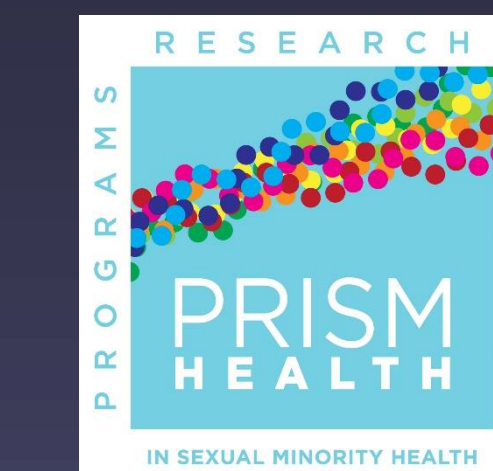




HIV Testing Motivations of U.S. Men Who Have Sex with Men in a National Online Survey

David A. Katz^{1,2}, Patrick S. Sullivan³, R. Craig Sineath³, Jennie McKenney³, Maria Zlotorzynska³, Susan Cassels⁴, Joanne D. Stekler¹

University of Washington¹, Seattle, USA; Public Health – Seattle & King County², Seattle, USA; Emory University³, Atlanta, GA; University of California Santa Barbara⁴, Santa Barbara, CA



Abstract

BACKGROUND: The Centers for Disease Control and Prevention recommends at least annual HIV testing for sexually active men who have sex with men (MSM) and testing every 3-6 months for those at greatest risk. Understanding reasons for seeking testing may help develop and evaluate interventions to increase frequent, regular testing.

METHODS: U.S. MSM aged 18-39 were recruited from social networking and MSM-focused online venues to participate in a study of online informed consent strategies. Surveys included questions about reasons for HIV testing. Chi-square and rank-sum tests were used to compare characteristics of never, regular, and non-regular testers and result of last test by reason for testing.

RESULTS: Of 1419 MSM with HIV testing data (89% of total), 1106 (78%) reported prior HIV testing, of whom 105 (9%) had tested positive. Among HIV-negative/unknown ever testers, 51% reported currently testing on a regular schedule, of whom 1% reported testing monthly, 33% quarterly, 38% every 6 months, 22% annually, 3% every 2 years, and 3% on another schedule. The Table compares characteristics of regular, non-regular, and never testers. Regular testers had tested more recently than non-regular testers (median of 3 v. 10 months since last test; $p<.0001$).

Among ever testers, reasons for last test were: routine testing (31%), HIV-positive partner (5%), other potential exposure (28%), new relationship (8%), healthcare provider recommended (7%), HIV/STD symptoms (6%), or other (14%). Among ever testers, 24% reported ever having tested in response to symptoms they thought might be acute HIV infection. The proportion who reported testing positive at last test differed by reason for last test: positive partner (30%), HIV/STD symptoms (15%), other exposure (7%), provider recommended (5%), routine testing (4%), new relationship (1%), and other (5%) [$p<0.0001$].

HIV-negative MSM thought they should test on a regular schedule (80%), after HIV exposure (29%), if they have HIV symptoms (22%), and between new partners (32%); this differed by testing history (Table). Most thought they should test at least annually (88%), including 85% of never testers.

CONCLUSIONS: Regular testing and perceived HIV exposures were important drivers of HIV testing among MSM, but one-fifth reported never having tested. Messages regarding frequent, regular HIV testing have reached these men but have not necessarily resulted in desired testing behaviors. Strategies for translating knowledge into practice, particularly for never testers, are needed.

Background

- HIV testing is the entry point into HIV prevention and care
- U.S. CDC recommends testing:
 - At least annual testing for sexually active men who have sex with men (MSM) and
 - Every 3-6 months for MSM at greatest risk of HIV acquisition
- However, many MSM test infrequently and an estimated 15% of U.S. MSM living with HIV remain unaware of their infection
- Understanding reasons for seeking testing may help develop and evaluate interventions to increase frequent, regular HIV testing

Objective

Examine reasons for seeking HIV testing, patterns of regular testing, and attitudes towards testing among U.S. MSM participating in a national online survey

Methods

Data Collection & Survey Questions

Data Source	Secondary analysis of data from study to improve online informed consent and survey procedures for young MSM (ClinicalTrials.gov NCT02139566)
Eligibility Criteria	<ul style="list-style-type: none"> Cis-men who reported sex with men in the prior year Ages 18-39 Living in U.S.
Recruitment	Ads on social networking and MSM-focused online venues
Reason for HIV testing	What was the main reason you got your last HIV test?
Testing for acute HIV infection	Most people will have some flu-like symptoms (fever, rash, sore throat, or muscle aches) in the first 1 to 4 weeks after getting infected with HIV. Have you ever tested for HIV because you had flu-like symptoms and thought they might be from a new HIV infection?
Regular testing	<ol style="list-style-type: none"> Do you currently test for HIV on a regular schedule? About how often do you test for HIV on this regular schedule?
When to test	When do you think you should test for HIV?*
How often to test	How often do you think you should test for HIV?

*Used only data from first of two phases of parent study, which asked this question as "mark all that apply", allowing men to choose multiple possible reasons they should test.

Definitions

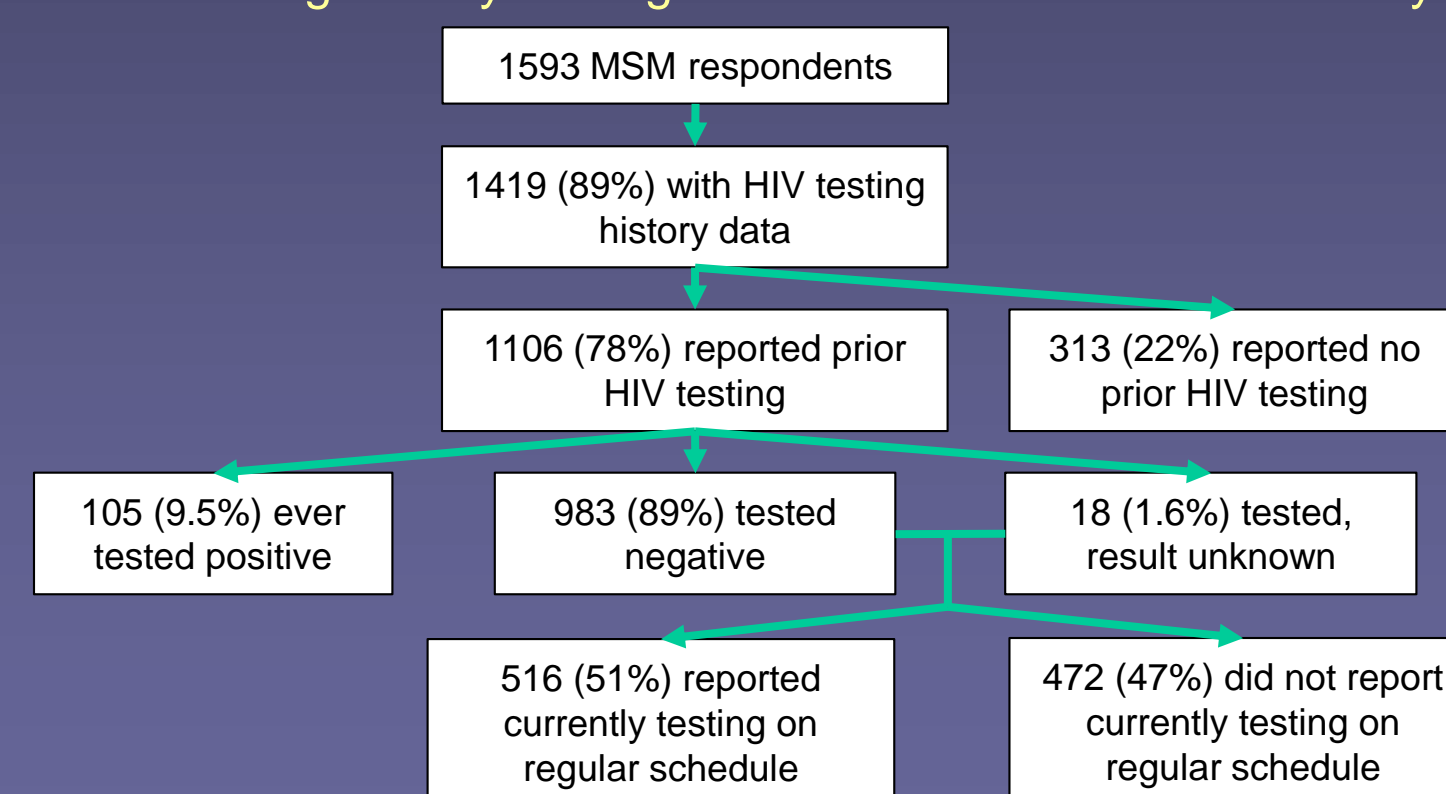
HIV Tester Type	
Regular Tester	Reported ever having tested for HIV and Reported currently testing on a regular schedule
Non-Regular Tester	Reported ever having tested for HIV and Did not report currently testing on a regular schedule
Never Tester	Reported never having tested for HIV
Categories of Reason for Last Test	
Regular testing	I get tested on a regular schedule and it was time for me to get tested again
HIV-positive partner	<ul style="list-style-type: none"> I had sex with someone I knew was HIV positive I had sex with someone and found out afterwards that he was HIV positive The health department contacted me because one of my sex partners tested positive for HIV
Other potential exposure	<ul style="list-style-type: none"> I had unprotected anal sex I shared needles or syringes with someone I was worried I might have been exposed to HIV
HIV/STI symptoms	<ul style="list-style-type: none"> I had symptoms of HIV I had symptoms of an STD other than HIV
New relationship	I was starting a new relationship
Provider recommended	My doctor or other health care provider recommended I get tested
Other	<ul style="list-style-type: none"> A sex partner requested it I received an email, text, or phone call to remind me about testing Because I got paid to have an HIV test Other

Statistical Analyses

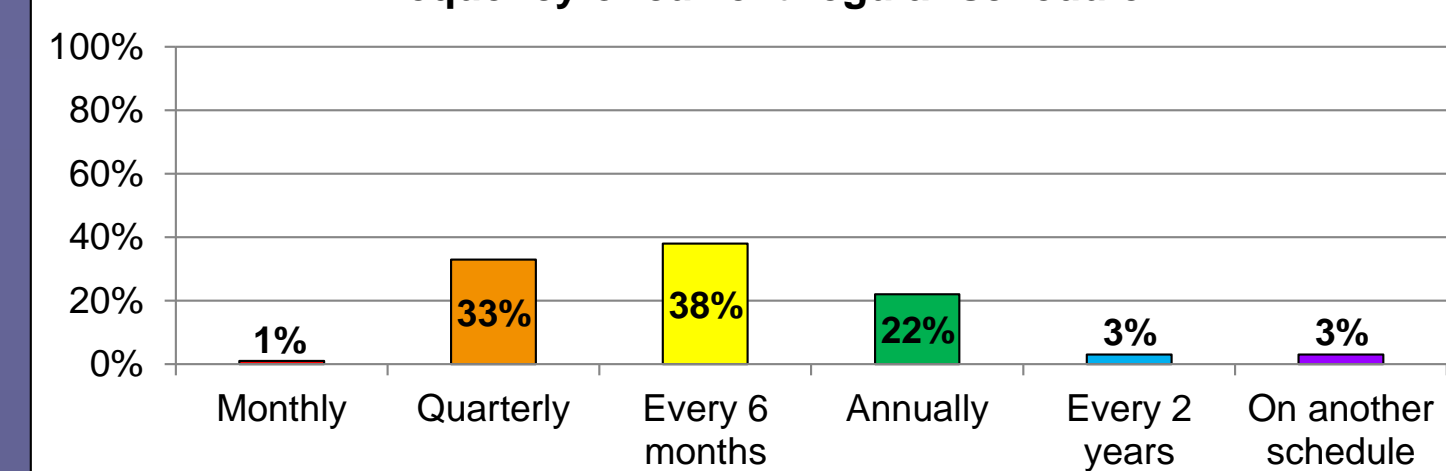
Outcome	Exposure	Statistical test
HIV tester type	Participant characteristics	Chi-square or rank-sum
Tested HIV positive at last test	Reason for last test	Chi-square
When/why men think they should test	Ever vs. never tested	Chi-square

Results

HIV Testing History among MSM in a National Online Survey



Frequency of current regular schedule



- Among ever testers, 24% (265/1086) reported ever having tested in response to symptoms they thought might be acute HIV infection
- Men who had tested in response to these symptoms were more likely to have ever tested positive (19%) than those who had not (3%) [chi-square $p<0.0001$]

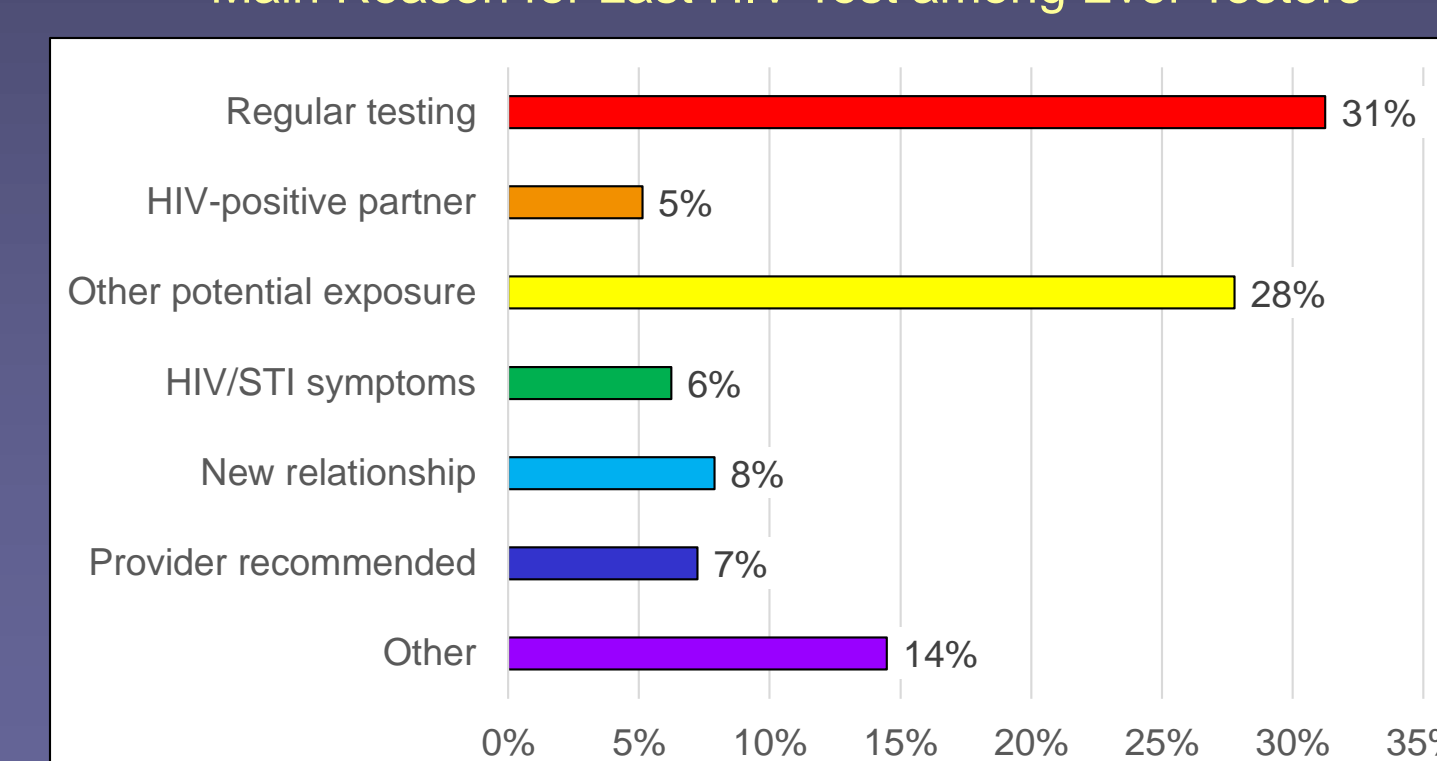
Characteristics of Regular, Non-Regular, and Never Testers

Characteristic	Never testers		Regular testers		Non-regular testers		p-value
	n	%	n	%	n	%	
N (% of total)	313	22%	516	36%	472	33%	-
Age*	21	19-25	26	23-30	25	22-29	<.001
Resides in core county of MSA* ≥1 million	113	37%	288	56%	189	41%	<.001
Hispanic	55	18%	104	20%	78	17%	0.32
Race							0.30
Asian	13	4%	27	5%	27	6%	
Black	11	4%	19	4%	30	6%	
White	253	81%	400	78%	357	76%	
Other	36	12%	70	14%	58	12%	
Identifies as gay or bisexual	283	90%	498	97%	457	97%	<.001
Number of male anal sex partners, last year*	2	1-3	3	1-8	2	1-4	<.001
HIV tested, last year	N/A		492	96%	770	78%	<.001
Months since last test*	N/A		3	1-6	10	4-22	<.001

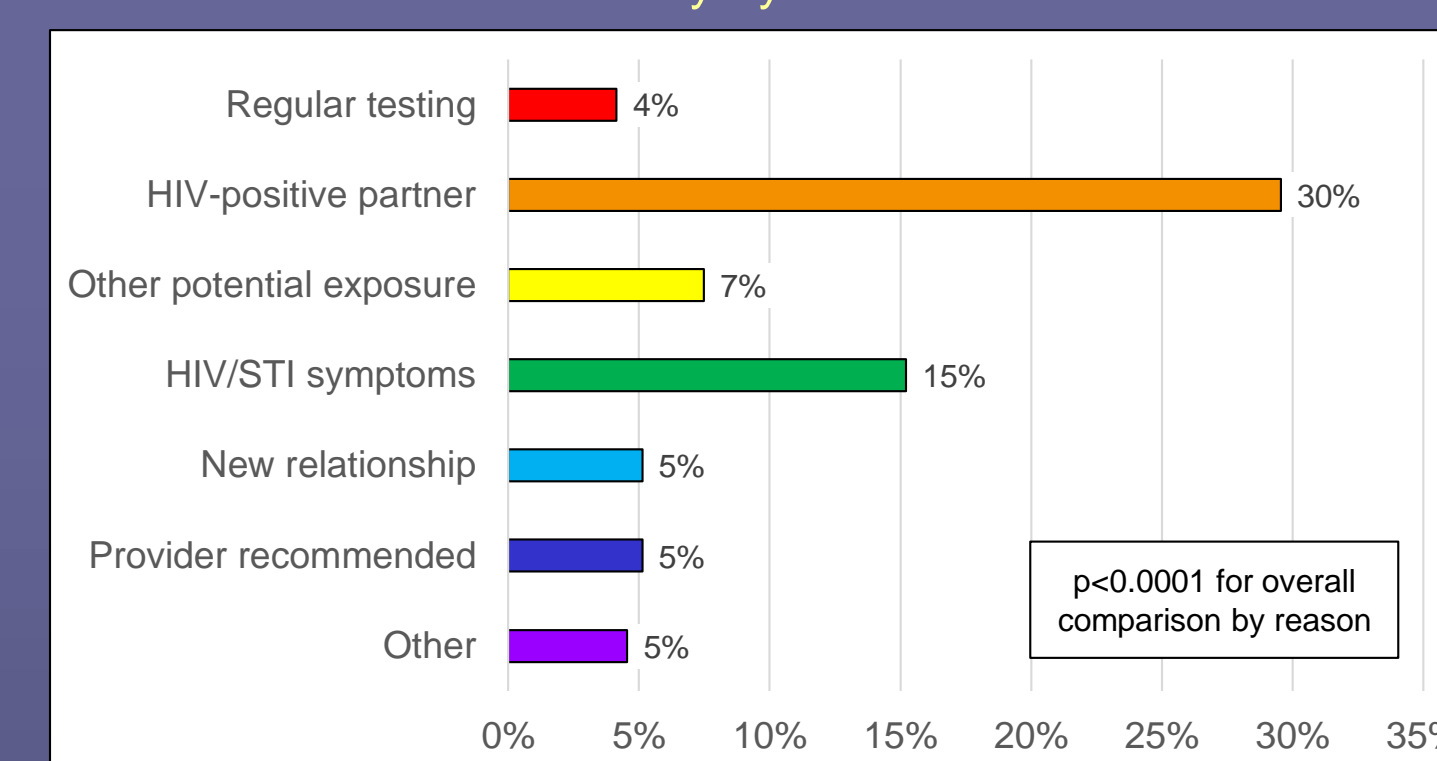
*Median and interquartile range. *Metropolitan statistical area.

Results (cont.)

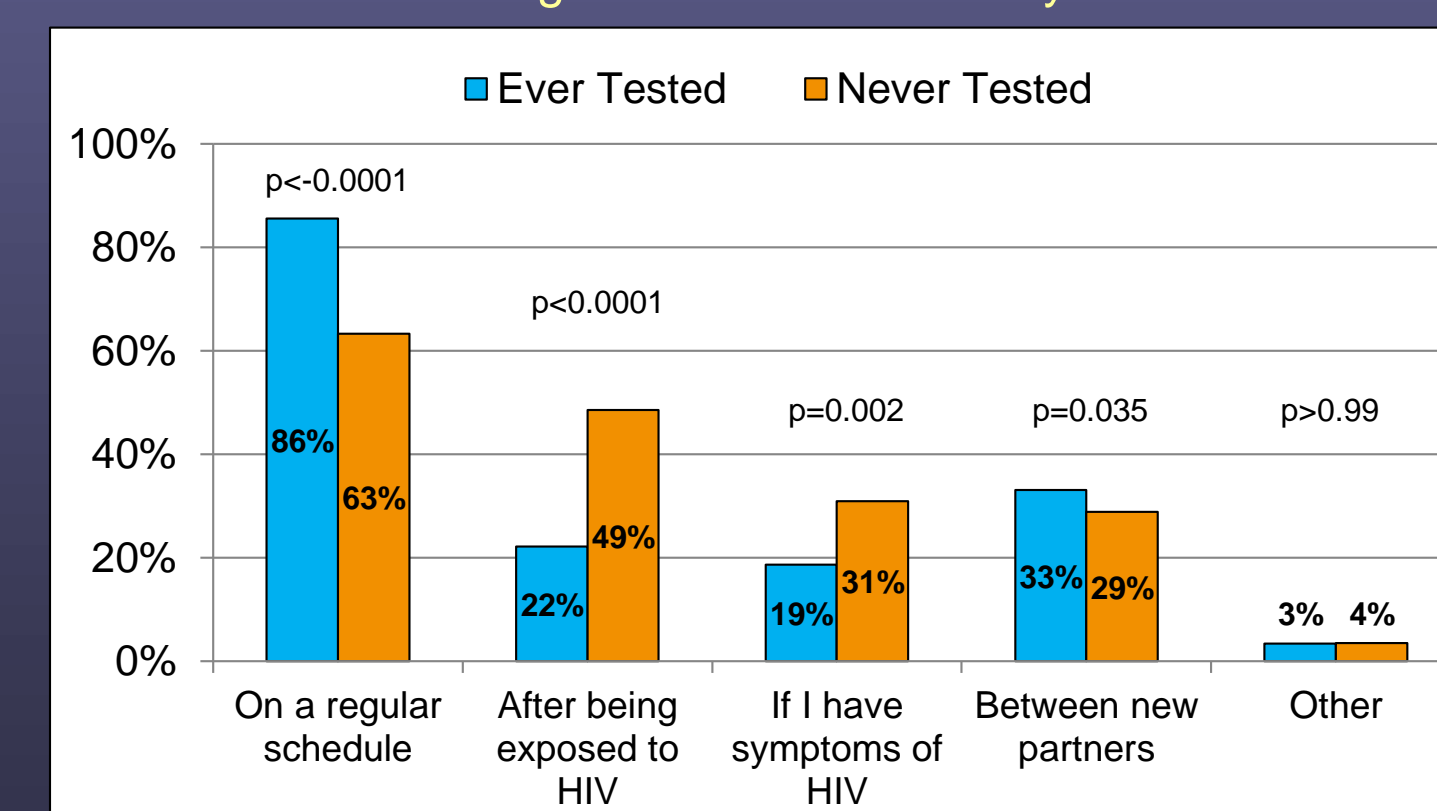
Main Reason for Last HIV Test among Ever Testers



HIV Test Positivity by Reason for Last Test

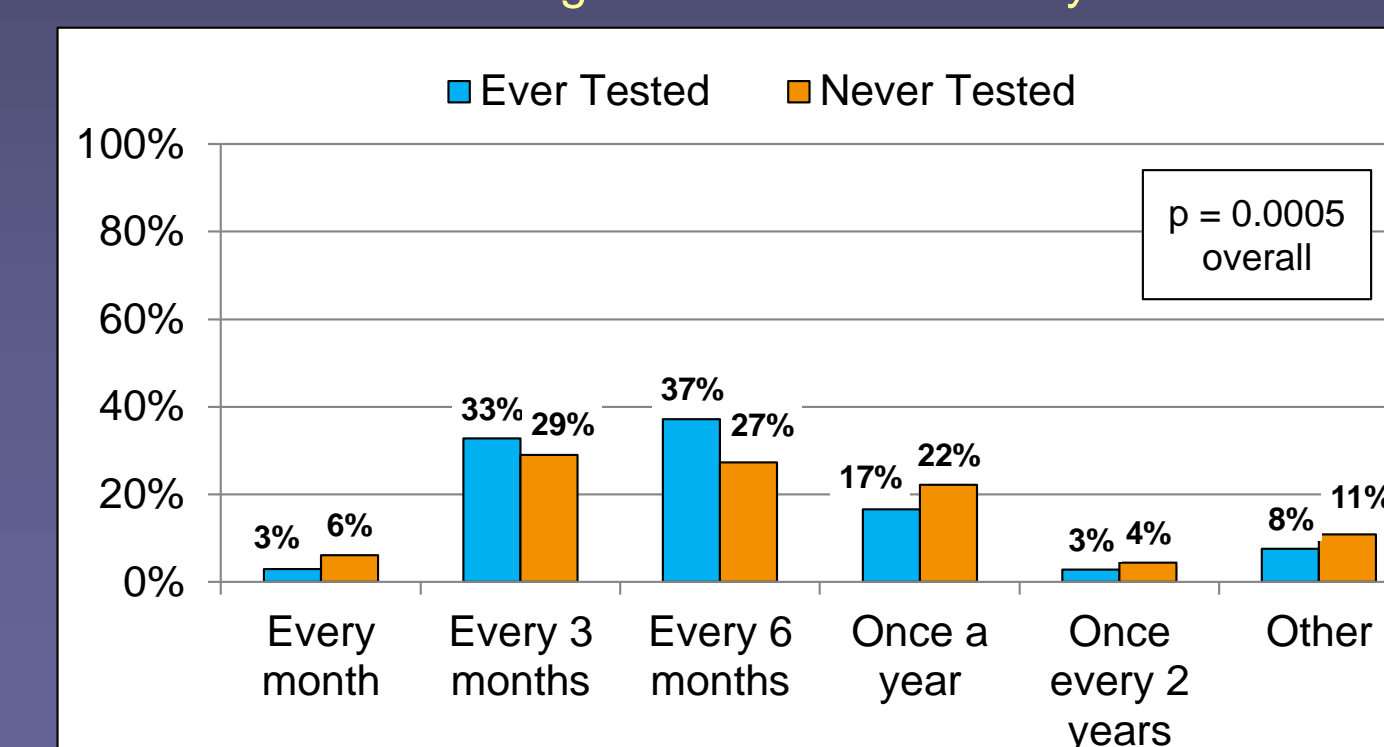


When HIV-Negative MSM Think They Should Test



Results (cont.)

How Often HIV-Negative MSM Think They Should Test



Limitations

- Respondents may not be representative of all U.S. MSM
- HIV testing history and status are sensitive to recall and social desirability bias
- Few men tested HIV-positive at last test → uncertainty in estimates of HIV test positivity by reason for testing

Summary

- One-fifth of MSM reported never having tested for HIV; younger and non-gay/bi-identified MSM were more likely to have never tested
- Regular testing and perceived exposures were important drivers of testing
- Living in a large city and having more partners was associated with regular testing
- Regular testers had tested more recently than non-regular testers, and most tested on schedules of every 3 or 6 months
- Men who had ever tested were more likely to think they should test on a regular schedule and less likely to think they should test after a specific HIV exposure than men who had never tested
- Regardless of testing history, almost all men thought they should test ≥once per yr
- HIV test positivity was greatest among persons testing because they had an HIV-positive partner followed by testing in response to HIV/STI symptoms

Conclusions

- Messages regarding frequent, regular HIV testing have reached MSM but have not resulted in desired testing behaviors in many men
- Strategies for helping MSM translate knowledge into practice, particularly for never testers, are needed

Acknowledgments

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