



**SEXUAL RISK STATUS AND BEHAVIOR OF NEW JERSEY ADULTS:
RESULTS FROM THE NEW JERSEY BEHAVIORAL RISK FACTOR SURVEY, 1998-1999**

Kenneth J. O'Dowd, Ph.D.

Abstract

This report examines the extent to which New Jersey adults aged 18-64 are at increased risk of acquiring or transmitting AIDS or other sexually transmitted diseases, based on responses to an ongoing telephone survey. Nearly one-fourth of unmarried adults report having multiple sex partners and/or at least one new sex partner during the previous year, and about four percent report having at least one of four specific HIV risk factors. About one-third of sexually active adults who are not involved in a long-term monogamous relationship report never being tested for HIV, and about one-third of adults who had multiple sex partners during the previous year report not using a condom during their most recent act of sexual intercourse. Among those deemed to be at high risk of HIV infection, nearly all report HIV testing, but only about 40% report using a condom during their most recent act of sexual intercourse. Based on these results, most New Jersey adults are not at risk for acquiring or transmitting an STD. However, these data suggest that condoms are underutilized by the sizable minority of sexually active New Jersey adults aged 18-64 who are not involved in an extended monogamous relationship, and that there are a significant number of New Jersey adults who have not been tested for HIV even though they may be at increased risk of acquiring or transmitting a sexually transmitted disease.

Introduction

Sexually transmitted diseases (including sexually-acquired hepatitis B and HIV infection) are a major cause of morbidity and mortality throughout the United States.¹ Intermediate factors resulting in death include cervical cancer and opportunistic infections. Pelvic inflammatory disease, infertility, ectopic pregnancy, congenital malformations, prematurity, and other types of serious conditions can also result from sexually transmitted diseases.

In New Jersey, nearly 20,000 new cases of sexually transmitted disease (excluding HIV/AIDS) are reported annually.² Additionally, nearly 2,000 cases of Acquired Immune Deficiency Syndrome (AIDS) were reported in New Jersey for the most recent 12-month period for which data are available.³ While the absolute number of New Jersey AIDS cases has been sharply declining in recent years, the proportion of cases ascribed to sexual transmission has been rising, and has most recently been estimated to be about 55% among women. Among



James E. McGreevey
Governor

Clifton R. Lacy, MD, Commissioner
New Jersey Department of Health and Senior Services
PO Box 360, Trenton, NJ 08625-0360

men, the absolute number of cases ascribed to homosexual transmission has been on the decline since 1993, but the number of cases ascribed to heterosexual transmission has been relatively stable, and the proportion of cases ascribed to heterosexual transmission has risen to over 15%. The proportion of cases diagnosed among people aged 50 and over has also been rising in recent years, and now exceeds 15%.

Questions on sexual risk behavior among adults aged 18-64 were added to the New Jersey Behavioral Risk Factor Survey (BRFS) in 1998 and 1999. As general measures of risk behavior, respondents were asked "During the past 12 months, with how many people have you had sexual intercourse?" and "How many new sex partners did you have during the past 12 months?". Respondents were also asked about treatment for any sexually transmitted disease (STD) within the previous five years, and the presence of one of four HIV-specific risk conditions: use of intravenous drugs within the preceding year, treatment for an STD within the preceding year, anal sex without a condom within the preceding year, or a positive test for HIV. Condom use was also determined by the question "Was a condom used the last time you had sexual intercourse?". HIV testing was ascertained by asking about blood donations since 1985, in addition to a direct question about testing for HIV. Twenty percent of adults categorized as Hispanic refused to answer questions on sexual behavior, as compared with 11% of adults categorized as Black, non-Hispanic and 8% of adults categorized as White, non-Hispanic.

NOTE: The New Jersey BRFS is part of the national Behavioral Risk Factor Surveillance System (BRFSS), a telephone survey of adults aged 18 years and over. This surveillance system is designed to monitor modifiable risk factors for chronic diseases and other leading causes of morbidity and death. The surveillance system is a cooperative effort between the national Centers for Disease Control and Prevention (CDC) and all states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. It has been in existence since 1984. The New Jersey Department of Health and Senior Services has been participating in the BRFSS since 1991, collecting approximately 125 telephone interviews per month through 1995 and nearly double that number through 1999. General design features and limitations of the BRFSS have been discussed elsewhere.⁴

Results

General Risk Behaviors

During the survey years 1998-1999, at least three-fourths (76%) of New Jersey adults aged 18-64 were sexually active (i.e., had at least one sex partner during the previous year) and at least 7% of adults in this age range reportedly had multiple partners during the previous year, according to the New Jersey BRFS (Table 1). Among unmarried adults, nearly two-thirds (62%) were sexually active, with about one out of six (16%) reportedly having at least two sex partners in the previous year, and about 8% having three or more partners in the previous year. By contrast, only about 1% of married adults reportedly had two or more sex partners during the previous year (Table 1 and Figure 1). Unmarried adults accounted for about 91% (87%-94%*) of all adults aged 18-64 reporting multiple sex partners during the past year.

* Prevalence estimates given as ranges in this report represent approximate 95% confidence intervals for the underlying population-based statistics, taking into account the random error introduced by sampling. These confidence intervals were calculated from variance estimates generated by the statistical software package SUDAAN, used for surveys such as the BRFSS which incorporate complex sampling designs.⁵ Where a 95% confidence interval is not presented, the "margin of error" (computed as the standard error of the estimate multiplied by 1.96) is expected to be less than 3%.

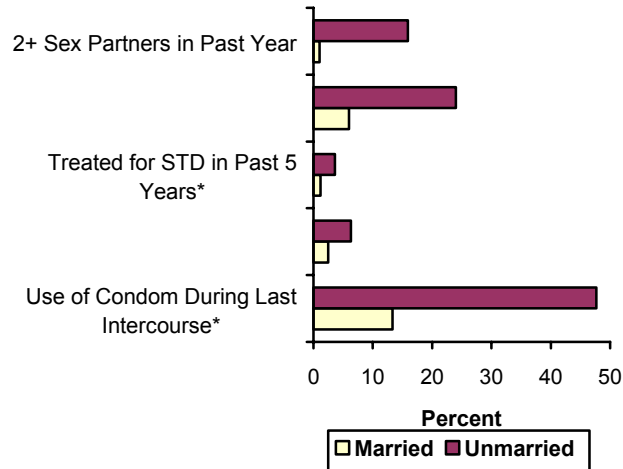
**Table 1. Sexual Risk Conditions Among Adults Aged 18-64 by Sociodemographic Characteristics
New Jersey, 1998-1999**

Characteristic	Sample Size	Sexually active in past year	One or more new sex partners in past year	Multiple sex partners in past year	Treated for STD in Past 5 Years¹	Specific HIV risk conditions^{1,2}
Age						
18-24	400	68.6 (63.0-73.8)	28.5 (23.6-34.0)	21.3 (17.0-26.4)	3.7 (2.0-7.0)	10.7 (7.2-15.6)
25-34	981	81.2 (77.6-84.4)	18.1 (15.4-21.0)	9.1 (7.2-11.4)	2.9 (1.8-4.8)	3.9 (2.8-5.6)
35-44	1,200	83.7 (81.3-86.0)	10.2 (8.5-12.3)	4.1 (3.1-5.5)	2.3 (1.4-3.7)	2.6 (1.7-4.0)
45-54	987	75.4 (72.0-78.4)	7.4 (5.7-9.5)	3.3 (2.2-4.8)	0.7 (0.3-1.7)	2.4 (1.4-4.2)
55-64	648	62.9 (58.6-66.9)	7.1 (5.2-9.7)	2.5 (1.5-4.1)	0.0 -	1.6 (0.5-5.6)
Sex						
Female	2,475	73.2 (71.1-75.2)	9.8 (8.5-11.3)	3.6 (2.9-4.6)	2.1 (1.4-3.0)	2.8 (2.1-3.9)
Male	1,741	79.1 (76.7-81.3)	17.2 (15.3-19.3)	10.8 (9.2-12.7)	2.0 (1.3-3.1)	4.7 (3.5-6.2)
Race/Ethnicity						
Black, non-Hispanic	458	69.6 (64.3-74.3)	13.2 (10.1-17.1)	9.2 (6.5-12.7)	8.9 (5.5-14.0)	9.0 (5.7-14.0)
White, non-Hispanic	3,044	80.1 (78.4-81.7)	13.0 (11.6-14.5)	7.0 (5.9-8.2)	1.1 (0.7-1.6)	2.9 (2.2-3.9)
Hispanic	466	64.4 (58.6-69.8)	17.9 (14.3-22.2)	8.0 (5.7-11.2)	3.4 (1.7-6.4)	5.9 (3.6-9.6)
Other	196	73.2 (65.6-79.7)	10.1 (6.5-15.2)	4.3 (2.0-8.9)	0.6 (0.1-4.1)	1.3 (0.4-4.4)
Marital Status						
Married	2,348	86.0 (84.2-87.5)	6.0 (5.0-7.2)	1.0 (0.6-1.6)	1.2 (0.8-1.9)	2.5 (1.8-3.4)
Unmarried	1,856	62.2 (59.4-65.0)	24.0 (21.7-26.6)	15.9 (13.9-18.2)	3.6 (2.5-5.3)	6.3 (4.8-8.3)
Education						
H.S. or less	1,563	70.4 (67.6-73.1)	14.8 (12.8-17.0)	7.1 (5.7-8.8)	2.1 (1.3-3.3)	5.9 (4.5-7.9)
Some higher education	1,035	80.4 (77.5-83.1)	13.4 (11.1-16.2)	8.7 (6.7-11.1)	2.5 (1.4-4.6)	2.6 (1.6-4.3)
College graduate	1,600	80.2 (77.9-82.4)	12.0 (10.3-14.0)	6.3 (5.1-7.9)	1.5 (0.9-2.4)	2.4 (1.6-3.6)
ALL	4,216	76.1 (74.5-77.7)	13.5 (12.3-14.7)	7.2 (6.3-8.2)	2.0 (1.5-2.7)	3.8 (3.0-4.7)

NOTES:

1. Denominator is limited to adults who are sexually active.
2. Defined as use of intravenous drugs, treatment for sexually transmitted disease, or anal sex without a condom during the preceding year, or a positive test for HIV.

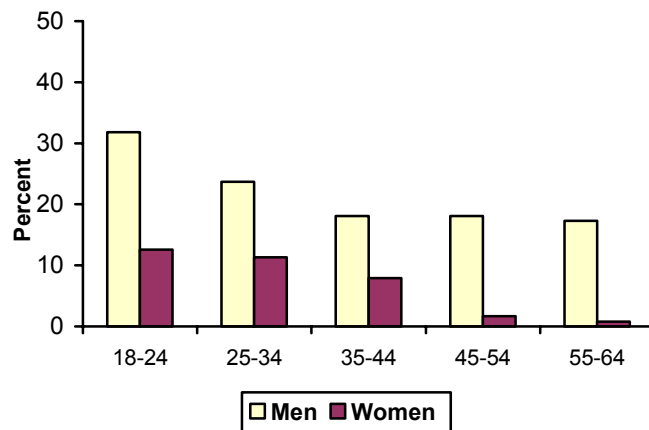
**Figure 1. Prevalence of Sexual Risk Conditions Among Adults Aged 18-64, by Marital Status
New Jersey, 1998-1999**



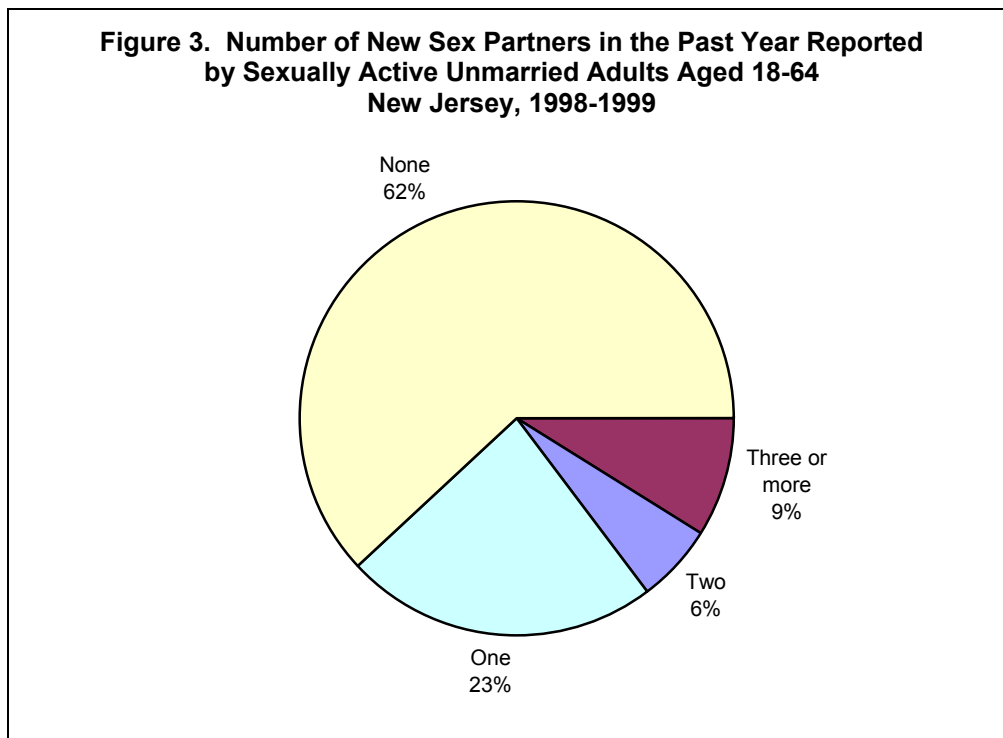
*Denominator is limited to adults aged 18-64 who were sexually active in the past year.

The total number of sex partners in the past year reported by New Jersey adults varied significantly with both age and sex, as well as marital status. Notably, about 32% (24%-41%) of unmarried men aged 18-24 reportedly had multiple sex partners during the previous year, compared with only about 13% (8%-19%) of unmarried women in this same age group (Figure 2). Overall, among unmarried adults aged 18-64, the proportion of men reporting multiple sex partners in the past year was about 24% (21%-28%), compared with only about 8% of women.

**Figure 2. Percentage of Unmarried Adults Reporting Multiple Sex Partners in the Past Year, by Age and Sex
New Jersey, 1998-1999**

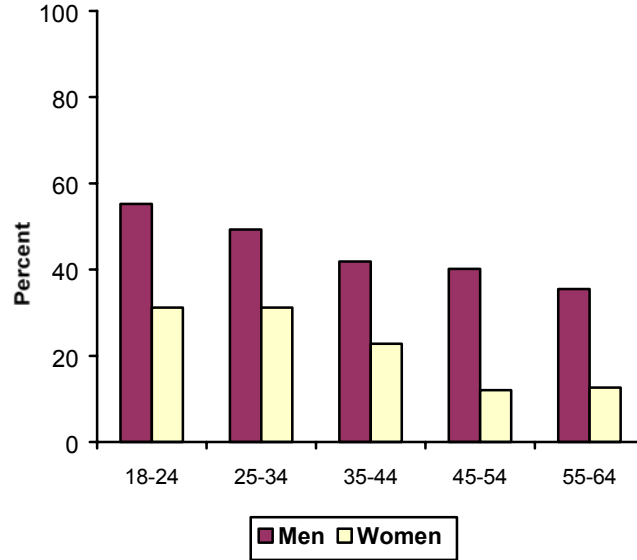


Among all New Jersey adults aged 18-64, the proportion having one or more new sex partners during the previous year was about 14%. Among unmarried adults, the proportion having one or more new sex partners during the previous year was about 24% (Table 1). Among those unmarried adults who were sexually active during the previous year, about 37% (34%-41%) reportedly had one or more new sex partners, with about 15% reportedly having had two or more new partners (Figure 3). In contrast, only about 6% of married adults reportedly initiated sexual relations with a partner some time in the previous twelve months (Table 1 and Figure 1), with virtually none reporting two or more new sex partners during that time period. Unmarried adults accounted for about 74% (69%-78%) of adults having at least one new sex partner during the previous year in this age range (data not shown).



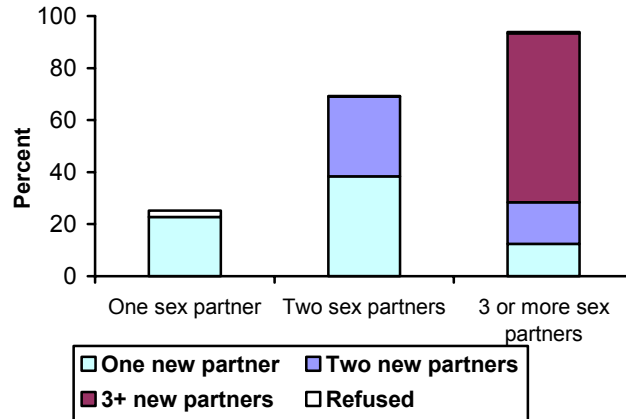
As with total number of sex partners in the past year, the proportion of sexually active adults reporting one or more new sex partners in the past year varied significantly with both age and sex, as well as marital status. Notably, the proportion of sexually active unmarried men aged 18-24 having one or more new sex partners during the previous year was about 55% (43%-67%), compared with only about 31% (22%-42%) of sexually active unmarried women in this same age group (Figure 4). Overall, among sexually active adults aged 18-64, the proportion of unmarried men aged 18-64 reporting one or more new sex partners in the past year was about 48% (42%-53%), compared with only about 26% (22%-31%) of unmarried women.

**Figure 4. Percentage of Sexually Active Unmarried Adults Aged 18-64 Reporting At Least One New Sex Partner in the Past Year, by Age and Sex
New Jersey, 1998-1999**



As would be expected, the number of new sex partners in the past year reported by New Jersey adults was strongly related to the total number of partners. Thus, approximately 69% (59%-78%) of those unmarried adults who had two sex partners during the previous year had at least one new partner during that time period, and approximately 93% (86%-97%) of those unmarried adults having three or more sex partners during the previous year had at least one new partner during that time period (Table 2 and Figure 5).

**Figure 5. Number of New Sex Partners in the Past Year Reported by Sexually Active Unmarried Adults Aged 18-64, by Total Number of Partners
New Jersey, 1998-1999**



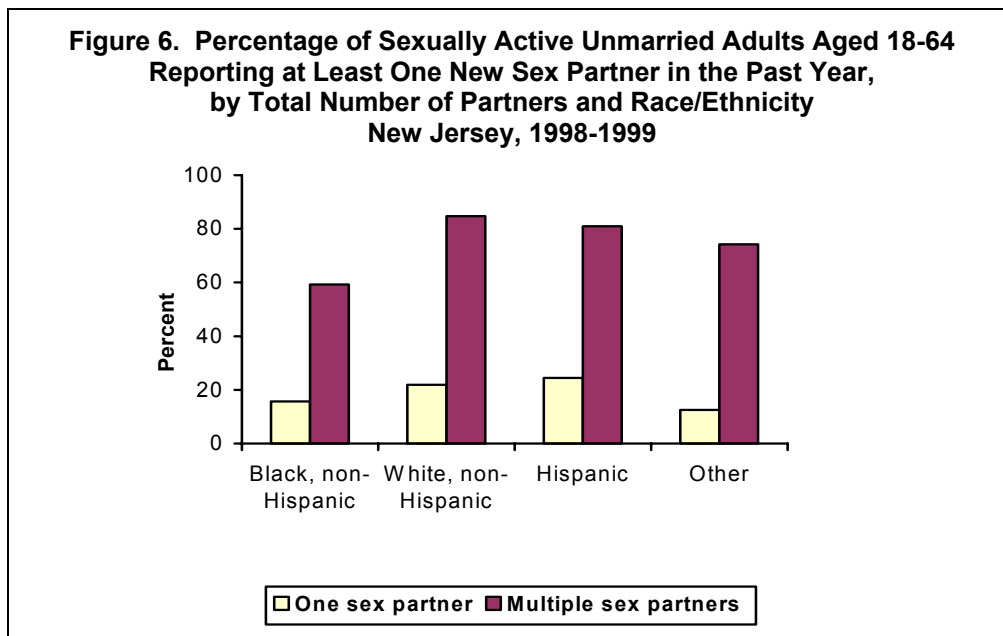
**Table 2. Sexual Risk Conditions Among Sexually Active Unmarried Adults Aged 18-64
New Jersey, 1998-1999**

Characteristic	Sample Size	One or more new sex partners in past year	Multiple sex partners in past year	Treated for STD in past 5 years	Specific HIV risk conditions¹
Number of New Sex Partners in Past Year					
None	683	-	7.7 (5.5-10.6)	2.9 (1.6-5.2)	4.1 (2.5-6.5)
One	268	-	27.7 (22.1-34.1)	2.4 (1.0-5.6)	6.6 (3.9-10.9)
2+	136	-	100.0 (-)	8.6 (4.5-15.7)	15.7 (9.8-24.1)
Refused	13	-	5.4 (1.1-23.4)	3.9 (0.5-24.5)	2.3 (0.3-16.2)
Total Number of Sex Partners in Past Year					
One	826	22.1 (19.0-25.9)	-	2.7 (1.6-4.6)	4.2 (2.8-6.3)
Two	147	68.9 (58.7-77.6)	-	3.4 (1.3-8.4)	6.9 (3.7-12.7)
3+	127	93.0 (86.4-96.5)	-	9.2 (4.8-16.8)	17.3 (10.8-26.5)
Treated for STD in Past 5 Years					
Yes	42	49.2 (30.7-68.0)	45.1 (27.3-64.2)	-	44.3 (26.9-63.2)
No	1042	37.5 (33.9-41.3)	25.2 (22.0-28.6)	-	4.8 (3.4-6.7)
Refused	16	3.1 (0.4-19.7)	9.3 (2.6-28.2)	-	10.6 (1.5-48.0)
Specific HIV Risk Conditions*					
Yes	66	60.3 (45.5-73.4)	50.0 (36.0-64.0)	25.6 (15.4-39.4)	-
No	1010	36.3 (32.7-40.1)	24.3 (21.1-27.8)	2.2 (1.3-3.8)	-
Refused	24	21.4 (8.0-46.2)	13.5 (4.8-32.7)	0.0 (-)	-
All	1100	37.4 (33.9-41.0)	25.6 (22.5-29.0)	3.6 (2.5-5.3)	6.3 (4.8-8.3)

NOTE:

1. Defined as use of intravenous drugs, treatment for sexually transmitted disease, or anal sex without a condom during the preceding year, or a positive test for HIV.

The proportion of sexually active unmarried adults reportedly having at least one new sex partner during the previous year also varied significantly with race/ethnicity, regardless of the total number of partners. Notably, among unmarried adults reporting multiple sex partners in the past year, only about 59% (44%-73%) of those identified as Black, non-Hispanic reportedly had at least one new sex partner during the previous year, compared with about 85% (79%-89%) of those identified as White, non-Hispanic, and 81% (66%-90%) of those identified as Hispanic (Figure 6). Overall, the percentage of sexually active unmarried adults having one or more new partners during the previous year was only about 25% (20%-32%) among adults identified as Black, non-Hispanic, compared with about 39% (35%-42%) of adults identified as White, non-Hispanic, and 40% (32%-49%) of adults identified as Hispanic.

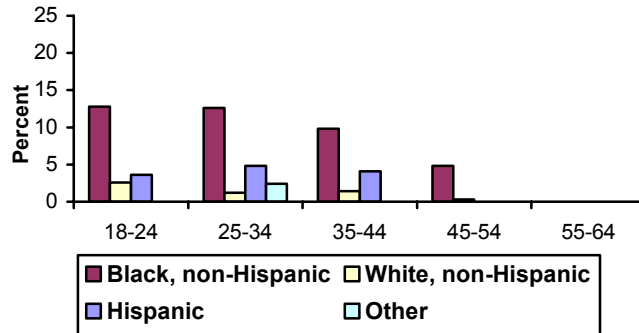


STD Treatment History and Specific HIV Risk Conditions

During the survey years 1998-1999, the proportion of sexually active New Jersey adults aged 18-64 who reportedly had been treated for a sexually-transmitted disease (STD) some time in the previous five years was about 2%, according to the New Jersey BRFSS (Table 1). Among sexually active unmarried adults in this age range, about 4% reported a positive treatment history, compared with only about 1% of married adults (Table 1 and Figure 1). Unmarried adults accounted for about 56% (43%-69%) of adults treated for an STD some time in the previous five years.

STD treatment history did not vary significantly by sex, with about 2% of sexually active men and 2% of sexually active women both reporting treatment some time in the past five years (Table 1). Reported STD treatment did vary significantly with age and race/ethnicity, however (Figure 7). Notably, among sexually active adults aged 18-34, about 13% (6%-24%) of those identified as Black, non-Hispanic aged 18-24, reported previous STD treatment, compared with only about 2% (1%-3%) of those identified as White, non-Hispanic and 4% (2%-9%) of those identified as Hispanic. Overall, among sexually active adults aged 18-64, about 9% (6%-14%) of those identified as Black, non-Hispanic reportedly were treated for an STD some time in the previous five years, compared to only about 1% (1%-2%) of those identified as White, non-Hispanic and 3% (2%-6%) of those identified as Hispanic (Table 1).

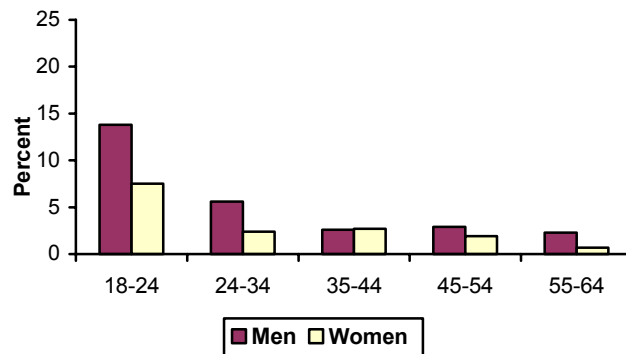
Figure 7. Percentage of Sexually Active Adults Aged 18-64 Reporting Treatment for a Sexually Transmitted Disease within the Past Five Years, by Age and Race/Ethnicity New Jersey, 1998-1999



About 4% of sexually active adults aged 18-64 reportedly had one or more of the four specific HIV risk conditions, according to the New Jersey BRFSS (Table 1). Among the sexually active adults in this age range who were unmarried, about 6% reportedly had one or more of the specific HIV risk conditions, compared with only about 3% of married adults (Figure 1 and Table 1). Unmarried adults accounted for about 55% (44%-65%) of those having one or more of the specific HIV risk factors.

The prevalence of HIV risk conditions varied significantly with both age and sex. Notably, about 14% (8%-22%) of sexually active men aged 18-24 reportedly had at least one of the specific HIV risk conditions, compared with about 7% (4%-13%) of sexually active women in this same age group (Figure 8). Overall, the proportion of sexually active men aged 18-64 reporting at least one HIV risk condition was about 5% (4%-6%), compared with about 3% (2%-4%) of sexually active women in this age range (Table 1).

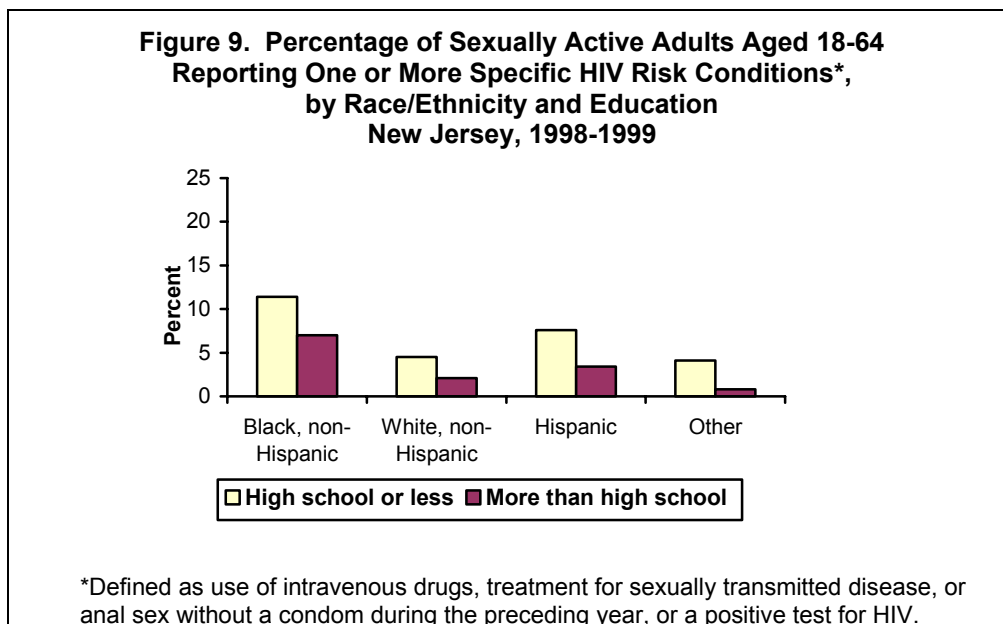
Figure 8. Percentage of Sexually Active Unmarried Adults Aged 18-64 Reporting One or More Specific HIV Risk Conditions*, by Age and Sex New Jersey, 1998-1999



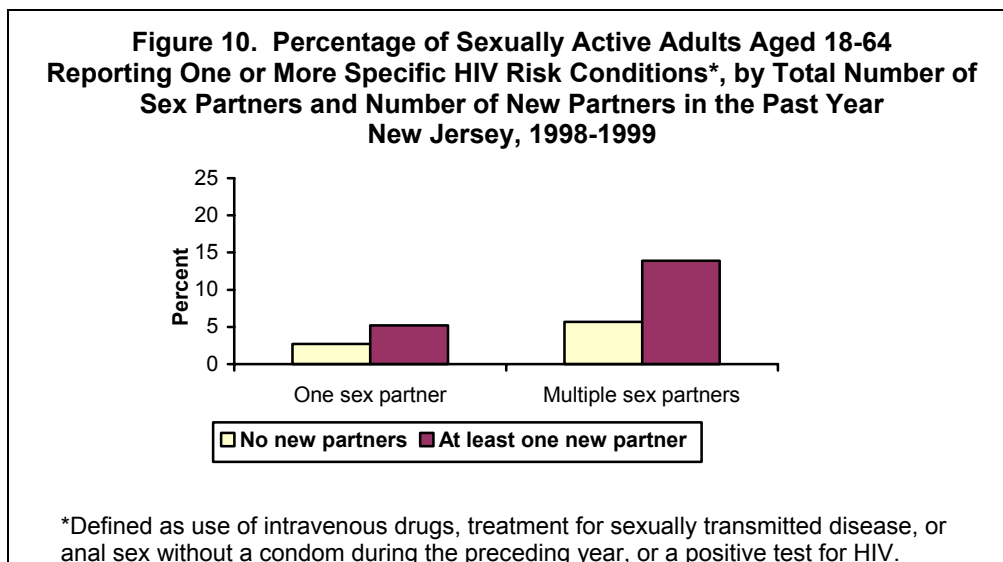
*Defined as use of intravenous drugs, treatment for sexually transmitted disease, or anal sex without a condom during the preceding year, or a positive test for HIV.

The prevalence of HIV risk conditions also varied significantly with race/ethnicity and education level (Figure 9). Persons identified as Black, non-Hispanic with a high school education or less had the highest levels, with an estimated prevalence of 11% (6%-20%). Overall, among sexually active adults

aged 18-64, about 9% (6%-14%) of those identified as Black, non-Hispanic reportedly had at least one HIV risk condition, compared with only about 3% (2%-4%) of those identified as White, non-Hispanic and about 6% (4%-10%) of those identified as Hispanic. With respect to education level, the prevalence of HIV risk conditions was about 6% overall among those with a high school education or less, compared with about 3% among those with some post-secondary education and 2% among college graduates (Table 1).



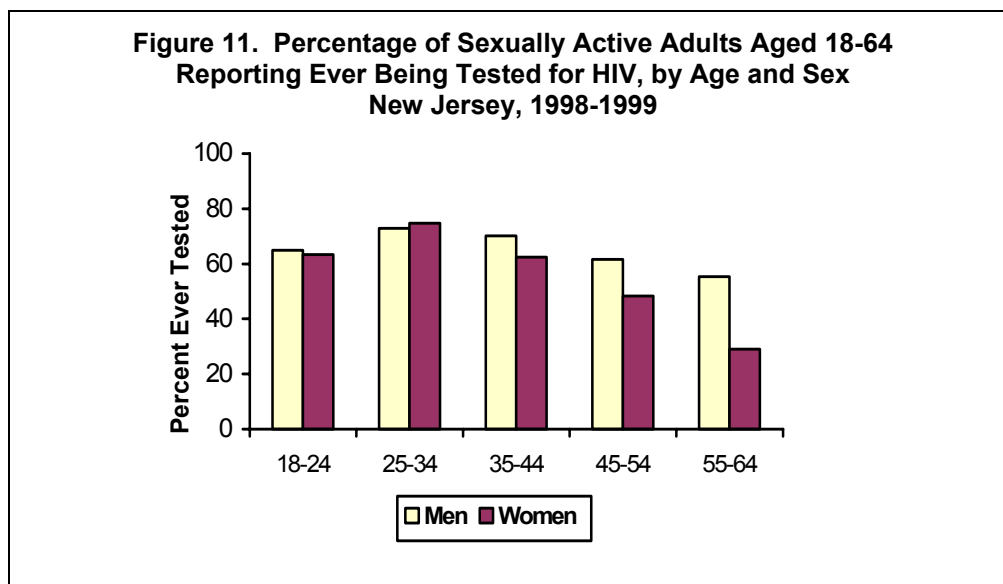
The prevalence of HIV risk conditions was significantly related to the more general risk behaviors. Notably, among those adults who had multiple sex partners with at least one new partner during the previous year, about 14% (9%-20%) reported one or more HIV risk conditions (Figure 10). Conversely, among those reporting one or more HIV risk conditions, about half (36%-64%) had multiple sex partners in the previous year and about 60% (46%-73%) had at least one new partner in the previous year (Table 2).



HIV Testing

During the survey years 1998-1999, the proportion of sexually active New Jersey adults aged 18-64 who reportedly had ever been tested for HIV was about 63% (61%-65%). Among sexually active unmarried adults in this age range, about 67% (64%-71%) reported ever being tested for HIV (Table 3), compared with about 61% (58%-63%) of married adults.

Reported HIV testing also varied significantly with age and sex, regardless of marital status (Figure 11). The highest levels of testing were found among men and women aged 25-34, with estimated prevalence levels of about 73% (67%-78%) and 63% (53%-72%), respectively. Overall, among sexually active adults aged 18-64, the proportion of men reporting HIV testing at any time in the past was about 66% (63%-69%), compared with about 59% (56%-62%) of women.



Reported HIV testing also varied significantly with race/ethnicity and education, regardless of marital status, sex, or age (Figure 12). Thus, among sexually active adults with a high school education or less, about 70% (61%-78%) of those identified as Black, non-Hispanic aged 18-24, reported ever being tested, compared with only about 55% (51%-59%) of those identified as White, non-Hispanic and 55% (46%-64%) of those identified as Hispanic. Overall, among sexually active adults aged 18-64, about 71% (65%-77%) of those identified as Black, non-Hispanic reportedly had ever been tested for HIV, compared with about 62% (60%-64%) of those identified as White, non-Hispanic and 64% (58%-71%) of those identified as Hispanic.

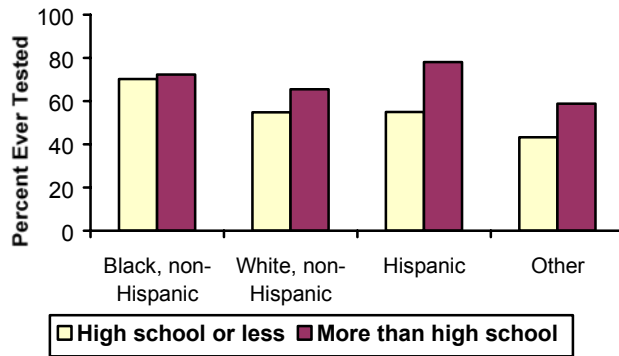
Table 3. HIV Testing and Condom Usage Among Sexually Active Unmarried Adults Aged 18-64, by Sexual Risk Status New Jersey, 1998-1999

Characteristic	Sample Size	Ever Tested for HIV or Donated Blood Since 1985	Tested for HIV or Donated Blood in Past 12 Months	Condom Used During Last Intercourse
Number of New Sex Partners in Past Year				
None	683	67.3 (62.6-71.6)	32.5 (27.9-37.5)	40.5 (35.9-45.3)
One	268	67.5 (60.3-73.9)	31.1 (24.9-38.0)	52.9 (45.8-59.8)
2+	136	72.5 (62.1-80.8)	29.8 (21.7-39.4)	70.3 (60.6-78.5)
Refused	13	27.4 (7.5-63.6)	6.2 (1.3-24.7)	41.7 (14.7-74.7)
Total Number of Sex Partners in Past Year				
One	826	65.7 (61.4-69.7)	31.1 (27.0-35.4)	41.5 (37.2-45.8)
Two	147	70.8 (60.4-79.4)	31.1 (22.7-41.1)	65.4 (55.4-74.2)
3+	127	73.3 (63.3-81.4)	32.9 (24.0-43.3)	66.1 (55.8-75.2)
Treated for STD in Past 5 Years				
Yes	42	90.6 (76.3-96.7)	49.4 (31.1-67.9)	36.7 (21.0-55.9)
No	1042	67.0 (63.2-70.5)	30.9 (27.3-34.7)	48.2 (44.4-52.1)
Refused	16	33.6 (13.6-61.9)	14.6 (3.2-46.9)	40.1 (17.6-67.8)
Specific HIV Risk Conditions¹				
Yes	66	81.7 (68.5-90.1)	61.3 (47.2-73.7)	36.6 (23.7-51.7)
No	1010	67.0 (63.1-70.6)	29.7 (26.1-33.5)	49.0 (45.1-52.9)
Refused	24	45.8 (24.2-69.1)	17.0 (5.3-43.0)	29.4 (13.6-52.4)
All	1100	67.3 (63.7-70.8)	31.3 (27.9-35.0)	47.7 (44.0-51.4)

NOTE:

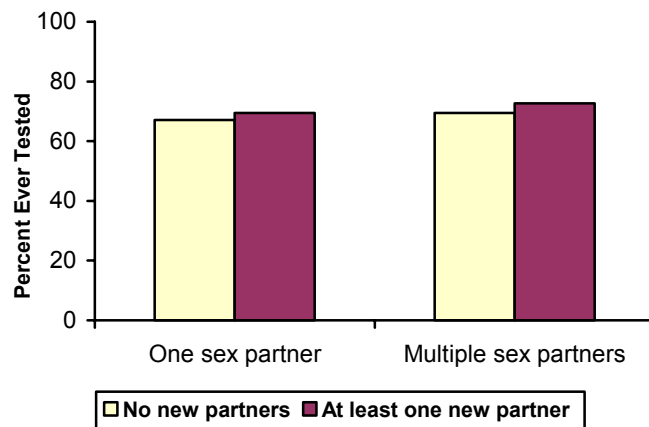
1. Defined as use of intravenous drugs, treatment for sexually transmitted disease, or anal sex without a condom during the preceding year, or a positive test for HIV.

Figure 12. HIV Testing Among Sexually Active Adults Aged 18-64, by Race/Ethnicity and Education, New Jersey, 1998-1999

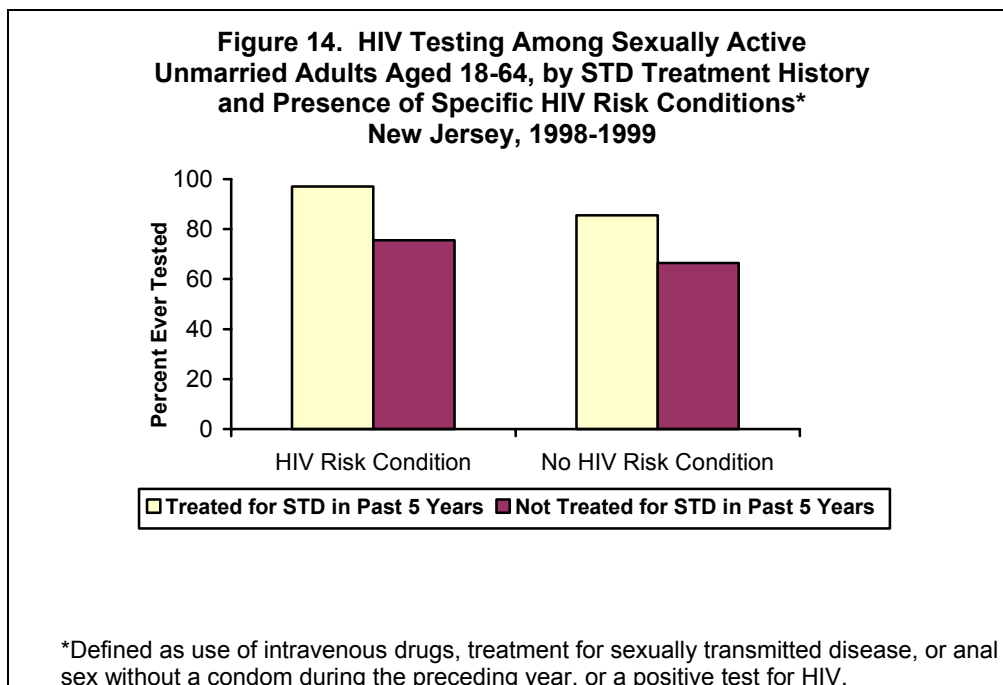


Reported HIV testing was not associated with the presence or absence of general risk behaviors. Among sexually active unmarried adults, the prevalence of HIV testing was about 67%, regardless of the total number of sex partners or number of new partners during the previous year (Table 3 and Figure 13). Conversely, among those reporting that they had never been tested for HIV, about 27% (24%-32%) had multiple sex partners in the previous year and about 39% (34%-43%) had at least one new partner in the previous year.

Figure 13. HIV Testing Among Sexually Active Unmarried Adults Aged 18-64, by Total Number of Sex Partners and Number of New Partners in the Past Year New Jersey, 1998-1999

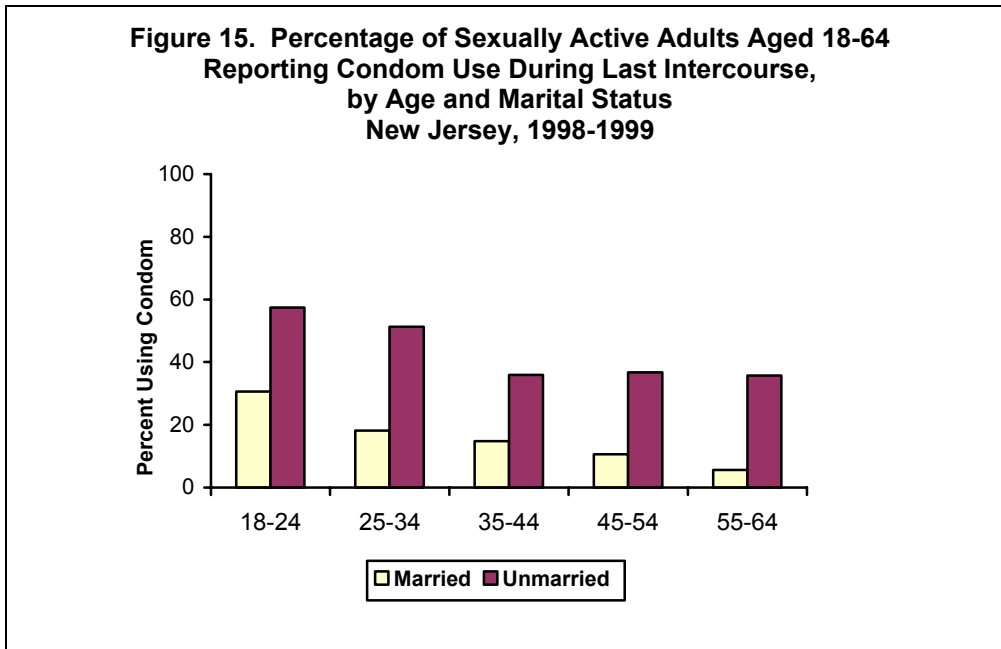


Reported HIV testing did vary with STD/HIV risk status. Among those sexually active unmarried adults who had been treated for an STD some time in the previous five years and also had one of the four specific HIV risk conditions, the prevalence of HIV testing was about 97% (81%-100%) (Figure 14). By comparison, among those who had not been treated for an STD in the previous five years and had none of the other specific HIV risk factors, the prevalence of HIV testing was only about 67% (63%-70%).

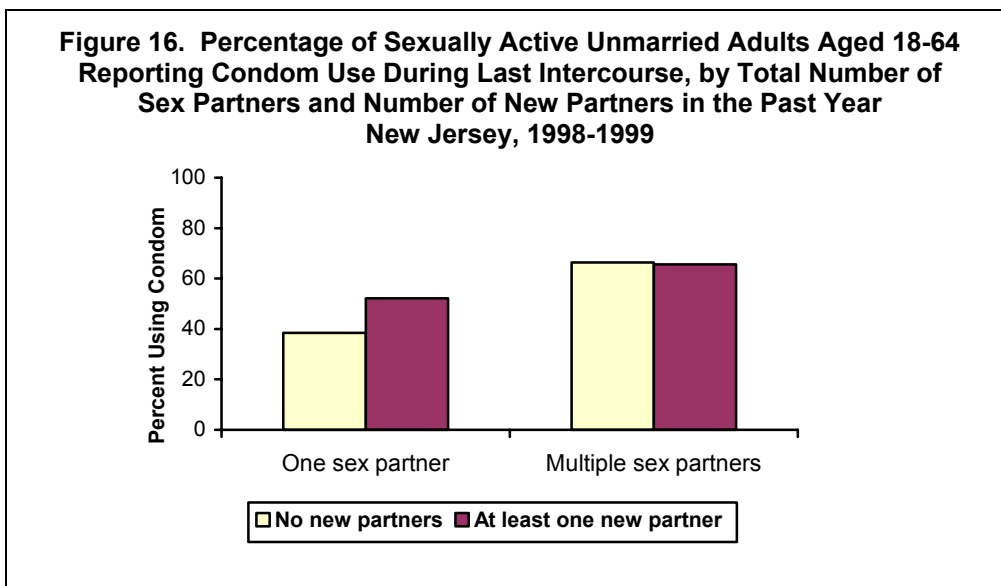


Condom usage

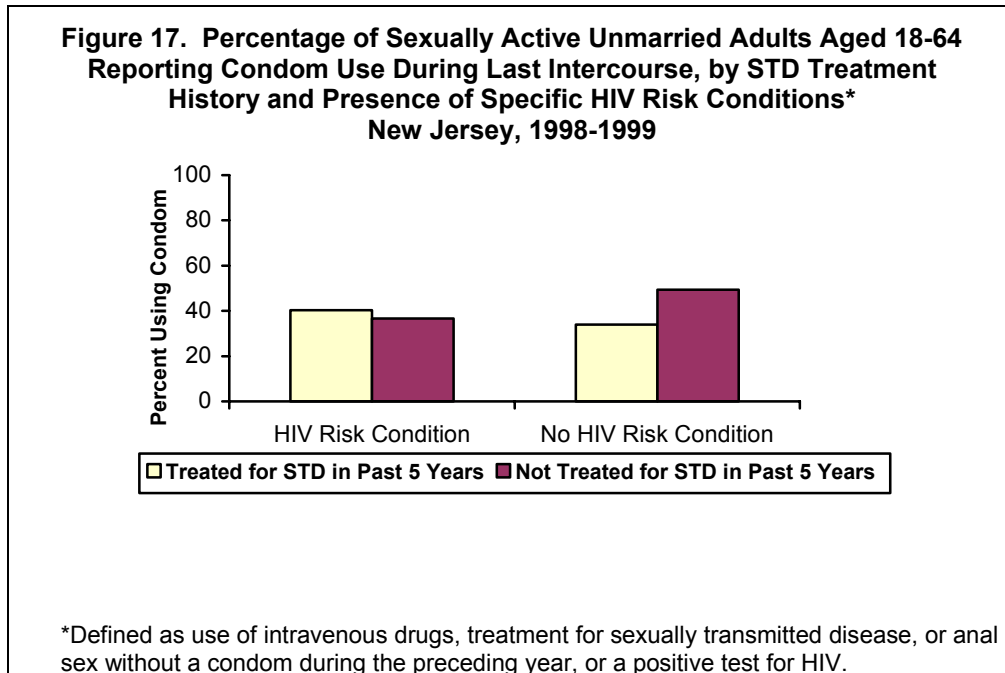
About 48% (44%-51%) of sexually active unmarried adults aged 18-64 in New Jersey reportedly used a condom the last time they had sexual intercourse, compared with only about 13% of married adults (Figure 1). The use of condoms decreases significantly with age, however, among both married and unmarried adults. Thus, among sexually active unmarried adults, the proportion of those aged 18-24 reporting the use of a condom was about 57% (49%-65%), compared with about 36% (25%-48%) of those aged 55-64 (Figure 15). Similarly, among married adults, the proportion of those aged 18-24 reporting the use of a condom at last intercourse was about 31% (17%-50%), compared with only about 6% (3%-9%) among those aged 55-64.



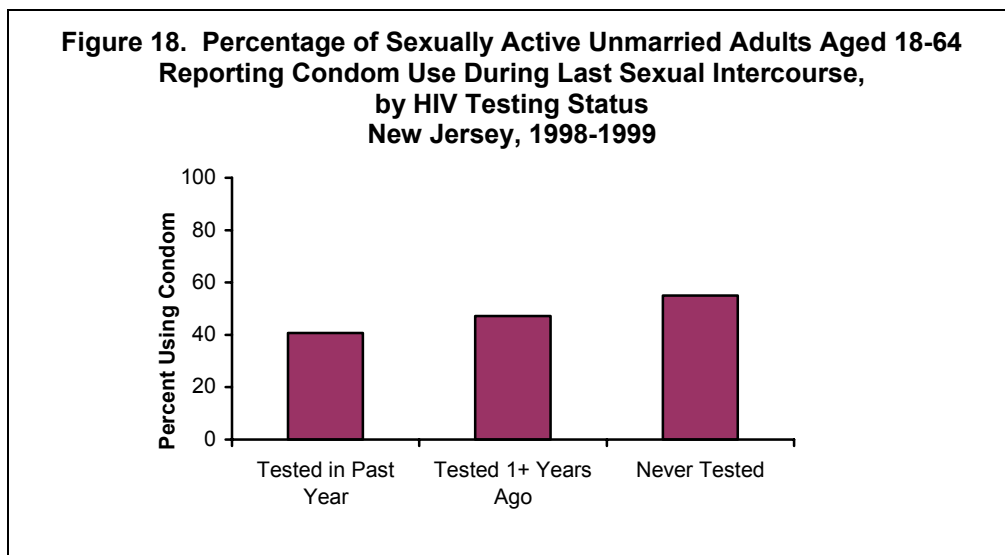
Reported condom usage among New Jersey adults was elevated in the presence of general risk behaviors. Among those sexually active unmarried adults reporting multiple sex partners within the past year, the estimated proportion using a condom at last intercourse was about 66% (59%-72%), regardless of the number of new partners (Figure 16). However, among those reporting only one sex partner, the estimated proportions using a condom at last intercourse were 52% (44%-61%) and 38% (34%-43%), respectively, depending on whether that partner was new within the previous year or not. Overall, about 41% (36%-45%) of those having no new sex partners, 53% (46%-60%) of those having one new sex partner, and 70% (61%-79%) of those having multiple new sex partners during the previous year reportedly used a condom the last time they had sexual intercourse (Table 3). Condom usage did not vary significantly with sex, education, or race/ethnicity, independent of age, total number of sex partners, and number of new sex partners during the previous year.



Reported condom usage was not significantly elevated among those adults with specific STD/HIV risk conditions. Among those sexually active unmarried adults who had been treated for an STD some time in the previous five years and had one of the four specific HIV risk conditions, the prevalence of condom usage at last intercourse was about 40% (18%-67%) (Figure 17). By comparison, among those who had not been treated for an STD in the previous five years and had none of the other specific HIV risk factors, the prevalence of condom use was about 49% (45%-53%).



The use of condoms among unmarried adults was to some extent inversely associated with the recency of HIV testing (Figure 18). Thus, among those unmarried adults who had been tested within the past year, condom usage was only about 41% (34%-48%), while among those who had never been tested, condom usage was about 55% (48%-62%). Conversely, among those unmarried adults who were sexually active in the past year and did not use a condom the last time they had sexual intercourse, about 26% (22%-31%) had never been tested for HIV.



Discussion

Definitive interpretation of these results is significantly hindered by the high rate of non-response, particularly among those respondents identified as Hispanic, and by the concern that self-report of data such as these which are of a sensitive nature might be highly inaccurate. With respect to the latter, however, at least some studies suggest that respondents report the number of sexual partners they have been involved with and condom use with a reasonable amount of accuracy.^{6,7}

The level of sexual activity and partner exchange among adults in New Jersey was previously reported to be similar to the median for all states which implemented the optional BRFSS sexual behavior module in 1997.⁸ Based on these results, most New Jersey adults are not at risk for acquiring or transmitting an STD. Among married adults aged 18-64, about 95% report not having a new sex partner for at least a year, and virtually none report having multiple partners within the same time period. However, among unmarried adults in the same age range, nearly one-fourth report having multiple sex partners and/or at least one new sex partner during the previous year. On the other hand, only about 2% of sexually active adults report a positive history of treatment for an STD within the past five years, and only about 4% report having at least one of four specific HIV risk conditions (including STD treatment within the past year).

In terms of the number of new sex partners in the past year, the total number of partners, and the presence of specific HIV risk factors, young men are generally at increased risk of acquiring or transmitting an STD by comparison with other New Jersey adults. In terms of STD history and the presence of specific HIV risk factors, New Jersey adults identified as Black, non-Hispanic are also generally at increased risk. However, adults identified as Black, non-Hispanic do not appear to be at increased risk in terms of having a higher-than-average number of new sex partners in a given year. Among other sociodemographic characteristics, lower education levels are associated with an increased risk for having one or more of the four specific HIV risk conditions in New Jersey.

It is worth noting that alcohol consumption has also been linked to sexual risk behavior.⁹ A strong relationship was found between number of sex partners and “binge” drinking for both men and women in this data set, but not between number of sex partners and chronic drinking (data not shown).

HIV testing among New Jersey adults aged 18-64 increased about 15% over levels reported for 1996.¹⁰ A significant number of people at increased risk appear to remain untested, however. About 10% of adults treated for an STD some time in the previous five years and about 20% of persons having one or more of the four specific HIV risk conditions report never having been tested (Table 3). Among unmarried adults with more general sexual risk factors (i.e., multiple sex partners and/or one or more new sex partners during the previous year), about one-third report never having been tested. It was previously shown that HIV testing among New Jersey adults tends to be more common among those who perceive themselves to be at greater risk of infection,¹⁰ and misperceptions about risk may be one of the reasons HIV testing levels are not higher in these high risk groups.

Only about half of sexually active unmarried New Jersey adults aged 18-64 reportedly used a condom during their most recent act of sexual intercourse. However, adults with more general behavioral risk factors were more consistent in their use of condoms than those without these risk factors (Table 3). The use of condoms by adults with multiple partners and the use of condoms by adults with one of the four specific HIV risk factors were both previously reported to be above the median in New Jersey among all states which implemented the BRFSS sexual behavior module in 1997.⁸ Nevertheless, a significant percentage of adults at increased risk

(i.e., about one-third of those adults having multiple sex partners during the previous year and about two-thirds of adults with one of the four specific HIV risk factors) apparently were not using condoms consistently, if at all. It was previously reported that only about 34-41% of New Jersey adults aged 18-64 believed that condoms were “very effective” in preventing the transmission of HIV.¹⁰ The current survey results indicate that only about 48% (45%-52%) of sexually active unmarried adults believe condoms are “very effective” in preventing the transmission of HIV. Moreover, among the small minority of sexually active unmarried adults who believe that condoms are “not at all” effective against transmission of HIV, condom use is significantly reduced, regardless of the number of partners (data not shown).

Conclusion

Based on these results, it appears that most New Jersey adults are not at risk for acquiring or transmitting an STD. However, these data suggest that condoms are underutilized by the sizable minority of sexually active New Jersey adults aged 18-64 who are not involved in an extended monogamous relationship, and that there are a significant number of New Jersey adults who have not been tested for HIV even though they may be at increased risk of acquiring or transmitting HIV.

References

1. McGinnis JM, Foege WH. Actual causes of death in the United States. JAMA 1993;270:2207-2212.
2. Communicable Disease Service, Division of Epidemiology, Environmental and Occupational Health. Sexually transmitted diseases statistics and tuberculosis morbidity. Trenton, NJ: New Jersey Department of Health and Senior Services. Available on the Internet at: <http://www.state.nj.us/health/cd/stdstats/>. Accessed on June 12, 2002.
3. Division of AIDS Prevention and Control. New Jersey HIV/AIDS cases reported as of September 30, 2001. Trenton, NJ: New Jersey Department of Health and Senior Services. 2001. Available at <http://www.state.nj.us/health/aids/qtr0901.pdf>.
4. Nelson DE, Holtzman D, Waller M, Leutzinger CL, Condon K. Objectives and design of the Behavioral Risk Factor Surveillance System. In: Proceedings of the Section on Survey Research Methods of the American Statistical Association National Meeting. Alexandria, VA: American Statistical Association, 1998, pp. 214-218.
5. Shah BV, Barnwell BG, Bieler GS. SUDAAN user's manual: Software for analysis of correlated data, Release 7.5. Research Triangle Park, NC: Research Triangle Institute. 1997.
6. Dare OO, Cleland JG. Reliability and validity of survey data on sexual behaviour. Health Transition Rev 1994;4(suppl):93-110.
7. Weinhardt LS, Forsyth AD, Carey MP, Jaworski BC, Durant LE. Reliability and validity of self-report measures of HIV-related sexual behavior: progress since 1990 and recommendations for research and practice. Arch Sex Behav 1998;27:155-180.
8. Centers for Disease Control and Prevention. Prevalence of risk behaviors for HIV infection among adults – United States, 1997. MMWR 2001;50:262-265.
9. Anderson JE and Dahlberg LL. High risk sexual behavior in the general population: results from a national survey 1988-1990. Sexually Transmitted Diseases 1992;19:320-325.
10. O'Dowd KJ. AIDS/HIV awareness among New Jersey adults: 1991-1996. Trenton, NJ: Center for Health Statistics, New Jersey Department of Health and Senior Services. 1997. Available at <http://www.state.nj.us/health/chs/brfss2-2.htm>.

The author wishes to acknowledge the helpful comments of Dawne DiOrio Rekas, M.P.A., New Jersey Sexually Transmitted Diseases Program.

For further information regarding the New Jersey Behavioral Risk Factor Survey, please access <http://www.state.nj.us/health/chs/brfss.htm> on the Internet or contact:

New Jersey BRFSS Coordinator
Center for Health Statistics
New Jersey Department of Health and Senior Services
P.O. Box 360
Trenton, NJ 08625-0360
Telephone: (609) 984-6702