Risk Behavior for HIV Transmission Among Gay Men Surveyed in Seattle Bars

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Tearsheet requests to Dr. Steiner. Also, a copy of the survey instrument is available upon request.

Synopsis

Men attending four Seattle gay bars were asked to complete a self-administered questionnaire including measures of sexual behavior, perceptions of peer norms in the area of sexual safety, personal human immunodeficiency virus (HIV) risk estimate, and knowledge and use of a variety of acquired immunodeficiency syndrome (AIDS) prevention services. Twenty-nine percent of the sample reported engaging in unprotected anal intercourse at least once during the 2 months before the survey.

Differences in peer norm perceptions, age, HIV risk estimate, and intent to be sexually safe in the future were found between those engaging in unprotected anal intercourse and those not reporting unprotected anal intercourse. No significant differences were found in level of education, use of AIDS prevention services, and whether or not a person had been tested for HIV. Implications for prevention programs are discussed.

PAST STUDIES conducted in larger cities around the United States have documented changes in high-risk sexual behavior among gay men (*1–6*). Behavioral changes have occurred primarily in the major acquired immunodeficiency syndrome (AIDS) epicenters of San Francisco, New York, and Los Angeles. Studies indicate that rates of unprotected anal intercourse and number of sexual partners have decreased, and that the use of condoms has increased since the onset of the epidemic.

Because no vaccine or cure for human immunodeficiency virus (HIV) infection appears imminent, it is widely accepted that promoting risk reduction through behavioral change is the most effective means available for controlling the spread of HIV. To identify possible targets for intervention, a number of researchers have examined factors believed to be associated with the reduction of risks through sexual behavior change. Among the factors examined, age (*7,8*), use of alcohol or drugs in conjunction with sex (*9–11*), accurate estimation of personal risk (*8,2*), and perception of peer group norms about the acceptability of practicing safer sex (*8*) have been found to be predictors of risky or safer sexual behavior.

Although a number of studies have examined gay male sexual behavior in the AIDS era, there remains a large gap in our knowledge about actual rates of unsafe behavior. One reason for this is the sampling difficulties that researchers encounter when studying gay men. Studies to date have used various sampling methods and sampling frames to gather information. Subjects have been found among clinic patients (*12,13*), patrons of gay bathhouses and bars (*8,14*), members of gay organizations and those attending gay events (*3*), and through randomly sampling telephone numbers listed with only a male name (*1*). While each frame presents a problem as to generalizability to the larger gay community, together they provide a more complete picture of behavior patterns and risk factors for the gay community as a whole.

One such study of a segment of the gay male population was conducted in three American cities in 1988 (*8*). This study used a self-administered survey format to determine the rates of unsafe sexual behavior and to examine a number of possible predictors of unsafe behavior among patrons of gay bars in Tampa, FL, Mobile, AL, and, of most relevance to the current research, Seattle, WA. The 1988 survey found that 33.1 percent of the Seattle respondents engaged in unprotected anal intercourse.

The current research continues the process of building an informational base by examining one

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subpopulation of the gay male community: gay bar patrons in Seattle. HIV-positive test results are not reportable in the State of Washington. Thus, prevalence data in Seattle are based solely on HIV tests performed by the Seattle-King County Department of Public Health.

From 1986 through 1992, 5,302 gay and bisexual men were tested for antibodies to HIV through the Seattle-King County Department of Public Health. Of those tested, 1,158, or 22 percent, tested positive. In 1991, the year this research was conducted, 17 percent of the 994 men tested were HIV positive.

Using methodology similar to the 1988 Seattle study, this research attempts to examine whether the rates of unsafe sexual behavior among male patrons of Seattle gay bars have changed since 1988. This knowledge provides important information about the permanency of behavior change and assists in documenting the need for additional prevention efforts with this population. The rates of high-risk behavior among gay bar patrons are examined, as are factors that predict risk. Finally, implications for possible intervention are discussed.

Method

For a 2-night period in July 1991, all men entering four popular Seattle gay bars were asked to complete a self-administered questionnaire addressing AIDS risk. Patrons were asked to complete the survey individually. To assure anonymity, respondents placed completed questionnaires directly in boxes. The response rate varied by bar, with between 64 and 88 percent of all male patrons agreeing to complete the survey. A total of 434 completed questionnaires were collected during the 2-night period.

The questionnaire asked for basic demographic information, partner status, and specific sexual behaviors that the respondents had engaged in within the past 2 months. The sexual behavior questions requested information on the number of times subjects had engaged in insertive or receptive anal and oral intercourse, with and without using a condom, the number of times they had engaged in mutual masturbation, and the number of male partners for each behavior.

The survey included eight items measuring perceptions of peer norms in the area of sexual safety (*8*). The items used a five-point Likert Scale (from 1 = strongly agree to 5 = strongly disagree) to indicate level of agreement or disagreement with statements about their friends' behavior and beliefs with regards to condom use and sexual safety. The items could be combined to give each subject a score ranging from 8 to 40, with higher scores indicating a belief in community norms of sexual safety.

The questionnaire also asked about respondents' intent to be sexually safe in the future, whether they had been tested for HIV and the results, and their knowledge and use of a variety of AIDS prevention services. Finally responses to the instrument provided a personal risk estimate score based on respondents' assessment of their level of risk for contracting HIV based on their behavior during the previous 2 months. This item used a four-point Likert Scale with the possible responses "not at all," "slight," "some," and "a lot," thus providing a possible score ranging from 1, no risk, to 4, high risk.

Results

The majority of those in the sample were white (83.9 percent) and had some college education (84.9 percent), with almost half reporting 4 or more years of college (44.9 percent). The mean age was 32. Forty-two percent reported being exclusively partnered, 15 percent for less than 1 year, and 27 percent for a year or more. Fifty-nine percent reported they were not exclusively partnered. Finally, 92 percent labeled themselves exclusively or primarily homosexual.

Of the total sample, 83 percent reported some type of sexual activities with other men during the previous 2 months. Fifty-five percent of those reporting any sexual activity had more than one partner. Forty percent of those reporting sexual activity only participated in sexual activities that did not involve fluid exchange. These sexual activities would include mutual masturbation and any sexual contacts where condoms were used to prevent fluid exchange.

Roughly half of the sample, 52 percent, reported engaging in either protected or unprotected anal intercourse during the 2-month period before the

survey. Of the respondents who engaged in anal intercourse, 29 percent never used a condom, and 46 percent used a condom for all occurrences of anal intercourse. The remaining 25 percent used a condom some of the time.

Of greatest concern for the spread of HIV, 29 percent of the total sample reported engaging in either unprotected insertive or receptive anal intercourse. Forty-nine percent reported engaging in behavior with fluid exchange, which means either unprotected anal intercourse or unprotected oral sex to orgasm.

Because unprotected anal intercourse is known to be the sexual practice that carries the greatest risk for the transmission of HIV, a multivariate analysis of variance (MANOVA) was performed comparing those reporting any occurrences of unprotected anal intercourse and those who reported no occurrences of this behavior on a number of dependent variables (age, education, peer norm score, personal risk estimate score, number of male partners). A significant multivariate effect was found (Hotelling's T2 (4, 370) = .25, $P < .0001$) confirming differences between the two groups. Univariate analyses of variance (ANOVAS) were then performed to identify differences for each variable.

The results of the ANOVAS can be found in the table, which shows that men who engaged in unprotected anal intercourse were younger, perceived less peer support for safer sexual behavior, correctly estimated that they were at higher risk for HIV infection, had a larger number of male partners, and had less education than men who reported no instances of unprotected anal intercourse. A chi-square analysis showed no significant differences between those who engaged in unprotected anal intercourse and those who did not on the categorical variables of whether they had been tested for HIV and whether a person had used any AIDS prevention service.

Means (M), standard deviations (SD), and analysis of variance results comparing men who did or did not engage in unprotected anal intercourse

Variable	*Engaged in unprotected anal intercourse* M	SD	*Did not engage in unprotected anal intercourse* M	SD	F(1,365)
Age (years)	29.9	6.7	32.8	7.6	[1]12.12
Education (years)	14.1	1.8	14.8	1.6	[1]12.71
Peer norm score	24.6	4.4	27.0	5.6	[1]15.98
Personal risk estimate score	2.2	.9	1.5	.7	[1]58.71
Number of male sexual partners	4.8	12.3	2.1	3.5	[2]10.03

[1]$P < .001$. [2]$P < .01$.

Discussion

The results of this survey corroborate a number of previous research findings. While many gay men in larger cities are engaging only in sexual practices that are considered low-risk for HIV transmission, a sizable minority of men attending gay bars in Seattle continue to engage in the highest risk behavior—unprotected anal intercourse. Although it is difficult to compare the results of two convenience samples, there is an indication that the rates of unprotected anal intercourse among the Seattle bar population have not changed dramatically since 1988.

Of those engaging in unprotected anal intercourse, 34.7 percent reported being exclusively partnered for more than 1 year. The current study did not ask respondents for the serostatus of their partners. Lack of information on partner serostatus obscures the true meaning of the 29 percent rate for unprotected anal intercourse. It is possible that some of the unsafe behavior was taking place within the confines of monogamous relationships where both partners were HIV negative. This would sharply decrease the risk to either partner. Partner serostatus should be more thoroughly addressed in future research.

This research supports prior findings that those continuing to engage in unsafe sexual behaviors do not do so because of an inaccurate perception of their risk of contracting the virus. Because these men seem to understand that their behavior puts them at increased risk for contracting HIV, programs focusing solely on risk education are clearly no longer effective for this population.

The research also supports earlier findings with regards to community norm perceptions. Men who believed that their friends were being sexually safer were less likely to engage in unprotected anal intercourse than those who saw the norm as one of continued unsafe behavior. This suggests a need for interventions that work to reshape community norms. Such an intervention has been used successfully among gay men in smaller cities (*15*). This research indicates that it may be prudent to implement this type of intervention with gay men in larger cities as well.

The higher rates of high-risk behavior among younger men may suggest that some of the decline in incidence of HIV infection among the entire population of gay men could be due primarily to changes made in the sexual behavior of older gay men. This would make sense, as men who are now older were

exposed to more intensive appeals to modify their behavior earlier in the epidemic. It may also be due to differences between older and younger people, such as a heightened sense of invulnerability among the young. Whatever the explanation, these findings suggest that prevention efforts aimed more specifically at younger men may prove particularly important at this time.

The survey asked respondents to indicate whether they had used any AIDS prevention services, including phone counseling groups, inperson support groups, individual counseling, AIDS hotlines, and safe sex workshops. It is interesting to note that no difference was found in the rates of unprotected anal intercourse between those who reported using any type of AIDS prevention service and those who reported none.

It may be that those who used AIDS prevention services had higher rates of unsafe sex prior to receiving services. The effect of the service utilization was to bring the rates down to the level of those not using services. An alternative explanation is that the service used was ineffective. The ambiguity in this area underscores the need for ongoing evaluation of all AIDS prevention services. Given increasingly scarce funding for AIDS prevention, studies that examine the effectiveness of innovative AIDS prevention services at bringing about behavior change should be undertaken.

As the AIDS epidemic continues to have an ever greater impact on populations other than gay and bisexual men, and funding continues to be limited, there may be increasing pressure to abandon work with gay and bisexual men. This research indicates that there remains a strong need to continue both research and prevention efforts among gay and bisexual men in larger cities, as well as among other populations with increasing incidence of HIV infection. The subpopulation of gay and bisexual men who continue to participate in unsafe sexual behaviors, despite their knowledge of the risks involved, may constitute a group that is difficult to reach and influence with conventional means. This is not to say that this group should be left out of future funding and prevention efforts. It means instead that we need to work harder to come up with creative interventions that can reach this target population.

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