

# Sexually Active Adolescents and Condoms: Changes Over One Year in Knowledge, Attitudes and Use

SUSAN M. KEGELES, PHD, NANCY E. ADLER, PHD, AND CHARLES E. IRWIN, JR., MD

**Abstract:** Over a year when public health information regarding AIDS intensified, changes in perceptions and use of condoms in a sample of sexually active adolescents in San Francisco were examined. Although perceptions that condoms prevent sexually transmit-

ted diseases (STDs) and the value and importance placed on avoiding STDs remained high, these were neither reflected in increased intentions to use condoms nor in increased use. (*Am J Public Health* 1988; 78:460-461.)

## Introduction

In assessing the threat of AIDS (acquired immunodeficiency syndrome) to the health of one nation, the Surgeon General has urged the use of condoms among individuals having intercourse outside of established mutually monogamous relationships or with individuals in "high risk groups."<sup>1</sup> AIDS is currently rare among adolescents<sup>2</sup> and the prevalence of human immunodeficiency virus (HIV) among teens is unknown. However because of their high rates of sexually transmitted diseases (STDs),<sup>3-7</sup> there is concern that teens may be at high risk for developing AIDS.<sup>8</sup> Thus, the need for sexually active teens to use condoms has become increasingly clear.

In San Francisco, information about AIDS prevention (including use of condoms) via television, newspapers, billboards, and on buses, some aimed specifically at teenagers, has increased in past years.<sup>9</sup> The San Francisco Unified School District (SFUSD) began teaching a one-class segment on AIDS in the middle and high schools in academic year 1985-86 with teachers free to discuss AIDS in the lesson plan as they chose. The impact of this increased information on adolescents' attitudes and intentions regarding condom use is not known. The present study examines changes in attitudes, intentions, and condom use in a sample of sexually active adolescents in San Francisco over a one-year period.

## Methods

These data were collected as part of a larger study of adolescents' decision-making regarding contraceptive use in heterosexual sex. Patients ages 14-19 years coming to a university or to a health maintenance organization (Kaiser Permanente San Francisco) adolescent health clinic in San Francisco who met inclusion criteria (English-speaking, single, not pregnant, and without a development disability or a major psychosocial problem) were invited to participate. The survey was administered after the patients' medical appointment. Because of frequent waits at the clinics, the majority of adolescents who declined to participate cited reluctance to stay for an additional hour beyond their medical appointment; we do not believe this selection factor is likely to introduce systematic bias.

Address reprint requests to Susan M. Kegeles, PhD, Graduate Program in Health Psychology, University of California, 1350 7th Avenue, CSBS-204, San Francisco, CA 94143. (Dr. Kegeles is with the Department of Psychiatry and the Division of General Internal Medicine, Dr. Adler is with the Departments of Psychiatry and Pediatrics, and Dr. Irwin is with the Department of Pediatrics, all at UCSF School of Medicine. This paper, submitted to the *Journal* July 16, 1987, was revised and accepted for publication December 11, 1987.

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The socioeconomic distribution at the university-based clinic as reflected in the method of payment for visits is: 40 per cent Medi-Cal (Medicaid), 30 per cent clinical teaching subsidy (partial funding for visit provided by a university teaching fund and the remainder from parent or patient), and 30 per cent private insurance. The socioeconomic distribution at the health maintenance organization is essentially a middle class population of adolescents whose parents are employed full-time.

Data reported here are from 234 females and 91 males who were sexually active at the time of the first survey, which was administered between February 1984 and September 1985. Questionnaires were largely self-administered with an interviewer present to read instructions and answer questions. Respondents were recontacted by telephone approximately one year later ( $M=14.2$ ,  $SD=3.00$  months between interviews) and reinterviewed in person, or if not possible, by telephone. Thus, the second survey was administered between January 1985 and October 1986; 151 females and 53 males completed both interviews. Analyses of both sociodemographic and attitudinal characteristics of those who participated in the follow-up survey versus those who left the study revealed no significant differences between the two groups. Over 80 per cent of the respondents were in high school or middle school at the time of the first interview.

Six variables relevant to this report were assessed via seven-point semantic differential scales (see Table 1 for precise wording): a) knowledge that condoms prevent STDs; b) value placed on using a contraceptive that prevents one from getting STDs; c) importance of using a contraceptive that prevents one from getting STDs; d) perceptions of their partner's wishes regarding condom use; e) intentions ever to use condoms; and f) intentions to use condoms most of the time.

## Results

The mean age of the females was 16.7 years ( $SD=1.36$ ) and of males was 16.2 years ( $SD=1.44$ ) at the first interview. All major ethnic groups were represented. The majority (53.0 per cent of the females and 72.2 per cent of the males) had previously had more than one sexual partner. During the year between the surveys, 40.3 per cent of the females and 69.4 per cent of the males reported more than one sex partner.

On both surveys, adolescents who were sexually active in the previous month were asked whether or not they had used condoms during that time; of the females, 27 per cent reported partners who did so prior to the first survey, and 23 per cent prior to the second survey. For males, corresponding figures were 41 per cent and 49 per cent, respectively. Only 2.1 per cent of the females and 8.2 per cent of the males reported using condoms every time they had intercourse during the study year.

Paired t-tests, conducted separately for males and fe-

**TABLE 1—Changes over One Year among Sexually Active Adolescent Females**

Adolescent Females	Year 1	Year 2	95% CI of Difference <sup>a</sup>
Knowledge that condoms prevent STDs <sup>b</sup>	1.71	2.20	(0.10, 0.88)
Value of using method that prevents STDs <sup>c</sup>	2.87	2.76	(-0.26, 0.02)
Importance of using method that prevents STDs <sup>d</sup>	2.81	2.58	(-0.39, -0.07)
Perception that partner wants to use condoms <sup>e</sup>	0.31	0.26	(-0.07, -0.03)
Intention mostly to use condoms <sup>f</sup>	-0.35	-0.03	(-0.17, 0.81)
Intention ever to use condoms <sup>g</sup>	0.34	0.48	(-0.61, 0.33)

<sup>a</sup>Confidence interval for year 2 mean - year 1 mean.  
<sup>b</sup>Using condoms would be ----- to protect me from venereal disease (VD). (very unlikely [-3] to very likely [3])  
<sup>c</sup>Using a method that protects me from venereal disease (VD) would be ----- (very bad [-3] to very good [3])  
<sup>d</sup>In using a method, how important is it that the method protects me from venereal disease (VD): ----- (not at all important [-3] to extremely important [3])  
<sup>e</sup>My partner thinks (she/he) or I ----- use condoms in the next year. (definitely should not [-3] to definitely should [3])  
<sup>f</sup>If I do have intercourse in the next year, I am ----- to use condoms most of the time. (very unlikely [-3] to very likely [3])  
<sup>g</sup>If I do have intercourse in the next year, I am ----- to ever use condoms for birth control. (very unlikely [-3] to very likely [3])

males, were used to examine change in the other variables over the year of the study (see Tables 1 and 2). In general, adolescents believed that condoms are effective at preventing STDs, with females showing an increasingly strong belief in this by the second interview. There was consensus among both males and females that using a contraceptive that prevents STDs is of great value and importance. Importance ratings decreased over the year among females. At both points of time females showed little intention to have their partners use condoms and were uncertain about whether or not their partners wanted to use them; they showed no change in these variables over time. In contrast, males believed that their partners wished them to use condoms and were likely to intend to use them although the strength of this intention decreased during the year.

**Discussion**

These results are disquieting. Sexually active adolescents report placing high value and importance on using a contraceptive that protects against STDs and know that condoms prevent STDs, yet the females continued not to intend to have their partners use condoms and the males' intentions to use condoms decreased. Although the study was conducted in a city with a high prevalence of AIDS, and where media and school coverage of the epidemic was increasing over the time studied, sexually active adolescents continued to have multiple sex partners and did not substantially increase their use of condoms, thus continuing to place themselves and their partners at possible risk for STDs, including HIV infection.

In our sample, males believed that their partners wanted them to use condoms, whereas females were mildly negative regarding their partners using condoms. Likewise, females were uncertain about males' desires regarding condom use

**TABLE 2—Changes over One Year among Sexually Active Adolescent Males**

Adolescent Males	Year 1	Year 2	95% CI of Difference <sup>a</sup>
Knowledge that condoms prevent STDs <sup>b</sup>	2.58	2.45	(-0.55, 0.29)
Value of using method that prevents STDs <sup>c</sup>	2.84	2.81	(-0.19, 0.15)
Importance of using method that prevents STDs <sup>d</sup>	2.80	2.66	(-0.54, 0.26)
Perception that partner wants to use condoms <sup>e</sup>	1.78	1.58	(-1.12, 0.74)
Intention mostly to use condoms <sup>f</sup>	2.02	1.22	(-1.44, -0.18)
Intention ever to use condoms <sup>g</sup>	2.44	1.51	(-1.59, -0.25)

when, in reality, males were quite positive about it. Interventions targeting such misperceptions might result in an increased ability among the females to request that their partners use condoms.

Solely providing information to adolescents that condoms reduce the risk of contracting STDs may be insufficient to cause an increase in condom use. One problem may be that even if adolescents understand in abstract terms that condoms protect against STDs and believe that this is of value, they may not feel personally vulnerable to contracting diseases from their sex partners. Thus, interventions that target perceptions of personal vulnerability may be a way of increasing adolescents' motivation to use condoms.

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