

HIV Infection, Risk, Prevention, and Testing Behaviors Among Heterosexuals at  
Increased Risk of HIV Infection  
National HIV Behavioral Surveillance in Hampton Roads Metropolitan Statistical Area,  
2019

Garrett Shields, MPH

Jennifer Kienzle, PhD

Contact: Jennifer Kienzle: [Jennifer.Kienzle@vdh.virginia.gov](mailto:Jennifer.Kienzle@vdh.virginia.gov)

Acknowledgements:

The authors would like to acknowledge the contributions to this report by current and past NHBS staff. The authors would also like to acknowledge the training and support of CDC Division of HIV/AIDS Prevention and the Data Coordinating Center at ICF International. Finally, the authors would like to acknowledge the individuals who graciously participated in the project.

Table of Contents

**List of Tables..... iii**

**Introduction..... 1**

**Summary of Findings**

**Sample Recruitment and Eligibility..... 1**

**Sociodemographic Characteristics..... 1**

**Health Insurance Coverage and Health Care Utilization..... 2**

**Substance Use..... 2**

**Sexual Behavior..... 2**

**HIV/STI Testing..... 3**

**HIV Prevalence..... 3**

**HIV Prevention..... 3**

**Tables..... 5**

List of Tables

<b>Table 1. Participant characteristics- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>5</b>
<b>Table 2. Health insurance and health care utilization- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>7</b>
<b>Table 3. Substance use- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>8</b>
<b>Table 4. Median and range of largest number of alcoholic beverages consumed on a single occasion in the past 30 days- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>9</b>
<b>Table 5. Median and range of sexual partners- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>10</b>
<b>Table 6. Sexual behavior in the past 12 months- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>11</b>
<b>Table 7. HIV/STI testing- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>12</b>
<b>Table 8. HIV prevalence- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>13</b>
<b>Table 9. HIV prevention activities- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019.....</b>	<b>14</b>

National HIV Behavioral Surveillance (NHBS) is a national surveillance project that collects behavioral data and conducts anonymous HIV testing among persons at increased risk for acquiring HIV. A standardized questionnaire is used to collect data relating to sociodemographic information, behavioral risk factors for HIV, HIV testing behaviors, receipt of prevention services, and use of prevention strategies.<sup>1</sup> NHBS collects data in 22 urban areas with high prevalence of HIV, each of which rotate data collection between three key populations: men who have sex with men (MSM), injection drug users (IDU), and heterosexual persons at increased risk of HIV infection (HET). Data are collected in annual cycles from one risk group per year, meaning each population is surveyed every three years. In 2019, Virginia conducted NHBS activities in the Hampton Roads Metropolitan Statistical Area (Hampton Roads MSA) for the HET cycle.

#### Sample Recruitment and Eligibility

General eligibility criteria across all three cycles include: 18 years of age or older, current resident in a participating city, no previous participation in NHBS during the current survey cycle, ability to complete the survey, and ability to provide informed consent. Additional eligibility criteria applied for the 2019 HET cycle include: 60 years of age or younger, reported having sex with a partner of the opposite gender in the 12 months prior to the interview, and did not identify as transgender. Participants were considered high-risk heterosexuals if they had not injected drugs during the past 12 months and if they reported low socioeconomic status, defined as either

no more than high school education or income below the Federal poverty line.<sup>2</sup>

2019 NHBS participants were recruited through a process called respondent-driven sampling (RDS), in which participants recruit other people they know to participate. All interviews were conducted at one of two field sites (Norfolk or Newport News) from June-November 2019. Virginia NHBS screened 864 individuals for participation in the project; 685 (79%) were eligible and completed the survey. Among those who completed the survey, 678 (99%) received an HIV test and 562 (82%) were considered high-risk heterosexuals. Data for those 562 participants are included in this report.

#### Sociodemographic Characteristics

Among the 562 high-risk heterosexual participants, 54% were female and 46% were male (Table 1). The majority of participants were black (87%), 4% were Hispanic, 1% were white, and 8% reported some other race. Twenty-nine percent of participants were 18-24 years of age, 22% were 30-39 years of age, 20% were 25-29 years of age, 18% were 40-49 years of age, and 10% were aged 50 years or older. For education level, the majority of participants had completed high school or received a GED (52%), 25% had less than a high school education, and 23% had received any education beyond high school. Twenty-nine percent of participants were employed full time, 25% were unemployed, 21% were employed part time, and 13% were unable to work for health reasons. The majority of participants were never married (73%). In terms of finances, 78% of participants were below the federal poverty level. In

the previous 12 months, 20% of participants reported being homeless. Among participants who reported ever being incarcerated for more than 24 hours, 31% reported being incarcerated in the previous 12 months. The two most common responses for current county of residence were Newport News (43%) and Norfolk (38%).

#### Health Insurance Coverage and Health Care Utilization

The majority of participants reported that they had health insurance or health care coverage (69%) at the time of the survey (Table 2). Among participants with health insurance, the most commonly reported types of insurance included Medicaid (77%), followed by private (16%), and Medicare (11%). Types of insurance are not mutually exclusive; therefore, participants can report more than one type. Eighty-eight percent of participants reported having a usual source of care where they can go when sick or need health-related help. The locations for usual sources of care included hospital emergency room (41%), doctor's office or HMO (36%), clinic or health center (18%), and some other location (4%). The majority of participants reported visiting a health care provider in the 12 months prior to the interview (83%). Among participants who did not visit a health care provider in the previous 12 months, 55% had a visit between one to two years ago, 29% had a visit two to five years ago, and 16% had a visit more than five years ago. Nineteen percent of participants reported not receiving necessary medical care in the past 12 months because they were unable to afford it.

#### Substance Use

The majority of participants reported having at least one alcoholic drink in the past 30 days (78%; Table 3). Among those who reported drinking alcohol, 47% reported binge drinking in the past 30 days. For males, the median largest number of alcoholic drinks consumed on a single occasion was four drinks (range, 1.0-24.0); for females, the median was three drinks (range, 0.0-27.0; Table 4).

More than half of participants reported non-injection drug use in the past 12 months (63%; Table 3). Marijuana was the most commonly used non-injection drug among those who reported any non-injection drug use (97%).

#### Sexual Behavior

Among females, the median number of sexual partners in the past 12 months was two (range, 1.0-60.0); among males, the median number of sexual partners was three (range, 1.0-40.0; Table 5).

Forty-six percent of females reported only main sex partners, 42% reported both main and casual sex partners, and 12% reported only casual sex partners (Table 6). The majority of males reported both main and casual sex partners (51%), 36% of males reported only main sex partners, and 13% reported only casual sex partners. More females reported having unprotected sex in the past 12 months compared to males (96% and 91%, respectively). More females also reported exchanging sex for money or drugs in the past 12 months than males (11% and 9%, respectively). Sixty-nine percent of females reported having sex with a partner whose HIV status was either positive or unknown and 6% of females had a partner who

injected drugs. Sixty-four percent of males reported having sex with a partner whose HIV status was either positive or unknown and 4% of males had a partner who injected drugs.

### HIV/STI Testing

The majority of participants reported having ever received an HIV test (73%); however, only 44% of these participants reported recently receiving an HIV test in the past 12 months (Table 7). Among participants with a recent HIV test (n=180), the three most common locations of the test were in a public health clinic or community health center (24%), a private doctor's office (20%), and a family planning or obstetrics clinic (13%). Among participants who did not report a recent HIV test (n=369), 67% indicated 'no particular reason', 12% believed they were at low risk for HIV infection, 9% reported not having time, 7% were afraid of finding out they had HIV, and 4% reported some other reason for not testing. Only 47% of participants received gonorrhea, chlamydia, and/or syphilis testing in the past 12 months.

### HIV Prevalence

Among participants who have ever been tested for HIV, less than 1% (n=1) of participants reported ever testing positive for HIV (Table 8). This participant was told where to get care within 30 days of their first positive HIV test result and has seen a health care provider for their HIV infection, but is not currently taking antiretroviral medicines and has never had an HIV viral load test.

### HIV Prevention

Twenty-eight percent of participants reported receiving free condoms in the past 12 months (Table 9). The three most commonly cited locations where participants received free condoms were doctor's office, health center, clinic or hospital (55%), other community organization (22%), and bar, club, bookstore, or other business (16%). Five percent of participants reported participating in HIV behavioral interventions, defined as one-on-one conversations with an outreach worker, counselor, or prevention program worker about ways to prevent HIV or organized sessions involving a small group of people to discuss ways to prevent HIV, in the past 12 months.

Among the participants who have never tested positive for HIV (n=561), 208 (37%) had heard of pre-exposure prophylaxis (PrEP) before the interview. Of these 208 participants, 10 (5%) reported having a discussion with a health care provider about taking PrEP. No participants reported taking PrEP in the past 12 months.

### References

- [1] Centers for Disease Control and Prevention (CDC). National HIV Behavioral Surveillance (NHBS). <https://www.cdc.gov/hiv/statistics/systems/nhbs/index.html>
- [2] Dinunno, E.O., Oster, A.M., Sioanean, C., Denning, P., and Lansky, A. (2012). Piloting a system for behavioral surveillance among heterosexuals at increased risk of HIV in the United States. *Open AIDS Journal*. 6: 169-176.

Suggested Citation:

Shields, G. and Kienzle, J. (2021). HIV Infection, Risk, Prevention, and Testing Behaviors Among Heterosexuals at Increased Risk of HIV Infection-- National HIV Behavioral Surveillance in Hampton Roads Metropolitan Statistical Area, 2019.

<http://www.vdh.virginia.gov/disease-prevention/disease-prevention/virginia-hiv-surveillance-program/national-hiv-behavioral-surveillance/>. Published September 30, 2021. Accessed [enter date].

Table 1. Participant characteristics - NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	n	%
<b>Gender</b>		
Male	256	45.6
Female	306	54.5
<b>Race</b>		
Black	491	87.4
Hispanic	21	3.7
White	7	1.3
Other	43	7.7
<b>Age at time of interview (years)</b>		
18-24	165	29.4
25-29	115	20.5
30-39	125	22.2
40-49	99	17.6
50+	58	10.3
<b>Education</b>		
Less than high school	140	24.9
High school diploma or GED	294	52.3
Some college or technical degree	113	20.1
College degree or more	15	2.7
<b>Employment status</b>		
Employed full time	164	29.2
Employed part time	118	21.0
Full-Time student	32	5.7
Homemaker	5	0.9
Retired	2	0.4
Unable to work for health reasons	74	13.2
Unemployed	140	24.9
Other	27	4.8
<b>Marital status</b>		
Never married	413	73.5
Married or living together	68	12.1
Separated, divorced, or widowed	81	14.4



Table 1. Participant characteristics - NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019 (continued)

	n	%
<b>Living below federal poverty line<sup>a</sup></b>		
Yes	439	78.1
No	123	21.9
<b>Household income (annual)</b>		
\$0 to \$4,999	94	16.7
\$5,000 to \$9,999	110	19.6
\$10,000 to \$14,999	151	26.9
\$15,000 to \$24,999	119	21.2
\$25,000 +	88	15.7
<b>Homeless, past 12 months<sup>b</sup></b>		
Yes	114	20.3
No	448	79.7
<b>Incarcerated, past 12 months<sup>c</sup></b>		
Yes	88	31.4
No	192	68.6
<b>Current county of residence</b>		
Chesapeake City	23	4.1
Gloucester County	1	0.2
Hampton City	58	10.3
Isle of Wight County	1	0.2
Newport News City	242	43.1
Norfolk City	213	37.9
Portsmouth City	5	0.9
Suffolk City	2	0.4
Virginia Beach City	17	3.0

<sup>a</sup> Poverty guidelines as established by HHS in 2018. More information regarding HHS poverty guidelines can be found at <https://aspe.hhs.gov/frequently-asked-questions-related-poverty-guidelines-and-poverty>

<sup>b</sup> Includes living on the street, in a shelter, in a Single Room Occupancy hotel (SRO), or in a car

<sup>c</sup> Having been held in a detention center, jail, or prison for more than 24 hours. Data includes participants that reported ever being incarcerated

Table 2. Health insurance and health care utilization - NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	n	%
<b>Current health insurance/coverage</b>		
Yes	386	68.7
No	176	31.3
<b>Type of health insurance/coverage<sup>a</sup></b>		
Medicaid	294	76.6
Private	62	16.2
Medicare	41	10.7
Tricare/CHAMPUS	9	2.3
Veterans Administration	3	0.8
Other	3	0.8
Other government plan	2	0.5
<b>Usual source of care</b>		
Yes	492	87.5
No	70	12.5
<b>Location of usual source of care<sup>b</sup></b>		
Hospital emergency room	203	41.3
Doctor office or HMO	176	35.8
Clinic or health center	90	18.3
Other	19	3.9
<b>Health care visit, past 12 months</b>		
Yes	469	83.5
No	93	16.6
<b>Time since last health care visit<sup>c</sup></b>		
More than 1 year, but less than 2 years ago	51	54.8
2 to 5 years ago	27	29.0
More than 5 years ago	15	16.1
<b>Unable to afford needed medical care</b>		
Yes	104	18.5
No	458	81.5

<sup>a</sup> Data includes participants that have current health insurance/coverage. Categories are not mutually exclusive

<sup>b</sup> Data includes participants that have a usual source of care

<sup>c</sup> Data includes participants that did not have a health care visit in the past 12 months

Table 3. Substance use - NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	n	%
<b>At least one alcoholic drink, past 30 days</b>		
Yes	439	78.1
No	123	21.9
<b>Binge drinking, past 30 days<sup>a</sup></b>		
Yes	206	47.0
No	232	53.0
<b>Non-injection drug use, past 12 months</b>		
Yes	351	62.6
No	210	37.4
<b>Most frequently reported non-injection drug type<sup>b</sup></b>		
Marijuana	339	96.6

<sup>a</sup> Binge drinking defined as 4 or more drinks for females and 5 or more drinks for males in one sitting; Data includes participants that reported drinking alcohol in the past 30 days

<sup>b</sup> Data includes participants that reported non-injection drug use in the past 12 months

Table 4. Median and range of largest number of alcoholic beverages consumed on a single occasion in the past 30 days- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	median	mean	SEM	range
<b>Males</b>	4.0	4.6	3.4	1.0-24.0
<b>Females</b>	3.0	3.9	3.5	0.0-27.0

Table 5. Median and range of sexual partners- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	median	mean	SEM	range
<b>Males</b>	3.0	4.4	5.1	1.0-40.0
<b>Females</b>	2.0	3.7	6.8	1.0-60.0

Table 6. Sexual behavior in the past 12 months - NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	Males (n=256)		Females (n=306)	
	n	%	n	%
<b>Type of partner for vaginal or anal sex</b>				
Main and casual	130	50.8	129	42.2
Main only <sup>a</sup>	93	36.3	141	46.1
Casual only <sup>b</sup>	33	12.9	36	11.8
<b>Unprotected sex</b>				
Yes	232	90.6	293	95.8
No	24	9.4	13	4.3
<b>Exchange sex<sup>c</sup></b>				
Yes	23	9.0	34	11.1
No	233	91.0	272	88.9
<b>Sex with partner whose HIV status is positive or unknown</b>				
Yes	163	63.7	212	69.3
No	93	36.3	94	30.7
<b>Sex with partner who injects drugs</b>				
Yes	11	4.3	17	5.6
No	245	95.7	289	94.4

<sup>a</sup> Main partner is defined as someone to whom the participant is committed

<sup>b</sup> Casual partner is defined as someone the participant is not committed to or does not know very well

<sup>c</sup> Refers to having given or received things like money or drugs in exchange for sex

Table 7. HIV/STI testing - NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	n	%
<b>Ever tested for HIV</b>		
Yes	410	73.1
No	151	26.9
<b>HIV test, past 12 months<sup>a</sup></b>		
Yes	180	43.9
No	230	56.1
<b>Location of recent HIV test<sup>b</sup></b>		
Public health clinic or community health center	43	24.2
Private doctor's office	35	19.7
Family planning or obstetrics clinic	23	12.9
Hospital (inpatient)	21	11.8
Correctional facility or jail/prison	12	6.7
Emergency room	10	5.6
HIV/AIDS street outreach program or mobile unit	7	3.9
HIV counseling and testing site	5	2.8
Drug treatment program	2	1.1
Other	20	11.2
<b>Reason for not receiving HIV test, past 12 months<sup>c</sup></b>		
No particular reason	248	67.2
Thought he/she was at low risk for HIV infection	45	12.2
Did not have time	35	9.5
Afraid of finding out he/she had HIV	27	7.3
Some other reason	14	3.8
<b>Tested for STI, past 12 months<sup>d</sup></b>		
Yes	261	46.5
No	300	53.5

<sup>a</sup> Data includes participants that reported ever receiving an HIV test

<sup>b</sup> Data includes participants that reported an HIV test in the past 12 months

<sup>c</sup> Data includes participants that did not receive an HIV test in the past 12 months

<sup>d</sup> STI= Sexually transmitted infection. This includes gonorrhea, chlamydia, and syphilis

Table 8. HIV prevalence - NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	n	%
<b>Ever tested positive for HIV<sup>a</sup></b>		
Yes	1	0.2
No	409	99.8
<b>Told where to get HIV care within 30 days of first positive HIV test<sup>b</sup></b>		
Yes	1	100.0
No	0	0.0
<b>Seen health care provider for HIV infection<sup>b</sup></b>		
Yes	1	100.0
No	0	0.0
<b>Currently taking antiretroviral medication<sup>b</sup></b>		
Yes	0	0.0
No	1	100.0
<b>Ever had HIV viral load (VL) test<sup>b</sup></b>		
Yes	0	0.0
No	1	100.0

<sup>a</sup> Data includes participants that reported ever receiving an HIV test

<sup>b</sup> Data includes participants that reported ever testing positive for HIV



Table 9. HIV prevention activities- NHBS Heterosexuals at Increased Risk of HIV Infection, Hampton Roads MSA, 2019

	n	%
<b>Received free condoms, past 12 months</b>		
Yes	155	27.6
No	407	72.4
<b>Location received free condoms<sup>a</sup></b>		
Doctor's office, health center, clinic, or hospital	84	54.6
Other community organization	34	22.1
Bar, club, bookstore, or other business	24	15.6
<b>Participated in discussion about HIV prevention, past 12 months</b>		
Yes	30	5.3
No	532	94.7
<b>Ever heard of PrEP before interview<sup>b</sup></b>		
Yes	208	37.1
No	353	62.9
<b>Discussed taking PrEP with health care provider, past 12 months<sup>c</sup></b>		
Yes	10	4.8
No	198	95.2
<b>Taken PrEP, past 12 months<sup>c</sup></b>		
Yes	0	0.0
No	208	100.0

<sup>a</sup> Three most frequently reported locations. Numbers will not add up to 100 as participants were able to choose more than one location. Data includes participants that received free condoms

<sup>b</sup> Data includes participants that are HIV-negative

<sup>c</sup> Data includes participants that had heard of PrEP before the interview