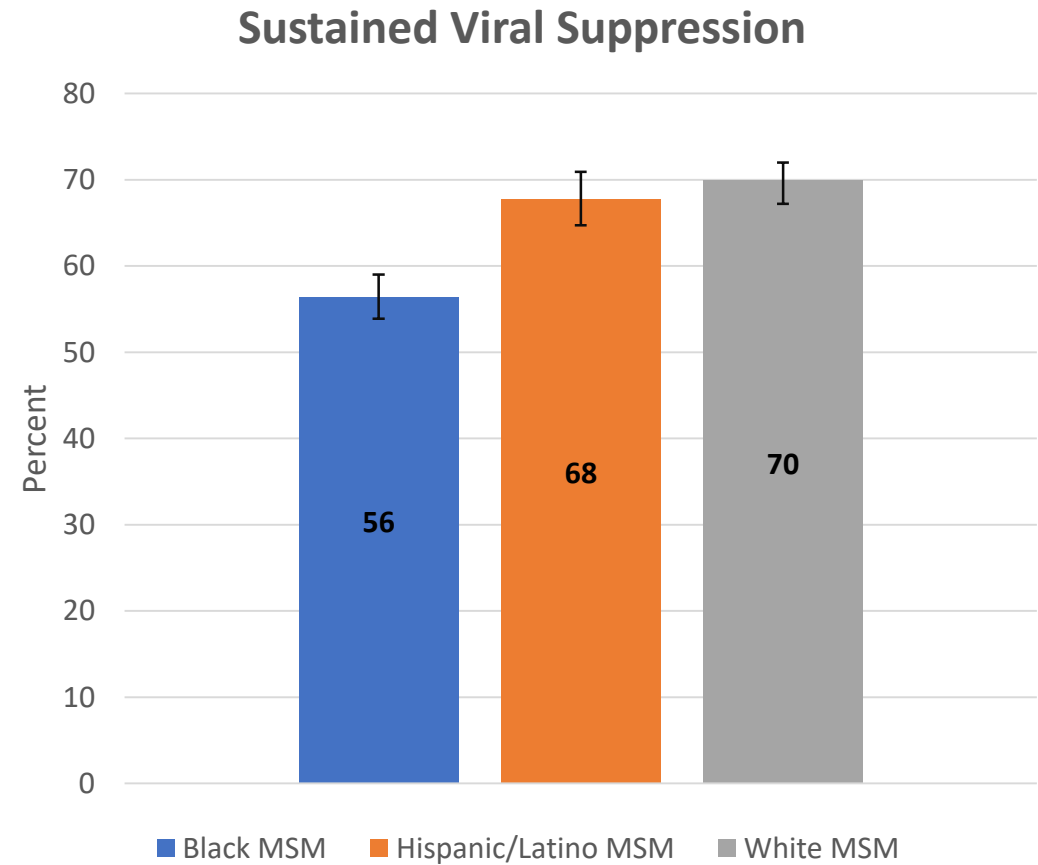
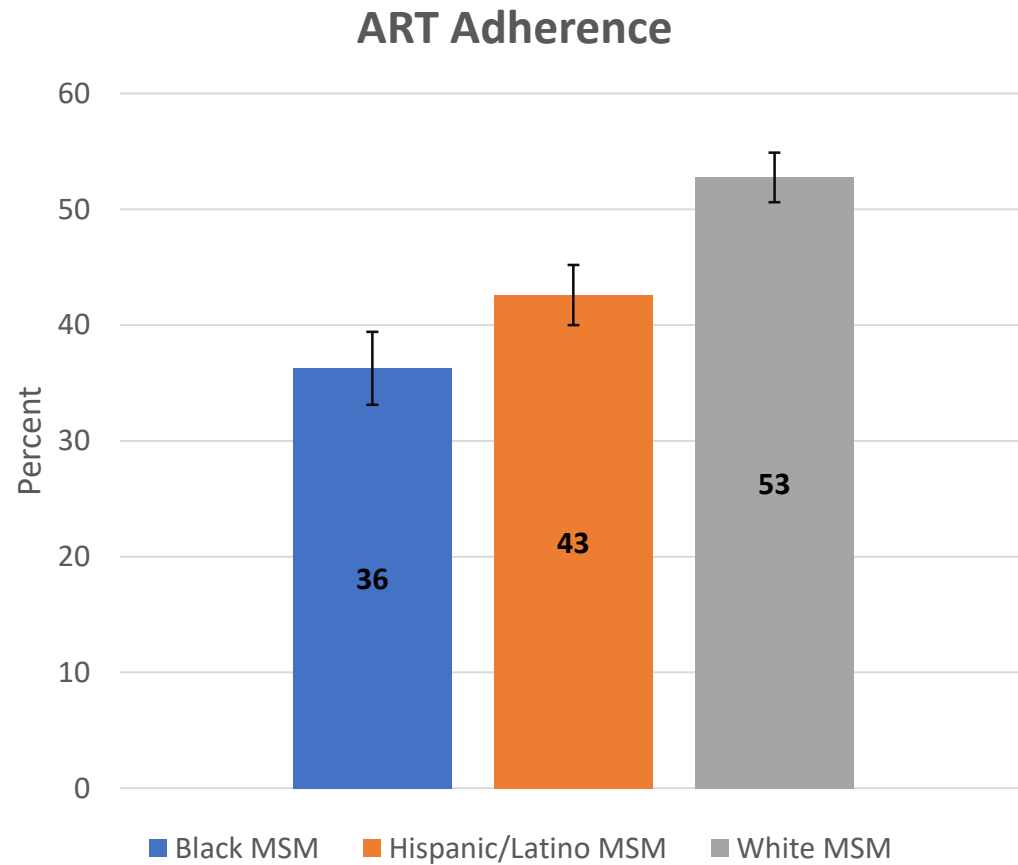
Statistical Analysis

- Racial/ethnic differences in SDH factors and behavioral/clinical characteristics
 - Weighted prevalence and prevalence differences (PDs) with 95% CIs
- Associations between covariates and treatment outcomes
 - Weighted prevalence with 95% CIs
- Reduced differences in treatment outcomes when controlling for SDH factors and behavioral/clinical characteristics using forward stepwise selection
 - Adjusted PDs with 95% CIs for Black or Hispanic/Latino MSM compared to White MSM

Results



Prevalence of Treatment Outcomes



Black & White MSM Comparisons

	Prevalence difference (95% CI)	Adjusted prevalence difference (95% CI)	Adjusted for	Percent change in PD
ART adherence	-17 (-20, -13)	-10 (-13, -6)	Age at interview + any unmet service need + food insecurity + federal poverty level + education + homelessness + gap in health coverage	-41%
Sustained viral suppression	-14 (-16, -11)	-6 (-9, -3)	ART adherence + age at interview + gap in health coverage + HIV care engagement + federal poverty level + food insecurity + any unmet service need + homelessness + education	-56%

Hispanic/Latino & White MSM Comparisons

	Prevalence difference (95% CI)	Adjusted prevalence difference (95% CI)	Adjusted for	Percent change in PD
ART adherence	-10 (-13, -7)	-4 (-7, -1)	Age at interview + federal poverty level + any unmet service need + binge drinking + health literacy	-62%
Sustained viral suppression	-2 (-6, 2)	N/A	N/A	N/A

Discussion



Summary

- Treatment outcomes varied by racial/ethnic groups among MSM
 - ART adherence was lower among Black and Hispanic/Latino MSM compared with White MSM
 - Sustained viral suppression was lower in Black MSM than in Hispanic/Latino or White MSM
- Adjusting for SDH and other characteristics reduced the magnitude of disparities
 - Any unmet service need
 - Poverty
 - Gap in health coverage
 - Food insecurity
 - Homelessness
 - Education

Discussion

- Multilevel approaches to addressing SDH in HIV care and treatment are needed:
 - Provider
 - Understanding and helping to address barriers to treatment & adherence
 - Anti-stigma & anti-discrimination training
 - Community
 - Integrating housing services and ancillary services with HIV care
 - Mobile treatment clinics
 - Policy
 - Health insurance expansion
 - Increased minimum wage

Limitations

- Interview data are self-reported
 - Recall bias
 - Social desirability
- Racial/ethnic disparities remained
 - Other factors that we were unable to account for

Conclusion

- Addressing SDH would greatly reduce the disparities in ART adherence and sustained viral suppression among Black, Hispanic/Latino, and White MSM
 - Would substantially improve health equity among MSM with HIV
- Understanding which other factors contribute to the remaining disparities by racial/ethnic groups among MSM is important
 - Addressing systemic racism as a fundamental cause of health disparities could further reduce racial/ethnic disparities in treatment outcomes

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Thank You!

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