

Characteristics associated with HIV self-testing reported by internet-recruited MSM in the United States, eSTAMP baseline data, 2015

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BACKGROUND

- The introduction of OraQuick In-home HIV Test (OraQuick) into the United States market in 2012 renewed questions about the use, reach, and public health implications of HIV self-testing (HIVST) for men who have sex with men (MSM).
- Using baseline data from the *Evaluation of HIV Self-Testing among MSM Project* (eSTAMP), we report on past 12 month HIVST and associated factors among internet-recruited MSM.

METHODS

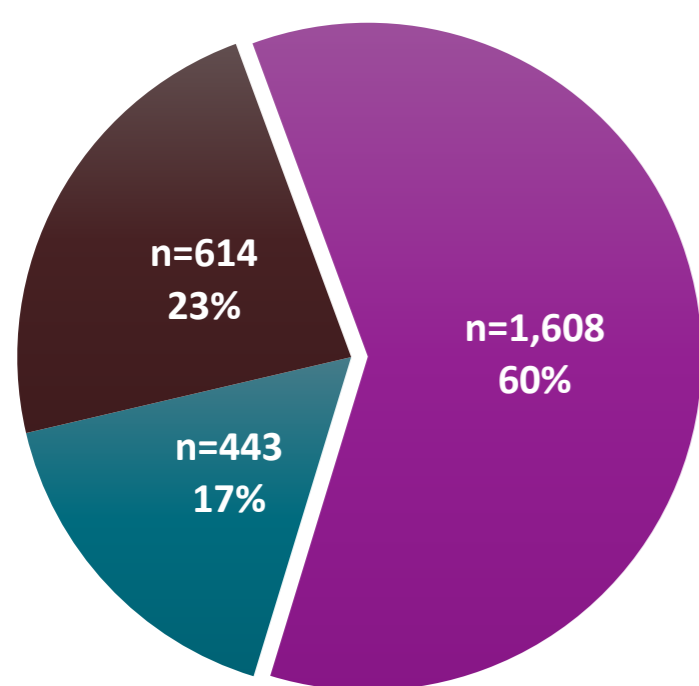
- Between March 25 and August 4, 2015, MSM reporting HIV-negative or HIV-unknown status were recruited online using targeted banner advertising in dating, music and social networking sites into eSTAMP (a 12-month randomized controlled trial of HIVST).
- Using data from a baseline online survey completed prior to randomization, we examined participant HIV testing history and their knowledge and use of HIV home tests. We calculated frequency and associations of past 12 months HIVST with selected sociodemographic characteristics and present unadjusted relative risks (RR) and 95% confidence intervals (95% CI).

RESULTS

- 2,665 MSM were recruited into eSTAMP. Most of them were white (58%), younger than 30 (57%), more than high school graduates (83%), employed (84%), had a household income <\$40K (51%), and 81% had health insurance.
- In the past 3 months: 63% had anal sex with ≥2 male partners, 77% had condomless anal sex (CAS), and 6% had CAS with ≥1 HIV infected male partner.

HIV TESTING HISTORY (N=2,665)

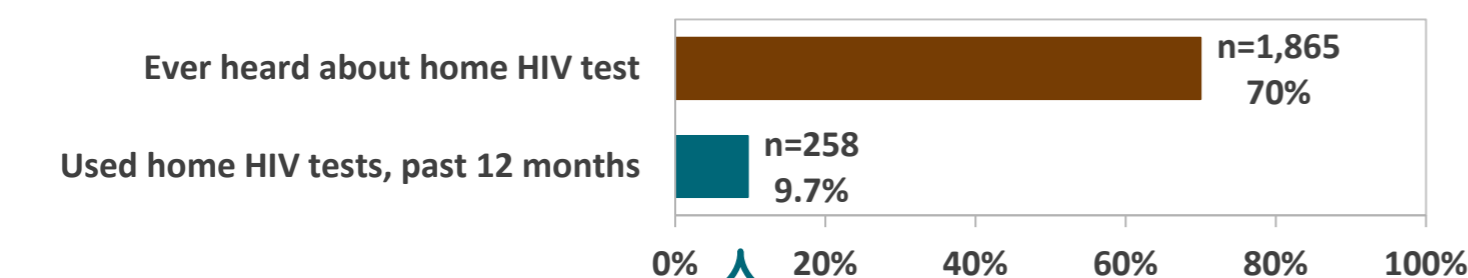
- Never tested
- Tested, not in the past 12 months
- Tested in the past 12 months



Location of last test, past 12 months (n = 1,608)	n (%)
Doctor's office	504 (31)
Health/STD clinic	457 (28)
HIV testing site/street outreach program	406 (25)
Home	146 (9)
Other	86 (5)
missing	9 (0.6)

Number of times tested, past 12 months (n = 1,608)	n (%)
1	683 (41)
2	464 (28)
3	260 (16)
4+	201 (12)

AWARENESS AND USE OF HOME HIV TESTS (N=2,665)



Type of home HIV test used, past 12 months (n=258)	n (%)	Number of times used home HIV tests, past 12 months (n=258)	n (%)
Home Access ^a	15 (5.8)	1	193 (74.8)
OraQuick	236 (91.5)	2	41 (15.9)
Home Access and OraQuick	3 (1.2)	3	13 (5.0)
Other	2 (0.8)	4+	9 (3.5)
missing	2 (0.8)	missing	2 (0.8)

^a Home Access: Home Access HIV-1 Test System

ORIGIN AND REASON FOR USING HOME HIV TESTS IN THE PAST 12 MONTHS

Origin* of Home HIV Test (n=258)	n (%)	Reason* for using (n=258)	n (%)
Bought online	52 (20.2)	Convenience	158 (61.2)
From pharmacy	164 (63.6)	Privacy	145 (56.2)
From another research study	19 (7.4)	Sexual encounter context	113 (43.8)
From sex partner and/or friend	17 (6.6)	To test with someone before sex	32 (12.4)
From HIV counseling/testing site	11 (4.3)	To test myself before sex	38 (14.7)
Other	4 (1.6)	To test myself after sex	69 (26.7)
missing	2 (0.8)	Sex partner asked me to test	13 (5.0)
		Other	25 (9.7)
		missing	1 (0.4)

*Multiple response: % presented as percentage of participants. Not mutually exclusive.

CHARACTERISTICS ASSOCIATED WITH PAST 12 MONTHS HIVST

	Total (n=2,665)		HIV home test user (n=258)		RR (95% CI)
	n ^a	Col %	n ^a	Row %	
Age					
18-29	1,527	57.3	131	8.6	ref
30-39	692	26.0	72	10.4	1.21 (0.92 - 1.59)
40-49	293	11.0	31	10.6	1.23 (0.85-1.79)
50+	153	5.7	24	15.7	1.83 (1.22 - 2.73)
Race/Ethnicity					
Non-Hispanic white	1,540	57.8	168	10.9	ref
Non-Hispanic black	261	9.8	24	9.2	0.84 (0.56-1.27)
Hispanic	620	23.3	38	6.1	0.56 (0.40-0.79)
Non-Hispanic, other race	244	9.2	28	11.5	1.05 (0.72-1.53)
Income					
<\$39,999	1,362	51.1	90	6.6	ref
\$40,000 or more	1,119	42.0	156	14.0	2.11 (1.65-2.70)
Employment Status					
Unemployed	394	14.8	20	5.1	ref
Employed	2,236	83.9	237	10.6	2.09 (1.34-3.25)
Education					
High school diploma or less	436	16.4	17	3.9	ref
Greater than high school education	2,222	83.4	241	10.8	2.78 (1.72-4.50)
Health insurance					
No	474	17.8	34	7.2	ref
Yes	2,155	80.9	223	10.3	1.44 (1.02-2.04)
Anal sex male partners, past 3 months					
0 or 1	991	37.2	76	7.7	ref
2 or more	1,671	62.7	182	10.9	1.42 (1.10-1.83)
CAS by male partner's HIV status, past 3 months					
No CAS	609	22.9	53	8.7	ref
CAS with HIV-negative partners only	1,147	43.0	126	11.0	1.26 (0.93-1.71)
CAS with HIV-unknown status partners ^b	730	27.4	56	7.7	0.88 (0.62-1.26)
CAS with any HIV-positive partner	163	6.1	23	14.1	1.62 (1.03-2.56)

Abbreviations: RR, relative risk; CAS, condomless anal sex.

^a Numbers might not add to total because of missing data.

^b Includes CAS with HIV-unknown partners only or CAS with HIV-unknown and HIV-negative partners.

LIMITATIONS

- The findings may not be generalizable to all MSM from the U.S.
- Measures used in the analysis are subject to recall and social desirability bias.
- Given the cross sectional design of the analysis no causal associations can be inferred.
- There might be underreporting of sex behaviors due to the 3-month reporting period.

CONCLUSIONS

- The relatively high proportion of MSM who had never tested for HIV who were recruited into eSTAMP highlighting the need for innovative testing strategies among this population.
- Awareness of HIV home tests was high, but few MSM reported using them in the past year.
- More than half of home HIV test users got their own test from a pharmacy and 1 out of 5 bought it online.
- Although the most common reasons for using a home HIV test were convenience and privacy, nearly half indicated using it in the context of a sexual encounter.
- Using a home HIV test in the past 12 months was positively associated with older age and higher socioeconomic status possibly due to test cost in the US (approximately \$40). Providing free or subsidized tests may be necessary to increase HIVST among MSM in the US, especially among lower income populations.
- MSM who engage in HIV sexual risk behaviors, such as having multiple male anal sex partners or having CAS with HIV infected male partners, may have been earlier adopters of HIVST.

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