



Risky Sexual Behavior Among
American Adolescents:
How Can Unintended Pregnancies
and Sexually Transmitted
Infections Be Lessened?

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About this Paper

About one-third of all girls in the United States get pregnant before age 20, giving birth to 435,427 infants in 2006. Eighty percent of those births were unintended. And 26 percent of American girls, ages 14 – 19, have at least one sexually transmitted infection, according to a recent Centers for Disease Control and Prevention (CDC) study. These findings highlight the importance of addressing risky adolescent sexual behavior.

Most federally funded educational programs promote abstinence until marriage as the primary prevention strategy, although there is no evidence that this is effective. Researchers have concluded that comprehensive education, which covers abstinence and contraception, does not increase adolescent sexual activity. Other opportunities to create new norms of healthy sexual behavior — including expanding effective counseling, education, screening, and clinical care to adolescents — are highlighted here.

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About the Rapid Public Health Policy Response Project

The Rapid Public Health Policy Response Project of the School of Public Health and Health Services at The George Washington University presents data and other background information on breaking public health stories. The goal is to educate the public, policymakers, legislators, health care providers, the media and others in order to promote informed decision making.

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Risky Sexual Behavior Among American Adolescents: How Can Unintended Pregnancies and Sexually Transmitted Infections Be Lessened?

The well-publicized pregnancy of a political candidate's teenage daughter has drawn attention to the sexual behavior of American adolescents. Until recently, pregnancies among 15–19-year-olds had dropped off considerably, falling 38 percent from 1990 to 2004.¹ However, birth rates in this age group rose by three percent from 2005 to 2006.² Whether or not that rise reflects a longer-term trend, the U.S. continues to lead the industrialized world in teen pregnancies by a wide margin.³

The consequences of risky sexual behavior were also underscored this year, with findings that 26 percent of American girls, ages 14 – 19 — more than three million teenagers — have at least one of the four most common sexually transmitted infections (STIs).^{*} That study, released in March 2008 by the Centers for Disease Control and Prevention (CDC), was the first to look at the overall burden of STIs in an adolescent population.⁴

How can unintended pregnancies and sexually transmitted infections among adolescents be lessened?

The Scope of the Problem

About one-third of all girls in the United States get pregnant before age 20, according to the CDC. In 2006, 435,427 infants were born to mothers age 15 – 19, and 80 percent of those births were unintended.⁵

The lifelong consequences of teenage childbearing is complex and controversial. Until recently, most researchers agreed that teenage parents and their children face substantial social and economic disadvantages, perform poorly in schools, face a heightened risk of poverty, abuse, and health problems and cost society money.⁶

In a television interview on NBC's "Today Show," Sarah Brown, CEO of the National Campaign to Prevent Teen and Unwanted Pregnancy outlined the stakes.⁷ "The vast majority of teen pregnancies are unplanned, the vast majority of teen mothers never even finish high school. So young parents are really at great risk. They are at risk of poor education and therefore, in this very tough economy, their chances of getting a good job and being able to stay comfortably out of poverty are compromised."

Not everyone agrees completely with that analysis. Some scholars have suggested that the negative effects of teen pregnancies have been exaggerated and may be more a *symptom* of disadvantage than its cause.⁸ Nonetheless, there is general agreement that teenagers should not become pregnant if they do not wish to do so.

Equally clear is the need to reduce the alarmingly high rates of sexually transmitted bacterial and viral infections among adolescents, which are associated with an increased risk of HIV,

* The terms *sexually transmitted infections* (STIs) and *sexually transmitted diseases* (STDs) appear somewhat interchangeably in published literature. Because a bacterial or viral infection does not necessarily result in active disease, STIs is broader terminology and it is used here except where a published source refers to STDs.

cervical cancer, infertility and other sequela. Prior to the CDC study this spring, a substantial body of data had already established STIs in the United States as a common and costly problem. The problem is particularly acute in underserved communities of color. In the District of Columbia, for example, the rate of chlamydia infection is three times the national average and the rates of gonorrhea and syphilis are about double.⁹

Teenagers in the United States have higher rates of sexually transmitted infections than any other industrialized nation.¹⁰ An estimated 18.9 million new STIs occur annually, almost half of them (9.1 million) among youth ages 15 to 24.¹¹ The direct medical cost of treating these infections in young people is approximately \$6.5 billion.¹²

The CDC study added significantly to the weight of earlier evidence by directly testing the urine, blood, and vaginal tissue of 838 female adolescent volunteers. In contrast to earlier studies that collected data only on a single infection, the CDC tested each girl for the presence of four infections — human papilloma virus (HPV), chlamydia, trichomoniasis and herpes simplex virus-2. HIV, gonorrhea and syphilis were not included in this study.

Sarah E. Forhan, MD, MPH, a CDC scientist and lead author of the new study, told *The New York Times* that the findings were “alarming.”¹³ Along with concluding that 26 percent of the girls studied had sexually transmitted infections, the researchers found that:

- ▶ Significant differences in infection rates exist by race and ethnicity. Almost half of African-American girls had a sexually transmitted infection, compared to 20 percent of caucasian girls.
- ▶ Of those girls who said they were sexually experienced (about half the study population), almost 40 percent had at least one STI.
- ▶ Prevalence rates rise sharply with the number of partners. While at least one STI was present among 20 percent of the girls with only one partner, 55 percent of those who said they had three or more partners had at least one STI.
- ▶ Fifteen percent of girls who had a sexually transmitted infection had more than one.
- ▶ HPV was by far the most prevalent infection, present in 18 percent of all study subjects, and in almost 30 percent of those who were sexually experienced. Chlamydia came in a distant second (present among 4 percent of the general study population, and among 7 percent of those who were sexually experienced).⁴

Because many sexually transmitted infections are asymptomatic for long periods of time, they often go unidentified and untreated. Yet each of them has potentially devastating health consequences — to infected individuals, their sexual partners, and their children.

Sex Education

While the need to influence risky adolescent sexual behavior, reduce unintended pregnancies and lessen sexually transmitted infections is apparent, the most effective ways of doing so are highly contentious. Some educational programs targeting young people focus exclusively on abstinence until marriage, while others take a more comprehensive approach to sexuality. Twenty states and the District of Columbia require public schools to teach sex education in

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some form, and 35 states plus DC require education focused on STIs and HIV but the content of that education varies significantly by state, region and school district.¹⁴

Federal Abstinence-Only Programs: The U.S. Department of Health and Human Services promotes programs that emphasize abstinence until marriage as its paramount strategy for preventing pregnancies and sexually transmitted infections among young people. These programs prohibit education about the proper use of condoms or other contraceptives, other than to discuss their failure rates.

The three major federal abstinence-only initiatives:

- ▶ *The State Abstinence Education Program*, created as part of welfare reform legislation in 1996, provides grants for state-level educational activities that have as their “exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity.”¹⁵ Federal funding, requiring a 75 percent match from the states, has been in the low \$40-million range over the past few years.¹⁶ The President’s FY 2009 budget request would increase that to \$50 million.¹⁷
- ▶ *The Community-Based Abstinence Education Program* awards grants to public and private entities for mentoring and educational initiatives that support adolescents in deciding to postpone sexual activity until marriage.¹⁸ In 2001, the program’s first year of funding, its budget was \$20 million;¹⁶ Congress appropriated \$113 million for the program in FY 2008 and the President requested a \$28 million budget increase in FY 2009.¹⁹
- ▶ *The Adolescent Family Life Program* is currently funding 36 “prevention demonstration projects” to enable community agencies to develop, implement and evaluate programs that motivate youth not to engage in premarital sex.²⁰ The President’s budget request for FY 2009 is for \$13 million, the same amount appropriated in FY 2008.¹⁹

In all, the federal government has spent more than \$1.3 billion on abstinence-only programs over the past decade.²¹

Comprehensive Sex Education: Comprehensive sex education takes a broader approach, typically educating youth about both abstinence and contraception, including the barrier methods that decrease the risk of STIs. According to a spokesperson for the American Academy of Pediatrics, “comprehensive sexuality education emphasizes abstinence as the best option for adolescents, but also provides age-appropriate, medically accurate discussion and information for the prevention of sexually transmitted infections and unintended pregnancies.”²²

There is no federal funding specifically for initiatives that teach young people about both abstinence and contraception.²³ (Services to prevent sexually transmitted diseases, however, are available through the Title X Family Planning Program, which provides comprehensive family planning and related preventive health services to low-income populations.²⁴) Seventeen states have their own comprehensive educational programs, which make them ineligible to receive funding for the federal abstinence-only programs.²⁵

Assessing What Works: A number of research studies suggest that abstinence-only programs do not change sexual behavior, according to recent Congressional testimony.²² For example, a Congressionally authorized evaluation of the State Abstinence Education Program

found no significant differences between youths receiving abstinence education and a control group that did not, either in their likelihood of abstaining from sex or in the number of their sexual partners.²⁶

The quality of abstinence-only programs has also been criticized. The U.S. Government Accountability Office (GAO) reviewed the accuracy and effectiveness of educational materials used in three programs and found:

- ▶ Materials were not routinely reviewed for scientific accuracy; when materials were reviewed, they often had inaccuracies.
- ▶ The federal agencies administering abstinence-only programs had not standardized their reporting requirements or performance measures.
- ▶ Most program evaluations had not met minimum criteria for validating results.¹⁶

In 2001, the U.S. Surgeon General summarized the body of evidence about comprehensive sex education programs and noted that it “gives strong support to the conclusion that providing information about contraception does not increase adolescent sexual activity, either by hastening the onset of sexual intercourse, increasing the frequency of sexual intercourse, or increasing the number of sexual partners.”²⁷

In light of such findings, the Society for Adolescent Medicine, the American Psychological Association, the American Medical Association, the National Association of School Psychologists, the American Academy of Pediatrics and the American Public Health Association have all criticized abstinence-only education.²⁸ Most Americans say they support school-based sex education programs that teach abstinence in combination with other ways to prevent pregnancy and sexually transmitted diseases.²⁸

Other Interventions to Reduce Risky Sexual Behavior

Beyond campaigns to educate adolescents about abstinence and contraception lie a host of other approaches for reducing risky sexual behavior.

While more data are needed about what works, and why, researchers have found that programs focusing on non-sexual factors can help to reduce both pregnancies and STIs. For example, initiatives to support early childhood development, including a year-round preschool program, and to promote intensive volunteer commitments, had positive influences on sexual behavior. Programs that increase parental involvement with their children and promote close relationships with caring adults also demonstrated a benefit.³⁰

The National Campaign to Prevent Teen and Unplanned Pregnancy has proposed an array of other strategies targeted at families, faith leaders, schools, and local, state, and federal policymakers. With funding from the CDC, the Campaign’s “Putting What Works to Work” consolidates and disseminates research-backed approaches — examples include incorporating pregnancy prevention into employment training and career planning activities; connecting teens to health, education and job training programs; encouraging community service and other efforts to promote healthy adolescent development; and implementing initiatives that specifically target boys.³¹

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The CDC has issued clinical guidelines for reducing STDs built around five strategies:³²

- Educating and counseling at-risk individuals on changing their sexual behavior in order to avoid STDs. The CDC specifically urged clinicians to provide nonjudgmental adolescent-appropriate counseling on healthy sexual behavior.
- Identifying asymptomatic infected individuals and those who have symptoms but are unlikely to seek diagnostic and treatment services.
- Diagnosing and treating infected individuals effectively.
- Evaluating, treating and counseling the sexual partners of individuals who are infected with an STD.
- Providing appropriate vaccinations.³³

The Institute of Medicine (IOM) has called for a national strategy to prevent STDs by “intervening at multiple points with behavioral, biomedical and structural interventions on both individual and community levels.”³⁴ The IOM has said the national strategy should focus heavily on adolescents and made these recommendations:

- Interventions should begin prior to the initiation of sexual activity, which may mean targeting pre-adolescents, and should focus on preventing high-risk sexual behavior from becoming established.
- Health plans and health providers should ensure the confidentiality of STD and contraceptive services provided to adolescents.
- Since adolescents are more likely than adults to lack health insurance, and may go infrequently to health care facilities, all school districts in the United States should provide health education and clinical services aimed at preventing STDs. The IOM also said that condoms should be available in schools.

A Broader Challenge: A legal framework for providing adolescents with access to testing and treatment for STIs is already in place. All 50 states and the District of Columbia allow minors to consent to STI services, although 18 states permit a physician to inform parents that their child is seeking those services.³⁵ Access to contraception is somewhat more restricted, with 21 states and DC explicitly permitting minors to consent to services without notifying their parents.³⁶

Adolescents, however, often fail to get routine primary care. Teenagers and people in their early 20s make fewer visits to physicians’ offices than at any other time in their lives.³⁷ Moreover, health care providers often fail to ask about sexual behavior, assess risk for STDs, provide age-appropriate counseling and education, or screen for asymptomatic infection.³²

Thus, broader challenges in the health care system will need to be addressed in order to bring the greatest possible benefits to adolescents. The high incidence of unintended adolescent pregnancies and sexually transmitted infections clearly underscore the urgency of confronting the problem. Although the appropriate responses remain controversial, sound recommendations rooted in science point the way towards action.

Endnotes

1. Ventura SJ, Abma JC, Mosher WD. “Estimated Pregnancy Rates by Outcome for the United States, 1990–2004.” *National Vital Statistics Report*, CDC;56 (15). April 14, 2008.
2. [Adolescent Reproductive Health home page](#). Centers for Disease Control and Prevention. Web page accessed Sept. 2, 2008.
3. Boonstra H. “[Teen Pregnancy: Trends and Lessons Learned](#).” *The Guttmacher Report on Public Policy* 2002 February;5 (1).
4. Forhan SE, Gottlieb SL, Sternberg MR, et al. “[Prevalence of Sexually Transmitted Infections and Bacterial Vaginosis among Female Adolescents in the United States: Data from the National Health and Nutrition Examination Survey \(NHANES\) 2003–04](#).” Presentation at the 2008 National STD Prevention Conference; March 13, 2008; Chicago, Ill.
5. “[Teen Pregnancy](#).” Fact Sheet. Centers for Disease Control and Prevention. Web page accessed Sept. 3, 2008.
6. Hayes C., ed. *Risking the Future*. Washington, DC: National Academy Press 1987. Other sources describing the negative consequences of teenage parenting include Maynard RA. *Kids Having Kids: A Robin Hood Foundation Special Report on the Costs of Adolescent Childbearing* 1996. New York: Robin Hood Foundation; Hoffman S. and *By the Numbers: The Public Costs of Teen Childbearing*. Washington, DC: National Campaign to Prevent Teen Pregnancy.
7. “Teen Pregnancy on the Rise,” NBC: *Today Show*, September 2, 2008.
8. Hoffman SD. “[Teenage Childbearing is Not So Bad After All... Or is It? A Review of the New Literature](#).” *Family Planning Perspective* 1998 September/October;30 (5):236-43.
9. *CDC Sexually Transmitted Diseases Surveillance Statistics 2006*, 2006 report: [chlamydia](#); [gonorrhea](#); [syphilis](#).
10. Guttmacher Institute. “[Facts in Brief: Teenagers’ Sexual and Reproductive Health: Developed Countries](#).” July, 2001.
11. Weinstock H., et al. “[Sexually Transmitted Disease Among American Youth: Incidence and Prevalence Estimates 2000](#).” *Perspectives on Sexual and Reproductive Health* 2004;36 (1):6–10. These data include eight STDs — chlamydia; gonorrhea; syphilis; genital herpes simplex type 2; HPV; hepatitis B; trichomoniasis; and HIV. This research is based on an analysis of published surveillance studies that drew primarily on health department-required reports

filed by clinicians and on national surveys. Such data are less reliable than testing individuals directly for the presence of an infection and the researchers who assessed the studies considered the quality of most evidence only “fair.”

12. Chesson HW. “[The Estimated Direct Medical Cost of Sexually Transmitted Diseases Among American Youth 2000.](#)” *Perspectives on Sexual and Reproductive Health* 2004;36 (1):11–19. The estimate is based on 2001 dollars and includes the costs of eight STDs — chlamydia; gonorrhea; syphilis; genital herpes; HPV; hepatitis B; trichomoniasis and HIV.
13. Altman, LK, “[Sex Infections Found in Quarter of Teenage Girls.](#)” *The New York Times*, March 12, 2008.
14. Guttmacher Institute. “[State Policies in Brief: Sex and STI/HIV Education.](#)” April 1, 2008. See also Guttmacher Institute. “[In Brief: Facts on Sex Education in the United States.](#)” December 2006.
15. See the Web site of the [State Abstinence Education Program](#), which was created under Title V, Section 10 of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. The program is run by the Department of Health and Human Service’s Administration for Children and Families.
16. U.S. Government Accountability Office. “[Abstinence Education: Efforts to Assess the Accuracy and Effectiveness of Federally Funded Programs.](#)” Washington, DC: October 2006.
17. National Conference of State Legislatures. “[Highlights of FY 2009 Administration Budget Requests for Selected Programs.](#)” 2008.
18. See the Web site of the [Community-Based Abstinence Education Program](#). The program is run by the Department of Health and Human Service’s Administration for Children and Families.
19. Keckler, Charles. “[Statement By Charles Keckler, Acting Deputy Assistance Secretary for Policy and External Affairs, Administration for Children and Families, U.S. Department of Health and Human Services.](#)” Hearing: Domestic Abstinence-Only Programs: Assessing the Evidence. Hearing before the Committee on Oversight and Government Reform, U.S. House of Representatives, April 23, 2008.
20. See the Web site of the [Adolescent Family Life Program](#). The program is run by the Department of Health and Human Service’s Office of Population Affairs, which sits within the Office of Public Health and Science.
21. “[Committee Holds Hearing Assessing the Evidence of Domestic Abstinence-Only Programs.](#)” Hearing: Domestic Abstinence-Only Programs: Assessing

- the Evidence. Hearing before the Committee on Oversight and Government Reform, U.S. House of Representatives, April 23, 2008.
22. Blythe M. [“Testimony on Behalf of the American Academy of Pediatrics.”](#) Hearing: Domestic Abstinence-Only Programs: Assessing the Evidence. Hearing before the Committee on Oversight and Government Reform, U.S. House of Representatives, April 23, 2008.
 23. Guttmacher Institute. [“In Brief: Facts on Sex Education in the United States.”](#) December 2006.
 24. Office of Public Health and Science, Office of Populations Affairs. [“Family Planning.”](#) URL accessed June 3, 2008.
 25. *Medical News Today*. [“Iowa Gov. Culver Rejects Federal Funding for Abstinence-Only Education.”](#) March 4, 2008.
 26. Mathematica Policy Research, Inc. [“Impacts of Four Title V, Section 510 Abstinence Education Programs.”](#) Princeton, NJ: April 2007.
 27. U.S. Surgeon General. [“The Surgeon General’s Call to Action to Promote Sexual Health and Responsible Sexual Behavior.”](#) Washington, DC: July 9, 2001. For a discussion of how opponents and supporters responded to the “Call to Action,” see Kaiser Daily Women’s Health Policy, [“Surgeon General Releases Report on Sexual Health for Teens, Calls for Open Dialogue Between Adults, Youth,”](#) June 29, 2001.
 28. Hampton T. [“Abstinence-Only Programs Under Fire.”](#) *Journal of the American Medical Association*, May 7, 2008;299 (17);2013–5.
 29. Bleakley A, Hennessy M, Fishbein M. [“Public Opinion on Sex Education in U.S. Schools.”](#) *Archives of Pediatric Adolescent Medicine* 2006;160;1151–6.
 30. Kirby D. [“Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases.”](#) The National Campaign to Prevent Teen and Unplanned Pregnancy. Washington, DC. November 2007.
 31. See the National Campaign to Prevent Teen Pregnancy [Web site](#) for reports, fact sheets and other research, as well as information about the Putting What Works to Work initiative.
 32. Centers for Disease Control and Prevention. [“Sexually Transmitted Diseases Treatment Guidelines, 2006.”](#) Aug. 4, 2006.
 33. The HPV vaccine was approved shortly before the CDC issued its guidelines. The CDC’s Advisory Committee on Immunization Practices recommends that

girls be routinely vaccinated against HPV at age 11 or 12 or given a catch-up vaccine between the ages of 13 and 26 if they have not already been vaccinated. For a detailed discussion of the HPV vaccine, see GW's Rapid Public Health Policy Response Project paper, "[HPV Vaccination: Should It Be Recommended or Required?](#)," published January 2007. A vaccine is also available for hepatitis B, which is frequently transmitted sexually; vaccines for a number of other STIs are under study.

34. Eng TR, Butler WT, eds. [The Hidden Epidemic: Confronting Sexually Transmitted Diseases](#). National Academy of Sciences, 1997.
35. Guttmacher Institute. "[State Policies in Brief: Minors' Access to STI Services](#)." May 1, 2008.
36. Guttmacher Institute. "[State Policies in Brief: Minors' Access to Contraceptive Services](#)." May 1, 2008.
37. Humiston S, Rosenthal S. "[Challenges to Vaccinating Adolescents: Vaccine Implementation Issues](#)." *Pediatric Infectious Disease Journal*, June 2005; 24(6) supplement; 134-140.