

# Changes in HIV Rates and Sexual Behavior among Homosexual Men, 1984 to 1988/92

## ABSTRACT

Data were collected from 1614 homosexual and bisexual men in 1984 through 1985 and from 1988 to 1992 in Pittsburgh. Of the men entering the study since 1988, 16% reported engaging in unprotected anal receptive intercourse with more than one partner during the 6 months before their visit. Approximately 7% of the younger men and 18% of the men over 22 years of age in the recent cohort were already infected with the human immunodeficiency virus, the same rates as those described 8 years ago. Aggressive risk-reduction programs are needed in high schools and existing networks in the gay community. (*Am J Public Health*. 1993;83: 578-580)

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### Introduction

This paper describes risk behaviors related to the human immunodeficiency virus (HIV) of cohorts of gay and bisexual men using data collected in 1984 through 1985 and from 1988 to 1992 at the Pitt Men's Study, a site of the Multicenter AIDS Cohort Study. The Pitt Men's Study is an epidemiological study of HIV among gay and bisexual men in the Pittsburgh area.

Comparing men who joined the study early with those who joined later may provide some insight into changes in behavior and in HIV transmission rates, especially among gay youth who had begun their sexual activity after HIV was identified and its transmission described. The sexual activity among these men has serious implications for predicting the future of this epidemic. It is also a focus of major concern, since previous research suggests that, on average, young homosexual men in Pittsburgh begin their regular sexual interactions at 16 years of age,<sup>1</sup> are least likely to use condoms,<sup>2</sup> and engage in relatively high rates of anal receptive sex.<sup>3</sup>

### Methods

#### Subjects

A vigorous program to recruit gay and bisexual men into a study of the natural history of HIV was initiated in early 1984 and continued through 1985. It included blood draws at gay bars, phone banks, and more traditional recruitment techniques previously described.<sup>4</sup> Between 1987 and 1991, recruitment was limited to advertisements and word-of-mouth referrals. In 1991, additional recruitment of gay teens and young men included the contacting of gay leaders, mailings, presentations, and articles and advertisements in the local gay newspaper and newsletters. Data for this study were gathered and analyzed on 1614 gay and bisexual men, 1079 of whom joined the study in 1984 through 1985 and 536 who joined from 1988 to 1992.

### Measures

Men completed a self-administered, 10-page questionnaire with 36 questions. Information was elicited about demographic characteristics and behaviors, including race, ethnicity, age, drug and alcohol use, sexual practices, and involvement in the gay community.

Data were gathered about each subject's number of sexual partners in the 6 months, 2 years, and lifetime before entering the study. Men entering the study since 1987 also completed an additional two-page, eight-item questionnaire on condom use.

Serum was tested for antibody to HIV by enzyme-linked immunosorbent assay and the Western blot.<sup>5</sup> Subjects provided written informed consent when they joined the study and when antibody results were obtained. Strict confidentiality procedures were followed throughout the study.

### Results

Data on demographic differences and rates of sexually transmitted diseases (see Table 1) and selected sexual behaviors (see Table 2) indicate that there were few significant differences between men 22 years of age or younger entering the study in 1984 and those entering in 1988 to 1992. Of particular importance was the similarity in rectal gonorrhea rates and anal receptive intercourse. Data collected about

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numbers of partners indicate that while younger men recently entering the study reported significantly fewer partners than those who entered in 1984, two thirds of the cohort reported more than one partner in the previous 6 months. Although data about whether partners were intoxicated during sex or about condom use were not collected in 1984, such information was collected on recent recruits. Of men 22 years of age or younger who entered the study since 1988, 15% reported that their partners were intoxicated during sexual intercourse. Of the 41 younger men (65%) in 1988 to 1992 who reported anal receptive intercourse in the 6 months before joining the study, only 12 (29%) reported using condoms all of the time. Of those having anal intercourse, 16 (39%) reported being anal receptive with more than one partner and not using condoms all of the time.

Similar patterns with some important differences emerged in examining men over 22 years of age joining the study in the two time periods. Older recent recruits reported fewer sexually transmitted diseases than older men in 1984. Of particular interest were the significantly fewer reported cases of rectal gonorrhea and of syphilis. Of these older men, 25% reported having partners who were intoxicated during sex. Of the older men who joined recently, 22% reported having anal receptive intercourse with more than one partner in the 6 months before joining the study, and half of these men reported not using condoms all of the time.

Of the 414 older men who recently joined the study and who reported ever engaging in anal sex, 61 (16%) reported a condom break and 37 (9%) reported a condom slip, at least once, when they engaged in anal receptive intercourse. Only about 10% of the entire recent cohort used spermicide, and no differences in age were noted.

## Discussion

The most striking finding of this study is that HIV infection rates between 1984 and 1988 to 1992 did not vary in this cohort. Despite the substantial increase in knowledge about HIV over this period, including the mode of transmission and the recognition of the importance of prevention of sexual transmission, the prevalence rate of about 7% among gay teenage males and young adults in this sample did not decline. While it is very encouraging that there have been widespread and significant changes in sexual behaviors, a substantial proportion of gay and bisexual

Characteristics	22 Years of Age or Less			More than 22 Years of Age		
	1984 (n = 121)	1992 (n = 61)	P	1984 (n = 958)	1992 (n = 475)	P
Race (non-White), %	6	5	NS	5	7	NS
Unemployed, %	19	8	<.05	8	5	<.05
Student, %	39	47	NS	47	14	NS
More than 2 years of college, %	29	33	NS	61	61	NS
Age at first gay intercourse, median	16	15	NS	17	18	NS
Age at first regular intercourse, median	18	18	NS	21	22	NS
Years living in Pittsburgh, median	18	18	NS	24	22	NS
Syphilis, %	1	0	NS	13	4	<.05
Urethral gonorrhea, %	19	0	<.05	33	19	<.05
Rectal gonorrhea, %	4	0	NS	13	4	<.05
Nonspecific urethritis, %	16	3	<.05	35	19	<.05
Genital/anal warts, %	9	3	NS	18	13	NS
Hepatitis B vaccine, %	2	3	NS	3	8	<.001
HIV positive, %	7.4	6.6	NS	16.4	17.8	NS

Note. HIV = human immunodeficiency virus; NS = not significant.

Sexual Behavior <sup>a</sup>	22 Years of Age or Less			More than 22 Years of Age		
	1984 (n = 121), % (median)	1992 (n = 61), % (median)	P	1984 (n = 958), % (median)	1992 (n = 475), % (median)	P
Masturbation	42 (16)	80 (16)	<.001	45 (16)	75 (16)	.001
Oral insertive	86 (16)	88 (16)	NS	87 (16)	83 (16)	.05
Anal insertive	35 (16)	27 (16)	NS	37 (16)	21 (15)	.001
Rimming insertive	13 (16)	15 (16)	NS	17 (38)	13 (16)	.06
Fisting insertive	0 (0)	0 (0)	NS	1 (32)	1 (38)	NS
Oral receptive	84 (16)	75 (16)	NS	82 (16)	73 (16)	NS
Anal receptive	45 (16)	29 (16)	NS	34 (16)	18 (16)	NS
Any anal receptive	94 ...	81 ...	NS	85 ...	65 ...	NS
Rimming receptive	20 (16)	18 (16)	NS	20 (16)	11 (16)	.001
Fisting receptive	0 (0)	2 (16)	NS	1 (38)	1 (16)	NS

Note. NS = not significant.  
<sup>a</sup>Sexual behaviors participated in with 50% or more of partners in the last 2 years.

men in this sample still continued to engage in or have relapsed into unsafe behaviors that could lead to HIV infection. This suggests that present levels of change are not sufficient for slowing, much less for ending, the epidemic. As the pool of people who are HIV infected grows, the likelihood increases that one's partner is also infected. Hence, fewer partners with whom anal receptive sex is performed are needed before one encounters a partner who is HIV positive.

Because data were collected from a volunteer sample, generalizability is somewhat limited; nonetheless, these results are worrisome. Additional research

is needed to assess current sexual behaviors and HIV rates among gay men not currently involved in studies. This research will need to account for cultural, geographic, racial, and age-related differences in that population. It should also be noted that the differences between the cohorts of older men entering this study may be due, at least in part, to depletion of the cohort's riskiest members through HIV-related illness and death.

Hays and his colleagues suggest that differences in selected attitudes, perceptions, knowledge, and skills are related to HIV risk taking among gay youth.<sup>6</sup> More research is needed to identify which fac-

tors are most important in changing sexual behavior and effective ways of influencing them and to understand the reasons for condom failure. Demonstration projects and community-based and high school prevention programs related to changing unsafe sexual behaviors of all gay men, especially the young, are needed. □

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## Reported Asthma among Puerto Rican, Mexican-American, and Cuban Children, 1982 through 1984

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### ABSTRACT

Data from the Hispanic Health and Nutrition Examination Survey (HHANES) (1982 through 1984) and the National Health and Nutrition Examination Survey (NHANES) II (1976 through 1980) were used to examine reported physician-diagnosed asthma among 6-month-old through 11-year-old children. The highest prevalence of active asthma was reported for Puerto Ricans: 11.2% compared with 3.3% for non-Hispanic Whites, 5.9% for non-Hispanic Blacks, 2.7% for Mexican Americans, and 5.2% for Cubans. Health services utilization and severity do not appear to explain the differences between Puerto Ricans and Mexican Americans. Educational programs on asthma should consider focusing on Puerto Ricans. (*Am J Public Health*. 1993;83:580-582)

### Introduction

Asthma is the leading chronic disease in childhood and is a major cause of school absence and functional limitation.<sup>1,2</sup> The apparent high frequency and severity of asthma among Puerto Ricans in the continental United States and Puerto Rico is of particular concern.<sup>3-7</sup> This paper uses data from the 1982 through 1984 Hispanic Health and Nutrition Examination Survey (HHANES) and the 1976 through 1980 second National Health and Nutrition Examination Survey (NHANES II) to compare the prevalence of asthma among various Hispanic and non-Hispanic groups.

### Methods

The second National Health and Nutrition Examination Survey (NHANES II), conducted from 1976 through 1980, was a complex sample survey designed to assess the health and nutritional status of the United States civilian population aged 6 months through 74 years.<sup>8</sup> Asthma data are available from the Medical History Questionnaire for 96% of the selected sample of non-Hispanic White (n = 5497) and Black children aged 6 months through 11 years (n = 1148). Two questions were asked of an adult household member (usually a parent):

Ever had asthma—"Did a doctor ever tell you that \_\_ had asthma?"

Active asthma—"Does he or she still have asthma?"

The Hispanic Health and Nutrition Examination Survey (HHANES), conducted from 1982 to 1984, aimed to produce estimates comparable to those of NHANES II for Mexican Americans in the Southwest, Cubans in Miami, and Puerto Ricans in the New York City area.<sup>9</sup> Asthma data are available from the Child Sample Person Questionnaire for 2761 (92%) of the selected sample of Mexican-American children, 291 (85%) of the Cuban children, and 914 (92%) of the Puerto Rican children aged 6 months through 11 years. The wording of the asthma questions differed slightly from that of NHANES II:

Ever had asthma—"Did a doctor ever say that \_\_ had asthma?"

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