

Use of a Computer-Assisted Survey to Measure Risk Behaviors among HIV-Infected Patients

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Objectives

- Measure self-reported HIV related risk behaviors and medication adherence, through the use of an anonymous, computer-assisted survey of an antiretroviral-treated HIV positive population accessing primary health care.
- Determine feasibility of adapting computerized self-administered surveys into behavioral surveillance activities of HIV+ populations in NYC and assess the acceptability of the computer-assisted survey.

Methods - 1

- Cross-sectional survey measuring sexual and drug related risk behaviors.
- Anonymous, 20-30 minute self-administered computer-assisted survey
- Eligibility criteria:
 - HIV+ patients on antiretroviral therapy accessing care at one of four hospital-based primary care HIV clinics
 - ≥ 18 years of age and English literate

Methods - 2

- DOHMH staff performed on-site recruiting through posted fliers, general announcements, and referrals from clinic staff.
- Survey questions were introduced one at a time using a tablet, laptop with mouse, or touch screen device with an audio component. Patients received a \$20 subway pass upon completion of the survey.
- A total of 1,106 patients were recruited from June through December 2004.

Sample Question on Computer Screen

What sex do you identify yourself as now?



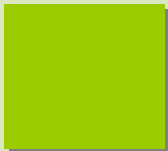
Male



Female



Transgender



Other

Refuse to Answer

Don't Know

Not Applicable

Previous Question

Next Question

Repeat Question

Definitions

MSM – men having sex with men

MSW – men having sex with women

WSM – women having sex with men

Sexually Active = ≥ 1 partner in past 12 months

Sexual Risk = non-condom use during anal or vaginal sex

Demographics

Total
(N = 1,106)

Gender (%)

Male	55
Female	43
TG / Other	2

Race / Ethnicity (%)

White	4
Black	41
Hispanic	36
Other / Unknown	20

Age (%) *Median age: 46 years*

18-29	2
30-34	6
35-39	13
40-44	24
45-49	24
50-54	13
55+	13

Total
(N = 1,106)

Education Level (%)

College Grad	8
Some College	19
H.S. Grad / GED	33
Some H.S.	27
Less Than H.S.	12
Refuse / DK	<1

Sexual Orientation (%)

Heterosexual	74
Homosexual	12
Bisexual	8
Other	5
Refuse / DK	1

Clinical Characteristics

- Duration of HIV infection: Mean = 9.8 yrs. (range 0 – 21; 95% CI = 9.5 – 10.2)
- 48% report undetectable viral load

	Frequency	%
Antiretroviral Medications		
Nucleoside / Nucleotide Analogs (NRTIs)	1,070	97
Protease Inhibitors (PIs)	634	57
Non-Nucleosides (NNRTIs)	384	35
Entry Inhibitor	11	1
Regimen		
PI	23	2
PI + Entry	2	0.2
NNRTI	7	0.6
NNRTI + PI	4	0.4
NRTI	142	13
NRTI + Entry	5	0.5
NRTI + PI	546	49
NRTI + PI + Entry	4	0.4
NRTI + NNRTI	318	29
NRTI + NNRTI + PI	55	5

Medication Adherence

Last time you missed any of your medications?

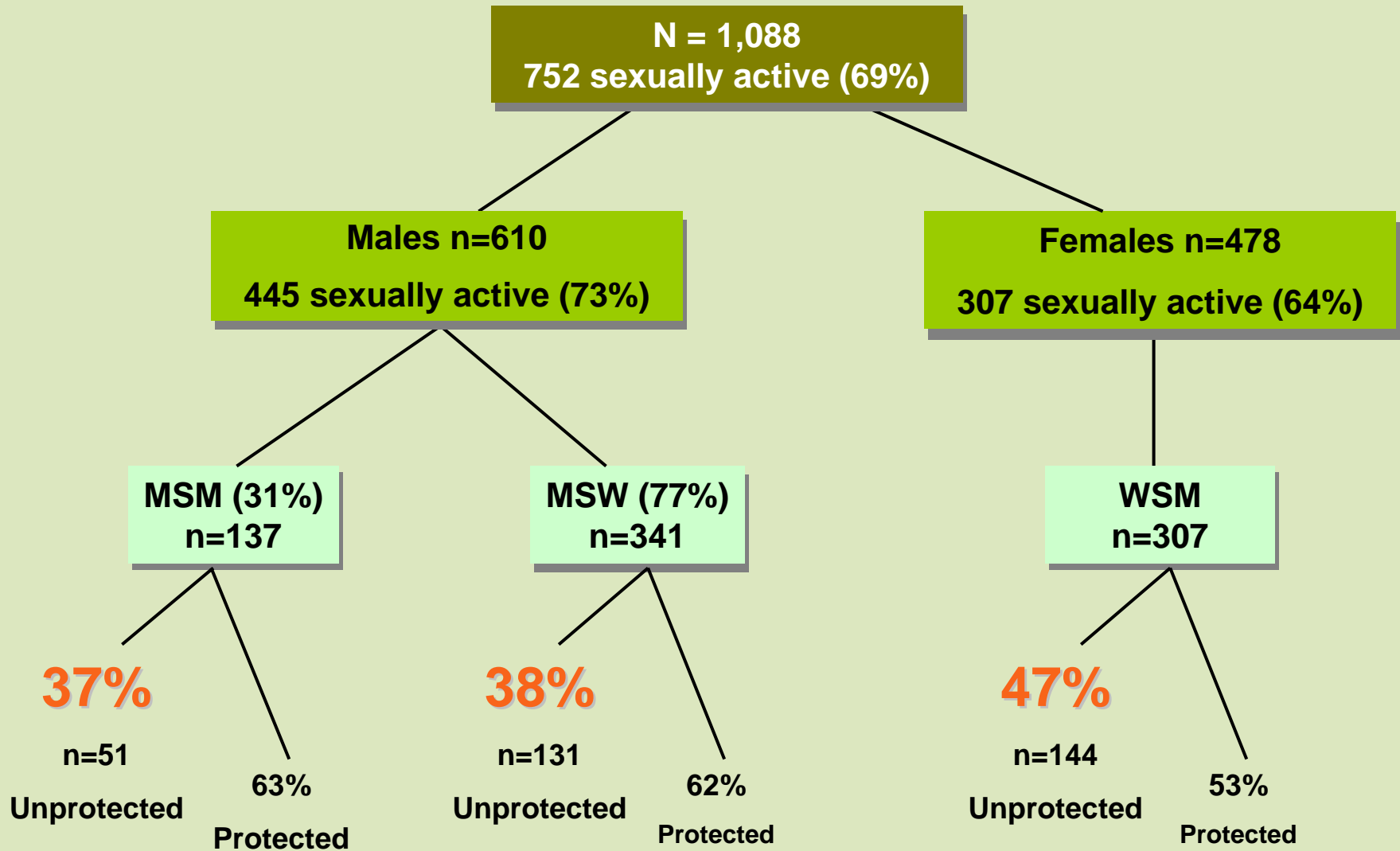
	Males (n = 610)	Females (n = 478)
Never	32%	32%
> 3 months ago	12%	9%
1-3 months ago	6%	7%
2-4 weeks ago	5%	3%
1-2 weeks ago	3%	3%
Within last week	41%	45%
Refused / Unknown	1%	1%

Medication Adherence

Possible reasons for missed medications:

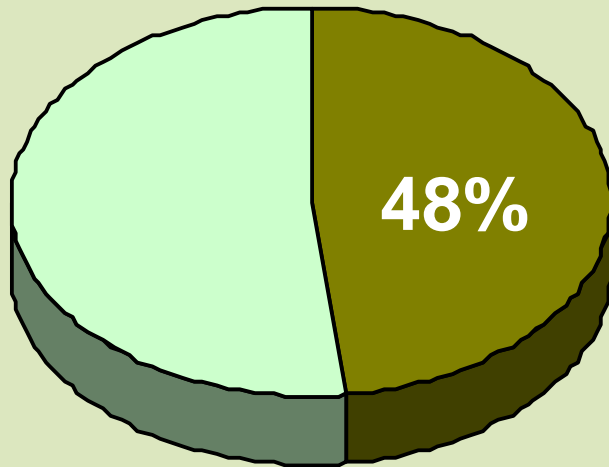
	Frequency
Away from home	211
Simply forgot	208
Fell asleep / slept through dose	126
Ran out of pills	106
Busy with other things	95
Had change in daily routine	85
Felt depressed / overwhelmed	67
Felt sick / ill	65
To avoid side-effects	63
Felt the drug was toxic / harmful	34
To avoid seeing you take meds	30
Felt good	26

Self-Reported Sexual Risk Behavior Over Past 12 Months

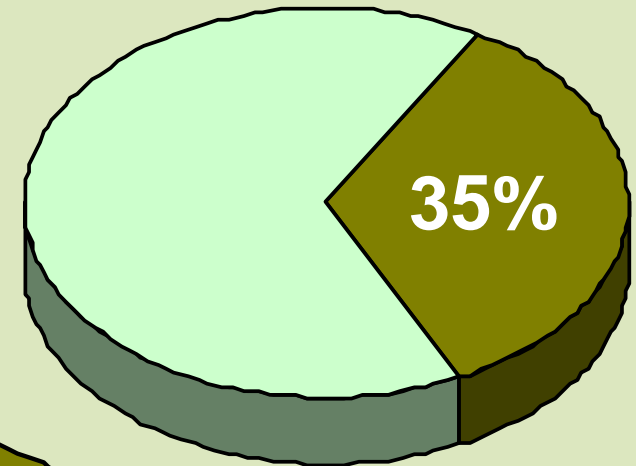


Serodiscordant Partners Among Those Having Unprotected Sex During Last Sexual Encounter

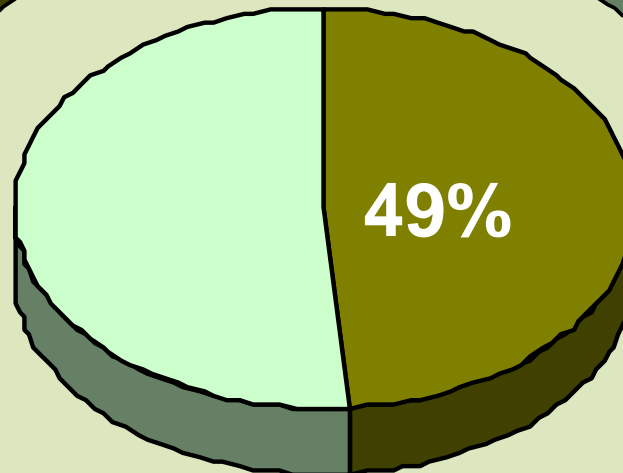
MSM
n=48



MSW
n=113

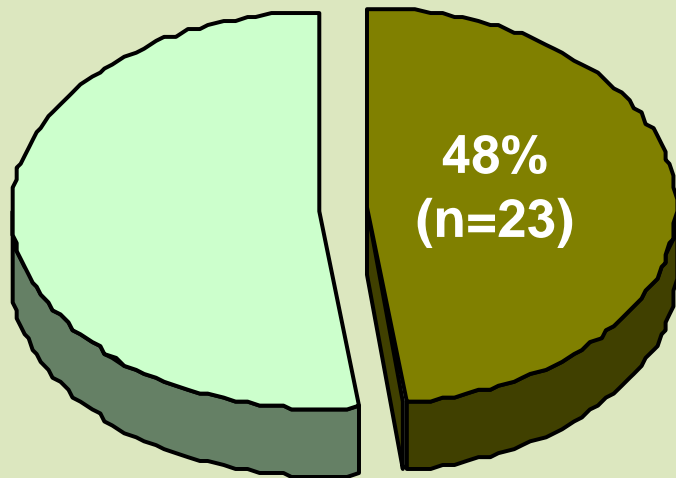


WSM
n=138

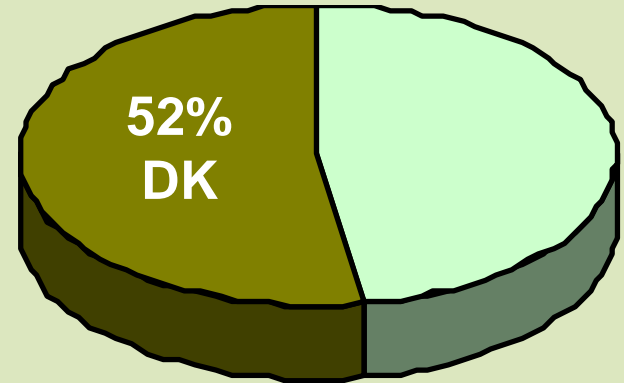


Did Serodiscordant Partner Know Respondent's Status?

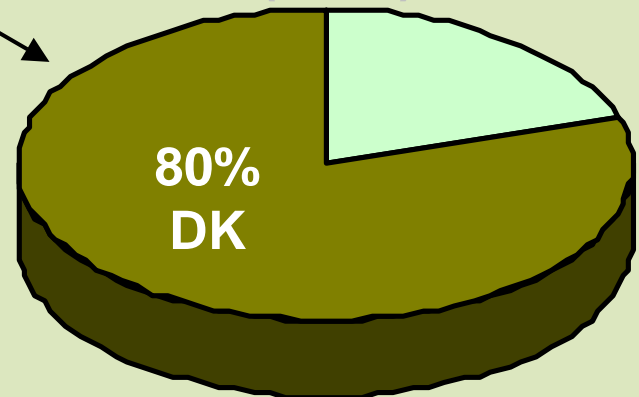
MSM w/ Serodiscordant Partner



Main Partner (n=21)

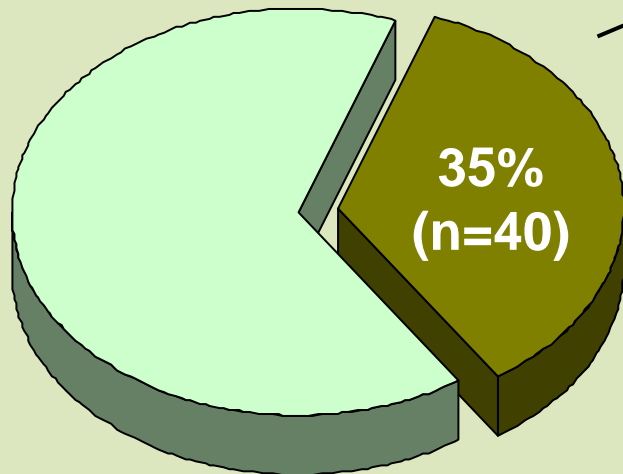


Non-Main Partner (n=20)

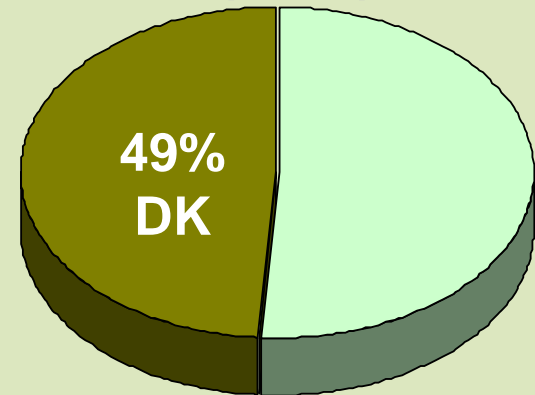


Did Serodiscordant Partner Know Respondent's Status?

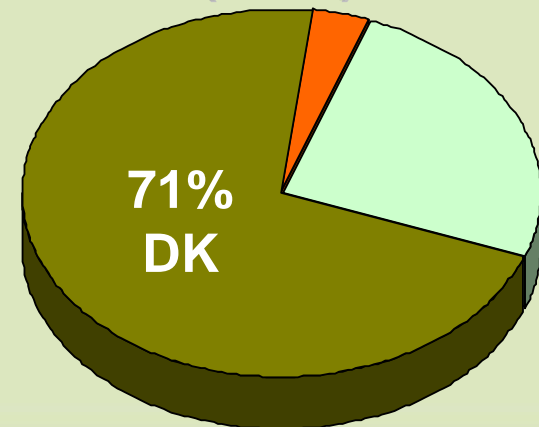
MSW w/ Serodiscordant Partner



**Main Partner
(n=39)**

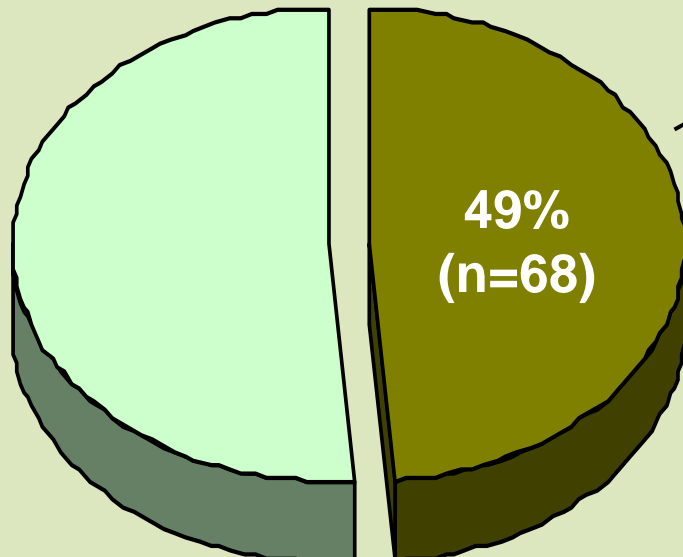


**Non-Main Partner
(n=28)**

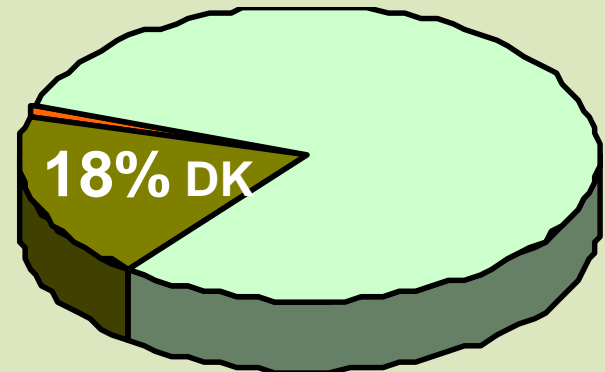


Did Serodiscordant Partner Know Respondent's Status?

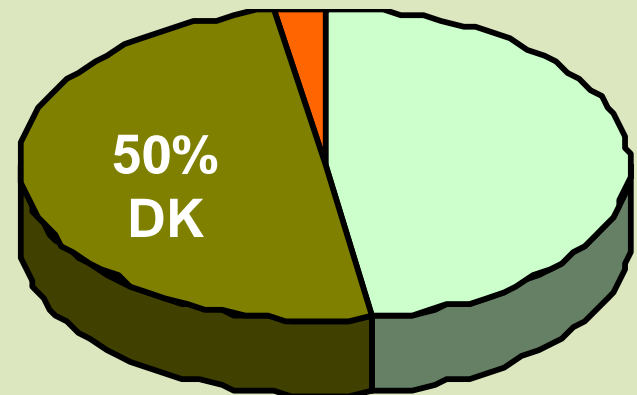
WSM w/ Serodiscordant Partner



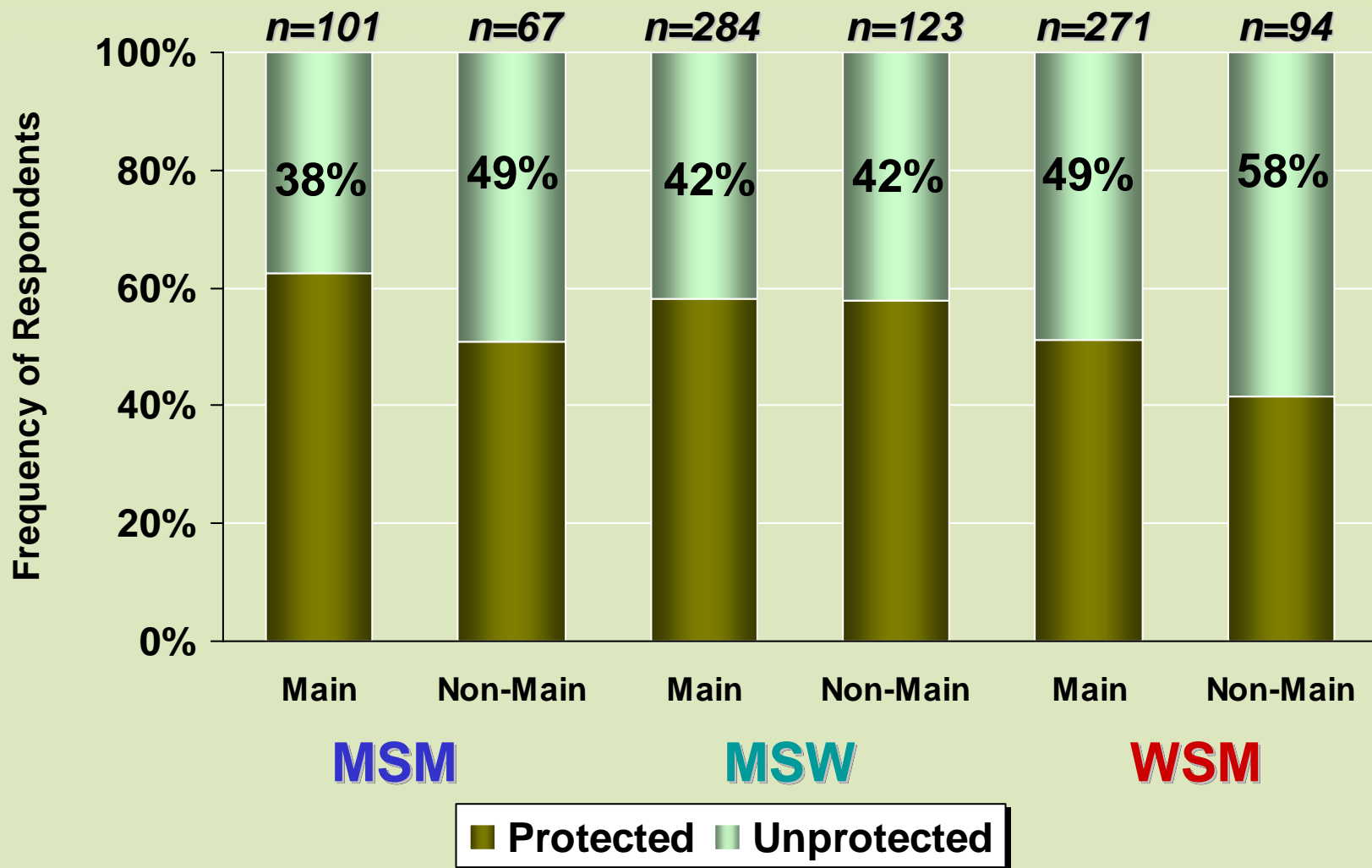
**Main Partner
(n=66)**



**Non-Main Partner
(n=38)**



Unprotected Sex in Main versus Non-main Partners During Past 12 months



Reasons for Non-Condom Use

Main

Non-Main

MSM partner didn't want to use (16%)
interferes with sexual pleasure (13%)
partner was HIV+ (13%)

interferes with sexual pleasure (18%)
partner was HIV+ (18%)
partner didn't want to use (15%)

MSW partner was HIV+ (18%)
unavailability of condoms (13%)
interferes with sexual pleasure (13%)

drunk or high (13%)
interferes with sexual pleasure (13%)
unavailability condoms (13%)

WSM interferes with sexual pleasure (20%)
partner was HIV+ (13%)
hard to practice safe sex (13%)

partner didn't want to use (20%)
interferes with sexual pleasure (16%)
unavailability of condoms (13%)

% Reporting Non-condom Use by Medication Adherence

	Adherent	Non-Adherent
MSM	34%	39%
MSW	40%	37%
WSM *	33%	52%

* $p < 0.01$

% Reporting Multiple Partners (past 12 months)

	Number of Partners			
	1	2-5	6-10	>10
MSM	50	32	10	7
MSW	56	29	8	7
WSM	71	23	3	3

Exchange for Sex During Last Sexual Episode

- 6% (48/752) had sex in exchange for money, drugs, food, shelter or transportation (36 Males, 12 Females).
- During the exchange for sex, the majority of MSW report paying for sex (79%) while the majority of WSM report being paid for sex (83%).
- 56% (27/48) report unprotected sex with partners of unknown serostatus.

STD Infections Diagnosed in Past 12 Months

Syphilis	4%
Gonorrhoea	2%
Other	4%

% Drug Use Among the Sexually Active

	Men having sex with men (n = 137)	Men having sex with women (n = 341)	Women having sex with men (n = 307)	Total (N = 752)
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Injecting Drug Using

Ever Injected	12	48	24	32
Injected within past 12 months	5	9	4	6

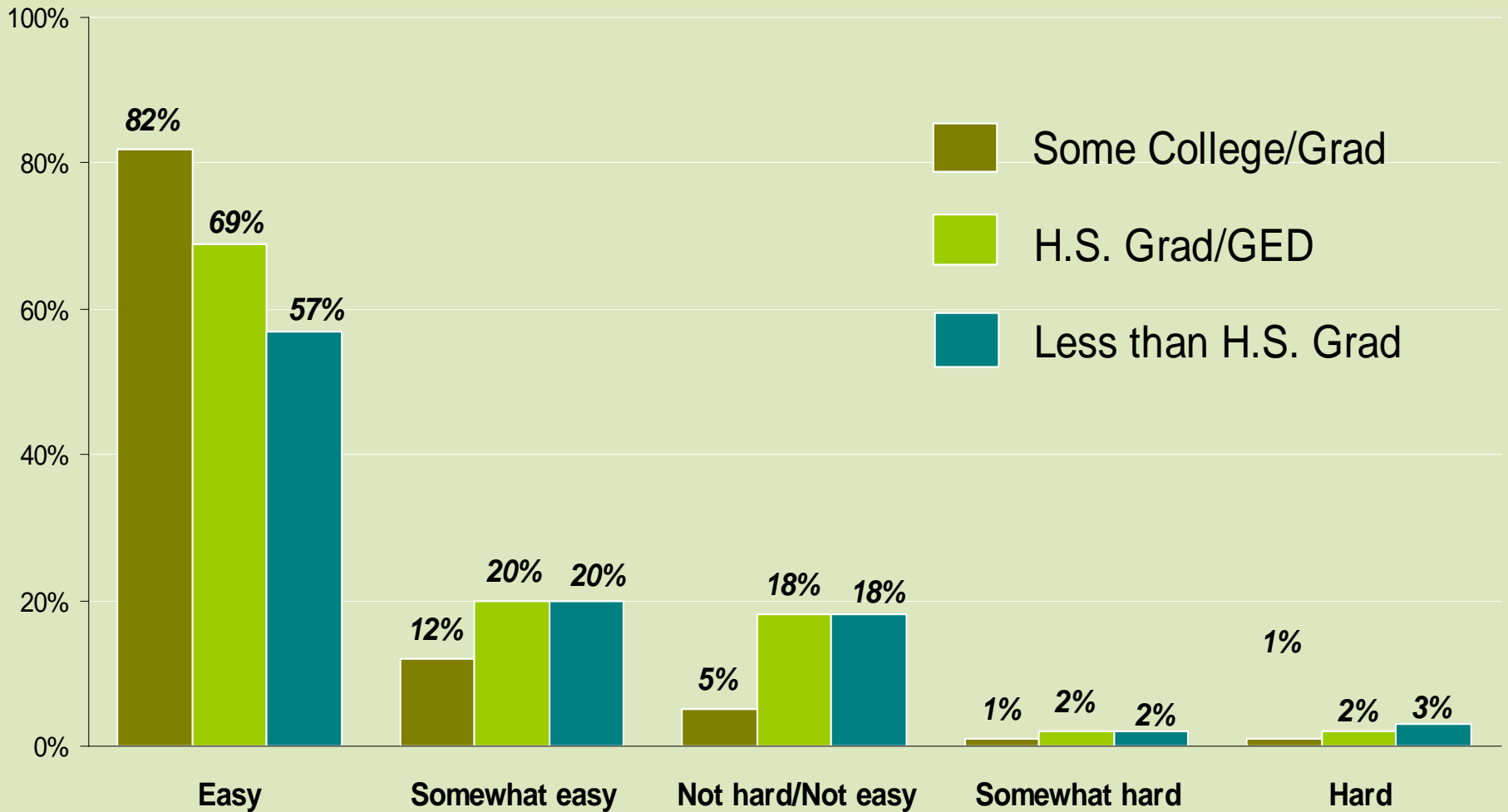
Non-Injecting Drugs used within past 12 months	33	27	19	24
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Non-Injecting Drugs used during sex	20	16	10	15
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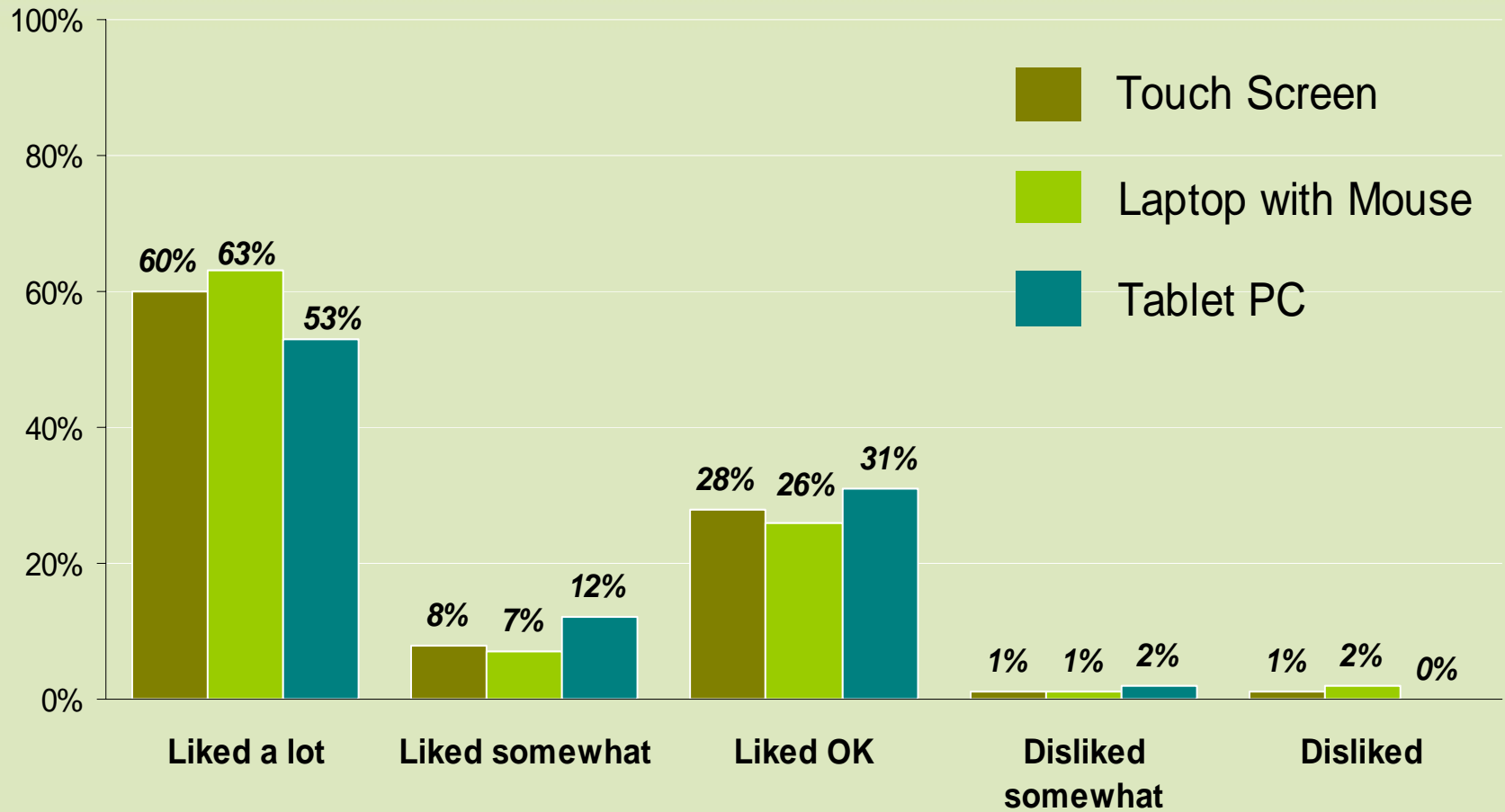
Types of Non-Injecting Drugs Used During Sex

Marijuana	10	6	5	7
Crack	9	9	5	7
Cocaine	4	4	1	3
Heroin	0.7	6	2	3
Poppers	6	0.3	0	1
Pain Killers	1	1	1	1
Downers	0.7	1	0.3	0.7
Crystal	3	0	0	0.5
Ecstasy	2	0	0	0.4
Club Drugs	1	0	0	0.3
Amphetamines	0	0	0.3	0.1

Ease of Using the Computer



Acceptability of Taking a Computerized Survey



94% would be willing to take a computerized survey again.

Limitations

- Because the surveys were conducted in hospital-based HIV clinics, some subgroups of HIV+ patients are under-represented such as MSM and whites.
- Using a computerized survey for data collection eliminates the ability to identify missing data at the time of administration of the survey.
- Although the literature suggests that use of computer-assisted surveys may yield more accurate reporting of risk behaviors, this study was unable to assess this due to absence of interviewer administered surveys among this sample as a comparison.

Conclusions

- Based on these results, ongoing prevention efforts are needed to promote and maintain reduced risk behaviors.
- HIV primary care clinics serve as a key access point for implementing targeted prevention efforts aimed at reducing sexual and drug-using risk behaviors and thereby reducing risk of transmission.
- Use of a computer-assisted survey provides a more anonymous setting and standardized approach for collection of sensitive sexual and drug-using behaviors.

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