

# Sexual risk behavior and awareness of HIV status among men who have sex with men (MSM) in Memphis, TN



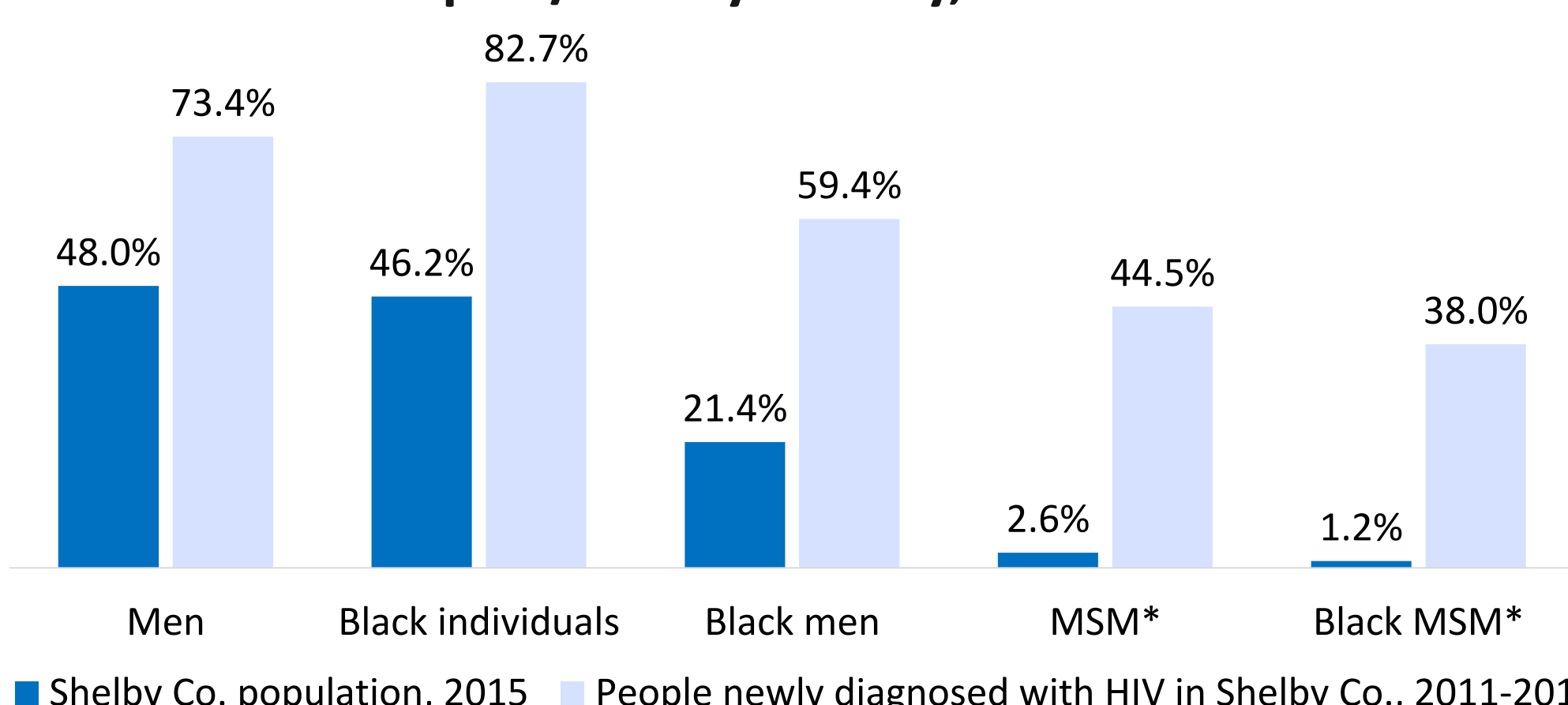
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## Background

In 2017, the Memphis metropolitan statistical area (MSA) had the eighth highest rate of HIV diagnoses in the US (21.4 per 100,000 persons), with non-Hispanic (NH) Black men who have sex with men (MSM) experiencing disproportionately high rates (Figure 1). Each year, CDC's National HIV Behavioral Surveillance (NHBS) monitors HIV risk behaviors and outcomes among high-risk populations to inform local HIV prevention activities. In 2017, the Memphis, Tennessee site completed the first NHBS cycle among MSM.

**Figure 1. Comparison of new diagnoses and total population in Memphis/Shelby County, 2011 – 2015**



\*Based on estimates of MSM prevalence in Memphis, Tennessee from Grey, Jeremy A., et al. "Estimating the Population Sizes of Men Who Have Sex With Men in US States and Counties Using Data From the American Community Survey." JMIR Public Health and Surveillance, JMIR Publications, 21 Apr. 2016.

## Methods

During August – December 2017, the Tennessee Department of Health interviewed and offered rapid HIV tests to adult MSM residing in the Memphis MSA. Venue-based sampling was employed at over 40 locations and events. Eligibility criteria for participation included:

- being a **cisgender man**,
- being at least **18 years old**, and
- **ever reporting male-to-male sexual contact**.



Venues for sampling included churches, pride events, the county jails, parks, bars, and local businesses.

**Summary statistics** were generated for demographics and sexual risk behaviors.

**Bivariate** (chi-squared tests) and **multivariate** logistic regression were used to identify associations between demographics, sexual risk behaviors and 2 outcomes:

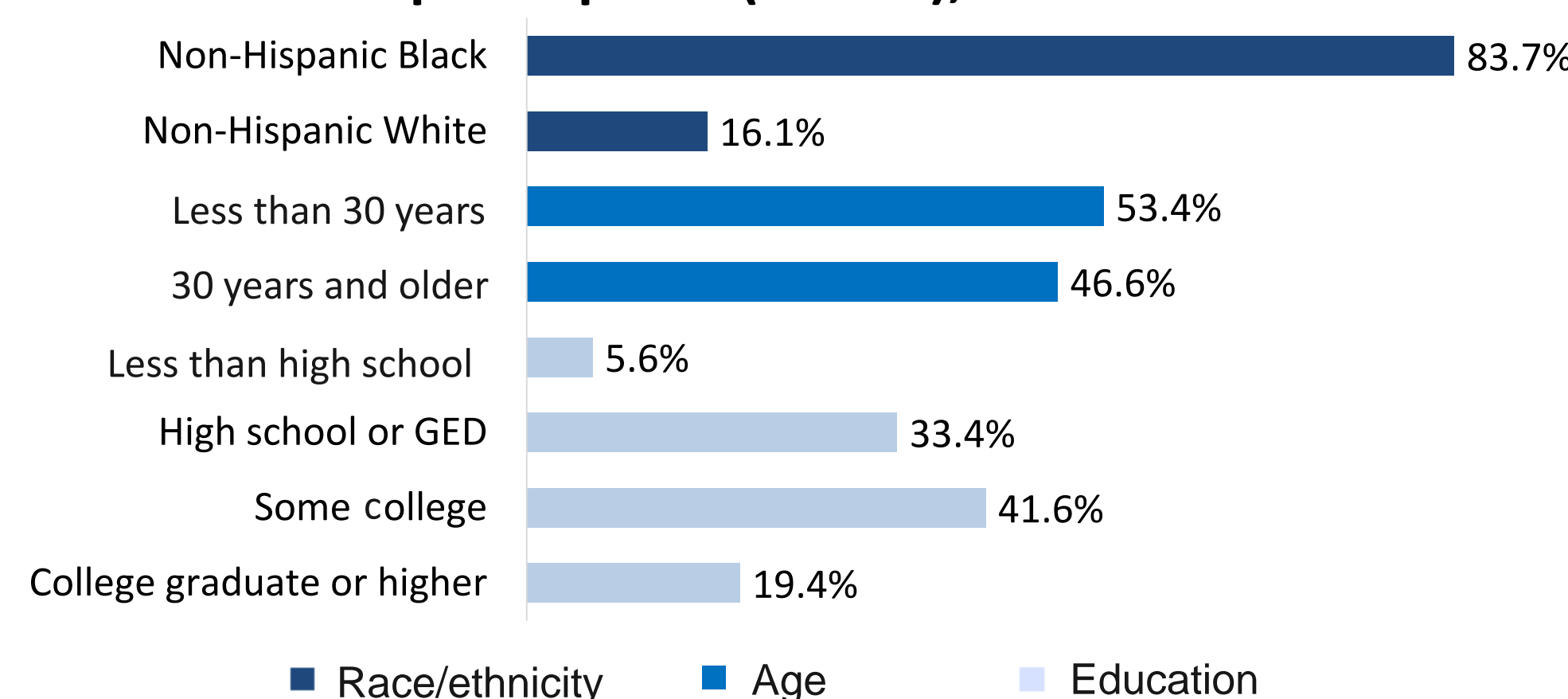
- awareness of HIV status
- history of HIV testing (ever and in the past 12 months)

Participants were defined as "unaware" of their HIV status if their self-reported status did not align with their rapid HIV test result.

## Results: Summary Statistics

A total of 356 participants were surveyed. A subset of 338 non-Hispanic Black and White participants was used for analysis (Figure 2). Among non-Hispanic black and white participants, over 90% (n=316) had ever been tested for HIV (Figure 3). Thirty participants (10%) reported never being tested and were not tested during their interview.

**Figure 2. Demographics of NHBS MSM Memphis participants (N=338), 2017**

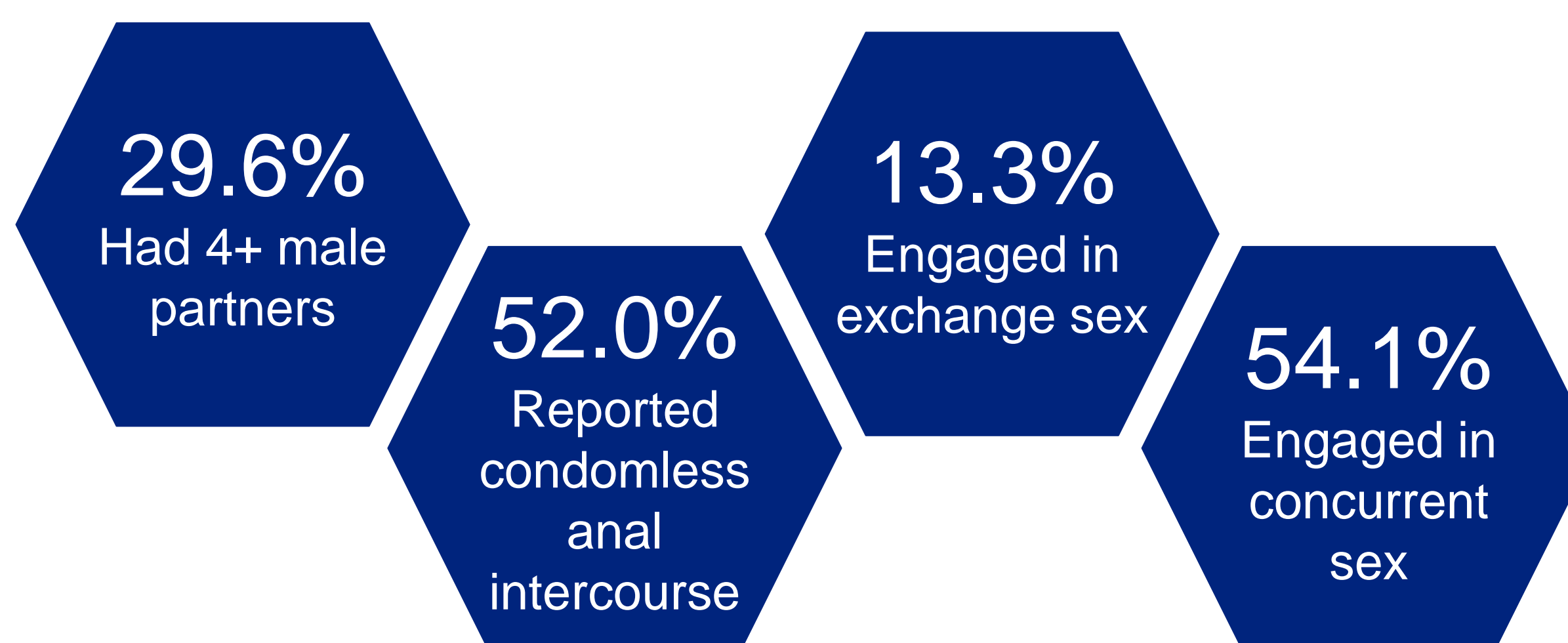


**Figure 3. HIV testing history and status by race and ethnicity**

	Non-Hispanic Black		Non-Hispanic White		Total	
	N	%	N	%	N	%
<b>Ever tested for HIV</b>						
Yes	264	93.3	52	94.5	316	93.5
No	19	6.7	3	5.5	22	6.5
<b>Tested for HIV in part 12 months</b>						
Yes	153	54.1	36	65.5	189	55.9
No	45	15.9	13	23.6	58	17.2
<b>HIV status, awareness of status</b>						
Negative, aware of status	139	49.1	45	81.8	184	54.4
Positive, aware of status	85	30.0	6	10.9	91	26.9
Positive, unaware of status	32	11.3	1	1.8	33	9.8
Unknown**	27	9.5	3	5.5	30	8.9
<b>Overall</b>	<b>283</b>	<b>100.0</b>	<b>55</b>	<b>100.0</b>	<b>338</b>	<b>100.0</b>

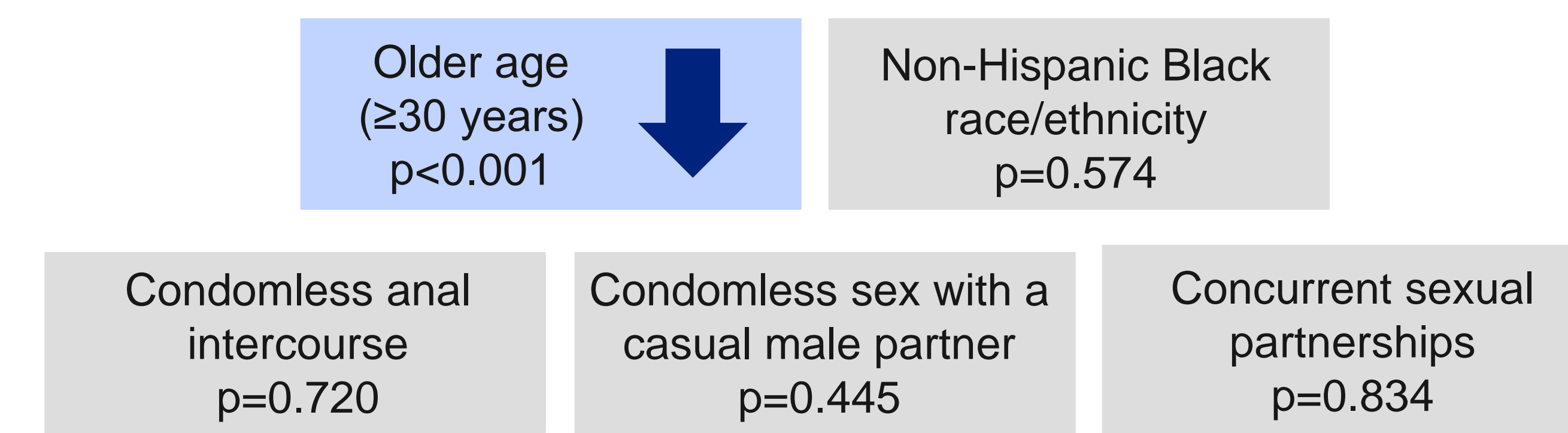
\*\*Includes participants who did not self report HIV-positive status and did not consent to an HIV test

## In the last year:

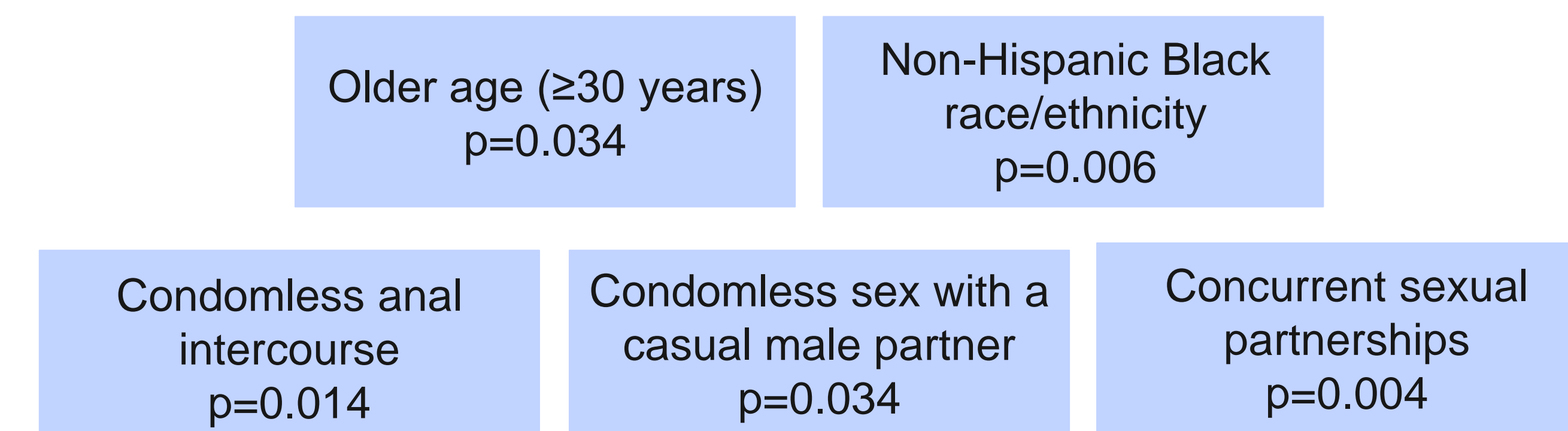


## Results: Bi/Multivariate Analysis

In bivariate analysis, older age ( $\geq 30$  years) was associated with no HIV testing in the last year ( $p < 0.001$ ), while non-Hispanic Black identity, condomless anal intercourse, condomless sex with a casual male partner, and concurrent sexual partnerships were not associated with an increase or decrease in yearly testing.



In multivariate analysis, being unaware of one's HIV-positive status was significantly associated with the five demographic characteristics and sexual risk behaviors evaluated in the bivariate analysis:



## Conclusions

While the percent of MSM being tested for HIV annually has increased nationwide, many individuals are continuing to engage in various risk behaviors.

Tailored messaging to 30+ year old NH Black MSM that explores the nuances of negotiating condomless anal intercourse, viral suppression, and concurrent sexual partnerships may be important for successful HIV prevention interventions (e.g. PrEP, routine testing) in this population.

## Contact Information

For questions regarding the Memphis National HIV Behavioral Surveillance Project, contact Jack Marr at Jack.Marr@tn.gov.

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