

HIV Infection, Risk, Prevention, and Testing Behaviors Among Persons Who Inject
Drugs

National HIV Behavioral Surveillance in Norfolk-Newport News-Virginia Beach
Metropolitan Statistical Area, 2018

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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.

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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.¹ 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), persons who inject drugs (PWID), 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 2018, Virginia conducted NHBS activities in the Norfolk-Newport News-Virginia Beach Metropolitan Statistical Area (Norfolk MSA) for the PWID cycle.

Sample Recruitment and Eligibility

General eligibility criteria across all three cycles include: 18 years of age or older, current resident in a participating MSA, no previous participation in NHBS during the current survey cycle, ability to complete the survey, and ability to provide informed consent. An additional eligibility criterion applied for the 2018 PWID cycle was reported injection drug use in the past 12 months.²

In 2018, 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 July-

December 2018. Virginia NHBS screened 751 individuals for participation in the project; 542 (72%) were eligible and completed the survey. Among those who completed the survey, 539 (99%) received an HIV test. Data for those 542 participants that completed the survey are included in this report.

Sociodemographic Characteristics

Among the 542 PWID participants, 67% were male, 33% were female, and 0.2% were transgender (Table 1). The majority of participants were black (68%), 24% were white, 3% were Hispanic, and 5% reported some other race. Thirty-one percent of participants were 50-59 years of age, 26% were 60 years or older, 21% were 40-49 years of age, 15% were 30-39 years of age, and 7% were 18-29 years of age. The majority of participants self-identified as heterosexual (91%), 9% as bisexual, and 1% as homosexual, gay, or lesbian. Forty-three percent of participants had never been married, 38% were separated, divorced, or widowed, and 19% were married or living with someone. For education level, nearly half of participants had completed high school or received a GED (46%), 31% had less than a high school education, 21% completed some college or a technical degree, and 2% completed a college degree or more. Thirty percent of participants were unable to work for health reasons, 29% were unemployed, 26% were employed (13% full time, 13% part time), and 8% were retired. In terms of finances, 64% of participants reported an annual household income of less than \$15,000, 15% reported an annual income of \$25,000 to \$39,999, 11% reported an annual income of \$15,000 to \$24,999,

7% reported an annual income of \$40,000 to \$59,999, and 4% reported an annual income of \$60,000 or more. In the previous 12 months, 48% of participants reported being homeless. Among participants who reported ever being incarcerated, 27% reported being incarcerated in the past 12 months. The two most common responses for current county of residence were Norfolk City (40%) and Newport News City (35%).

Health Insurance Coverage and Health Care Utilization

The majority of participants reported that they had health insurance or health care coverage (52%) at the time of the survey (Table 2). Among participants with health insurance, the most commonly reported types of insurance included Medicaid (56%), followed by Medicare (35%), Veterans Administration (12%), private (10%), other government plans (8%), and TRICARE/CHAMPUS (3%). Types of insurance are not mutually exclusive; therefore, participants can report more than one type. Ninety 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 (46%), clinic or health center (29%), doctor's office or HMO (20%), and some other location (4%). The majority of participants reported visiting a health care provider in the 12 months prior to the interview (79%). Among participants who did not visit a health care provider in the previous 12 months, 50% had a visit between one to two years ago, 42% had a visit two to five years ago, and 8% had a visit more than five years ago. Thirty-eight 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 (76%; Table 3). Among those who reported drinking alcohol, 50% reported binge drinking in the past 30 days. For males, the median largest number of alcoholic drinks consumed on a single occasion was three drinks (range, 1.0-26.0); for females, the median was four drinks (range, 1.0-36.0; Table 4).

The majority of participants reported non-injection drug use in the past 12 months (80%; Table 3). Heroin was the most commonly used non-injection drug among those who reported any non-injection drug use (70%). Heroin was also the most commonly injected drug among participants (95%). In terms of frequency of injection drug use in the past 12 months, 76% of participants reported injecting more than once a day, 9% injected once a day, 8% injected more than once a week, and 7% injected once a week or less. When injecting, 35% of participants reported using a sterile needle about half of the time, 34% used a sterile needle most of the time, 19% always used a sterile needle, 11% rarely used a sterile needle, and 1% never used a sterile needle. Among participants who reported using a needle after someone else in the past 12 months, 51% reported this occurring rarely, with smaller percentages reporting this occurring about half the time (38%), most of the time (9%), and always (3%). Nearly half of participants who reported giving their used needle to someone else in the past 12 months reported this occurring rarely (47%), with

smaller percentages reporting this occurred about half of the time (36%), most of the time (13%), and always (4%).

Sexual Behavior

Among sexually active males, the median number of sexual partners in the past 12 months was two (range, 1.0-60.0); among sexually active females, the median number of sexual partners was two (range, 1.0-4,600.0; Table 5).

Among sexually active males, 42% reported having sex with only main partners, 37% reported both main and casual partners, and 21% reported only casual partners. Among sexually active females, 44% reported having sex with both main and casual partners, 40% reported only main partners, and 16% reported only casual partners (Table 6). More males reported having condomless sex in the past 12 months compared to females (83% and 55%, respectively); however, more females reported exchanging sex for money or drugs than males (49% and 28%, respectively). The majority of males and females reported having sex with a partner whose HIV status was either positive or unknown (57% and 61%, respectively). Thirty-seven percent of males had a partner who injected drugs compared to 61% of females.

HIV/STI Testing

The majority of participants reported having ever received an HIV test (88%); however, only 39% of these participants reported receiving an HIV test in the past 12 months (Table 7). Among participants with a recent HIV test (n=184), the three most common locations of the test were in a hospital (22%), public health clinic or

community health center (16%), and a private doctor's office (14%). Among participants who have never tested positive for HIV and did not report a recent HIV test (n=332), 53% reported no particular reason, 18% were afraid of finding out they had HIV, 16% believed they were at low risk for HIV infection, 7% reported not having time, and 6% reported some other reason for not testing. Less than a quarter of participants received gonorrhea, chlamydia, and/or syphilis testing in the past 12 months (23%).

HIV Prevalence

Two percent (n=8) of participants who have ever received an HIV test reported testing positive for HIV (Table 8). Among those eight participants, 63% were told where to get care within 30 days of their first positive HIV test result and 100% have seen a health care provider for their HIV infection. Among participants who have seen a health care provider, 88% are currently taking antiretroviral medicines and 100% reported having ever had an HIV viral load (VL) test. Results of the most recent VL test were undetectable (less than 200 viral copies/mL) for 88% of participants and detectable, but less than 5,000 viral copies/mL for 13% of participants.

HIV Prevention

Fifty 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 (33%), drug or alcohol treatment center (31%), and other community organization (24%). Twenty-eight

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=534), 36% had heard of pre-exposure prophylaxis (PrEP) before the interview. Of these individuals, 10% reported having a discussion with a health care provider about taking PrEP and 2% reported taking PrEP in the past 12 months. Among participants taking PrEP, 67% reported taking PrEP every day and 33% reported taking PrEP less often.

Suggested Citation

Shields, G. and Kienzle, J. (2020). HIV Infection, Risk, Prevention, and Testing Behaviors Among Persons Who Inject Drugs--National HIV Behavioral Surveillance in Norfolk-Newport News-Virginia Beach Metropolitan Statistical Area, 2018. <http://www.vdh.virginia.gov/disease-prevention/virginia-hiv-surveillance-program/national-hiv-behavioral-surveillance/>. Published January 10, 2020. Accessed [enter date].

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[1] Centers for Disease Control and Prevention (CDC). National HIV Behavioral Surveillance (NHBS). <https://www.cdc.gov/hiv/statistics/systems/nhbs/index.html>

[2] Centers for Disease Control and Prevention. National HIV Behavioral Surveillance System Round 5: Model Surveillance Protocol. December 15, 2017. <https://www.cdc.gov/hiv/statistics/systems/nhbs/operations.html>.

Table 1. Participant characteristics - NHBS persons who inject drugs,
Norfolk MSA, 2018

	n	%
Gender		
Male	362	66.9
Female	178	32.9
Transgender	1	0.2
Race		
Black	370	68.3
White	129	23.8
Hispanic	16	3.0
Other	27	5.0
Age at time of interview (years)		
18-29	35	6.5
30-39	80	14.8
40-49	115	21.2
50-59	170	31.4
60+	142	26.2
Sexual orientation		
Heterosexual	491	90.6
Homosexual, gay, or lesbian	4	0.7
Bisexual	47	8.7
Marital status		
Never married	232	42.8
Married or living together	105	19.4
Separated, divorced, or widowed	205	37.8
Education		
Less than high school	168	31.0
High school diploma or GED	250	46.1
Some college or technical degree	113	20.9
College degree or more	11	2.0

Table 1. Participant characteristics - NHBS persons who inject drugs,
Norfolk MSA, 2018 (continued)

	n	%
Employment status		
Employed full time	71	13.1
Employed part time	68	12.6
Full-Time student	2	0.4
Retired	44	8.1
Unable to work for health reasons	165	30.4
Unemployed	158	29.2
Other	34	6.3
Household income (annual)		
\$0 to \$14,999	339	64.1
\$15,000 to \$24,999	57	10.8
\$25,000 to \$39,999	77	14.6
\$40,000 to \$59,999	36	6.8
\$60,000 +	20	3.8
Homeless, past 12 months^a		
Yes	260	48.0
No	282	52.0
Incarcerated, past 12 months^b		
Yes	129	27.0
No	348	73.0
Current county of residence		
Chesapeake City	7	1.3
Gloucester County	3	0.6
Hampton City	68	12.6
Isle of Wight County	2	0.4
Newport News City	187	34.5
Norfolk City	215	39.7
Poquoson City	1	0.2
Portsmouth City	19	3.5
Suffolk City	1	0.2
Virginia Beach City	30	5.5
York County	9	1.7

^a Includes living on the street, in a shelter, in a Single Room Occupancy hotel (SRO), or in a car

^b Data include participants that reported ever being incarcerated. Incarcerated is defined as having been held in a detention center, jail, or prison for more than 24 hours

Table 2. Health insurance and health care utilization - NHBS persons who inject drugs, Norfolk MSA, 2018

	n	%
Current health insurance/coverage		
Yes	283	52.3
No	258	47.7
Type of health insurance/coverage^a		
Medicaid	157	55.5
Medicare	99	35.0
Veterans Administration	35	12.4
Private	27	9.5
Other government plan	23	8.1
TRICARE/CHAMPUS	7	2.5
Other	1	0.4
Usual source of care		
Yes	485	89.5
No	57	10.5
Location of usual source of care^b		
Hospital emergency room	224	46.2
Clinic or health center	141	29.1
Doctor's office or HMO	98	20.2
Other	19	3.9
Doesn't go to one place most often	3	0.6
Health care visit, past 12 months		
Yes	429	79.2
No	113	20.9
Time since last health care visit^c		
More than 1 year, but less than 2 years ago	57	50.4
2 to 5 years ago	47	41.6
More than 5 years ago	9	8.0
Unable to afford needed medical care		
Yes	205	37.8
No	337	62.2

^a Data include participants that have current health insurance/coverage. Categories are not mutually exclusive

^b Data include participants that have a usual source of care

^c Data include participants that did not have a health care visit in the past 12 months

Table 3. Substance use - NHBS persons who inject drugs, Norfolk MSA, 2018

	n	%
At least one alcoholic drink, past 30 days		
Yes	414	76.4
No	128	23.6
Binge drinking, past 30 days^a		
Yes	203	49.9
No	204	50.1
Non-injection drug use, past 12 months		
Yes	434	80.1
No	108	19.9
Most frequently reported non-injection drug type^b		
Heroin	303	69.8
Injection drug use, past 12 months		
More than once a day	413	76.2
Once a day	51	9.4
More than once a week	42	7.8
Once a week or less	36	6.6
Most frequently reported injection drug type		
Heroin	513	94.7
Use of sterile needle when injecting, past 12 months^c		
Always	105	19.4
Most of the time	185	34.1
About half of the time	191	35.2
Rarely	57	10.5
Never	4	0.7
Used needle after someone else, past 12 months^d		
Always	5	2.5
Most of the time	17	8.6
About half of the time	74	37.6
Rarely	101	51.3

Table 3. Substance use - NHBS persons who inject drugs, Norfolk MSA, 2018 (continued)

	n	%
Gave needle to someone else after injecting, past 12 months^e		
Always	11	4.3
Most of the time	34	13.4
About half of the time	91	35.8
Rarely	118	46.5

^a Binge drinking defined as 4 or more drinks for females and 5 or more drinks for males in one sitting; Data include participants that reported drinking alcohol in the past 30 days

^b Data include participants that reported non-injection drug use in the past 12 months

^c Sterile needle is defined as a needle never used by anyone, even the participant

^d Data include participants that reported not always using a sterile needle and reported using a needle after at least one person in the past 12 months

^e Data include participants that reported giving a needle to someone else after injecting with it 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 persons who inject drugs, Norfolk MSA, 2018

	median	mean	SD	range
Males	3.0	4.6	3.5	1.0-26.0
Females	4.0	5.0	5.1	1.0-36.0

Table 5. Median and range of sexual partners, among sexually active - NHBS
persons who inject drugs, Norfolk MSA, 2018

	median	mean	SD	range
Males	2.0	4.0	6.5	1.0-60.0
Females	2.0	57.9	401.6	1.0-4600.0

Table 6. Sexual behavior in the past 12 months, among sexually active - NHBS persons who inject drugs, Norfolk MSA, 2018

	Males (n=313)		Females (n=148)	
	n	%	n	%
Type of partner for vaginal or anal sex				
Main and casual	115	36.9	64	43.5
Main only ^a	132	42.3	59	40.1
Casual only ^b	65	20.8	24	16.3
Condomless sex				
Yes	261	83.4	82	55.4
No	52	16.6	66	44.6
Exchange sex^c				
Yes	86	27.5	72	48.7
No	227	72.5	76	51.4
Sex with partner whose HIV status is positive or unknown				
Yes	178	56.9	90	60.8
No	135	43.1	58	39.2
Sex with partner who injects drugs				
Yes	117	37.4	90	60.8
No	196	62.6	58	39.2

^a Main partner is defined as someone to whom the participant is committed

^b Casual partner is defined as someone the participant is not committed to or does not know very well

^c Refers to having given or received things like money or drugs in exchange for sex

Table 7. HIV/STI testing - NHBS persons who inject drugs, Norfolk MSA, 2018

	n	%
Ever tested for HIV		
Yes	476	88.2
No	64	11.9
HIV test, past 12 months^a		
Yes	184	38.7
No	292	61.4
Location of recent HIV test^b		
Hospital (inpatient)	40	21.7
Public health clinic or community health center	30	16.3
Private doctor's office	26	14.1
Correctional facility or jail/prison	24	13.0
Drug treatment program	21	11.4
HIV counseling and testing site	20	10.9
HIV/AIDS street outreach program or mobile unit	9	4.9
Emergency room	5	2.7
Other	9	4.9
Reason for not receiving HIV test, past 12 months^c		
No particular reason	176	53.0
Afraid of finding out he/she had HIV	60	18.1
Thought he/she was at low risk for HIV infection	53	16.0
Did not have time	23	6.9
Some other reason	20	6.0
Tested for STI, past 12 months^d		
Yes	122	22.5
No	420	77.5

^a Data include participants that reported ever receiving an HIV test, but did not report a previous HIV-positive test result

^b Data include participants that reported an HIV test in the past 12 months

^c Data include participants that have never tested positive for HIV and did not receive an HIV test in the past 12 months

^d STI= Sexually transmitted infection. This includes gonorrhea, chlamydia, and syphilis

Table 8. HIV prevalence - NHBS persons who inject drugs, Norfolk MSA, 2018

	n	%
Ever tested positive for HIV^a		
Yes	8	1.7
No	468	98.3
Told where to get HIV care within 30 days of first positive HIV test^b		
Yes	5	62.5
No	3	37.5
Seen health care provider for HIV infection^b		
Yes	8	100.0
No	0	0.0
Currently taking antiretroviral medication^c		
Yes	7	87.5
No	1	12.5
Ever had HIV viral load (VL) test^c		
Yes	8	100.0
No	0	0.0
Result of most recent VL test^d		
Undetectable ^e	7	87.5
Detectable, but less than 5,000 viral copies/mL	1	12.5

^a Data include participants that reported ever receiving an HIV test

^b Data include participants that reported ever testing positive for HIV

^c Data include participants that reported seeing a health care provider

^d Data include participants that reported ever receiving VL test

^e Undetectable viral load defined as < 200 copies/mL

Table 9. HIV prevention activities- NHBS persons who inject drugs,
Norfolk MSA, 2018

	n	%
Received free condoms, past 12 months		
Yes	273	50.4
No	269	49.6
Location received free condoms^a		
Doctor's office, health center, clinic, or hospital	89	32.6
Drug or alcohol treatment center	84	30.8
Other community organization	65	23.8
Participated in discussion about HIV prevention, past 12 months		
Yes	154	28.4
No	388	71.6
Ever heard of pre-exposure prophylaxis (PrEP) before interview^b		
Yes	191	35.8
No	343	64.2
Discussed taking PrEP with health care provider, past 12 months^c		
Yes	19	10.0
No	172	90.1
Taken PrEP, past 12 months^c		
Yes	3	1.6
No	188	98.4
Frequency of PrEP use, past 12 months^d		
Every day	2	66.7
Less often	1	33.3

^aThree most frequently reported locations. Numbers will not add up to 100 as participants were able to choose more than one location. Data include participants that received free condoms

^bData include participants that never tested positive for HIV

^cData include participants that had heard of PrEP before the interview

^dData include participants that used PrEP in the past 12 months