

HIV Risk and Prevalence among Heterosexually Active Adults at Increased Risk for HIV in New York City

2019 National HIV Behavioral Surveillance Study

NYC

Health
Disease Control
Bureau of HIV

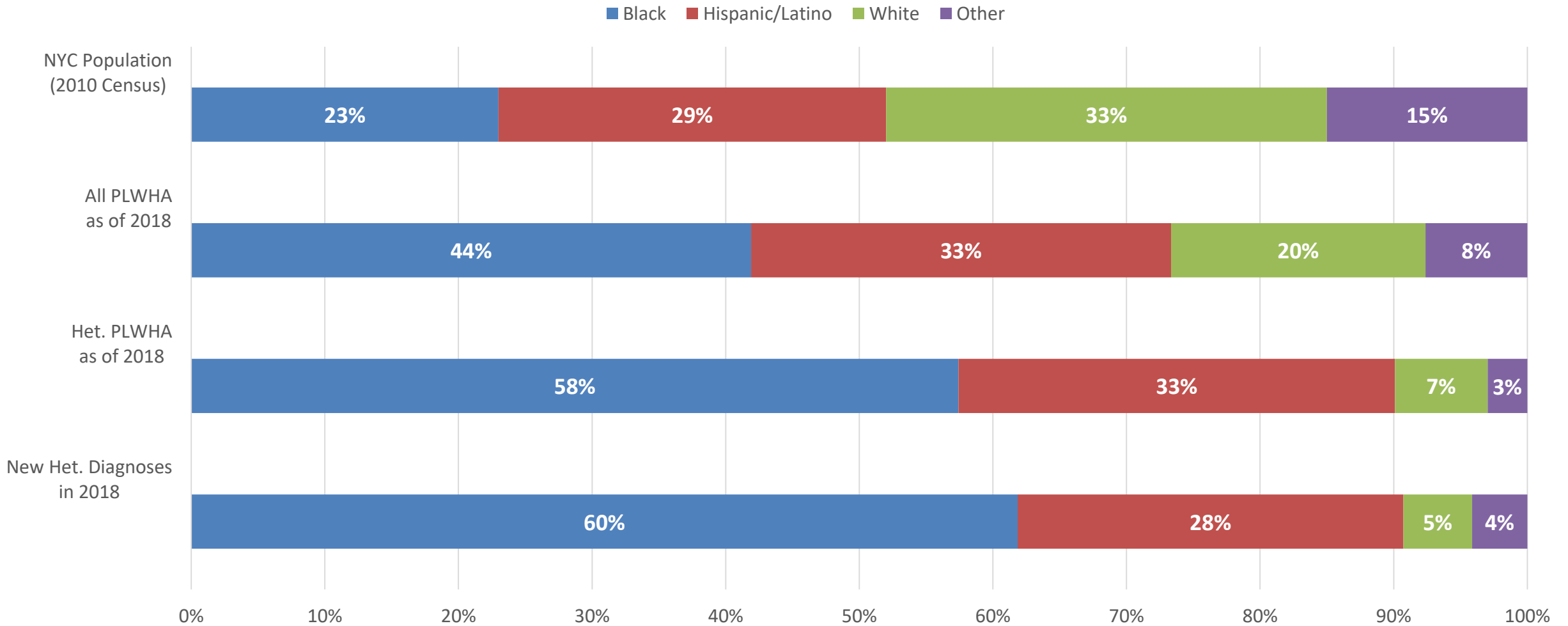
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ENDING THE EPIDEMIC

Background

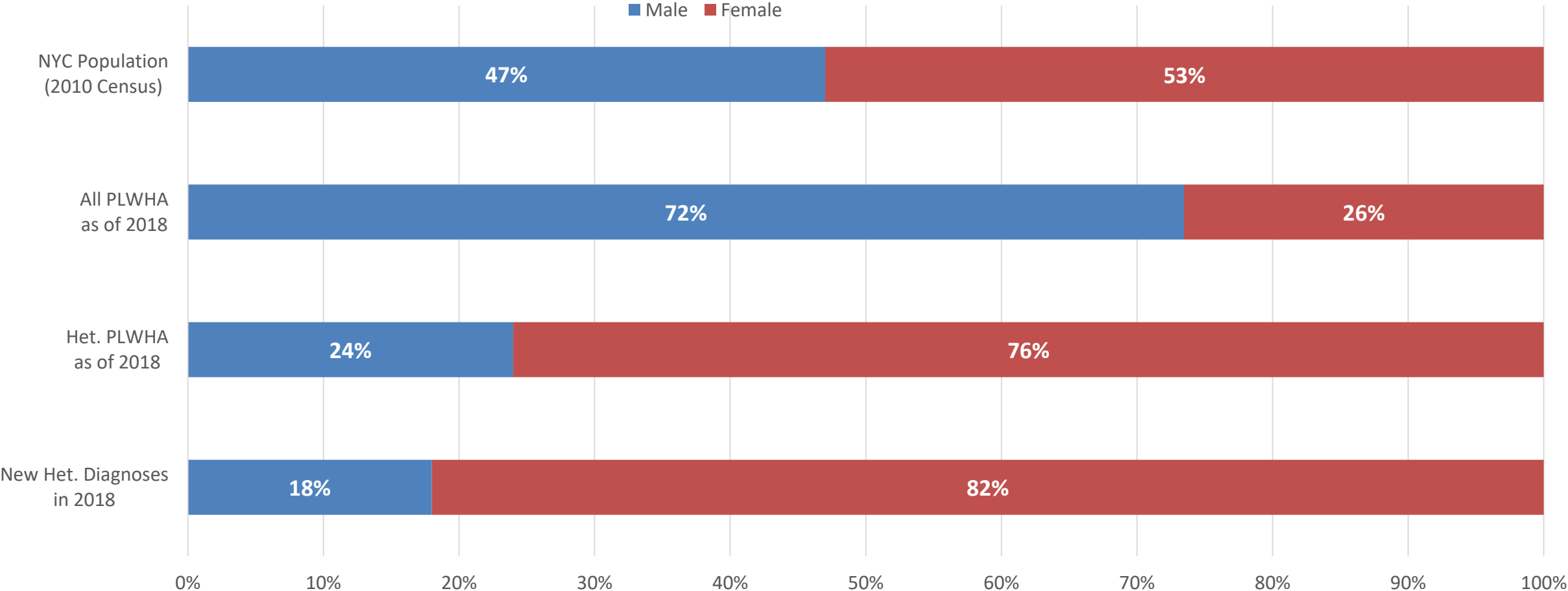
- Heterosexual transmission* HIV case surveillance in New York City (NYC)
 - 358 new diagnoses of heterosexual transmission in 2018
 - *19% of all new diagnoses and 24% of new diagnoses with known risk*
 - 24,495 PLWHA with heterosexual transmission as of 2018
 - *20% of all PLWHA and 24% of PLWHA with known risk*
- Heterosexual transmission case categorization is complicated by need for known partner risks
 - Heterosexual transmission is partially driven by sexual partnerships with partners at increased risk (including men who have sex with men [MSM] and people who inject drugs [PWID]).
 - Sexual partnerships are often unknown.

Racial/Ethnic Disparities in Heterosexual HIV Transmission in NYC



Compared to the overall NYC population, PLWHA with heterosexual transmission and new diagnoses are disproportionately Black.

Gender Disparities in Heterosexual HIV Transmission in NYC



PLWHA with heterosexual transmission and new diagnoses are disproportionately female.

National HIV Behavioral Surveillance (NHBS)

- Ongoing, cyclical study of three groups at risk for HIV: MSM, PWID, and heterosexually-active adult at increased risk for HIV (HET).
 - Conducted in 22 cities through the US
 - Funded by CDC, designed collaboratively
 - Cross-sectional study design
 - Anonymous, structured interview and optional HIV testing
- Data were collected for the fifth cycle among HET (“HET5”) during June-October 2019.

NHBS-HET5 Objectives

- Determine the frequency and correlates of HIV risk behaviors
- Assess HIV testing history and patterns
- Assess exposure to and use of HIV prevention services
- Estimate the prevalence of HIV infection
- Understand trends in HIV risk and prevalence

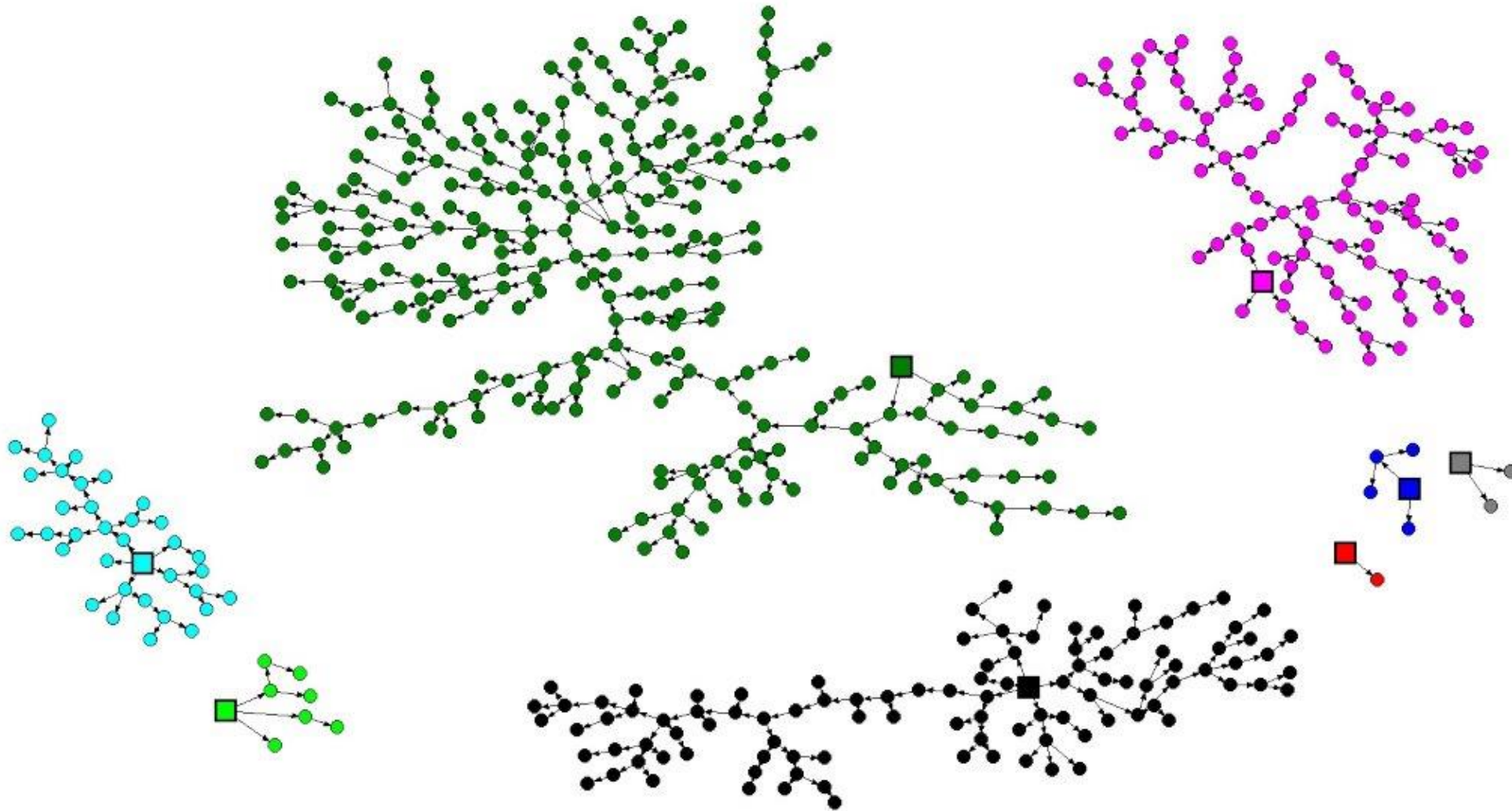
NHBS-HET5 Eligibility Criteria

- Survey eligibility criteria:
 - Self-identify as female and had vaginal or anal sex with a male sex partner in the past 12 months or self-identify as male and had vaginal or anal sex with a female sex partner in the past 12 months
 - Is between 18 and 60 years of age
 - Be a resident of NYC metropolitan statistical area
 - Speaks English or Spanish
- Final sample eligibility criteria (“HET definition”):
 - Household income does not exceed 150% of the HHS poverty guidelines adjusted for NYC’s cost of living
 - Has not injected drugs in the past 12 months
 - If male, has not had male sex partners in the past 12 months

Recruitment through Respondent-Driven Sampling (RDS)

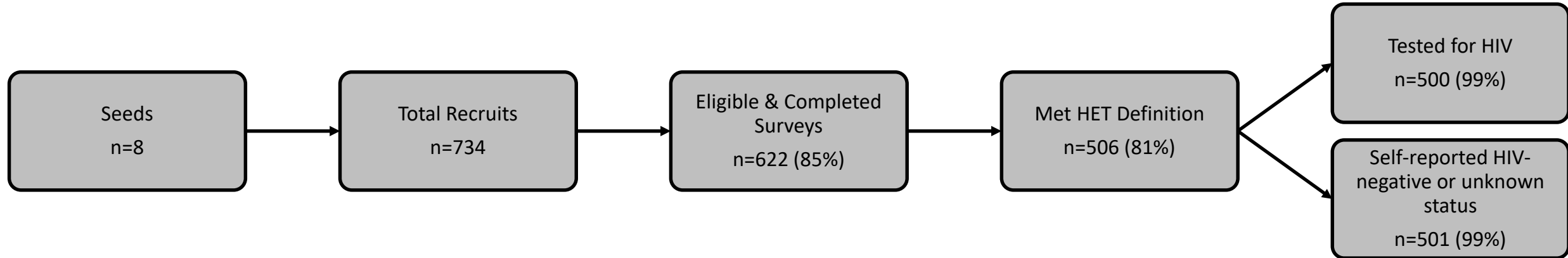
1. Study team recruits small number of initial participants (“seeds”) through community outreach.
 - In order to focus on heterosexually active adults at increased risk, seeds must have never injected drugs, and, if male, must have never had male sex partners.
2. Seeds participate in the study and then recruit up to 5 peers in their social networks.
3. If eligible, those recruited peers participate; those who meet the ‘HET definition’ can recruit up to 3 peers until sample size is met.
4. Incentives were provided for completing the survey, HIV testing, and peer recruitment.

Recruitment Chain Diagram for NYC NHBS-HET5 Cycle



Each node represents a study participant. Linking lines show recruitment chains, initiated by 8 productive seeds (represented by squares). To focus recruitment in social networks of heterosexuals at increased risk, only those who met the HET definition were eligible to recruit and are shown in the diagram.

Study Sample



Statistical Analyses

- Weighted analyses were conducted with RDS Analyst (RDS-A); data were weighted to take into account network size using RDS II estimators.
 - Those with large network sizes have a higher probability of selection.
- An advantage of RDS is that, if methodological assumptions are met, RDS-A may estimate proportions that are generalizable to the larger population.

Statistical Analyses

- Basic descriptive frequencies of risk behaviors and use of HIV testing and prevention services were calculated.
- Chi-square tests (categorical variables) and Wilcoxon (continuous variables; unweighted) were used to compare differences in HIV risk and the use of HIV testing and prevention services. Any statistically significant associations ($p < 0.05$) are denoted.
- Analyses exclude seeds (n=8) because they were not recruited randomly.
- Behavioral risk analyses exclude participants who self-report an HIV-positive status, since awareness of a positive status influences behavior.
- Overall prevalence of HIV infection was determined by the HIV test result among those agreeing to take an HIV test and have a confirmed result (n=497).

Demographics

NYC NHBS-HET5, 2019, n=506

Race/Ethnicity

Hispanic/Latino	33%
Black	65%
White	1%
Other	1%

Age

18-29	43%
30-39	25%
40-49	13%
50-60	20%

Self-Identified Gender

Male	48%
Female	52%

Birthplace

US	88%
Outside US	12%

Demographics

NYC NHBS-HET5, 2019, n=506

Poverty Status¹

At or below poverty level	82%
Above poverty level	18%

Education Level

<High School	31%
≥High School	69%

Borough of Residence

Bronx	15%
Brooklyn	52%
Manhattan	26%
Queens	7%
Staten Island	0%

Homelessness²

Homeless	13%
Not homeless	87%

Incarceration²

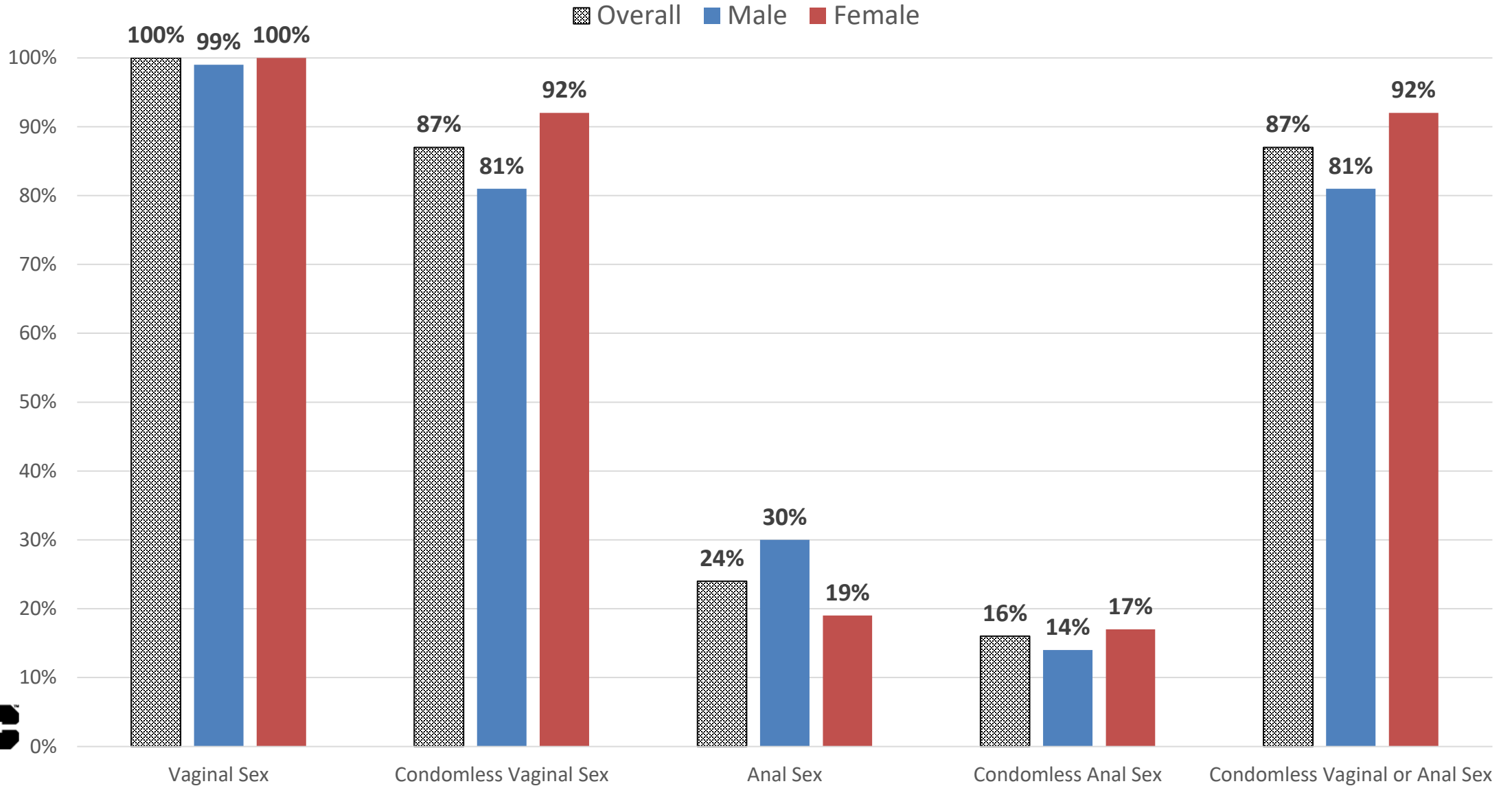
Incarcerated	10%
Not incarcerated	90%

¹Federal poverty level as per 2019 Department of Health and Human Services Guidelines

²Past 12 months

Sexual Behaviors by Participant Gender, Past 12 Months

NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)



Number of Sex Partners, by Gender, Past 12 Months

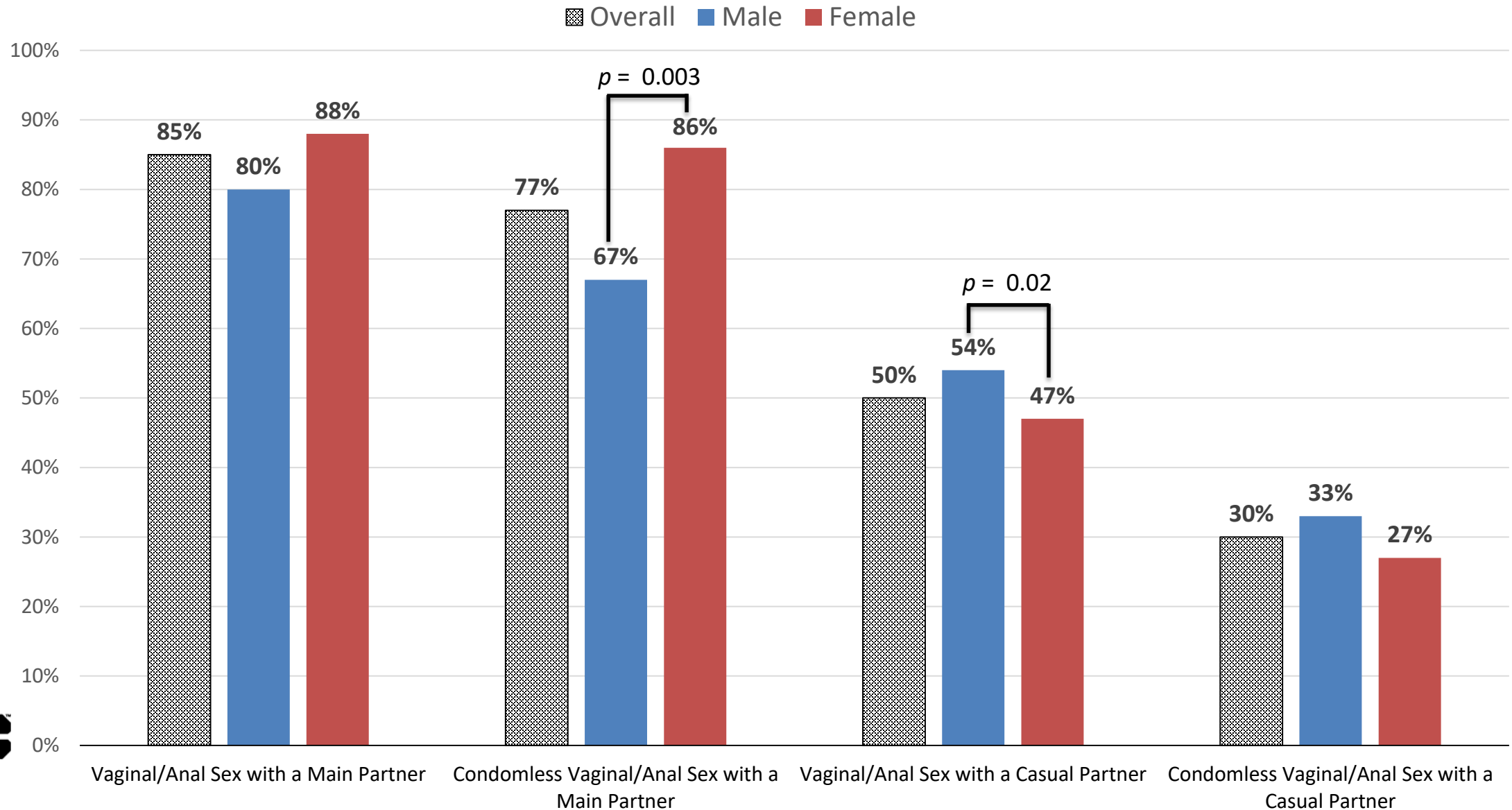
NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)

	Total (n=501)		Men (n=269)		Women (n=232)	
	Median	Mean	Median	Mean	Median	Mean
Main	1	1.1	1	1.2	1	1.1
Casual*	1	2.5	1	3.3	1	1.5
Any Type*	2	3.6	2	4.4	2	2.7

*p<0.001; Wilcoxon Test: Men had more casual and total sex partners compared to women.

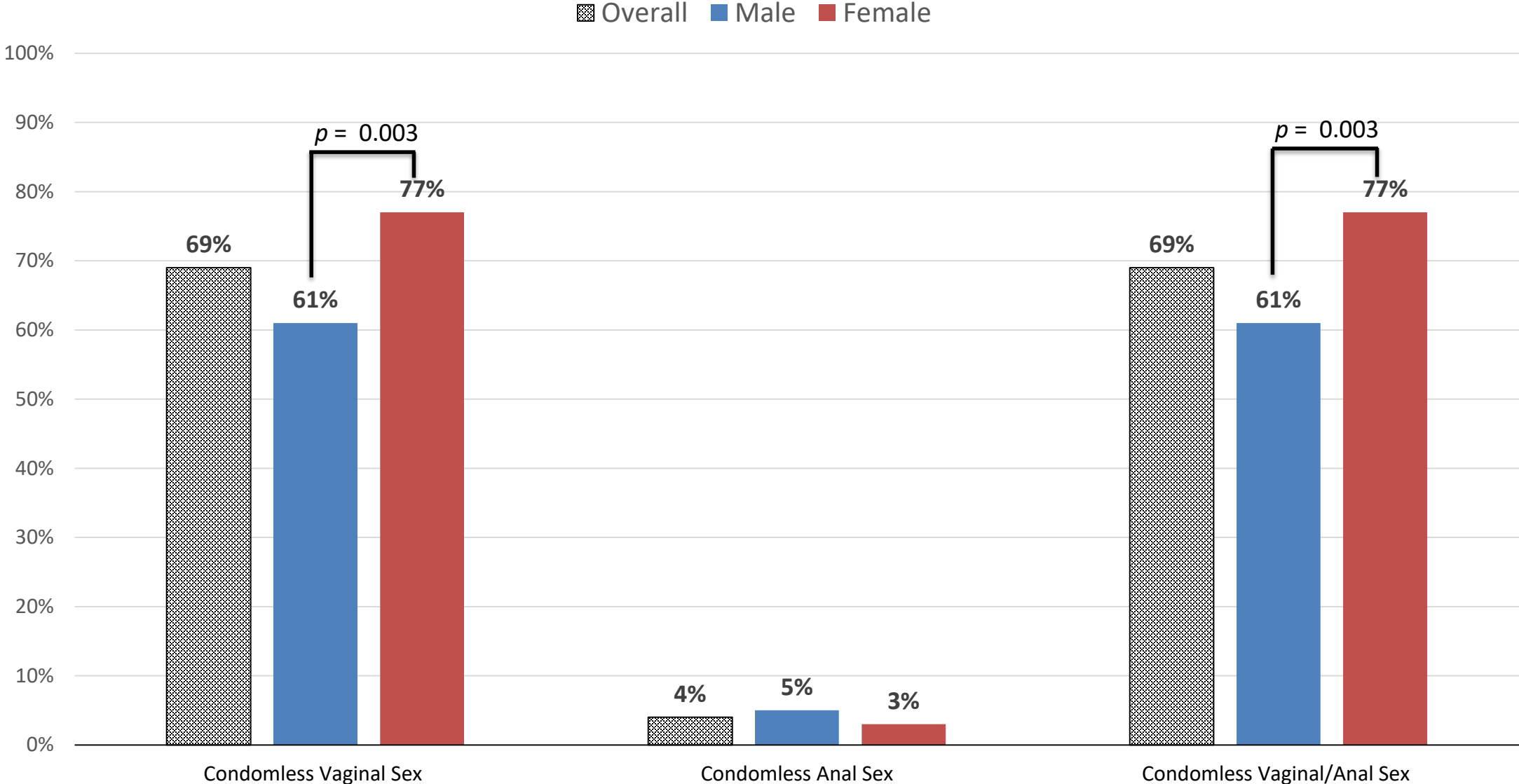
Sexual Behaviors by Partner Type and Participant Gender, Past 12 Months

NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)



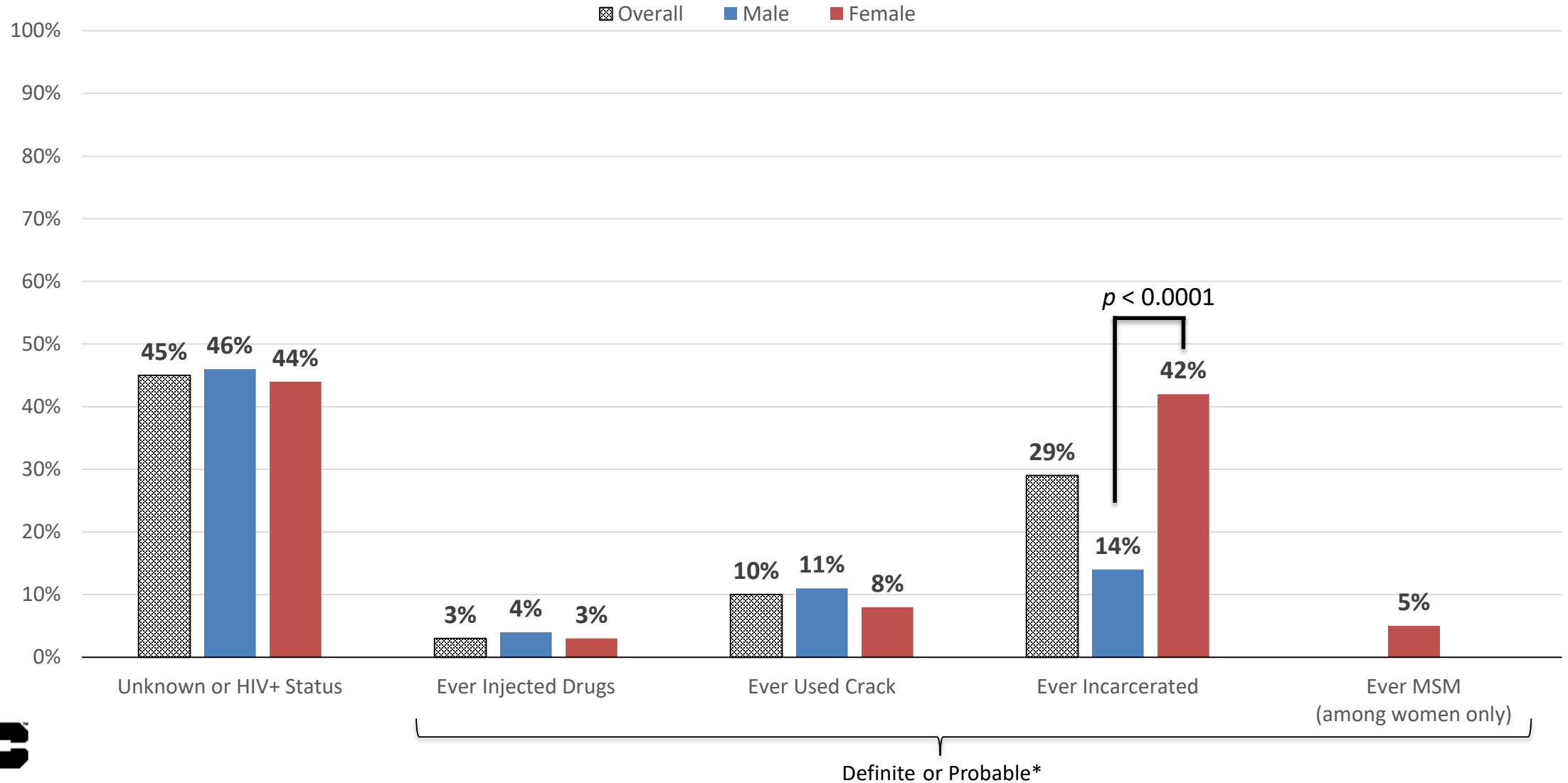
Sexual Behaviors by Gender, At Last Sex

NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)



Characteristics of Last Sex Partner, by Participant Gender

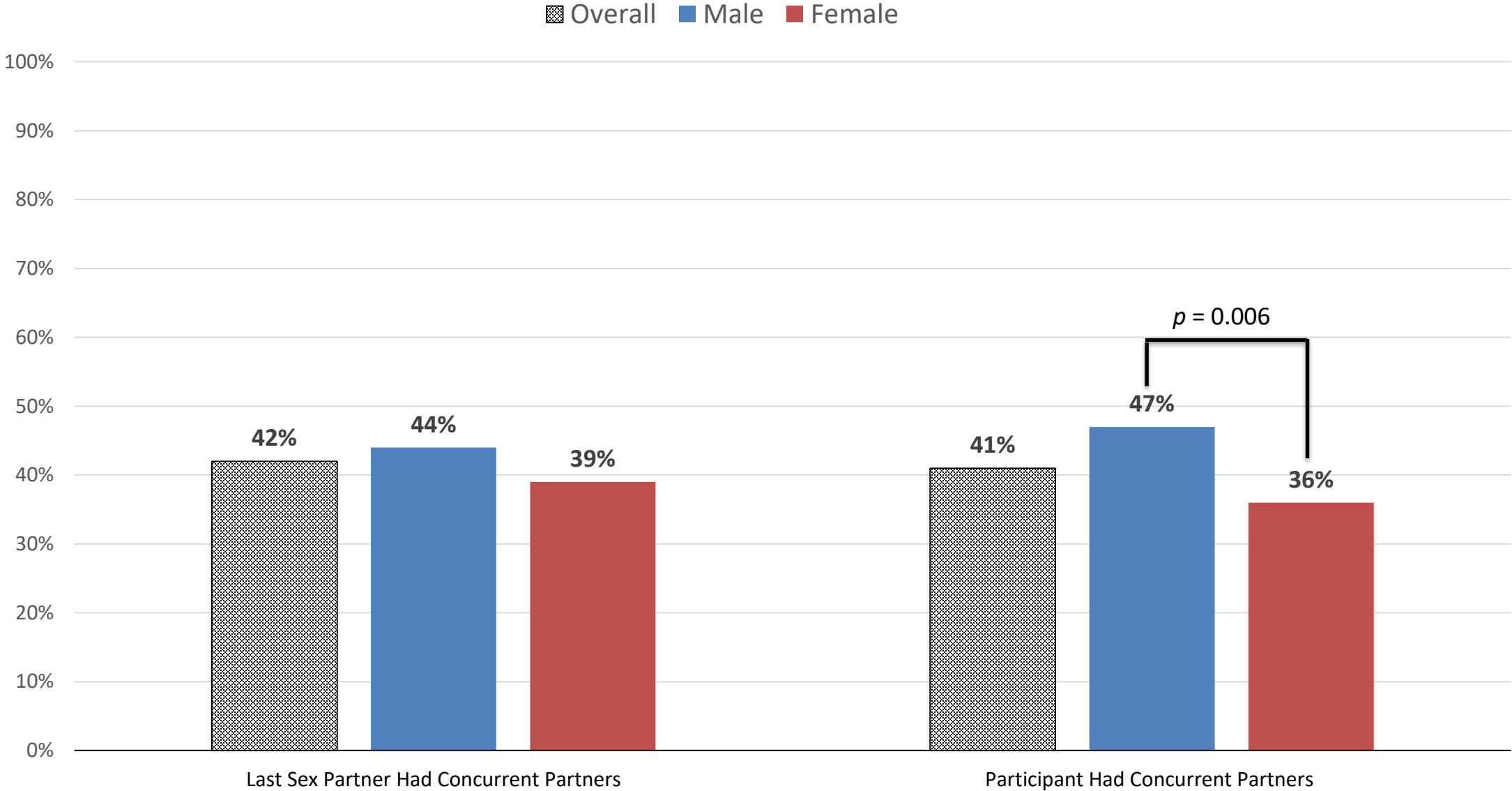
NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)



*Participant was asked whether last partner definitely did, probably did, probably did not, or definitely did not have the characteristic.

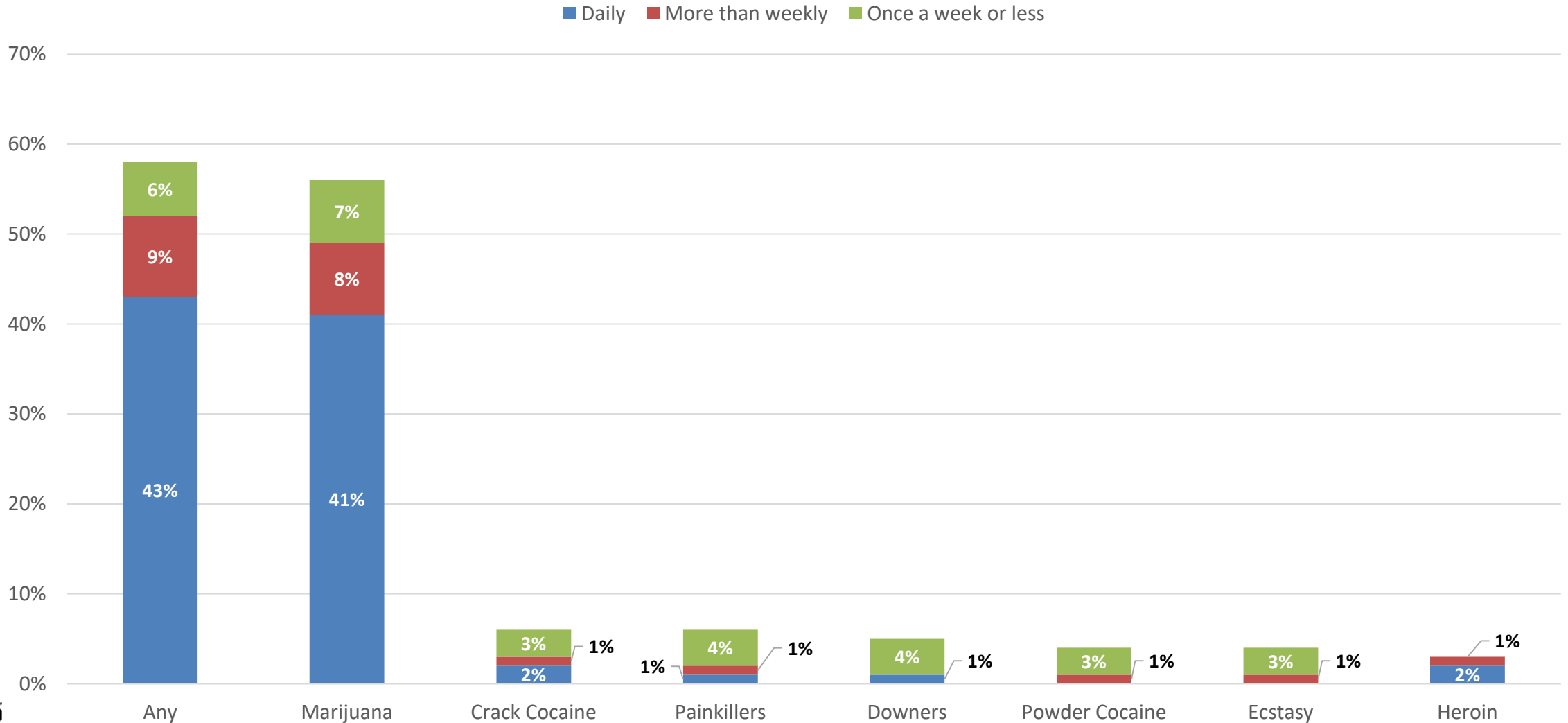
Concurrent Partnerships by Participant Gender, At Last Sex

NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)



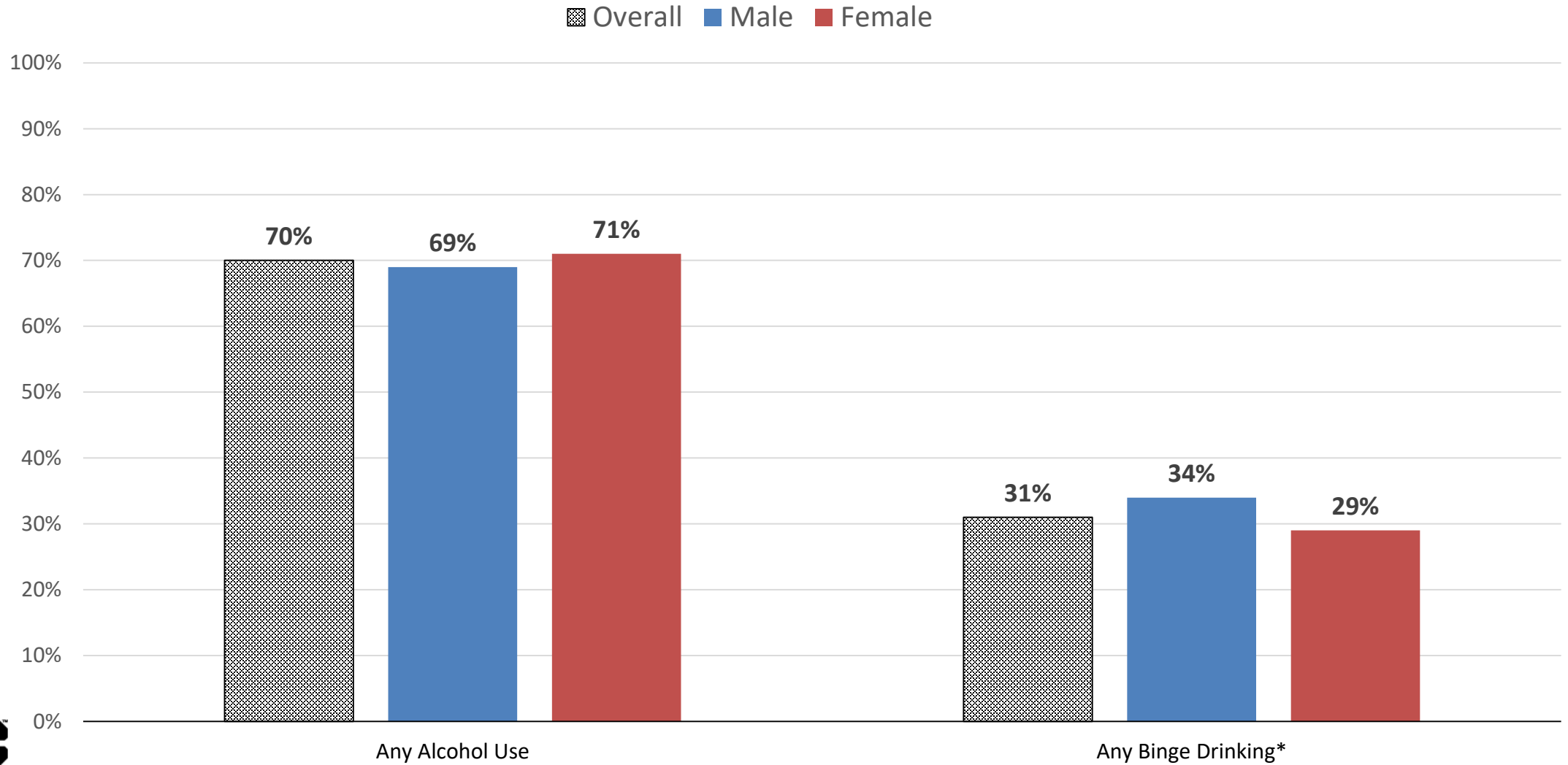
Frequency of Non-Injection Drugs Used, Past 12 Months

NYC NHBS-HET5, 2019, n=506



Alcohol Use by Gender, Past 30 Days

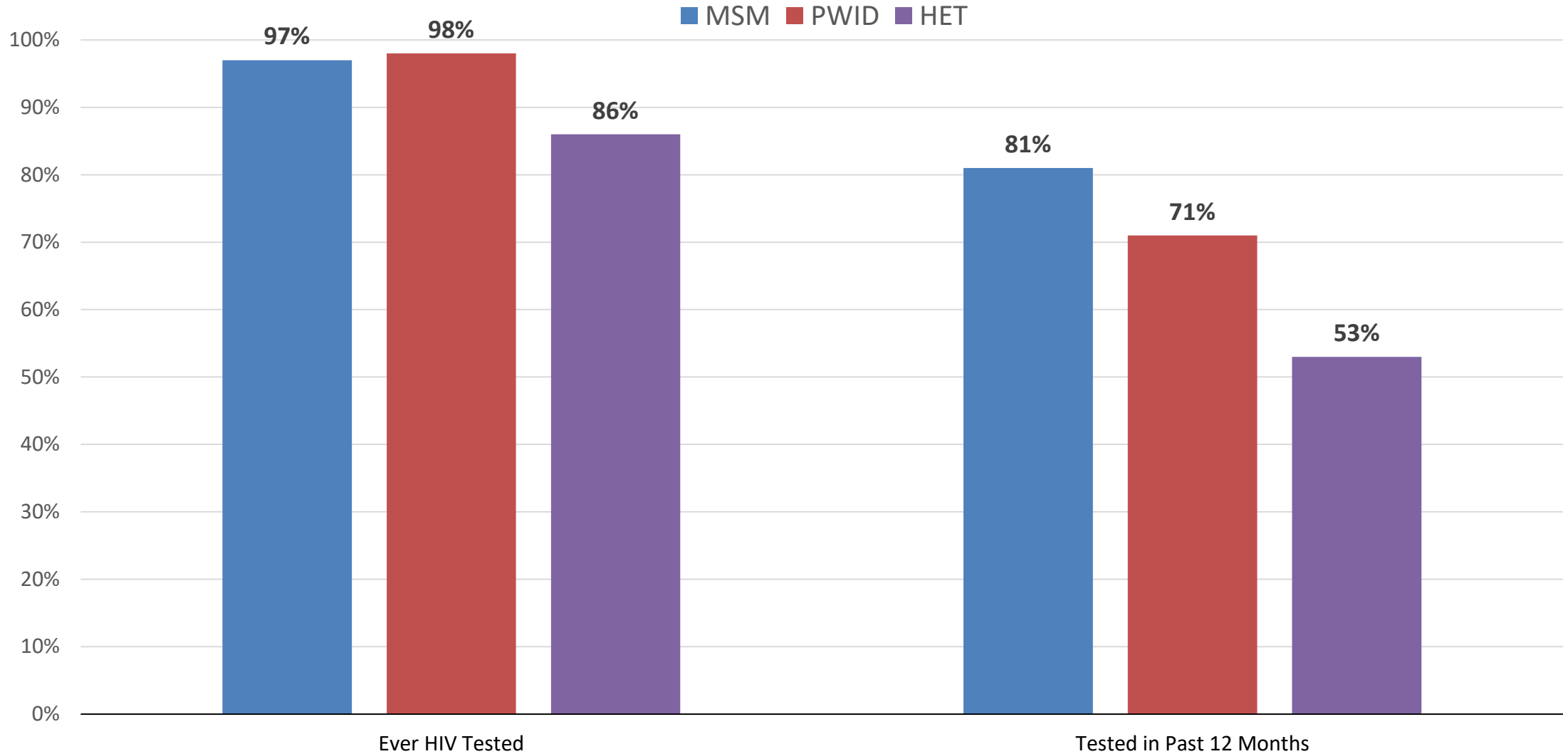
NYC NHBS-HET5, 2019, n=506



*Defined as ≥ 4 drinks in one sitting for females and ≥ 5 drinks in one sitting for males.

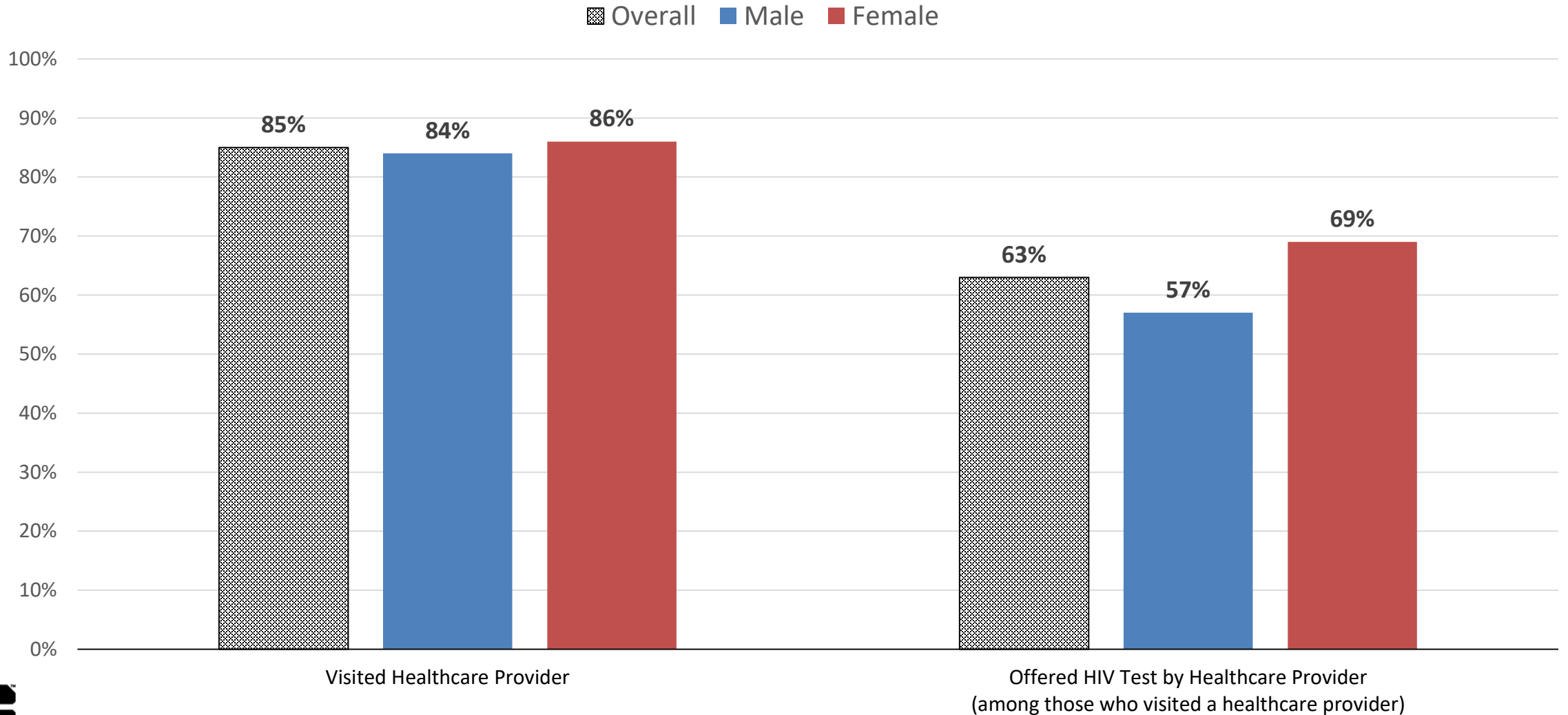
HIV Testing History among HET Compared to Other NHBS Populations

NYC NHBS-MSM (2017), PWID (2018), and HET (2019) (HIV-/Unknown Status)



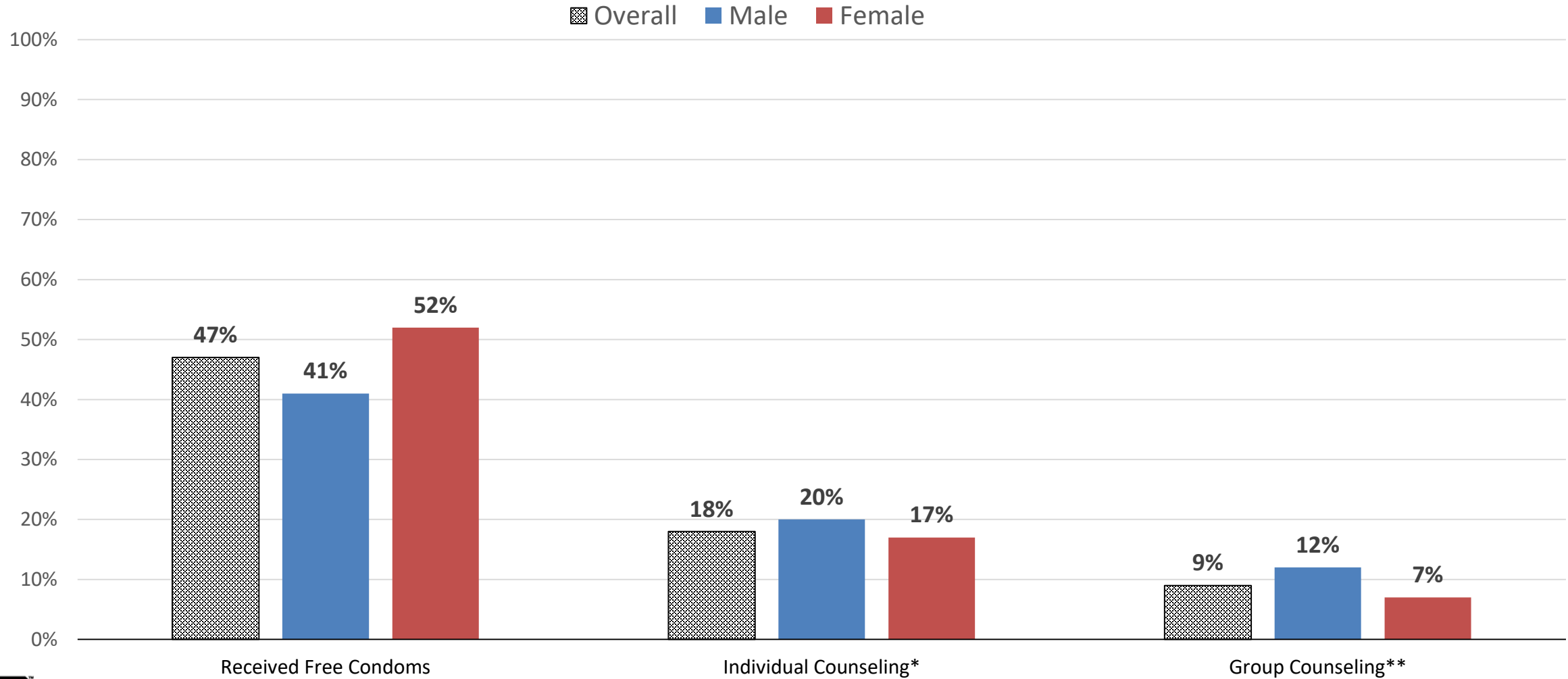
Medical Visits and HIV Testing by Gender, Past 12 Months

NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)



HIV Prevention Activities by Gender, Past 12 Months

NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)

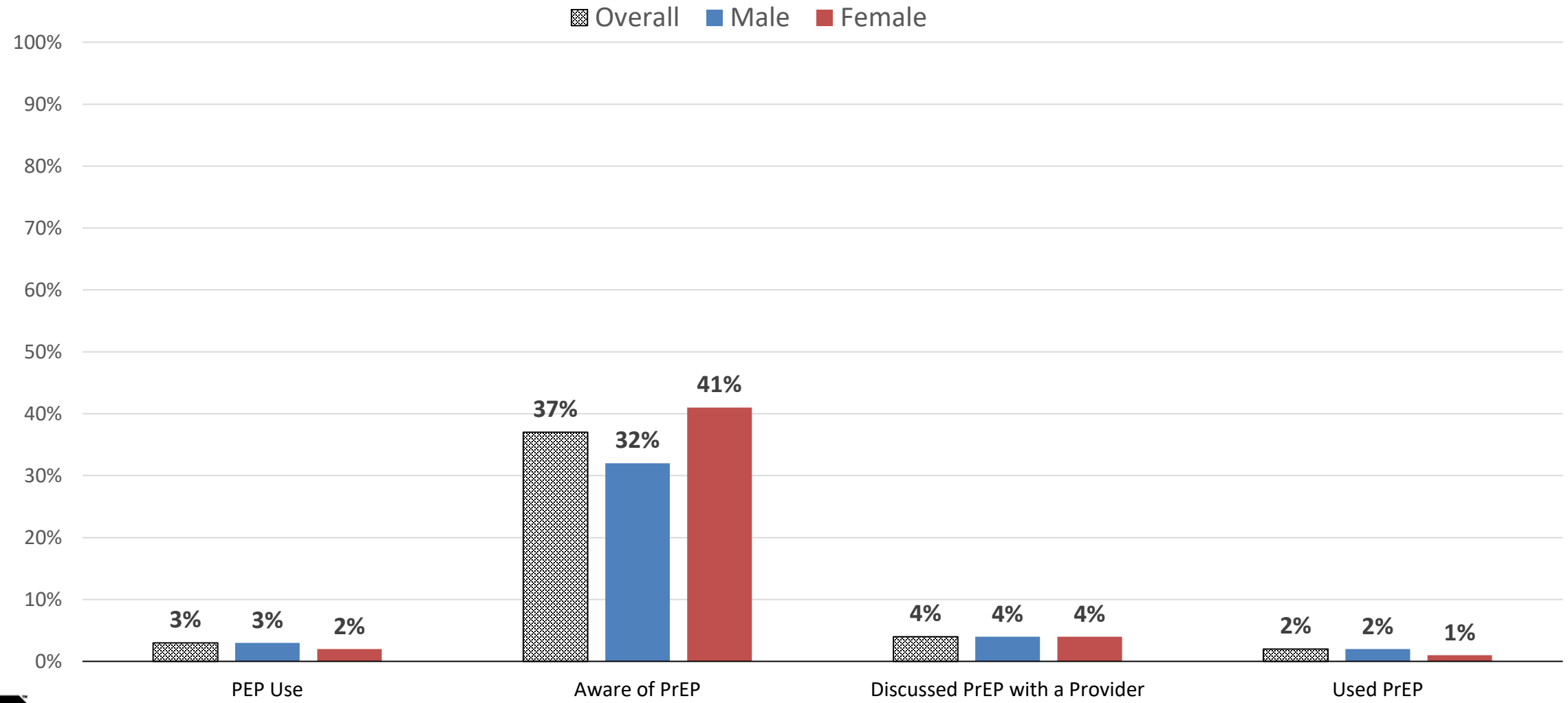


*Defined as a one-on-one conversation with an outreach worker, counselor, or prevention program worker about ways to prevent HIV. Does not include counseling as part of an HIV test.

**Defined as any organized session with a small group of people to discuss ways to prevent HIV. Does not include discussions with a group of friends.

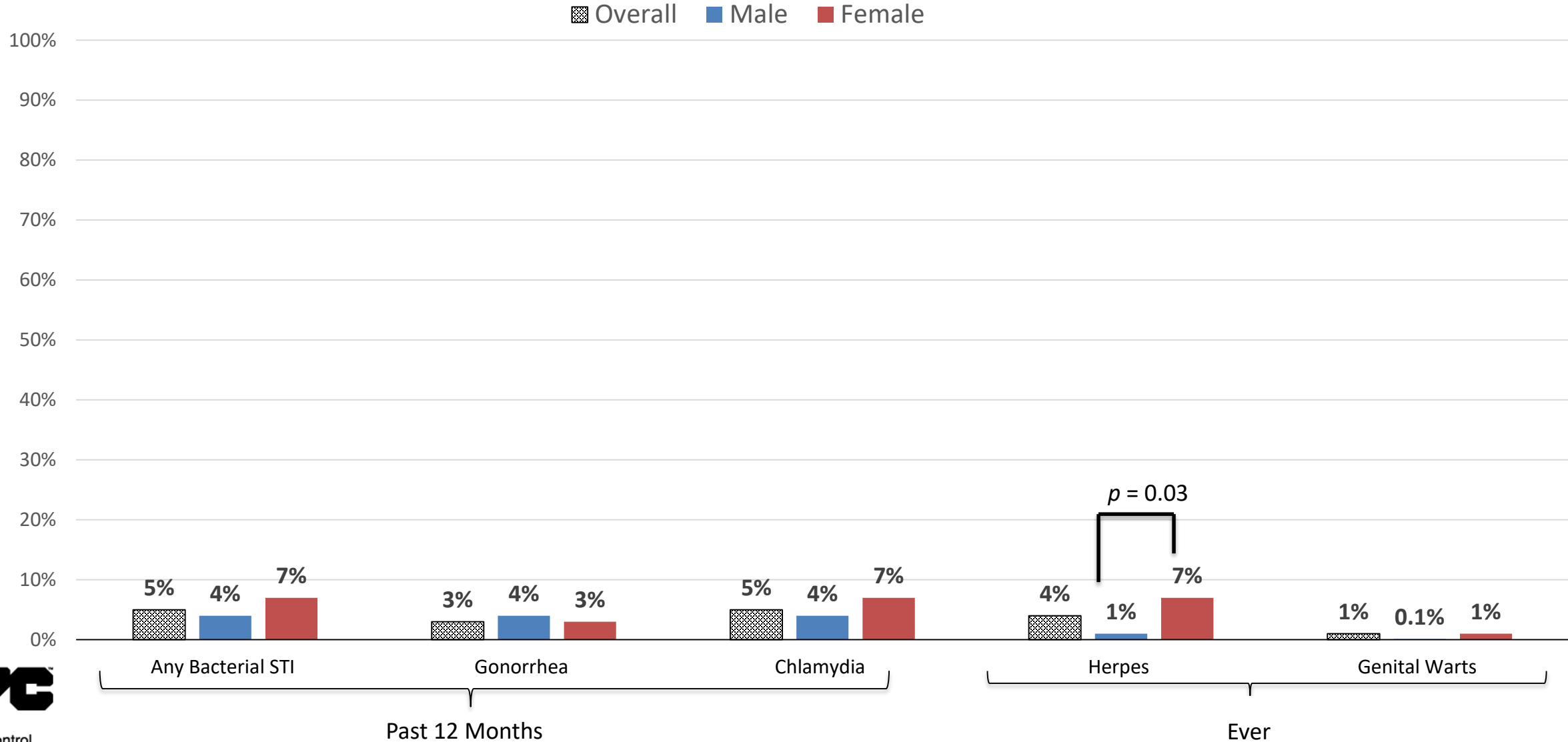
PEP/PrEP Awareness and Use by Gender, Past 12 Months

NYC NHBS-HET5, 2019, n=501 (HIV-/Unknown Status)



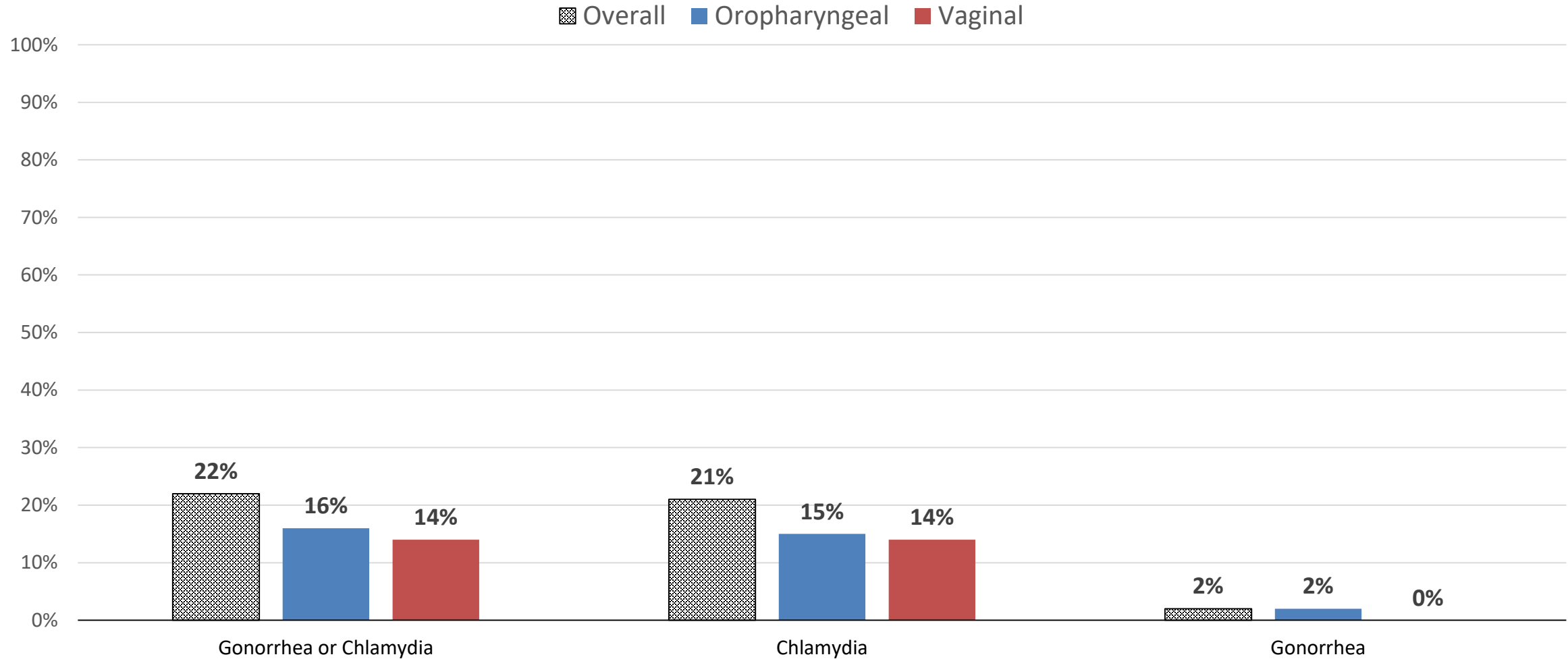
Sexually Transmitted Infection (STI) Diagnoses, by Gender

NYC NHBS-HET5, 2019, n=506



Supplemental Activity: STI Prevalence among Women aged 18-30

NYC NHBS-HET5, 2019, n=92 (Agreed to STI Testing)



Estimated HIV Prevalence

NYC NHBS-HET5, 2019, n=497 (Tested for HIV, Confirmed Result)

	Unweighted Sample Size	HIV-Positive Test Result	95% CI
Overall	497	1.1%	0.0% - 2.3%
Lifetime Risks			
HET only	497	1.0%	0.0% - 2.1%
HET & MSM ¹	9	9.0%	0.0% - 27.9%
HET & PWID ²	3	0%	-
Gender			
Male	266	1.6%	0.0% - 3.9%
Female	231	0.6%	0.0% - 1.5%

¹MSM in lifetime, but not in the past 12 months.

²PWID in lifetime, but not in the past 12 months.

Estimated HIV Prevalence

NYC NHBS-HET5, 2019, n=497 (Tested for HIV, Confirmed Result)

	Unweighted Sample Size	HIV-Positive Test Result	95% CI
Overall	497	1.1%	0.0% - 2.3%
Race/Ethnicity			
Hispanic/Latino	153	0.4%	0.0% - 1.1%
Black	331	1.5%	0.0% - 3.3%
White	6	0%	-
Other	5	0%	-
Age			
18-29	200	0.4%	0.0% - 1.2%
30-39	102	2.2%	0.0% - 6.5%
40-49	79	1.4%	0.0% - 4.1%
50-60	116	1.1%	0.0% - 2.5%

Summary

- The sample of heterosexually active adults at increased risk for HIV (HET) were almost all Black or Latino and a high proportion were living at or below the Federal Poverty Level.
- 87% of the sample reported condomless vaginal or anal sex in the past 12 months.
 - Although men reported more sex partners than women, women were more likely to report having had sex with someone who had been incarcerated.
- Non-injection drug use (with the exception of marijuana) was low.

Summary

- Uptake of HIV prevention methods was low
 - Compared to MSM and PWID NHBS samples, the HET sample reported lower levels of lifetime and recent HIV testing
 - Only 37% were aware of PrEP, with only 2% reporting recent use.
- Overall, HIV prevalence (1.1%) was lower than in the general NYC population (1.5%)
 - There were no statistically significant differences in HIV prevalence by gender, race/ethnicity, or age.
 - The higher HIV prevalence among men compared to women may be due to the higher HIV prevalence among men who reported a history of having sex with other men.
 - By race/ethnicity, Black people had the highest prevalence of HIV.
 - Prevalence did not increase with age; people aged 30-39 years had the highest prevalence.

NYC National HIV Behavioral Surveillance Team – HET5

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