

## Condom Use and HIV Risk Among US Adults

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HIV prevention programs seek to increase the use of condoms among persons at risk for acquiring HIV.<sup>1</sup> In recent years, the importance of condoms for prevention has remained high as the epidemic has shifted to have more impact on women and persons subject to infection through heterosexual contact.<sup>2</sup> Data from surveys indicate increas-

ing condom use among adolescents<sup>3-6</sup> and adults<sup>7-8</sup> since the 1980s.

I present data on condom use from a nationally representative survey of adults living in the United States—the General Social Survey—for 1996, 1998, and 2000, the first national data, available since the mid-1990s, on condom use among adults; the goal is to measure trends in condom use and to estimate the extent to which persons at increased risk for HIV report using condoms to protect their sexual partners and themselves.

### METHODS

The General Social Survey has collected information on a variety of topics of social importance annually or semiannually since 1972 from a national household-based probability sample of US adults aged 18 and older.<sup>9</sup> Questions on sexual behavior and condom use were asked in 1996, 1998, and 2000 as part of a self-administered questionnaire, and drug use questions were added in 2000. The overall response rates

for the main interview of the General Social Surveys have averaged 77%, and since 1996, an estimated 13.7% of the respondents did not complete the self-administered questionnaire. The data presented here are for 5743 sexually active respondents aged 18 and older interviewed in 1996, 1998, and 2000; the more detailed analysis is for 1786 respondents from the 2000 General Social Survey.

The condom use measure is based on a question on condom use at last sexual intercourse (Table 1), similar to questions used on several national surveys.<sup>3,5,10,11</sup> Condom use is assessed separately by relationship to last sexual partner, contrasting regular, ongoing partners with other partners, and is presented for major population subgroups defined by demographic and socioeconomic factors as well as by sex- and drug-related HIV risk. Percentages have been computed for population groups, with *t* tests of differences between categories. Estimates based on survey weighting factors<sup>9</sup> have been adjusted with an assumed design effect of 1.3.

**TABLE 1—Condom Use at Last Sexual Intercourse,<sup>a</sup> by Partner Type and Year, in Adults Aged 18 and Older Who Were Sexually Active in the Past Year: 1996, 1998, 2000 General Social Surveys**

	Percentage	95% CI	n
All sexual partners			
Total	19.5	18.1, 21.0	5743
1996	20.5	18.0, 22.9	2088
1998	18.3	15.9, 20.7	1869
2000	19.7	17.1, 22.3	1786
Ongoing relationship sexual partner			
Total	17.5	16.1, 19.0	5208
1996	18.4	16.0, 20.8	1918
1998	16.5	14.1, 19.0	1685
2000	17.5	14.9, 20.1	1605
Other sexual partners			
Total	42.9	36.4, 49.4	478
1996	47.7	36.1, 59.4	152
1998	37.0	26.6, 47.4	167
2000	44.5	32.9, 56.0	159

Note. CI = confidence interval; n = number of observations. Differences by year not significant, *P* < .05.

<sup>a</sup>Based on the question: "The last time you had sex, was a condom used? By sex, we mean vaginal, oral, or anal sex."

**TABLE 2—Used Condom at Last Sexual Intercourse, by Relationship Type and Selected Characteristics, in Adults Aged 18 and Older Who Were Sexually Active in the Past Year: 2000 General Social Survey**

	Within Ongoing Relationship			Outside Ongoing Relationship		
	Percentage	95% CI	n	Percentage	95% CI	n
Total	17.5	14.9, 20.1	1605	44.5	32.9, 56.0	159
Demographic/Socioeconomic factors						
Marital status						
Unmarried	31.3*	26.2, 36.4	669	55.9*	42.3, 69.5	118
Married	10.0	7.4, 12.6	936	17.6	2.6, 32.7	40
Age, y						
18-24	30.9*	21.3, 40.6	170	58.2	33.4, 83.0	29
25-34	23.3	17.7, 29.0	397	50.8	28.3, 73.4	38
35-59	14.2	11.0, 17.4	852	43.5	26.0, 61.1	76
≥ 60	6.9	1.9, 12.0	183	...		15
Sex						
Male	17.8	14.0, 21.7	734	41.8	28.0, 55.7	98
Female	17.2	13.8, 20.6	871	49.1	29.2, 68.9	61
Race/Ethnicity						
White	15.0*	12.3, 17.7	1288	43.2	31.0, 55.4	127
Black	30.1*	21.7, 38.5	227	54.5	24.2, 84.9	27
Other	23.4	11.6, 35.1	90	...		5
Education						
< High school graduate	21.6	13.3, 30.0	175	30.0	6.9, 53.1	30
High school graduate	15.4	12.2, 18.7	885	47.0	32.1, 61.9	85
> High school graduate	19.0	14.5, 23.6	540	50.6	26.2, 75.1	44
Region						
Northeast	25.1*	18.3, 31.9	302	61.3	34.9, 87.7	29
Midwest	15.4	10.8, 20.0	397	34.8	13.1, 56.4	37
South	15.3	11.2, 19.4	562	39.0	22.0, 56.1	61
West	16.8	11.2, 22.5	344	48.1	23.8, 72.5	32
Residence						
Metropolitan	19.3*	16.2, 22.4	1184	48.9	35.3, 62.4	123
Nonmetropolitan	12.6	8.1, 17.1	421	31.0	10.3, 51.6	36
HIV Risk Factors						
Sexual partners in past y						
1	14.2	11.7, 16.7	1342	29.3	12.3, 46.2	73
≥ 2	37.7*	28.4, 47.1	231	60.7*	45.6, 75.8	84
1-4	16.8	14.3, 19.4	1549	41.7	29.2, 54.1	136
≥ 5	40.4	12.5, 68.3	24	65.7	37.1, 94.4	21
Sexual intercourse with stranger						
Yes	47.1*	28.3, 65.9	57	64.7*	45.6, 83.9	50
No	16.2	13.6, 18.7	1516	36.1	22.2, 50.1	107
Any sex-related risk						
Yes	34.0	15.2, 52.8	49	62.5	37.3, 87.7	30
No	16.7	14.1, 19.2	1524	41.0	28.1, 53.9	127
Injected drugs or used crack in past 3 y						
Yes	39.6	14.4, 64.9	29	...		13
No	16.8	14.2, 19.4	1557	42.5	30.4, 54.6	145

Continued

## RESULTS

Condom use during last sexual intercourse was reported by 19.5% of the adults in the 1996, 1998, and 2000 General Social Surveys (Table 1). No increase in condom use from 1996 to 2000 was found. As noted in other studies,<sup>10-16</sup> condom use was much higher with nonregular sexual partners: 42.9% versus 17.5% for sexual intercourse within ongoing relationships. Among persons whose last sexual intercourse was within a regular relationship, condom use was higher among those who were unmarried, were younger, were Black, had 2 or more sexual partners or not-well-known partners in the past year, or had some degree of HIV risk, whether from sexual or drug use behavior (Table 2). Condom use outside of regular relationships was higher among those with some degree of sex risk.

An estimated 4.6% (95% confidence interval=3.4%, 5.8%) of the 2000 General Social Survey respondents were at increased risk through either sexual or drug-use behavior. As Table 2 indicates, these at-risk persons were more likely to use condoms with their regular partners (35.8% vs 16.2% for those not at increased risk). This implies that most of the persons at risk (i.e., 64.2%) were not using condoms with their ongoing sexual partners and therefore were placing their partners or themselves at risk for acquiring or transmitting HIV.

## DISCUSSION

The 1996, 1998, and 2000 General Social Surveys provide the first national data on condom use for adults since the mid-1990s. The 2000 General Social Survey estimate of 35.1% condom use at last sexual intercourse by unmarried adults (95% confidence interval=30.2%, 40.0%) suggests that Objective 18.4 of *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*<sup>17</sup>—to increase this indicator to 50%—was not achieved.

The General Social Survey's use-at-last-sexual-intercourse approach cannot answer all questions about condom use behavior, but it has some advantages over other techniques: it requires fewer questions, has been found to

TABLE 2—Continued

Any HIV risk						
Drug or sex risk	35.8*	19.1, 52.6	63	63.8	41.5, 86.1	38
Other	16.2	13.6, 18.8	1494	40.6	27.2, 54.0	118

Note. CI = confidence interval; n = number of observations.

Sexual intercourse with stranger = in the past year, sexual intercourse with a casual date or pickup or someone paid for or who paid for sexual intercourse.

Any sex-related risk = in past year, 5 or more partners, male-to-male sexual intercourse, or paid for or was paid for sexual intercourse.

Any HIV risk = sex risk, injected illegal drugs in past 3 years, used crack in past year.

\* $P < .05$ , t test, each category vs all others.

yield similar results to alternative methods,<sup>18</sup> places fewer cognitive demands on respondents,<sup>19</sup> and has been used by several national surveys.<sup>3,5,10,11</sup> Sensitive behaviors are subject to underreporting on surveys, but the use of a self-administered questionnaire has been found to yield higher reporting than interviewer-administered interviews.<sup>20</sup>

The General Social Survey provides national estimates at frequent intervals data that is unavailable elsewhere. The picture regarding condom use among adults in the United States is clear. No trend toward greater condom use is apparent in the 1996 to 2000 period. Persons at increased behavioral risk for HIV are more likely than others to use condoms, but most of them are not using condoms with their regular partners. The General Social Survey estimates that 7 to 12 million adults are at increased risk for acquiring or transmitting HIV through risk behavior.<sup>21</sup> Increasing safe-sex behavior for these individuals is a priority for prevention programs.<sup>1</sup> ■

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### Human Participant Protection

The data were collected with the informed consent of the respondents following procedures approved by the institutional review board of the National Opinion Research Center.

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