



Frequency of Patronage and Choice of Sexual Partners may Impact Likelihood of HIV Transmission in Bathhouses

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Introduction

Men who have sex with men account for a significant proportion of new HIV infections in the United States and appear to be driving a recent upswing in incident cases. Many MSM continue to meet their sexual partners at bathhouses. Few studies have described the population of bathhouse patrons and their frequency of bathhouse use.

Though anecdotal reports indicate the recruitment of sex partners in bathhouses as a risk factor for HIV transmission, few studies have described the population of bathhouse patrons in terms of risk and frequency of patronage. With the intent of better characterizing those patrons choosing to participate in high-risk behaviors in a bathhouse setting, we utilized a cross sectional survey to compare high-risk patrons - those having unprotected anal intercourse - at three bathhouse facilities in Denver with low-risk patrons.

Methods

In 2006, Denver Public Health designed and implemented a cross-sectional survey of patrons of 3 bathhouses in Denver. Survey design included a literature review, focus groups in local baths, and piloting of the instrument. The survey tool was developed using QDS software and was loaded onto handheld PDAs. The survey included questions on demographics, HIV status, sexual and drug using risk behaviors both within the bathhouses and outside of the bathhouses, HIV serostatus of sexual partners, frequency of use of the baths, and use of various bathhouse amenities.

Recognizing that bathhouse patrons differ by the time of day, a schedule was developed that would maximize exposure to the broadest range of patrons possible. Data collection occurred in random three hour blocks, consisting of five different shifts starting from 10:00 am until 1:00 am the following day. Surveyors notified bathhouse staff of their presence prior to arrival at any given bathhouse and were given access to rooms in high-traffic locations in order to maximize participation.

A convenience sample of participants was recruited through direct one-on-one contact and through announcements made through an overhead intercom system. Each participant was assured of confidentiality, consented, and given an incentive of two movie tickets at the completion of the survey.

Bathhouse management was included at all stages of survey development and implementation in order to assure that the survey tool was culturally appropriate for this setting and to facilitate acquisition of data from patrons without significant disruption.

Univariate analyses were conducted using SAS and Chi-Square or t-test p-values reported as appropriate. Those variables found to be significant in univariate analyses were then included in a multiple logistic regression analysis. This project was reviewed by our local IRB and was determined to be exempt from further review.

	Univariate Analysis; Baseline Characteristics of Study Population:	All Participants % (N)	High Risk: UAI in Bathhouse % (N)	Low Risk: No UAI in Bathhouse % (N)	p-value
	All Participants	N = 296	N = 153	N = 143	Significant is highlighted
AGE	25 and Under	10 (29)	10 (16)	9 (13)	0.6927
	26-35	28 (82)	25 (39)	30 (43)	0.3790
	36-50	48 (143)	25 (78)	46 (65)	0.3418
	51-65	12 (35)	10 (16)	13 (19)	0.4513
	66 and Older	2 (7)	3 (4)	2 (3)	0.7701
Race Ethnicity	White	67 (199)	74 (114)	59 (85)	0.0058
	Black	6 (18)	7 (10)	6 (8)	0.7348
	Hispanic	19 (55)	14 (22)	23 (33)	0.0545
	Other	8 (24)	5 (7)	12 (17)	0.0213
Education	Post Grad and Higher	27 (80)	23 (35)	31 (45)	0.0962
	College	63 (186)	67 (102)	59 (84)	0.1585
	Elementary through H.S.	10 (30)	10 (16)	10 (14)	0.8492
Relationship	Single	74 (219)	77 (117)	71 (102)	0.3136
	Partnered with Male	21 (61)	20 (31)	21 (30)	0.8788
	Partnered with Female	5 (16)	3 (5)	8 (11)	0.0925
Sexual Orient.	Gay	77 (227)	82 (125)	72 (102)	0.0350
	Bisexual	21 (62)	17 (25)	26 (37)	0.0440
	Straight	1 (3)	1 (2)	2 (1)	0.6018
Out Range	Degree of "Outness" (Mean (N)) Not out = 1; Out = 10	8.497 (296)	9.098 (153)	7.853 (143)	0.5110
Sex w/ Women	Within the last 6 Months	15 (45)	17 (20)	13 (25)	0.2909
HIV Status	HIV(+)	21 (62)	29 (45)	12 (17)	0.0002
	HIV(-) and Unknown	79 (234)	71 (108)	88 (126)	
Last Sex Partner	HIV(+)	16 (30)	22 (22)	10 (8)	0.0314
	HIV(-) and Unknown	84 (152)	78 (79)	90 (73)	
Disclose	Disclosed HIV Status to last Partner	44 (113)	45 (69)	42 (44)	0.5669
	Non-disclosure	56 (146)	55 (84)	58 (62)	
Use of Amenities	Rooms	68 (202)	76 (116)	60 (86)	0.0038
	Lockers	45 (132)	39 (59)	51 (73)	0.0308
	Enema Access	21 (61)	27 (41)	14 (20)	0.0065
	Glory Holes	42 (123)	47 (72)	36 (51)	0.0468
	Maze	40 (118)	45 (69)	34 (49)	0.0572
Drug Use at Bathhouse	Methamphetamine	24 (71)	35 (53)	13 (18)	< .0001
	Cocaine	11 (34)	16 (25)	6 (9)	0.0068
	MDMA (Ecstasy)	16 (47)	24 (36)	8 (11)	0.0002
	GHB	10 (30)	16 (25)	4 (5)	0.0003
	Marijuana	18 (54)	25 (38)	11 (16)	0.0024
	Viagra/Levitra/Cialis	26 (76)	35 (54)	15 (22)	< .0001
	Any illicit drug use	38 (113)	52 (80)	23 (33)	< .0001
Last Visit	Within last month	60 (179)	61 (94)	58 (85)	
	Within last year	33 (99)	33 (51)	34 (48)	0.8072
	Greater than one year	7 (18)	5 (8)	7 (10)	
How Often Visit	≥ Once a month	73 (204)	77 (116)	68 (88)	0.0871
	< Once a month	27 (77)	23 (35)	32 (42)	

Significant P-Values	
Greater High Risk	
Greater Low Risk	

Multivariate Analysis:		
Variables	High Risk (OR)	P-Value
Use of Drugs in BH	2.66 (1.40-5.06)	0.0029
Use of Glory Holes	2.54 (1.30-4.97)	0.0065

Results

The 296 persons surveyed in this study were reflective of the MSM population in Denver with the exception that more men in this study identified as HIV infected compared to recent studies of MSM in our community (21% vs. 16% in NHBS).

Of the men surveyed, 153 (52%) were at risk for acquiring or transmitting HIV in the bathhouse as they had had unprotected anal intercourse at some time in the past in this setting. Persons at high risk were significantly more likely than men who did not have unprotected anal intercourse in the baths to be white, more likely to identify as gay, more likely to be HIV positive themselves, and more likely to have HIV-infected sexual partners. These men were more likely to access private rooms or glory holes in the baths and use enema equipment. In addition, they were more likely to use drugs in the baths, including erectile dysfunction drugs.

High-risk patrons were significantly less likely to identify with a race or ethnicity other than White, Black or Hispanic. They were also less likely to identify as bisexual as opposed to gay or straight and were less likely to rent a locker. All patrons frequented the baths often (73% visiting at least once a month or more), but frequency of patronage did not differ significantly by risk group.

In multiple logistic regression analysis, the use of any illicit drugs and the use of glory holes was found to be strongly associated with having unprotected anal intercourse at some time in the bathhouse setting.

Conclusions

- Patrons of bathhouses reported frequent use of the facilities with 73% attending the baths more than once a month.
- A greater proportion of persons reporting unprotected anal intercourse at the baths identified as White, gay, or HIV-infected.
- A greater proportion of high-risk patrons reported having partners who were HIV-infected and reported accessing private rooms and/or glory holes when in the baths.
- A greater proportion of persons reporting only low-risk activities in the baths identified with a race or ethnicity other than White, Black, or Hispanic; identified as bisexual; and accessed lockers.
- Identifying as using any illicit drugs and accessing glory holes was strongly correlated with unprotected anal intercourse.
- Bathhouses continue to be likely locations for HIV or STD transmission to occur. More research is needed on who bathhouse patrons are, how sexual partners are selected in these venues, and how structural aspects of the baths might impact HIV transmission risk.