

Peer Advocate Services Increase the Odds That Women With HIV Will Use Condoms with Main Partners

Among HIV-positive women participating in an HIV prevention program, the odds of improving consistency of condom use with a main partner are more than twice as high for those who have access to peer advocates as for those who do not.¹ Women's odds of being confident in their ability to use a condom every time they have sex with their main partner are doubled if they have access to peer advocates. However, the same intervention has little effect on condom use among women at risk of HIV infection. These findings are based on an evaluation involving 1,611 women in Baltimore and Philadelphia.

Between March 1993 and September 1995, researchers recruited 322 HIV-positive, non-pregnant women aged 18–44 in Baltimore and 1,289 nonpregnant at-risk women aged 15–44 in Philadelphia to participate in an HIV prevention program. In Baltimore, women were recruited from a hospital-based outpatient HIV or pediatric HIV clinic, from a community-based primary HIV care facility or through informal referrals from outreach workers. Women's HIV status was confirmed through medical records, if available, or through an HIV test. In Philadelphia, women were recruited from drug treatment facilities, homeless shelters and public housing developments. These facilities were chosen because their clients tend to be at risk of HIV infection (for example, because they or their partners are injection-drug users, or they exchange sex for money or drugs).

The six-month interventions were the same in both cities: Women participated in either an HIV prevention program that provided access to comprehensive reproductive health care services (standard services) or a program that provided the same services accompanied by access to peer advocates (enhanced services). Peer advocates focused on three behaviors: condom use with main male partners, condom use with other male partners and contraceptive use.

Tailoring services to each client's needs, peer advocates provided an intervention designed to help women move along a continuum of behavior change, from "precontemplation" (sig-

nifying that the woman was not yet considering a new behavior) to "maintenance" (meaning that she had mastered and sustained a new behavior). Women could meet one-on-one with advocates as many times as they wanted and could attend weekly group sessions.

Women in Baltimore were randomly assigned to an intervention group; 158 women received standard services and 164 received enhanced services. In Philadelphia, assignment to a group was based on recruitment site, because it was not possible to randomly assign women within facilities; 566 women received standard services, and 723 women received enhanced services.

Women completed a baseline interview and follow-up interviews at six, 12 and 18 months. Interviewers asked about women's demographic and risk characteristics; condom and other contraceptive use with main and other partners; confidence in their ability to use a method (or self-efficacy); and perceptions of advantages and disadvantages of use.

On the basis of their responses to the questions about condom and other contraceptive use, women were categorized into one stage along the continuum of behavior change. If women moved forward or backward along the continuum from one interview to the next, they were considered to have either progressed or relapsed in a particular behavior. The researchers conducted regression analyses to compare the probabilities of changes in behavior, self-efficacy and perceived advantages in the two treatment groups. The analyses were of 124 HIV-positive women and 843 at-risk women.

The HIV-positive women were similar to those at risk in mean age (32 and 30 years, respectively) and mean length of their relationship with a main partner (five years). Similar proportions in both groups had less than a high school education (49% and 56%), had ever had a sexually transmitted disease (67% and 61%) and had ever exchanged sex for money or drugs (35% and 41%). Larger proportions of women who were HIV-positive than of at-risk women had ever injected drugs

(56% vs. 18%), had a main partner who was HIV-positive (43% vs. 2%) and had only one sexual partner (88% vs. 65%). Larger proportions of infected women than of at-risk women were considered to be in the maintenance category of contraceptive use (59% vs. 28%) and of condom use with a main partner (48% vs. 9%) and other partners (33% vs. 20%). By contrast, larger proportions of at-risk women were in the precontemplation or contemplation stages for condom use with main partner (68% vs. 26%) and contraceptive use (41% vs. 29%).

Across all interview periods, among HIV-positive women receiving enhanced services, the odds of progressing in condom use with a main partner were more than twice those of women receiving standard services (odds ratio, 2.3), and the odds of relapsing were less than half those of women receiving standard services (0.4). In addition, for women receiving enhanced services, the odds of reporting confidence in their ability to use condoms with a main partner and of perceiving advantages to such use were twice those of women receiving standard services (2.0 and 1.9, respectively).

However, there were fewer significant differences between the two groups at specific follow-up periods. Only at the six-month interview did women receiving enhanced services have elevated odds of progressing in condom use with a main partner (odds ratio, 2.8) and reduced odds of relapsing (0.3); only at the 12-month interview did they have elevated odds for self-efficacy (7.4). The researchers did not conduct an analysis of women's behavior with other partners because only 19 infected women reported such partners at any of the interviews.

Regarding contraceptive use, overall, women receiving enhanced services were significantly less likely than those receiving standard services to have relapsed (odds ratio, 0.4). There were no significant differences in contraceptive use or perceptions of use between the two groups at six months. At the 12-month follow-up, women receiving enhanced services had elevated odds of perceiving disadvantages of using contraceptives (4.1). At 18 months, they

were significantly more likely to have progressed and significantly less likely to have relapsed (4.1 and 0.2, respectively). In addition, they had significantly elevated odds of perceiving advantages of contraceptive use (3.7). The investigators were not able to analyze self-efficacy for contraceptive use because the sample size for this variable was too small.

Among women at risk of HIV infection, receiving enhanced services was associated with small positive effects on behavior and perceptions, and in some cases was associated with the opposite of the desired effects. The only significant overall differences between intervention groups were that women receiving enhanced services had slightly elevated odds of perceiving advantages to using condoms with a main partner (odds ratio, 1.4) and had reduced odds for self-efficacy (0.8).

At the six-month follow-up, women who had received enhanced services were less likely than those getting standard care to report relapsing in their condom use with a main partner (odds ratio, 0.7), and were more likely to report feeling confident in their ability to use a condom every time they had sex with their main partner (1.5). In addition, at the 12-month follow-up they had reduced odds of perceiving disadvantages of contraceptive use. However, at 12 months, women receiving enhanced services were significantly less likely to report self-efficacy in using condoms with a main partner (0.4) or other partner (0.5), or in using contraceptives (0.5). There were no significant differences between the two groups at the 18-month follow-up.

The researchers speculate that there could be several reasons the intervention had different effects for HIV-positive women and women at risk of infection. For example, almost half of the HIV-positive women were in the maintenance stage at the beginning of the study, while more than half of at-risk women were in the precontemplation stage. The enhanced intervention targets these stages with very different counseling activities. For women in the early stages of behavior change, the counseling is very informational and the content is similar to that of standard services. Thus, because there was less of a difference in the intervention and control services most of the at-risk women received compared with what HIV-positive women received, there was less of an effect. Another possibility for the different findings is that women who are HIV-positive may be more highly motivated to use condoms or contraceptives. In addition, according

to the researchers, the HIV services they receive may help them maintain a more stable lifestyle than that of women who are in treatment for substance abuse or live in shelters.

The investigators acknowledge several limitations of their research, including the possibility that women in the HIV study, who were seeking medical care, may not be representative of all HIV-positive women. Even so, according to the researchers, “The enhanced intervention’s success among HIV-positive women suggests it should be considered among the tools public health professionals use to encourage condom use among HIV-positive women receiving primary HIV care.”—*B. Brown*

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Whether Americans Seek HIV Testing Is Linked To Race and Perceived Risk

Nearly one-third of American adults have ever been tested for HIV, excluding those who have been tested to qualify as blood donors. According to a review of HIV testing data from the 1999 National Health Interview Survey (NHIS),¹ the proportion ever tested differs widely by race, with blacks being most likely to have had a test (46%), followed by Hispanics (33%) and whites (29%). Similar racial and ethnic differences characterize recent testing: Twenty percent of blacks have been tested for HIV within the past 12 months, compared with 12% of Hispanics and 8% of whites. Although Americans who perceive themselves to be at risk for HIV or who have engaged in high-risk behaviors are more likely than others to have ever been tested, substantial proportions of individuals in either of these categories—39% of whites, 35% of similar Hispanics and 26% of blacks—have never been tested for the virus.

The NHIS is an annual household-based survey of a representative sample of the civilian, noninstitutionalized U.S. adult population. Of the 30,801 respondents, 2% reported having participated in at least one of the five HIV-risk behaviors* that the survey asked about. Respondents were also asked whether they perceived their risk to be high, medium, low or nonexistent; 2% perceived themselves to be at medium or high risk for contracting HIV.

Thus, 4% of the total sample fell into either the perceived or the actual HIV-risk category.

Thirty-one percent of respondents had ever been tested for HIV (excluding testing that was a requirement for donating blood). This proportion was significantly higher among blacks (46%) than among either Hispanics (33%) or whites (29%). Overall rates of HIV testing were consistently higher among Americans who were at risk than among those who were not. For example, roughly three-quarters (73%) of the sample who reported a risky behavior had ever been tested, compared with 30% of those not citing any such behavior. Similarly, 54% of those who perceived themselves to be at medium or high risk had ever been tested, compared with 30% of others. Finally, 61% of respondents who fell into either the actual or the perceived risk category had ever been tested, compared with 30% of those in neither risk classification.

Among Americans who reported having engaged in an HIV-risk behavior, the proportion ever tested was higher among blacks (82%) than among whites and Hispanics (73–74%). Blacks who characterized their personal risk as medium or high were also more likely to have been tested (70%) than were similar Hispanics (63%) or whites (51%). These differences by race also characterized the proportions ever tested who were in either at-risk category—73% among at-risk blacks, compared with 65% among at-risk Hispanics and 60% among similar whites.

Rates of recent HIV testing (i.e., within the past 12 months) were also higher among blacks (20%) than among Hispanics (12%), whites (8%) or the U.S. population as a whole (10%). Blacks who either reported a risk factor or who perceived themselves to be at risk were also more likely to have been tested in the past year (40%) than were similar Hispanics (28%) or whites (23%).

When asked why they decided to get tested for HIV in the past year, 43% of recently tested blacks said they did so “just to find out their infection status,” compared with 34% of similar Hispanics and 26% of similar whites. The proportion who noted that they had been tested to fulfill a requirement (i.e., for hospitalization, surgery, health or life insurance, compliance with provider guidelines, a new job,

*The five behaviors that qualified as high-risk were, for hemophiliacs, having received clotting factor concentrations; for men, ever having had sex with another man since 1980; ever having taken street drugs by needle since 1980; ever having traded sex for money since 1980; and ever having had sex with a person who fits any of the above descriptions.

admission into the military or compliance with immigration law) was highest among recently tested whites (39%); 32% of similar Hispanics and 26% of similar blacks gave this response. Hispanics were the most likely to have been tested because it had been recommended by a doctor, a sexual partner or a health department (35%, compared with 29% of the other groups).

The researchers caution that these data are likely to be underestimates. First, like all self-reported data, the findings from the NHIS may be affected by recall or other personal bias. Second, highly sensitive behaviors may be underreported, given that these questions were asked face-to-face; further, respondents may not know all there is to know about their partners' past behaviors and thus underestimate their own risk status. Third, hospitalized and institutionalized persons are excluded from the sampling frame. The findings are further limited by the fact that respondents' actual infection status is unknown.

The researchers note that the 31% prevalence rate for HIV testing in 1999 represents an important increase from past years (i.e., from rates of 5% in 1987 and 26% in 1995), and while testing did not vary much by race in the late 1980s, important racial and ethnic differentials were apparent by the late 1990s. Moreover, substantial proportions of men and women who either perceived themselves to be at medium or high risk for HIV or had engaged in an HIV-risk behavior had never been tested for HIV—26% of at-risk blacks, 35% of at-risk Hispanics and 39% of at-risk whites. The investigators conclude that these important proportions of at-risk individuals who remain untested have important public health implications; thus “prevention programs should continue to develop innovative methods for counseling and testing at-risk persons.”—*L. Remez*

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who had never had a live birth to 56% among those who had had more than three—and was lower among women who had used hormonal contraceptives within the past six months (24%) than among nonusers of these methods (41%). Two-thirds of the sample had ever douched, and these women had a higher prevalence than women who had never done so (36% vs. 20%); prevalence was also significantly elevated among women who had first douched in their teens, those who had douched at least monthly within the past year and those who had douched within the past two months.

Finally, the prevalence of infection declined from 59% to 28% as the frequency with which a woman showered increased from zero to four or more times a week, but it rose from 24% to 50% as the frequency of bathing increased over that same range. It was lower among women who took vitamins or nutritional supplements (21%) than among those who did not (34%).

Results of logistic regression analysis revealed that two behavioral factors had independent effects on the odds of bacterial vaginosis. When all factors that were significantly related to prevalence or that were considered clinically relevant were controlled for, hormonal contraceptive use continued to have a protective effect (odds ratio, 0.5), and having douched within the past two months remained a risk factor (2.9). Of the background factors examined, only the interaction between race and education was significantly associated with the odds of bacterial vaginosis: Compared with white women who had more than 13 years of schooling, less-educated black women had significantly and sharply higher odds (odds ratio, 5.5).

Because of the elevated prevalence of douching among women with bacterial vaginosis, the investigators explored the association between douching and bacterial vaginosis among women who reported vaginal symptoms (discharge, change in color of discharge, odor or itching, and odor after intercourse) and those who did not. They found that the prevalence of douching was similar in these groups (29% and 23%, respectively), and in both groups, women who douched had elevated odds of bacterial vaginosis (odds ratios, 5.8 and 2.6, respectively). Furthermore, whether women douched because they had symptoms or for other reasons, their odds of bacterial vaginosis were about three times those of women who did not douche (odds ratios, 3.1–3.4).

At one time, the authors observe, the moti-

Risk of Bacterial Vaginosis Is Elevated for Women Who Douche, Whether or Not They Have Had Symptoms

Demographic, behavioral and hormonal factors all appear to play a role in the occurrence of bacterial vaginosis, a condition caused by an overabundance of certain types of bacteria normally present in the vagina.¹ In a clinic-based study conducted in Michigan, black women with no more than 13 years of education and women who douched had significantly elevated odds of the condition, while those who had recently used hormonal contraceptives had reduced odds. Douching was associated with both symptomatic and asymptomatic disease, and the association was equally strong whether women douched because they had symptoms or for other reasons.

The analyses are based on 298 women receiving services at a county health department clinic in 1998. Women were eligible to participate if they were scheduled to have a vaginal examination. After providing basic information about their demographic characteristics and reasons for visiting the clinic, participants completed a detailed, self-administered questionnaire that covered vaginal symptoms and gynecologic, reproductive and lifestyle factors that may affect the odds of bacterial vaginosis. Vaginal smears taken during their examination were assessed for bacterial vaginosis.

Women attending the public clinic were predominantly 20 or older (89%) and unmarried (77%). The majority had more than 13 years of schooling (57%), and about half said that at least one of their parents had gone beyond high school (53%). Sixty-five percent were white, 25% black and 11% members of other racial or ethnic groups. One in five had Medicaid coverage.

Overall, 30% of participants had bacterial vaginosis. Results of chi-square testing indicated that women with 13 or fewer years of schooling had significantly higher prevalence levels (38–48%) than those with more education (23%), and Medicaid recipients had a higher prevalence (42%) than those without such coverage (28%). Black women's prevalence was almost twice that of whites (42% vs. 25%). The racial difference was more pronounced among women with 13 or fewer years of education than among those with more schooling: At the lower educational level, 59% of black women and 35% of white women had bacterial vaginosis, while at the higher level, the proportions were 28% and 17%, respectively.

The prevalence of bacterial vaginosis was also related to several gynecologic and reproductive factors. It increased significantly as a woman's parity rose—from 19% among those

vation for treating bacterial vaginosis was to eliminate the unpleasant odor and discharge that it often causes. However, a growing body of evidence has linked the condition to numerous adverse health outcomes, and some research has suggested that it facilitates the transmission of HIV. They conclude, therefore, that “the relatively high prevalence of regular vaginal douching and the modifiable nature of this behavior argue for more comprehensive studies on (1) the impact of vaginal douching...and (2) the personal and culture-based motivations for vaginal douching.” They also stress the importance of exploring the “natural history” of bacterial vaginosis and understanding the interactions of all potential factors.—*D. Hollander*

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One-Third of Teenagers Experience Abuse Within Heterosexual Relationships

Nearly one-third of U.S. adolescents who have recently been in a heterosexual relationship have been abused by their partners, according to a study of the health and health-related behaviors of a nationally representative sample of youth: Twenty-nine percent have experienced psychological abuse, while 12% have experienced physical abuse.¹ For adolescents of both genders, the odds of experiencing psychological abuse, physical abuse or both roughly double or triple with increased age and with increased number of relationships within the past 18 months; several other social and demographic factors (such as race, family structure and religion) are significantly associated with abuse of either males or females.

To determine the prevalence of violence within heterosexual relationships among U.S. adolescents, researchers examined data from the National Longitudinal Study of Adolescent Health (Add Health). Add Health respondents were asked to give social and demographic information and to report on up to three romantic relationships that they had had within the 18 months prior to the survey. They were also asked to report any exposure to psychological abuse (such as being sworn at, insulted or threatened) or physical abuse (such as

being pushed) within those relationships. Adolescents who reported having 1–3 heterosexual and no homosexual relationships within the previous 18 months were included in the study. Researchers performed polytomous logistic regression analyses to determine which individual factors are associated with abuse within adolescent relationships.

Overall, 7,493 adolescents between the ages of 12 and 21 were included in the study: Sixteen percent were aged 12–14, 59% were 15–17 and the rest were 18–21. Roughly half were female (53%); the majority were white (74%) and non-Hispanic (88%). Fifty-two percent of the respondents reported living with both biological parents, 18% in other two parents households, 21% without a father figure and 3% without a mother figure; 6% reported their family structure as “other.” Some 54% had at least one parent with higher than a high school education. When asked about the importance of religion, 36% of adolescents said that religion is very important, 36% that it is fairly important and 28% that it is unimportant. Seventeen percent of respondents attended a small high school (1–400 students), 44% a medium-size high school (401–1,000) and 40% a large high school (1,001–4,000). Two-thirds of adolescents (67%) reported having had one relationship in the previous 18 months, 22% had had two and 11% had had three. The mean grade point average of the respondents was 2.8.

About three in 10 adolescents (32%) reported having experienced any form of abuse within a recent heterosexual relationship; 29% reported having experienced psychological abuse, and 12% physical abuse. Twenty percent had had exposure to only psychological abuse, while 12% had had exposure to physical or to both types of abuse. There was little difference between males’ and females’ reports of abuse.

For adolescents of both genders, number of relationships and age were significantly associated with abuse in the regression analyses. Adolescents with two relationships had elevated odds of having experienced psychological abuse (odds ratio, 1.6 for males and 1.8 for females) and physical or both types of abuse (1.6 and 2.7, respectively) in comparison with those with one relationship; those with three relationships had even more elevated odds of having experienced psychological abuse (2.4 and 2.1) and physical or both types of abuse (2.9 and 3.4). Male and female adolescents aged 18–21 had higher odds of having experienced psychological abuse than 12–14-year-

olds had (2.3 and 1.6); 15–17-year-old and 18–21-year-old males had elevated odds of having experienced physical or both types of abuse (2.0 and 2.5).

Other variables were significantly associated with gender-specific differences. Males without a father figure had elevated odds compared with those who lived with two biological parents, and males who attended a large high school had elevated odds compared with those who attended a small one, of having exposure to psychological abuse (odds ratio, 1.6–1.7). The odds of exposure to physical abuse or to both types of abuse were elevated for black and Asian males in comparison with whites (2.2 for each) and for males who reported their family status as “other” (2.4) in comparison with those who lived with two biological parents. Males with at least one parent who graduated from college had lower odds than those with parents with less than a high school education of having experienced physical or both types of abuse (0.6).

Females with at least one parent who graduated from high school had elevated odds compared with those whose parents had not (odds ratio, 1.8) of having exposure to psychological abuse; the odds of psychological abuse also were elevated for females without a mother figure compared with those who lived with two biological parents (2.1). Females who reported that religion is fairly or very important had 1.3–1.6 times the odds of those who reported that religion is not important to have had exposure to psychological abuse. For females, the odds of physical or both types of abuse decreased by 25% with each one-point increase in grade point average.

The researchers comment, “Given the importance of the number of relationships a respondent has had within a limited time period, the higher prevalence of victimization in older age groups may be partly a function of the greater dating experience that generally accumulates with age.” They conclude that their findings “underscore the importance of examining the correlates of partner violence during the transition from adolescence to young adulthood, when both the number and seriousness of relationships tend to increase, thus increasing the potential for violence.”—*J. Rosenberg*

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Regimen That Doubles The Number of Active Pills Per Cycle Reduces Bleeding

An oral contraceptive regimen that extends the pill cycle by doubling the number of days on which women take hormonally active pills resulted in less bleeding than a traditional regimen among participants in a randomized, controlled trial in the United States.¹ During the yearlong trial, women on the extended regimen (42 days of active pills followed by seven days of inactive pills) bled on significantly fewer days and had significantly fewer episodes of consecutive days of bleeding than women following a standard regimen (21 days of active pills followed by seven days of inactive pills). The investigators note that an extended cycle of pill use may have health benefits and may increase the method's appeal to some women, but they emphasize that the impact on bleeding patterns, and how it affects women's satisfaction and compliance with the method, must be well understood.

The study was conducted among women aged 18–45 who sought oral contraceptive prescriptions at four clinics in the Seattle, Washington, area between April 1998 and April 2000. Participants completed a demographic questionnaire and a medical history that documented their eligibility for pill use and their contraceptive and reproductive history. Researchers randomly assigned women to one of the two regimens and gave them a supply of pills, along with a diary sheet on which participants were to record details about their pill use, bleeding, side effects and menstrual or cyclic symptoms. Every three months, participants returned to the clinic to obtain a new supply of oral contraceptives and to hand in their diaries; at these visits, they were asked additional questions about their experiences with the method.

In all, 90 women enrolled in the study. On average, the women were about 26 years old and had been pregnant once. Two-thirds of the women were current oral contraceptive users, one-quarter had used pills in the past and a small fraction had never used oral contraceptives. Fifty-three women (24 of those on the 28-day regimen and 29 using the extended regimen) completed 12 cycles of the assigned regimen; the investigators based their study on this group of women, analyzing the data per quarter (84 days) of use.

Women following the 49-day regimen bled

on significantly fewer days per quarter (5.8–7.6, on average) than those on the traditional regimen (10.0–11.4). They also had significantly fewer episodes of bleeding for two or more consecutive days (1.6–2.0 per quarter, compared with 2.8–2.9 among women on the 28-day cycle). Similar differences were found between groups in episodes of bleeding and spotting (i.e., a discharge that does not require sanitary protection) combined, although not in the number of days of spotting. Consistent with the reported differences in bleeding patterns, women on the extended regimen required sanitary protection on half as many days as those on the 28-day cycle (27 vs. 54 days for the entire year) and spent significantly less on hygiene products (\$18 vs. \$41). Bleeding patterns were not affected by whether women had used oral contraceptives before, or by the time of day at which they took the pills.

A far higher proportion of women on the extended regimen than those on the traditional regimen reported infrequent bleeding (defined as fewer than two episodes of bleeding) in at least one quarter—59% vs. 9%. The groups did not differ, however, in their reports of amenorrhea, frequent bleeding or prolonged bleeding. By and large, women in both groups said that the amount of bleeding they experienced was what they expected or less.

Using a scale of 1–5 to rate the severity of side effects, women on the extended regimen recorded significantly lower scores for genital itch and headache in the final quarter than those on the standard regimen, but similar scores for other common side effects. Levels of compliance and satisfaction with the method did not differ by regimen.

Pointing to research documenting a growing acceptance of menstrual reduction and suppression, the investigators observe that some women may choose a contraceptive precisely because it reduces bleeding. Moreover, they note, an extended oral contraceptive cycle could prevent some conditions that hormonal withdrawal “perpetuates”—for example, anemia, dysmenorrhea and menstrual migraine. Thus, they conclude that the extended pill cycle could prove beneficial, but they acknowledge that “further research is needed to determine the most effective schedule and formulation.”—D. Hollander

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Risky Behavior Is Growing More Common Among British Men and Women

The reported prevalence of risky sexual behavior is rising in Great Britain, according to an analysis comparing results of the 2000 and 1990 rounds of the National Survey of Sexual Attitudes and Lifestyles (Natsal).¹ Both men and women in the more recent survey said that they had had a significantly larger number of lifetime heterosexual partners than their counterparts had reported a decade earlier; they also had increased odds of reporting recent anal intercourse or oral-genital contact. Overall, the consistency of condom use improved between surveys, but among men and women who had had multiple partners in the past year, the odds of inconsistent use were elevated in the later round.

Natsal is a probability sample survey of British residents aged 16–44. In 1990, when Natsal was first conducted, respondents participated in face-to-face interviews and completed self-administered questionnaires; in 2000, computer-assisted self-interview replaced the questionnaire component of the survey. A total of 13,765 respondents (6,000 men and 7,765 women) completed the first survey, and 11,161 respondents (4,762 men and 6,399 women) completed the more recent one. The data were weighted so that the sample was broadly representative of the British population.

In both surveys, the majority of respondents (roughly 70–75%) were aged 25–34; only 12% were teenagers. The proportion who were cohabiting was higher in the second survey than in the first (17% vs. 10%), while the proportion who were married was lower (42% vs. 52%).

On average, men in the later survey said they had had 12.7 lifetime sexual partners, and women reported having had 6.5. Eighteen percent of men and 24% of women reported no more than one lifetime partner; 60% and 46%, respectively, reported five or more. During the five years preceding the survey, men reportedly had had an average of 3.8 partners, while women had had 2.4. Fifty-one percent of men and 63% of women said they had had no partners or only one in the previous five years, but sizable proportions (21% and 12%, respectively) had had five or more. For both men and women, the mean number of partners during the last five years was highest among 16–24-year-olds and declined in each successive age-group.

Thirty-one percent of men and 21% of women in the second Natsal reported having had a new partner—overwhelmingly a partner of the opposite sex—in the past year. Of these, 57% of men and 43% of women said that the first time they had had intercourse with their most recent partner was within one month of their meeting.

Among all respondents who had had a sexual partner in the year before the 2000 survey, the researchers estimated that 15% of men and 9% of women had had concurrent relationships. Men and women who had had a heterosexual relationship during the previous year reportedly had had sex an average of 6–7 times in the four weeks before the survey.

One-quarter of men and one in five women interviewed for the second survey reported having used a condom at every act of intercourse in the past four weeks; the proportions were higher among those who had had two or more partners in the past year (33% of men and 24% of women) than among those who had had only one (21% and 17%, respectively). However, 15% of men and 10% of women had had multiple partners over the previous year and had not used condoms consistently during the month prior to the survey. Five percent of men and 3% of women considered themselves to be at high risk of contracting HIV.

The analysts compared data from the two rounds of Natsal by calculating age-adjusted odds ratios. Results of these analyses showed that for both men and women, the lifetime number of opposite-sex partners, number of such partners in the past five years and number of same-sex partners in the past five years increased significantly in the decade between surveys. Men and women in the later survey had elevated odds of ever having had a partner of the same sex, of having had a same-sex partner in the past five years and of recently having had concurrent partnerships (odds ratios, 1.4–3.4). While they were no more likely than their counterparts 10 years earlier to report recent vaginal intercourse, they had significantly higher odds of reporting oral-genital contact or anal intercourse (1.6–1.9). Men had higher odds in 2000 than in 1990 of saying that they had paid for sex in the past five years and that they had ever injected drugs (2.1 for each); women in 2000 had reduced odds of reporting injection-drug use in the past five years.

For both men and women, the odds of consistent condom use during vaginal or anal sex in the four weeks before the survey were significantly elevated in 2000 (odds ratio, 1.5 for

men and 1.3 for women). However, the odds of both having had two or more partners in the past year and having used condoms inconsistently in the previous month were elevated (1.2 for men and 1.5 for women). Respondents to the second survey had higher odds than those participating in 1990 of considering themselves “quite a lot or greatly at risk of HIV” (1.8 for men and 1.5 for women).

The analysts acknowledge that some of the behavioral changes identified by the 2000 Natsal may reflect respondents’ greater willingness to report behaviors because of societal changes and the use of computer-assisted self-interview. Still, they conclude that “despite raised public awareness of sexual health issues and the challenges of the global HIV epidemic, [the] results imply sustained population risk, which should signal a re-appraisal of the effectiveness of the programmes of the past decade and provide impetus for new approaches to, and investment in, public health interventions to improve sexual health.”—D. Hollander

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Parents Are Youngsters’ Top Choice as Source Of Health Information

Youth in grades 5–12 obtain information about health care from a wide variety of sources, and parents head the list; roughly three in five females and two in five males say that their mother is the first person they would consult about a health-related question. The majority of young people think that health care providers should discuss sexually transmitted diseases (STDs), smoking, and drug and alcohol use with them, but much smaller proportions report that a provider actually has done so. These are among the main findings of a 1997 survey of a nationally representative sample of nearly 7,000 public and private school students.¹

The survey, which was sponsored by the Commonwealth Fund, was carried out in 297 schools by means of a self-administered questionnaire. Of the total sample of 3,153 males and 3,575 females, 18% were in fifth or sixth grade, 43% were in grades 7–9 and 39% were in grades 10–12. Some 54% of respondents were white, 14% black, 9% Hispanic and 7% members of

other racial or ethnic groups; 16% did not provide information on their race or ethnicity. Analysts weighted responses in terms of these characteristics and examined bivariate associations with youths’ reports of their sources of health care information and level of comfort discussing various health-related topics.

When asked to select from a list the person they would go to first for information about health care issues, 58% of female respondents chose their mother. The next most common responses were a friend (18%) and a doctor or nurse (16%). Other choices (their father, a sibling, another adult female relative, a teacher, a school nurse, another male relative and nobody) each accounted for 1–8% of responses.

Like females, male respondents most often said that their mother would be their first choice as a source of health care information; 42% gave this response. Health care providers and fathers were the next most frequent choice among males (22% and 21%, respectively); 2–10% of males selected each of the remaining choices. A significantly smaller proportion of males than of females said that their primary resource would be their mother, a friend or another adult female relative; a significantly larger proportion selected a doctor or nurse, their father, a teacher or nobody.

Among both females and males, the proportion whose primary source would be their mother was highest among students in grades 5–6 (72% and 54%, respectively) and lowest among those in grades 10–12 (46% and 35%). The proportion who would consult friends first was lowest in the early grades (7% among females and 5% among males) and highest among the oldest students (26% and 15%, respectively).

Given a broader list of possible sources of information and asked to indicate all that they would use, young people most frequently said their parents (72% of females and 60% of males). Health care providers were the only other source cited by more than half of students (62% of females and 52% of males). The differences between males and females were statistically significant for these sources, as well as for several other responses: Larger proportions of females than of males reported that they would get information from health education class, magazines and other adults; larger proportions of males than of females said that they would use newspapers, the Internet and toll-free telephone numbers. Sixteen percent of males, but only 7% of females, reported not knowing where they would get information about health care.

Young people think that health care providers should discuss a wide range of topics with them, but relatively few say that they have had such conversations. For example, 56–65% of females indicated that providers should talk to youth about drugs, STDs, smoking, drinking, good eating habits, weight, stress, exercise, eating disorders and pregnancy prevention, but only 23–53% report ever having had such conversations. Males' responses fell into a similar pattern.

At the same time, respondents indicated that they would be too embarrassed, afraid or uncomfortable to discuss some issues with a health care provider. Roughly half of females reported feeling this way about discussing sexuality, body changes and menstruation; four in 10 placed "private health concerns," physical or sexual abuse, and contraception in this

category; and about one-quarter felt this way about pregnancy and STDs. Males were concerned about the same issues, although the proportions reporting discomfort (except for private matters and STDs) were significantly lower than among females (about 20–40%).

For several topics, reports of discomfort or embarrassment were significantly less common among students in higher grades than among younger respondents. This pattern was apparent with regard to body changes, menstruation (for females only), contraception, pregnancy, STDs and eating disorders.

The analysts acknowledge that because of several limitations of the survey, the results should be interpreted with caution: The survey did not explore any issue in great depth and did not address access to or availability of various information sources. Furthermore, providers' per-

ceptions of whether an issue has been discussed may differ from young people's. Nevertheless, the analysts conclude that the findings highlight the need for health care providers to initiate discussions on sensitive topics with youth, "and to do so in such a manner as to relieve potential discomfort." They also recognize the need to ensure that providers are adequately trained for, and comfortable with, this task, and to keep parents up to date on "topics pertinent to adolescent health care" by offering them educational materials and opportunities to discuss relevant issues with professionals.—D. Hollander

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