

# Adolescents Face Unique Risk Factors for STDs

*Short-lived sexual relationships, lack of access to care, and confusion about symptoms pose challenges.*

BY MARY ELLEN SCHNEIDER  
Senior Writer

NEW YORK — Adolescents are disproportionately affected by sexually transmitted diseases due to biologic, psychological, cognitive, and behavioral factors, as well as poor access to health care, Dr. Robin Recant said at a gynecology conference sponsored by Mount Sinai School of Medicine.

Female adolescents are biologically at higher risk for STDs such as chlamydia and gonorrhea because of the columnar epithelium on their ectocervix, said Dr. Recant, of the New York City Department of Health and Mental Hygiene Bureau of Sexually Transmitted Disease Control.

Both chlamydia and gonorrhea preferentially attach to the columnar epithelium, she said. Also, HIV acquisition and shedding may be increased with cervical ectopy.

Mucus production in the adolescent female is increased, but the mucus is thinner than in older women, which may make it easier for pathogens to attach to

the epithelium. Adolescent females also have lower vaginal pH, though there are no studies on the significance of this in terms of STD infection, Dr. Recant said.

Psychological and cognitive factors also make both female and male adolescents more vulnerable. For instance, these young adults may not appreciate the consequences of their actions. "Their lack of foresight is often compounded by the use of drugs and alcohol," Dr. Recant said.

Adolescents also may have difficulty with complex, ordered tasks, such as correct condom use. And they may use sexual activity as a form of rebellion against their parents.

Adolescents are likely to experiment both with relationships and sexual behaviors. And since they are going through a formative stage of social development, it may be hard for them to negotiate with older sex partners, she said.

On the behavioral front, sexually active adolescents frequently have multiple sex partners, putting them at greater risk for STDs. Adolescents are frequently serial monogamists who have a series of short-lived sexual relationships, Dr. Recant said.

The 2003 results of the Youth Risk Behavior Survey show that 53% of male high school students in New York City had sexual intercourse and that 39% of female high school students had. In addition, the survey finds that 8% of female high school students and 25% of male high school students in New York City have had four or more sexual partners in their lifetime.

Trends over the past 10 years show an overall increase in the use of condoms by adolescents, Dr. Recant said, but that use decreases with the duration of the relationship and with age.

Similar trends appear in data from the 2003 Youth Risk Behavior Survey. The survey shows that among females, condom use dropped from 78% among 9th graders

to 64% among girls in the 12th grade. Condom use was higher in males but dropped from a high of 90% in 10th graders to 82% in 12th graders.

Adolescents may face greater risk from inadequate access to health care, and generally obtain health care services less often than older or younger individuals, Dr. Recant said. Also, some may not recognize the symptoms of a sexually transmitted disease or may be too embarrassed to seek care.

"Adolescents may not even be able to distinguish whether aspects of their health are physically normal or abnormal because their bodies are changing so rapidly," Dr. Recant said.

Confidentiality is another issue. Adolescents are more likely to seek care from physicians and other providers who ensure confidentiality, she said.

Some physicians contribute to the problem because they may not be comfortable discussing sexual behavior with adolescents. Sometimes physicians and other providers fail to take a sexual history or screen as recommended, she said.

Cost can be a barrier for adolescents. Those with insurance coverage may be afraid that their parents will see the diagnosis when they get the bill for the appointment, Dr. Recant said. ■

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## HPV Screening Not Cost Effective in Adolescents; Monitor Lesions Closely

BY MARY ELLEN SCHNEIDER  
Senior Writer

NEW YORK — Screening for the human papillomavirus in adolescent females is not cost effective because of the high rate of infection in that population, Dr. Edyta C. Pirog said at a gynecology conference sponsored by Mount Sinai School of Medicine.

The majority of low-grade squamous intraepithelial lesions will regress spontaneously in adolescent females, so most treatment guidelines allow for the observation of these lesions through repeated cytology, said Dr. Pirog of Weill Cornell Medical College, New York. However, immunosuppressed adolescents, who have a high rate of progression to high-grade squamous intraepithelial lesions, require careful follow-up by physicians, Dr. Pirog said.

The American College of Obstetricians and Gynecologists recently released a new committee opinion advising physicians to take a less aggressive approach to treating abnormal pap test results and benign lesions in adolescents, compared with the approach used in adults (Obstet. Gynecol. 2006;107:963-8). ACOG recommends a noninvasive approach be-

cause of the risk of cervical incompetence after surgical excision. Adolescents who follow their physicians' instructions can be treated effectively by follow-up cytology screening at either two 6-month visits or one 12-month follow-up in most cases, according to ACOG.

There is a high prevalence of HPV in women aged 15-35 years, even among those with normal pap smears. About 20%-40% of women aged 15-35 with normal pap smears have HPV, Dr. Pirog reported.

Most infections are transient and asymptomatic. About half of women of all ages will clear an HPV infection within 8 months, and 90% of women clear the infection within 2 years, she said. In one study of adolescents aged 14-17 years, the cumulative incidence of HPV infection was more than 80% but the infections cleared within a matter of months (J. Infect. Dis. 2005;191:182-92).

Adolescents also have a different progression of squamous intraepi-

thelial lesions, compared with adults. More than half of low-grade squamous intraepithelial lesions in adolescents have regressed at 12 months; 91% regress by 36 months (Lancet 2004;364:1678-83). This study found that only 3% of low-grade lesions have progressed to high-grade lesions at 36 months in adolescents, compared with about 10% in other age groups.

Researchers have shown, however, that the risk of progression is greater in HIV-positive adolescents. A study of females aged 13-18 years found that the incidence of high-grade squamous intraepithelial lesions at the end of the 4-year follow-up was 21.5% in HIV-positive girls, compared with 4.8% in HIV-negative girls (J. Infect. Dis. 2004;190:1413-21).

A multivariate analysis also showed that the use of hormonal contraceptives, a high cervical mucus concentration of interleukin-12, a positive HPV test, and persistent low-grade squamous intraepithelial lesions were significantly associated with the development of high-grade lesions. ■

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## Self-Collected Samples Boost Rates of STD Detection

BY PATRICE WENDLING  
Chicago Bureau

NICE, FRANCE — Self-collected vaginal swabs and urine samples provide clinicians with an opportunity to identify chlamydia and gonorrhea infections that would otherwise go undetected, Dr. Christian Hoebe said at the 16th European Congress of Clinical Microbiology and Infectious Diseases.

That conclusion emerged from a cross-sectional survey that showed the two tests were feasible and highly accepted among 413 women, aged 16-35 years, attending a public STD clinic.

The women reported in a questionnaire that the self-collected vaginal swabs and first-catch urine tests had clear instructions (reported by 97% and 93%, respectively); were easy to perform (95% and 92%); and were a "pleasant" method (98% and 99%).

Over three-fourths (77%) preferred the self-administered tests to a traditional gynecologic STD exam. The refusal rate was 1.5% for self-collected vaginal swab specimens and 0% for urine samples.

Analysis of the samples conducted using an amplified DNA assay (the BD ProbeTec ET System, from BD Diagnostics in Sparks, Md.) detected *Chlamydia trachomatis* in 45 of 413 of patients (11%) and *Neisseria gonorrhoeae* in 6 of 413 (1.5%).

Chlamydia was detected in 8 of 43 patients (19%) with a prior STD and in 39 of 312 of 16- to 25-year-old women (13%).

Overall, 68% of the women had never undergone STD testing before, and 11% of these tested positive (Sex Transm. Dis. 2006 Mar 16;[Epub ahead of print]).

The patients' mean age was 23 years; 56% had engaged in prior risky behaviors; 17% had a risky partner; and 29% were fearful of STDs.

Reasons for taking the tests were: anonymity/privacy (68%), easy access (61%), and not having to undergo an intimate vaginal exam (12%), said Dr. Hoebe of the South Limburg Public Health Service, Heerlen, the Netherlands.

The percent agreement of the tests was 98.8% for chlamydia and 99.3% for gonorrhea, he said. ■