

# STDs in Adolescents and Young Adults

## Public Health Impact

Compared to older adults, adolescents (10- to 19-year-olds) and young adults (20- to 24-year-olds) are at higher risk for acquiring STDs for a number of reasons: they may be more likely to have multiple (sequential or concurrent) sexual partners rather than a single, long-term relationship; they may be more likely to engage in unprotected intercourse; and they may select partners at higher risk. In addition, for some STDs, e.g., *Chlamydia trachomatis*, adolescent women may have a physiologically increased susceptibility to infection due to increased cervical ectopy and lack of immunity. During the past two decades, the age of initiation of sexual activity has steadily decreased and age at first marriage has increased, resulting in increases in premarital sexual experience among adolescent women and in an enlarging pool of young women at risk<sup>1,2,3</sup>. In addition, the higher prevalence of STDs among adolescents reflects multiple barriers to quality STD prevention services, including lack of insurance or other ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality.

## Observations

- Numerous prevalence studies in various clinic populations have shown that sexually active adolescents have high rates of chlamydial infection<sup>4</sup>. The Chlamydia Regional Projects that perform large-scale screening among women attending family planning clinics demonstrate that younger women consistently have higher positivity rates of chlamydia than older women, even as prevalence declines. An example is the Region X Project, which has screened women since 1988<sup>5</sup> (Figure J).
- Among women, 15- to 19-year-olds had the highest rate of gonorrhea in 1998 (Figure M, Table 12B), and 20- to 24-year-olds had the highest rate of primary and secondary syphilis (Figure O, Table 23B). Among men, 20- to 24-year-olds had the highest rate of gonorrhea and third highest rate of primary and secondary syphilis (Figures N and P, Tables 12B and 23B).
- Rates of gonorrhea among male adolescents generally decreased during 1994-98 (Table 12B). In the 10- to 14-year-old group, the rate for males remained stable at 8.5 per 100,000 for 1997 and 1998. In the 15- to 19-year-old group, the rate declined from 585.2 in 1994 to 354.6 in 1998, a 39% decrease. However, the rate for this male adolescent age group increased from 348.1 in 1997 to 354.6 in 1998. Among young adult men in the 20- to 24-year-old group, the rate of gonorrhea also increased between 1997 and 1998 (537.1 and 575.1, respectively); however, relative to the 1994 rate of 739.1, the 1998 rate reflected a decline of 22%.
- Rates of gonorrhea among female adolescents also generally decreased during the 5 year period 1994-98 (Table 12B). In the 10- to 14-year-old group, the rate

for females decreased from 82.3 per 100,000 in 1994 to 58.0 in 1998, a decrease of 30%. In the 15- to 19-year-old group, the rate declined from 890.2 in 1994 to 779.7 in 1998, a 12% decrease. However, the rates for female adolescents increased between 1997 and 1998 in both age groups. Among young adult women in the 20- to 24-year-old group, the rate of gonorrhea increased from 560.4 in 1997 to 645.9 in 1998; relative to the 1994 rate of 650.4, the 1998 rate decreased slightly.

- In 1998, the highest age-specific gonorrhea rates among women and the second highest rates among men were in the 15- to 19-year-old group (Figure 17).
- Since 1990, approximately 20,000 female Job Corps entrants have been screened each year for chlamydia. The Job Corps, administered by the U.S. Department of Labor at more than 100 sites throughout the country, is a job training program for disadvantaged youth aged 16-24 years. Among women entering the Job Corps in 1998, based on their place of residence just before program entry, state-specific chlamydia prevalence ranged from 4.6% to 20.3% (Figure K). Chlamydial infection is widespread geographically and highly prevalent among these economically disadvantaged young women.
- Data from Job Corps centers submitting gonorrhea specimens for female students aged 16- 24 years to the national contract laboratory indicate a high prevalence of gonococcal infection in this population. At least 100 students from each of 12 states were tested; state-specific gonorrhea prevalence ranged from 1.4% to 8.4% in 1998 (Figure L).

---

<sup>1</sup>CDC. Premarital sexual experience among adolescent women—United States, 1970-1988. *MMWR* 1991;39:929-32.

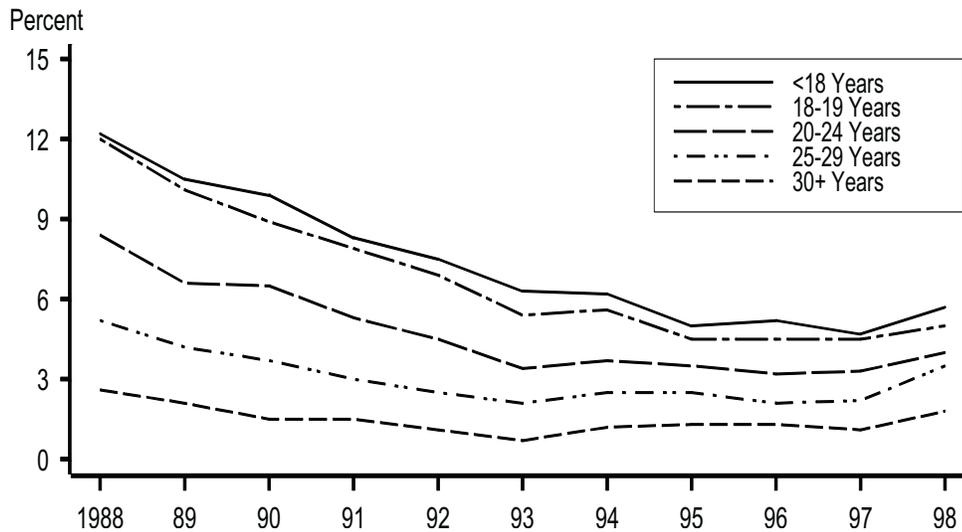
<sup>2</sup>CDC. Pregnancy, Sexually Transmitted Diseases and Related Risk Behaviors Among U.S. Adolescents. Atlanta: Centers for Disease Control and Prevention, 1994. Adolescent Health: State of the Nation monograph series, No. 2. CDC Publication No. 099-4630.

<sup>3</sup>Forrest JD. Timing of reproductive life stages. *Obstet Gynecol* 1993;82(1)

<sup>4</sup>CDC. Recommendations for the prevention and management of *Chlamydia trachomatis* infections, 1993. *MMWR* 1993;42(No. RR-12).

<sup>5</sup>Lossick J, Delisle S, Fine D, Mosure D, Lee V, Smith C. Regional program for widespread screening for *Chlamydia trachomatis* in family planning clinics. In: Bowie WR, Caldwell HD, Jones RP, et al., eds. *Chlamydial Infections: Proceedings of the Seventh International Symposium of Human Chlamydial Infections*, Cambridge, Cambridge, University Press, 1990, pp. 575-9.

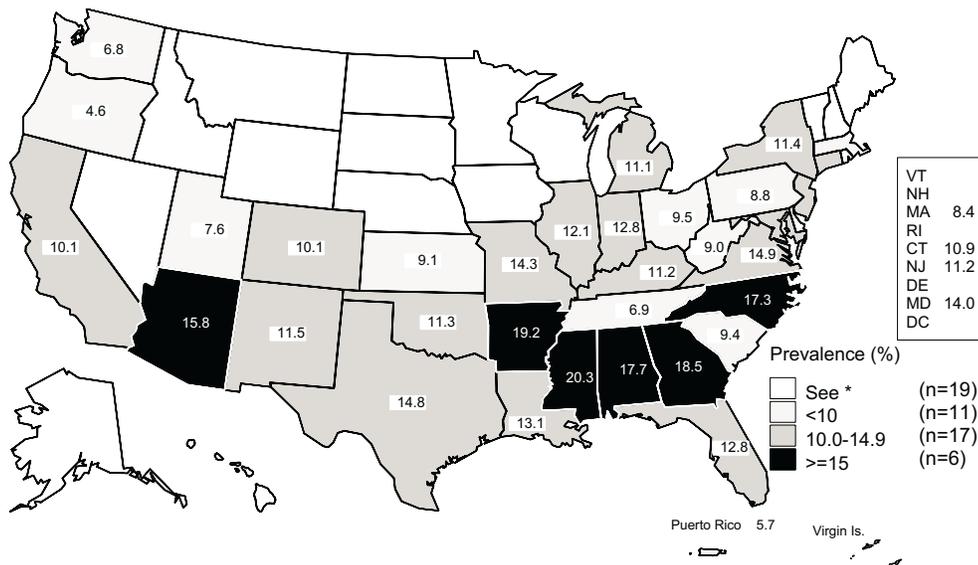
**Figure J. Chlamydia — Positivity among women tested in family planning clinics by age group: Region X, 1988–1998**



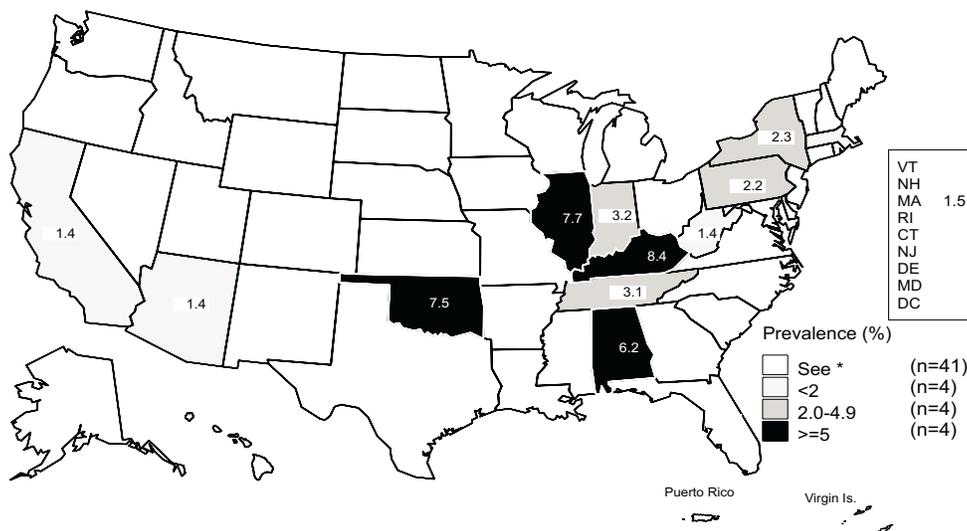
Note: Women who met screening criteria were tested. Trends not adjusted for changes in laboratory test method in 1994 and 1998 and associated increases in test sensitivity.

SOURCE: Regional Infertility Prevention Program: Region X Chlamydia Project (Alaska, Idaho, Oregon and Washington)

**Figure K. Chlamydia — Prevalence among 16-24 year-old women entering the U.S. Job Corps by state of residence, 1998**



**Figure L. Gonorrhea — Prevalence among 16-24 year-old women entering the U.S. Job Corps by state of residence, 1998**

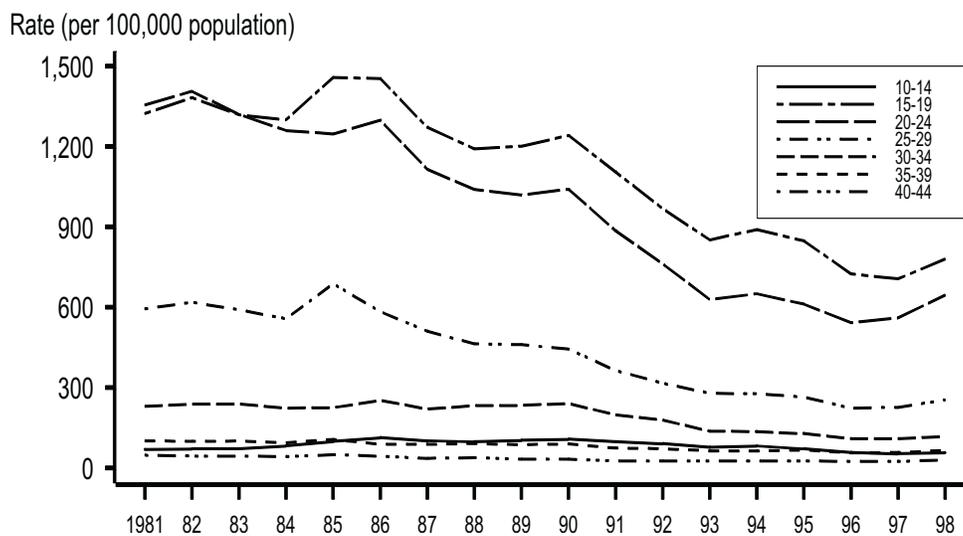


\*Fewer than 100 women residing in these states and entering the U.S. Job Corps were screened for gonorrhea by the national contract laboratory in 1998.

Note: Many Job Corps centers test female students for gonorrhea using local laboratories; these results are not available to CDC. For this map, gonorrhea test results for students at centers submitting specimens to the national contract laboratory were included if the number of gonorrhea tests submitted was greater than 90% of the number of chlamydia tests submitted.

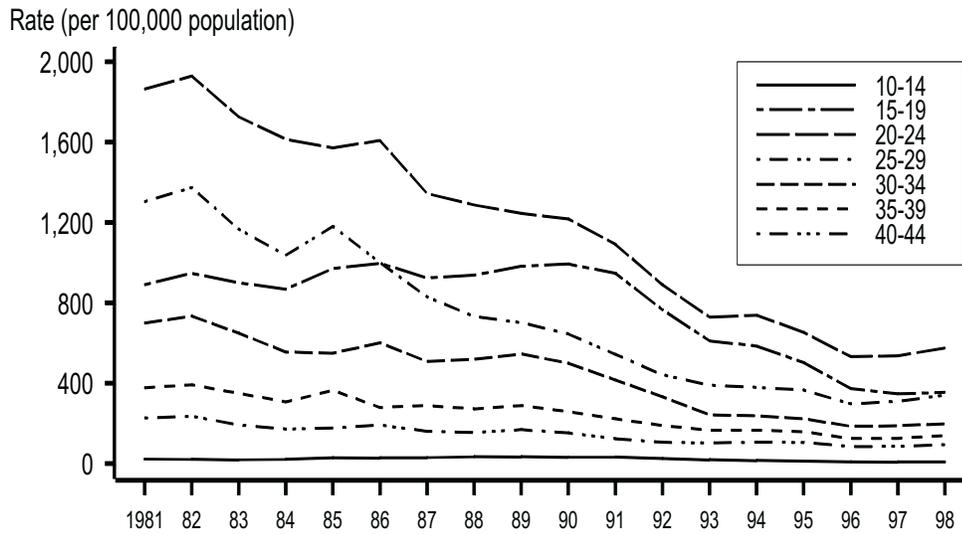
SOURCE: U.S. Department of Labor

**Figure M. Gonorrhea — Age-specific rates among women 10-44 years of age: United States, 1981-1998**



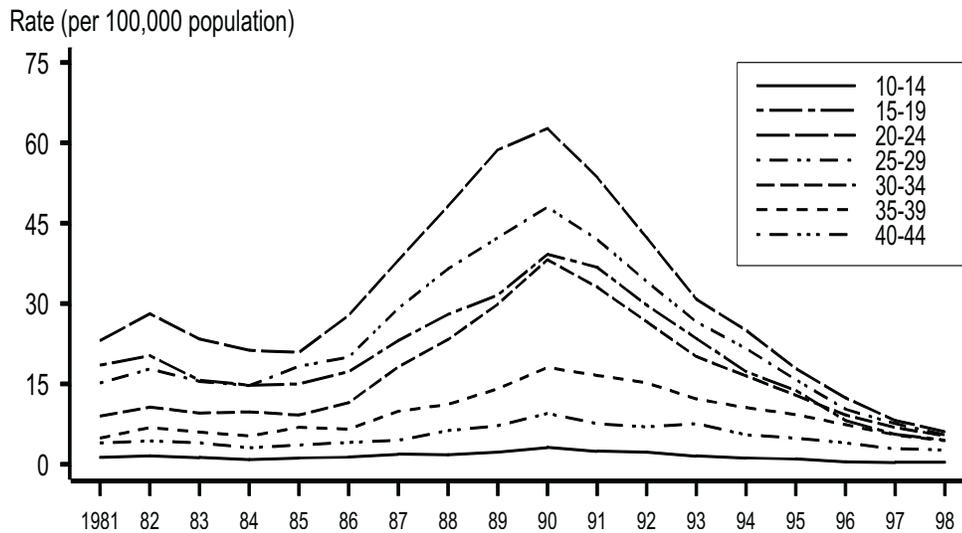
Note: See Appendix.

**Figure N. Gonorrhea — Age-specific rates among men 10-44 years of age: United States, 1981–1998**



Note: See Appendix.

**Figure O. Primary and secondary syphilis — Age-specific rates among women 10-44 years of age: United States, 1981–1998**



**Figure P. Primary and secondary syphilis — Age-specific rates among men 10-44 years of age: United States, 1981–1998**

