

# **American Men's Internet Survey (AMIS):**

Online HIV Behavioral Survey of Men Who  
Have Sex with Men

**SAMPLE, 2013**

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## Introduction

Men who have sex with men (MSM) contribute to over half of the more than one million adults living with HIV in the United States [1]. Incidence estimates of HIV infection from 2008 to 2011 have shown an increase in the number of new infections among MSM [2], due to factors including high prevalence, sexual risk behaviors, and not being aware of HIV status. The National HIV Behavioral Surveillance System (NHBS), using venue-based sampling to collect risk behavior data from high-risk populations, has found continued sexual risk and drug use behaviors associated with increased HIV risk among MSM [3]. The Centers for Disease Control and Prevention (CDC) recommends annual HIV testing for sexually active MSM (and more frequent for those with multiple sexual partners) [4], but 2011 NHBS data found only about 67% of HIV-negative or unknown status MSM reported an HIV test in the previous 12 months [5]. Monitoring HIV risk and testing behaviors among MSM is important in understanding epidemic trends and the impact of prevention efforts, including behavioral interventions and strategies to increase HIV testing.

An increasing number of MSM are socializing and identifying sexual partners through the internet, and recruiting MSM online offers an opportunity to supplement venue-based studies, such as NHBS, by including at-risk MSM that may not be reached through traditional means, such as bars and clubs [6]. Additionally, online HIV behavioral surveys allow for the collection of data from a large sample of MSM with broad geographic diversity. This report summarizes finding from a large online HIV behavior survey among MSM.

*American Men's Internet Survey (AMIS)* is a multi-cycle cross-sectional online HIV behavioral survey collecting self-reported data on demographic characteristics, HIV risk behaviors, HIV testing behaviors, and use of HIV prevention services among internet-using MSM in the United States and dependent territories. Participants were recruited online through advertisements (ads), and were consented and screened for eligibility after clicking on the ads. Men were eligible for participation if they were 18 years of age or older, U.S. residents, reported ever having oral or anal sex with a man, and able to complete the survey in English. Men who were eligible to participate in the survey completed a self-administered online survey. The survey consisted of a core questionnaire that every participant answered, 3 different subset questionnaires that participants were randomized to at the start of the survey, and an additional set of questions that were asked of participants from mobile-only social networking ads. The core questions were comprised of the following domains: demographics, sexual behavior, HIV testing history, drug and alcohol use, and HIV prevention services exposure. The randomized question subsets were comprised of the following domains: Subset A - knowledge and use of antiretrovirals for HIV prophylaxis and sexually transmitted disease testing/vaccination; Subset B - disclosure of sexual identity and experiences of stigma; Subset C - additional details about most recent male sex partner. The participants from the mobile-only social networking application received an additional set of questions about a potential mobile HIV prevention application and about acute HIV infection.

The tables in this report include data from the 2013 cycle of AMIS, collected between December 2013 and May 2014, among respondents reporting residence in *SAMPLE*. For demographic categories with small cell sizes, data were collapsed to prevent identification. Study questions and full categories are available in Appendix A. These data were collected as a convenience sample and may not be representative or generalizable to all MSM living in a given state.

## References

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**Table 1. Characteristics of participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

		<b>N</b>	<b>%</b>
<b>Race/ethnicity*</b>	Black, non-Hispanic	36	3.5
	Hispanic	39	3.8
	White, non-Hispanic	889	86.1
	Other or multiple races	69	6.7
<b>Age (years)</b>	18-24	220	21.3
	25-29	147	14.2
	30-39	162	15.7
	40 or older	504	48.8
<b>Education</b>	< HS diploma	17	1.6
	HS diploma or equivalent	117	11.3
	Some college or technical degree	320	31.0
	College degree or postgraduate education	570	55.2
<b>Income</b>	\$0-19999	142	13.7
	\$20000-39999	224	21.7
	\$40000-74999	251	24.3
	\$75000 or more	339	32.8
<b>Population density</b>	Rural	434	42.0
	Urban	599	58.0
<b>Self-reported HIV status</b>	Negative	742	71.8
	Positive	97	9.4
	Unknown	194	18.8
<b>Anal sex without a condom with a male partner, past 12 month</b>	No	403	39.0
	Yes	630	61.0
<b>Illicit substances used, past 12 months</b>	No	753	72.9
	Yes	280	27.1
<b>Total</b>		1033	

**Percentages may not total 100% due to missing data**

**MSM=men who have sex with men**

**HS=high school**

**\*Persons of Hispanic/Latino ethnicity may be of any race**

**NOTE: data may be combined or suppressed due to small cell sizes**

**Table 2. Sexual behaviors with male partners of participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

			<b>Sexual behaviors with male partners in the past 12 months</b>					
			<b>No. in sample</b>	<b>Anal intercourse with a male partner without a condom</b>		<b>Anal intercourse without a condom with last male partner of discordant or unknown HIV status</b>		
				<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	
<b>HIV NEGATIVE OR UNKNOWN</b>	<b>Age (years)</b>	18-24	211	136	64.5	26	12.3	
		25-29	131	90	68.7	19	14.5	
		30-39	155	102	65.8	12	7.7	
		40 or older	439	228	51.9	39	8.9	
	<b>Race/ethnicity*</b>	Black, non-Hispanic	28	16	57.1	5	17.9	
		Hispanic	32	21	65.6	4	12.5	
		White, non-Hispanic	814	478	58.7	80	9.8	
		Other or multiple races	62	41	66.1	7	11.3	
	<b>Total</b>			936	556	59.4	96	10.3
	<b>HIV POSITIVE</b>	<b>Age (years)</b>	18-24	9	7	77.8	5	55.6
25-29			16	14	87.5	10	62.5	
30-39			7	6	85.7	2	28.6	
40 or older			65	47	72.3	29	44.6	
<b>Race/ethnicity*</b>		Black, non-Hispanic	8	5	62.5	3	37.5	
		Hispanic	7	4	57.1	2	28.6	
		White, non-Hispanic	75	60	80.0	38	50.7	
		Other or multiple races	7	5	71.4	3	42.9	
<b>Total</b>			97	74	76.3	46	47.4	

Percentages may not total 100% due to missing data

MSM=men who have sex with men

\*Persons of Hispanic/Latino ethnicity may be of any race

NOTE: data may be combined or suppressed due to small cell sizes

**Table 3. Substance using behaviors of participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

			<b>Substance use in the past 12 months</b>					
			<b>No. in sample</b>	<b>Used illicit drugs</b>		<b>Binge drank alcohol</b>		
				<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	
<b>HIV NEGATIVE OR UNKNOWN</b>	<b>Age (years)</b>	18-24	211	78	37.0	154	73.0	
		25-29	131	43	32.8	94	71.8	
		30-39	155	40	25.8	106	68.4	
		40 or older	439	77	17.5	186	42.4	
	<b>Race/ethnicity*</b>	Black, non-Hispanic	28	6	21.4	14	50.0	
		Hispanic	32	5	15.6	19	59.4	
		White, non-Hispanic	814	206	25.3	476	58.5	
		Other or multiple races	62	21	33.9	31	50.0	
	<b>Total</b>			936	238	25.4	540	57.7
	<hr/>							
	<b>HIV POSITIVE</b>	<b>Age (years)</b>	18-24	9	5	55.6	7	77.8
			25-29	16	8	50.0	12	75.0
			30-39	7	2	28.6	6	85.7
40 or older			65	27	41.5	25	38.5	
<b>Race/ethnicity*</b>		Black, non-Hispanic	8	3	37.5	5	62.5	
		Hispanic	7	3	42.9	3	42.9	
		White, non-Hispanic	75	33	44.0	37	49.3	
		Other or multiple races	7	3	42.9	5	71.4	
<b>Total</b>			97	42	43.3	50	51.5	

Percentages may not total 100% due to missing data  
 MSM=men who have sex with men  
 \*Persons of Hispanic/Latino ethnicity may be of any race  
 NOTE: data may be combined or suppressed due to small cell sizes

**Table 4. Sexually transmitted infection testing and hepatitis vaccination of participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

			<i>No. in sample**</i>	<i>Sexually transmitted disease testing in the past 12 months</i>		<i>Ever received hepatitis vaccination</i>		
				<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
<b>HIV NEGATIVE OR UNKNOWN</b>	<b>Age (years)</b>	18-24	68	16	23.5	63	92.6	
		25-29	36	16	44.4	36	100.0	
		30-39	50	11	22.0	49	98.0	
		40 or older	162	35	21.6	143	88.3	
	<b>Race/ethnicity*</b>	Black, non-Hispanic	9	4	44.4	8	88.9	
		Hispanic	10	4	40.0	10	100.0	
		White, non-Hispanic	271	61	22.5	251	92.6	
		Other or multiple races	26	9	34.6	22	84.6	
	<b>Total</b>			316	78	24.7	291	92.1
	<b>HIV POSITIVE</b>	<b>Age (years)</b>	18-39	9	7	77.8	9	100.0
40 or older			21	10	47.6	20	95.2	
<b>Race/ethnicity*</b>		Non-white	10	8	80.0	10	100.0	
		White, non-Hispanic	20	9	45.0	19	95.0	
<b>Total</b>			30	17	56.7	29	96.7	

**Percentages may not total 100% due to missing data**

**MSM=men who have sex with men**

**\*Persons of Hispanic/Latino ethnicity may be of any race**

**\*\*Subset of full cohort**

**NOTE: data may be combined or suppressed due to small cell sizes**



**Table 5. HIV testing behaviors of HIV-negative or unknown serostatus participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

		No. in sample	Ever HIV tested		HIV tested in the past 12 months	
			N	%	N	%
<i>Race/ethnicity*</i>	Black, non-Hispanic	28	25	89.3	15	53.6
	Hispanic	32	27	84.4	14	43.8
	White, non-Hispanic	814	648	79.6	307	37.7
	Other or multiple races	62	49	79.0	31	50.0
<i>Age (years)</i>	18-24	211	129	61.1	77	36.5
	25-29	131	107	81.7	60	45.8
	30-39	155	139	89.7	71	45.8
	40 or older	439	374	85.2	159	36.2
<i>Education</i>	< HS diploma	15	7	46.7	4	26.7
	HS diploma or equivalent	98	60	61.2	30	30.6
	Some college or technical degree	288	228	79.2	108	37.5
	College degree or postgraduate education	526	446	84.8	222	42.2
<i>Household income</i>	\$0-19999	122	96	78.7	47	38.5
	\$20000-39999	208	168	80.8	89	42.8
	\$40000-74999	227	191	84.1	96	42.3
	\$75000 or more	309	255	82.5	118	38.2
<i>Population density</i>	Urban	530	435	82.1	214	40.4
	Rural	406	314	77.3	153	37.7
<i>Health insurance</i>	None	91	73	80.2	31	34.1
	Private only	510	408	80.0	191	37.5
	Public only	60	53	88.3	21	35.0
	Other/Multiple	74	50	67.6	20	27.0
<i>Total</i>		936	749	80.0	367	39.2

**Percentages may not total 100% due to missing data**

**MSM=men who have sex with men**

**HS=high school**

**\*Persons of Hispanic/Latino ethnicity may be of any race**

**NOTE: data may be combined or suppressed due to small cell sizes**

**Table 6. Testing location of last HIV test of HIV-negative or unknown serostatus participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

	<b>Location of most recent HIV test</b>	
	<b>N</b>	<b>%</b>
<i>Private doctor's office</i>	294	39.7
<i>HIV counseling and testing site</i>	118	15.9
<i>Public health clinic/community health clinic</i>	146	19.7
<i>Street outreach program/mobile unit</i>	27	3.6
<i>Sexually transmitted disease clinic</i>	12	1.6
<i>Hospital (inpatient)</i>	27	3.6
<i>Correctional facility (jail or prison)</i>	3	0.4
<i>Emergency room</i>	5	0.7
<i>At home</i>	52	7.0

**Percentages may not total 100% due to missing data**

**MSM=men who have sex with men**

**NOTE: data may be combined or suppressed due to small cell sizes**

**NOTE: data may be combined or suppressed due to small cell sizes**

**Table 7. Participation in HIV prevention services of HIV-negative or unknown serostatus participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

		Prevention services received in the past 12 months						
		No. in sample	Received free condoms		Participated in group discussion		Participated in one-on-one prevention counseling	
			N	%	N	%	N	%
<i>Race/ethnicity*</i>	Black, non-Hispanic	28	16	57.1	2	7.1	6	21.4
	Hispanic	32	17	53.1	2	6.3	6	18.8
	White, non-Hispanic	814	322	39.6	35	4.3	100	12.3
	Other or multiple races	62	36	58.1	4	6.5	12	19.4
<i>Age (years)</i>	18-24	211	114	54.0	27	12.8	42	19.9
	25-29	131	68	51.9	6	4.6	21	16.0
	30-39	155	71	45.8	1	0.6	20	12.9
	40 or older	439	138	31.4	9	2.1	41	9.3
<i>Education</i>	< HS diploma	15	5	33.3	0	0.0	3	20.0
	HS diploma or equivalent	98	25	25.5	7	7.1	9	9.2
	Some college or technical degree	288	127	44.1	14	4.9	33	11.5
	College degree or postgraduate education	526	229	43.5	21	4.0	79	15.0
<i>Household income</i>	\$0-19999	122	58	47.5	9	7.4	19	15.6
	\$20000-39999	208	89	42.8	7	3.4	32	15.4
	\$40000-74999	227	100	44.1	7	3.1	31	13.7
	\$75000 or more	309	111	35.9	14	4.5	32	10.4
<i>Population density</i>	Urban	530	236	44.5	26	4.9	73	13.8
	Rural	406	155	38.2	17	4.2	51	12.6
<i>Health insurance</i>	None	91	33	36.3	4	4.4	11	12.1
	Private only	510	205	40.2	23	4.5	69	13.5
	Public only	60	18	30.0	3	5.0	7	11.7
	Other/Multiple	74	25	33.8	3	4.1	5	6.8
<i>Total</i>		936	391	41.8	43	4.6	124	13.2

Percentages may not total 100% due to missing data

MSM=men who have sex with men

HS=high school

\*Persons of Hispanic/Latino ethnicity may be of any race

NOTE: data may be combined or suppressed due to small cell sizes

**Table 8. Knowledge of PrEP and willingness to use PrEP of HIV-negative or unknown serostatus participants in an online survey of MSM, SAMPLE, American Men's Internet Survey (AMIS), 2013**

		No. in sample**	Heard of PrEP		Willing to use PrEP	
			N	%	N	%
<i>Race/ethnicity*</i>	Black, non-Hispanic	9	4	44.4	4	44.4
	Hispanic	10	5	50.0	5	50.0
	Other or multiple races	26	11	42.3	9	34.6
	White, non-Hispanic	271	95	35.1	119	43.9
<i>Age (years)</i>	18-24	68	21	30.9	31	45.6
	25-29	36	21	58.3	21	58.3
	30-39	50	20	40.0	19	38.0
	40 or older	162	53	32.7	66	40.7
<i>Education</i>	< HS of HS diploma/equivalent	35	5	14.3	16	45.7
	Some college or technical degree	102	29	28.4	44	43.1
	College degree or postgraduate education	175	80	45.7	77	44.0
<i>Household income</i>	\$0-19999	38	9	23.7	18	47.4
	\$20000-39999	64	15	23.4	23	35.9
	\$40000-74999	76	38	50.0	37	48.7
	\$75000 or more	113	46	40.7	52	46.0
<i>Population density</i>	Rural	140	44	31.4	59	42.1
	Urban	176	71	40.3	78	44.3
<i>Health insurance</i>	None	30	6	20.0	14	46.7
	Other/Multiple	25	7	28.0	7	28.0
	Private only	175	68	38.9	68	38.9
	Public only	20	5	25.0	9	45.0
<i>Total</i>		316	115	36.4	137	43.4

Percentages may not total 100% due to missing data

MSM=men who have sex with men

HS=high school

PrEP= pre-exposure prophylaxis

\*Persons of Hispanic/Latino ethnicity may be of any race

\*\*Subset of full cohort

NOTE: data may be combined or suppressed due to small cell sizes