

# **Sexual and Substance Use Behaviors and HIV Prevalence Among People Who Inject Drugs in New York City**

Findings from the 2024 National HIV Behavioral Surveillance  
Study

# Background

- New York City (NYC) has a large population of people who inject drugs (PWID)
- The number of new HIV diagnoses among people with a history of injection drug use in NYC has decreased over the course of the epidemic
  - The decrease is largely attributed to the success of sterile syringe access programs and increased safe injection practices
- In 2024, 2.3% of new HIV diagnoses in NYC were among people with a history of injection drug use
- PWID may continue to engage in sexual activity and drug use that may increase HIV risk. Changes in drug use practices at the population level may affect individual risk.

# National HIV Behavioral Surveillance (NHBS)

- Ongoing, cyclical study of three priority populations at increased risk for HIV: men who have sex with men (MSM), PWID, and heterosexually active persons at increased risk of HIV infection (HET)
  - Currently conducted in 19 cities throughout the U.S.
  - Funded by CDC, designed collaboratively
  - Cross-sectional study design
  - Anonymous, structured interview and optional HIV testing
- Data were collected for the seventh cycle among PWID (PWID2024) from August to December 2024

# NHBS-PWID2024 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
- HIV prevention
  - Assess the exposure to and use of prevention services, including HIV pre-exposure prophylaxis (PrEP)
  - Identify gaps in HIV prevention and missed opportunities for prevention interventions
- Hepatitis C (*supplemental activity*)
  - Determine the prevalence of acute and chronic hepatitis C

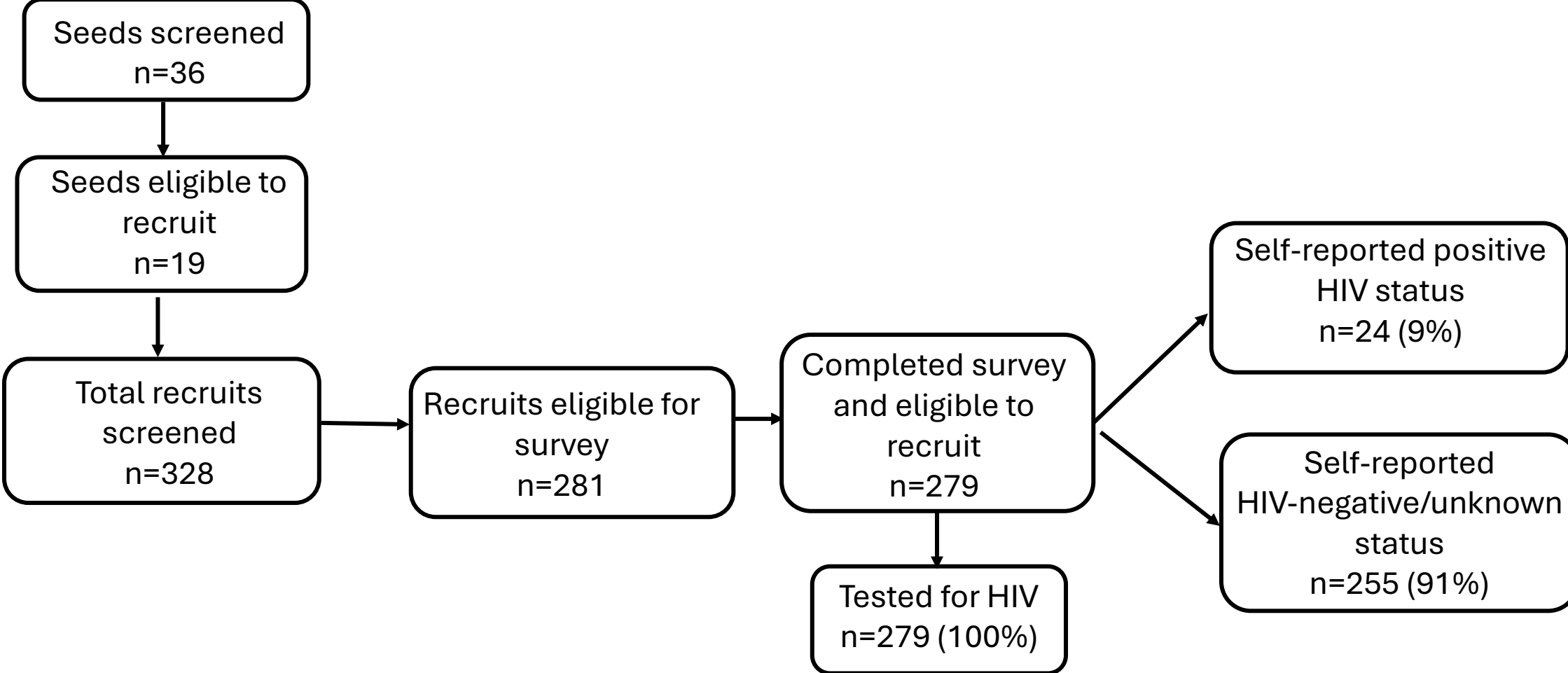
# NHBS-PWID2024 Eligibility Criteria

- At least 18 years old
- Resident of NYC Metropolitan Statistical Area (MSA) which includes NYC, Westchester County, Rockland County, Orange County and some counties in New Jersey.
- Injected drugs that were not prescribed to them in the past 12 months
- Able to complete the interview in English or Spanish
- Did not previously participate in that current NHBS-PWID cycle

# Respondent-Driven Sampling (RDS) Recruitment Method

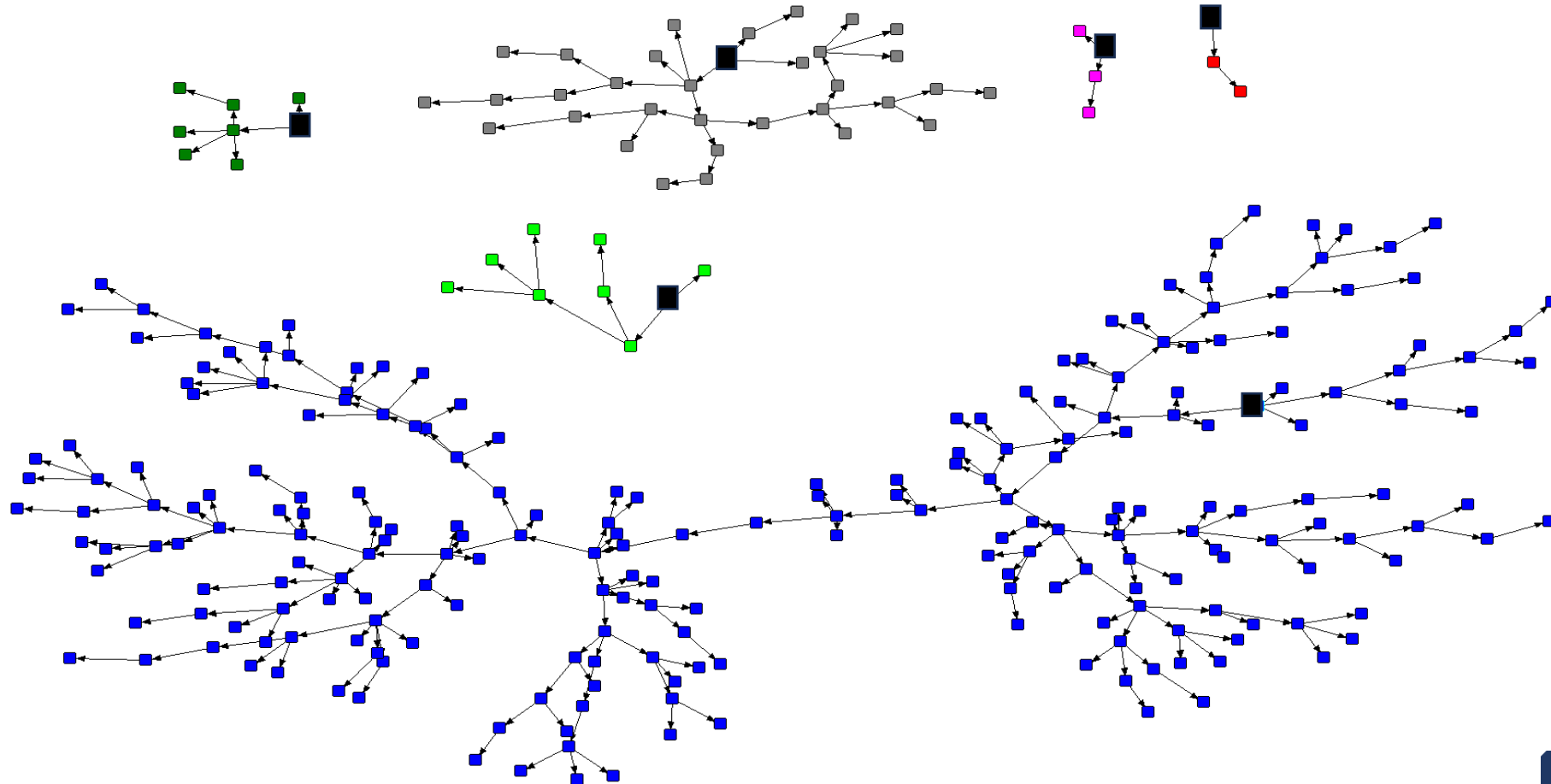
1. Study team recruited a small number of initial participants (“seeds”) through community outreach.
  - To increase the proportion of young PWID, initial seeds were 18-39 years old
2. Seeds participated in the study and then recruited up to five peers in their social networks.
3. If eligible, those recruited peers participated and each recruited up to an additional five peers until the sample size was met.
  - Recruitment chains were continually monitored to ensure demographic representativeness.
4. Incentives were provided for completing the survey, HIV testing, hepatitis C virus (HCV) testing, and peer recruitment.

# NYC NHBS-PWID2024 Study Sample



# Recruitment Chain Diagram for NYC NHBS-PWID2024

Each node represents a study participant. Linking lines show recruitment chains, initiated by six productive seeds (represented by black square nodes)



# Statistical Analyses

- Analyses were restricted to recruits (n=279) as seeds were recruited by the study team and not through their peers
- We conducted basic descriptive frequencies of demographics, structural factors, sexual behaviors, drug use, and use of HIV testing and prevention services
- We used Chi-square or Fisher's exact tests to compare differences in behaviors and use of HIV testing and HIV prevention services; significant associations are denoted. We conducted pairwise comparisons with a Bonferroni Correction, when needed
- We estimated overall HIV prevalence from confirmed test results (n=279), and examined prevalence by gender identity, transmission category (MSM vs. not), age group, and race or ethnicity
- Due to sample size, data are unweighted

# Demographics

# Demographics

NYC NHBS-PWID2024, n=279

<b>Age group (in years)</b>	18-29	4%
	30-39	21%
	40-49	28%
	≥ 50	47%
<b>Race or ethnicity</b>	Latino	51%
	Black	33%
	White	14%
	Other <sup>1</sup>	3%
<b>Gender identity</b>	Cisgender man	82%
	Cisgender woman	16%
	Transgender woman	1%
	Transgender man	< 1%
	Nonbinary	0%

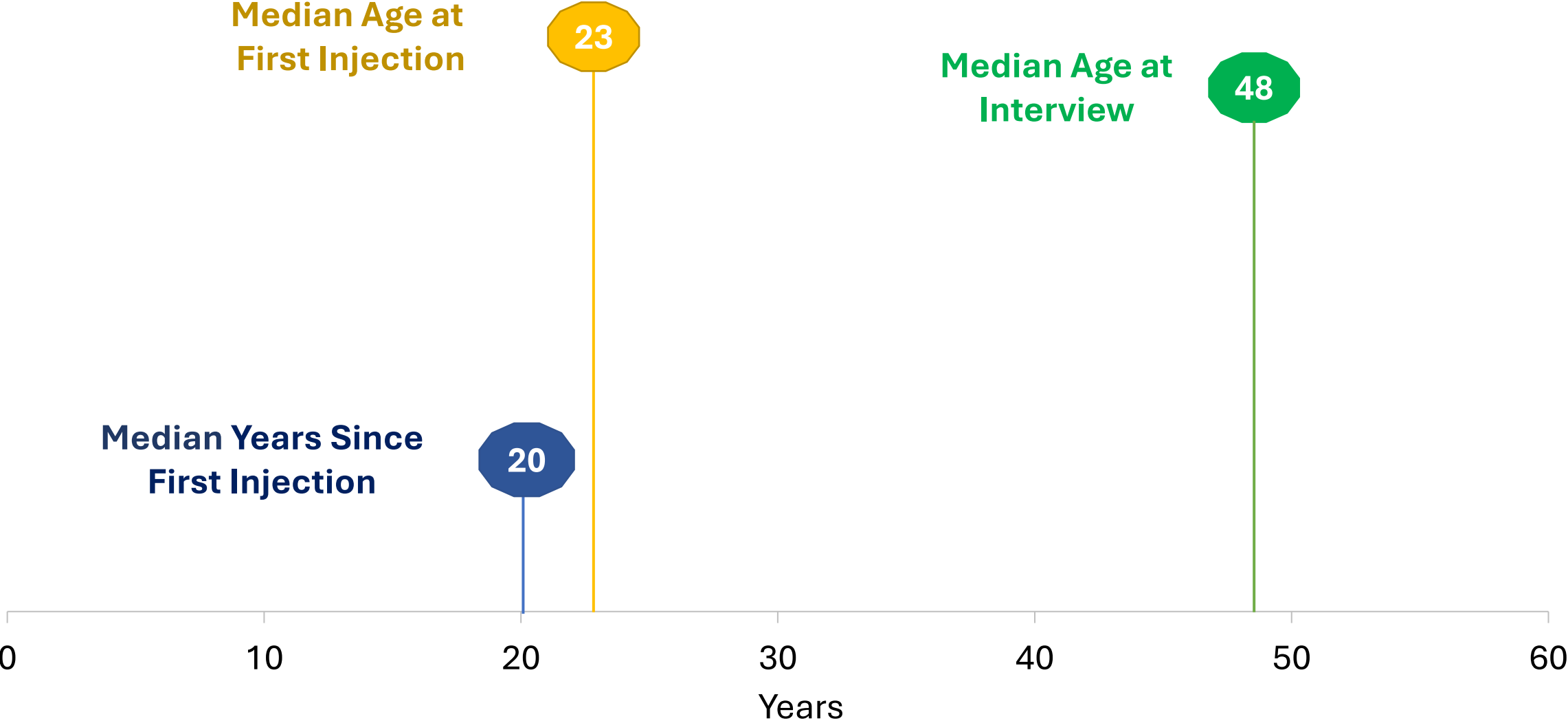
<b>Birthplace</b>	Continental U.S.	86%
	Puerto Rico	8%
	Outside of the U.S.	6%
<b>Annual household income</b>	< \$10,000	67%
	\$10,000 - \$29,999	24%
	\$30,000 - \$49,999	5%
	> \$50,000	4%
<b>Education level</b>	Less than high school	33%
	High school or above	67%
<b>Homeless, past 12 months</b>	No	54%
	Yes	46%

<sup>1</sup>'Other' racial/ethnic category includes American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander.

# Injection Drug Use

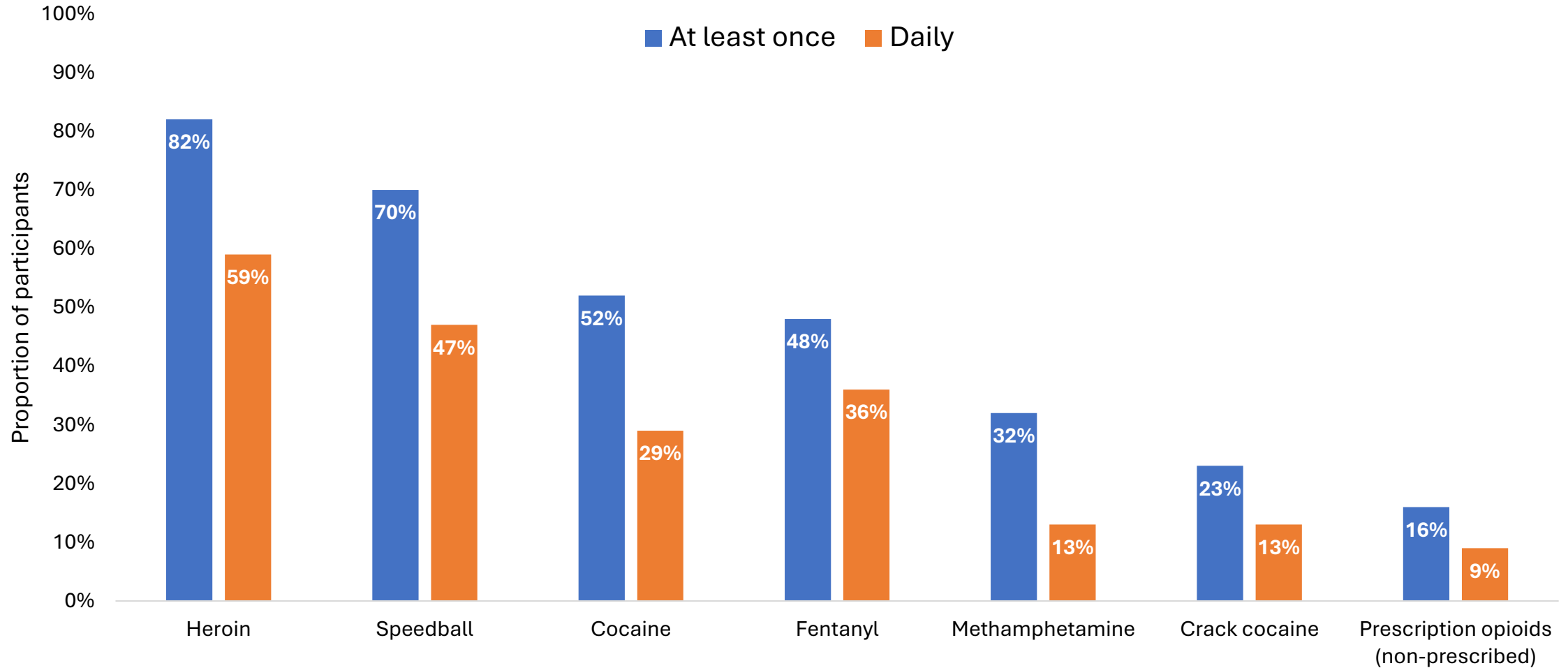
# Lifetime Injection History

NYC NHBS-PWID2024, n=279



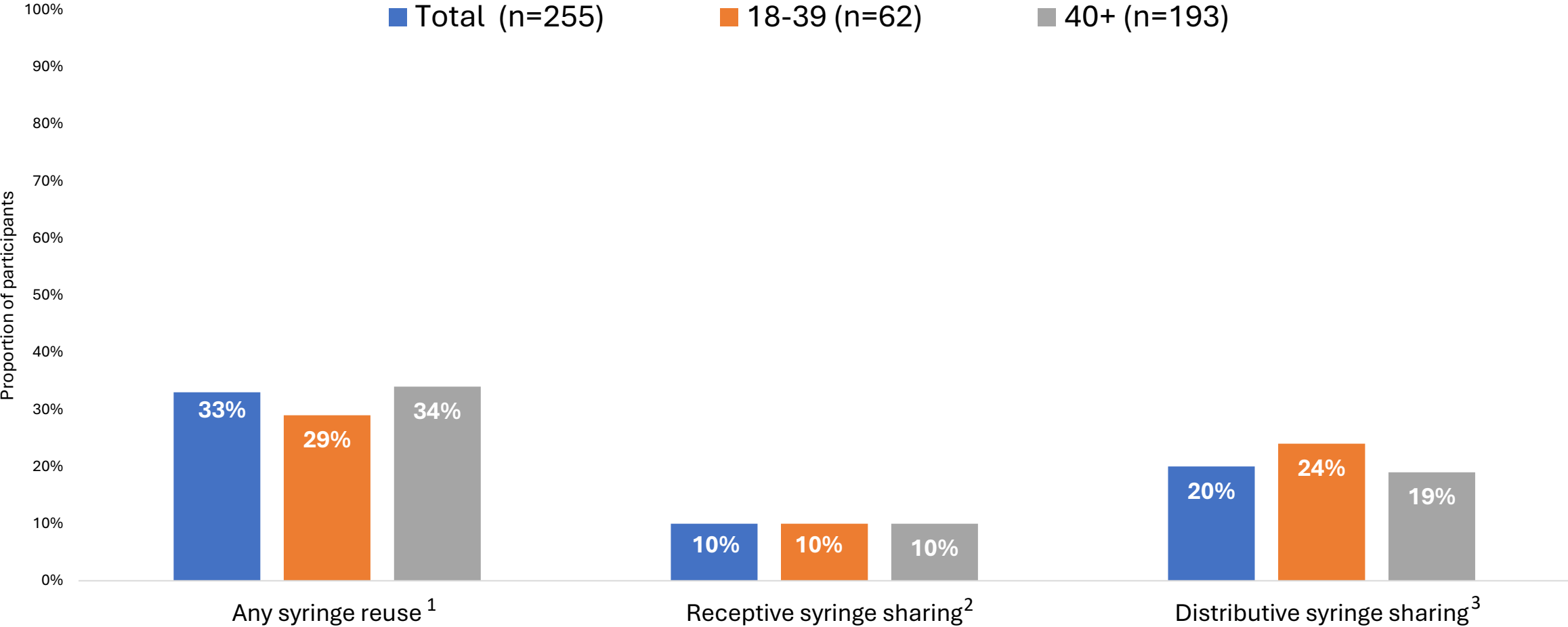
# Frequency of Drugs Injected, Past 12 Months

NYC NHBS-PWID2024, n=279



# Syringe Reuse and Sharing, Overall and by Participant's Age, Past 12 Months

NYC NHBS-PWID2024, n=255 (HIV-/Unknown Status)



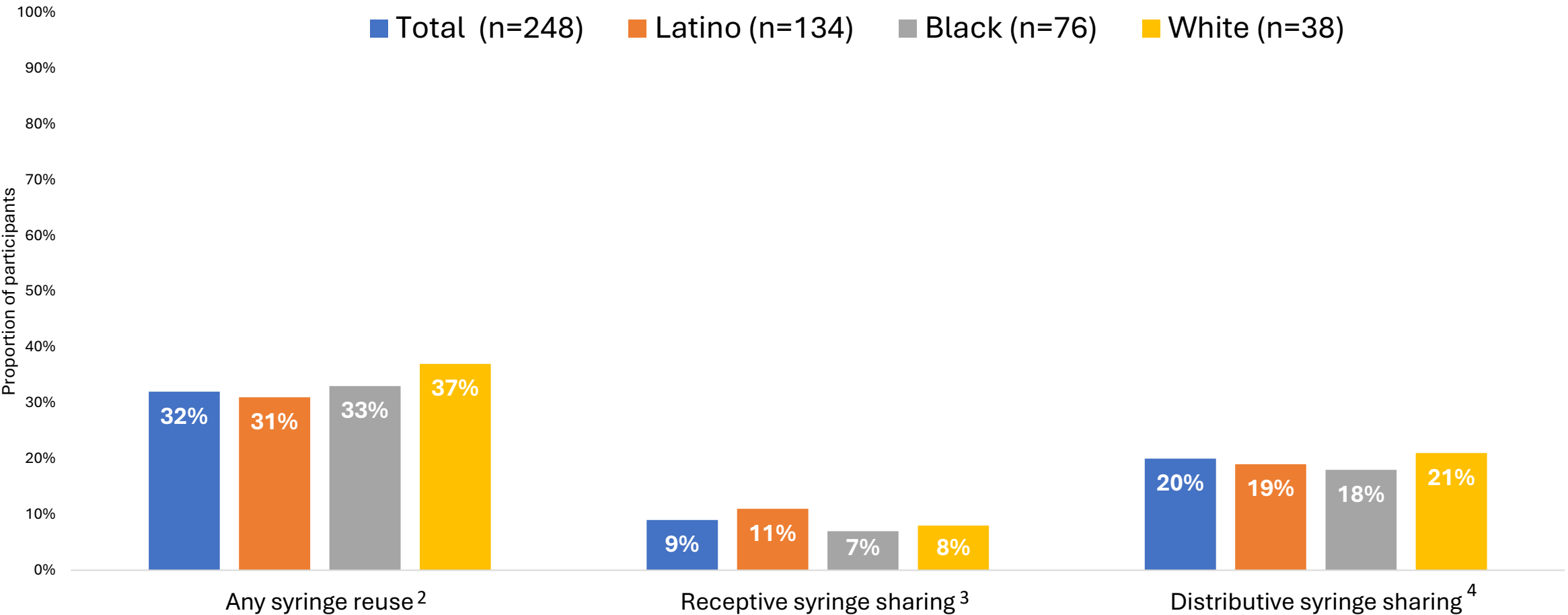
<sup>1</sup>Syringe reuse: not using a new, sterile needle when injecting.

<sup>2</sup>Receptive sharing: using a needle after someone else injected with it.

<sup>3</sup>Distributive sharing: giving a needle to someone else after using it to inject with.

# Syringe Reuse and Sharing, Overall and by Participant's Race or Ethnicity<sup>1</sup>, Past 12 Months

NYC NHBS-PWID2024, n=248 (HIV-/Unknown Status)



<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

<sup>2</sup>Syringe reuse: not using a new, sterile needle when injecting.

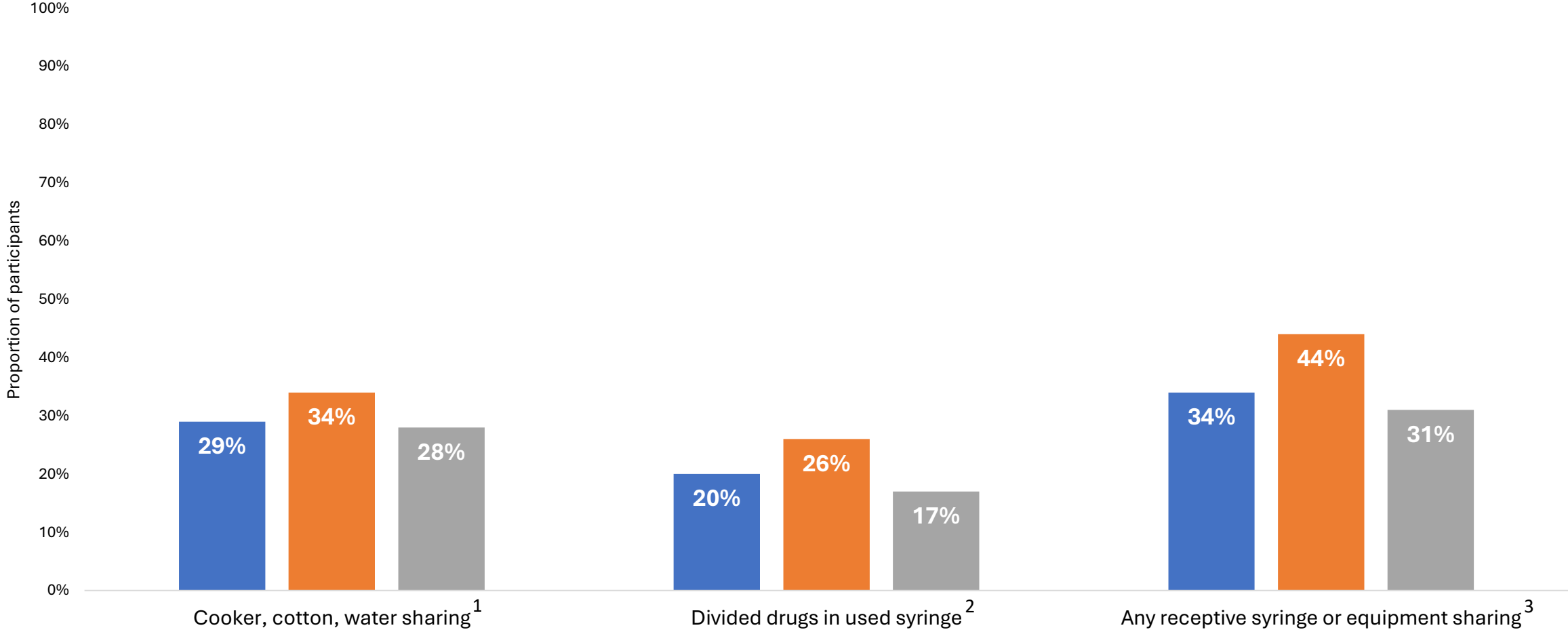
<sup>3</sup>Receptive sharing: using a needle after someone else injected with it.

<sup>4</sup>Distributive sharing: giving a needle to someone else after using it to inject with.

# Other Equipment Sharing, Overall and by Participant's Age, Past 12 Months

NYC NHBS-PWID2024, n=255 (HIV-/Unknown Status)

■ Total (n=255) ■ 18-39 (n=62) ■ 40+ (n=193)



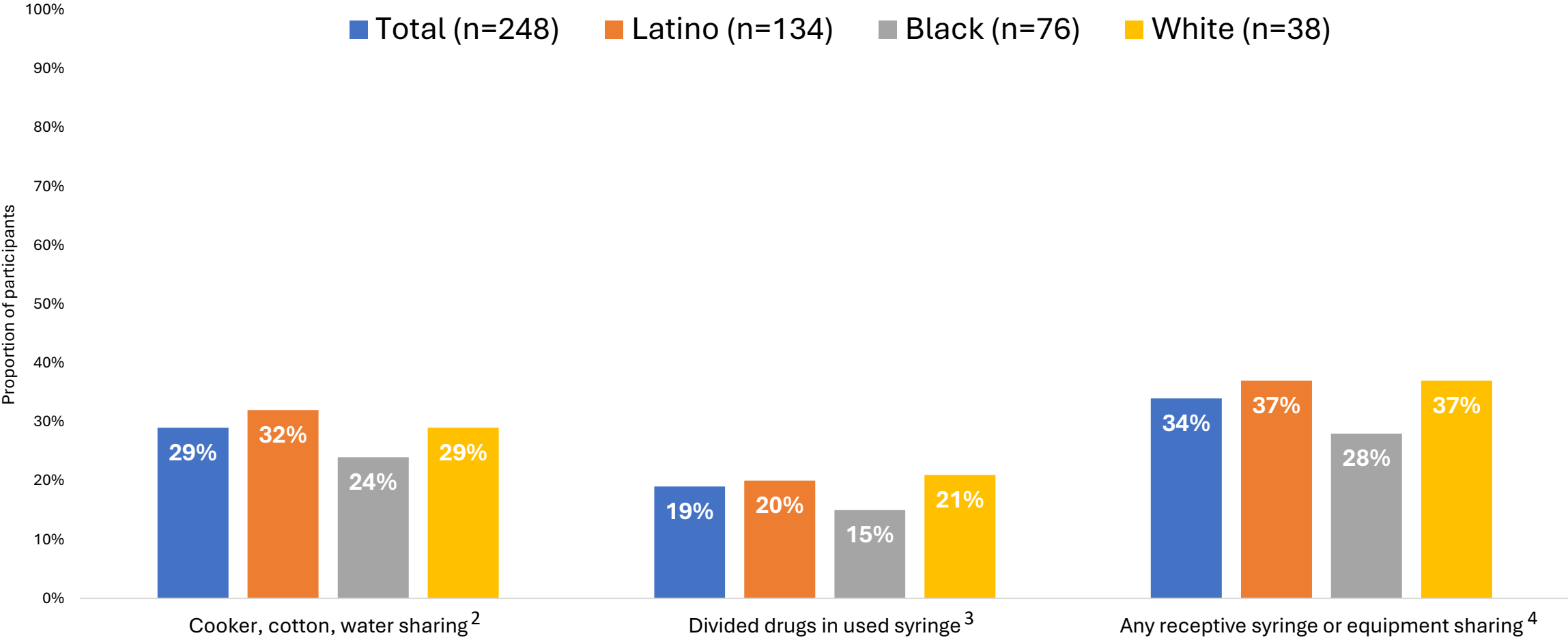
<sup>1</sup>Used the same cooker, cotton, or water for rinsing needles after someone already used it.

<sup>2</sup>Used drugs that had been divided with a syringe that had already been used.

<sup>3</sup>Used a needle, cooker, cotton, or water for rinsing needles after someone already used it or used drugs that had been divided with a syringe that had already been used.

# Other Equipment Sharing, Overall and by Participant's Race or Ethnicity<sup>1</sup>, Past 12 Months

NYC NHBS-PWID2024, n=248 (HIV-/Unknown Status)



<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

<sup>2</sup>Using the same cooker, cotton, or water for rinsing needles after someone already used it.

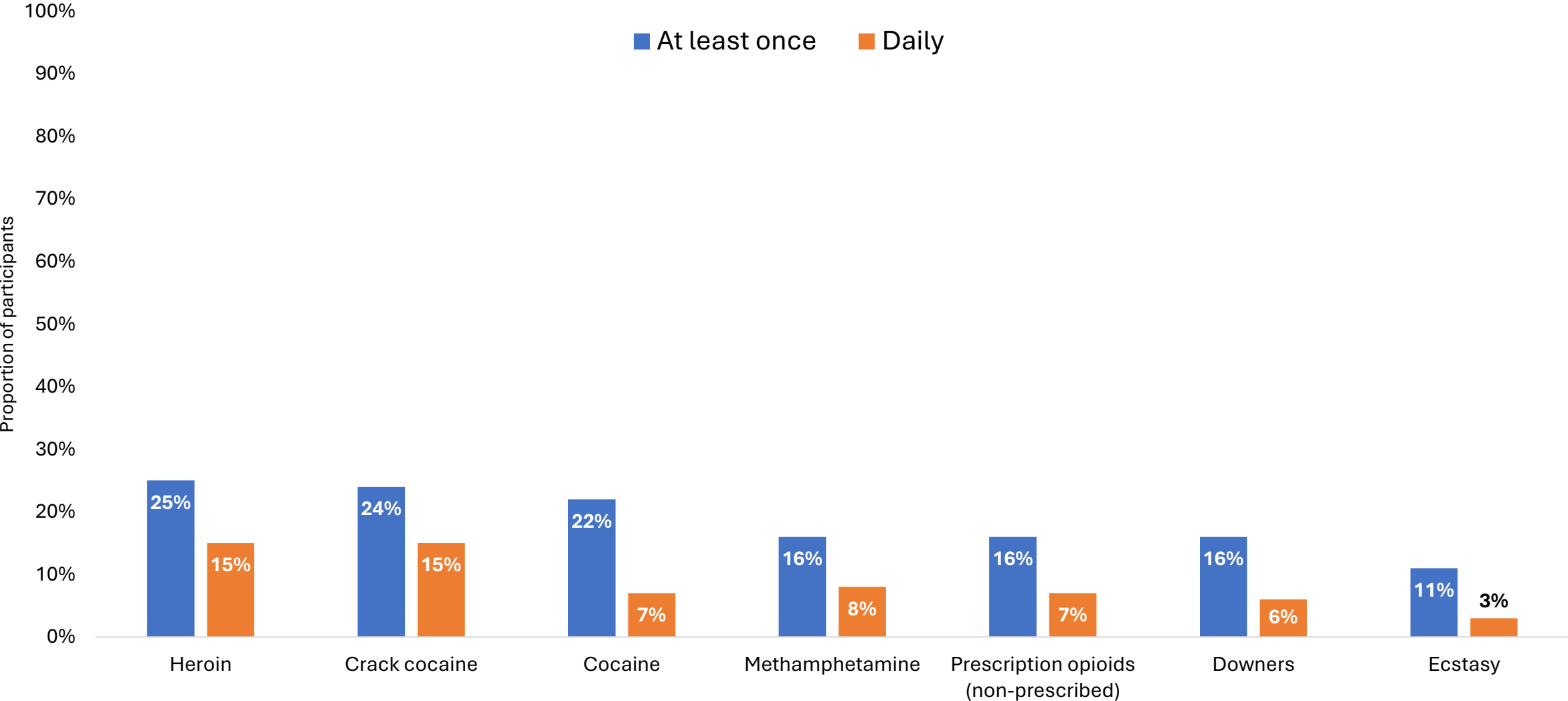
<sup>3</sup>Used drugs that had been divided with a syringe that had already been used.

<sup>4</sup>Used a needle, cooker, cotton, or water for rinsing needles after someone already used it or used drugs that had been divided with a syringe that had already been used.

# Non-Injection Drug Use

# Frequency of Non-Injection Drug Use, Past 12 Months

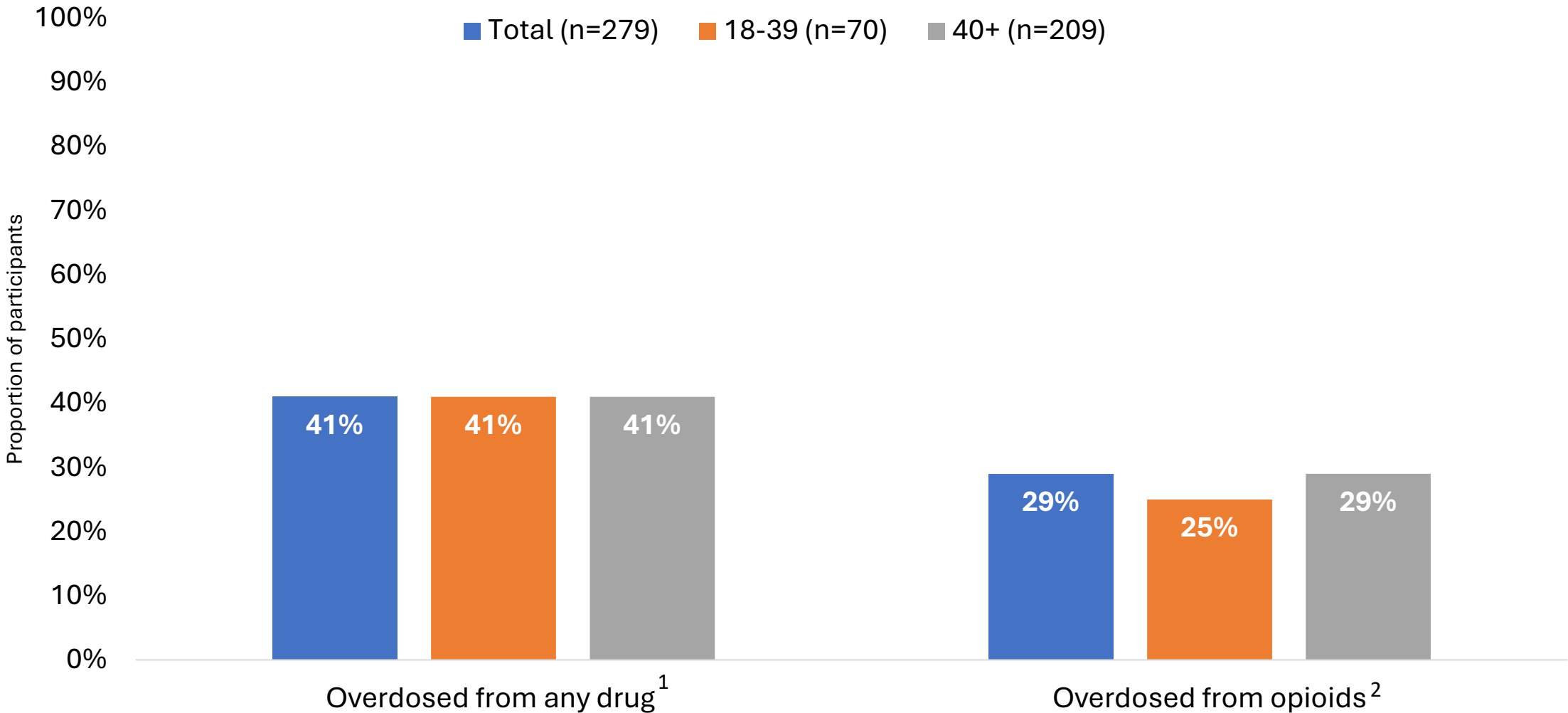
NYC NHBS-PWID2024, n=279



# Overdose and Overdose Prevention

# Experienced a Nonfatal Overdose, Overall and by Participant's Age, Past 12 Months

NYC NHBS-PWID2024, n=279

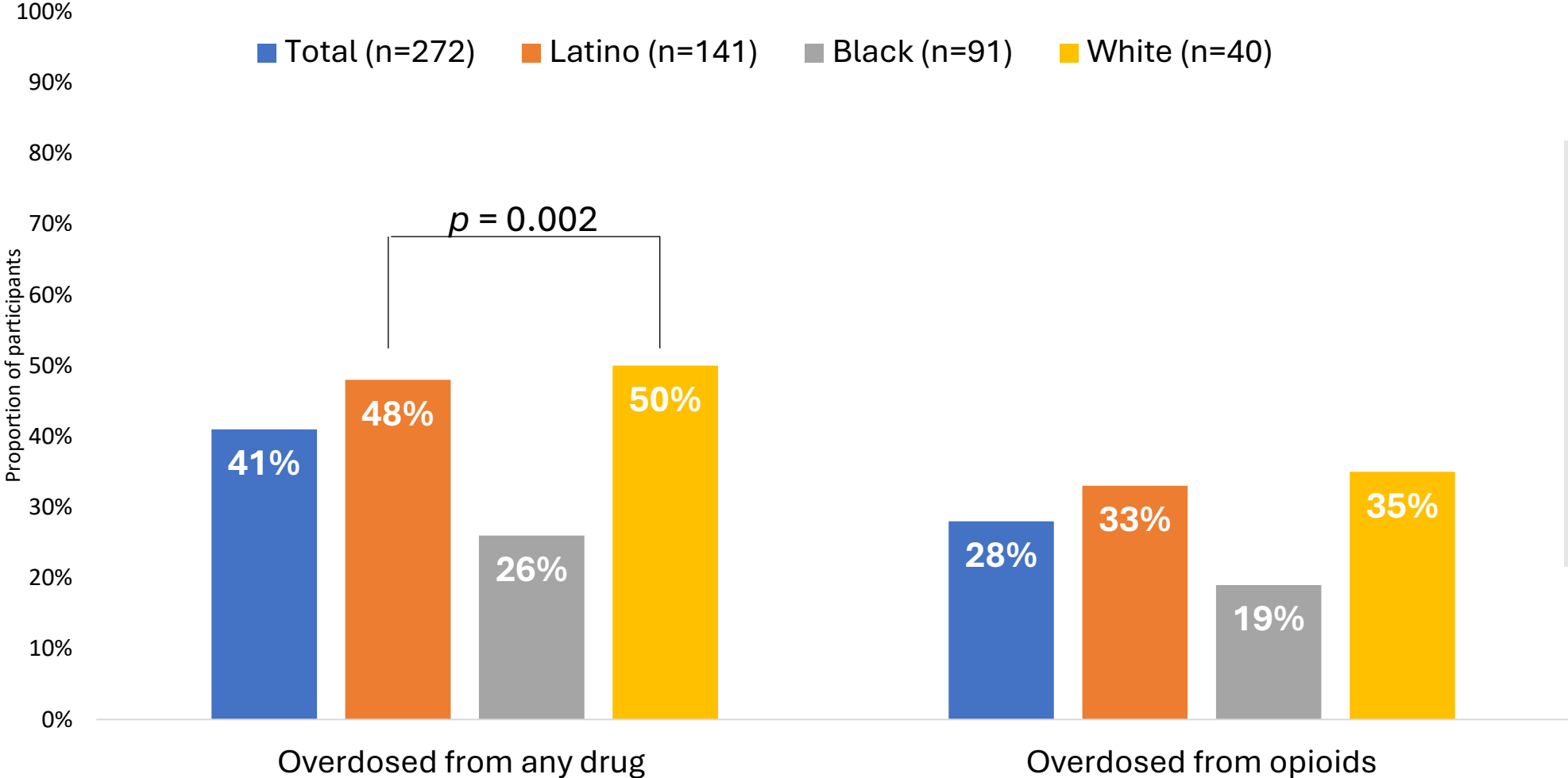


<sup>1</sup>Defined as passing out, turning blue, overheating, overstimulation, or stopped breathing from using drugs.

<sup>2</sup>Defined as passing out, turning blue, or stopped breathing from using heroin or painkillers.

# Experienced a Nonfatal Overdose, Overall and by Participant's Race or Ethnicity<sup>1</sup>, Past 12 Months

NYC NHBS-PWID2024, n=272



**Black PWID were less likely than Latino and White PWID to have experienced a nonfatal overdose in the past 12 months.**

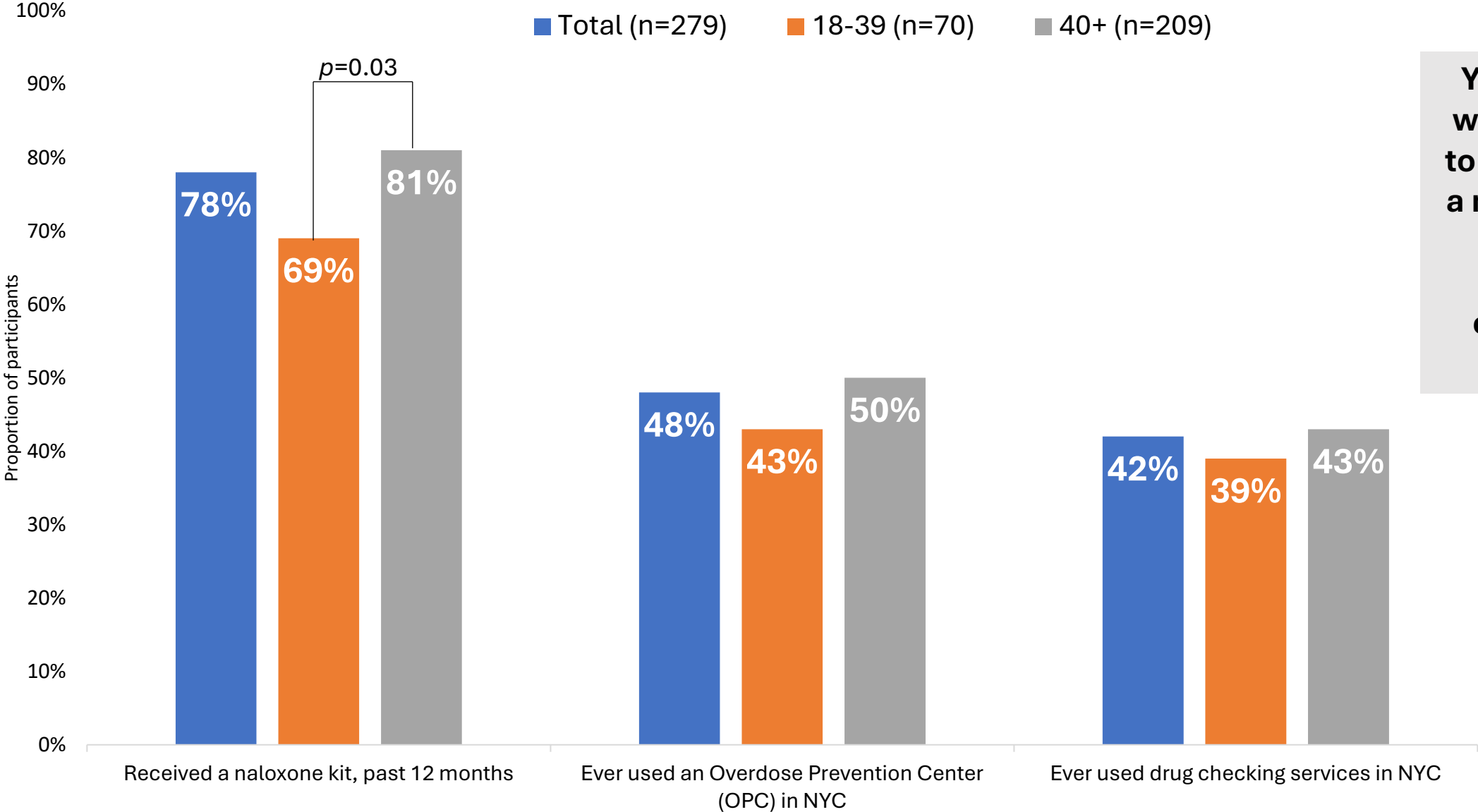
<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

<sup>2</sup>Defined as passing out, turning blue, overheating, overstimulation, or stopped breathing from using drugs.

<sup>3</sup>Defined as passing out, turning blue, or stopped breathing from using heroin or painkillers.

# Overdose Prevention, Overall and by Participant's Age

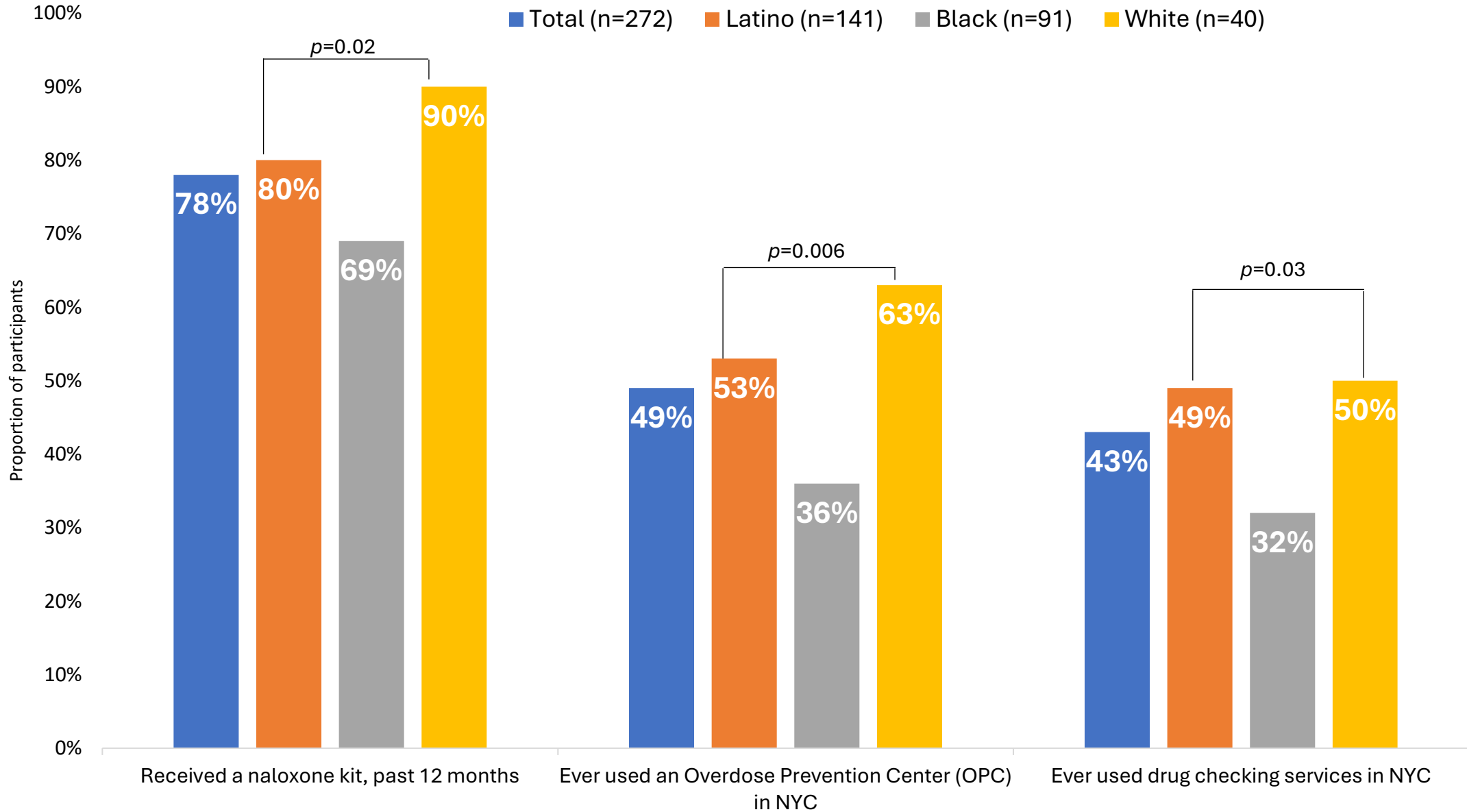
NYC NHBS-PWID2024, n=279



**Younger PWID were less likely to have received a naloxone kit in the past 12 months, compared to older PWID.**

# Overdose Prevention, Overall and by Participant's Race or Ethnicity<sup>1</sup>

NYC NHBS-PWID2024, n=272



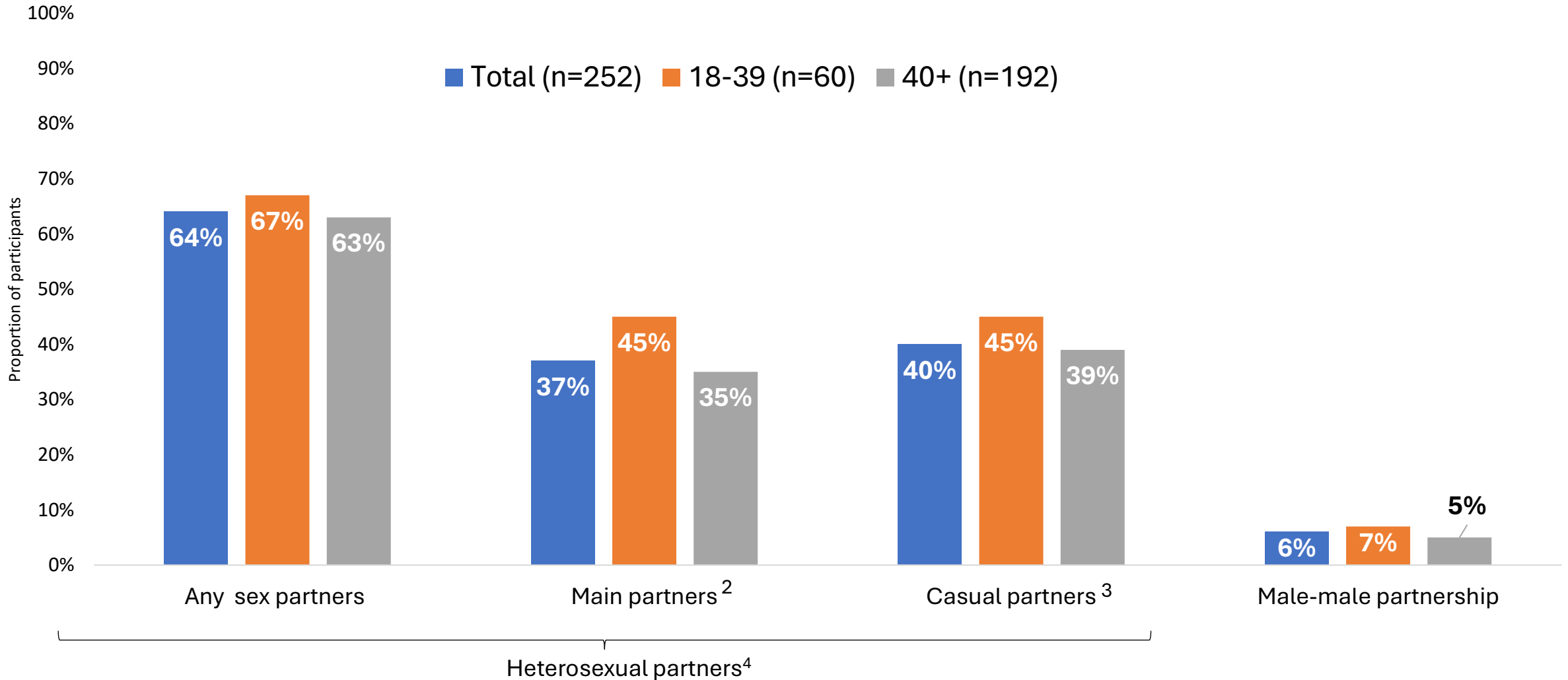
**Black PWID were less likely than white PWID to receive a naloxone kit. They were less likely than white and Latino PWID to use OPCs and were less likely than Latino PWID to use drug checking services.**

<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

# Sexual Activity

# Sexual Partner Type, Overall and by Participant's Age, Past 12 Months

NYC NHBS-PWID2024, n=252 (HIV-/Unknown Status)<sup>1</sup>



<sup>1</sup>Sexual behavior questions were not asked among those who did not identify as cisgender (n=3). Sex is defined as anal or vaginal sex.

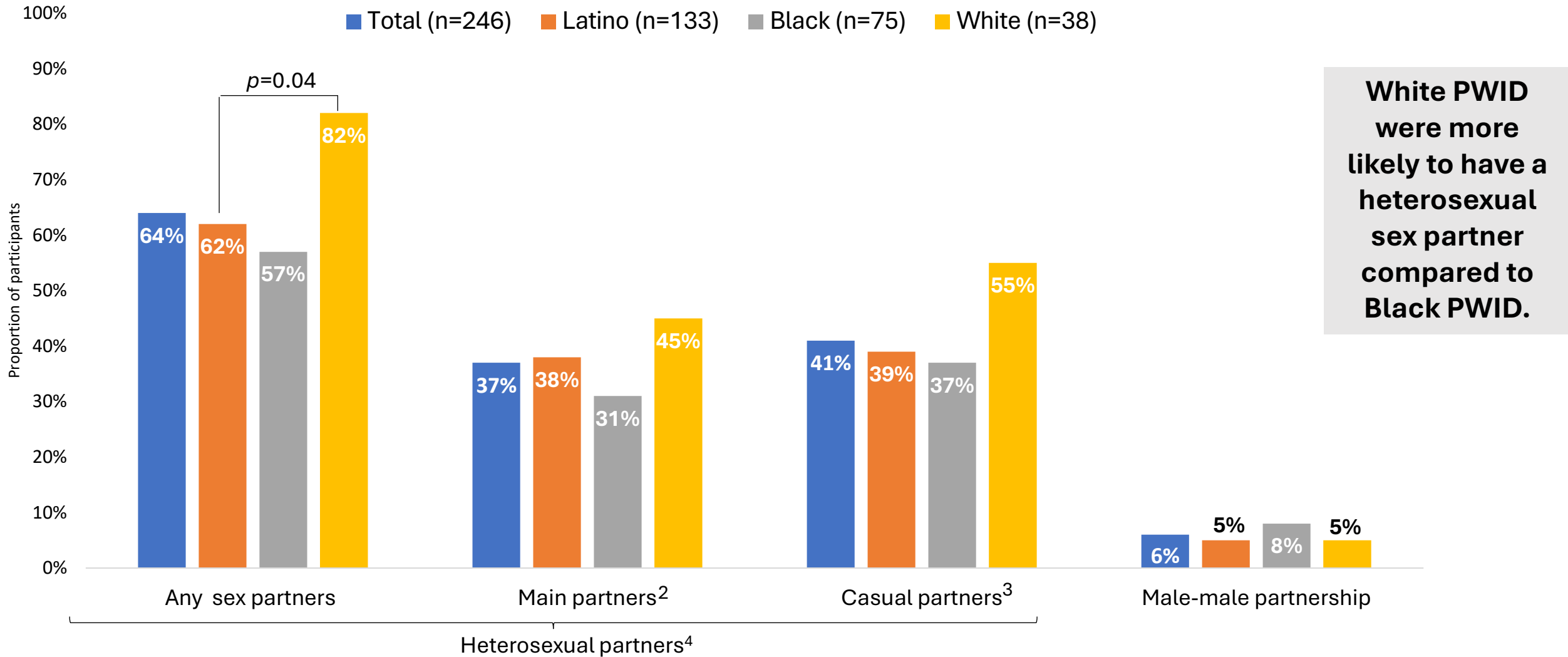
<sup>2</sup>Main partner: a person the respondent had sex with and who they felt committed to above anyone else.

<sup>3</sup>Casual partner: a person the respondent had sex with but who they did not feel committed to or did not know very well.

<sup>4</sup>Variables are not mutually exclusive.

# Sexual Partner Type, Overall and by Participant's Race or Ethnicity<sup>1</sup>, Past 12 Months

NYC NHBS-PWID2024, n=246 (HIV-/Unknown Status)



<sup>1</sup>Sexual behavior questions were not asked among those who did not identify as cisgender (n=3). Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=6). Sex is defined as anal or vaginal sex.

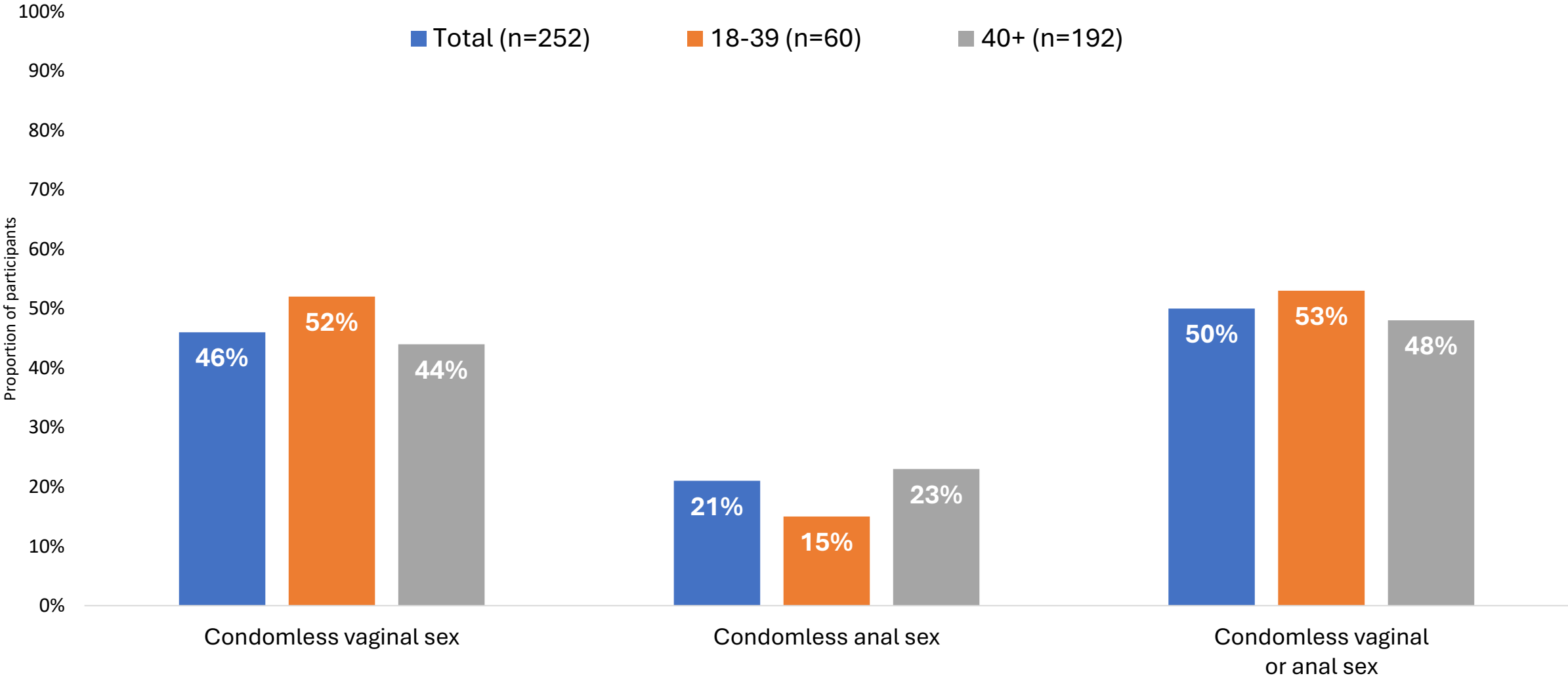
<sup>2</sup>Main partner: a person the respondent had sex with and who they felt committed to above anyone else.

<sup>3</sup>Casual partner: a person the respondent had sex with but who they did not feel committed to or did not know very well.

<sup>4</sup>Variables are not mutually exclusive.

# Sexual Behavior, Overall and by Participant's Age, Past 12 Months

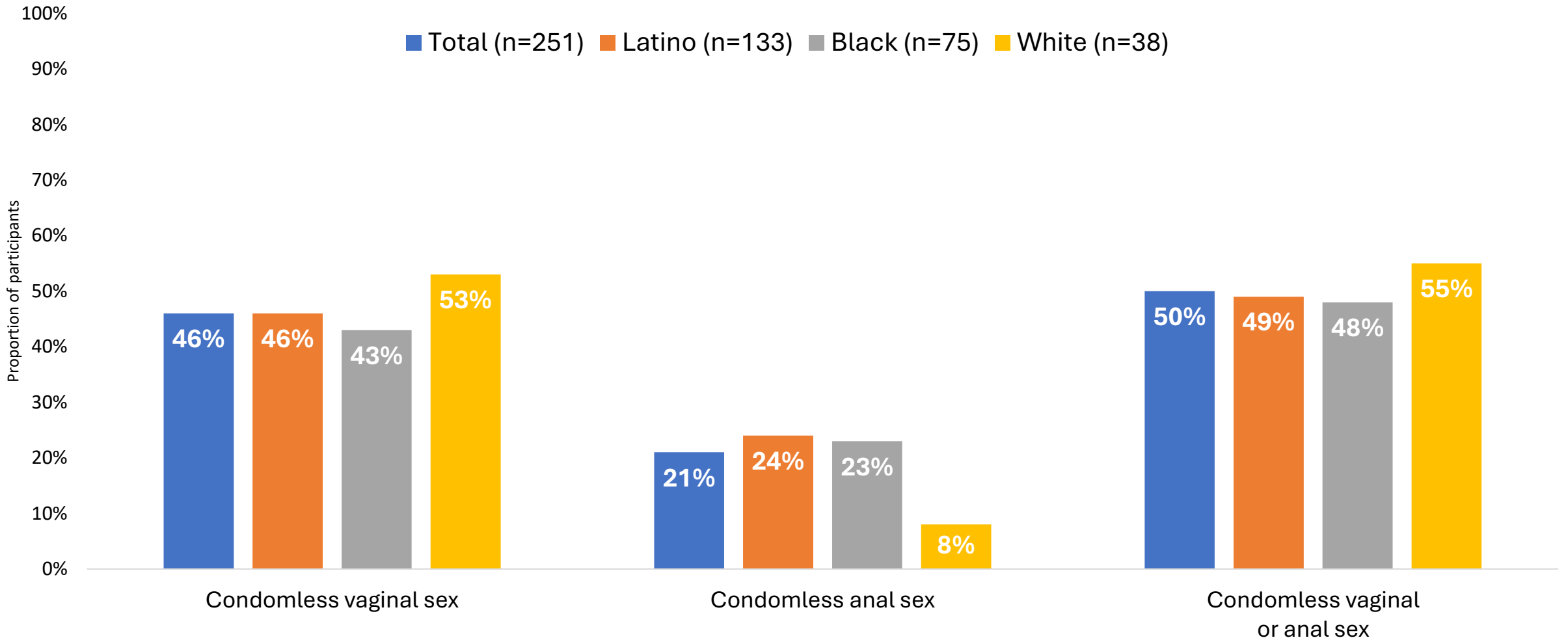
NYC NHBS-PWID2024, n=252 (HIV-/Unknown Status)<sup>1</sup>



<sup>1</sup>Sexual behavior questions were not asked among those who did not identify as cisgender (n=3). Sex is defined as anal or vaginal sex.

# Sexual Behavior, Overall and by Participant's Race or Ethnicity, Past 12 Months

NYC NHBS-PWID2024, n=246 (HIV-/Unknown Status)<sup>1</sup>

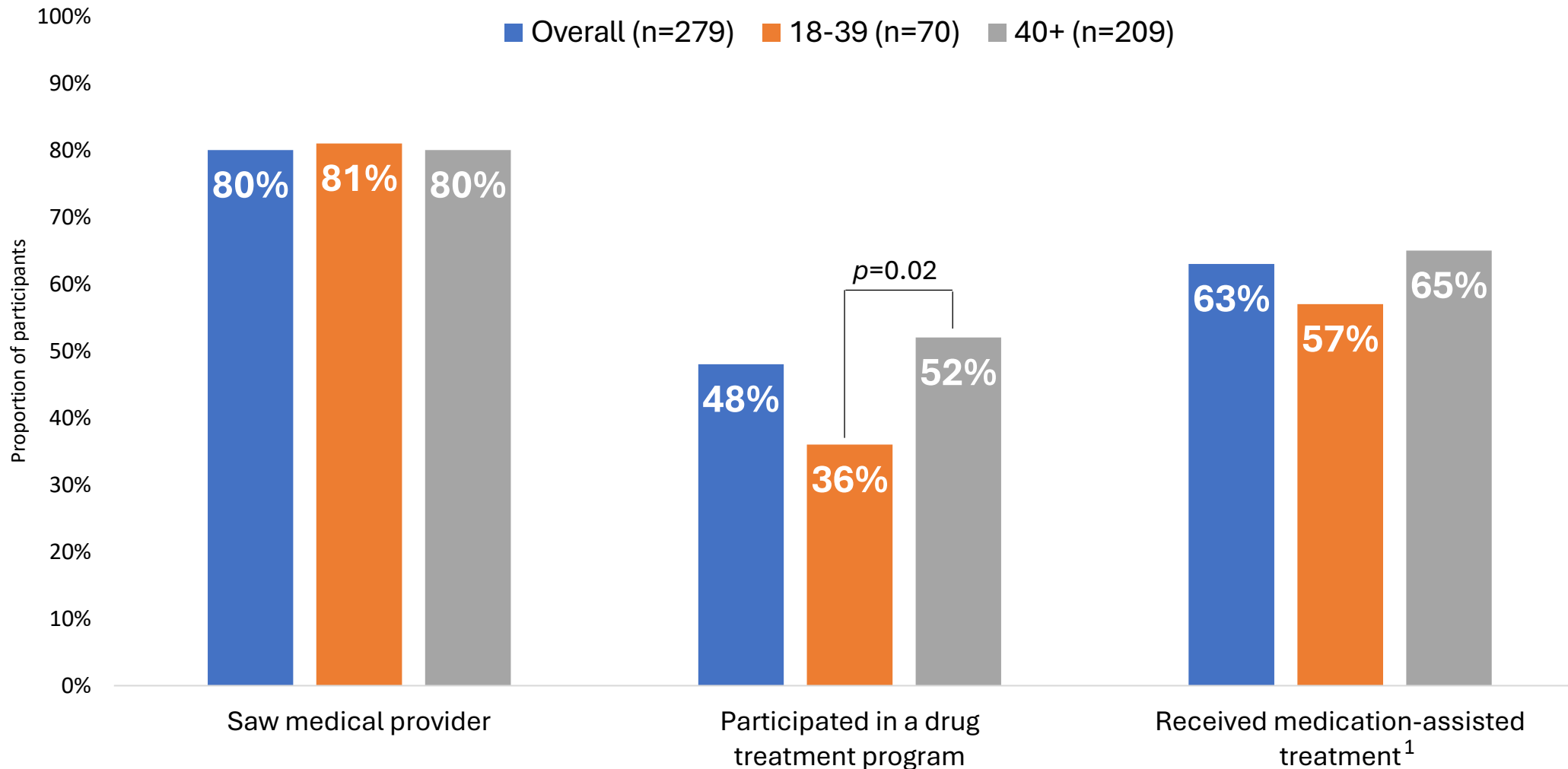


<sup>1</sup>Sexual behavior questions were not asked among those who did not identify as cisgender (n=3). Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=6). Sex is defined as anal or vaginal sex.

# Health Care and HIV Prevention

# Health Care and Drug Treatment, Overall and by Participant's Age, Past 12 Months

NYC NHBS-PWID2024, n=279

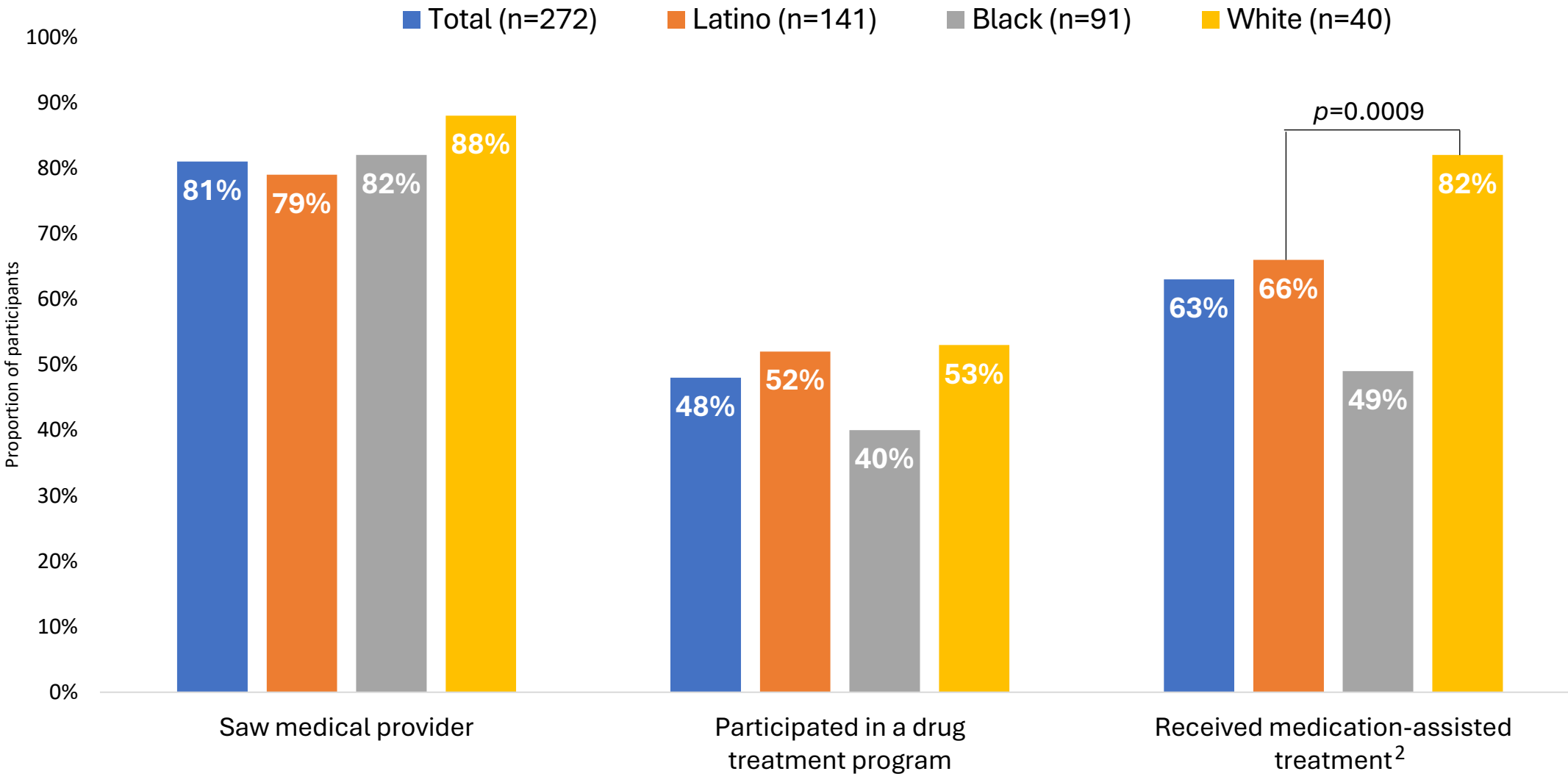


**Older PWID were more likely to have participated in a drug treatment program, compared to younger PWID.**

<sup>1</sup>Among those who reported opioid use in the past 12 months (n=268). Medication treatment included medicines like methadone, buprenorphine, Suboxone or Subutex.

# Health Care and Drug Treatment, Overall and by Participant's Race or Ethnicity<sup>1</sup>, Past 12 Months

NYC NHBS-PWID2024, n=272



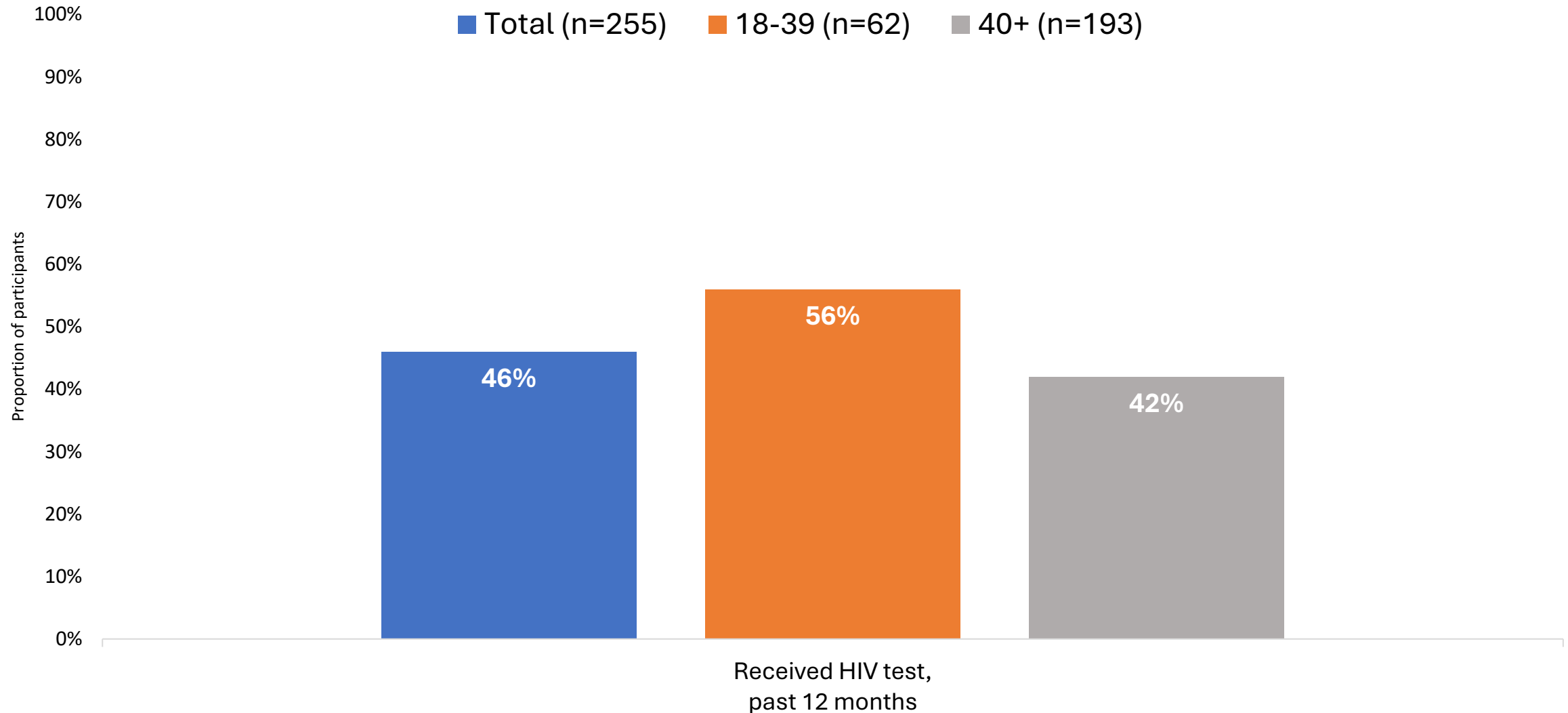
**Black PWID were less likely to have received medication assisted treatment, compared to Latino and white PWID.**

<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

<sup>2</sup>Among those who reported opioid use in the past 12 months (n=261). Medication treatment included medicines like methadone, buprenorphine, Suboxone or Subutex.

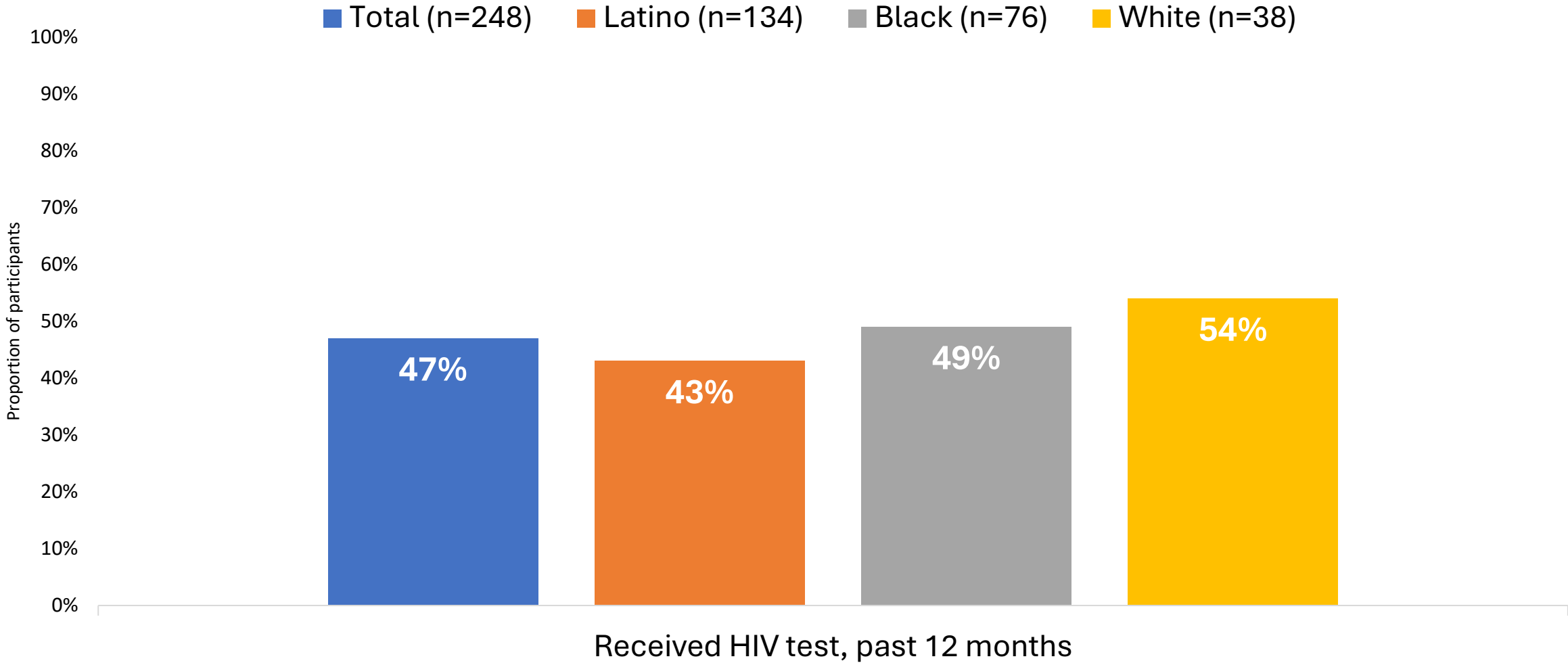
# HIV Testing Uptake, Overall and by Participant's Age, Past 12 Months

NYC NHBS-PWID2024, n=255 (HIV-/Unknown Status)



# HIV Testing Uptake, Overall and by Participant's Race or Ethnicity<sup>1</sup>, Past 12 Months

NYC NHBS-PWID2024, n=248 (HIV-/Unknown Status)

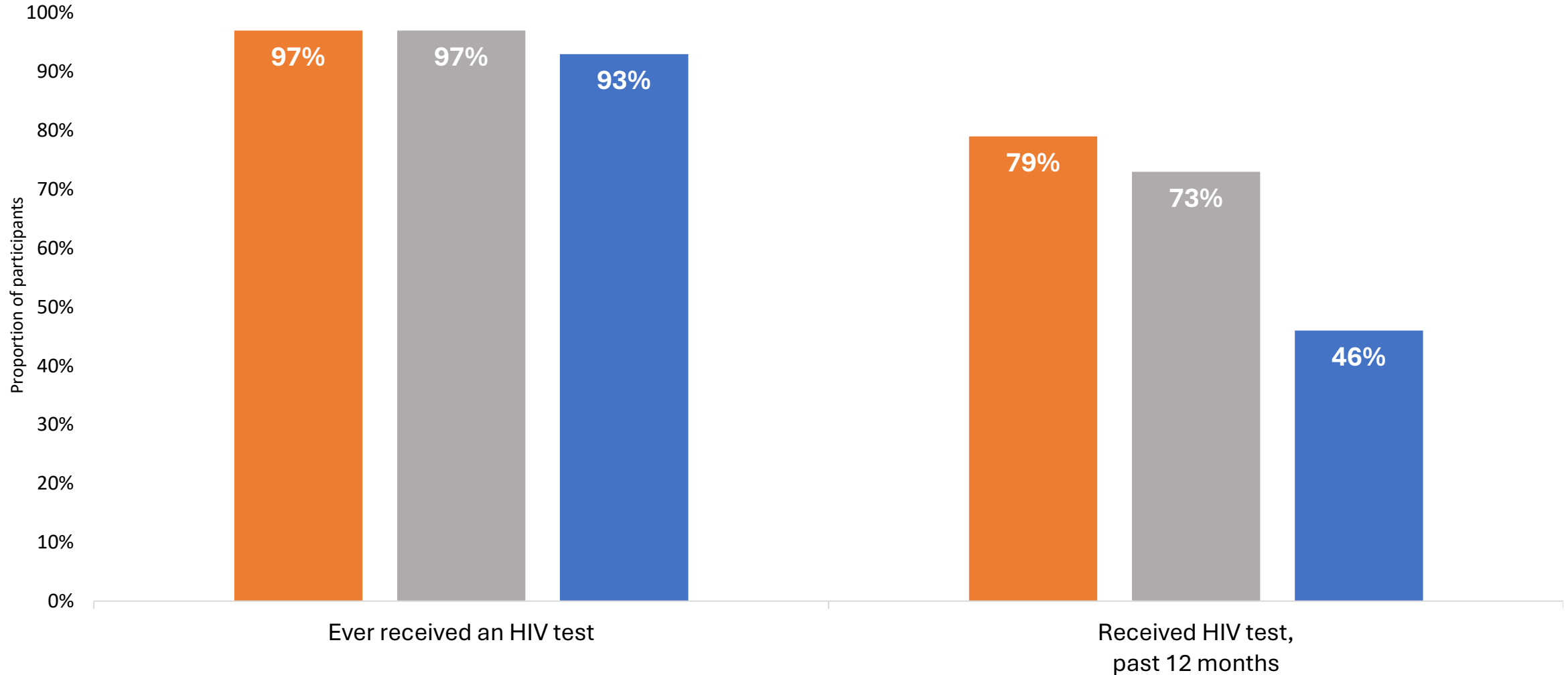


<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

# HIV Testing History Among PWID Across Cycles

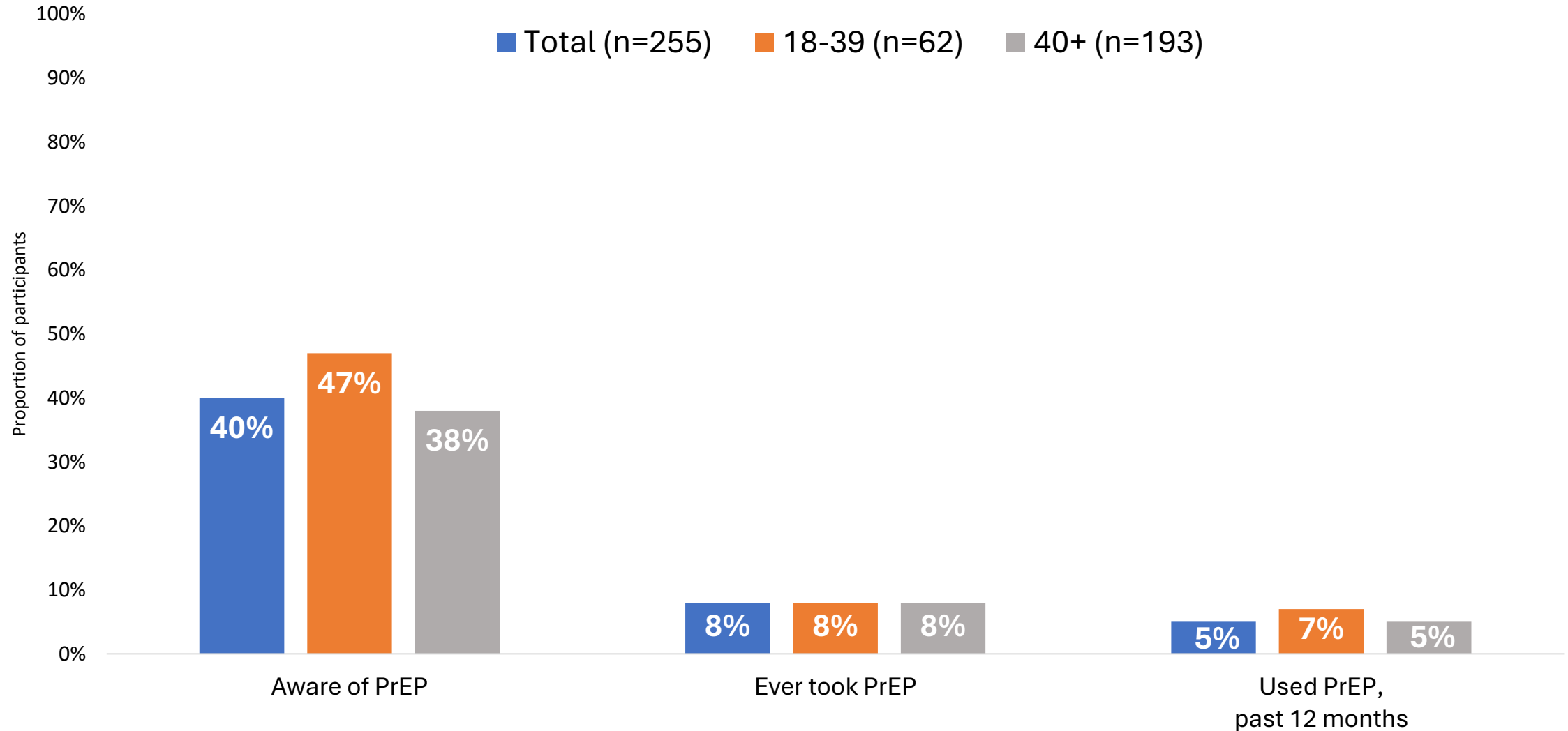
IDU4 (2015), IDU5 (2018), and PWID2024 (HIV-/Unknown Status across all cycles)

■ IDU4 ■ IDU5 ■ PWID2024



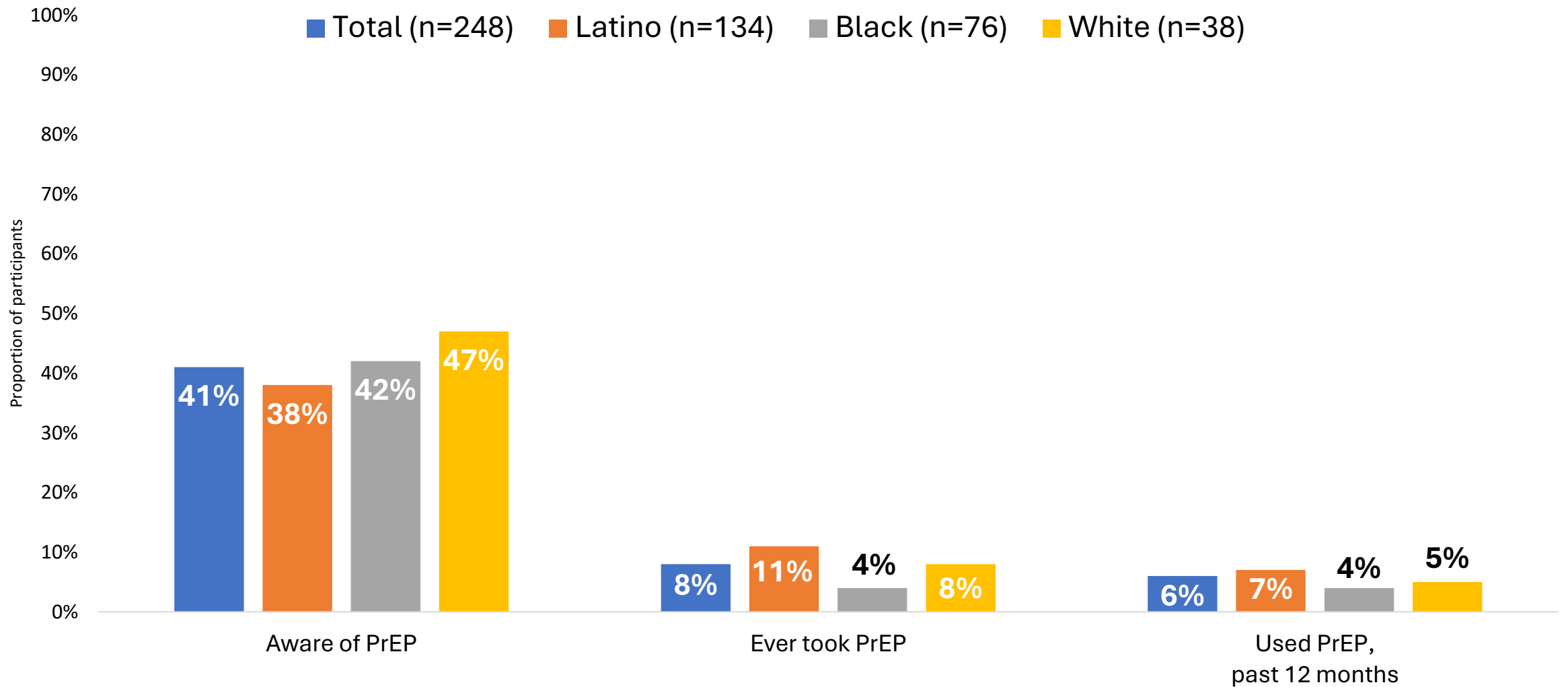
# Pre-Exposure Prophylaxis (PrEP) Awareness and Use, Overall and by Participant's Age

NYC NHBS-PWID2024, n=255 (HIV-/Unknown Status)



# Pre-Exposure Prophylaxis (PrEP) Awareness and Use, Overall and by Participant's Race or Ethnicity<sup>1</sup>

NYC NHBS-PWID2024, n=248 (HIV-/Unknown Status)

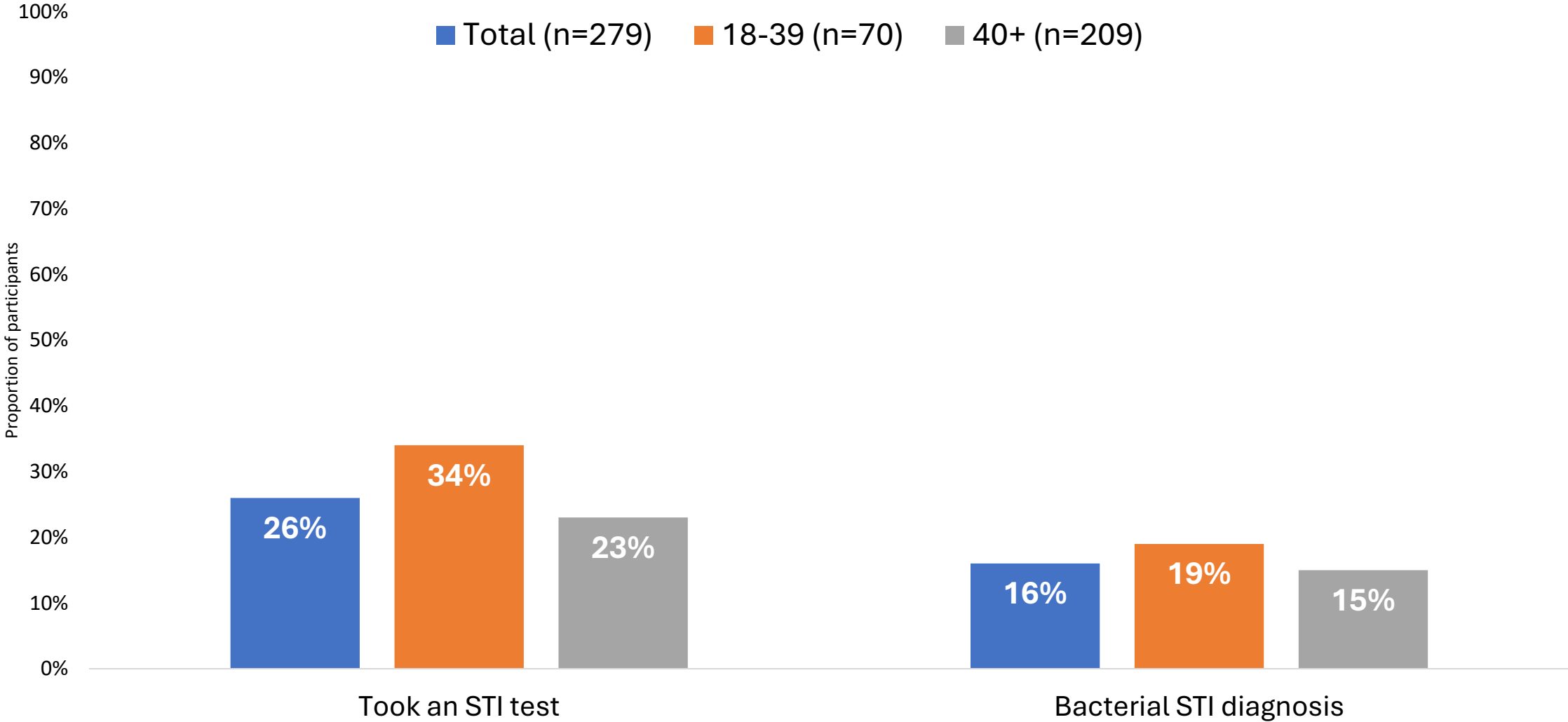


<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

# Sexually Transmitted Infections (STIs)

# STI Testing and Diagnoses, Overall and by Participant's Age, Past 12 Months<sup>1</sup>

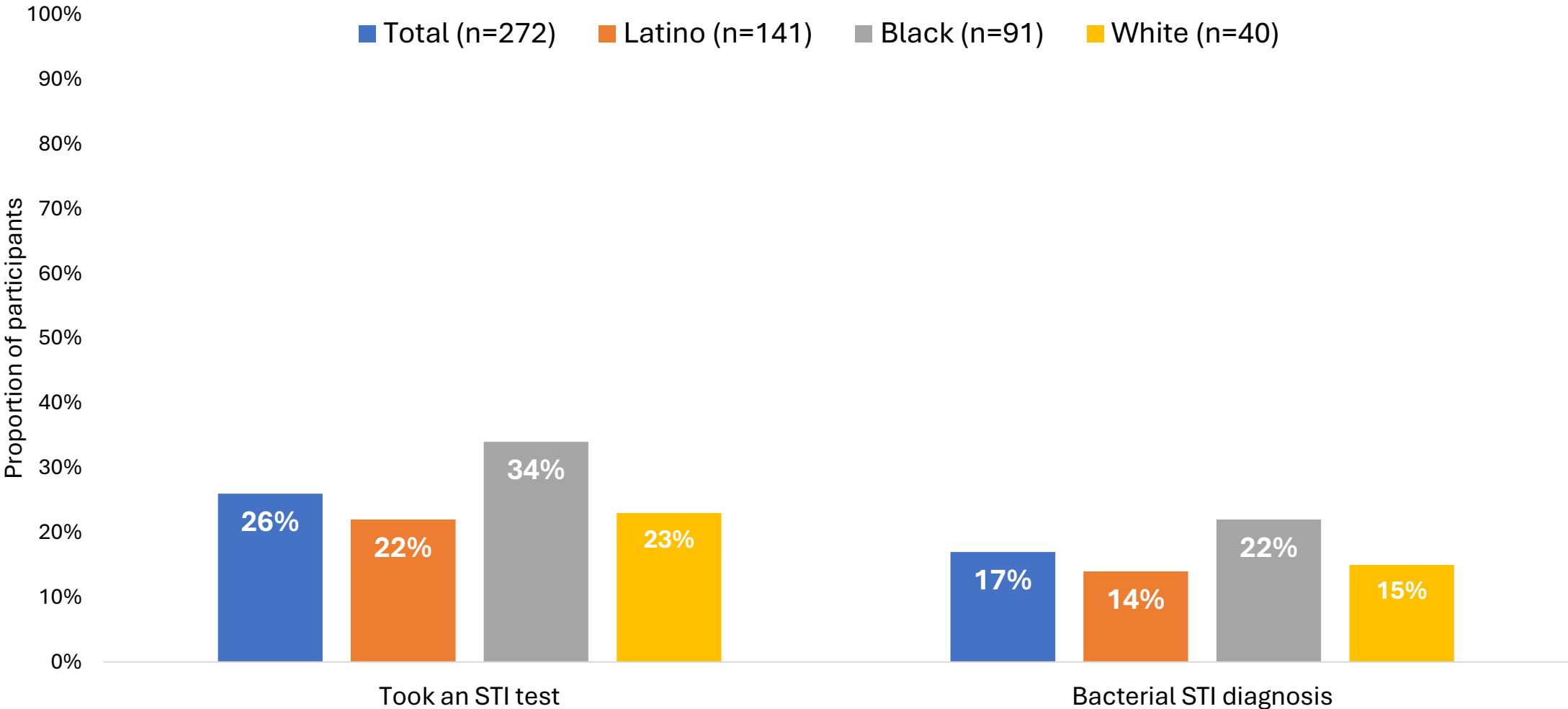
NYC NHBS-PWID2024, n=279



<sup>1</sup>STI testing did not include testing for HIV or hepatitis.

# STI Testing and Diagnoses, Overall and by Participant's Race or Ethnicity<sup>1</sup>, Past 12 Months<sup>2</sup>

NYC NHBS-PWID2024, n=272



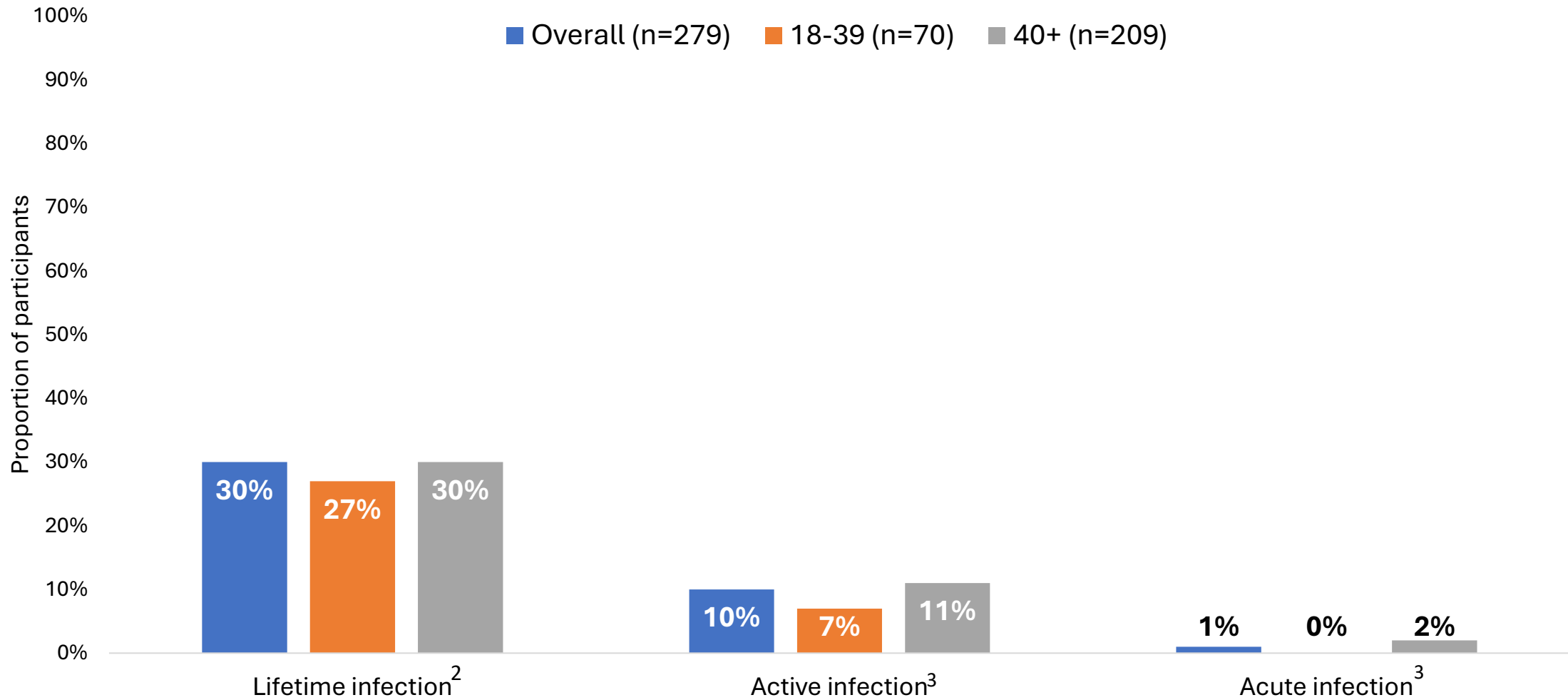
<sup>1</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

<sup>2</sup>STI testing did not include testing for HIV or hepatitis.

# Hepatitis C Virus (HCV)

# NHBS HCV Testing Results, Overall and by Participant's Age, Past 12 Months<sup>1</sup>

NYC NHBS-PWID2024, n=279



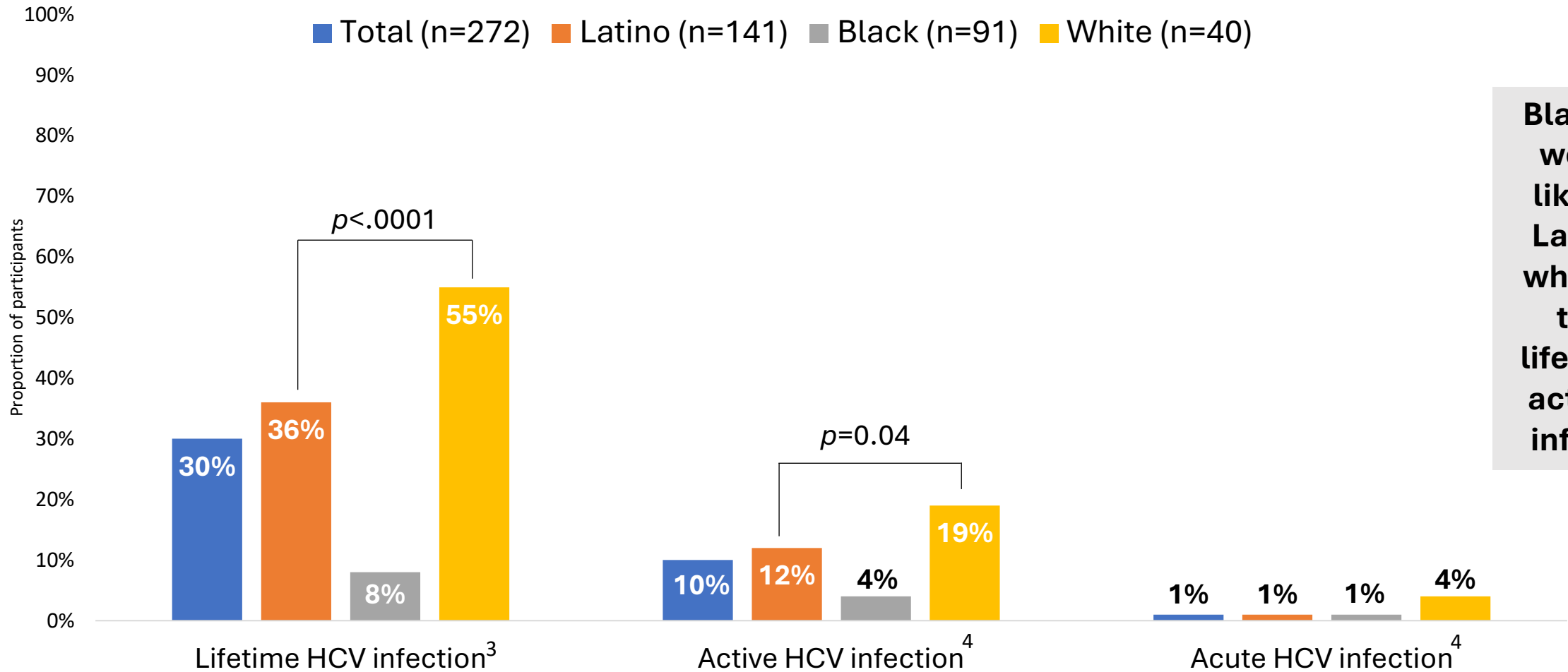
<sup>1</sup>HCV testing was conducted by a rapid HCV test for lifetime infection followed by RNA testing for active infection. Acute infection was defined as having a negative rapid test and a positive RNA test.

<sup>2</sup>Among those who underwent rapid HCV testing (n=274).

<sup>3</sup>Among those who underwent RNA testing (n=234).

# NHBS HCV Testing Results, Overall and by Participant's Race or Ethnicity, Past 12 Months<sup>1,2</sup>

NYC NHBS-PWID2024, n=272



**Black PWID were less likely than Latino and white PWID to have lifetime and active HCV infections.**

<sup>1</sup> HCV testing was conducted by a rapid HCV test for lifetime infection followed by RNA testing for active infection. Acute infection was defined as having a negative rapid test and a positive RNA test.

<sup>2</sup> Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

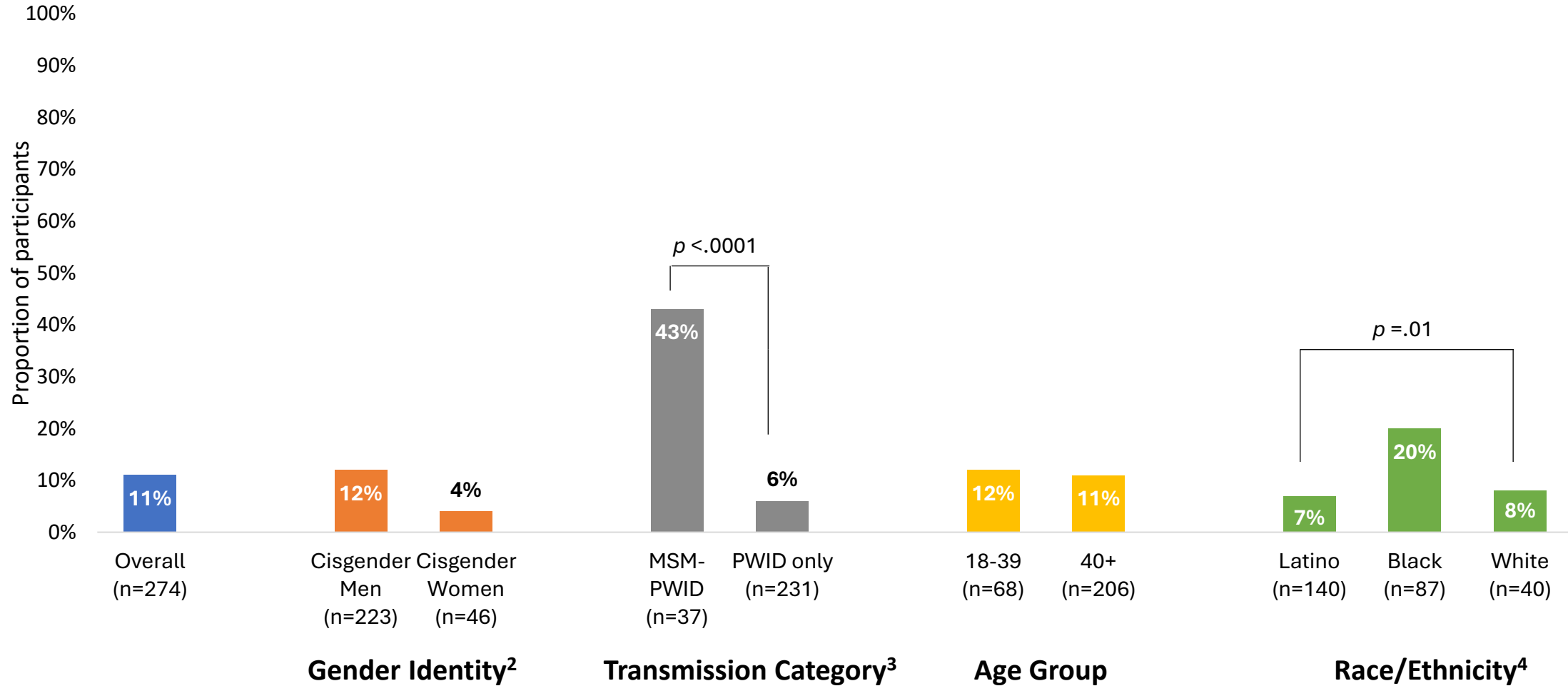
<sup>3</sup> Among those who underwent rapid HCV testing (n=267).

<sup>4</sup> Among those who underwent RNA testing (n=230).

# HIV Prevalence

# HIV Prevalence, Overall and by Selected Characteristics

NYC NHBS-PWID2024, n=274 (Confirmed NHBS HIV Test Result)<sup>1</sup>



**MSM-PWID had a higher HIV prevalence than PWID without a MSM history.**

**Black PWID had a higher HIV prevalence than Latino PWID.**

<sup>1</sup>Confirmed via a rapid-rapid testing algorithm with a final test result. Discordant, indeterminate, and invalid rapid test results and those who received a negative test result but self-reported a positive status are considered unconfirmed test results (n=5).

<sup>2</sup>Participants who did not identify as cisgender were excluded (n=5) due to small sample size.

<sup>3</sup>Participants who did not identify as cisgender were excluded (n=5) as they were not asked sexual behavior questions.

<sup>4</sup>Excludes 'other' race category (American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) due to small sample size (n=7).

# Conclusions

# Summary

- Heroin remains the most common drug injected by participants in our sample.
- Both injection-related and sexual behaviors pose a risk for increased HIV transmission to PWID.
  - Among PWID who reported an HIV-negative or unknown status, 34% reported any receptive sharing of injection-related equipment and 50% reported any condomless vaginal or anal sex in the past 12 months.

# Summary

- Among PWID who reported an HIV-negative or unknown status, 93% of participants reported that they took an HIV test in their lifetime. However, less than half (46%) of PWID took an HIV test in the past 12 months, a 33% decrease since 2015.
- Among PWID who reported an HIV-negative or unknown status, awareness of PrEP (40%) and PrEP use (5%) remains historically lower than in other priority populations.

# Summary

- Black PWID were less likely to have a nonfatal overdose. Yet, Black people had the highest overdose death rate in NYC in 2024.<sup>1</sup> Given that Black PWID were less likely to access overdose prevention, they should be considered a priority population in overdose prevention efforts.
- Black PWID had the highest HIV prevalence, but lowest prevalence of current or past HCV infection. Further exploration into non-injection-related drivers of HIV transmission among Black PWID is needed.
- MSM-PWID continue to have a high burden of HIV. We did not find any differences in HIV prevalence by gender identity or age group.

# Strengths

- NHBS is the only ongoing national data collection system for biobehavioral HIV surveillance
- A standardized survey and protocol are implemented nationally
- RDS can reach underrepresented populations who may not access treatment programs and other institutionalized settings
- Local questions were developed to explore relevant themes specific to PWID in NYC
- HIV status was confirmed via a rapid-rapid testing algorithm

# Limitations

- Findings may not be representative of the PWID population in NYC
- Only those who are socially networked to other PWID can be recruited through RDS
- Survey data were collected by self-report and may be biased by recall error or social desirability

# NYC NHBS-PWID2024 Team

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CDC Grant: 5 NU62PS924775



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