

Sexual and Substance Use Behaviors and HIV Prevalence Among Men Who Have Sex With Men in New York City

Findings from the 2023 National HIV Behavioral Surveillance Study

Background

- New York City (NYC) has one of the largest population of men who have sex with men (MSM) of any city in the United States
- In 2023, MSM represented 49% of all new HIV diagnoses in NYC and 62% of new diagnoses among men
 - 825 MSM were newly diagnosed with HIV (49% of all known diagnoses and 69% with known transmission category)
- In 2023, NYC HIV surveillance shows that 46% of people with HIV were MSM, representing 63% among all men
 - 62,210 MSM were living with HIV (46% of all and 56% of people with HIV with known transmission category)

National HIV Behavioral Surveillance (NHBS)

- Ongoing, cyclical study of three priority populations for HIV prevention and care: MSM, people who inject drugs, and heterosexually active people
 - Currently conducted in 19 cities across the U.S.
 - Funded by CDC, designed collaboratively with local jurisdictions
 - Cross-sectional study design
 - Anonymous, structured interview and optional HIV testing
- Due to the COVID-19 pandemic and response, 2023 was the first year since 2018 that the MSM cycle was conducted following the standard procedures

NHBS-MSM2023 Objectives

- Seroprevalence
 - Assess the prevalence of and trends in HIV and awareness of HIV status
- Behaviors
 - Assess the prevalence of and trends in behaviors and social determinants that increase the risk of HIV acquisition and transmission, including sexual and drug use behaviors
- HIV testing and treatment
 - Describe utilization of and trends in HIV testing, linkage to care, and antiretroviral therapy
- Prevention
 - Assess the exposure to and use of prevention services, including HIV pre-exposure prophylaxis (PrEP)
 - Identify gaps in prevention and missed opportunities for prevention interventions

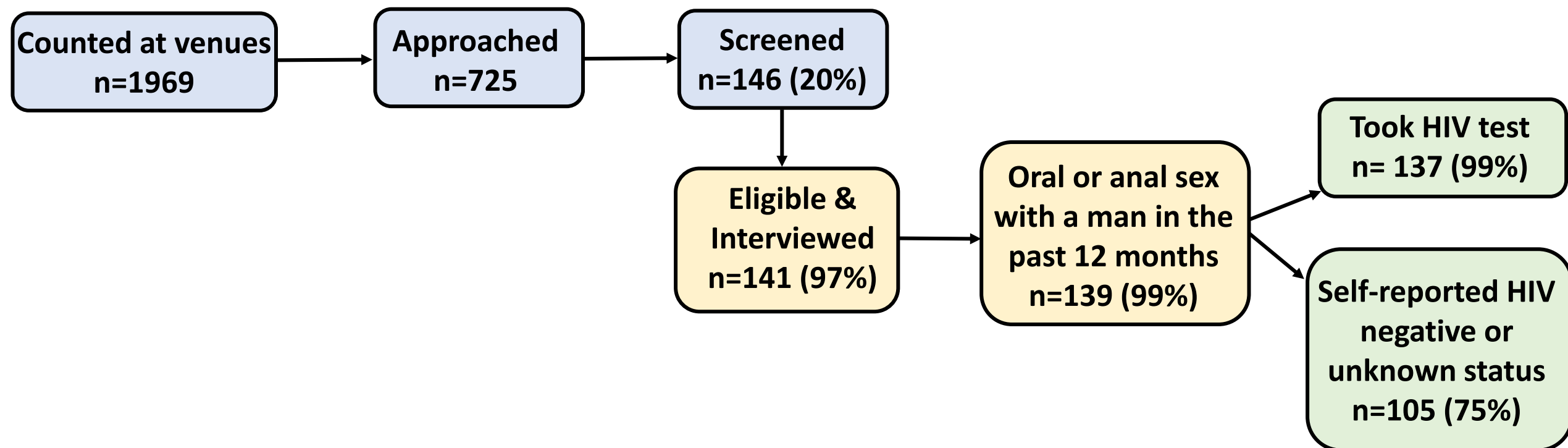
NHBS-MSM2023 Eligibility Criteria

- At least 18 years old
- Reports a gender identity of man or was assigned male sex at birth and reports a gender identity of nonbinary
- Ever had oral or anal sex with another man
- Resident of NYC Metropolitan Statistical Area (MSA) which includes NYC, Westchester County, Rockland County, Orange County, and some counties in New Jersey
- Able to complete the interview in English or Spanish

Venue-Based Sampling Recruitment

- Universe of MSM-oriented venues constructed
 - Bars, clubs, parks, restaurants, cruising areas
- Venues randomly selected, placed on monthly calendar
 - Special events or venues also added non-randomly
- Study team sequentially approach men at venue
 - Men must cross an imaginary line, venue volume measured
- Approached men are screened, and if eligible, provide informed consent, are interviewed, and offered HIV testing
- Data were collected from October to December 2023

NYC NHBS-MSM2023 Study Sample



Statistical Analyses

- Analyses were restricted to those who live in NYC and reported oral or anal sex with a man in the past 12 months (n=139)
- We conducted basic descriptive frequencies of demographics, sexual behaviors, drug use, and use of HIV testing and prevention services
- Chi-square or Fisher's exact tests (for categorical variables) and Wilcoxon and Kruskal-Wallis tests (for continuous variables) were used to compare differences in behaviors and use of HIV testing and preventions services, significant associations are denoted
- Overall HIV prevalence was determined by the study's HIV test result among those with a confirmed test result (n=137)

Demographics

Demographics

NYC NHBS-MSM2023, n=139

Age Group (In Years)	18-29	32%
	30-39	52%
	40+	17%
Race or Ethnicity	Latino	61%
	White	24%
	Black	12%
	Other ¹	3%
Sexual Identity	Gay	91%
	Bisexual	9%
	Heterosexual	0%
Gender Identity	Cisgender man	96%
	Nonbinary	4%
	Transgender man	0%
Birthplace	Continental U.S.	34%
	Puerto Rico	3%
	Outside of the U.S.	63%

¹ ‘Other’ race category includes American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander (n=4).

Demographics Continued

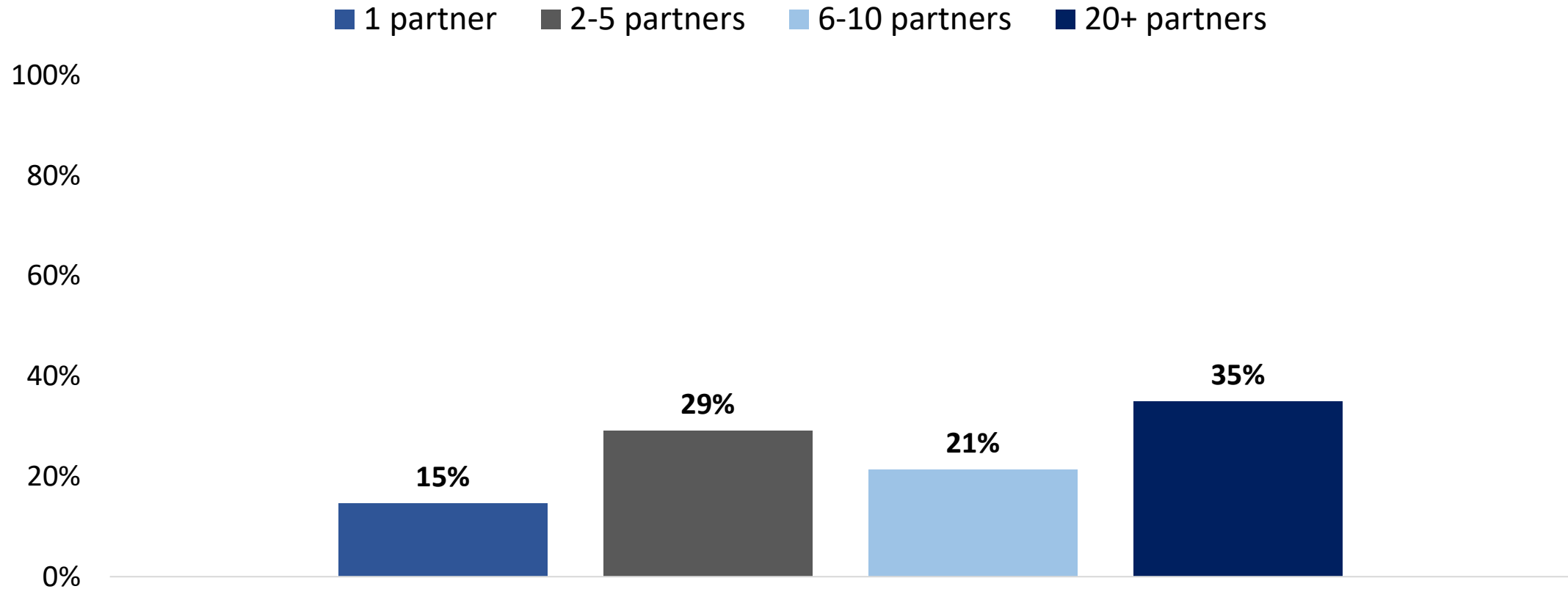
NYC NHBS-MSM2023, n=139

Annual Household Income	< \$10,000	23%
	\$10,000-\$29,999	30%
	\$30,000-\$49,000	26%
	≥\$50,000	21%
Borough of Residence	Bronx	14%
	Brooklyn	14%
	Manhattan	20%
	Queens	53%
	Staten Island	0%
Education Level	No college	50%
	Some college or above	50%
Homeless, past 12 months	Homeless	18%
	Not Homeless	82%

Sexual Behavior

Number of Male Sex Partners, Past 12 Months¹

NYC NHBS-MSM2023, n=103 (HIV-/Unknown Status)²

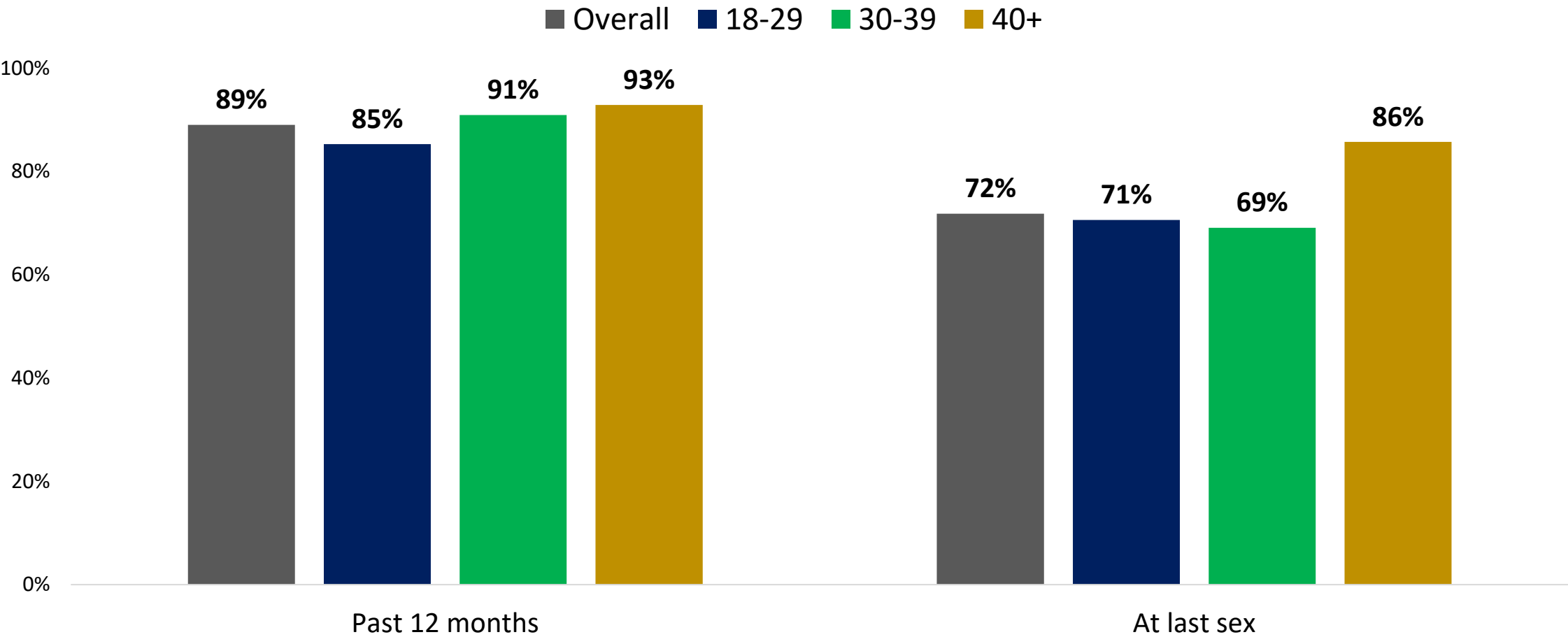


¹ Sex is defined as oral or anal sex.

² Excludes nonbinary individuals (n=2).

Condomless Anal Sex With a Man, Past 12 Months and at Last Sex Overall and by Participant's Age

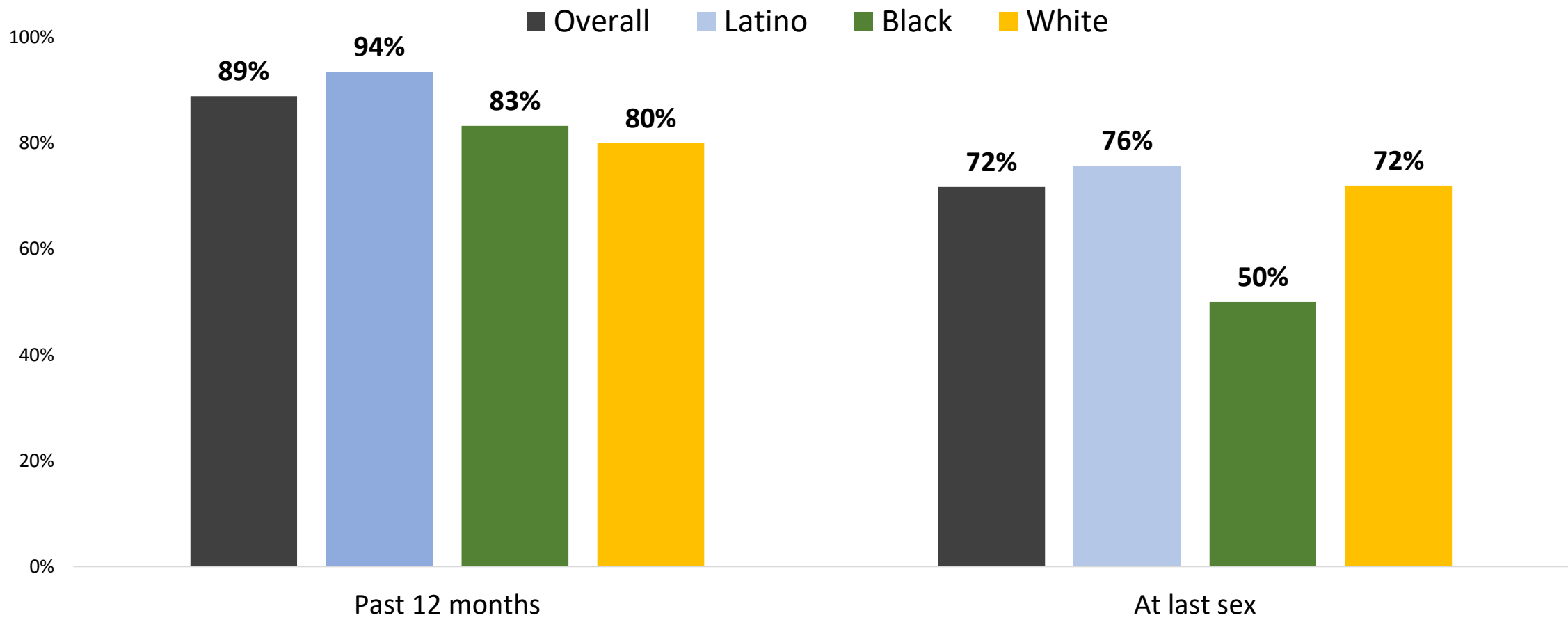
NYC NHBS-MSM2023, n=103 (HIV-/Unknown Status)¹



¹ Excludes nonbinary individuals (n=2).

Condomless Anal Sex With a Man, Past 12 Months and at Last Sex Overall and by Participant's Race or Ethnicity

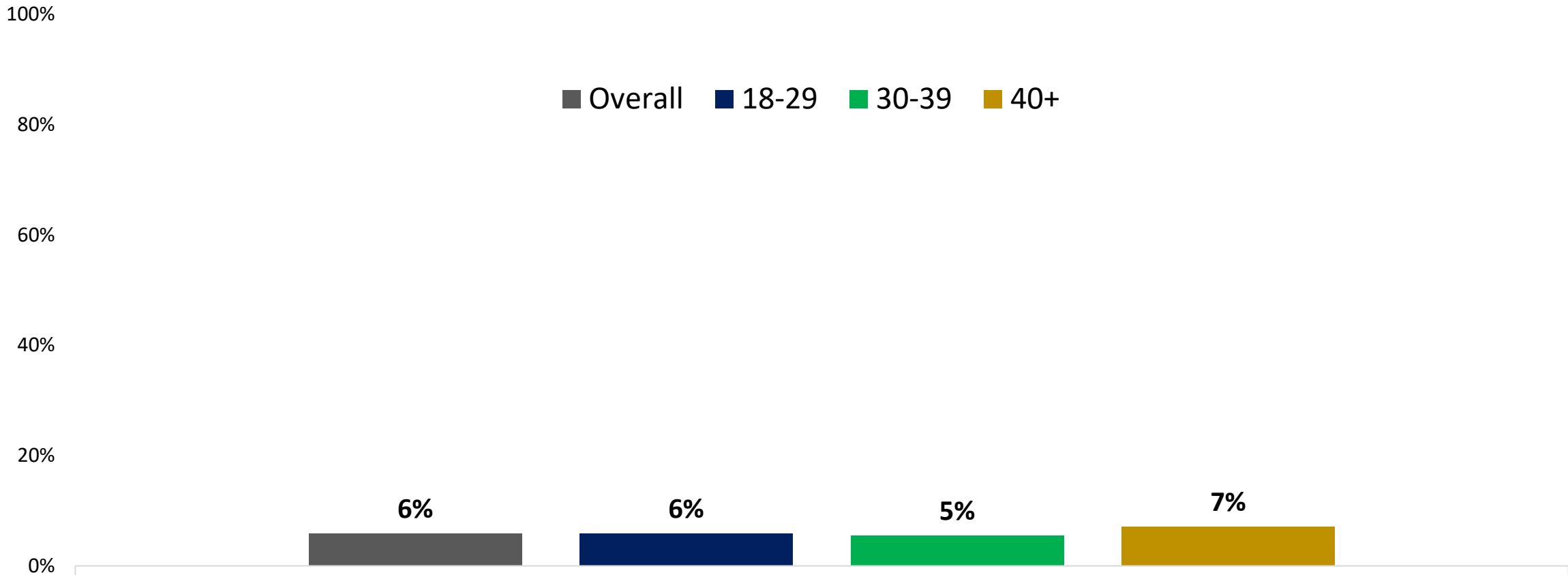
NYC NHBS-MSM2023, n=99 (HIV-/Unknown Status)¹



¹ Excludes nonbinary individuals (n=2) and 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Condomless Vaginal or Anal Sex With a Woman Overall and by Participant's Age, Past 12 Months

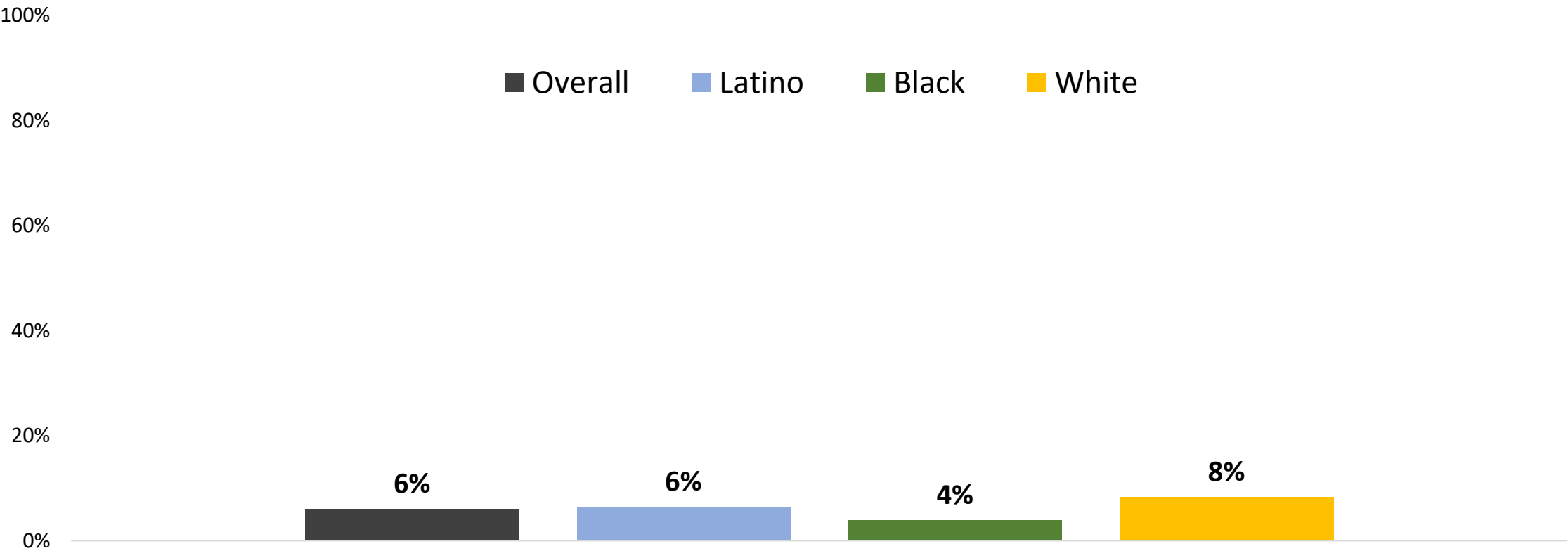
NYC NHBS-MSM2023, n=103 (HIV-/Unknown Status)¹



¹ Excludes nonbinary individuals (n=2)

Condomless Vaginal or Anal Sex With a Woman by Participant's Overall and by Race or Ethnicity, Past 12 Months

NYC NHBS-MSM2023, n=99 (HIV-/Unknown Status)¹

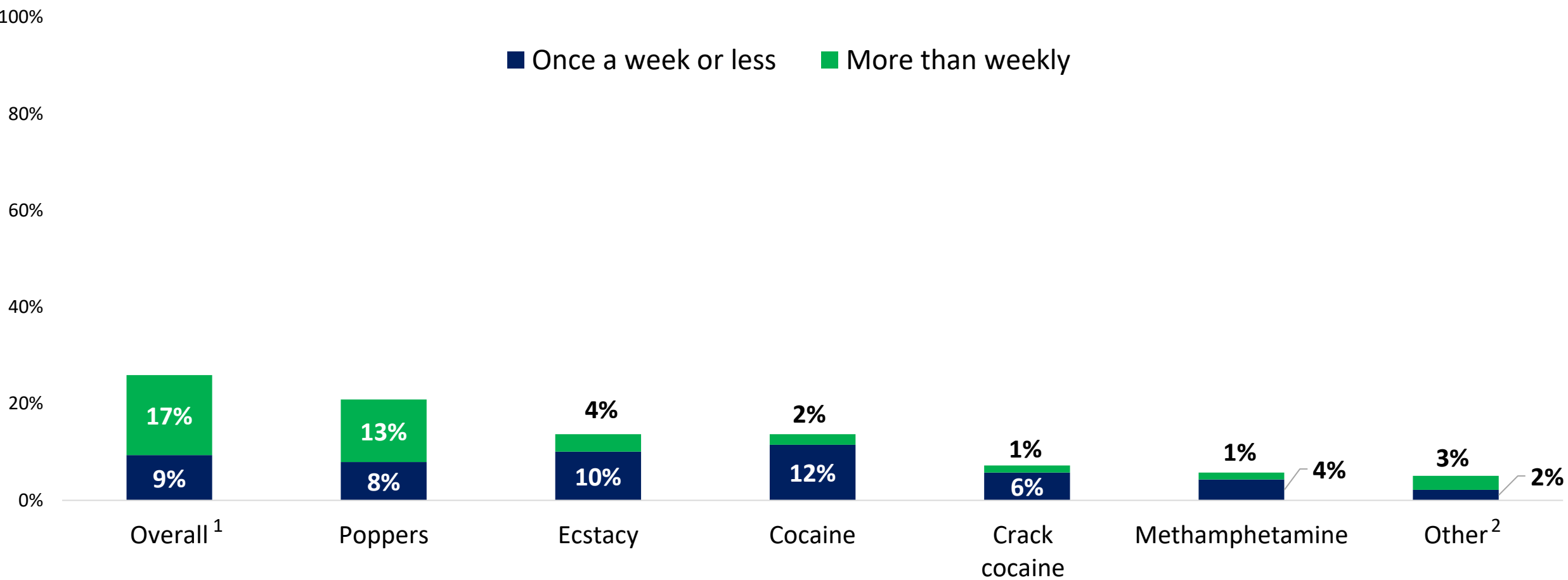


¹ Excludes nonbinary individuals (n=2) and 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Substance Use

Non-Injection Drug Use, Past 12 Months

NYC NHBS-MSM2023, n=139

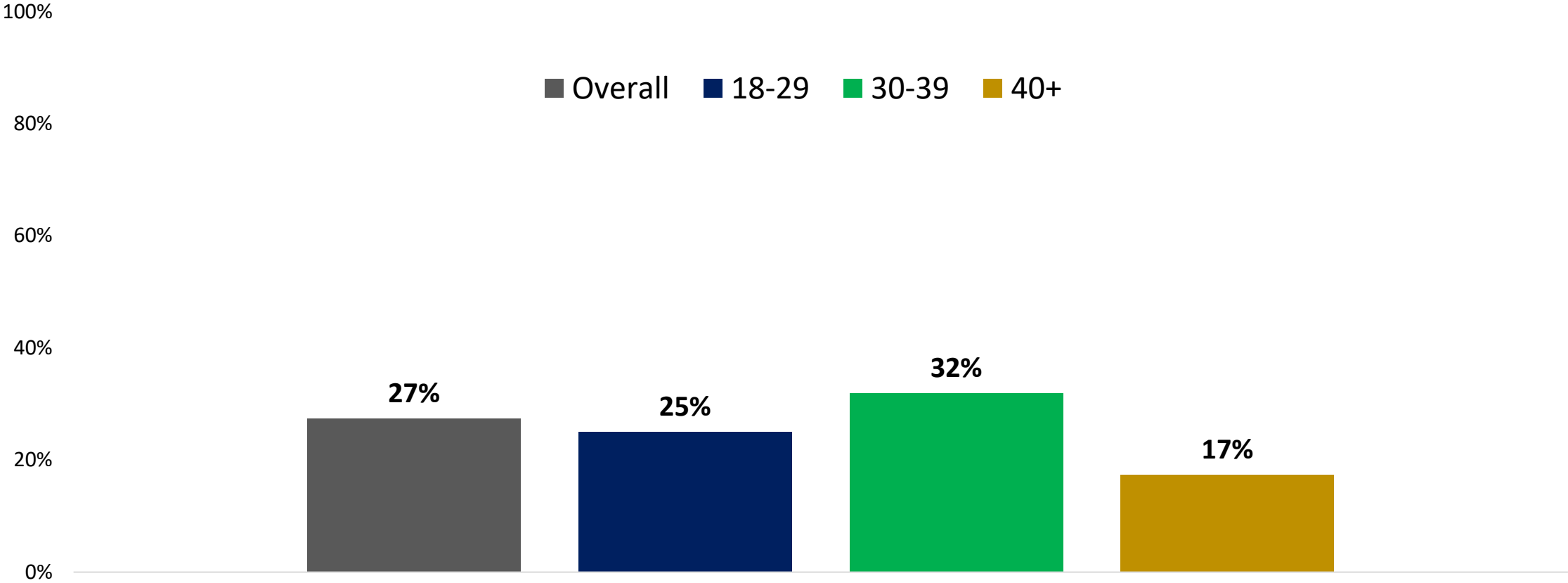


¹ Excludes use of marijuana.

² Use of other drugs (downers and non-prescription pills) were less common and are included in the 'other' category). No one reported non-injection heroin use.

Binge Alcohol Use Overall and by Participant's Age, Past 30 Days¹

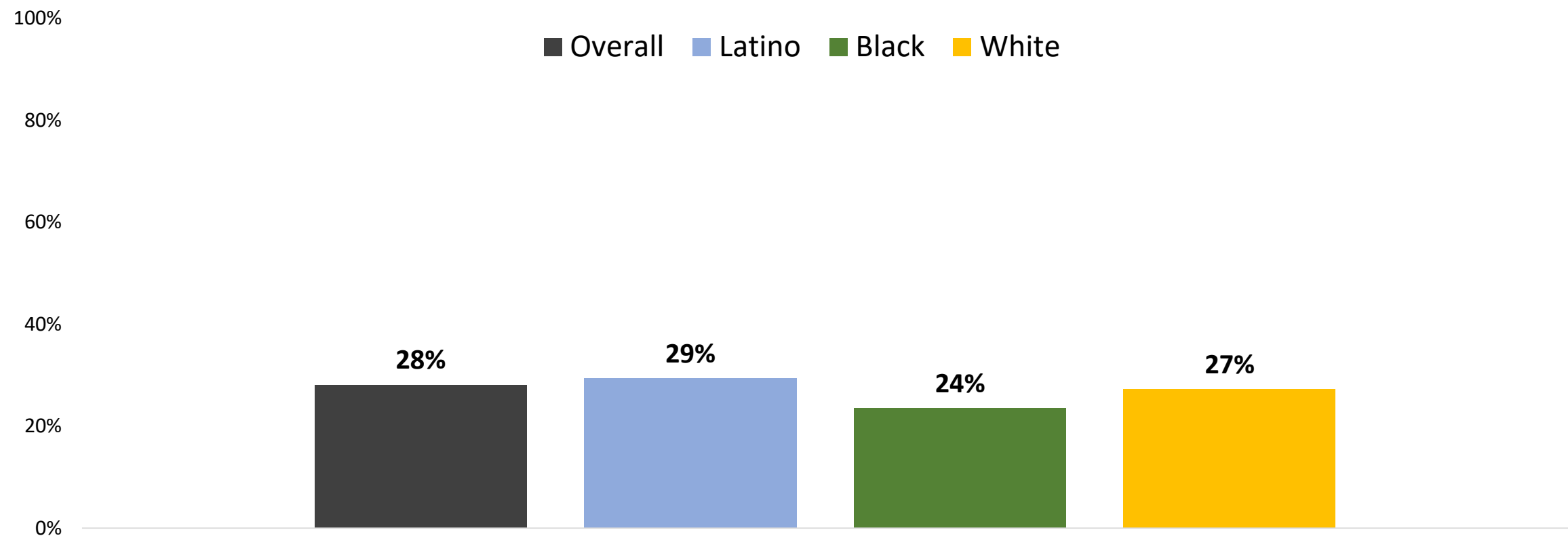
NYC NHBS-MSM2023, n=139



¹ Binge alcohol use is defined as consuming at least 5 drinks in one sitting.

Binge Alcohol Use Overall and by Participant's Race or Ethnicity, Past 30 Days¹

NYC NHBS-MSM2023, n=135²



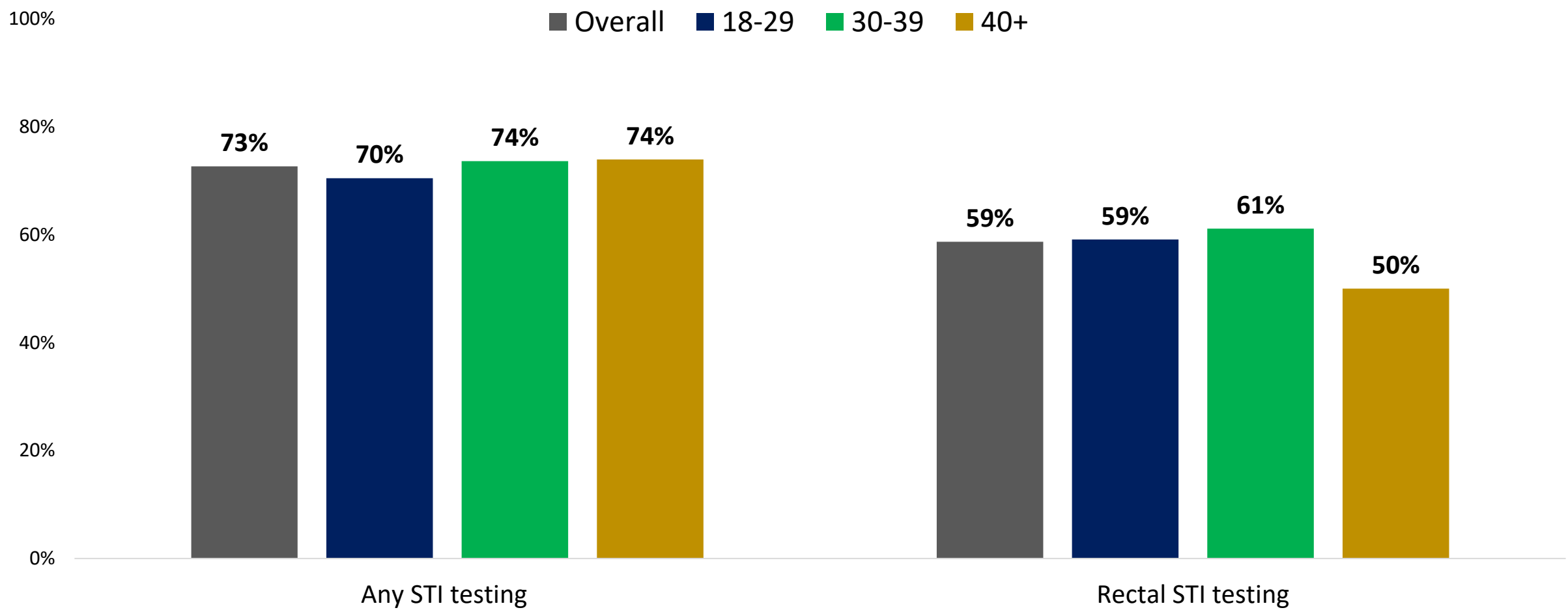
¹ Binge alcohol use is defined as consuming at least 5 drinks in one sitting.

² Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Sexually Transmitted Infections (STIs)

STI Testing Uptake Overall and by Participant's Age, Past 12 Months¹

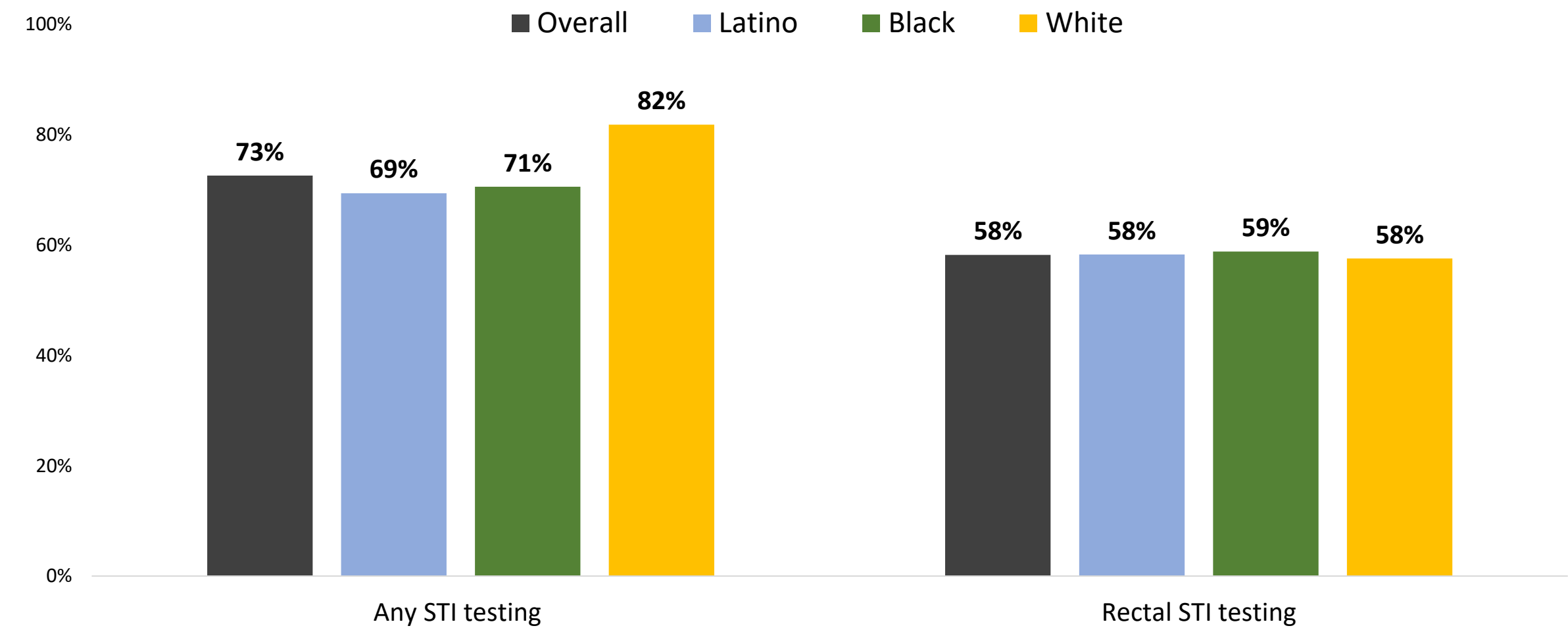
NYC NHBS-MSM2023, n=139



¹ STI testing did not include testing for HIV or hepatitis.

STI Testing Uptake Overall and by Participant’s Race or Ethnicity, Past 12 Months¹

NYC NHBS-MSM2023, n=135²

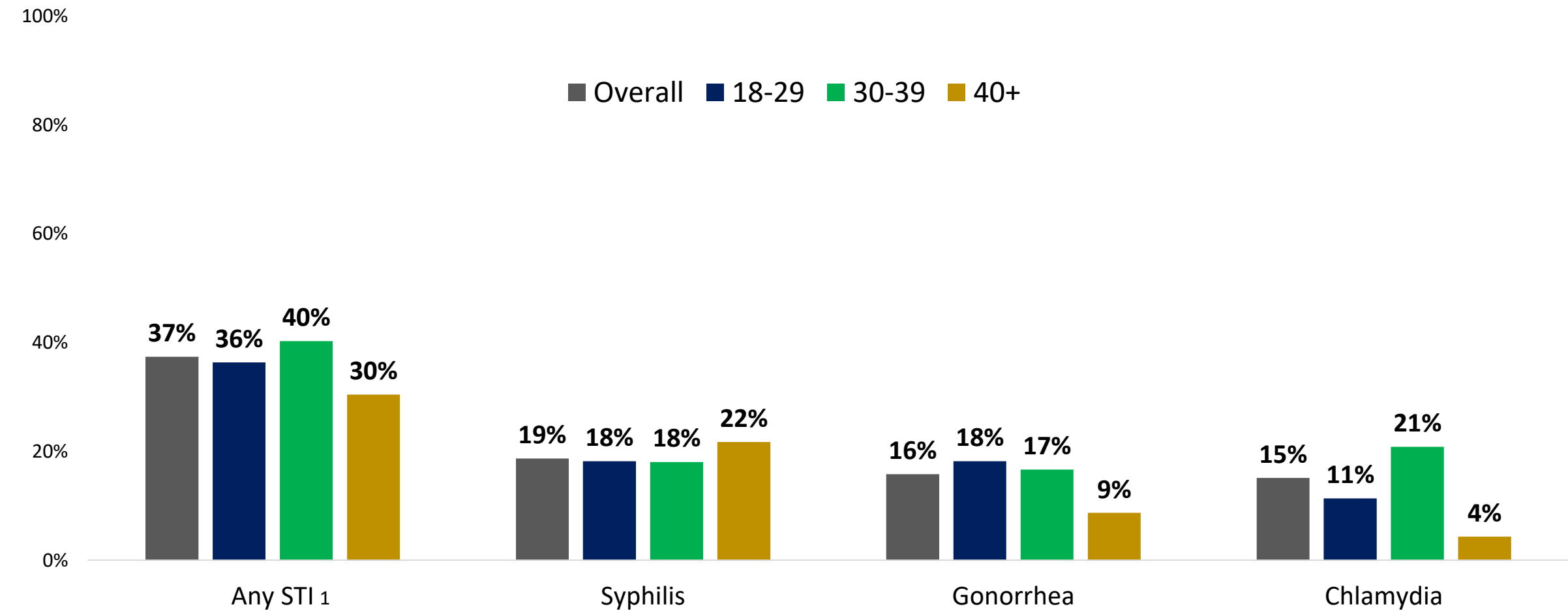


¹ STI testing did not include testing for HIV or hepatitis.

² Excludes ‘other’ race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Self-Reported STI Diagnoses Overall and by Participant's Age, Past 12 Months

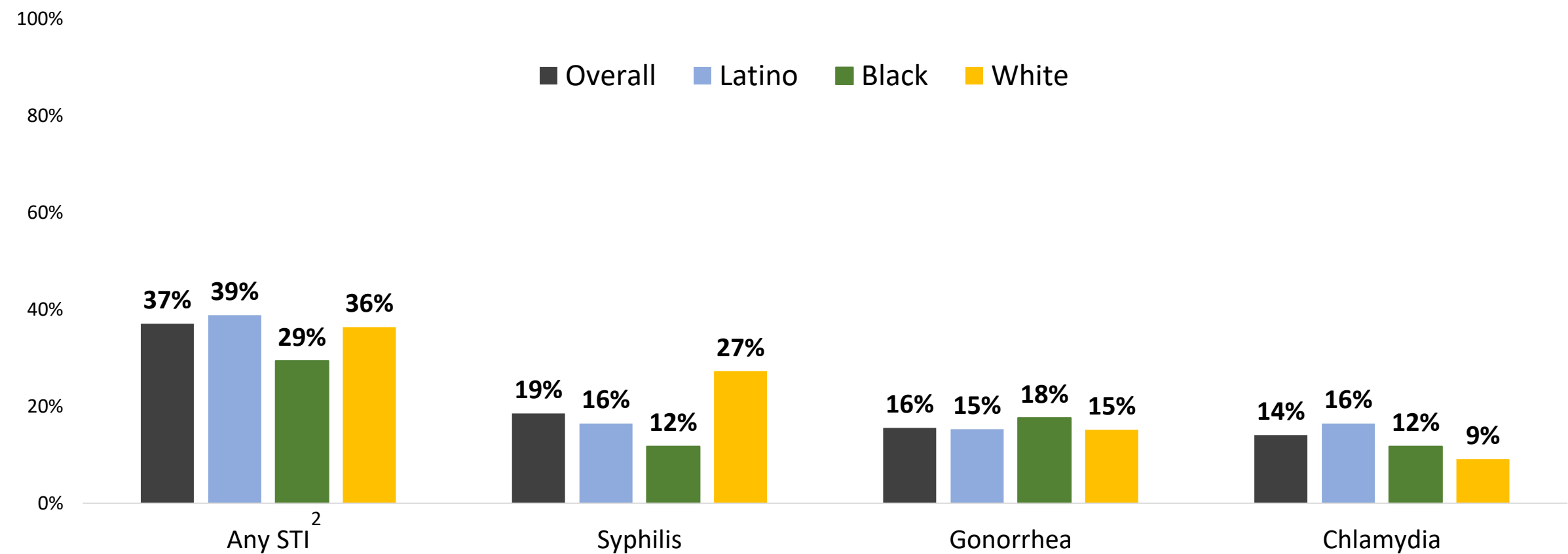
NYC NHBS-MSM2023, n=139



¹ Any STI diagnosis is defined as any self-reported syphilis, gonorrhea, or chlamydia diagnosis.

Self-Reported STI Diagnoses Overall and by Participant's Race or Ethnicity, Past 12 Months

NYC NHBS-MSM2023, n=135¹

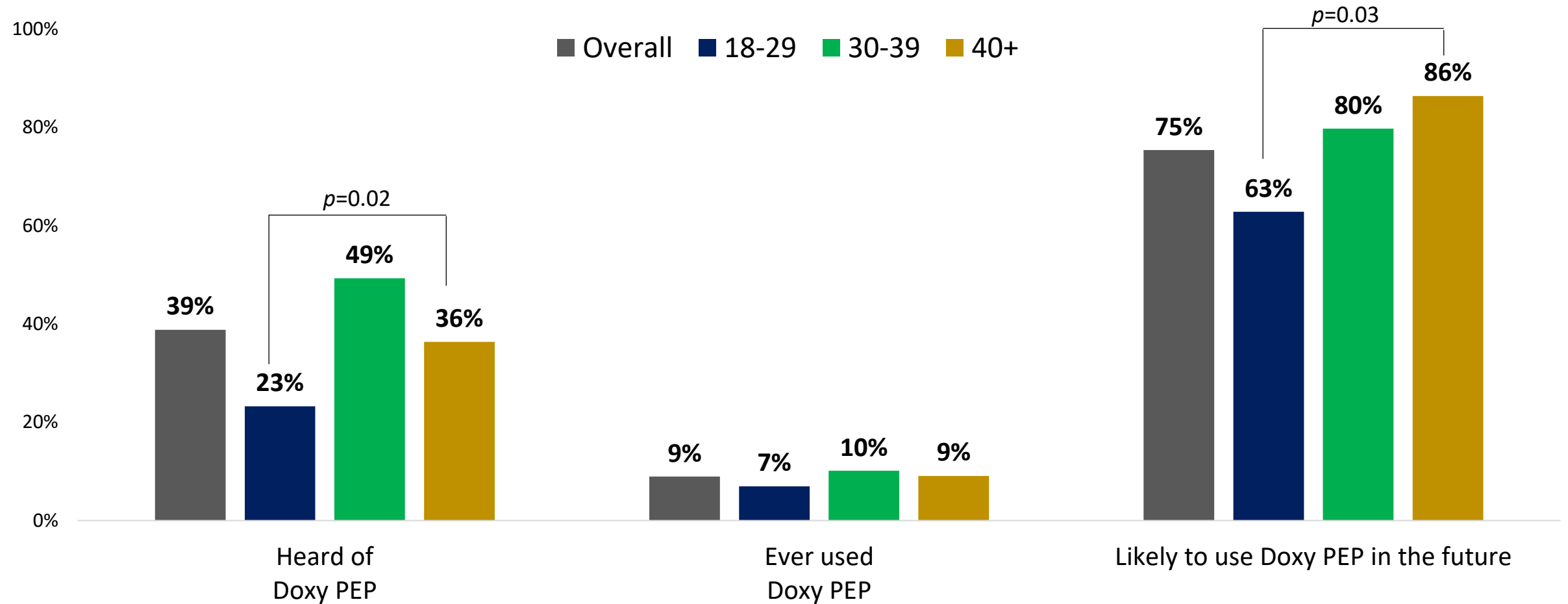


¹ Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

² Any STI diagnosis is defined as any self-reported syphilis, gonorrhea, or chlamydia diagnosis.

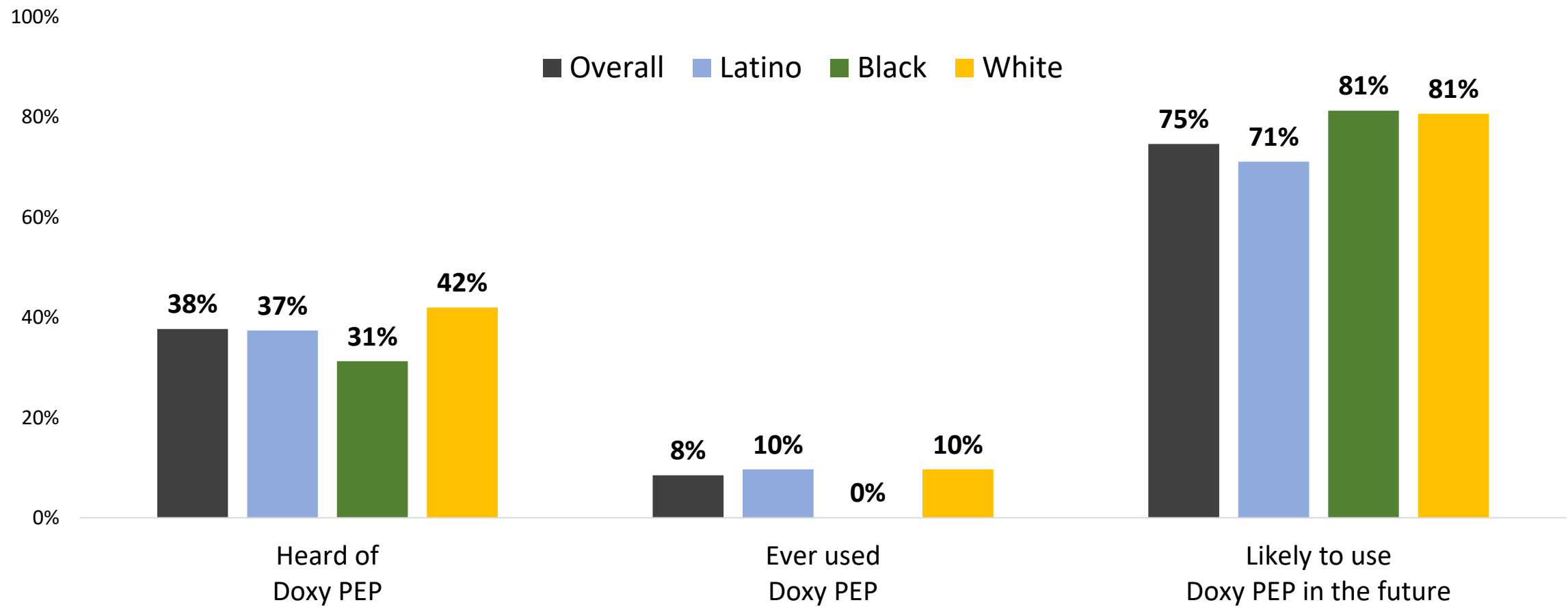
Awareness of, Use of, and Likelihood to Use Doxy PEP Overall and by Participant's Age

NYC NHBS-MSM2023, n=139



Awareness of, Use of, and Likelihood to Use Doxy PEP Overall and by Participant's Race or Ethnicity

NYC NHBS-MSM2023, n=135¹

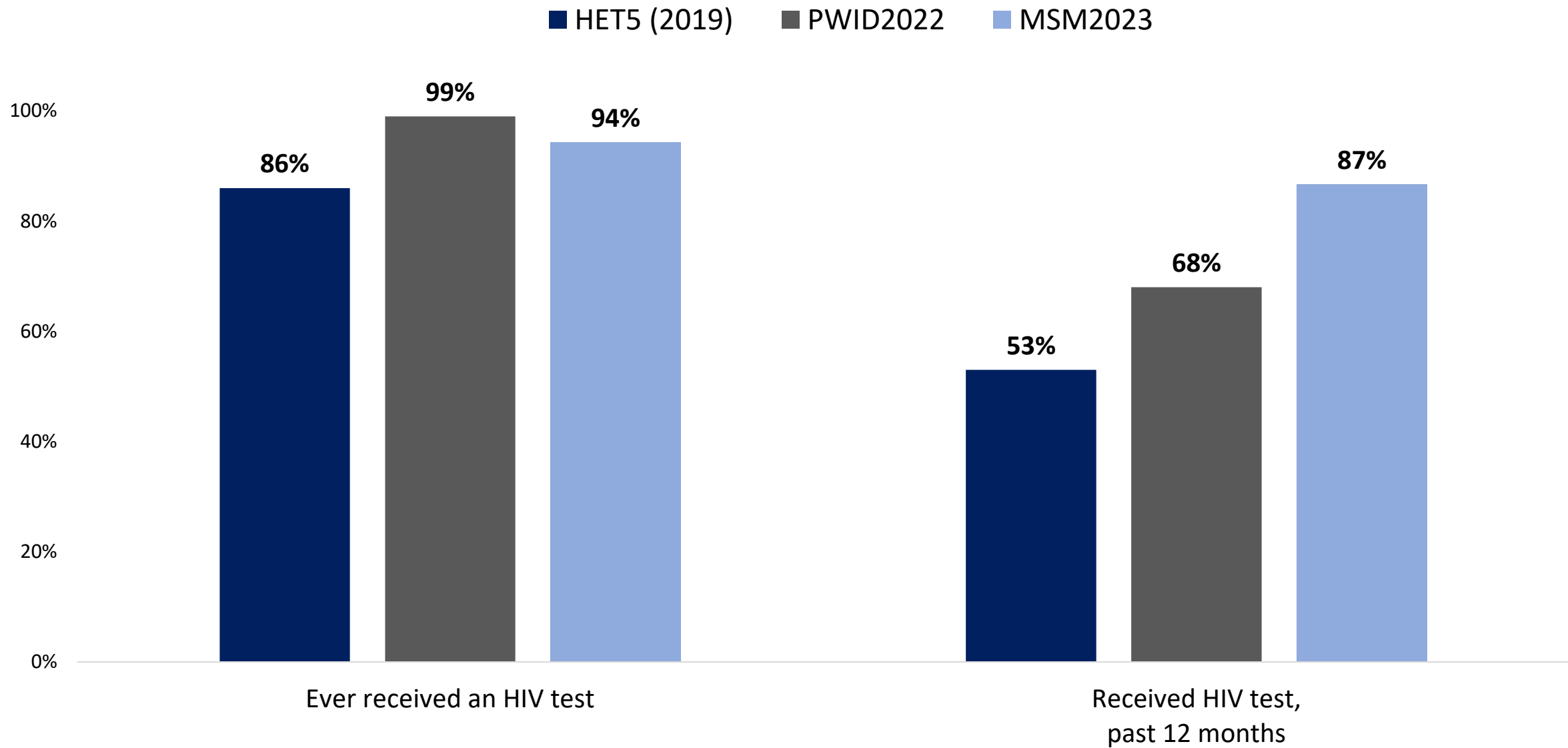


¹ Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

HIV Prevention Services

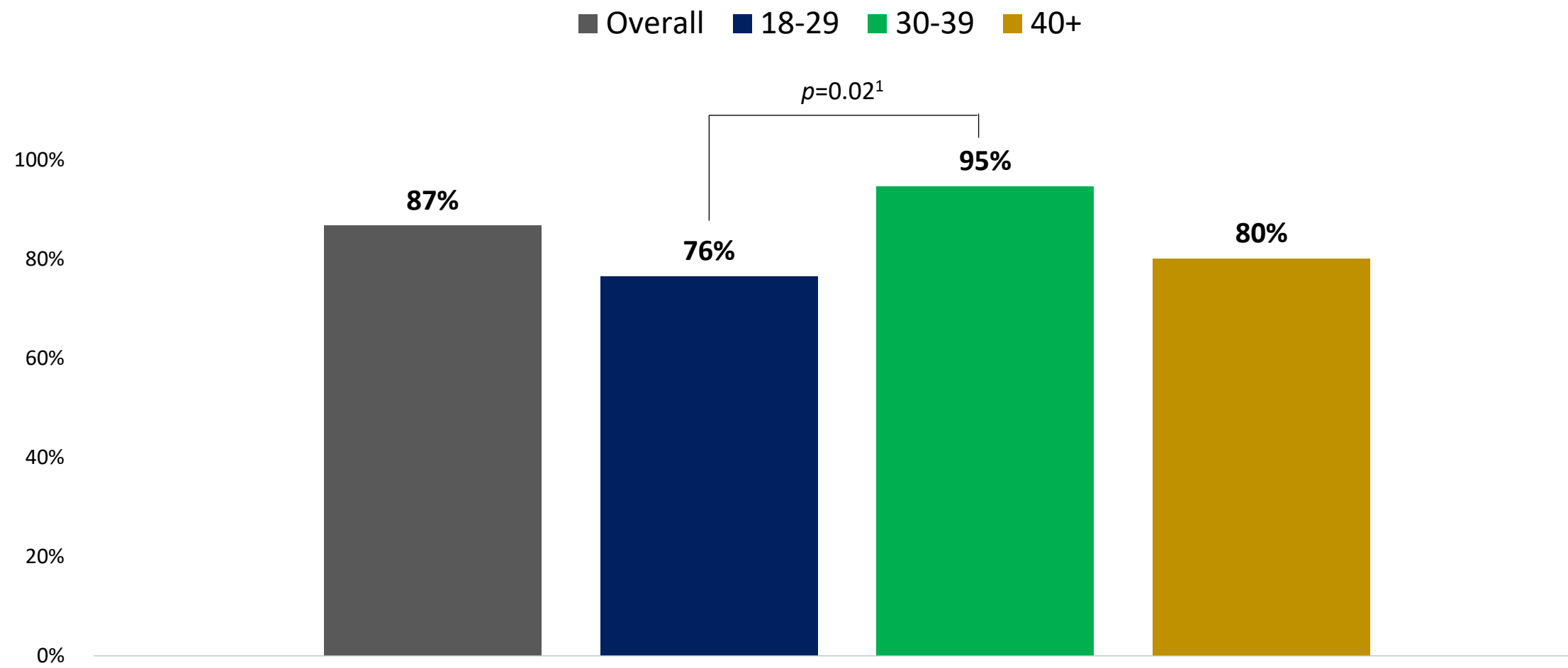
HIV Testing History Among MSM Compared to Other NHBS Groups

NYC NHBS-HET5 (2019), PWID2022, and MSM2023 (HIV-/Unknown Status)



HIV Testing Uptake Overall and by Participant's Age, 12 Months

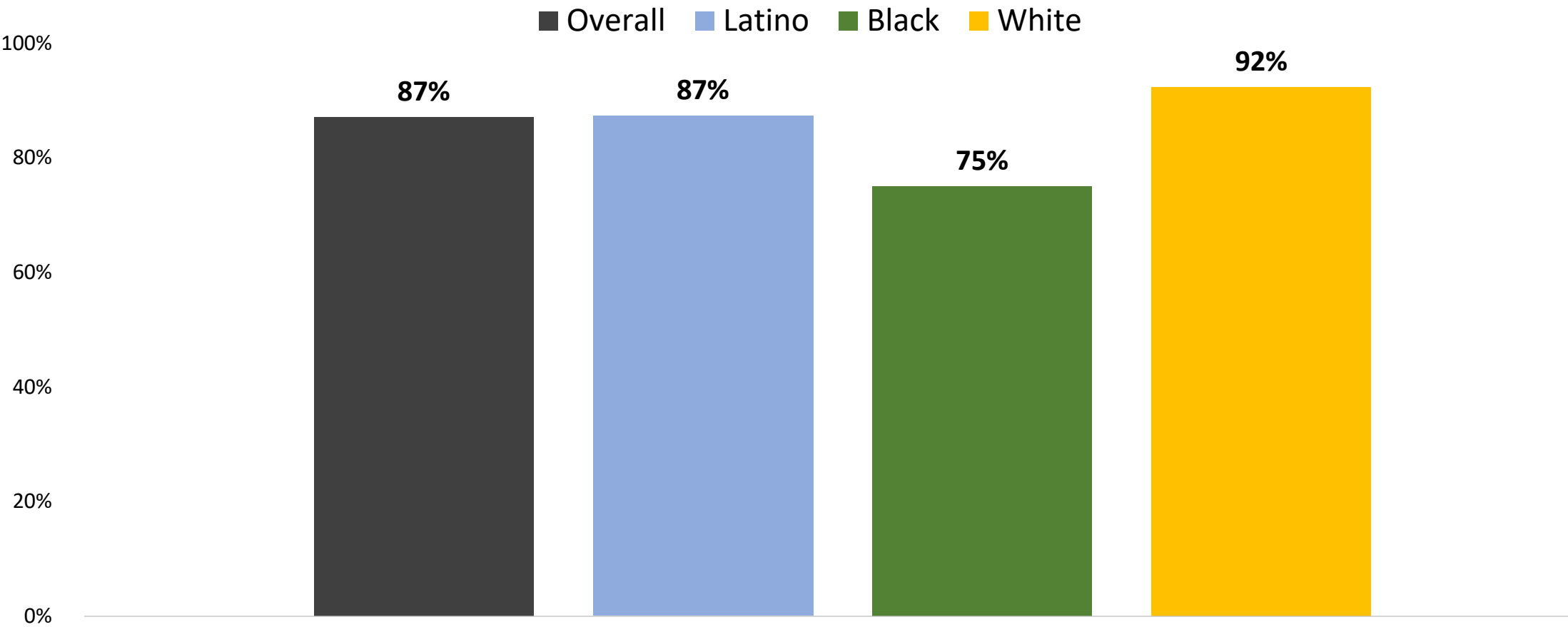
NYC NHBS-MSM2023, n=105 (HIV-/Unknown Status)¹



¹Fisher's exact test used.

HIV Testing Uptake Overall and by Participant's Race or Ethnicity, Past 12 Months

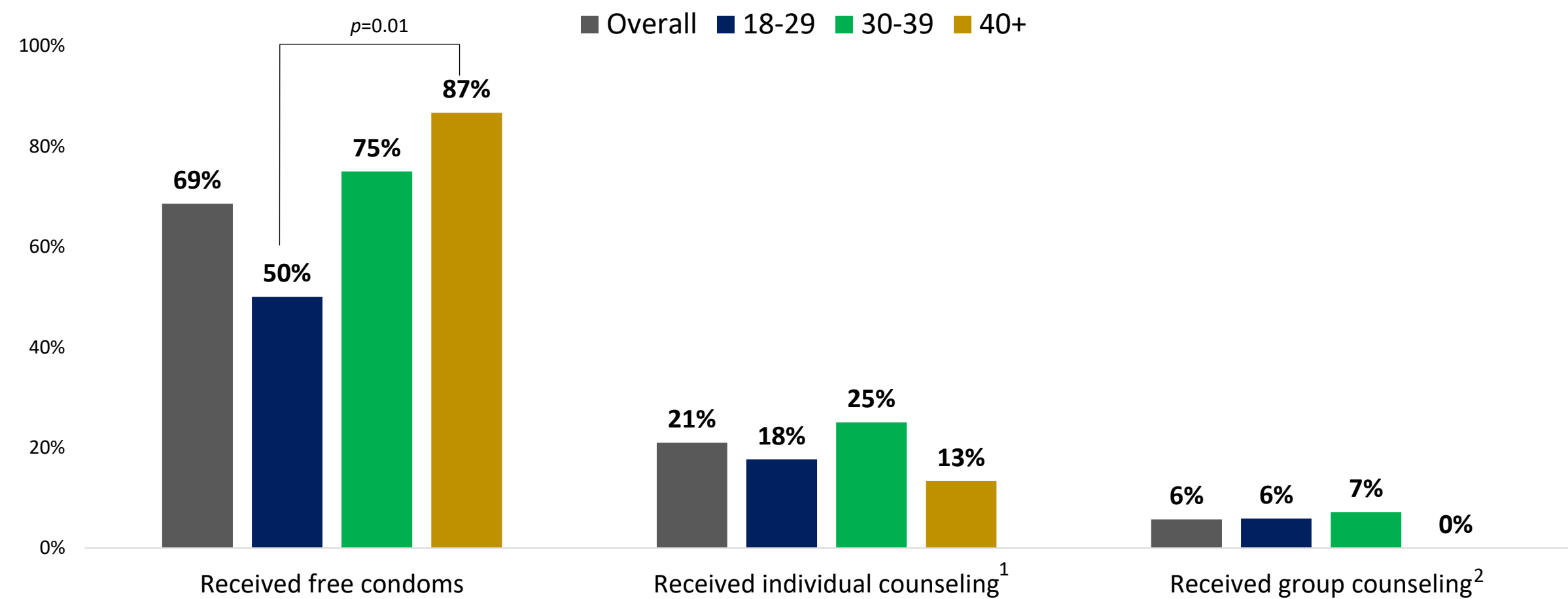
NYC NHBS-MSM2023, n=101 (HIV-/Unknown Status)¹



¹ Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Use of HIV Prevention Services Overall and by Participant's Age, Past 12 Months

NYC NHBS-MSM2023, n=105 (HIV-/Unknown Status)

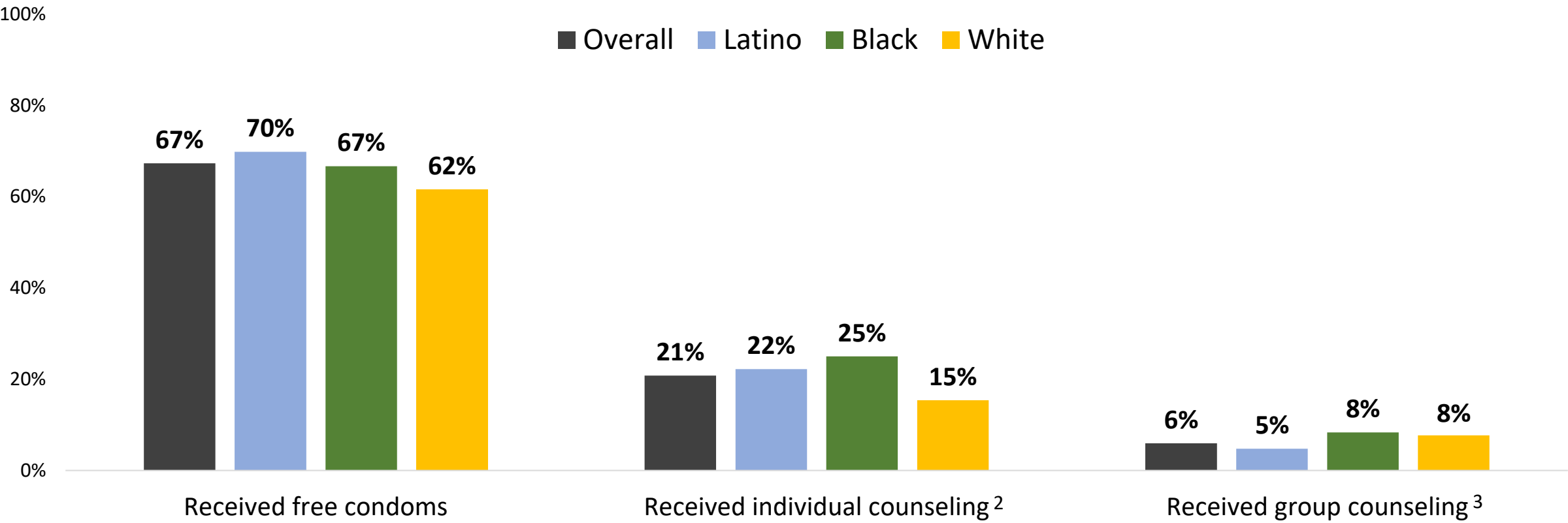


¹ Individual counseling: one-on-one conversation with an outreach worker, counselor, or prevention program worker about ways to prevent HIV. Does not include counseling as part of an HIV test.

² Group counseling: any organized session involving a small group of people to discuss ways to prevent HIV. Does not include discussions had with friends.

Use of HIV Prevention Services Overall and by Participant's Race or Ethnicity, Past 12 Months

NYC NHBS-MSM2023, n=101 (HIV-/Unknown Status)¹



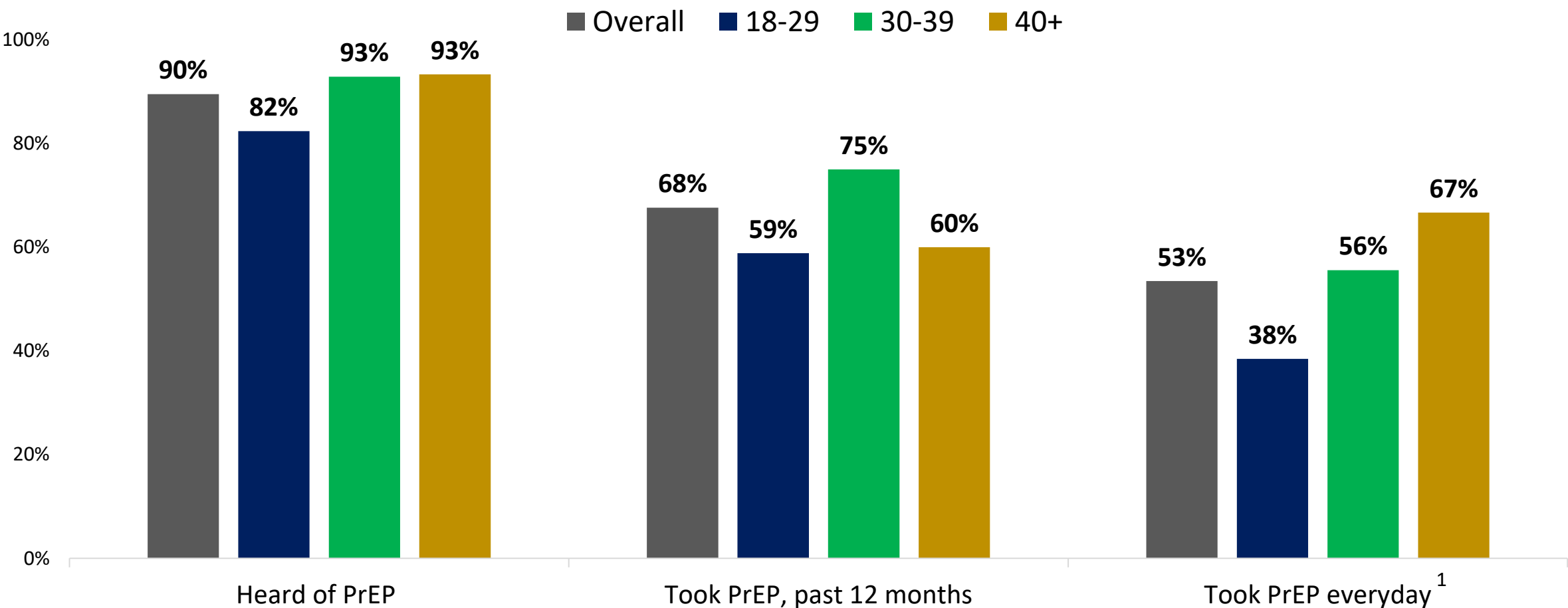
¹ Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

² Individual counseling: one-on-one conversation with an outreach worker, counselor, or prevention program worker about ways to prevent HIV. Does not include counseling as part of an HIV test.

³ Group counseling: any organized session involving a small group of people to discuss ways to prevent HIV. Does not include discussions had with friends.

Pre-Exposure Prophylaxis (PrEP) Awareness, Use, and Adherence Overall and by Participant's Age, 12 Months

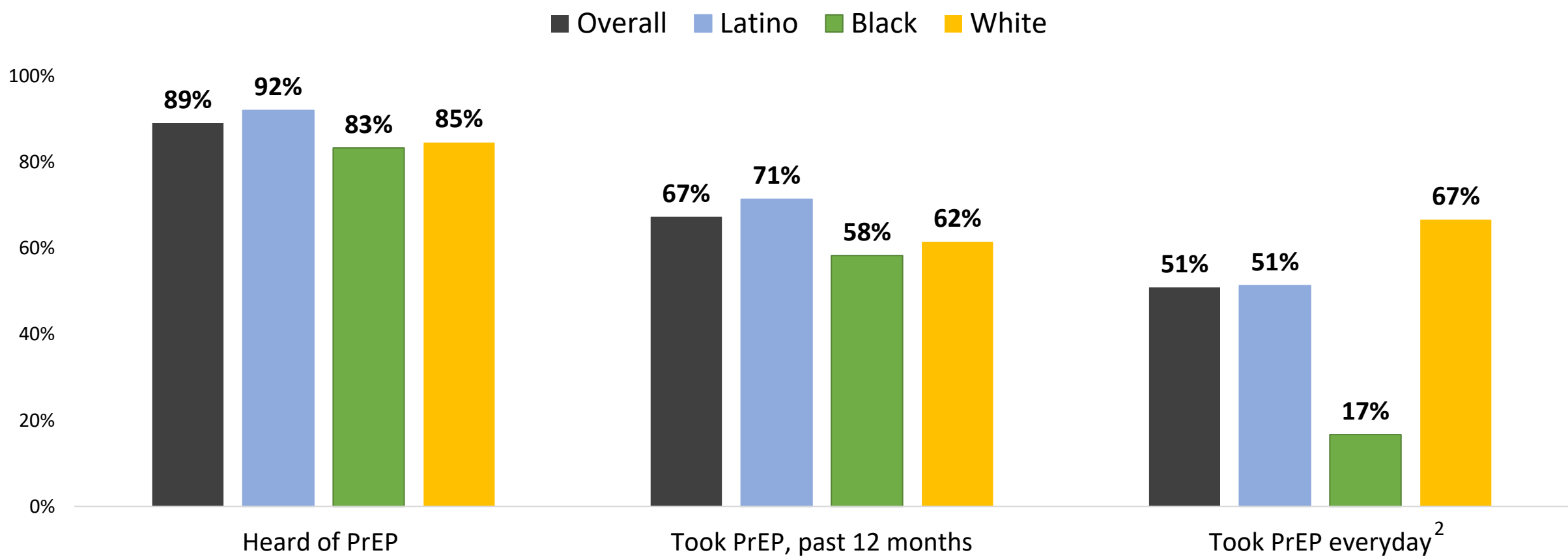
NYC NHBS-MSM2023, n=105 (HIV-/Unknown Status)



¹Defined as taking PrEP every day, among those who took PrEP in the past 30 days and took either Truvada or Descovy (n=58).

PrEP Awareness, Use, and Adherence Overall and by Participant's Race or Ethnicity, Past 12 Months

NYC NHBS-MSM2023, n=101 (HIV-/Unknown Status)¹

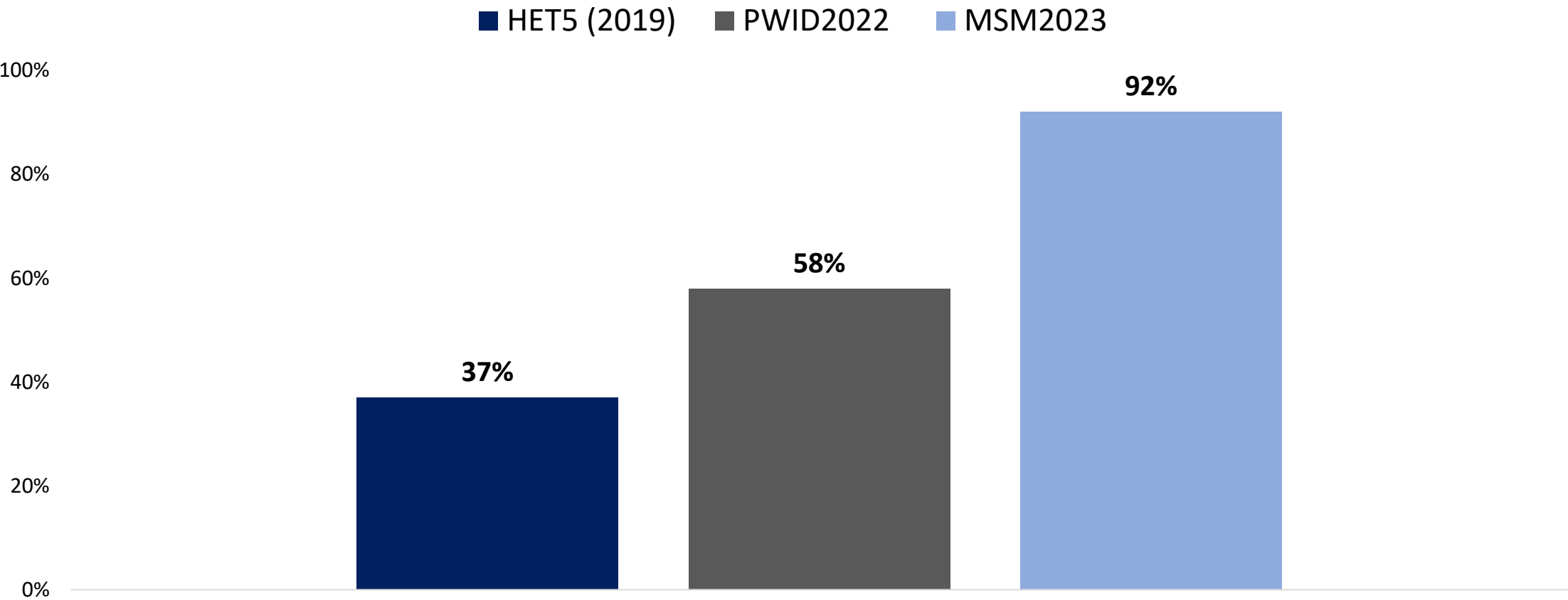


¹ Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

² Defined as taking PrEP every day, among those who took PrEP in the past 30 days and took either Truvada or Descovy (n=55).

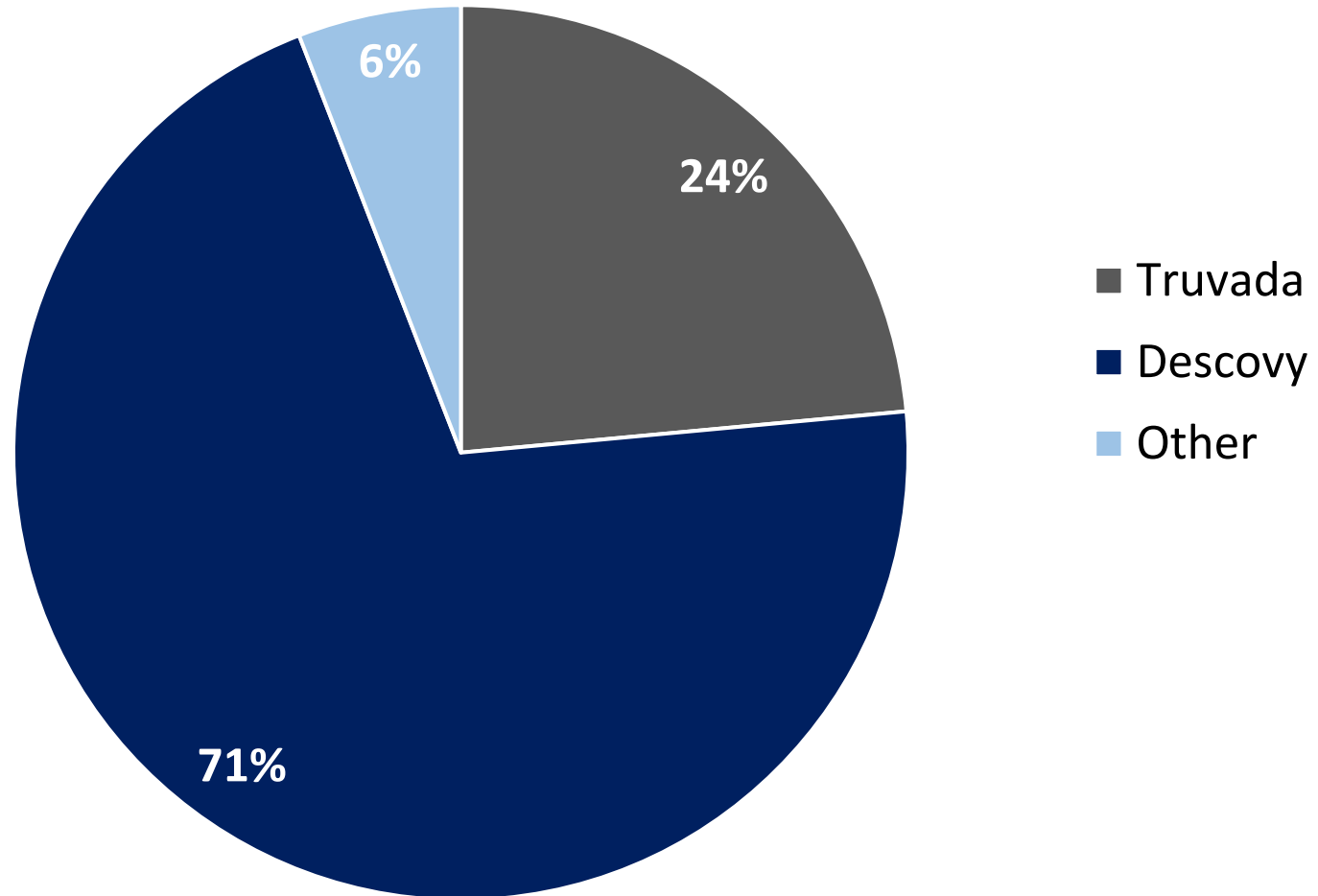
PrEP Awareness Among MSM Compared to Other NHBS Groups

NYC NHBS-HET5 (2019), PWID2022, and MSM2023 (HIV-/Unknown Status)



Type of PrEP¹ Used at Last Use

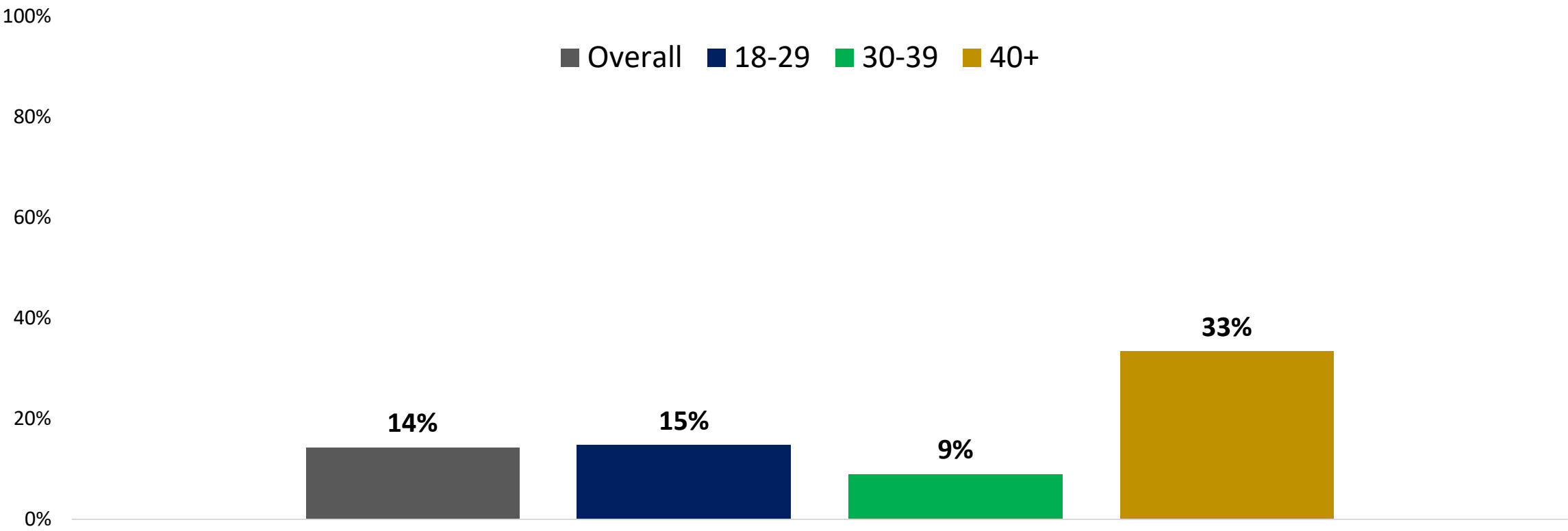
NYC NHBS-MSM2023, n=71 (Used PrEP, past 12 months)



¹ Truvada was defined as either brand or generic. Injectable Cabotegravir and Dapivirine vaginal ring were listed as options, but no participants reported their use.

PrEP On-Demand Use Overall and by Participant's Age, Past 12 Months¹

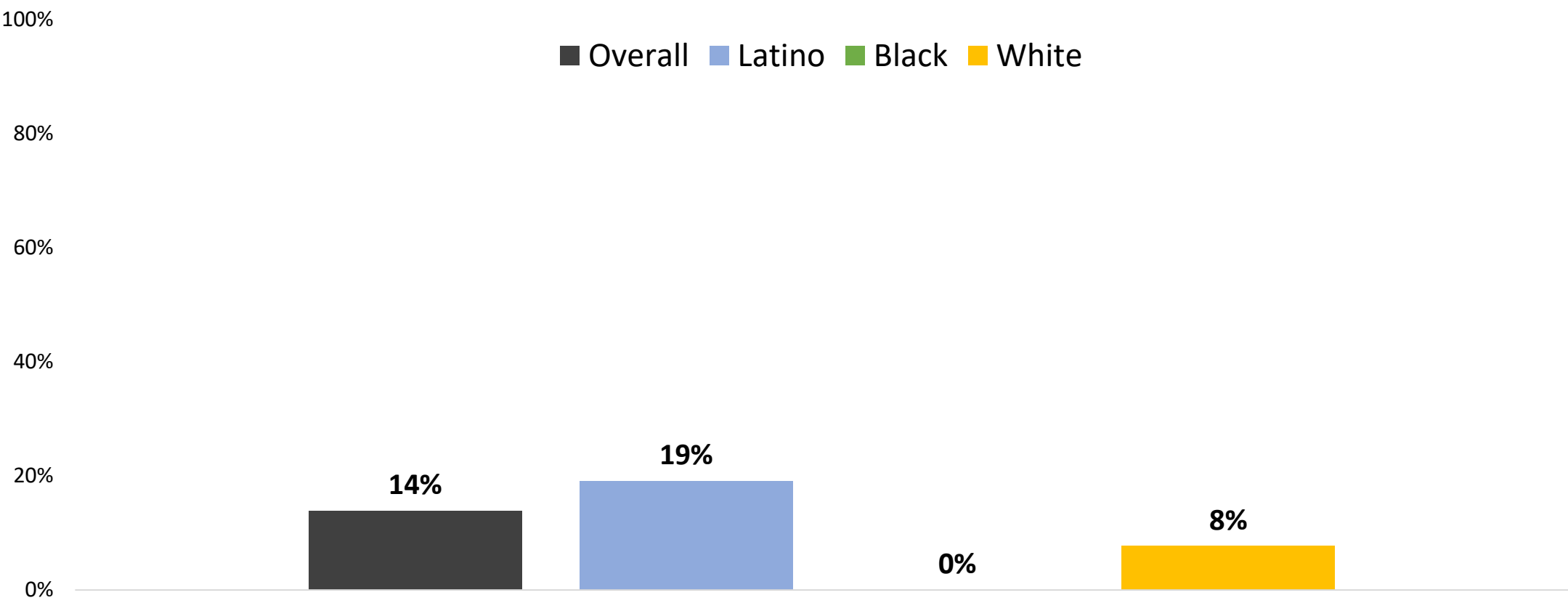
NYC NHBS-MSM2023, n=105 (HIV-/Unknown Status)



¹ PrEP On-Demand, or PrEP 2-1-1, was defined as taking 2 pills a few hours before sex, 1 pill the next day, and 1 pill the day after that to prevent HIV.

PrEP On-Demand Use Overall and by Participant’s Race or Ethnicity, Past 12 Months¹

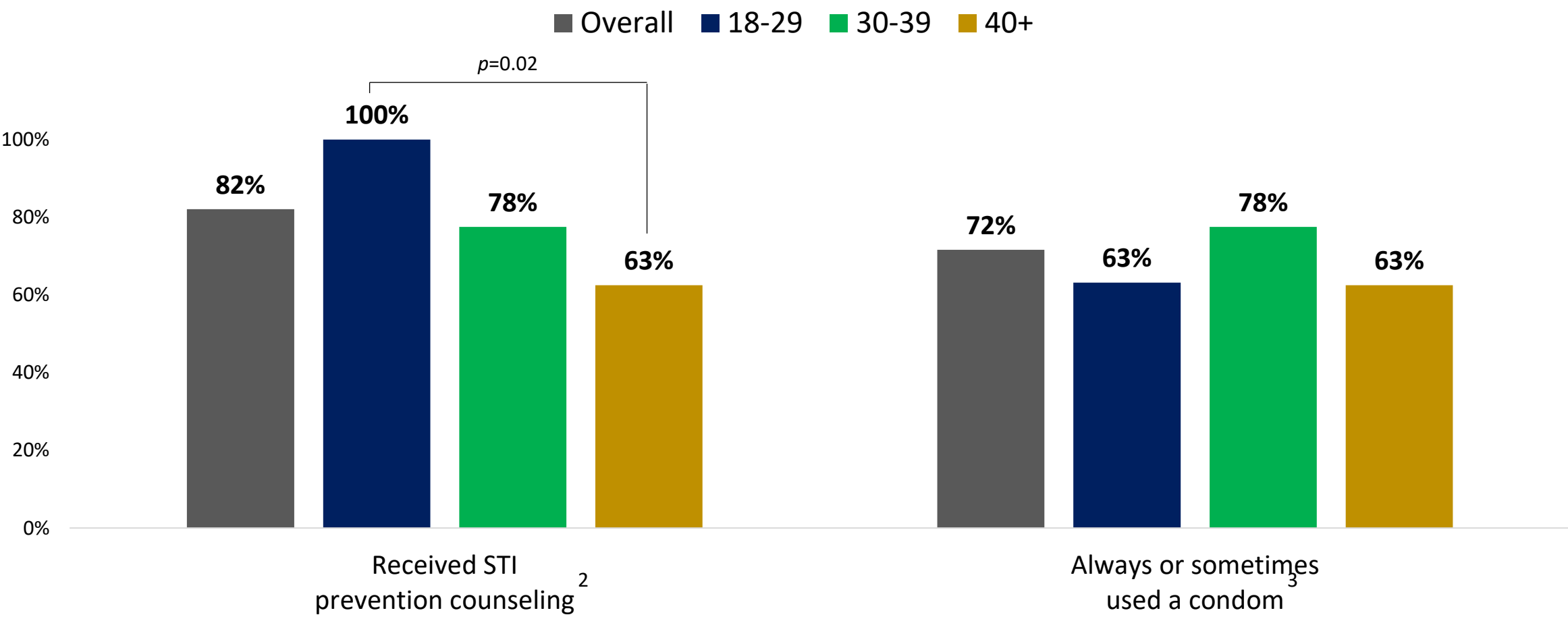
NYC NHBS-MSM2023, n=101 (HIV-/Unknown Status)²



¹ PrEP On-Demand, or PrEP 2-1-1, was defined as taking 2 pills a few hours before sex, 1 pill the next day, and 1 pill the day after that.
² Excludes ‘other’ race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Prevention Use Among PrEP Users Overall and by Participant's Age, 12 Months

NYC NHBS-MSM2023, n=71 (PrEP users, past 12 months)¹



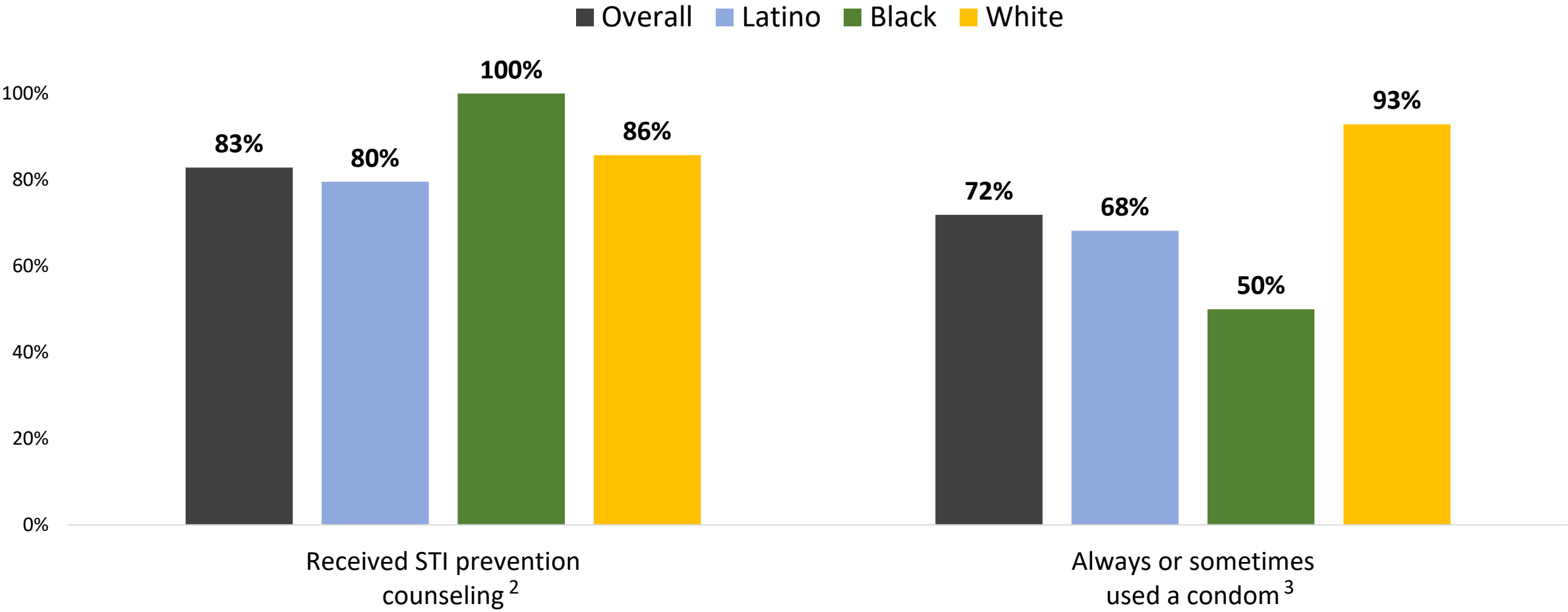
¹ Among those who took PrEP at some point in the past 12 months (n=71).

² Defined as receiving counseling from a health care provider or testing counselor on using condoms to prevent STI's (gonorrhea, chlamydia, and syphilis), while on PrEP.

³ During vaginal or anal sex, while on PrEP.

Prevention Use Among PrEP Users Overall and by Participant’s Race or Ethnicity, Past 12 Months¹

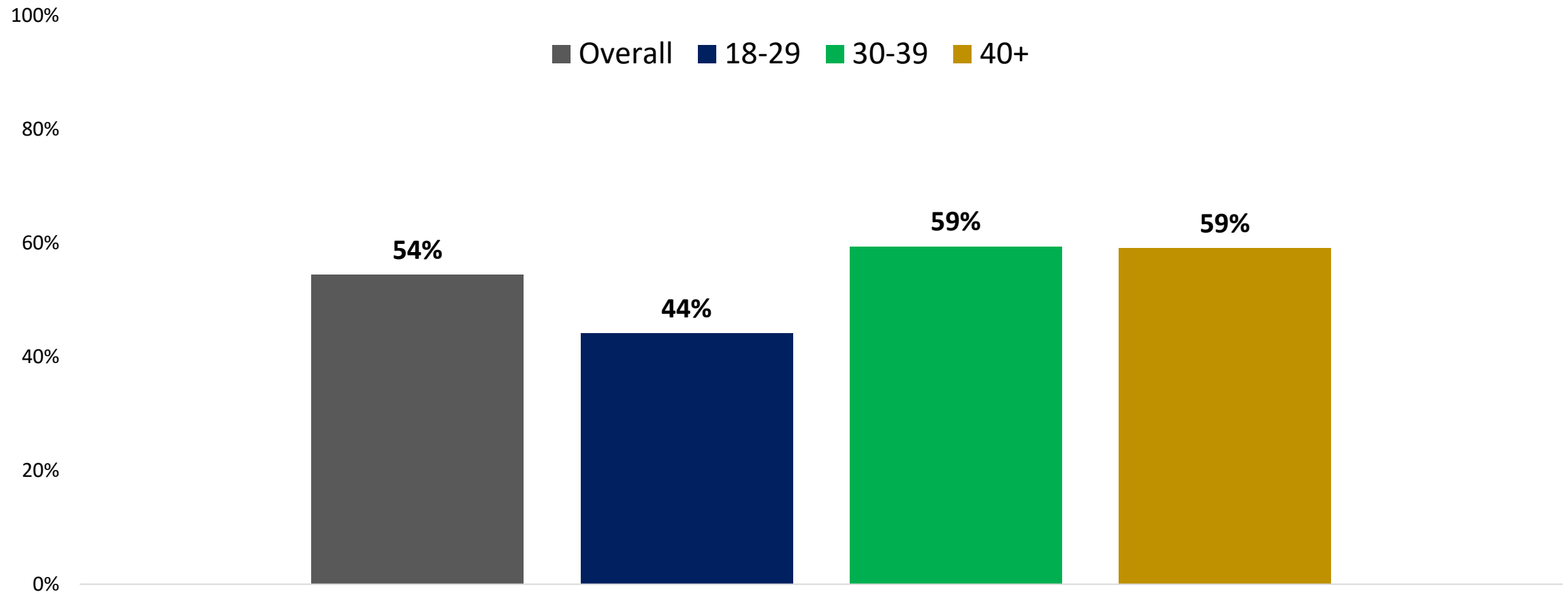
NYC NHBS-MSM2023, n=68 (PrEP users, past 12 months)



¹ Excludes ‘other’ race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=2) due to small sample size.
² Defined as receiving counseling from a health care provider or testing counselor on using condoms to prevent STIs (gonorrhea, chlamydia, and syphilis), while on PrEP.
³ During vaginal or anal sex, while on PrEP.

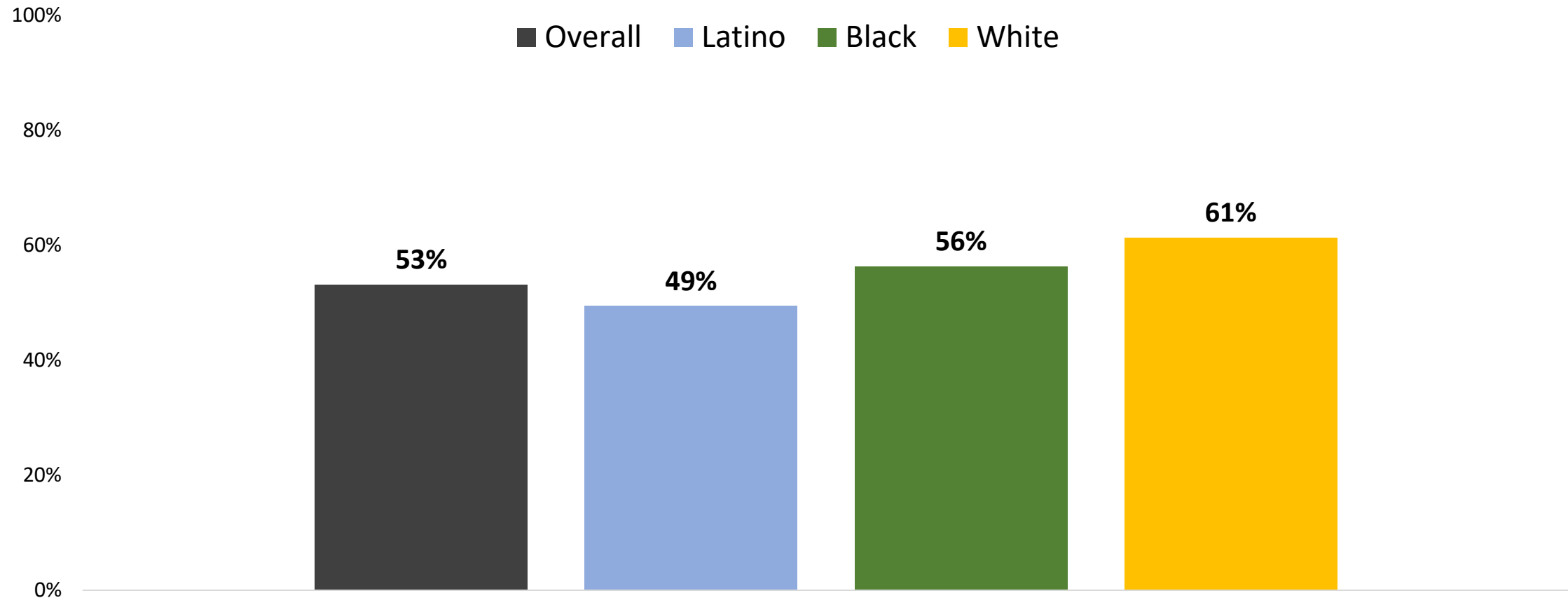
Awareness of Long-Acting Injectable PrEP Overall and by Participant's Age

NYC NHBS-MSM2023, n=139



Awareness of Long-Acting Injectable PrEP Overall and by Participant's Race or Ethnicity

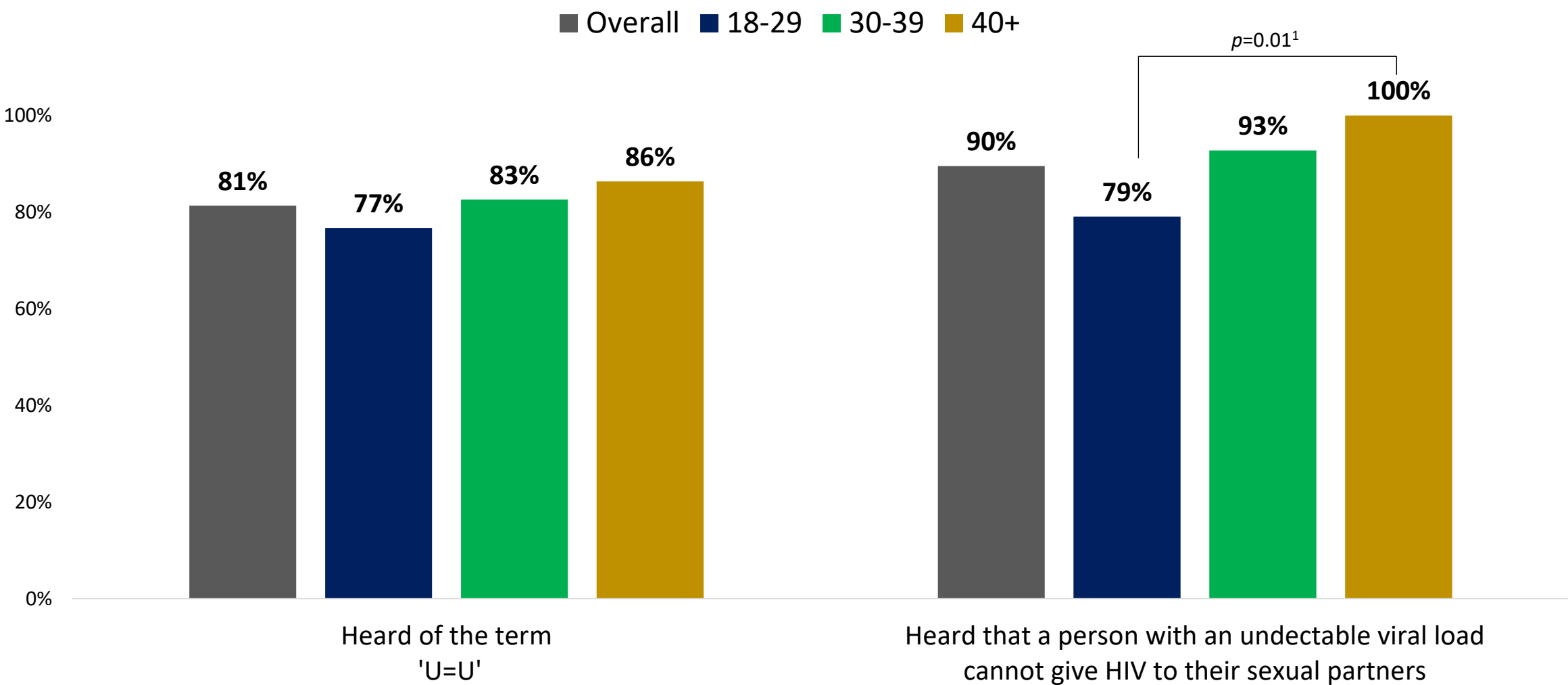
NYC NHBS-MSM2023, n=135¹



¹ Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Awareness of U=U Overall and by Age

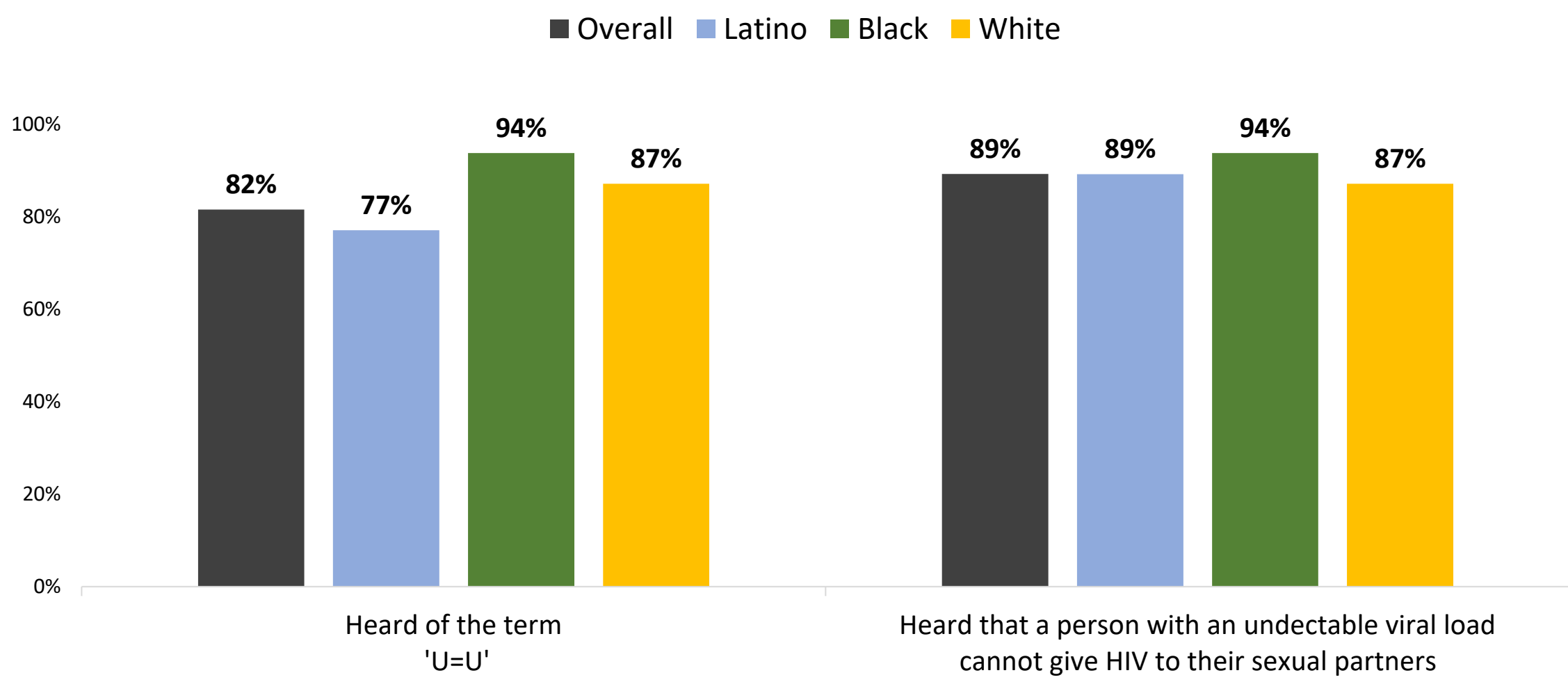
NYC NHBS-MSM2023, n=139



¹ Fisher's exact test used.

Awareness of U=U by Overall and Participant's Race or Ethnicity

NYC NHBS-MSM2023, n=135¹



¹ Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

HIV Prevalence

HIV Prevalence by Age Group

NYC NHBS-MSM2023, n=137 (Confirmed NHBS HIV Test Result)¹

	Confirmed Test Result (n)	Positive Test Result (%)	95% Confidence Interval
Overall	137	30.7%	23.1% - 39.1%
By Age Group			
18-29	44	27.9%	15.0% - 42.8%
30-39	71	29.0%	18.1% - 40.1%
40+	22	42.9%	24.4% - 66.0%

¹ Confirmed via a rapid-rapid testing algorithm with a final test result.

Overall HIV Prevalence and by Race or Ethnicity

NYC NHBS-MSM2023, n= 133 (Confirmed NHBS HIV Test Result)¹

	Confirmed Test Result (n)	Positive Test Result (%)	95% Confidence Interval
Overall	133	30.8%	23.1% - 39.1%
By Race or Ethnicity ²			
Latino	85	29.4%	20.0% - 40.3%
Black	16	37.5%	15.2% - 64.6%
White	32	31.3%	16.1% - 50.0%

¹ Confirmed via a rapid-rapid testing algorithm with a final test result.

² Excludes ‘other’ race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) (n=4) due to small sample size.

Conclusions

Summary

- NHBS MSM2023 was able to restart standard procedures for the first time since 2018. Despite the administrative delays, we were able to recruit 137 participants in less than two months
- More than half of the participants recruited (63%), reported being born outside of the U.S. and 43% of the interviews were conducted in Spanish
- Almost 90% of the participants had condomless sex with a man in the past 12 months, with 70% reporting condomless sex at last sex
- Nearly one-third of participants self-reported a syphilis, gonorrhea, or chlamydia diagnosis in the past year with the highest proportions among those aged 30-39 (40%) and Latino participants (39%)

Summary

- Participants ages 18 to 29 were significantly less likely to have heard of Doxy PEP and to have received an HIV test in the past 12 months, compared to those ages 30 to 39. Furthermore, participants ages 18 to 29 were significantly less likely than older groups to have received free condoms or to be aware that a person with an undetectable viral load cannot give HIV to their sex partners (U=U)
- PrEP awareness was high at 90%. Yet, only about half of the sample was aware of long-acting injectable PrEP
- HIV prevalence was highest among Black participants; however, we did not find significant differences by race, ethnicity, or age group

Strengths

- NHBS is the only ongoing national data collection system for biobehavioral HIV surveillance
- A standardized survey and protocol is implemented nationally
- Local questions were developed to explore relevant themes specific to MSM in NYC
- HIV status was confirmed via a rapid-rapid testing algorithm

Limitations

- Study was considerably delayed, which limited the overall sample size
- The small sample size may have affected our ability to detect statistically significant differences
- Findings may not be representative of the MSM population in NYC
- Survey data were collected by self-report and may be affected by recall error or social desirability bias

NYC NHBS-MSM2023 Team

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CDC Grant: 5 NU62PS924775

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