Increasing HIV Testing through a Health Promotion Focus

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Background

Despite the obvious benefits to early HIV testing, significant numbers of individuals are still not testing for HIV or not testing early enough. Latinos are more likely than Whites to report having been tested for HIV (Kaiser Family Foundation (2005). However, these self-reporting rates may be overestimates, since a quarter of Latinos assume that the HIV test is a routine part of a medical exam. In addition, Latinos are more than twice as likely as Whites to be late testers (obtaining a positive HIV test ≤ 1 year before a diagnosis of AIDS) (*MMWR,* 2003). There is a need, then, to encourage Latinos to test early for HIV.

One promising method for increasing HIV testing by Latinos may be through "bundling" it, i.e., offering it in combination with other relevant tests (Ickovics, 2005). Offering the HIV test in this manner takes the sole focus off of the HIV test and makes it less stigmatizing for individuals to take the HIV test.

References
CDC. Late versus early testing of HIV --- 16 sites, United States, 2000—2003. *MMWR* 2003;52:581-586.
Ickovics J. "Innovation in HIV Prevention Research: Structural Interventions to Promote Individual Health and Social Change." Keynote presentation delivered at the CHIPTS conference, "HIV Research: The Next Generation." Center for HIV Identification, Prevention and Treatment Services (CHIPTS), Los Angeles, CA. April 19, 2005.
Kaiser Family Foundation, *HIV/AIDS Policy Fact Sheet: Latinos and HIV/AIDS,* February 2005.

Methods

Research design: comparative posttest quasi-experimental design comparing 2 different HIV testing outreach protocols:
- a standard HIV testing outreach protocol offering only the HIV test
- a broader health promotion outreach protocol offering the HIV test in the context of tests for the following conditions:

gonorrhea	alcohol dependence
syphilis	drug dependence
Chlamydia	depression

Research questions:
- Which protocol will get more people to test for HIV?
- Which protocol will identify more HIV-positive people?

Target populations: Latino men between the ages of 21 and 50

Research sites: Latino gay bars

Recruitment process:

Conduct outreach at the same 3 bars, on certain weeks offering the HIV test by itself and on alternate weeks offering the HIV test along with other tests

Randomly select participants at the research sites

Screen for high-risk behaviors

Each participant received $15:
- In HIV-only protocol: for taking the HIV test
- In health promotion protocol: for taking any test of the ones offered

Table 1: Sample Characteristics

Variable	N	%
Total	394	100.0
Site		
Bar A	151	38.3
Bar B	175	44.4
Bar C	68	17.3
Language of Interview		
English	209	53.1
Spanish	185	46.9
Age		
21-25	114	28.9
26-30	146	37.1
31-35	65	16.5
36-40	46	11.7
41-45	17	4.3
46-50	6	1.5
Country of Birth		
U.S.A.	148	37.6
Mexico	176	44.7
Other Latin American country[a]	70	17.8
Years Lived in the U.S.		
0-10	132	33.5
11-20	84	21.3
21-30	141	35.8
31-40	30	7.6
41-49	7	1.8
Years of Education		
0-6	20	5.1
7-12	172	43.7
13-16	159	40.4
17-23	43	10.9
Gross Previous Year's Income		
No response or missing	5	1.3
No income	27	6.9
Less than $5,000	22	5.6
$5,000-10,000	38	9.6
$10,001-25,000	134	34.0
$25,001-50,000	136	34.5
$50,001-75,000	20	5.1
$75,001-100,000	9	2.3
Over $100,000	3	.76
Residency Status in U.S.		
U.S. citizen	186	47.2
Legal resident	88	22.3
Undocumented worker	74	18.8
Other	46	11.7
Sexual Orientation		
Bisexual[b]	120	30.5
Gay[c]	274	69.5
Number of Sexual Partners in Previous Year		
None	4	1.0
1-5	238	60.4
6-10	77	19.6
11-20	37	9.4
21-60	32	8.1
100-300	5	1.3
365	1	0.3
Gender of Sexual Partners in Previous Year		
Primarily men	315	80.8
Primarily women	19	4.9
Equally men and women	56	14.4
Unprotected Penetrative Anal Sex in Previous 12 Months		
Yes	234	60.2
No	155	39.8
Unprotected Receptive Anal Sex in Previous 12 Months		
Yes	148	38.1
No	241	61.9
Risk Factors[d]		
Yes	224	56.9
No	170	43.2

Some cells do not add up to 100% because of rounding.
a. El Salvador, 20; Guatemala, 18; Honduras, 10; Nicaragua, 3; Other Central American countries, 7; Cuba, 6; South American countries, 6.
b. Includes 8 men who identified as heterosexual and 1 man who reported having sex primarily with women and 4 men who reported having sex equally with men and women in the previous 12 months.
c. Includes 2 men who reported having sex primarily with men in the previous 12 months.
d. Any of the following: currently homeless or in temporary housing; had sex while high or intoxicated in previous month; had STD in previous 12 months; exchanged sex for food, money, drugs or shelter in previous 3 months; used crack or cocaine or methamphetamine in previous 3 months.

Table 2: Association between HIV Protocol and Taking the HIV Test among All Participants Approached

Protocol	Took HIV Test				Total Number of Participants Approached
	No n	%	Yes n	%	
Health Promotion	1,281	89.8%	146	10.2%	1,427
HIV-only	2,021	91.1%	197	8.9%	2,218
Total Number of Participants Approached	3,302	90.6%	343	9.4%	3,645

Fisher's exact test = 0.181 (non-significant)

Table 3: Association between HIV Protocol and Testing HIV-Positive among All Participants Approached

Protocol	HIV-Positive				Total Number of Participants Approached
	No n	%	Yes n	%	
Health Promotion	1,422	99.7%	5	0.35%	1,427
HIV-only	2,208	99.6%	10	0.45%	2,218
Total Number of Participants Approached	3,630	99.6%	15	0.4%	3,645

Fisher's exact test = 0.793 (non-significant)

Table 4: Association between HIV Protocol and Testing HIV-Positive among Only Those Participants Who Took Any Test

Protocol	HIV-Positive				Total Number of Participants Taking Any Test
	No n	%	Yes n	%	
Health Promotion	141	96.6%	5	3.4%	146
HIV-only	187	94.9%	10	5.1%	197
Total Number of Participants Approached	328	95.6%	15	4.4%	343

Fisher's exact test = 0.596 (non-significant)

Table 5: Likelihood of Choosing HIV-Only Protocol Versus Health Promotion Protocol (Logistic Regressions)

	Bivariate		Multivariate	
Variable	**OR**	**95% CI**	**OR**	**95% CI**
Site				
Bar A	*1.00*	---	*1.00*	---
Bar B		ns		ns
Bar C	1.90*	1.06-3.41	2.17*	1.19-3.97
Country of Birth				
U.S.A. (Reference)	*1.00*	---		
Mexico	1.45[a]	0.93-2.25		
Other Latin American Country		ns		
Gender of Sexual Partners in Previous Year				
Primarily men (Reference)	*1.00*	---	*1.00*	---
Primarily women	0.24*	0.08-0.73	0.27*	0.09-0.87
Equally men and women		ns		ns
Unprotected Receptive Anal Sex in Previous 12 Months	1.68*	1.11-2.54	1.56*	1.02-2.39

All of the following variables were nonsignificant at the bivariate level at $p < 0.05$ and were not included in the multivariate model: Age, Gross Previous Year's Income, Language of Interview, Number of Sexual Partners in Previous Year, Residency Status in U.S., Risk Factors, Sexual Orientation (the "bisexual" category included 8 men who identified as heterosexual and 1 man who reported having sex primarily with women and 4 men who reported having sex equally with men and women in the previous 12 months; the "gay" category included 2 men who reported having sex primarily with men in the previous 12 months), Unprotected Penetrative Anal Sex in Previous 12 Months, Years Lived in the U.S. and Years of Education.

ns = non-significant; $^{*}p \leq 0.05$; $^{a}p \leq 0.10$

Conclusions

•There was no statistical difference between the two protocols with regards to the number of individuals who took the HIV test. Nevertheless, the difference between the two rates (8.9% for the HIV-only protocol and 10.2% for the health promotion protocol) is not trivial; the health promotion protocol obtained 14.6% higher participation than did the HIV-only protocol.

•There was no statistical difference between the two protocols with regards to the number of individuals who tested HIV-positive, regardless of whether this was examined among the total number of participants approached or among just those individuals who took any test.

•The advantage for "bundling" HIV testing into a health promotion protocol is that it may be more likely to encourage HIV testing among people who perceive themselves to be at low risk for HIV but may in fact be at high risk and at risk for passing it on to others. Our study suggests that the health promotion protocol may be most effective among populations who may be at risk for HIV but do not realize it, such as bisexual males who are primarily sexually active with women.

In order to test this further, we conducted additional analysis. We combined those who had reported having had primarily women as sexual partners in the previous year with those who reported having had equal numbers of men and women as sexual partners. We then entered this variable in the same multivariate model used in Table 5. Men who reported having had as sexual partners either primarily women or equally men and women were significantly less likely to choose the HIV-only protocol compared to men who had primarily men as sexual partners. However, in this case, an Odds Ratio of 0.59 ($p = 0.049$) was obtained. This OR was higher than what we had obtained when considering separately men who had sex primarily with women (OR = 0.27; $p < 0.05$) (Table 5). This suggests that there may be value in promoting the health promotion protocol for use with men who frequent gay bars but report having sex primarily with women.

•It may also be that these men who report primarily having women as sexual partners have more fear or perceive more stigma in taking an HIV test and hence are more drawn to the health promotion protocol which has a broader focus.

•Men who reported having unprotected receptive anal sex in the previous 12 months were more likely to choose the HIV-only protocol compared to men who did not report unprotected receptive anal sex. This may be related to the fact that these men could have a heightened sense of having placed themselves at risk for HIV and hence may be more concerned about finding out their HIV status and less concerned about other tests.

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