

HIV Prevalence and Risk Behaviors Among Men Who Have Sex with Men in New York City

Results from the National HIV Behavioral Surveillance (NHBS)

HIV Epidemiology Program
New York City Department of Health and Mental Hygiene

New York Blood Center

Objectives

Among men who have sex with men (MSM):

- Estimate the prevalence and incidence of HIV infection
- Determine frequency of risk behaviors
- Determine correlates of risk behaviors
- Identify gaps in prevention services

Study Design

- Multi-site survey of MSM who attend public venues
 - 16 sites in U.S.
 - Public venues: bars, dance clubs, business establishments, social organizations, sex establishments, street locations
 - Cross-sectional sample
 - Anonymous

Sampling Procedures (i)

- 4 stages of conducting survey
 1. Identify public venues attended by MSM
 - Sampling frame from Young Men's Survey (YMS)
 - Community interviews
 - Review local gay publications

Sampling Procedures (ii)

2. Build monthly sampling frame of venues and their associated sampling periods

- Type 1 enumeration: counts for unknown venues
- Type 2 enumeration: brief-street interviews to establish peak times
- Determine if venue produces minimum number of eligible men during a 4 hr. sampling period

Sampling Procedures (iii)

3. Random selection of venues and sampling periods each month ('event')
4. Sampling of men at randomly selected events

Eligibility Criteria

- Male
- Resident of NYC metropolitan area
- 18+ years old
- Sexual orientation or behaviors were not included

Data Collection

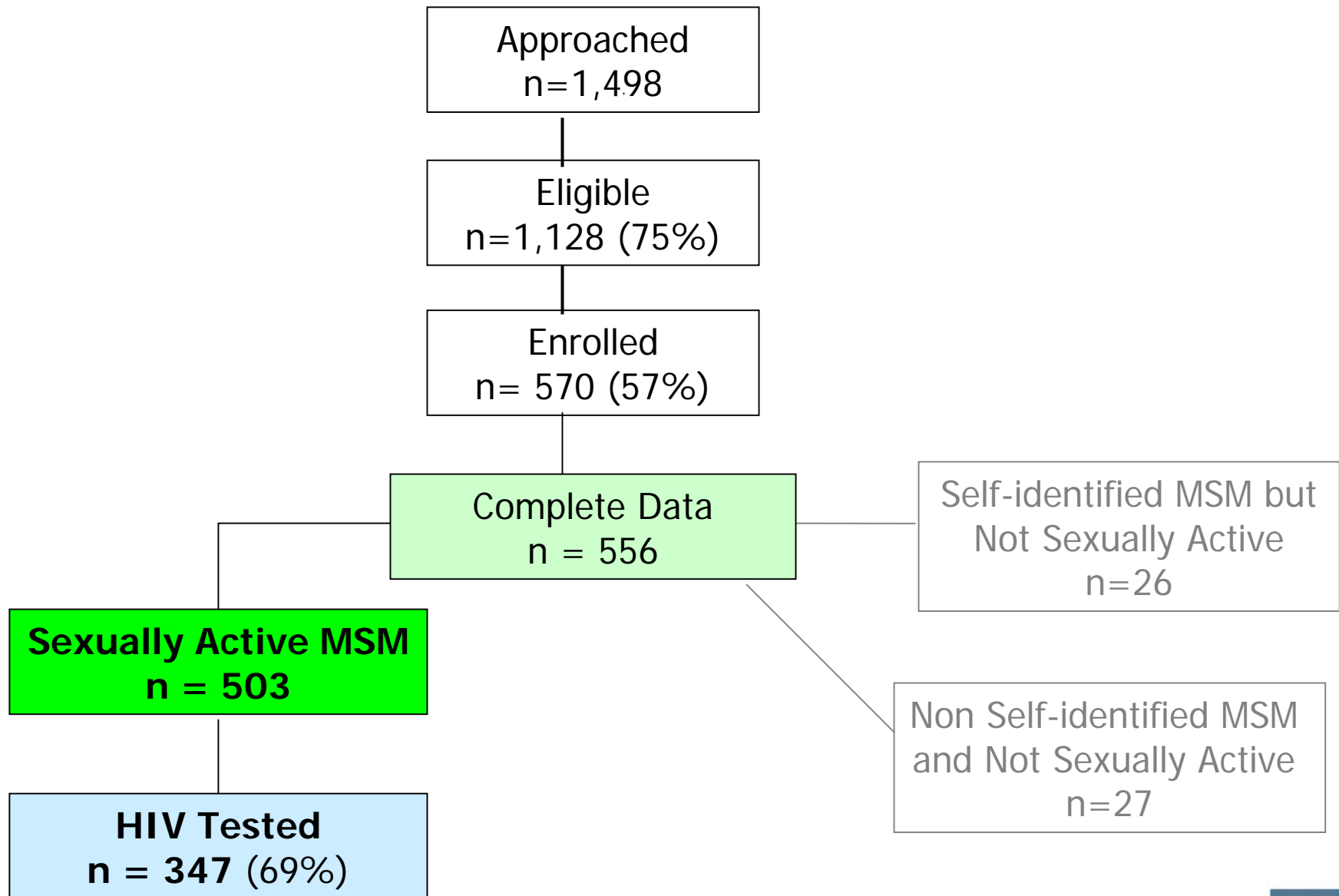
- In a mobile van:
 - Standardized core questionnaire plus local questions
 - HIV pre-test counseling
 - Blood specimen

Sampling Events

82 events from 7/04 to 1/05

– Bars	44	events
– Dance clubs	9	
– Street locations	8	
– Retail businesses	8	
– Cafes/restaurants	5	
– Social organizations	3	
– Events	2	
– Parks	2	
– Gym	1	

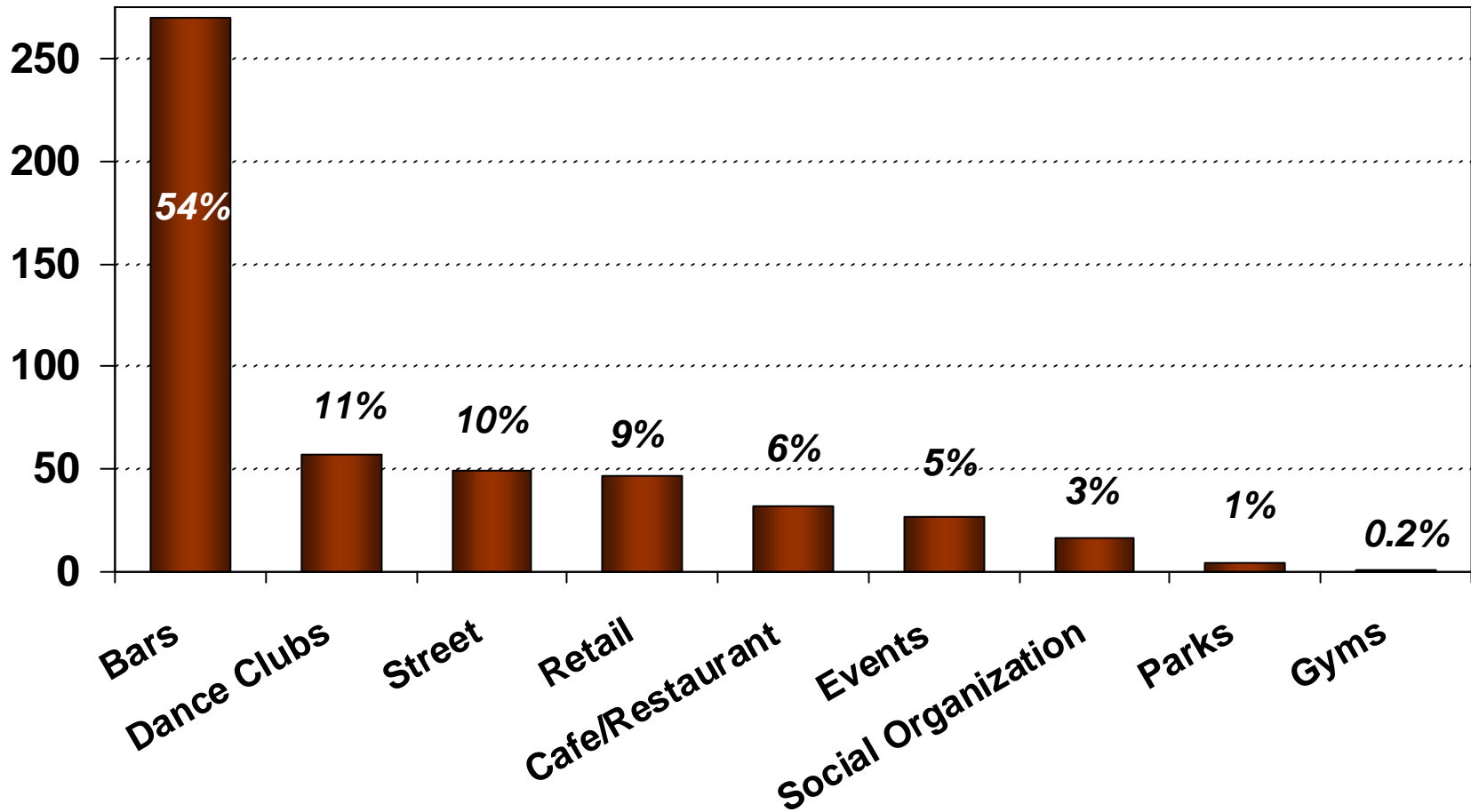
Study Sample



Sexually Active: Sex with man in past 12 months

Interview Venues

(n=503)



Demographic Characteristics (n=503)

	%
Age	
18-24	30
25-29	21
30-34	17
35-39	15
40+	17

Race/ethnicity	
White	40
Hispanic	27
Black	23
API	4
Native American	1
Other/Unknown	5

	%
Education	
< High school	8
High school grad.	18
Some college	26
≥ College grad.	48

Living situation	
Rent house or apt.	65
Live with someone, no pay	13
Live with someone, pay	12
Own house	8
Other	3

Sexual Partners in Past 12 Months (n=503)

	Sex with Men %	Sex with Men/Women %
<i>Self-Identified</i>		
Heterosexual (n=5)	20	80
Homosexual (n=397)	95	5
Bisexual (n=91)	42	58
Other (n=10)	60	40

Sexual Behaviors in Past 12 Months (n=503)

	%
> 5 Male Partners	46
Sex with Female	16
Exchange Sex for Money/Drugs	9
Unprotected Anal Intercourse (UAI)	53
STD Diagnosis	10

Sexual Behaviors in Past 12 Months by Race/Ethnicity (n=503)

	Black (n=117) %	White (n=199) %	Latino (n=138) %
> 5 Male Partners *	38	57	36
Sex with Female *	29	5	23
Exchange Sex for Money/Drugs	9	6	12
UAI	44	58	55
STD Diagnosis	11	12	9

* P < 0.001

Substance-Use Behaviors in Past 12 Months (n=503)

	%
Ever Injection Drug Use	4
Recent Injection Drug Use	1
Non-Injection Drug Use	61
Non-Injection Drug Use during Sex	48

Substance-Use Behaviors in Past 12 Months by Race/Ethnicity (n=503)

	Black (n=117) %	White (n=199) %	Latino (n=138) %
Ever Injection Drug Use	3	6	3
Recent Injection Drug Use	0	2	1
Non-Injection Drug Use	54	67	59
Non-Injection Drug Use during Sex	44	55	43

Non-Injection Drug Use in Past 12 Months (n=503)

	% used	% used during sex*
Poppers	23	91
Amphetamines	14	71
Marijuana	51	67
Heroin	1	57
Crack	4	53
Cocaine	32	52
Ecstasy	21	51
Club Drugs	8	39
Hallucinogens	3	31
Downers	10	23
Pain Killers	6	16

* Proportions among those who used specific drug

Non-Injection Drug Use in Past 12 Months by Race/Ethnicity (n=503)

	Black (n=117) %	White (n=199) %	Latino (n=138) %
Marijuana	52	53	50
Cocaine	22	41	28
Poppers	11	29	25
Ecstasy	19	20	20
Amphetamines	7	17	13
Downers	5	15	8
Club Drugs	3	13	7
Pain Killers	5	8	5
Crack	6	2	6
Hallucinogens	4	3	2
Heroin	1	2	2

Amphetamine Use among MSM

CDC National HIV Behavioral Surveillance Survey

Site	Last 12 months	Weekly or more
New York	14%	3%
Chicago	10%	2%
Baltimore	7%	3%
San Francisco	21%	6%
Los Angeles	13%	4%

Source: 2005 National HIV Prevention Conference, Atlanta GA, June 2005.

Non-Injection Drug Use During Sex in Past 12 Months, by Race/Ethnicity (n=503)

	Black (n=117) %	White (n=199) %	Latino (n=138) %
Marijuana	38	35	31
Cocaine	12	22	12
Poppers	10	27	22
Ecstasy	13	10	7
Amphetamines	4	12	9
Downers	2	3	4
Club Drugs	2	6	2
Pain Killers	1	1	2
Crack	4	1	2
Hallucinogens	3	1	1
Heroin	0	2	1

High during Last Sexual Encounter by Race/Ethnicity (n=503)

	Black (n=117) %	White (n=199) %	Latino (n=138) %
Alcohol *	27	47	23
Any Drug	22	21	23

* P < 0.001

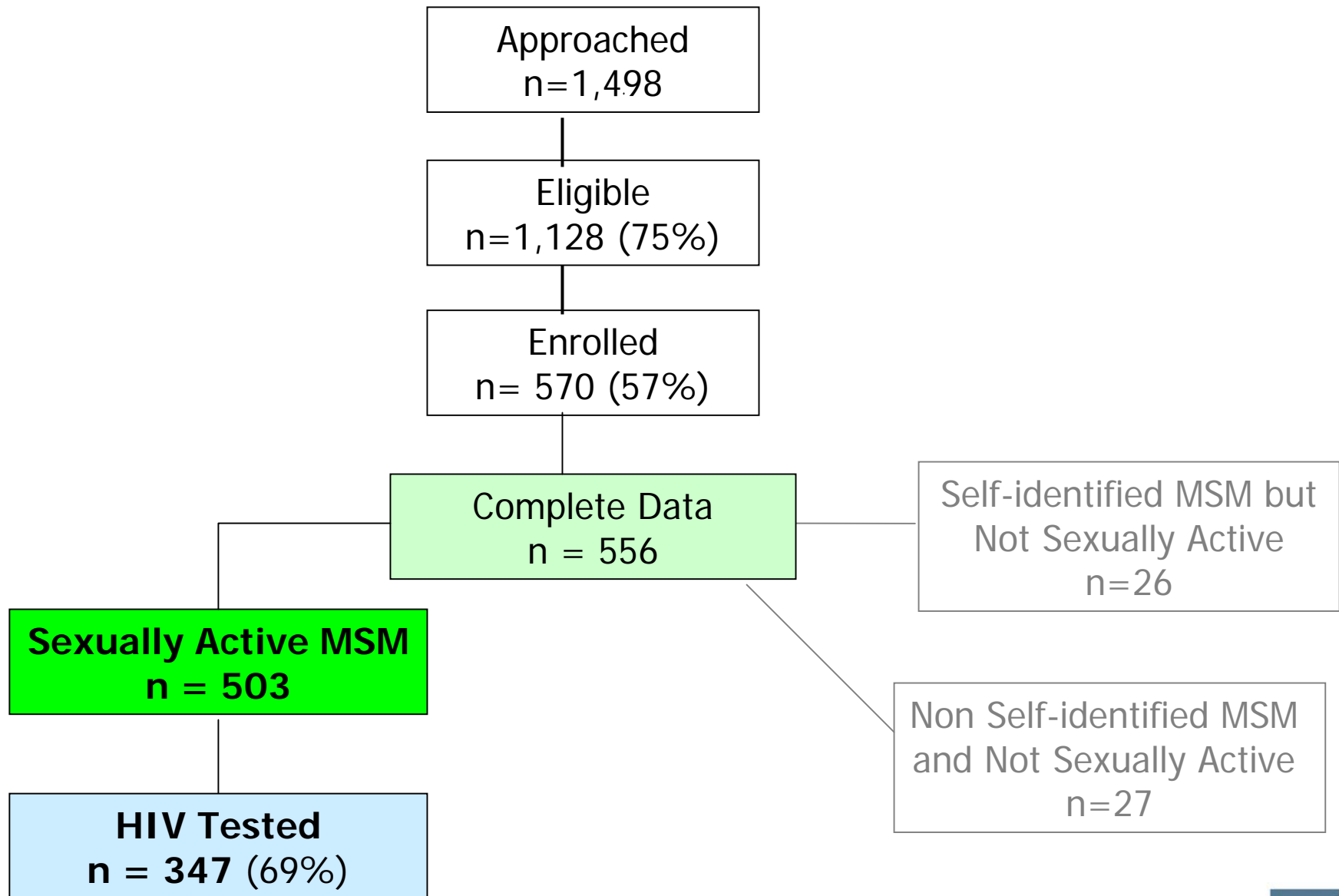
HIV Testing History (n=503)

	%
Ever Tested	91
Tested in Past 12 Months	60
Self-Reported HIV Status	
Positive	10
Negative	77
Unknown/Refused	13

HIV Testing History by Race/Ethnicity (n=503)

	Black (n=117) %	White (n=199) %	Latino (n=138) %
Ever Tested	88	94	88
Tested in Past 12 Months	66	57	62
Self-Reported HIV Status			
Positive	12	10	9
Negative	70	81	78
Unknown/Refused	18	9	13

Study Sample



Sexually Active: Sex with man in past 12 months

HIV Testing at Interview by Demographics (n=503)

	Not Offered (n=101) %	Offered and Tested (n=347) %	Offered but Declined (n=55) %
Age			
18 – 24	38	31	13
> 25	62	69	87
Race/Ethnicity			
White	37	39	47
Black	29	23	18
Latino	31	28	18
API	1	5	9
Other/Unknown	2	5	8

HIV Testing at Interview, by Risk Factors and Testing History (n=503)

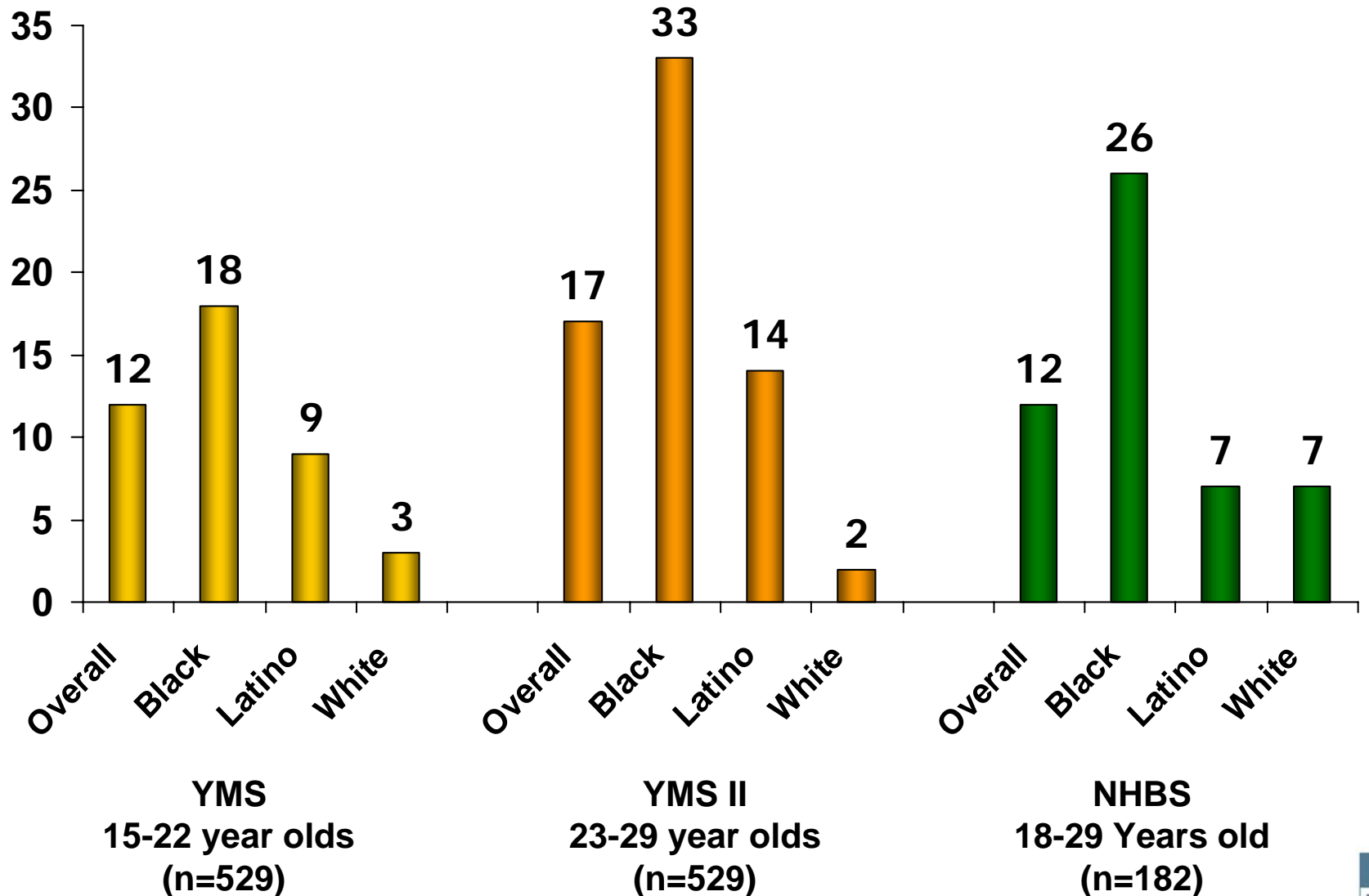
	Not Offered (n=101) %	Offered and Tested (n=347) %	Offered but Declined (n=55) %
> 5 Male Partners	47	45	51
Sex with Female	11	19	7
Exchange Sex	5	10	5
UAI	55	54	45
STD Diagnosis	14	9	11
Ever Tested	91	90	91
Tested in Past 12 Months	63	59	64

HIV Prevalence - Demographics

	Total Tested (N)	HIV + (%)	HIV+ Unaware of Infection (%)
TOTAL	347	18	52
Age			
18 - 24	106	9 *	70
25 +	241	22	48
Race/Ethnicity			
White	136	14 *	37
Black	78	36	64
Hispanic	97	14	57
Other	36	8	0

* P < 0.001

HIV prevalence, NYC YMS and NHBS



HIV Prevalence – Risk Behaviors in Past 12 Months

	Total Tested (N)	HIV + (%)	HIV+ Unaware of Infection (%)
TOTAL	347	18	52
# Male Partners			
1 – 5	191	17	59
> 5	156	21	44
Sex with Women			
Yes	65	15	80
No	282	19	46
Exchange Sex			
Yes	36	17	83
No	311	19	48
STD Diagnosis			
Yes	32	28	44
No	315	17	53
UAI			
Yes	186	20	54
No	161	17	48

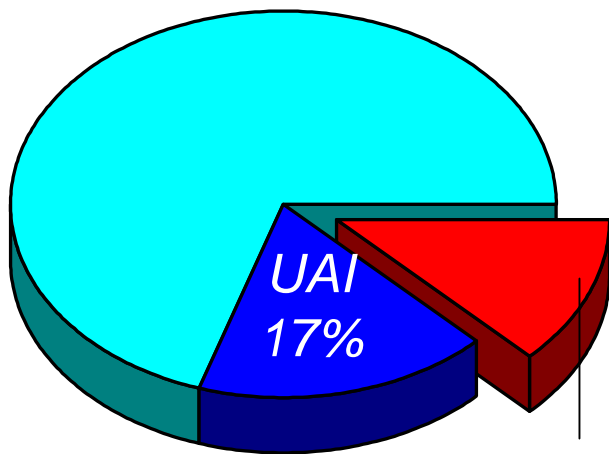
HIV Prevalence – Race/Ethnicity and Risk Behaviors in Past 12 Months

	Black %	White %	Latino %
# Male Partners			
1 – 5	38	15	7
> 5	33	13	27
Sex with Women			
Yes	24	33	7
No	42	13	18
Exchange Sex for Money/Drugs			
Yes	38	11	15
No	36	14	13
STD Diagnosis			
Yes	50	9	50
No	35	10	11
Unprotected Anal Intercourse			
Yes	41	15	18
No	33	12	10

Partner's HIV Status and Unprotected Anal Intercourse during Last Encounter

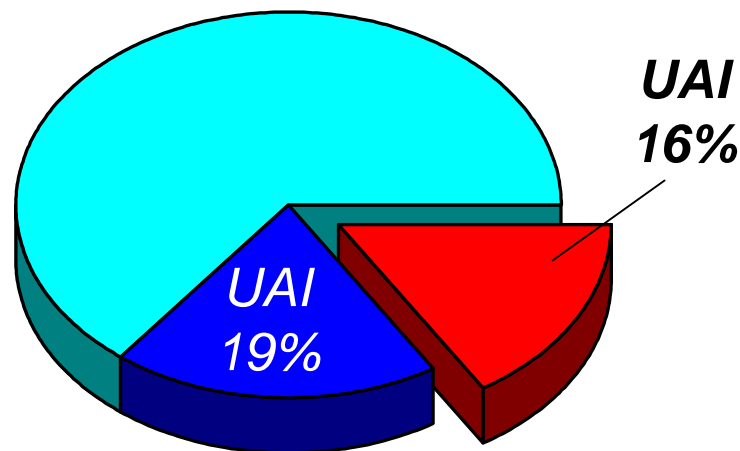
- No UAI
- UAI with Seroconcordant Partner
- UAI with Serodiscordant Partner

Self-reported and Tested Negative (n=246)

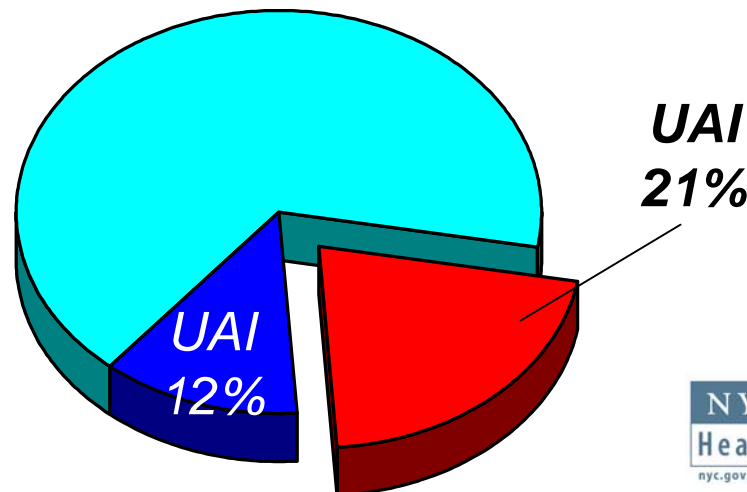


Serodiscordant UAI 13%

Self-reported and Tested Positive (n=31)



Unaware of HIV Infection (n=33)



Serodiscordant: Partner has an opposite or unknown HIV status

Unprotected Anal Intercourse (UAI) during Last Sexual Encounter in Past 12 Months

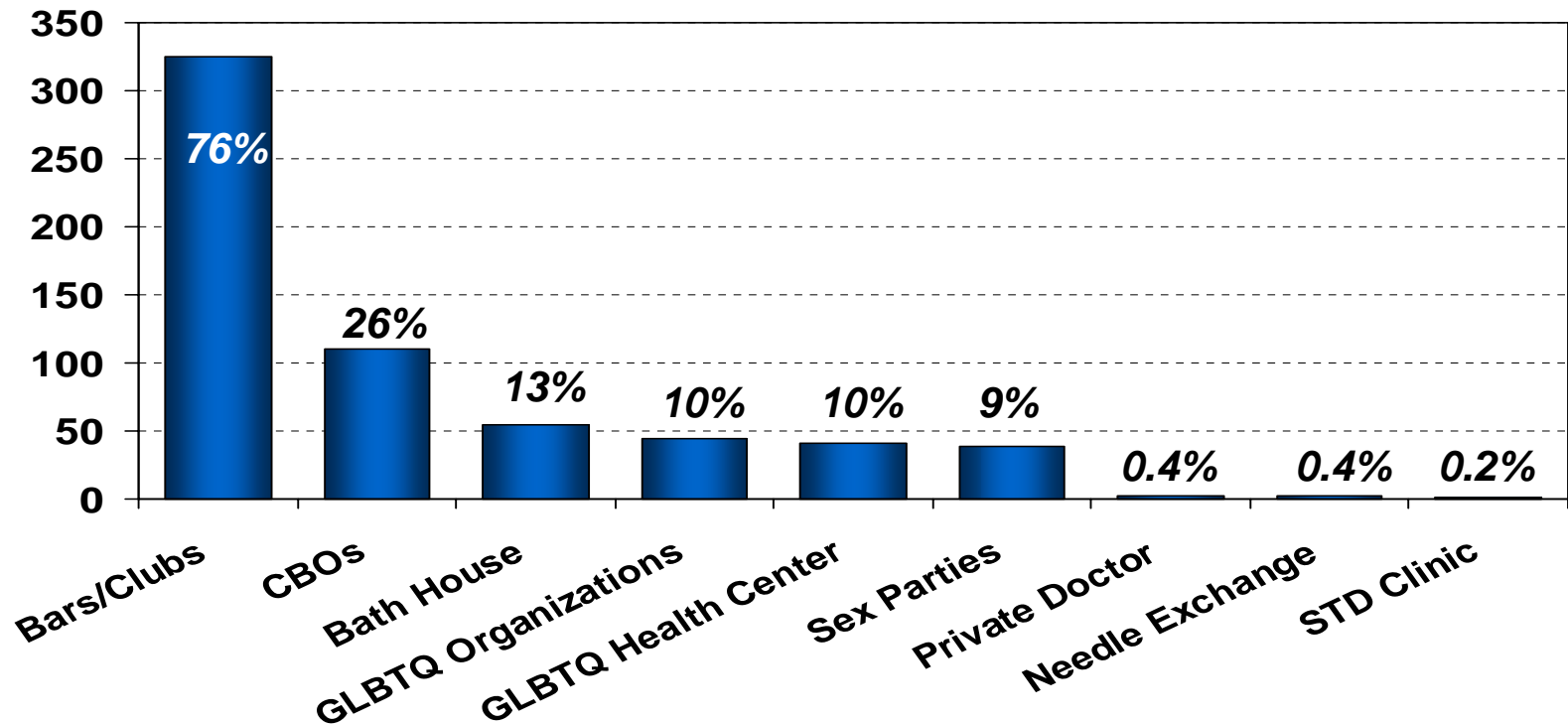
	Self-reported HIV Positive (n=51) %
Insertive UAI with Negative Partner	2
Insertive UAI with Unknown Partner	10
Receptive UAI with Negative Partner	8
Receptive UAI with Unknown Partner	14
Insertive UAI with Positive Partner	16
Receptive UAI with Positive Partner	12
No UAI	63

Unprotected Anal Intercourse (UAI) during Last Sexual Encounter in Past 12 Months

	Self-reported HIV Negative (n=388) %
Receptive UAI with Positive Partner	0.5
Receptive UAI with Unknown Partner	5
Insertive UAI with Positive Partner	1
Insertive UAI with Unknown Partner	9
Receptive UAI with Negative Partner	12
Insertive UAI with Negative Partner	19
No UAI	65

Participated in HIV Prevention Activities: Received Free Condoms

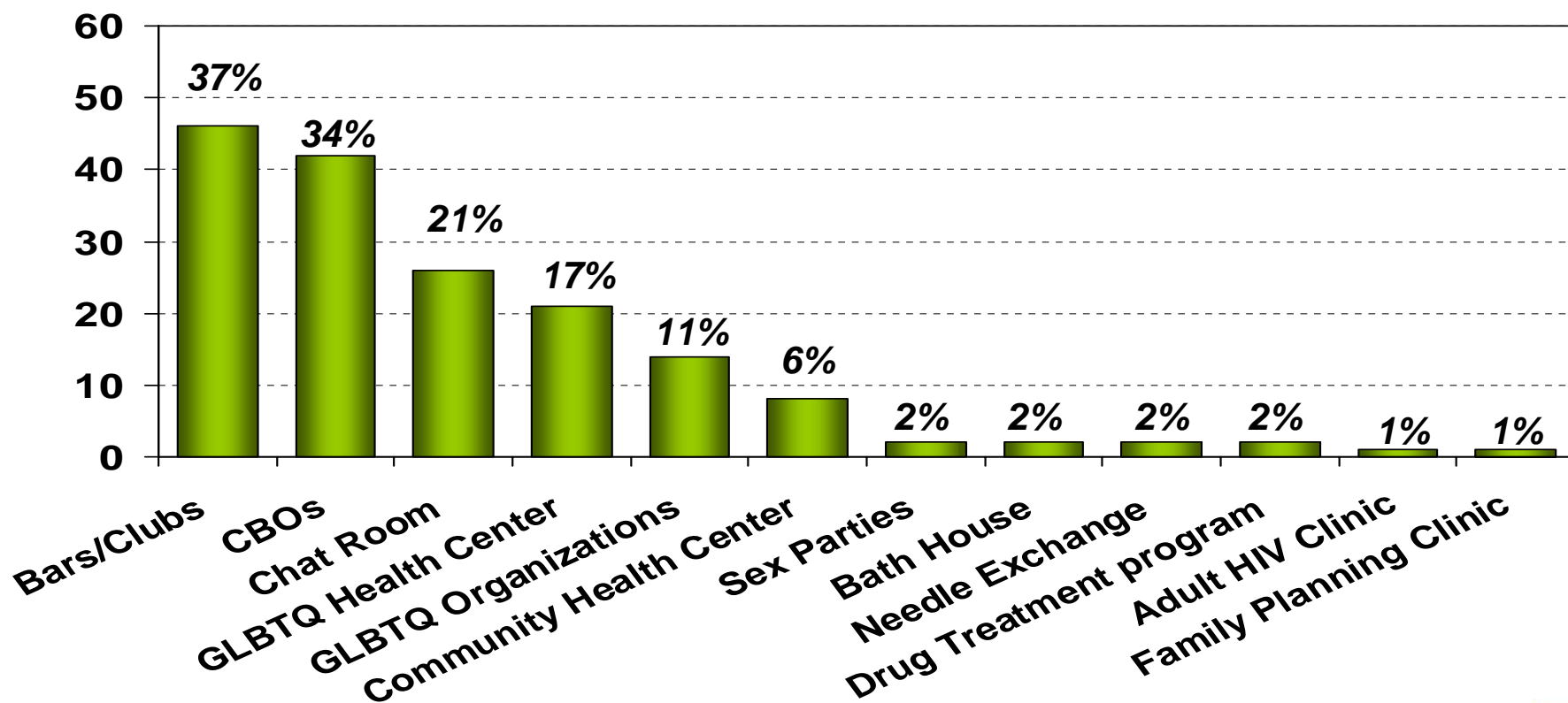
- 429 (85% of 503) have received free condoms in past 12 months
- Sources of free condoms (n=429):



- 328 (76% of 429) have used free condoms in past 12 months

Participated in HIV Prevention Activities: 1-on-1 Discussion with Counselor

- 124 (25% of 503) participated in 1-on-1 counseling in past 12 mo.
- Locations of counseling (n=124):



Participated in HIV Prevention Activities: 1-on-1 Discussion with Counselor

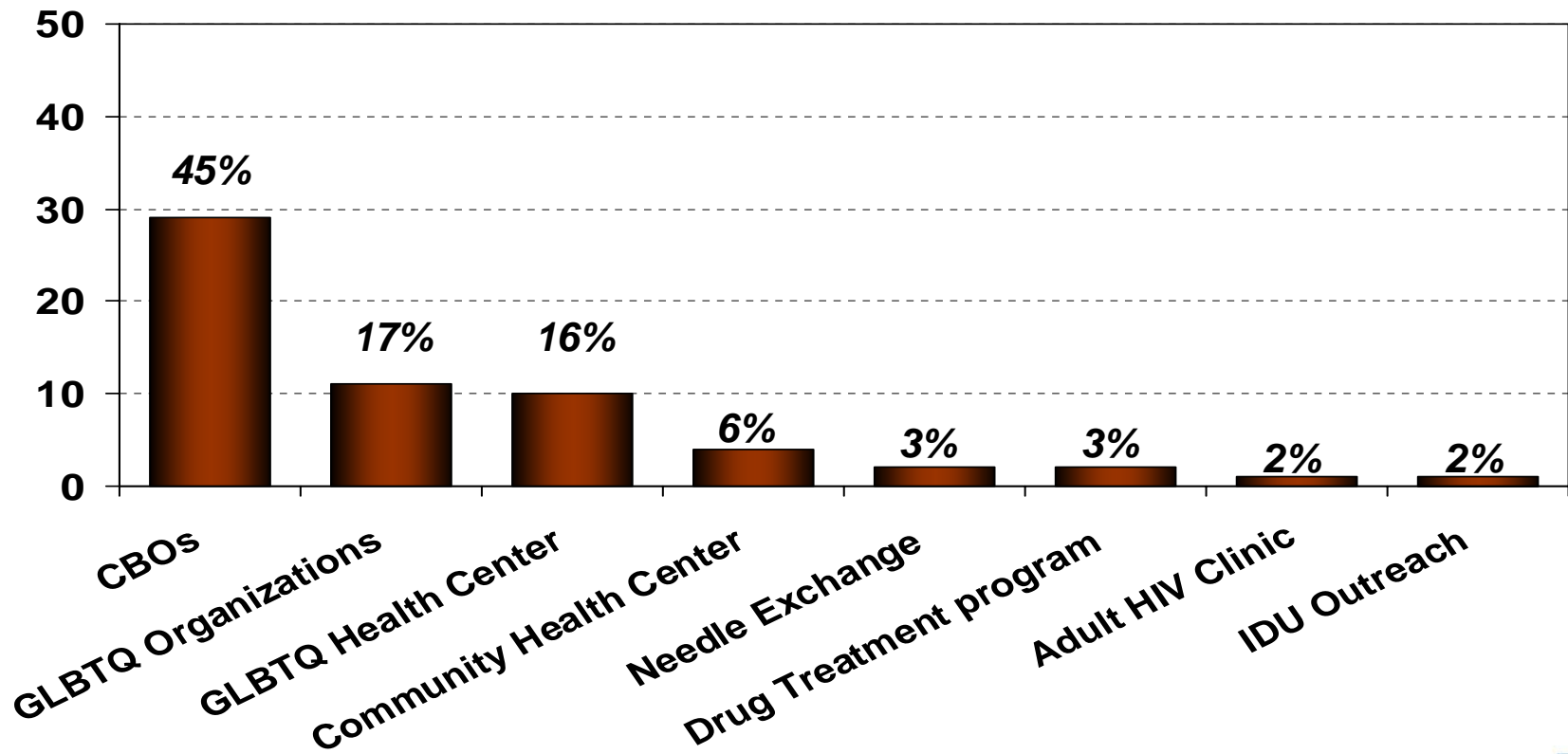
- Topics of Counseling (n=124):



- After 1-on-1 counseling:
 - 52% talked differently to partners about safe sex
 - 2% practiced safer drug-injecting

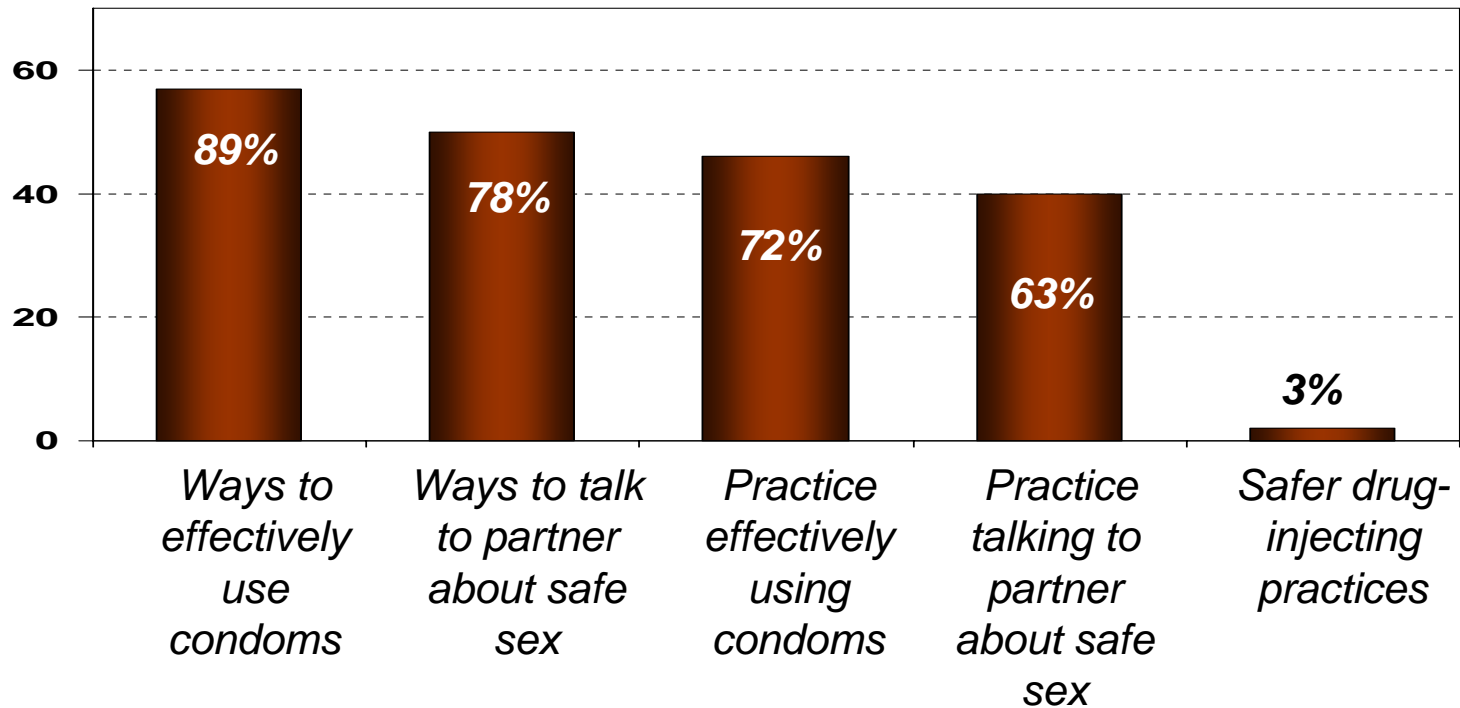
Participated in HIV Prevention Activities: Group Sessions

- 64 (13% of 503) had a group session in past 12 months
- Locations of group sessions (n=64):



Participated in HIV Prevention Activities: Group Sessions

- Topics of group sessions (n=64):



- After group sessions:
 - 58% talked differently to partners about safe sex
 - 3% practiced safer drug-injecting

Limitations

- These findings may not be generalizable to the NYC MSM communities.
- Risk behavior and testing data are self-reported therefore subject to recall bias.
- Certain questions were of a sensitive nature (psycho-social factors and HIV status), thus underreporting may have occurred.

Summary (I)

- Overall a high proportion of men in this sample reported sexual risk behaviors (> 5 male partners and UAI in the last 12 months) with the highest proportion being reported among Whites.
- Non-injection drug use in the past 12 months was reported by more than half of the survey participants.
 - A high proportion (48%) of participants reported using non-injection drugs during sex.

Summary (II)

- Despite a high proportion of persons reporting having previously tested for HIV, 52% of persons who tested positive were unaware of their infection.
- Persons more likely to be HIV positive:
 - Black
 - 25 years of age or older
- Regardless of participant's self-reported HIV status, one-third reported UAI during the last sexual encounter.

Recommendations

- Subculture-tailored approaches to accessing and sampling target populations are key for successful implementation of research and intervention activities.
- Simultaneous provision of HIV testing and targeted referral services to a community that may otherwise not routinely access local CBOs.
- Ongoing prevention efforts are needed to promote and maintain reduced risk behaviors in the gay and bisexual community.

Acknowledgements

NHBS Field Staff

Michael Camacho
Christine Borges
Juan Carlos Guerrero
Joshua Hinkson, Jr.
Kerri O'Meally
Terrence Precord
Michael Ramos
Vincent Guilin

Laboratory of Infectious Disease Prevention, NY Blood Center

Beryl Koblin
Thomas Lee
Jay Loeffel
Ofiji Paris
Giselle Silvagnoli
Guozhen Xu

NYC Department of Health and Mental Hygiene

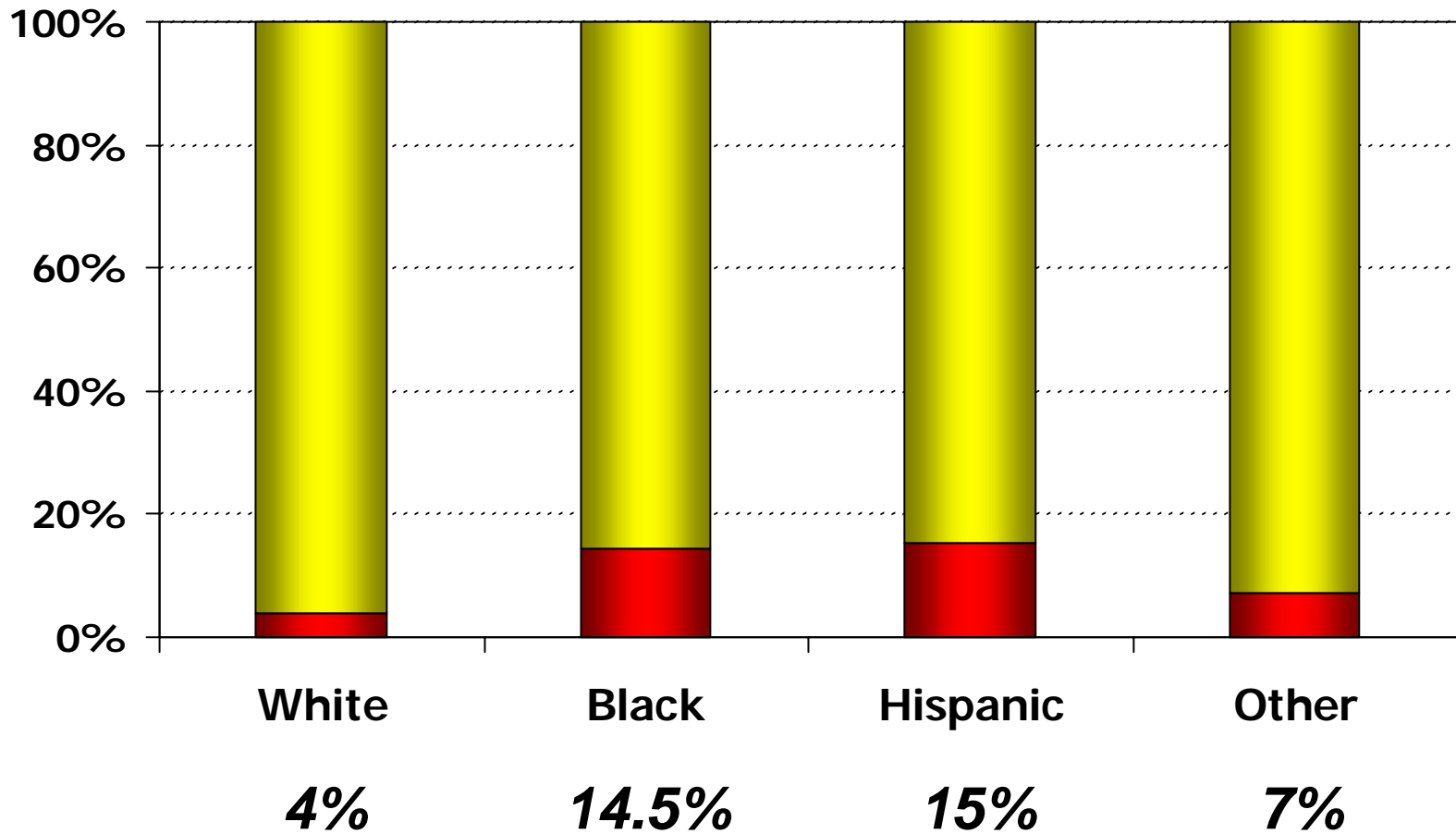
Christopher Murrill
Lucia Torian
Darryl Wong
Kai-Lih Liu
Lisa Buckley
Shavvy Raj-Singh
Keyi Xu
Amado Punsalang
Fred Schween

CDC

Danni Daniels
Stephanie Behel
Amy Lansky

Project ACHIEVE Community
Advisory Board

Ever Arrested in Past 12 months by Race/Ethnicity (n=503)



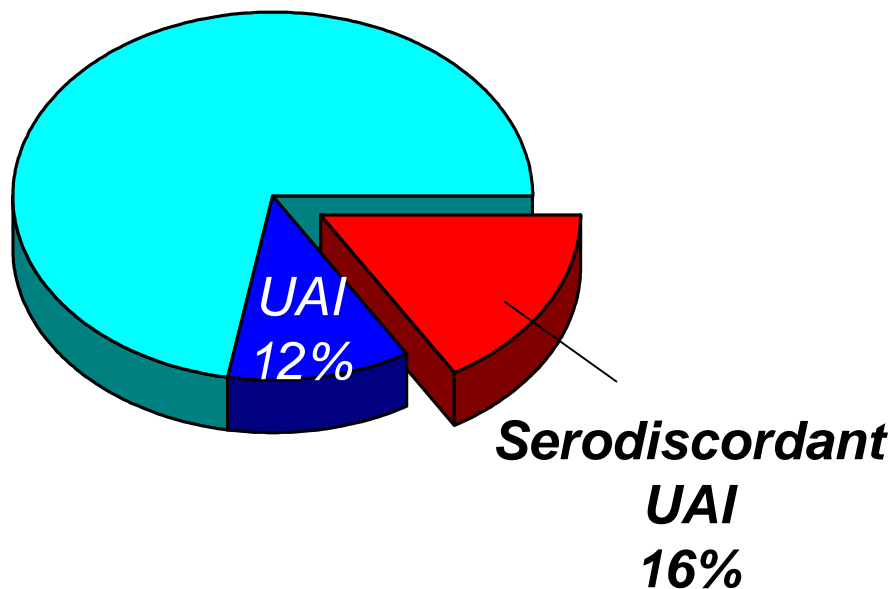
Non-Injection Drug Use During Sex in Past 12 Months, by Race/Ethnicity (n=307)

	Black	White	Latino
	%	%	%
Poppers	92	95	88
Amphetamines	63	70	72
Marijuana	74	67	62
Heroin	0	75	50
Crack	71	50	38
Cocaine	54	54	45
Ecstasy	68	50	33
Club Drugs	50	44	33
Hallucinogens	60	17	33
Downers	33	17	45
Pain Killers	17	7	43

Partner's HIV Status and Unprotected Anal Intercourse during Last Encounter among *Black* Respondents

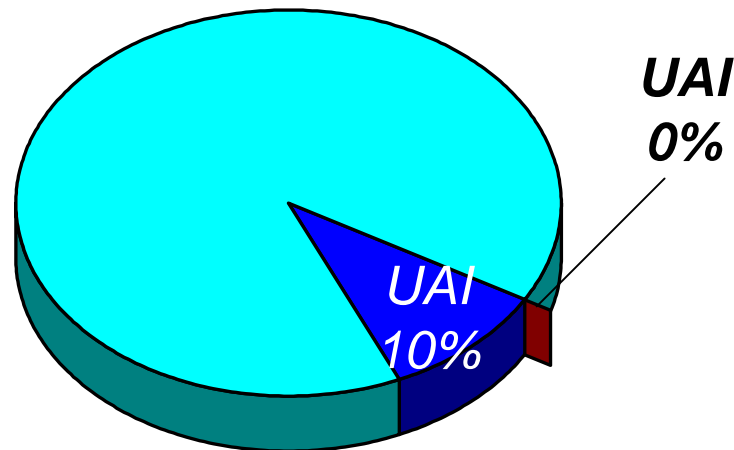
- No UAI
- UAI with Seroconcordant Partner
- UAI with Serodiscordant Partner

Self-reported and Tested Negative (n=43)



Serodiscordant UAI 16%

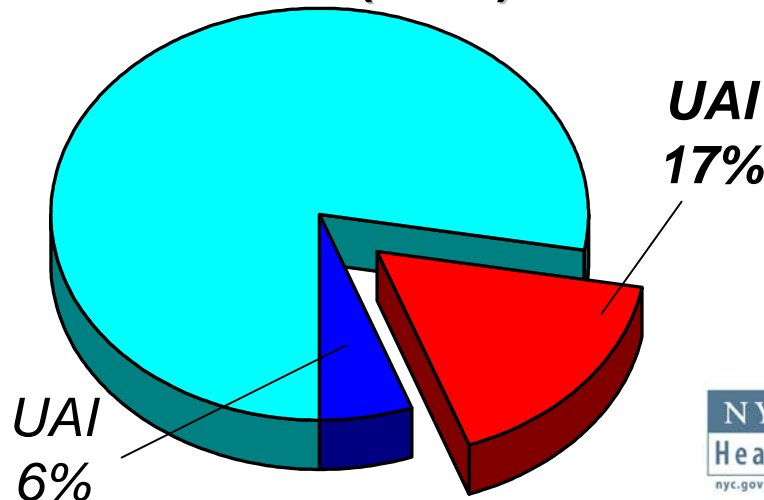
Self-reported and Tested Positive (n=10)



UAI 0%

UAI 10%

Unaware of HIV Infection (n=18)



UAI 17%

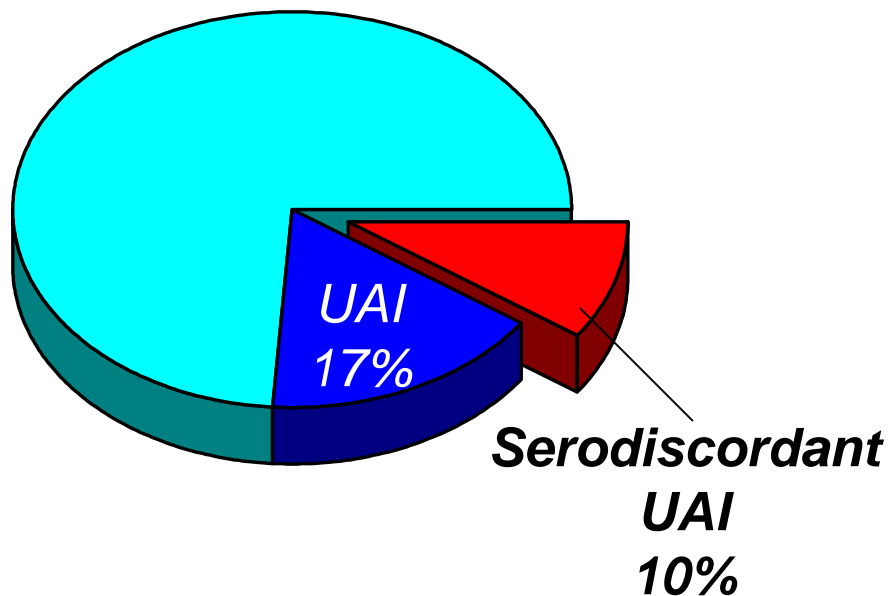
UAI 6%

Serodiscordant: Partner has an opposite or unknown HIV status

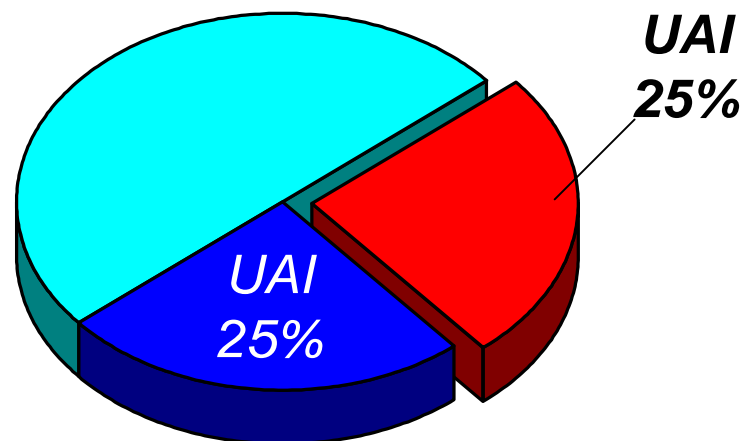
Partner's HIV Status and Unprotected Anal Intercourse during Last Encounter among *White* Respondents

- No UAI
- UAI with Seroconcordant Partner
- UAI with Serodiscordant Partner

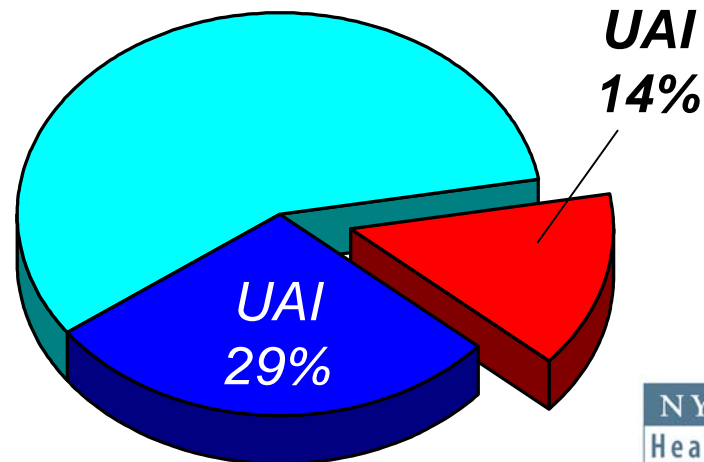
Self-reported and Tested Negative (n=103)



Self-reported and Tested Positive (n=12)



Unaware of HIV Infection (n=7)

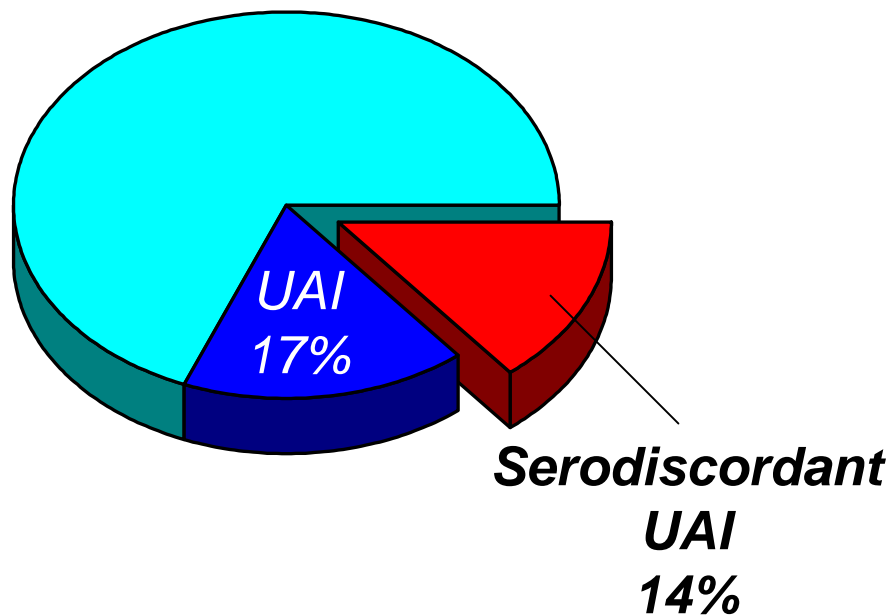


Serodiscordant: Partner has an opposite or unknown HIV status

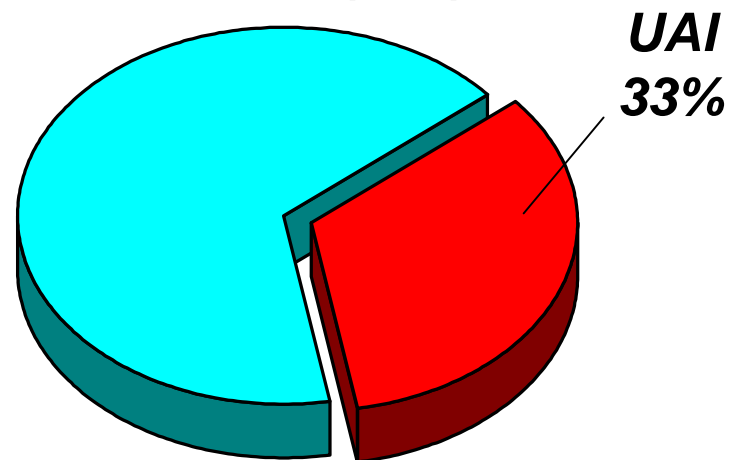
Partner's HIV Status and Unprotected Anal Intercourse during Last Encounter among *Latino* Respondents

- No UAI
- UAI with Seroconcordant Partner
- UAI with Serodiscordant Partner

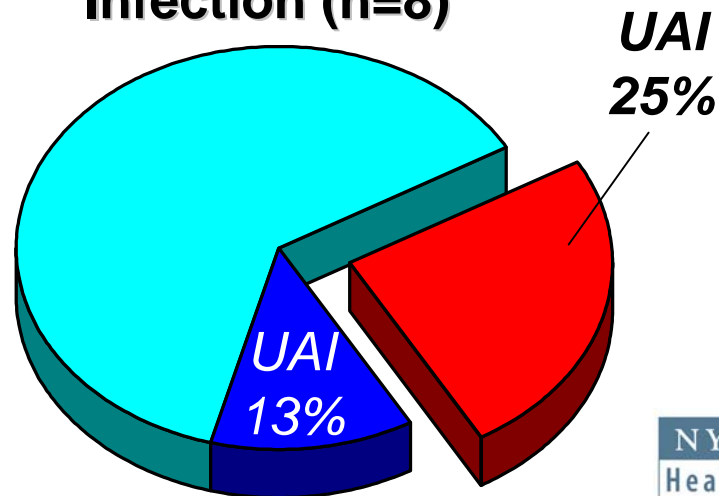
Self-reported and Tested Negative (n=71)



Self-reported and Tested Positive (n=6)



Unaware of HIV Infection (n=8)



Serodiscordant: Partner has an opposite or unknown HIV status

HIV Treatment among HIV-Positive Respondents (n=64)

