



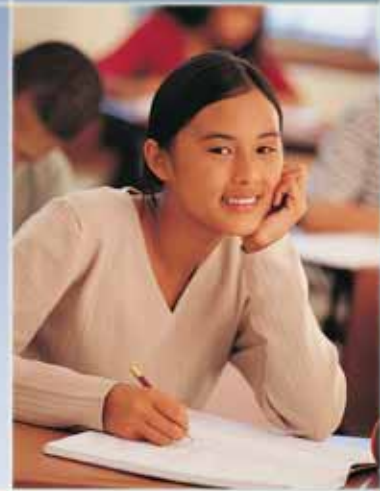
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics

Adolescent Health

in the United States, 2007



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Introduction

Adolescent Health in the United States, 2007 describes the health of the population 10–19 years of age. Because the transition to adulthood often continues through ages 20–24 years (young adults), data for young adults are presented in topic areas when comparable data were available and in charts where space allowed. For many figures, additional information on gender, race and Hispanic origin, and age is available in the accompanying data table to supplement the characteristics highlighted in the figure.

Adolescence is a period of accelerated growth and change that bridges the complex transition from childhood to adulthood. The second decade of life is often a turbulent period in which adolescents experience hormonal changes, physical maturation, and, frequently, opportunities to engage in risk behaviors. The patterns of behavior they adopt may have long-term consequences for their health and quality of life. Because of the rapid physical, cognitive, and emotional developments that take place during this age period, adolescence is also a time when many health problems may first emerge (1). Moreover, adolescents also experience special vulnerabilities, health concerns, and barriers to accessing health care.

Definitions of adolescence and the years encompassed vary. Adolescence is generally regarded as the period of life from puberty to maturity, the meanings of which, however, are often debated by health professionals. Many children begin puberty by the age of 10, although there is considerable individual variation in the developmental and maturation time line. During their teenage years, adolescents are learning financial, social, and personal independence, and they are expected to become capable of adult behavior and response. By the age of 19, most young people have completed high school and are experiencing new living situations and embarking on widely divergent paths—from college to military service to employment. They are completing their teenage years and entering the young adult realm, with new legal standing, responsibilities, and independence. The transition to adulthood can continue during the early twenties.

Adolescents have remarkable creativity, energy, and potential, and the teenage years are also a time of exploration, idealism, and cynicism. This period offers adolescents an opportunity to begin planning for their futures, to adopt healthy attitudes about risk behaviors, and to develop

meaningful roles in their communities. More teenagers now than ever before are making commitments to community service through volunteer activities. Some recent studies have found that adolescents who volunteer do better in school, feel more positive about themselves, and avoid risky behaviors such as using drugs (2).

Organization of *Adolescent Health in the United States, 2007*

This report from the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS) presents data on the current status of adolescent health. Many of the measures of health status are shown by single year of age or by 2- or 3-year age intervals to highlight the changes that occur in health status as adolescents move through this important developmental period. Summary measures combining 5- or 10-year age groups (the standard for analyses of childhood health events) do not adequately capture the wide variation in health status and the vast developmental differences between younger and older adolescents.

Racial and ethnic variation in adolescent health is discussed when the data sources allow for such analysis. Differences between sexes in some aspects of health status among adolescents become more apparent with age. These differences are presented when the data allow for such analysis and the differences are notable.

Socioeconomic status, as measured by family income, poverty status, or level of parents' education, is as strongly associated with the health of adolescents as it is with the health of persons of all ages in the United States (3). Differences in the life circumstances of high- and low-socioeconomic status adolescents and their families influence health and health risk behavior in a number of ways. Low family income decreases the ability to afford comfortable housing, healthy food, and appropriate health care, and it also reduces the opportunity to live in a safe and healthy environment. To fully assess the impact of socioeconomic factors on the health of adolescents, the examination of adolescent school and family environments should be included, as well as their broader sociostructural environments (4). A comprehensive presentation on socioeconomic status and adolescent health is beyond the scope of this report. However, information on selected social determinants of health (Figures 2 and 3) and the strong

relationship between socioeconomic status and adolescent health has been documented in several charts (Figures 5, 6, 34, and 40).

Characterizing the health of adolescents requires not only measuring mortality and morbidity but also describing other indicators of adolescent health. Risk behaviors—including tobacco use, alcohol and other drug use, sexual behavior, physical inactivity, unhealthy dietary behaviors, and behaviors that contribute to unintentional and intentional injuries—may have a profound effect on current and future health. Reproductive health is a key element in adolescent health. The decision to become sexually active can have long-term and permanent consequences for some adolescents.

Healthy People 2010, a nationwide health promotion and disease prevention agenda that sets specific health objectives for the year 2010, includes objectives related to adolescent health (5). Of the 107 objectives that pertain to adolescents and young adults, 21 objectives have been designated as critical adolescent objectives. Appendix I, *Healthy People 2010*, discusses objectives for adolescent health in *Healthy People 2010* and includes a table that lists these objectives with baseline and current measures. The table also references the related *Adolescent Health in the United States, 2007* figures.

This report is divided into sections on population characteristics, health status, violence and victimization, reproductive health, risk behaviors, and health care access and utilization. The 40 figures and accompanying text are followed by technical notes and data tables for each figure. Data tables include estimates in the figures plus standard errors when available, and, for some charts, additional related data are presented. The technical notes describe in further detail information about methods used that is not covered in Appendix II, *Data Sources*.

Population Characteristics

The first section of this report describes selected sociodemographic characteristics of the adolescent population. One of the most notable characteristics is the changing racial and ethnic composition of this population (Figure 1). Today, approximately 61 percent of adolescents are non-Hispanic white. By 2050, this proportion is estimated to have decreased to 44 percent. Other sociodemographic measures, including family structure, poverty status, and dropout rates describe the economic circumstances of adolescents. Family

structure affects adolescents' economic well-being (Figure 2), and adolescents who drop out of high school will have fewer opportunities to succeed in the work force than their peers who complete high school (Figure 3). Educational achievement is one of the most important indicators of lifetime economic opportunity and is also associated with health status.

Health Status

The second section of *Adolescent Health in the United States, 2007* presents selected measures of physical, dental, and mental health status. Although adolescents do have physical health problems, they are at greatly reduced risk for life-threatening illnesses that affect the very young or very old. Some adolescents experience chronic health conditions that limit their activity or require special education services (Figure 4), and a rapidly increasing percentage of the adolescent population is overweight (Figure 5a). The negative effects of poverty on dental health status as measured by untreated dental caries are apparent in Figure 6.

Many of the normal transitions of life, such as the adjustment to the physical and biological changes to their bodies and new levels of independence and responsibility, can be stressful for teenagers. Although mood swings are a common feature of adolescence, more serious suicidal thoughts or suicide attempts are indicators of a mental or emotional health problem (Figure 7). To further assess adolescent health status, data on selected aspects of health care utilization were analyzed (Figures 8–13). These sources identify health events for which emergency department (ED) care or inpatient hospital care was received and also provide information on leading diagnoses among adolescents.

Injuries are a major cause of ED visits among adolescents. In 2002–2004, four external causes of injury accounted for over 60 percent of all initial injury-related ED visits: falls, being struck by or against an object or person, cuts, and motor vehicle crashes (Figure 10). The most common injury diagnoses were fractures, sprains and strains, open wounds, and contusions (Figure 11). Upper respiratory conditions, asthma, and abdominal or gastrointestinal conditions were among the leading diagnoses for adolescents' ED visits not related to an injury in 2002–2004 (Figure 12). Alcohol-related visits to EDs increase with age and are substantially higher for male adolescents and young adults than for their female counterparts (Figure 13).

Hospital discharge rates vary by gender, chiefly because of the large number of hospitalizations for pregnancy-related causes among female adolescents (Figure 14). Pregnancy-related discharges accounted for almost one-half of all hospital discharges among female adolescents in 2002–2004 (Figure 14). Asthma, psychoses, fractures, and poisoning were among the leading first-listed diagnoses for hospitalized adolescents in 2002–2004, and accounted for almost one-fifth of all hospital discharges (Figure 15).

Mortality rates are a measure of the most serious adolescent health events. Leading causes of injury mortality are presented in Figures 16–17. Motor vehicle traffic-related injuries and firearm-related injuries are the two leading causes of death among adolescents 10 to 19 years of age (Figure 17). Changes in mortality by single year of age across the adolescent period are significant and striking.

Violence and Victimization

The third section of this report presents selected measures on violence and victimization. Adolescents are the victims of violent acts, including rape or sexual assault, aggravated and simple assault, and robbery (Figure 18a). Over the past two decades, crime victimization rates among adolescents and young adults have changed considerably, declining almost two-thirds between 1995 and 2005 (Figure 18b). Adolescents of both sexes are victims of dating violence (being hit, slapped, or physically hurt on purpose by a boyfriend or girlfriend) (Figure 19), and both sexes report having had forced intercourse (Figure 19).

Reproductive Health

The onset of puberty is one of the benchmarks of adolescence. For the first time in their lives, adolescents are facing issues and decisions about their own sexuality. The majority of today's adolescents become sexually active during their teenage years and are at risk for health consequences associated with sexual activity, such as pregnancy or sexually transmitted disease. An important measure of adolescent reproductive health is contraceptive use (Figure 20). Oral contraceptives and condoms are the most common methods of contraception used by female adolescents. Trends in pregnancy rates among female adolescents are shown in Figure 21a, and pregnancy rates by race and Hispanic origin and pregnancy outcome are shown in Figure 21b. Birth rates among adolescents increase with age and vary considerably

by race and Hispanic origin (Figure 22). Birth rates among adolescents have declined markedly between 1991 and 2004.

Sexually transmitted diseases (STDs) are the most commonly reported infectious diseases among sexually active adolescents, and chlamydia and gonorrhea are the most common bacterial causes of STDs (Figure 23). Young people in the United States are at persistent risk for human immunodeficiency virus (HIV) infection, and sexual activity and drug use among adolescents place them at high risk for HIV transmission (Figure 24) (6).

Risk Behaviors

Adolescents today are confronting societal and peer-related pressures to have sex at earlier ages and to use tobacco, alcohol, or other drugs. Many adolescents are engaging in risk behaviors that are harmful or dangerous to themselves and others, with consequences to their health and well-being that may be immediate or long term. Many of the patterns of behavior initiated during the adolescent years are associated with adult morbidity and mortality.

Approximately one-half of adolescents engage in some form of sexual contact, most commonly oral sex or vaginal intercourse (Figure 25b). The likelihood that an adolescent has ever had heterosexual vaginal intercourse increases with age (Figure 25a). Among those adolescents who have been sexually active, a majority have had intercourse with more than one partner in their life (Figure 26).

Smoking has serious long-term effects on health. Most adults who are addicted to tobacco began smoking as adolescents (7). Current and frequent smoking among high school students is shown in Figure 27. Alcohol is the most commonly used psychoactive substance during adolescence. Alcohol use, including heavy alcohol use and binge alcohol use, are shown in Figure 28.

Drug use by adolescents can have immediate and long-term health consequences. Marijuana is the most commonly used illicit drug among high school students. In 2005, almost 4 in 10 high school students had used marijuana in their lifetime (Figure 30).

As adolescents become more independent, they are at risk from behaviors associated with riding in and driving cars. Among high school students in 2005, riding with a driver who had been drinking was more common than driving after drinking alcohol (Figure 29b).

Weapon carrying is associated with the most serious injuries resulting from violence. Carrying a gun or other weapon (for example, a knife or club) is more common among male high school students than among female high school students (Figure 31).

Physical activity provides important health and emotional benefits for adolescents. Physical activity, along with a healthy diet, plays an important role in the prevention of overweight and obesity. Participation by high school students at the currently recommended level of physical activity and participation in moderate to vigorous physical activity are shown in Figure 32.

Dietary risk behaviors can have serious health consequences for adolescents. Adolescents who go on extreme diets are more likely to smoke, drink alcohol, use marijuana, and attempt suicide, and they are less likely to make healthy choices, such as exercising moderately and eating five servings of fruits and vegetables each day (8). Dietary risk behaviors include fasting (for 24 hours or more), vomiting, and taking laxatives to lose weight or keep from gaining weight (Figure 33).

Health Care Access and Utilization

Lack of health insurance is associated with diminished access to and use of preventive health services. Adolescents from poor and near poor families are more likely to be uninsured than those from nonpoor families (Figure 34). Routine health care for adolescents includes physical examinations, preventive interventions and education, observations, screening, and sick care. Uninsured adolescents are less likely to receive health care than those with coverage (Figure 35).

The out-of-pocket cost associated with receiving health care is an important measure of health care access. Out-of-pocket expenses for health care and prescribed medicine are shown in Figures 36 and 37. For adolescents with special health care needs (SHCN), consistent access to a wide range of health care services is particularly important. Among the most commonly needed services are dental care, specialist care, preventive care, prescription medication, and eyeglasses or vision care (Figure 38b). Insurance status is strongly associated with the proportion of adolescents with SHCN who have one or more unmet health care needs (Figure 38a).

Adolescents and young adults use routine family planning and reproductive health medical services in a variety of settings, including private physicians' offices and clinics (Figure 39). Sexual and reproductive health services encompass three main areas: contraceptive services, maternal health services, and services related to sexually transmitted diseases.

Oral health is an important component of adolescent health. Professional dental care on a routine basis may prevent oral disease or disclose existing disease in its early stages. The proportion of adolescents who had at least one dental visit in the past year varies by race and Hispanic origin and insurance status (Figure 40).

Chartbook Data Sources

The data presented in *Adolescent Health in the United States, 2007* are from nationally representative health surveys or vital statistics. One of the data sources, the Youth Risk Behavior Survey (YRBS), is a survey of high school students in grades 9 through 12. Figures that are based on the YRBS present data for adolescents by grade level rather than by age. Measures of risk behavior in YRBS are limited to the population of adolescents enrolled in and attending high school. Consequently, the measures of risk behaviors in this report may be lower than if all high school-aged adolescents were included in the survey. In 2004, 10 percent of adolescents and young adults 16–24 years of age were not enrolled in school and had not earned a high school credential (i.e., diploma or equivalent, such as a General Educational Development (GED) certificate). These adolescents and young adults are at increased risk of alcohol, drug, and tobacco use and are more likely to engage in violence-related behavior (9).

For data from the following systems, multiple years are combined to increase the reliability of estimates: the NCHS's National Hospital Ambulatory Medical Care Survey (2002–2004), National Hospital Discharge Survey (2002–2004), National Vital Statistics System, Mortality (2002–2004), National Health Interview Survey (2004–2005—for chronic health conditions causing limitation of activity), and the National Health and Nutrition Examination Surveys (2001–2004), and CDC's National Center for HIV, STD, and TB Prevention AIDS Surveillance System (2000–2004).

In national surveys that are not specifically designed to study adolescents, the number of observations may not be large enough to analyze differences among age, gender, and race

or ethnicity groups. For certain topics, data are presented for all races combined in the chart, and significant race differences (if they exist) are discussed in the accompanying text. See “[Technical Notes](#)” and [Appendix II](#) for more detailed descriptions of data sources.

Other Sources of Data

In addition to the data sources used in this chartbook, we would like to acknowledge other sources of available data on adolescent health. Each of the following sources makes a unique contribution to the collective body of knowledge on adolescent health. The National Longitudinal Study of Adolescent Health (National Institutes of Health) was designed to study the influences on adolescent health and health behaviors, with an emphasis on the social contexts in which adolescents live (10). Monitoring the Future (National Institute on Drug Abuse) is a nationally representative, annual survey of 8th-, 10th-, and 12th-grade students’ values, behaviors, and lifestyle orientations (11). The National Adolescent Health Information Center (NAHIC) at the University of California, San Francisco, serves as a national resource for adolescent health information and research (12) and is funded by a grant from the Maternal and Child Health Bureau, Health Resources and Services Administration. NAHIC works to ensure the integration, synthesis, coordination, and dissemination of adolescent health-related information. The Kaiser Family Foundation has published two recent reports on adolescents. The first report, *Generation M: Media in the Lives of 8–18 Year-olds*, examined adolescent media use using a nationally representative survey of young people (13). The second report, *Generation Rx.com: How Young People Use the Internet for Health Information*, found that a majority of teenagers and young adults (ages 15–24 years) use the Internet to search for health information (14). Web pages designed for teenagers are available from several sources, including Medline (15) and the U.S. Food and Drug Administration (16). The Centers for Disease Control and Prevention provides an informative website on adolescent health with links to key resources (17).

Data Gaps

Available data sources present several limitations for studying adolescent health. In some sources of data, adolescents may not be considered a separate group. They may be included in tabulations for children under 15 or under 18 years of age, or

they may be included with young adults ages 15–24 years. In such cases, trends pertaining specifically to adolescents cannot be separated from those pertaining to children or young adults. In data sources that do categorize adolescents separately, inconsistencies are present in the age ranges employed, making comparisons of data sources difficult. Furthermore, data for adolescents are often not available by single year of age. A major focus of this chartbook is to address this limitation by presenting data by single year of age when possible.

Another obstacle in assessing the health status of the adolescent population is the lack of information on detailed racial and ethnic minority groups. The socioeconomic status and cultures of racial and ethnic groups may vary widely and have important health consequences. In this report, the most detailed race and ethnicity categories available are presented, given the constraints of numbers of observations. For many data sources on adolescent health, information on the socioeconomic status of adolescents is not available. Educational attainment is often used as a measure of socioeconomic status for adults, but it is not a useful measure for an age group comprising people who have not yet completed their education. School-based surveys may collect health information directly from adolescents who are not knowledgeable about their family’s income or other measures of socioeconomic status.

Several areas exist in which the special needs or problems of adolescents have been recognized. However, national data are not available to more fully explore these areas. Some of those issues are briefly discussed here.

- Adolescents have an increased sensitivity about their bodies and the changes in shape and weight that accompanies maturation. Some adolescents may develop eating disorders, such as anorexia or complications, yet these disorders often go undetected and untreated. The prevalence of eating disorders is particularly difficult to measure because of the underlying denial and secretive nature of the behavior.
- Although adolescent sexual activity has been well-documented, the extent to which sex is consensual has not been fully evaluated. Because many myths concerning rape persist among adolescents, acquaintance rape and date rape are often unreported and untreated (18).
- Adolescents who are runaways and “living on the streets” are not included in national survey data. These young people are especially vulnerable and may have unique health care

needs. Similarly, incarcerated youth are not included in national survey data.

■ Adolescents with alternative lifestyles and sexual identity (i.e., gay, lesbian, bisexual, and transgender) face unique social and health issues. National data are not available for these populations.

Conclusion

The health and risk behaviors of adolescents have consequences for their current and long-term well-being as well as consequences for society. Today's adolescents are the future parents, leaders, and work force of the United States.

This report examines a variety of current measures of health status, risk behavior, and health care from national data sources. The differences in health status between younger and older adolescents are documented. The health of the adolescent population also varies by gender, race and ethnicity, and socioeconomic status. Understanding patterns of health among adolescents requires attention to differences in the population and recognition of the economic and racial disparities that exist.

Overall, the majority of adolescents are healthy when assessed by traditional measures of morbidity and mortality. Many of the health threats for adolescents are primarily social and behavioral. Health-risk behaviors often are established during youth, extend into adulthood, and are interrelated (19). The most costly and widespread adolescent health problems—unintended pregnancy, sexually-transmitted infections, violence, suicide, unintended injuries, and the use of alcohol, tobacco, and other drugs— are potentially preventable (1). Adolescent risk behaviors have been linked to subsequent morbidity or mortality. Intervention and prevention strategies may prevent or reduce adolescent and adult morbidity and mortality and promote a healthier transition from childhood to adulthood.

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Population

Race and Ethnicity

Changes in the racial and ethnic composition of the population have important consequences for the health of the adolescent population because many of the measures of risk behavior, health status, and disease differ significantly by race and ethnicity.

■ In 2005, over 42 million residents of the United States were adolescents 10–19 years of age, constituting approximately 14 percent of the U.S. population. Three-fifths of the adolescent population was non-Hispanic white, and two-fifths consisted of other racial and ethnic groups (Figure 1).

■ The race and Hispanic origin distribution of the adolescent population, like that of the general population, changed considerably over the past 20 years, and projections of the population indicate that certain racial and ethnic groups will continue to expand. Hispanic, black or African American, American Indian or Alaska Native, and Asian or Pacific Islander adolescents, as well as adolescents who are of two or more races, will constitute 56 percent of the adolescent population by the year 2050.

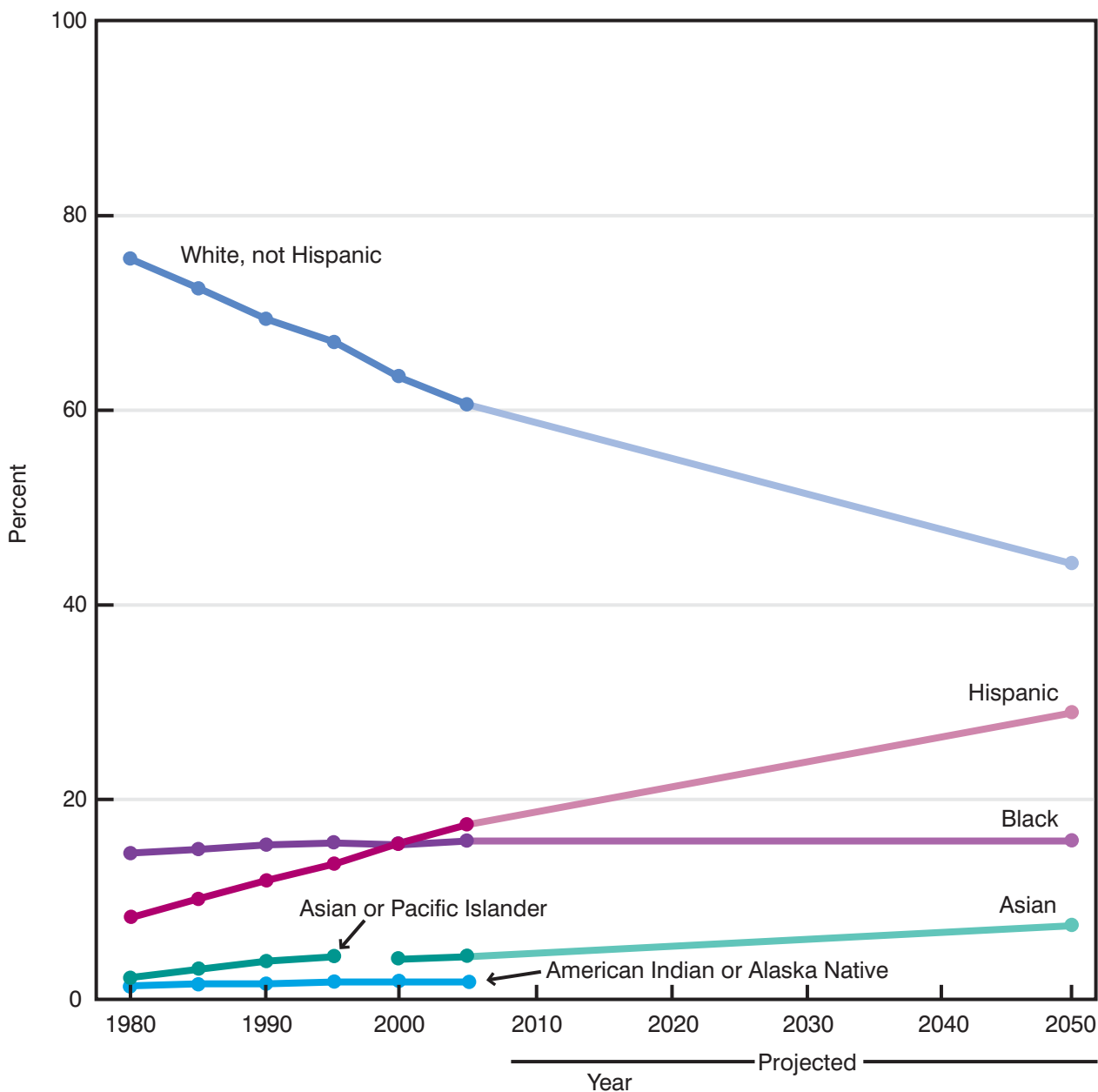
■ Increasing racial and ethnic diversity in the general population is reflected in changes in the adolescent population. Hispanic adolescents have recently surpassed black adolescents as the largest minority group of adolescents, and the proportion of adolescents who are Hispanic is expected to increase considerably by 2050.

■ A large influx of immigrants has contributed to changes in the population distribution. In 1990, 19 percent of adolescents lived in immigrant families—that is, the adolescent was an immigrant or had immigrant parents (1). By 2004, the proportion of adolescents in immigrant families had increased to 22 percent (2). Most future growth in the U.S. population is expected to occur primarily through immigration and higher fertility rates among minority populations (1,3).

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Figure 1. Race and Hispanic origin of adolescents 10–19 years of age: United States, 1980–2050



NOTES: Data for 1980–1995 are for Asian or Pacific Islander persons; data for 2000–2050 are for Asian person only. Population projections are not available for American Indian or Alaska Native persons. Persons of

Hispanic origin may be of any race. See data table for data points and additional notes.

SOURCE: U.S. Census Bureau.

Poverty and Family Structure

Poverty during adolescence has immediate and lasting negative consequences. Adolescents in families who are poor are more likely than adolescents in other families to drop out of school (1), to become teenage parents (2), and to earn less and be unemployed more frequently as adults (3). Furthermore, poverty is strongly associated with reduced access to health care and poorer health status for adolescents. The structure of an adolescent's family is generally linked to the economic resources and support available to that adolescent.

- In 2005, almost 16 percent of all adolescents 10–17 years of age lived in families with incomes below the poverty threshold (\$19,971 a year in 2005, for a family of four), whereas an additional 20 percent of adolescents lived in families near poverty (one to two times the poverty threshold) (Figure 2).

- Adolescents who live in a household with one parent only are substantially more likely to have a family income near or below the poverty line than are adolescents living in a household with two parents.

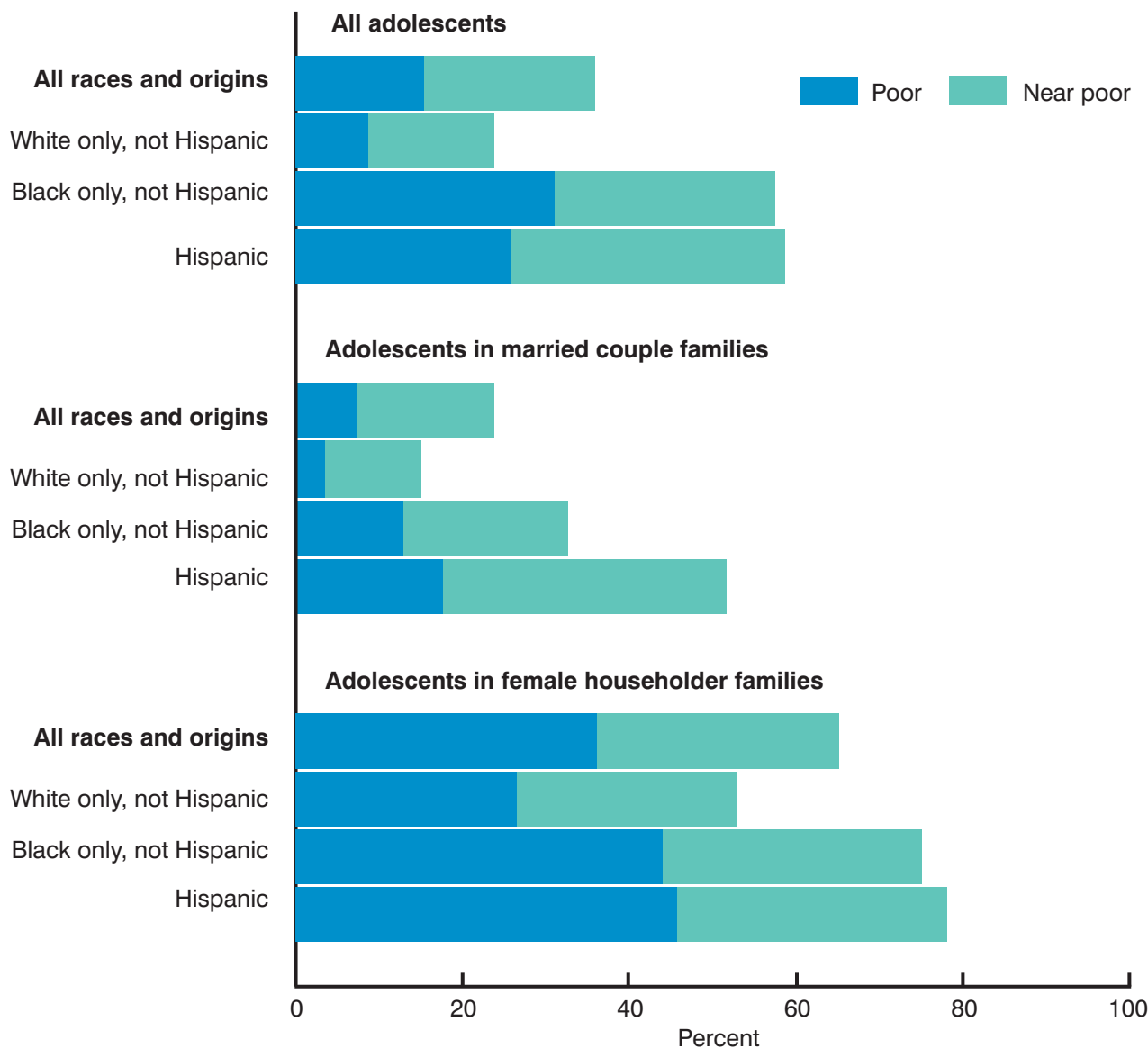
- One-parent households headed by women experience the highest rates of poverty for a variety of reasons, including pay differentials and lack of paternal financial support. In 2005, 36 percent of all adolescents in female head-of-household families were living in poverty, compared with 7 percent of adolescents in two-parent families. Non-Hispanic black and Hispanic adolescents in female head-of-household families were 1.7 times as likely to have a family income below the poverty line as their non-Hispanic white counterparts.

- In 2005, 25 percent of non-Hispanic white adolescents lived with a single parent (mother or father), compared with 60 percent of non-Hispanic black adolescents and 35 percent of adolescents of Hispanic origin (4).

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Figure 2. Poverty status among adolescents 10–17 years of age, by family structure and race and Hispanic origin: United States, 2005



NOTES: Poverty status is derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor

families have income of 200 percent of the poverty threshold or more. Persons of Hispanic origin may be of any race. See data table for data points.

SOURCE: U.S. Census Bureau, Current Population Survey, March Supplement 2006.

Dropout Rates

Although the majority of adolescents complete high school, students who drop out of school have fewer opportunities than students who complete high school to succeed in the work force or to assume a fully functional place in society. High school dropouts have lower earnings, experience more unemployment, and are more likely to receive government assistance or be in prison than their peers who complete high school or college (1). Out-of-school adolescents are more likely than those in school to smoke; use alcohol, marijuana, or cocaine; be involved in a physical fight; and be sexually active (2). Among adults aged 25 years and over, dropouts reported worse health than did those who completed high school, regardless of income (3).

The status dropout rate is a measure of the proportion of the civilian noninstitutionalized population 16–24 years of age who are not in high school and who have not earned a high school credential—either a diploma or an equivalency credential such as a GED certificate. Status dropout rates measure the extent of the dropout problem for a population and can be used to estimate the need for further education and training in that population.

- In 2004, 10.3 percent of adolescents and young adults 16–24 years of age were not enrolled in school and did not have a high school credential (Figure 3). Dropout rates declined gradually between 1972 and 2004, from 15 percent to a low of 10 percent in 2003, where the rate remained in 2004 (3).

- The status dropout rate increases with age. In 2004, adolescents 18 years of age and over were two to three times as likely to have dropped out as were those ages 16–17 years.

- The status dropout rate is higher for males than for females. In 2004, almost 12 percent of males ages 16–24 years were high school dropouts, compared with 9 percent of females (data table for Figure 3). Although males constitute one-half of the population, they account for 57 percent of the dropouts in this age group.

- Non-Hispanic black and Hispanic adolescents and young adults are more likely than non-Hispanic white adolescents and young adults to have dropped out of high school. In 2004, 7 percent of non-Hispanic white adolescents 16–24 years of age were not enrolled in school and had not completed high school, compared with 12 percent of non-Hispanic black and 24 percent of Hispanic adolescents.

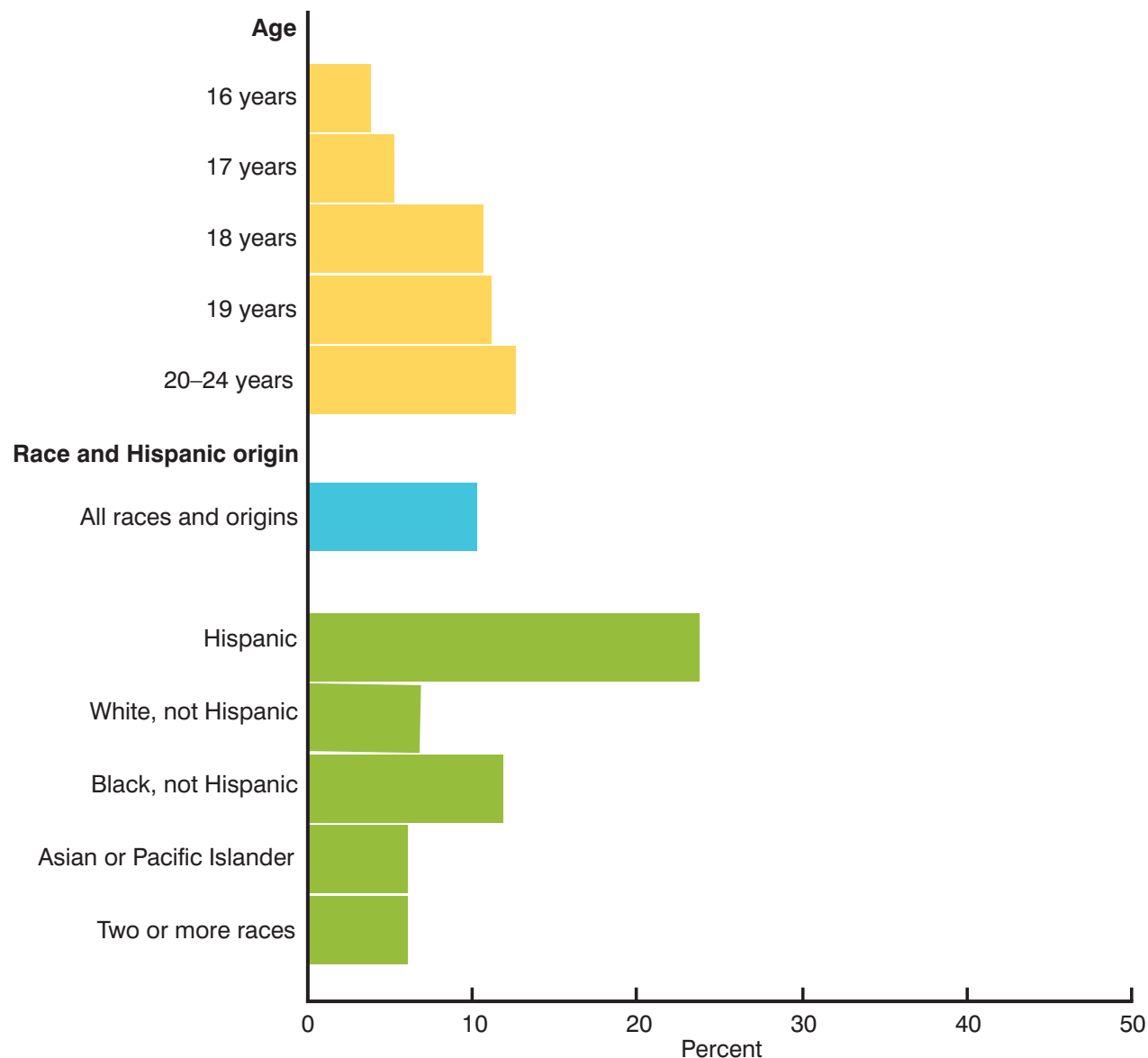
Asian and Pacific Islander adolescents had the lowest dropout rate among all racial and ethnic groups in 2004, with a dropout rate of less than 4 percent.

- The majority of students who drop out of high school go on to earn a high school diploma or alternative credential within 8 years (4).

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Figure 3. Status dropout rates among adolescents and young adults 16–24 years of age, by age and race and Hispanic origin: United States, 2004



NOTES: The status dropout rate is the percentage of civilian noninstitutional population 16–24 years of age who are not in high school and have not earned a high school credential, irrespective of when they dropped out. Persons who reported only one race are included in single-race categories; persons who reported more than one race shown as having two or more and are not included in single categories.

Persons of Hispanic origin may be of any race or racial combination. See data table for data points, data by gender and region, standard errors, and additional notes.

SOURCE: U.S. Census Bureau, Current Population Survey, October Supplement 2004. Tabulated by the U.S. Department of Education, National Center for Education Statistics.

Health Status

Limitation of Activity

Limitation of activity due to chronic physical, mental, or emotional conditions is a broad measure of health and functioning that gauges an adolescent's ability to undertake age-appropriate activities. Schoolwork is the primary activity for adolescents 10–17 years of age.

The National Health Interview Survey (NHIS) identifies adolescents with activity limitation through questions about specific limitations in walking, memory, self-care, and other activities, and also through a question concerning current use of special education services. An adolescent is classified as having an activity limitation due to a chronic condition if the limitation is caused by a chronic physical, mental, or emotional problem. Estimates of the number of adolescents with an activity limitation may differ depending on the type of limitations included and the methods used to identify them (1).

- In 2004–2005, approximately 9 percent of adolescents 10–17 years of age had a limitation of activity due to a chronic health condition.

- Learning disabilities and Attention Deficit Hyperactivity Disorder (ADHD or ADD) were among the most frequently mentioned chronic conditions causing activity limitation (Figure 4) in 2004–2005. Learning disabilities are disorders that affect the ability to understand or use spoken or written language, do mathematical calculations, coordinate movements, or direct attention (2). The most common treatment for learning disabilities is special education. Adolescents with ADHD may have impaired functioning in multiple settings, including at home, at school, and in relationships with peers. This disorder can have long-term adverse effects (3).

- Approximately one-fifth of adolescents with an activity limitation had more than one condition causing activity limitation. The most common combinations of causal conditions were learning disability and ADHD; learning disability and speech problems; and ADHD and other mental, emotional, or behavioral problems.

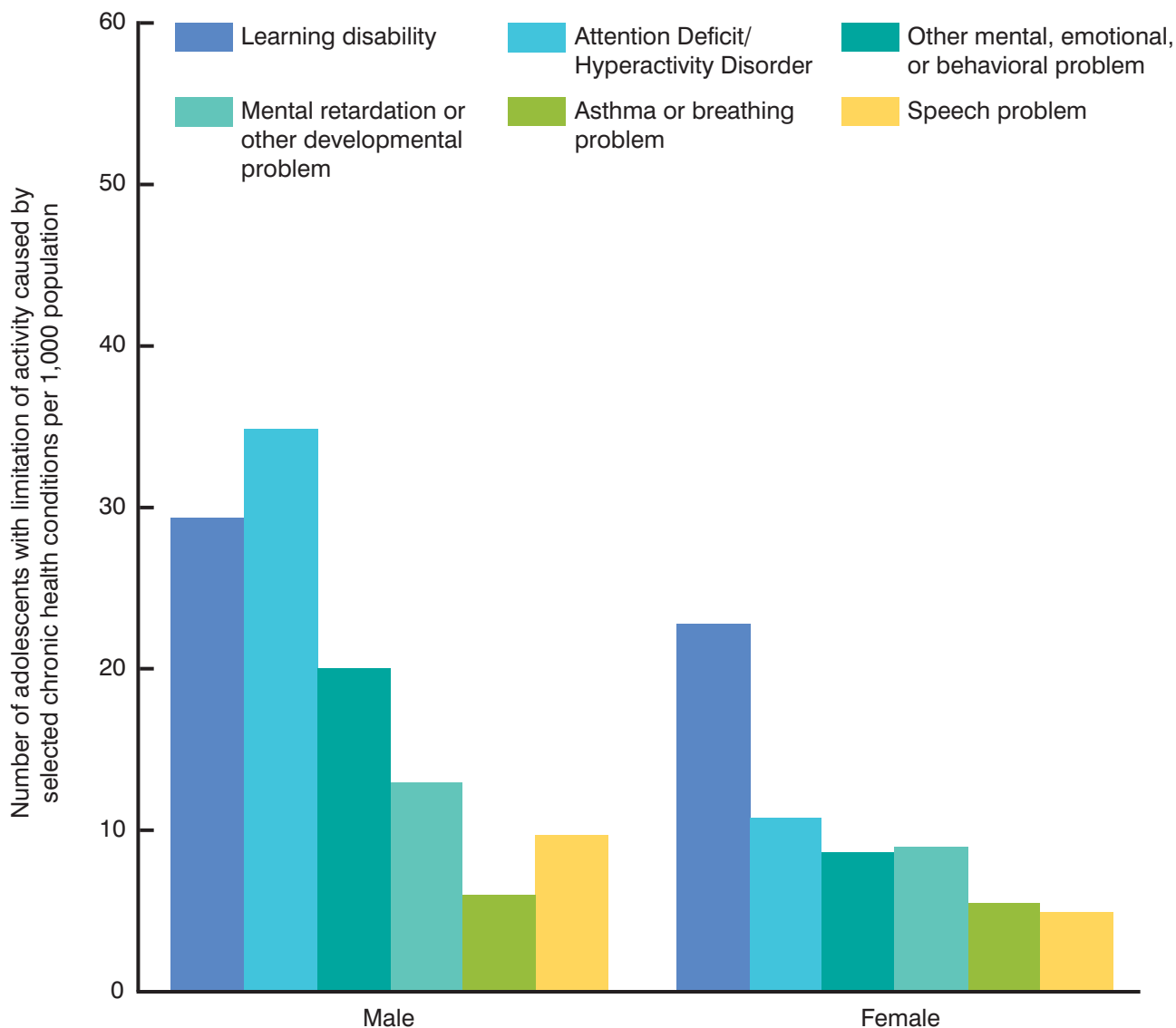
- Limitation of activity varies by gender. In 2004–2005, male adolescents were more than three times as likely to have limitations due to ADHD as were female adolescents, and males were more than twice as likely to have limitations due

to mental, emotional, or other behavioral problems. Physiological, maturational, behavioral, and social differences between boys and girls have been suggested as explanations for the higher prevalence of activity limitation in boys (4).

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Figure 4. Limitation of activity caused by selected chronic health conditions among adolescents 10–17 years of age, by gender: United States, average annual 2004–2005



NOTES: Data are for noninstitutionalized adolescents. Adolescents with limitation of activity caused by chronic health conditions were either identified by current use of special education or by a limitation in their ability to perform activities because of a chronic physical, mental, or emotional problem. These conditions are not mutually exclusive: an adolescent

may have more than one chronic health condition. See data table for data points, data by race, origin, and poverty status, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Overweight

Overweight and obesity have serious health consequences among adolescents, increasing the risk of high cholesterol, hypertension, and diabetes (1). Diet, physical inactivity, genetic factors, environment, and health conditions all contribute to overweight in adolescents.

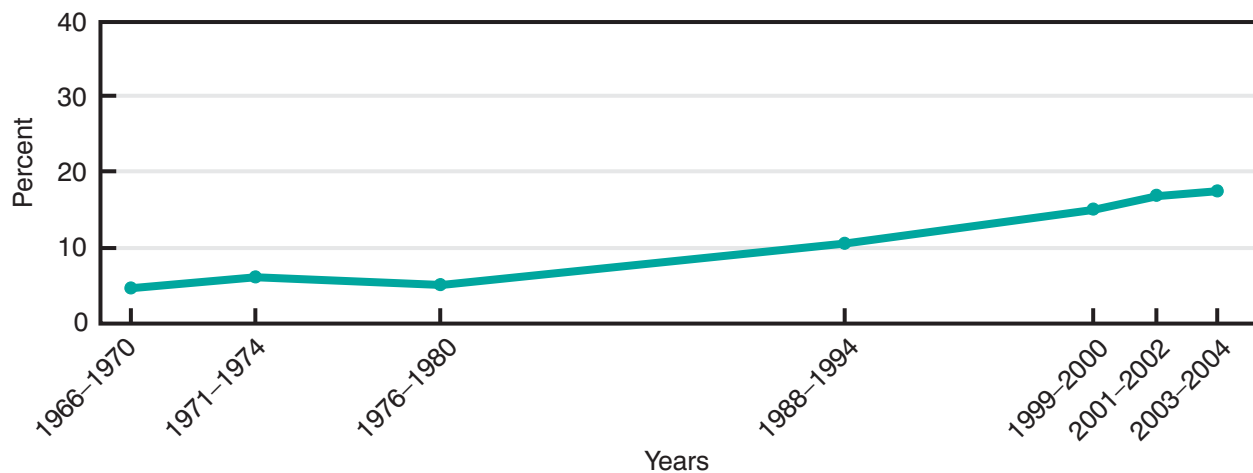
- In 2001–2004, 17 percent of adolescents 12–19 years of age were overweight (Figure 5a). The percentage of adolescents who are overweight has more than tripled since 1980.
- The percentage of adolescents who are overweight varies by race, Hispanic origin, and gender (Figure 5b). In 2001–2004, non-Hispanic black female adolescents were more likely to be overweight than non-Hispanic white and Mexican American female teenagers. Among male adolescents, there were no significant differences in overweight by race and Hispanic origin.
- Overweight adolescents have a 70 percent chance of becoming overweight or obese adults. This probability increases to 80 percent if at least one parent is overweight or

obese (2). Overweight or obese adults are at risk for a number of health problems including heart disease, type 2 diabetes, high blood pressure, and some forms of cancer. Type 2 diabetes, previously considered an adult disease, has increased in children and adolescents (2).

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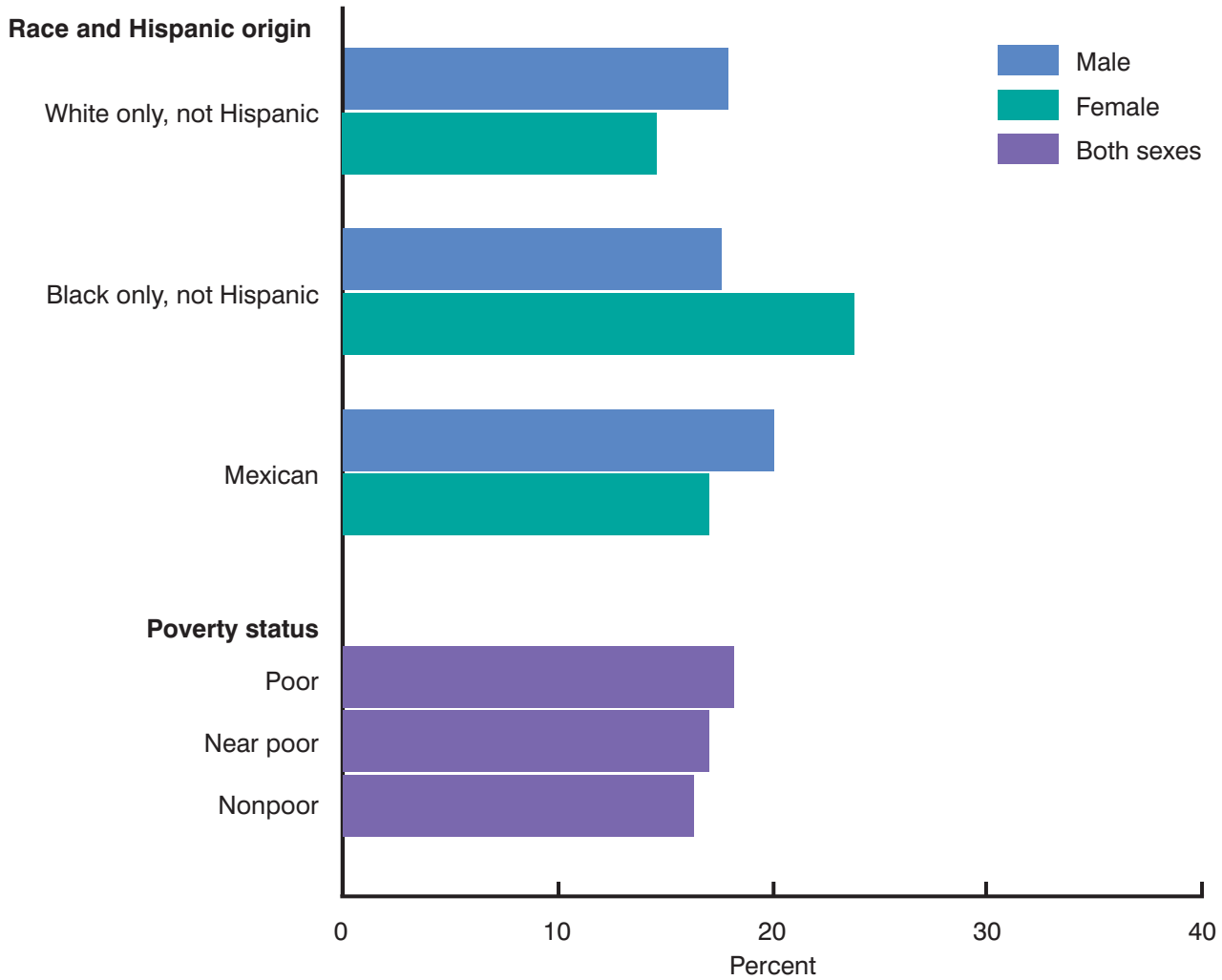
Figure 5a. Overweight among adolescents 12–19 years of age: United States, selected years 1966–1970 through 2003–2004



NOTES: Overweight is defined as body mass index (BMI) at or above the gender- and age-specific 95th percentile BMI cutoff points from the 2000 CDC Growth Charts. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey.

Figure 5b. Overweight among adolescents 12–19 years of age, by gender, race and Hispanic origin, and poverty status: United States, average annual 2001–2004



NOTES: Overweight is defined as body mass index (BMI) at or above the gender- and age-specific 95th percentile BMI cutoff points from the 2000 CDC Growth Charts. Persons of Mexican origin may be of any race. Poverty status is derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of

the poverty threshold; nonpoor families have income of 200 percent of the poverty threshold or more. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey.

Untreated Dental Caries

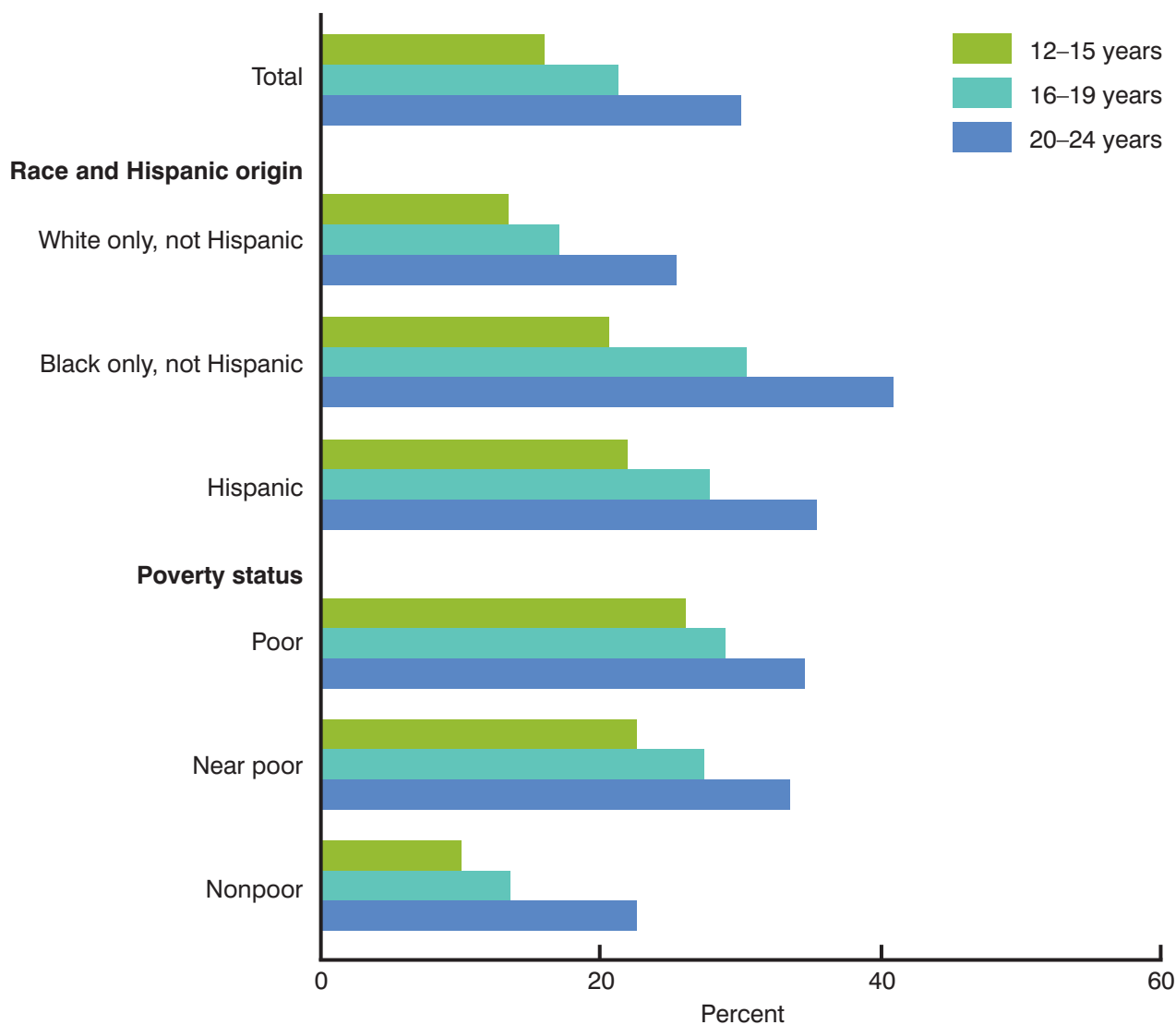
Untreated dental caries or tooth decay can negatively affect the overall quality of life for adolescents. Dental caries are bacterial infections, which, if left untreated, can advance and cause severe pain and possible tooth loss. Untreated cavities may also cause dysfunction, absence from school, underweight, and poor appearance (1).

- In 2001–2004, 23 percent of adolescents and young adults had at least one untreated caries lesion or active tooth infection. The proportion of young adults 20–24 years with untreated dental caries was higher than that of adolescents 12–15 and 16–19 years of age (Figure 6).
- Lower family income is associated with a higher rate of untreated dental caries. In 2001–2004, poor and near poor adolescents were twice as likely to have untreated dental caries as nonpoor adolescents.
- Racial differences are also apparent in the proportion of adolescents and young adults with untreated dental caries. Non-Hispanic black and Mexican American adolescents and young adults were more likely to have untreated dental caries than their non-Hispanic white counterparts.
- Dental visits are necessary to treat decayed teeth. In 2005, 71 percent of adolescents and young adults had a dental visit in the past year (see Figure 40).

Reference

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Figure 6. Untreated dental caries among adolescents 12–19 years of age and young adults 20–24 years of age, by age group, race and Hispanic origin, and poverty status: United States, average annual 2001–2004



NOTES: Data are based on dental examinations of a sample of the civilian noninstitutionalized population. Persons of Mexican origin may be of any race. Poverty status is derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent

of the poverty threshold; nonpoor families have income of 200 percent of the poverty threshold or more. See data table for data points, data by gender, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey.

Suicide Ideation and Attempts

In 2004, suicide was the third leading cause of death among adolescents 13–19 years of age. In addition, many teenagers seriously consider suicide without attempting it, or they attempt but do not complete suicide. Factors influencing suicidal thoughts may include depression, feelings of hopelessness or worthlessness, and a preoccupation with death (1). Factors that may contribute to adolescent's attempting suicide include a history of previous suicide attempts, a family history of suicide, alcohol or drug abuse, and a stressful life event or loss (2). Substance abuse or dependence can escalate suicidal thoughts to suicide attempts (3).

■ In 2005, about one-fifth of all high school students reported seriously considering suicide or attempting suicide during the previous 12 months (data table for Figure 7). About one-half of all students who seriously considered suicide actually attempted suicide (8 percent of all students). About 2 percent of all students reported having an injurious suicide attempt that resulted in an injury, poisoning, or overdose that was treated by a doctor or nurse.

■ Female students were substantially more likely to consider suicide than male students in all racial or ethnic and grade level subgroups (Figure 7).

■ Among students in grades 9–11, female students were significantly more likely to attempt suicide than male students were. There was no significant difference in the rate of suicide attempts between male and female students in 12th grade. In contrast, the rate of completed suicides was significantly higher for male adolescents than for female adolescents (see Figure 16).

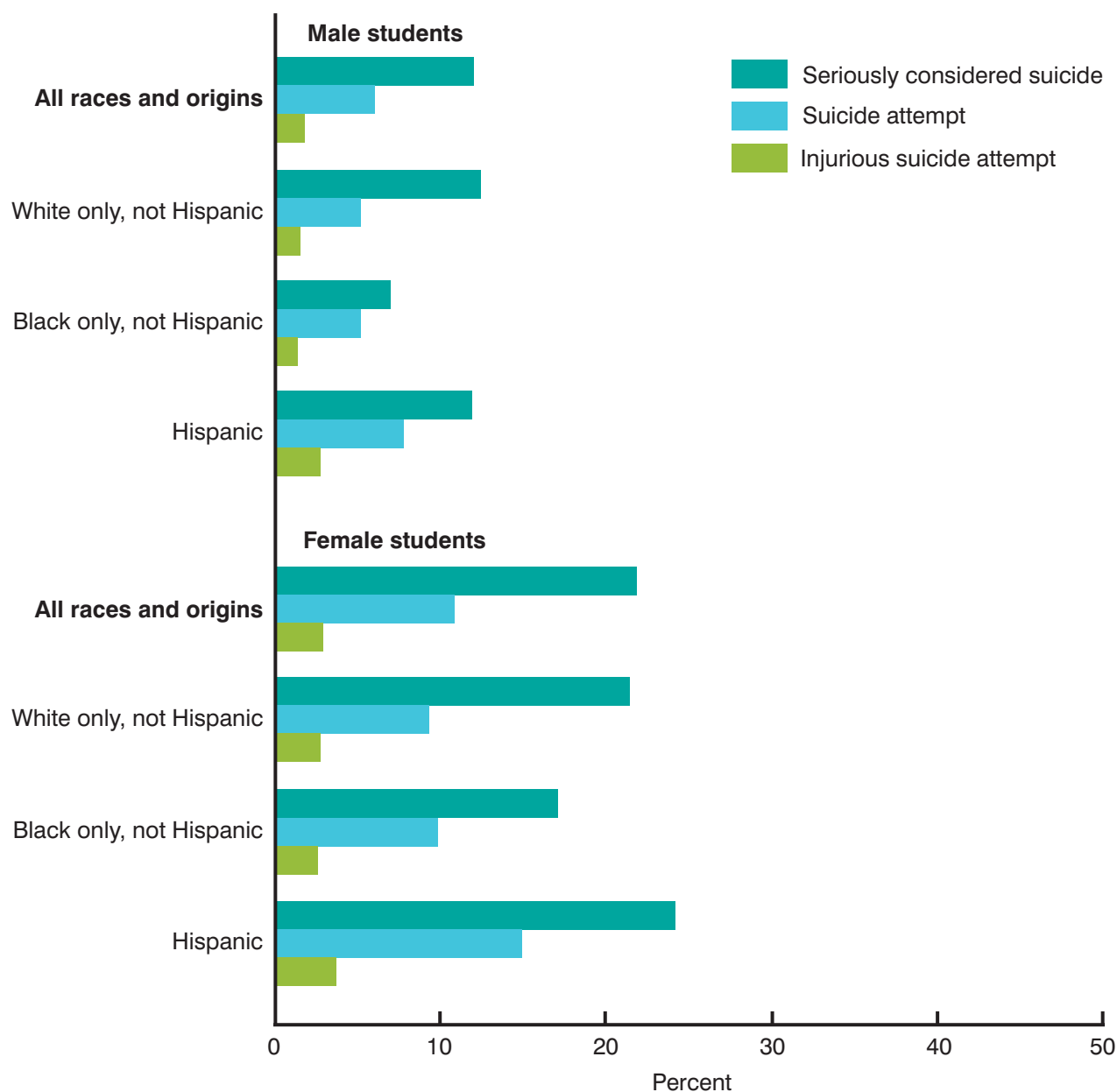
■ Among female students, Hispanic students were significantly more likely to report a suicide attempt than non-Hispanic white or black students were. No difference by race and ethnicity was present among male students.

■ In 2005, 20 percent of male students and 37 percent of female students reported feeling so sad or hopeless almost every day for two or more consecutive weeks during the past 12 months that they stopped doing some usual activities (4).

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Figure 7. Suicide ideation and attempts among students in grades 9–12, by gender and race and Hispanic origin: United States, 2005



NOTES: Response is for the 12 months preceding the survey. Some students who seriously considered suicide may also have attempted suicide. An injurious suicide attempt resulted in an injury, poisoning, or overdose that was treated by a doctor or nurse. Persons of Hispanic origin may be of

any race. See data table for data points, data by grade level, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Youth Risk Behavior Survey.

Emergency Department Visits, Hospital Discharges, and Death Rates

Morbidity and mortality data for adolescents provide a more complete picture of the health status of that population than mortality data alone. Emergency department (ED) and inpatient hospital utilization data provide information on morbidity that results in health care utilization from these sources.

EDs provide unscheduled care for reasons that range from life-threatening conditions to problems that could be treated in a primary care setting. Use of the ED may be influenced by underlying health status, the severity of the current illness or injury, access to other sources of health care, and health insurance status.

Hospitalization is dependent not only on a person's medical condition, but also on ambulatory care access and utilization (1).

■ In 2002–2004, adolescents 10–19 years of age had about 13 million ED visits annually. ED visit rates increased with age for both male and female adolescents (Figure 8). Visit rates for male adolescents 18–19 years of age were about one-third higher than those for males 10 years of age. Among female adolescents, ED visit rates were relatively stable at ages 10–13 years but began to increase rapidly at age 14 years. Visit rates more than doubled between ages 10–13 years and 18–19 years, in part because of conditions related to pregnancy and sexual activity (see Figure 12).

■ In 2002–2004, adolescents 10–19 years of age averaged 1.8 million hospital stays annually. Among male adolescents 10–19 years, the hospital discharge rate remained fairly stable across the age range. In contrast, the discharge rate for female adolescents 19 years of age was seven times the rate for those 10 years of age. For male and female adolescents 10–14 years of age, discharge rates were similar, but from ages 15–19 years, the discharge rate for females was higher than that for males, with differences increasing by age. Hospitalization for pregnancy-related diagnoses was the primary cause of those differences (see Figure 14).

■ In 2002–2004, almost 18,000 adolescents died each year. Mortality among male and female adolescents did not follow the same patterns observed for ED and hospital utilization. Death rates for male adolescents exceeded those for female adolescents at each age, and the difference increased with age. These differences were primarily due to the age-related

increases in injury mortality among male adolescents (see Figures 16 and 17).

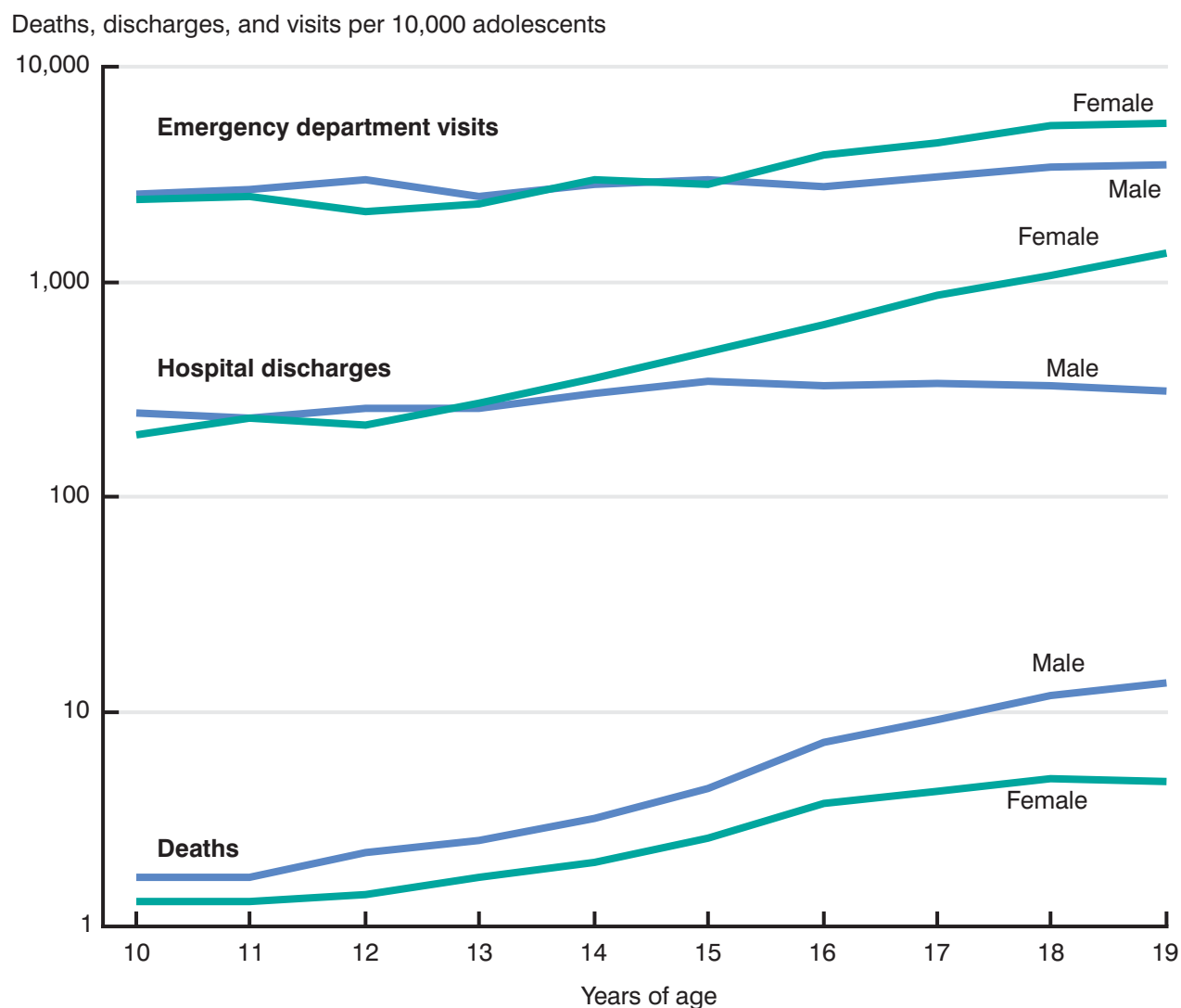
■ The death rate for male adolescents 19 years of age was eightfold that of males 10 and 11 years of age. In contrast, the death rate for female adolescents 18 and 19 years of age was threefold that of females 10 and 11 years of age.

Note: Death rates are generally shown as per 100,000 population, but for comparability to morbidity measures, they are shown only in Figure 8 as per 10,000.

Reference

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Figure 8. Emergency department visit rates, hospital discharge rates, and death rates among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: Data are presented on a log scale. See “Technical Notes” for discussion of emergency department visits, hospital discharges, and death rates. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey, National Hospital Discharge Survey, and National Vital Statistics System, Mortality File.

Emergency Department Visits for Injury

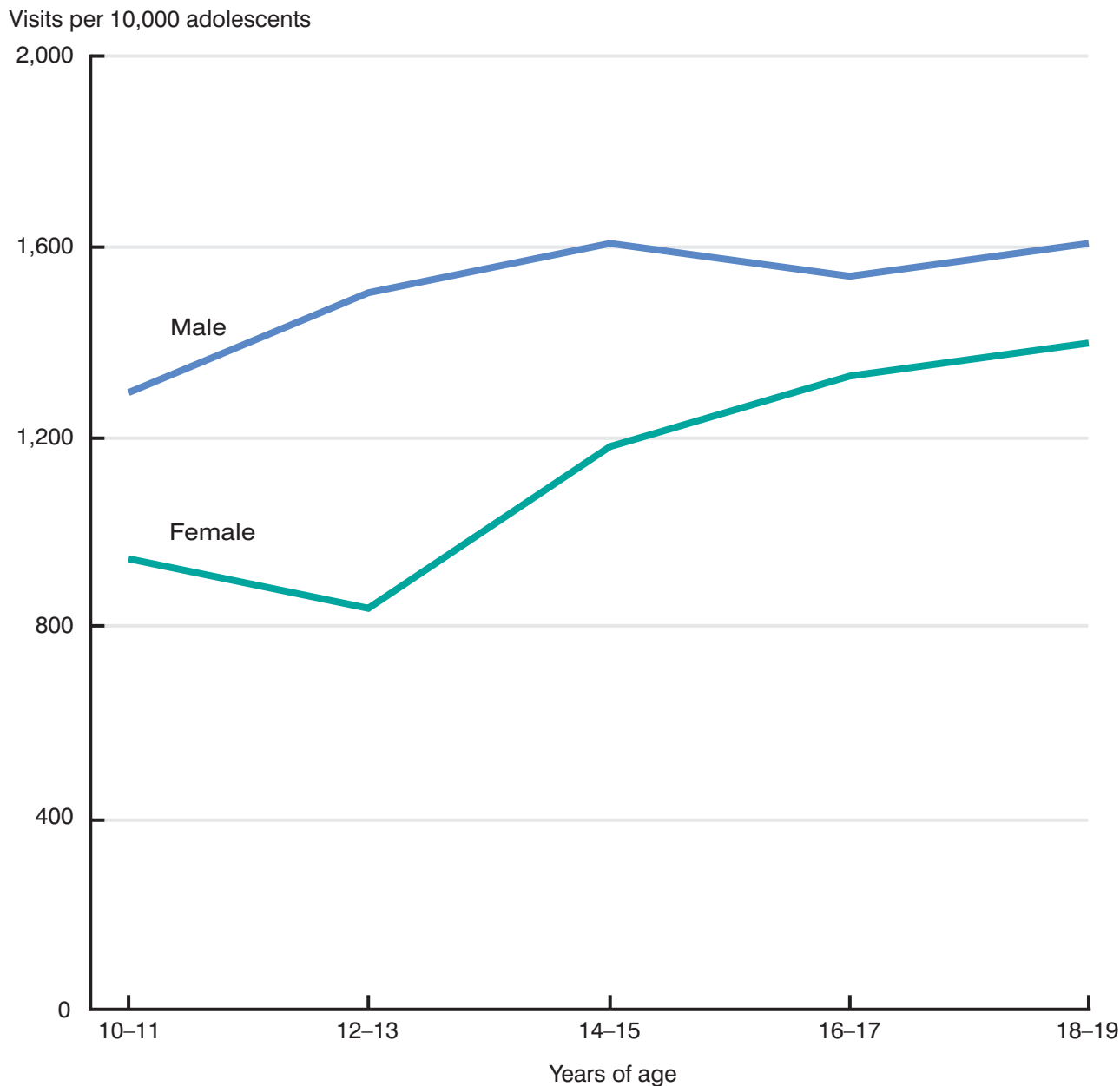
Injuries are a major cause of ED visits. The morbidity associated with injuries is costly on an individual and a societal level (1). An ED visit is classified as an injury visit if it is the initial ED visit for that injury. Follow-up visits for the same injury are not classified as injury visits in this analysis (2).

- In 2002–2004, initial visits for injuries constituted 42 percent of all ED visits for adolescents 10–19 years of age. Among male adolescents, about one-half of all ED visits were injury-related; among female adolescents, one-third of ED visits were injury-related.
- Initial injury-related ED visits were higher among male adolescents than among female adolescents, but the difference decreased with age (Figure 9). Among male adolescents, injury-related visit rates remained fairly level between ages 12–13 and 18–19 years. In contrast, injury-related visit rates among female adolescents increased 70 percent between ages 12–13 and 18–19 years.
- Four of the most common external causes of injury among adolescents include being struck by or against an object or person, falls, motor vehicle traffic-related injuries, and being cut or pierced by a sharp object (see Figure 10).
- The four most common injury diagnoses for ED visits among adolescents are fractures, sprains and strains, open wounds, and contusions (see Figure 11).

References

1. Burt CW, Fingerhut LA. Injury visits to hospital emergency departments: United States, 1992–95. National Center for Health Statistics. Vital Health Stat 13(131). 1998.
2. Fingerhut L. Recommended definition of initial injury visits to emergency departments for use with the NHAMCS-ED data. National Center for Health Statistics. Health E-Stat. [cited 2007 June 8]. Available from: www.cdc.gov/nchs/products/pubs/pubd/hestats/injury/injury.htm. 2007.

Figure 9. Initial emergency department visit rates for injury among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: See “Technical Notes” for discussion of emergency department visits. See data table for data points and standard errors.

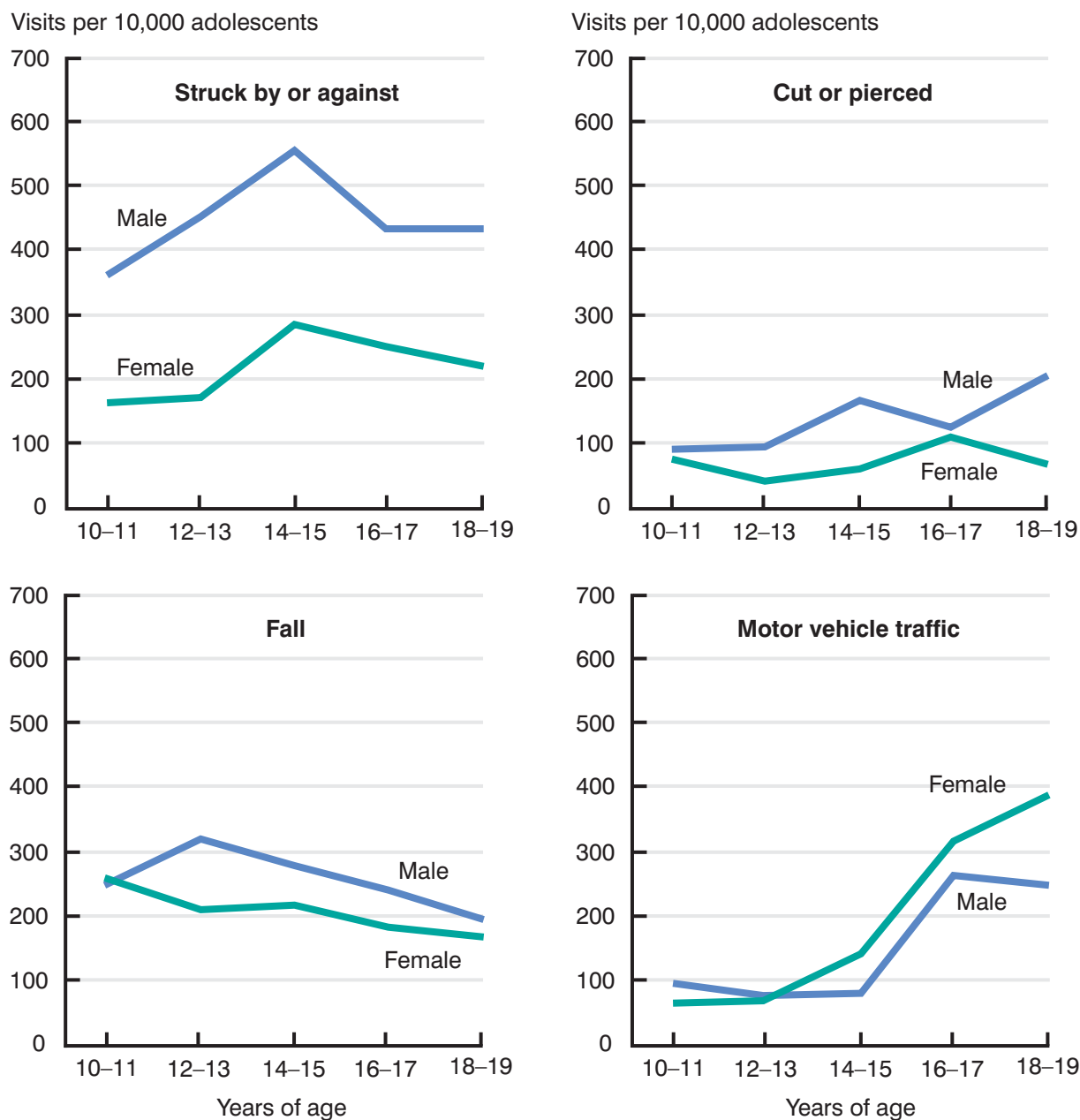
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Emergency Department Visits for Selected External Causes of Injury

Four external causes of injury—being struck by or against an object or person (being struck), falls, motor vehicle traffic-related injuries, and being cut by a sharp object—accounted for over 60 percent of all initial injury visits to EDs among adolescents in 2002–2004. Of these four causes, only motor vehicle traffic-related injuries are a significant source of mortality among adolescents (see [Figure 17](#)).

- One in four initial injury-related ED visits among adolescents resulted from being struck. In 2002–2004, at each age, the rate for male adolescents was about twice the rate for female adolescents ([Figure 10](#)). Sports-related injuries are a common cause of these ED visits.
- Initial ED visit rates for falls were similar for male and female adolescents. Falls accounted for about 18 percent of all injury-related visits.
- Initial injury visits associated with motor vehicle traffic-related injuries (13 percent of all injury-related visits) were similar for male and female adolescents age 10–11 through 16–17 years. Among adolescents 18–19 years of age, female adolescent traffic-related injury visit rates were 60 percent higher than those for male adolescents. However, death rates for motor vehicle traffic-related injuries for those 18–19 years of age were about twice as high for males as for females ([Figure 17](#)).
- Initial ED visits from being cut accounted for 8 percent of all injury-related visits among adolescents.

Figure 10. Initial emergency department visit rates for selected external causes of injury among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: See “Technical Notes” for discussion of emergency department visits. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Emergency Department Visits for Selected Injury Diagnoses

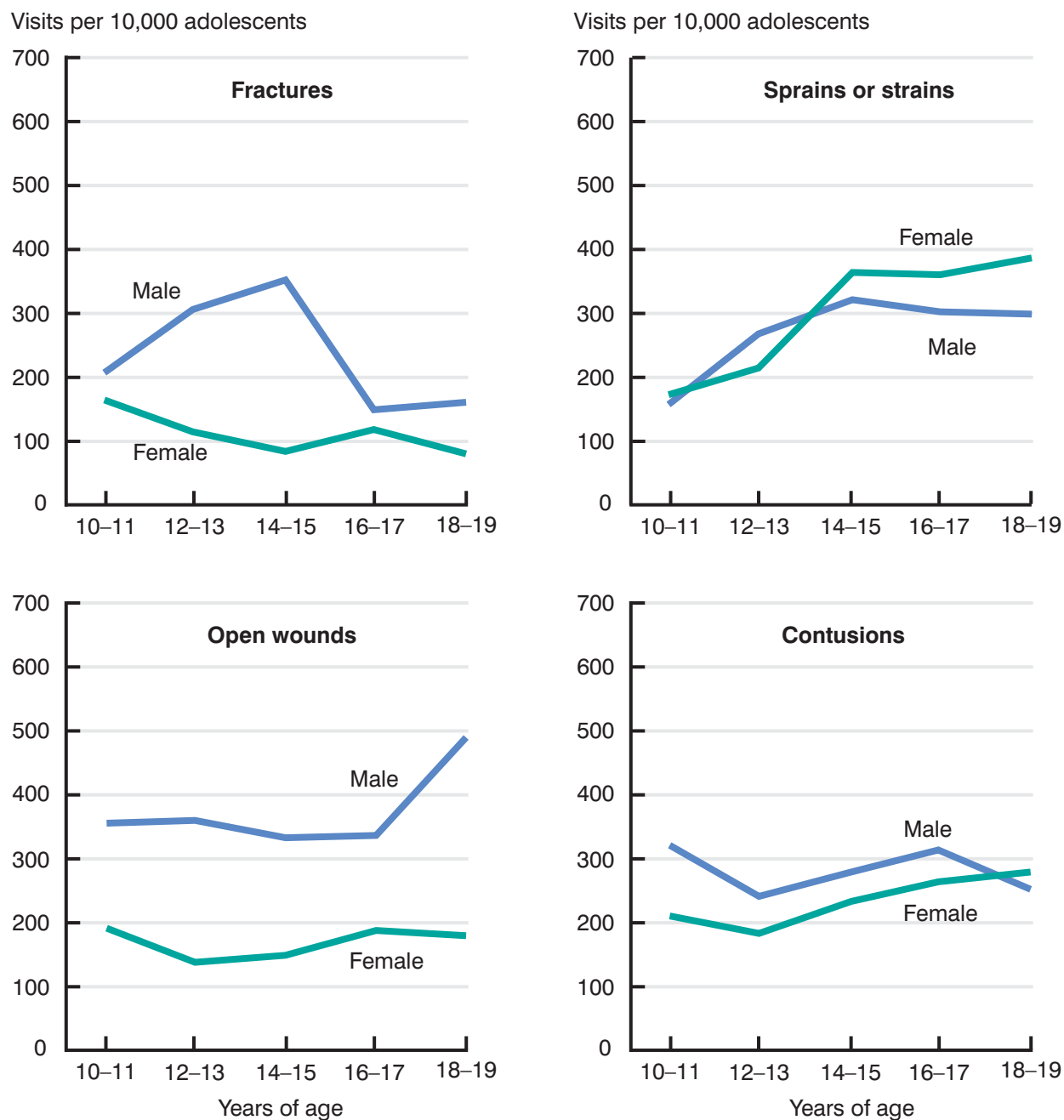
■ In 2002–2004, fractures, sprains and strains, open wounds, and contusions were the four most common injury diagnoses for initial ED visits among adolescents 10–19 years of age. These four injury diagnoses accounted for 72 percent of all first-listed diagnoses for initial injury visits by adolescents. Open wounds were the most often reported diagnoses for male adolescents, and sprains and strains were most often reported for female adolescents.

■ The pattern for initial ED visit rates for fractures varied by gender and age (Figure 11). Male and female visit rates for fractures were similar among both younger (aged 10–11 years) and older (aged 16–19 years) adolescents. In contrast, rates increased sharply among male adolescents 12–13 and 14–15 years of age and decreased among female adolescents in the same age groups. Injuries resulting from falls and being struck were the primary causes of fractures.

■ The initial ED visit rate for open wounds among adolescents 10–17 years of age did not vary with age. Open wound injury visit rates for female adolescents 10–17 years of age were about one-half the rates for males at each age. Among adolescents 18–19 years of age, rates increased significantly for males but remained level among females. Open wound injuries are caused primarily by knives and other instruments for cutting or piercing.

■ Sprains, strains, and contusions were the most commonly reported diagnoses in the ED for female adolescents 10–19 years, accounting for 45 percent of all first-listed injury diagnoses. There were no significant gender differences in initial visit rates for sprains and strains or contusions. Among the leading external causes of these injuries were motor vehicle traffic crashes, falls, being struck, and overexertion.

Figure 11. Initial emergency department visit rates for selected injury diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: See “Technical Notes” for discussion of emergency department visits. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Emergency Department Visits for Selected Diagnoses

Asthma, upper respiratory conditions, and abdominal or gastrointestinal (GI) conditions are among the leading principal diagnoses made in EDs for adolescents 10–19 years of age.

- In 2002–2004, these three groups of conditions accounted for more than one-fourth of all first-listed diagnoses for ED visits unrelated to an injury among male and female adolescents 10–19 years of age. Among female adolescents, visits for sexually transmitted diseases, urinary tract infections, and pregnancy-related conditions accounted for another 15 percent of female adolescent visits.

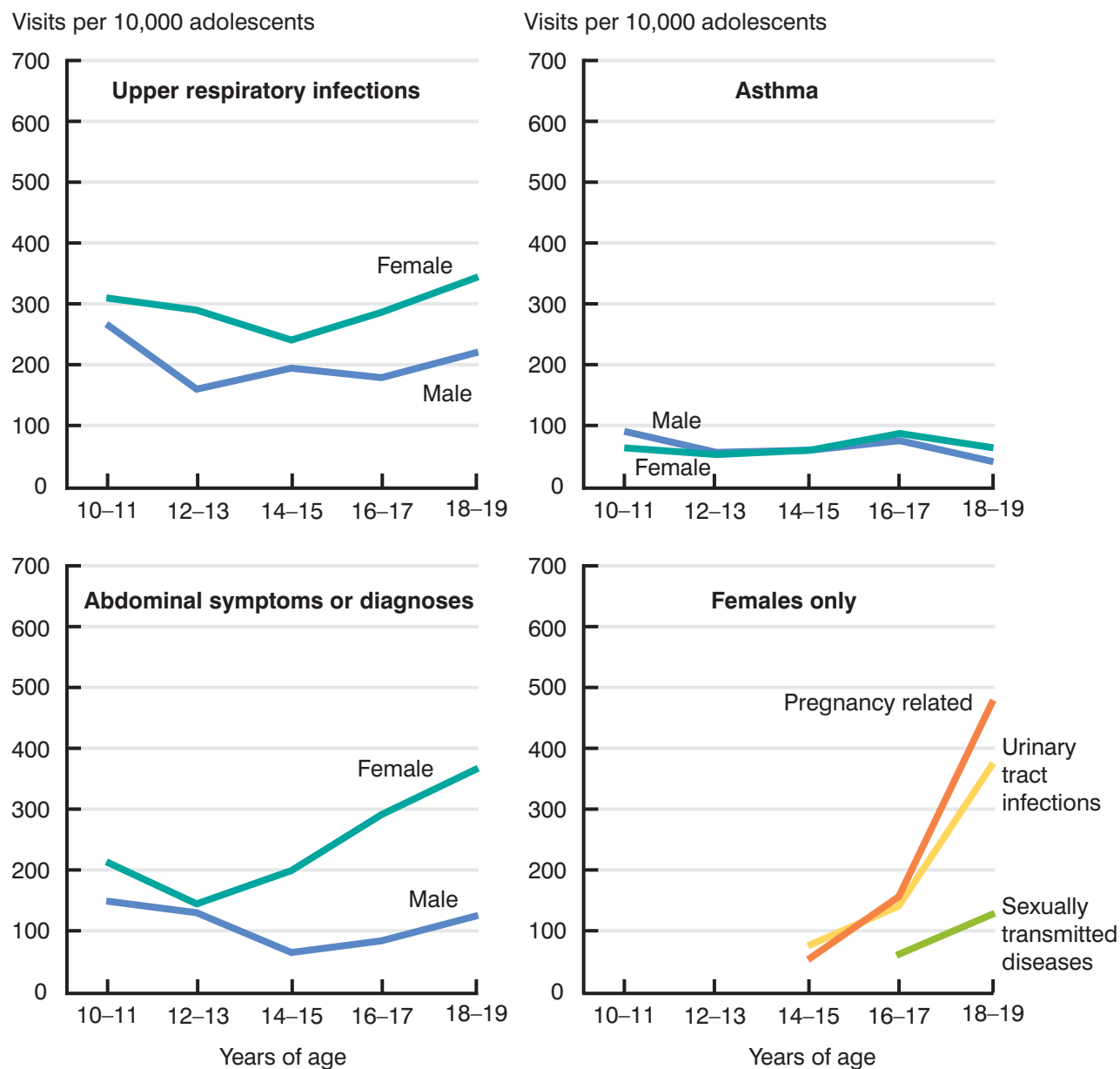
- Upper respiratory conditions, predominantly colds and ear infections, were the most common cause of ED visits unrelated to an injury among adolescents. The rate of ED visits for upper respiratory conditions was similar for male and female adolescents ([Figure 12](#)).

- Asthma is a disease that affects the lungs, causing repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. The need for urgent treatment of asthma symptoms may be related to acute exposure to specific precipitating factors, such as poor air quality or pets, or may be due to chronically suboptimal treatment of existing asthma. In 2002–2004, ED visit rates for the treatment of asthma did not vary by age or gender.

- ED visits for abdominal or GI symptoms were primarily due to stomach pains, gastroenteritis, and colitis. Among female adolescents, the visit rate for abdominal or GI conditions increased with age between ages 12–13 years and 18–19 years.

- Among female adolescents, the rate of ED visits for treatment of sexually transmitted diseases, urinary tract infections, and pregnancy-related conditions increased markedly with age. Sexual intercourse is a common cause of urinary tract infections in young women.

Figure 12. Emergency department visit rates for selected noninjury diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: Data points are not shown in figure when rates are unreliable. See “Technical Notes” for discussion of emergency department visits. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Alcohol-related Emergency Department Visits

Alcohol is the most widely used drug among youth (1) and causes serious and potentially life-threatening problems for adolescents and young adults. Research indicates that drinking is associated with risk-taking and sensation-seeking behavior, and alcohol has disinhibiting effects that may increase the likelihood of unsafe activities. In 1984, the Uniform Drinking Age Act mandated reduced federal transportation funds to those states that did not raise the minimum legal drinking age to 21; by 1988, all states had increased the legal drinking age to 21 years (2).

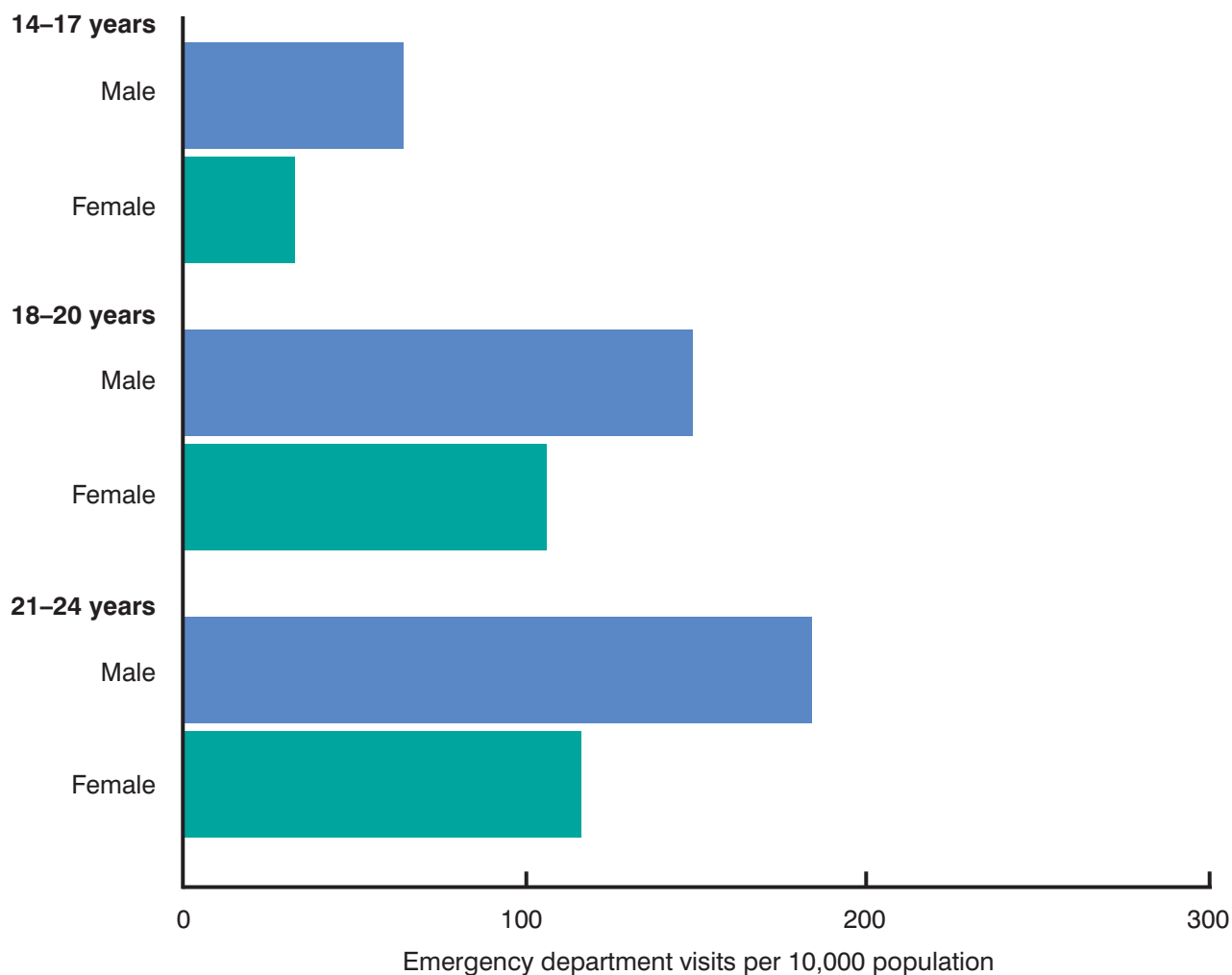
The National Hospital Ambulatory Medical Care Survey (NHAMCS) collects data on alcohol-related visits to hospital EDs. In the NHAMCS, an ED visit was considered alcohol-related by reviewing the ED record, including the patient's reason for the ED visit and the diagnoses and the injury codes recorded (see [data table for Figure 13](#) for detailed information related to the definition of an alcohol-related visit).

- During 2002–2004, there were, on average each year, over 230,000 alcohol-related ED visits among underage adolescents 14–20 years of age. Alcohol-related ED visits among underage adolescents accounted for 2% of all ED visits for this age group (3).
- Alcohol-related ED visit rates differed by gender and age for both underage and legal drinkers. Visit rates among males were higher than those among females. Alcohol-related ED visit rates increased with age from early to late adolescence and remained at that level through young adulthood ([Figure 13](#)). In 2002–2004, rates for older male adolescents 18–20 years of age were more than twice those of younger male adolescents 14–17 years of age, and rates for older female adolescents were more than three times those of younger female adolescents. Alcohol-related ED visit rates did not differ significantly between young adults who had reached legal drinking age and late adolescent drinkers 18–20 years of age.
- Most (89 percent) alcohol-related ED visits resulted in patients being treated and released from the ED; 5 percent of patients were admitted to inpatient units, and a small number of patients were transferred to other health facilities, left before being seen, or left against medical advice (3).

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2. French MT, Maclean JC. Underage alcohol use, delinquency, and criminal activity. *Health Econ* 15: 1261–81. 2006.
3. NCHS. National Hospital Ambulatory Medical Care Survey. Unpublished analysis. 2006.

Figure 13. Alcohol-related emergency department visit rates among adolescents 14–20 years of age and young adults 21–24 years of age, by age group and gender: United States, average annual 2002–2004



NOTES: An emergency department visit was considered alcohol-related if the checkbox for alcohol was indicated, the physician's diagnosis was alcohol-related, an alcohol-related external cause-of-injury code was present, or the patient's reason for visit was alcohol-related. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Hospital Discharge Rates

Hospitalization is dependent not only on a person's medical condition, but also on ambulatory care access and utilization (1). A person who delays or does not receive timely and appropriate care for chronic conditions and other health problems may contract more serious health conditions that require hospitalization.

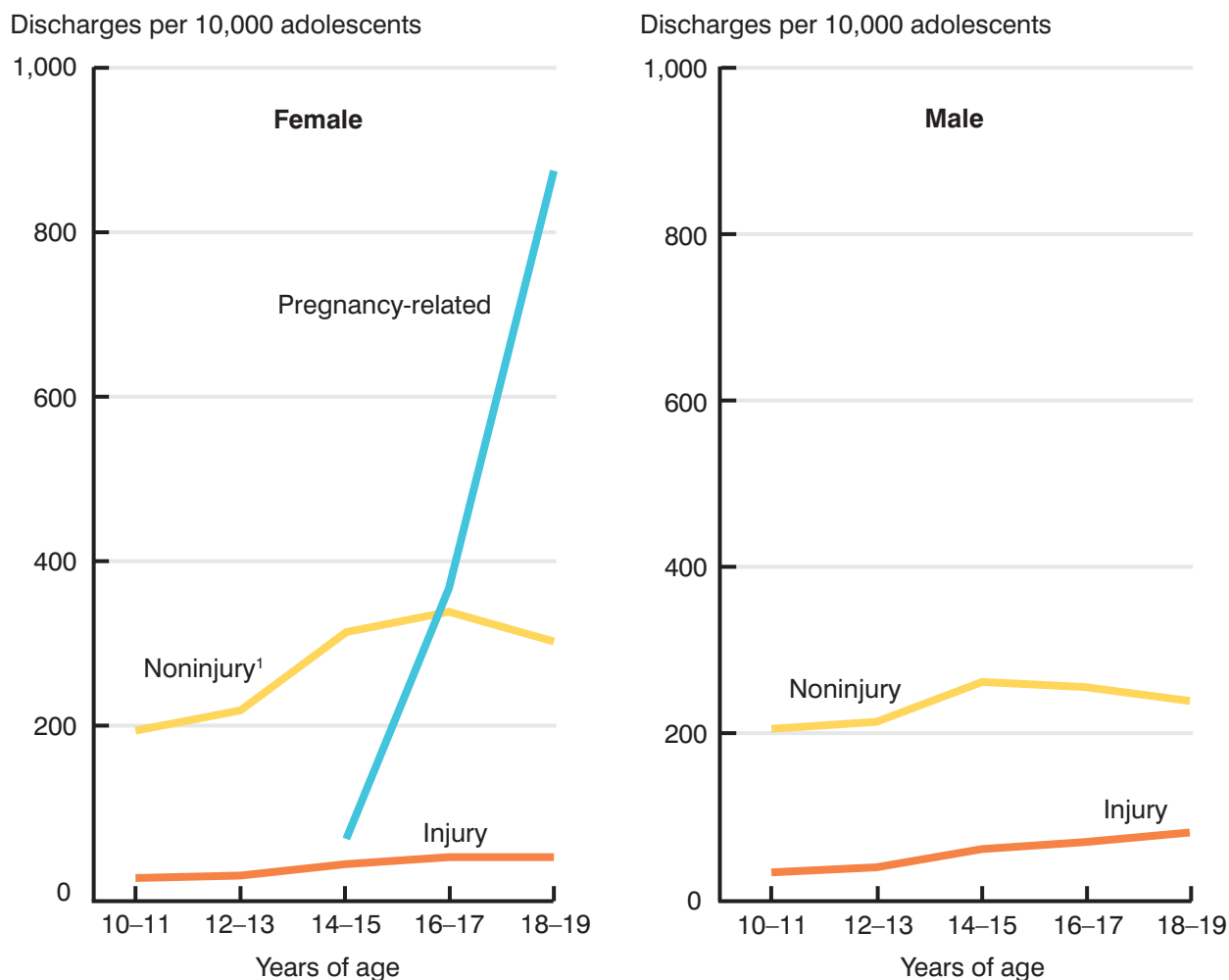
- Adolescents are among the least likely of all persons to be hospitalized (2). Younger children and adolescents have similar hospitalization rates. For noninjury and nonpregnancy causes, adolescents have the lowest rates of hospitalization, which are followed by those for younger children and young adults. Adolescents have higher hospital discharge rates for injuries than those for younger children but have lower rates than those of older persons (3).
- Hospital discharge rates vary by gender, in large part because of hospitalizations for pregnancy-related causes (including deliveries and diagnoses associated with pregnancy) among female adolescents. In 2002–2004, noninjury-related causes, excluding pregnancy, accounted for about 49 percent of all hospital discharges among female adolescents and 81 percent among male adolescents. Injuries accounted for 5 percent of all hospital discharges among female adolescents and 19 percent among males. Among female teenagers, pregnancy-related causes accounted for 46 percent of all discharges.
- In 2002–2004, hospitalizations for injury and noninjury causes increased with age for both sexes (Figure 14). The noninjury discharge rate among males increased marginally. In contrast, the noninjury (nonpregnancy-related) discharge rate among females increased by 50 percent between ages 10–11 years and 18–19 years. Hospital discharge rates for pregnancy-related causes increased dramatically by age among female adolescents.
- The injury hospital discharge rate for adolescent males 18–19 years of age was 2.5 times the rate for males 10–11 years of age. Similarly, the rate for female adolescents 16–19 years of age was more than double that of females aged 10–13 years.
- The expected principal method of payment varied among hospital discharges. Among injury and noninjury diagnoses, the expected source of payment for more than one-half (53–56 percent) was private insurance; public coverage was the expected source for 34 percent of injury discharges and 25 percent of noninjury discharges (2). In contrast, among

pregnancy-related discharges, the expected payment source was private insurance for 24 percent of discharges and public coverage for two-thirds of discharges. In the 1980s and 1990s, federal and state policy expanded Medicaid eligibility to provide greater health insurance coverage for pregnant women by expanding income eligibility requirements. Adolescent reproductive health coverage is also available through the State Children's Health Insurance Program (SCHIP), Title XXI of the Social Security Act.

References

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Figure 14. Short-stay hospital discharge rates for injury, noninjury, and pregnancy-related diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



¹Noninjury discharge rates for female adolescents do not include pregnancy-related discharges.

NOTES: Data points are not shown in figure when rates are unreliable. Cause-specific hospital discharge data are defined based on the first-listed diagnosis. See

“Technical Notes” for discussion of hospital diagnoses. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Discharge Survey.

Hospital Discharge Rates for Selected Diagnoses

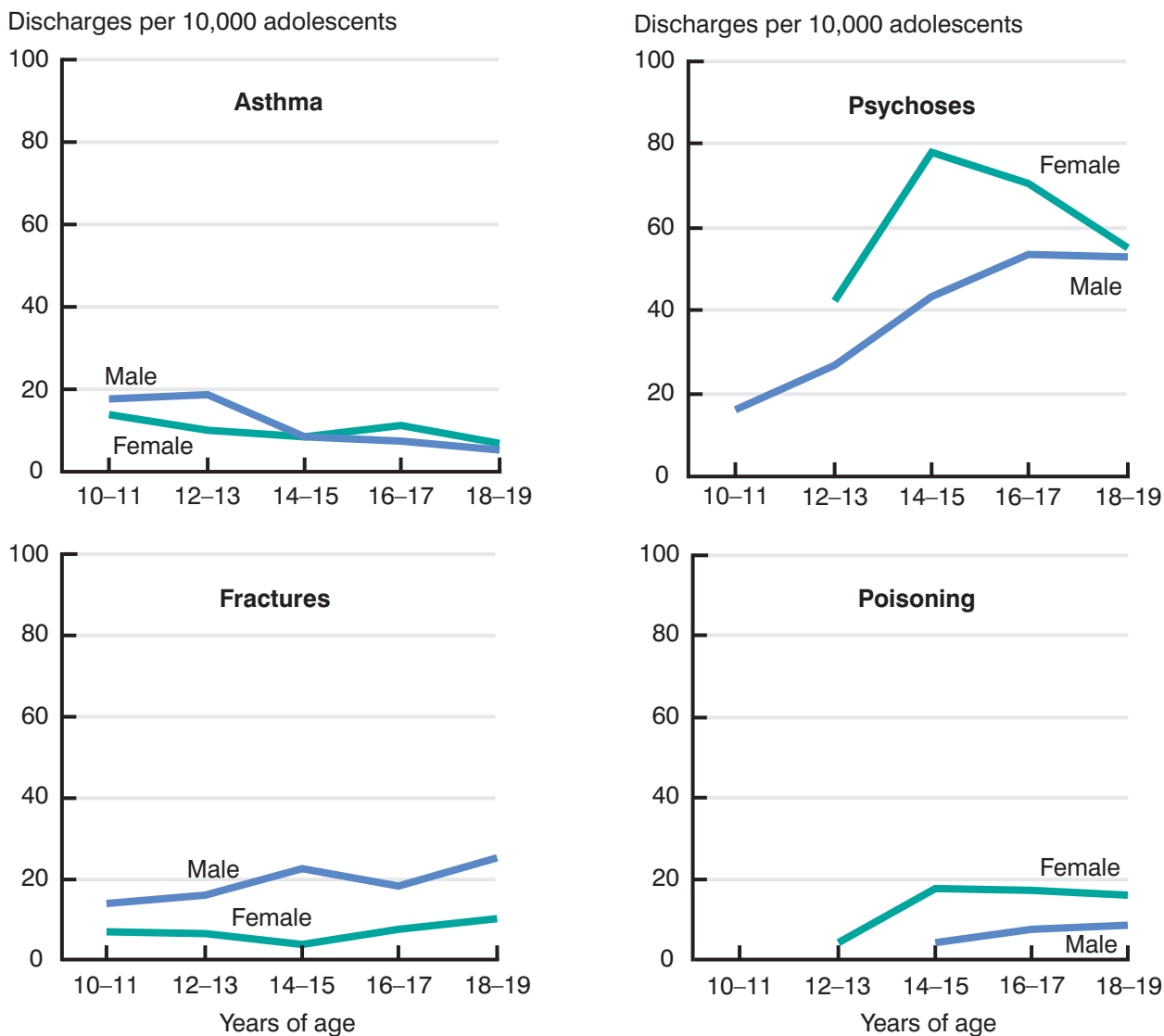
Asthma, psychoses, fractures, and poisoning were among the leading first-listed diagnoses in 2002–2004, accounting for 18 percent of all hospital discharges among adolescents. Patterns by age and gender differ for each of these diagnoses.

- Asthma is a disease that affects the lungs, causing repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. Asthma can be controlled by taking medicine and avoiding the triggers that can cause an attack. In 2002–2004, asthma hospital discharge rates for male adolescents declined by two-thirds with age, and rates for female adolescents declined by about 50 percent with age (Figure 15).
- Psychoses hospitalizations among adolescents increased sharply through ages 14–15 years; for adolescents 16–17 and 18–19 years of age, rates leveled off among males and declined among females. The leading diagnosis for this group is “major depressive disorder, single episode,” which accounts for 23 percent of all male and 31 percent of all female psychoses diagnoses (*International Classification of Diseases, Ninth Revision, Clinical Modification (ICD–9–CM)* codes include those for all psychoses, ICD 290–299).
- In 2002–2004, fractures were the leading cause of injury-related hospitalizations. Hospital discharge rates for fractures increased with age among male adolescents.
- Adolescents are at risk for both intentional and unintentional poisoning. About one-half of all poisonings among teenagers are classified as suicide attempts (1). Female adolescents were significantly more likely than male adolescents to be hospitalized for poisoning in 2002–2004.

Reference

1. Litovitz TL, Klein-Schwartz W, White S, et al. 2000 Annual report of the American Association of Poison Control Centers Toxic Exposures Surveillance System. *Am J Emerg Med* 19(5):337–96. 2001.

Figure 15. Short-stay hospital discharge rates for selected diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: Data points are not shown in figure when rates are unreliable. Cause-specific hospital discharge data are defined based on the first-listed diagnosis. See "Technical Notes" for discussion of hospital diagnoses. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Discharge Survey.

Death Rates

Deaths are categorized by the cause of death: injury or natural causes (*natural* is a term similar to *noninjury* that is used to categorize causes of death). Injury data are presented using the external cause of injury mortality matrix for ICD-10, which takes into account the manner or intent of the injury. The manner or intent of the injury involves whether the injury was inflicted purposefully or not (in some cases, intent cannot be determined) and, when intentional, whether the injury was self-inflicted (suicide) or inflicted upon another person (homicide) (1).

- Injuries cause more than twice as many deaths among adolescents as do natural causes. For the period 2002–2004, almost 13,000 adolescents died annually from injuries compared with about 5,000 adolescents who died from natural causes; that is, 71 percent of all deaths among adolescents 10–19 years of age were caused by an injury. The proportion of deaths that were due to injury increased with age, from 42 percent at 10 years of age to 80 percent at 18 years of age.

- Death rates varied by gender. In 2002–2004, the injury death rate for males 10–19 years of age was 2.6 times that of females, whereas the death rate for natural causes for male adolescents was 1.3 times that for females (Figure 16).

- Among male adolescents, death rates for natural causes exceeded those for injury among male adolescents 10–11 years of age. Beginning at 12 years of age, injury death rates exceeded natural cause death rates at each age through 19 years, and the difference increased with age. Among male adolescents 19 years of age, the injury death rate was almost 15 times the rate of those 10 years of age. Compared with death rates for injuries, death rates for natural causes increased more slowly with age. Among male adolescents 19 years of age, the natural cause death rate was about 2.5 times that of males 10 years of age.

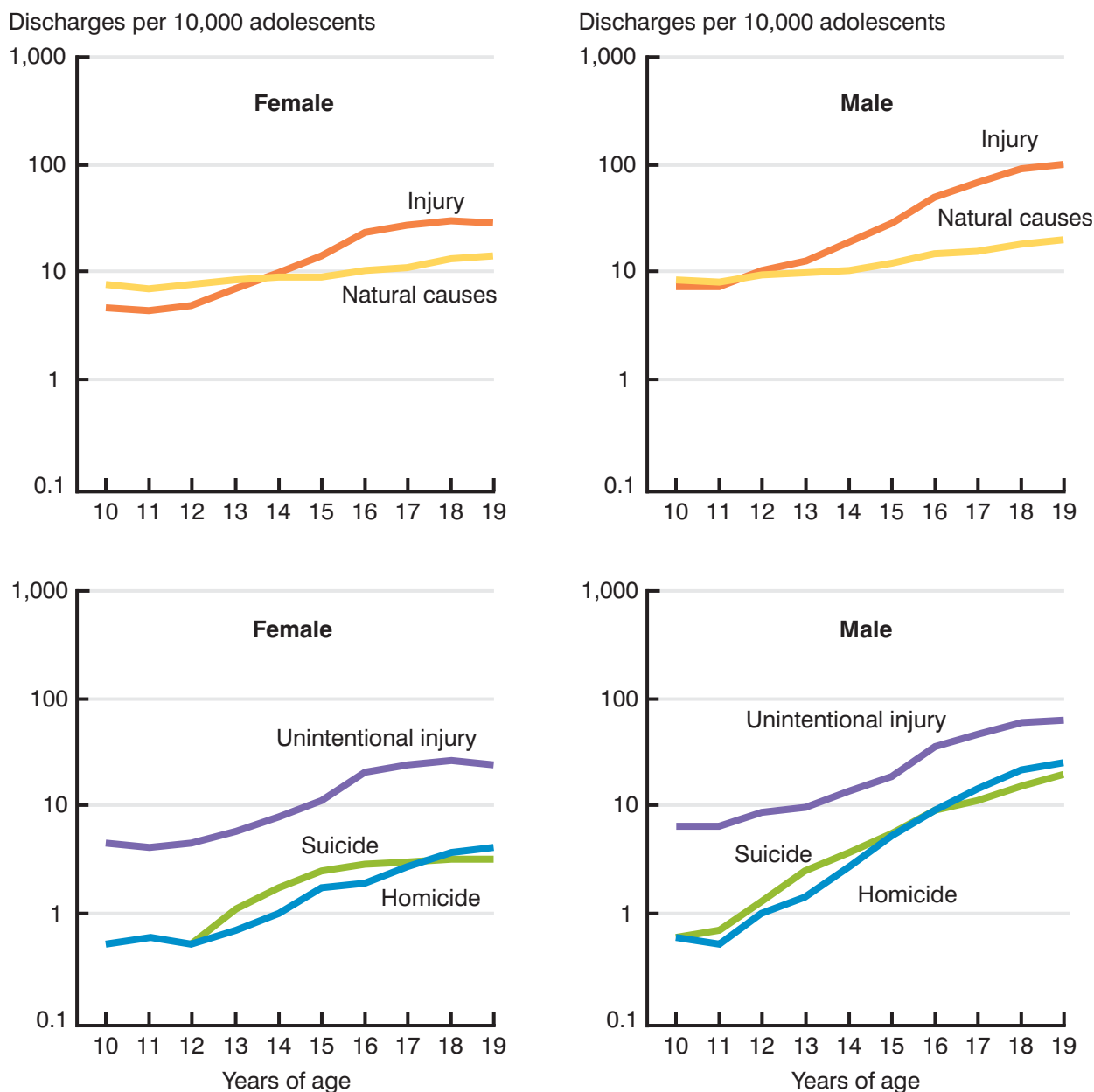
- Among female adolescents 10–13 years of age, death rates for natural causes exceeded those for injuries; among females 14–19 years of age, injury death rates were higher than natural cause death rates. Injury death rates for female adolescents did not increase as sharply with age as did the rates for male adolescents. Among female adolescents 19 years of age, the injury death rate was six times the rate for females 10 years of age, whereas the natural cause death rate doubled between ages 10 and 19 years.

- In 2002–2004, unintentional injuries constituted the majority of injury deaths: 63 percent among male adolescents and 78 percent among female adolescents. For both sexes, the proportion of injury deaths that were unintentional declined with age, whereas homicide and suicide deaths increased with age.

Reference

1. Hoyert DL, Heron MP, Murphy SL, Kung H. Deaths: Final data for 2003. National vital statistics reports; vol 54 no 13. Hyattsville, MD: National Center for Health Statistics. 2006.

Figure 16. Death rates for injury, by intent of injury and natural causes among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: Death rates are graphed on a log scale to clearly illustrate how rates change across the entire span 10–19 years. Data points are not shown in figure when rates are unreliable. See “Technical Notes” for discussion of cause-of-death coding. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Mortality File.

Motor Vehicle- and Firearm-Related Deaths

Motor vehicle traffic-related injuries and firearm-related injuries are the two leading causes of injury death among adolescents 10–19 years of age.

- For the period 2002–2004, motor vehicle traffic-related injuries were the leading cause of injury death for adolescents 10–19 years of age (averaging 6,360 deaths per year), followed by injuries from firearms (averaging 2,740 per year). Together, these two causes accounted for 51 percent of all deaths and 72 percent of all injury deaths for adolescents. By comparison, malignant neoplasms, the leading natural cause of death for this age group, accounted for 7 percent of all deaths (1).

- For motor vehicle traffic-related injury deaths, rates increased markedly with age for male and female adolescents (Figure 17). Notably, between ages 15 and 16 years, the rates for males and females doubled. A similar increase at these ages was noted in the ED visit rates for motor vehicle traffic-related injuries (see Figure 10).

- Disparities by race and ethnicity were apparent in rates of death from motor vehicle injuries for male and female adolescents (data table for Figure 17). Among males and females, motor vehicle injury rates were highest among American Indian or Alaska Native adolescents and lowest among Asian or Pacific Islander adolescents.

- The high rates of death from motor vehicle traffic-related injuries are partially attributable to risk behavior among adolescents. In 2005, almost 29 percent of high school students reported that in the previous 30 days, they rode in a car with a driver who had been drinking alcohol, and 15 percent reported that they drove after drinking alcohol (see Figure 28). Ten percent of students surveyed had rarely or never worn seat belts when riding in a car or truck driven by someone else.

- The risk of a motor vehicle crash is particularly high during the first year that teenagers are eligible to drive (2). The presence of teenage passengers increases the crash risk of unsupervised teenage drivers, and the risk also increases with the number of teenage passengers (3).

- A crash is considered speeding-related if the driver was charged with a speeding-related offense or if an officer indicated that racing, driving too fast for conditions, or exceeding the posted speed limit was a contributing factor to

the crash. Among male drivers 15–20 years of age who were involved in fatal crashes in 2003, 39 percent were speeding at the time of the crash (4).

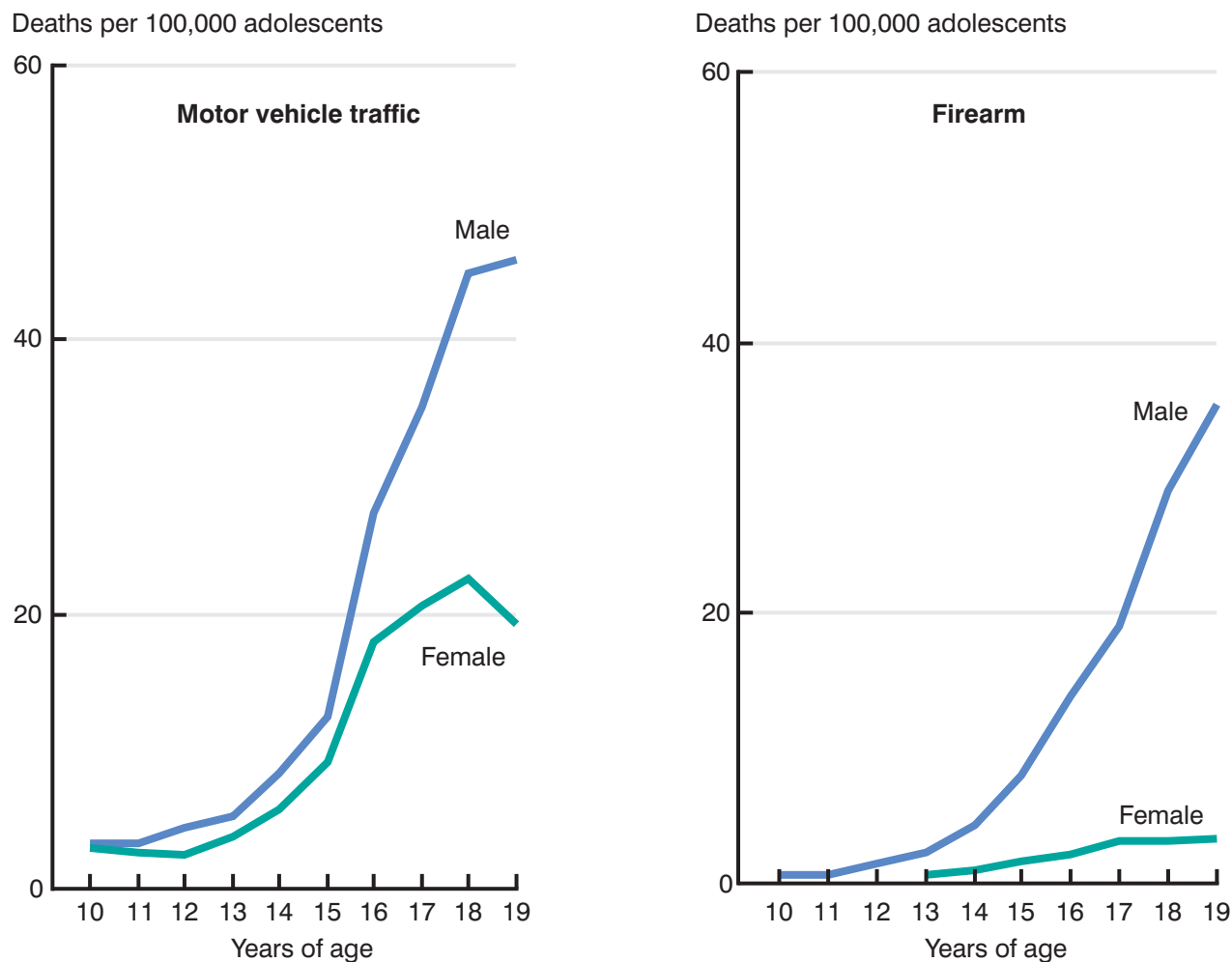
- Firearm-related injury death rates also increase substantially with age; the rate for males 19 years of age was 59 times the rate for those 10 and 11 years of age. In contrast, the firearm death rate for 19-year-old females was nine times the rate for 11-year-old females.

- Differences exist in firearm-related injury death rates by race and ethnicity for male and female adolescents. Rates were remarkably higher among black adolescents than among other racial and ethnic groups. Firearm-related injury death rates were lower for non-Hispanic white and Asian or Pacific Islander adolescents compared with other race and ethnicity groups (data table for Figure 17).

References

1. NCHS. National Vital Statistics System. Unpublished analysis. 2006.
2. Insurance Institute for Highway Safety. Fatality facts 2006: Teenagers [online]. [cited 2008 April 22]. Available from: www.iihs.org/research/fatality_facts_2006/teenagers.html.
3. Chen L, Baker SP, Braver ER, Li G. Carrying passengers as a risk factor for crashes fatal to 16- and 17-year old drivers. *JAMA* 283(12):1578–82. 2000.
4. National Highway Traffic Safety Administration. Traffic safety facts 2003: Overview. Washington, DC: U.S. Department of Transportation. 2004.

Figure 17. Death rates for motor vehicle traffic-related and firearm-related injuries among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004



NOTES: The firearm death rates for females 10–12 years of age are unreliable and are not shown. Firearm rates for female adolescents begin at 13 years of age. See “Technical Notes” for discussion of cause-of-death coding. See data table for data points, standard errors, and data on race and ethnicity.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.

Violence and Victimization

Violent Crime Victimization

Adolescents are the victims of violent acts in the home, at school, and in the community. Violent crimes include rape or sexual assault, aggravated and simple assaults, and robbery.

■ In 2004, approximately 1.6 million adolescents 12–19 years of age were reported as victims of violent crime. Almost 900,000 young adults ages 20–24 were also victims of violent crime.

■ Among younger adolescents—those 12–15 years of age—males were almost twice as likely as females to be victims of serious crimes (Figure 18a). By age 20–24 years, the crime victimization rates for males and females were similar.

■ Among female adolescents and young adults, the rates for rape and sexual assault were similar across age groups. Overall, female adolescents and young adults are four times more likely to be the victims of sexual assault than are women in all other age groups (1).

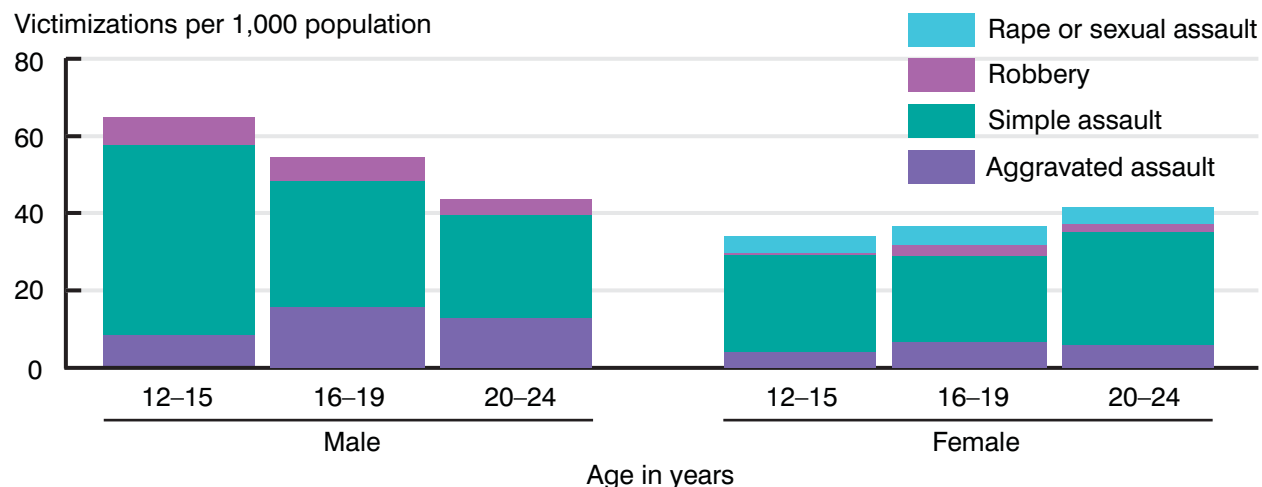
■ Over the past two decades, crime victimization rates for adolescents and young adults have changed considerably. Rates generally increased for adolescents and young adults from 1985 through 1995 and then declined between 1995 and 2005 to levels well below those in 1985 (Figure 18b).

■ In 2004, 5 percent of adolescent victims of violent crimes received hospital care and 10 percent of adolescent victims of robbery received hospital care (1).

Reference

1. U.S. Department of Justice. Criminal victimization in the United States, 2004 statistical tables [online]. NCJ 213257. [online]. [cited 2007 June 8]. Available from www.ojp.gov/bjs/pub/pdf/cvus0403.pdf. 2006.

Figure 18a. Violent crime victimization rates among adolescents 12–19 years of age and young adults 20–24 years of age, by gender, age group, and type of victimization: United States, 2004

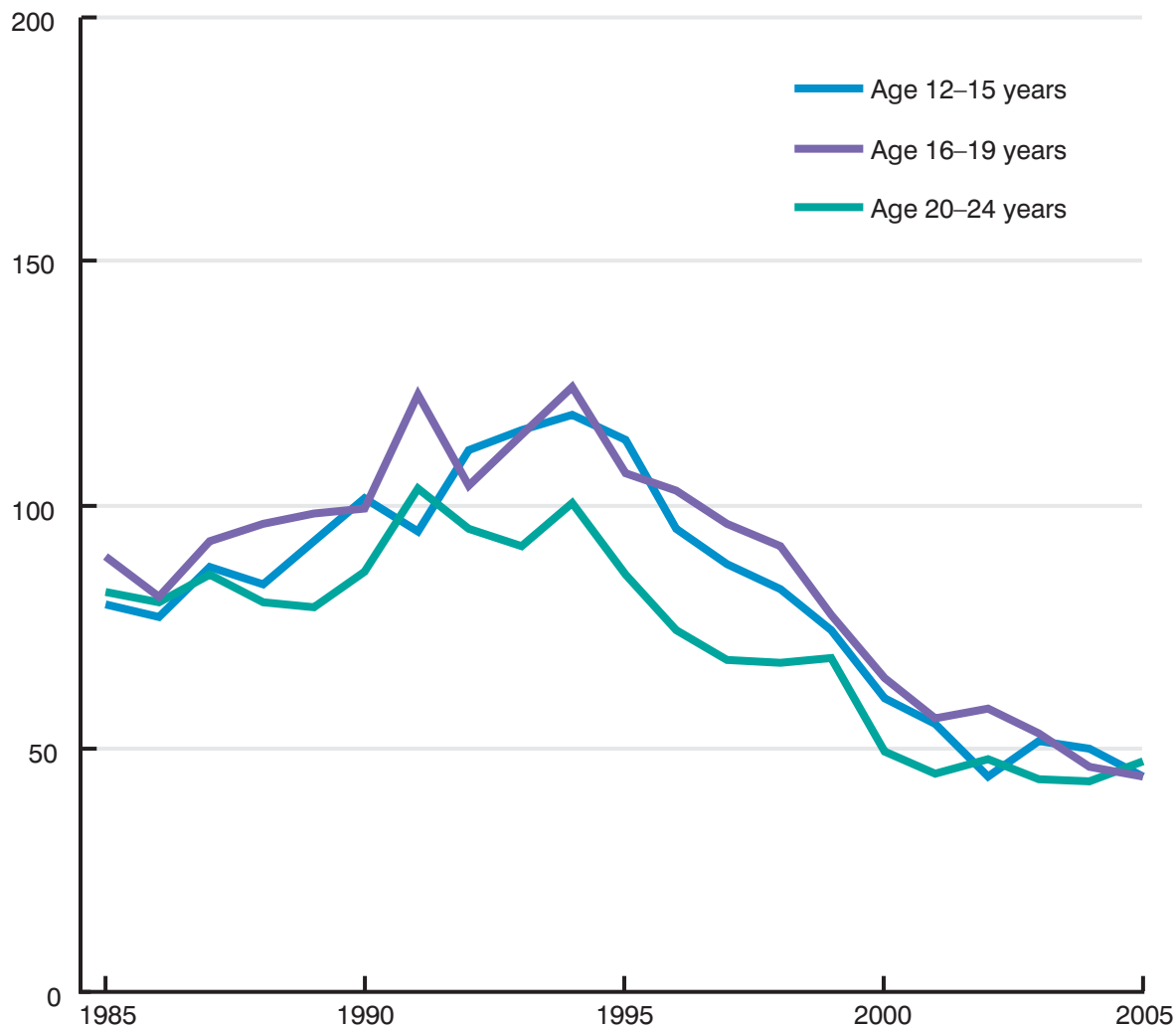


NOTES: Violent crimes include simple and aggravated assault, robbery, rape and sexual assault. See data table for data points.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey.

Figure 18b. Violent crime victimization rates among adolescents 12–19 years of age and young adults 20–24 years of age, by age group: United States, 1985–2005

Victimizations per 1,000 population in age group



NOTES: Violent crimes include simple and aggravated assault, robbery, rape and sexual assault. See data table for data points.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey.

Dating Violence and Forced Intercourse

Physical dating violence (PDV) is defined as physical violence within a dating relationship. Each year, 1 in 11 adolescents reports being a victim of PDV (1). In addition to the risk for injury and death, victims of dating violence are more likely to engage in risky sexual behavior, unhealthy dieting behaviors, substance use, episodic heavy drinking, physical fighting, and suicidal ideation or attempts (1). Dating violence victimization can be a precursor for intimate partner violence victimization in adulthood, especially among women (1,2).

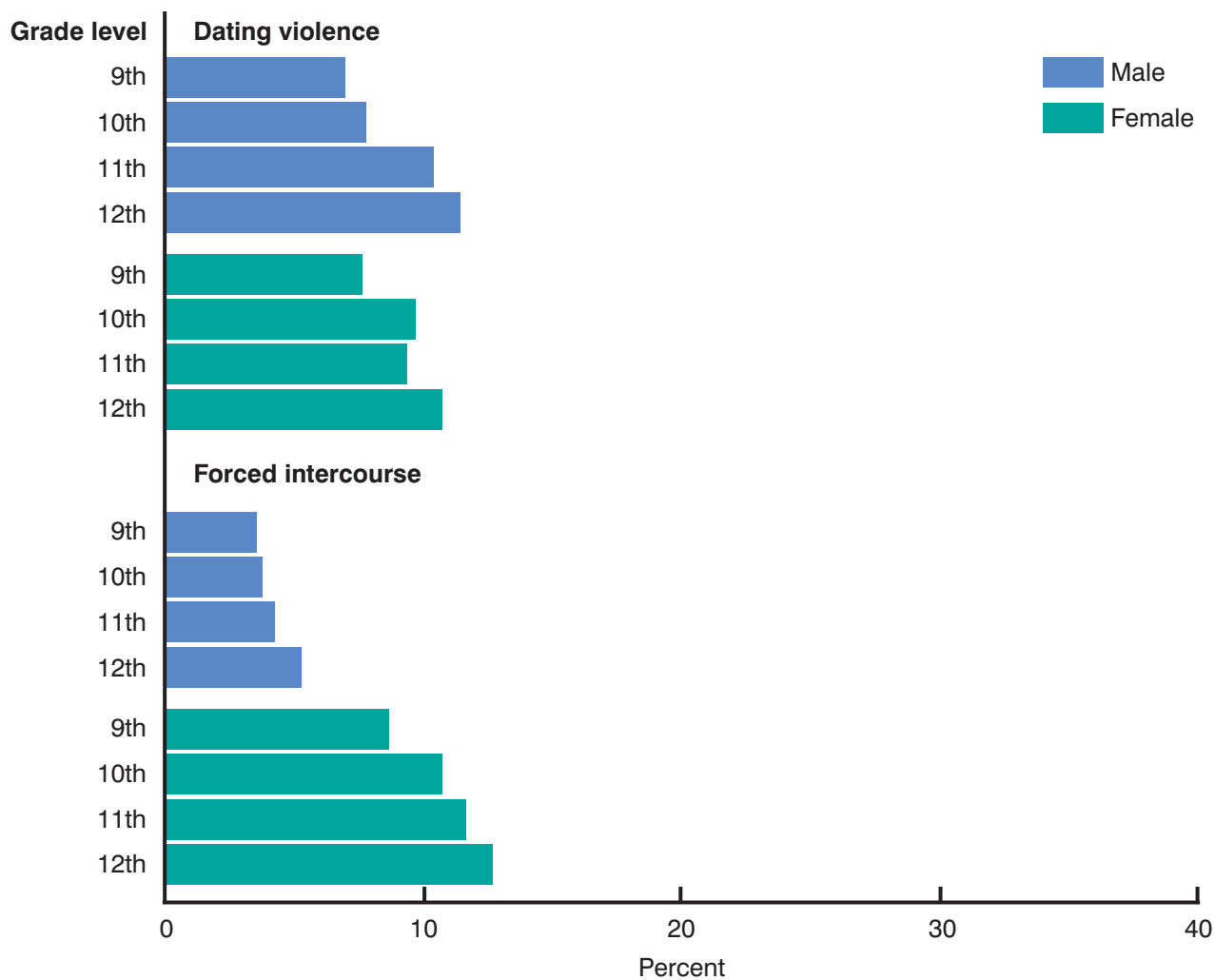
In the Youth Risk Behavior Survey, PDV victimization was defined as a response of “yes” to a single question: “During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?” Students were not asked whether they had had a boyfriend or girlfriend during the 12 months preceding the survey; therefore, a response of “no” might have included students who had not been dating.

- In 2005, about 9 percent of male and female students reported dating violence ([data table for Figure 19](#)). Overall, dating violence increased from 7 percent to 11 percent for students between 9th and 12th grade.
- In 2005, almost 8 percent of students had ever been physically forced to have sexual intercourse when they did not want to. The prevalence of having been forced to have sexual intercourse was higher among female students than among male students in each of grades 9 through 12 ([Figure 19](#)).

References

1. CDC. Physical dating violence among high school students—United States, 2003. *MMWR* 55:532–5. 2006.
2. Smith PH, White JW, Holland LJ. A longitudinal perspective on dating violence among adolescent and college-age women. *Am J Public Health* 93:1104–9. 2003.

Figure 19. Dating violence and being forced to have sexual intercourse among students in grades 9–12, by gender and grade level: United States, 2005



NOTES: Dating violence is the percentage of students who were hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months; forced intercourse is the percentage of students who have ever been physically forced to have intercourse when they did not want to. See data

table for data points, data by race and Hispanic origin, and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Reproductive Health

Contraceptive Use

Contraceptive use among sexually active teenagers increased between 1995 and 2002, and contracepting teenagers chose more effective contraceptive methods (1). Among contraceptive methods most frequently used by teenagers, the injectable (Depo-Provera®) and oral contraceptive (the “pill”) are the most reliable methods, with a failure rate of 0.3 percent with perfect use, followed by the male condom at 2 percent. Methods with higher failure rates with perfect use include periodic abstinence (1–9 percent) and withdrawal (4 percent) (2). Consistency and correctness of use may vary, increasing the failure rates.

■ In 2002, 83 percent of never-married female adolescents who had sexual intercourse in the past 3 months had used at least one method of contraception (Figure 20). The most common methods were condoms and oral contraceptives. Nine percent of sexually experienced teenagers with recent intercourse used other hormonal methods. These methods include injectables (such as Depo-Provera® and Lunelle® injectables), Norplant (a contraceptive patch), and emergency contraception (the use of high-dose oral contraceptives shortly after intercourse).

■ Contraceptive use among non-Hispanic white and non-Hispanic black adolescents differs. Ninety percent of non-Hispanic white female adolescents used some method of contraception at their last intercourse compared with 75 percent of non-Hispanic black female adolescents. Oral contraceptives were used more often among non-Hispanic white teenagers than among non-Hispanic black teenagers, whereas use of other hormonal methods was more common among non-Hispanic black teenagers than among non-Hispanic white teenagers.

■ Of all sexually experienced females 15–19 years of age in 2002, 26 percent had not used any method of contraception at their first intercourse, and among those who had their first intercourse before 15 years of age, 35 percent did not use a method of contraception at their first intercourse (1). Among male adolescents 15–19 years of age, condom use at first intercourse was reported by 71 percent, and 18 percent did not use any method (1).

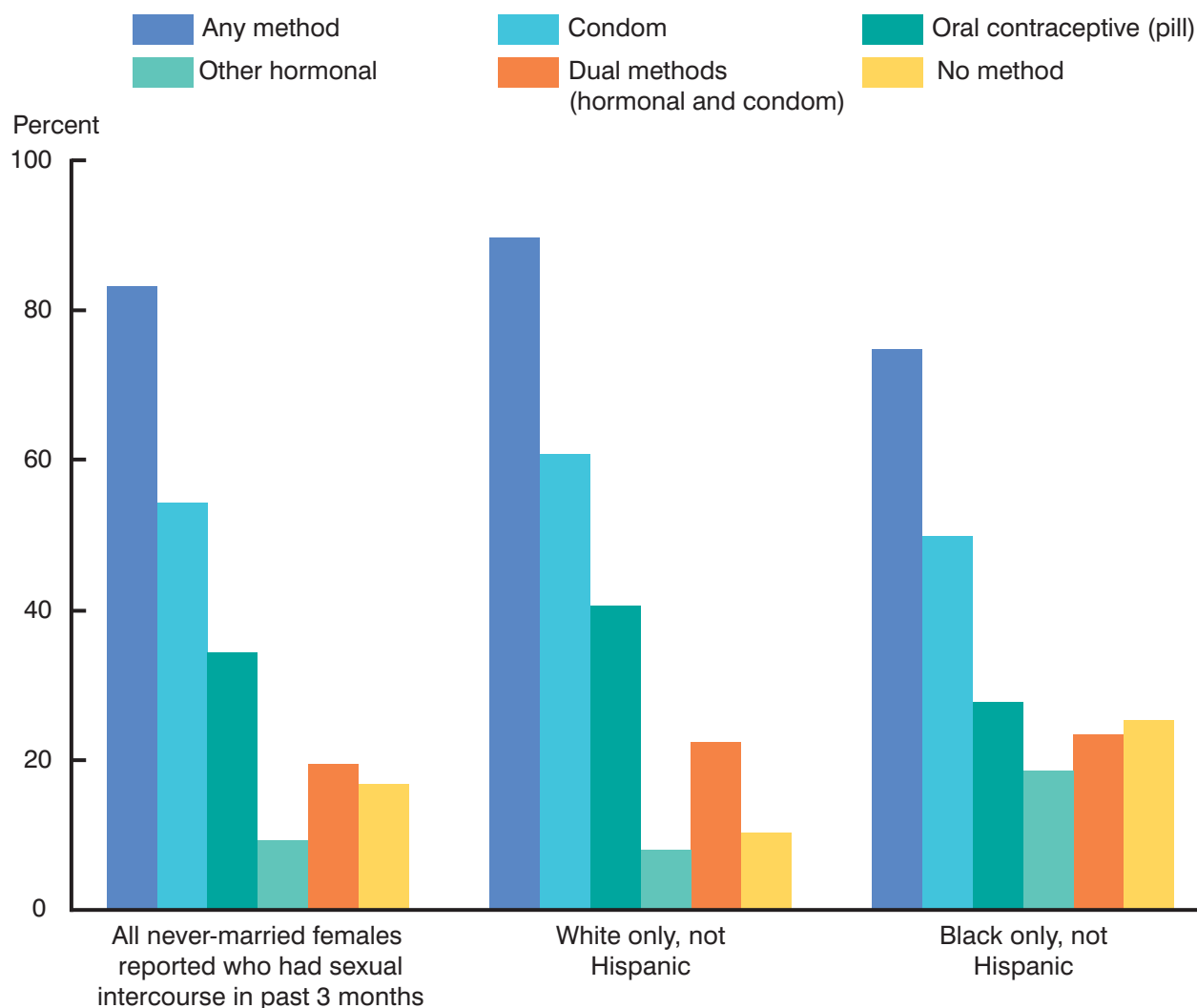
■ In 2002, the probability of a female adolescent giving birth before age 20 was 18 percent (2). The probability of a first birth increases with age and is associated with contraceptive use at first intercourse. Among young women 15–24 years of age, the probability of a first birth by age 15 was 1 percent compared with 13 percent by age 19. Among those who did not use a method of contraception at first intercourse, the probability of a first birth between ages 17 and 20 years was twice as high at each age level as that of adolescents using a method of contraception at first intercourse (1).

■ Between 1995 and 2002, notable increases in some methods of contraception were observed. The percentage of adolescent women who had ever used the pill increased from 52 percent to 61 percent, and those who had ever used the very effective injectable methods increased from 10 percent to 21 percent over the time period (1).

References

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2. Abma JC, Martinez GM, Mosher WD, Dawson BS. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. National Center for Health Statistics. *Vital Health Stat* 23 (24). 2004.

Figure 20. Contraceptive use among never-married female adolescents 15–19 years of age who have had sexual intercourse in the past 3 months, by specified method used at last intercourse and race and Hispanic origin: United States, 2002



NOTES: Categories are not mutually exclusive. Condom includes condom use alone or in combination with any other method. Oral contraceptive (pill) includes pill use alone or in combination with any other method. Other hormonal includes Depo-Provera® injectable, Lunelle® injectable, Norplant implants, emergency contraception, and contraceptive patch. Data are not shown separately for “other methods,” which include all other methods besides

condom and hormonal methods. Estimates for Hispanic adolescents did not meet standards of reliability and precision, and are not shown. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth.

Pregnancy Rates

Approximately 750,000 adolescents 15–19 years of age become pregnant annually. The majority of teen pregnancies are unplanned (82 percent), accounting for more than one-fifth of all unintended pregnancies each year (1). The consequences of unintended pregnancy for adolescents include unintended births, reduced educational attainment, fewer employment opportunities, increased likelihood of welfare receipt, and poorer health and developmental outcomes among their infants (2). About 40 percent of unintended pregnancies among adolescents 15–19 years of age end in induced abortion (1).

■ The number of pregnancies is estimated as the sum of live births, induced abortions, and fetal losses (miscarriages and still births). In 2002, the pregnancy rate was 76.4 pregnancies per 1,000 young women 15–19 years of age (Figure 21a).

■ Teenage pregnancy rates vary by race and Hispanic origin. In 2002, pregnancy rates were more than twice as high among non-Hispanic black and Hispanic teenagers as among non-Hispanic white teenagers (Figure 21b). The proportion of pregnancies that ended in induced abortion was higher among non-Hispanic black teenagers than among either Hispanic or non-Hispanic white teenagers.

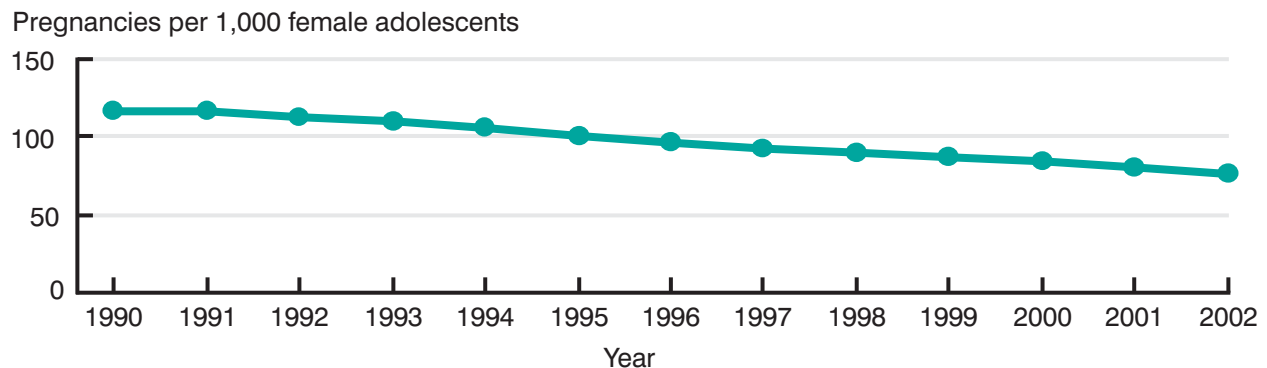
■ By 2002, the teenage pregnancy rate for young women 15–19 years of age had decreased 35 percent from a peak of 116.8 pregnancies per 1,000 young women in 1990 (3).

■ Between 1988 and 2002, the percentage of teenagers 15–19 years of age who ever had sexual intercourse decreased from 55 percent to 46 percent (4). Moreover, contraceptive use among sexually active teenagers increased over those years, and contracepting teenagers chose more effective contraceptive methods. These factors contributed to the decrease in pregnancy rates among teenagers.

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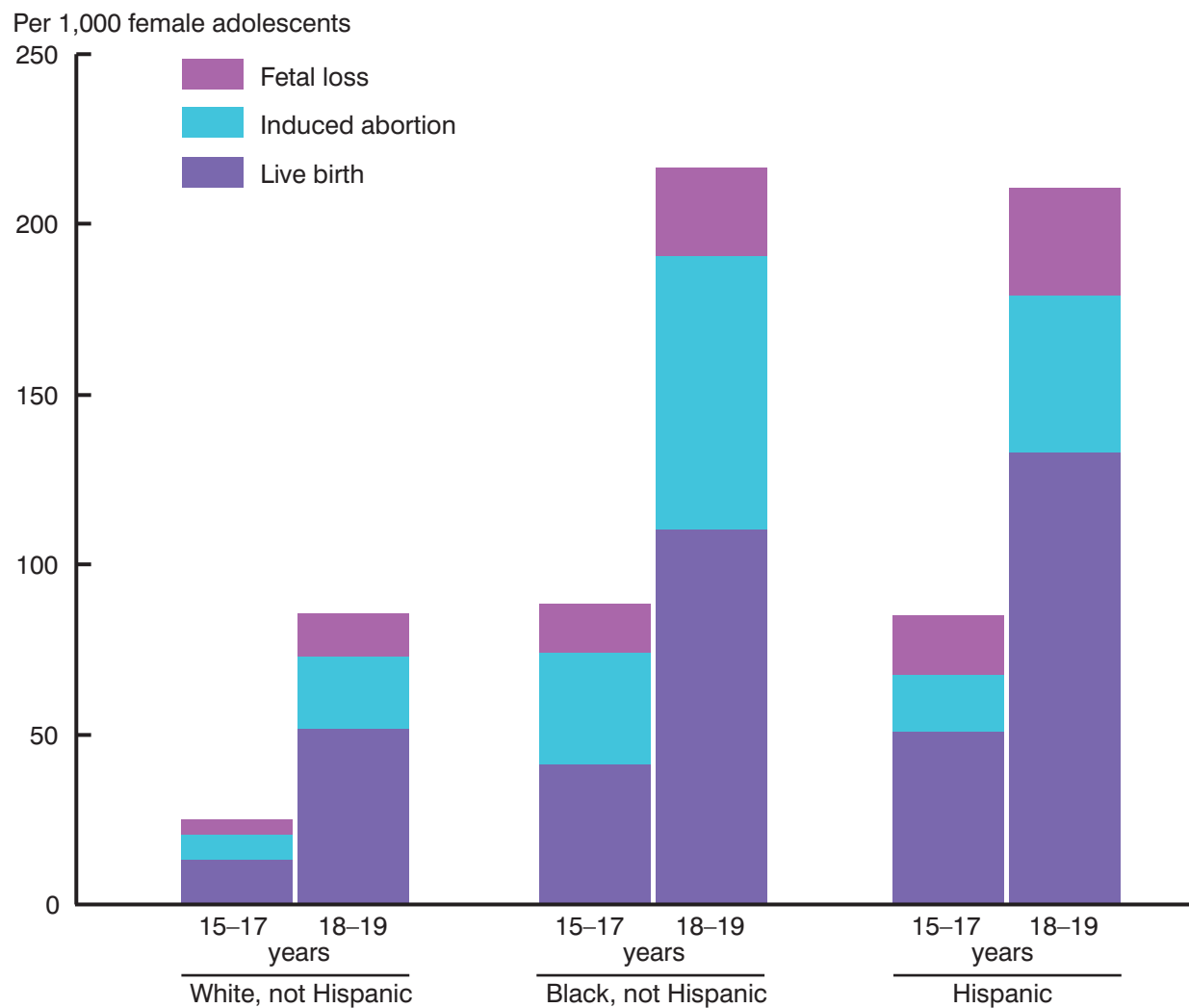
Figure 21a. Pregnancy rates among adolescents 15–19 years of age: United States, 1990–2002



NOTES: See “Technical Notes” for a discussion of pregnancy rate estimation. See data table for data points.

SOURCE: Ventura SJ, Abma JC, Mosher WD, Henshaw SK. Recent trends in teenage pregnancy in the United States, 1990–2002. Health E-stat. National Center for Health Statistics. 2006.

Figure 21b. Pregnancy rates among adolescents 15–19 years of age, by age, race and Hispanic origin, and outcome of pregnancy: United States, 2002



NOTES: See “Technical Notes” for discussion of pregnancy rate estimation. Persons of Hispanic origin may be of any race. See data table for data points.

SOURCE: Ventura SJ, Abma JC, Mosher WD, Henshaw SK. Recent Trends in Teenage Pregnancy in the United States, 1990–2002. Health E-stat. National Center for Health Statistics. 2006.

Birth Rates

Adolescent mothers are at greater risk of adverse health consequences compared with older mothers (1). Second and higher order births further increase the risk of poor outcomes for young women and their children (2). Most teenage mothers are not prepared for the emotional, psychological, and financial responsibilities and challenges of parenthood (3). Compared with peers who delay childbearing, teenage mothers are less likely to complete high school or have steady employment and are more likely to receive public assistance and experience marital instability (4).

■ In 2004, there were approximately 422,000 births to adolescents 10–19 years of age, accounting for 10 percent of all births. The birth rate for adolescent women 15–19 years of age was 41.1 births per 1,000 adolescent women, whereas the birth rate for very young adolescents (10–14 years of age) was 0.7 (5).

■ Among adolescents, birth rates increase with maternal age, regardless of race or ethnicity (Figure 22). Overall, teenagers aged 18–19 years were three times as likely to give birth as those aged 15–17 years.

■ Birth rates vary considerably by race and Hispanic origin. In 2004, Hispanic and non-Hispanic black teenagers had the highest birth rates, followed by American Indian or Alaska Native teenagers; Asian or Pacific Islander teenagers had the lowest birth rates. Among women 18–19 years of age, birth rates among non-Hispanic black (103.9 births per 1,000) and Hispanic teenagers (133.5) were three to four times those of Asian or Pacific Islander teenagers (29.6).

■ Birth rates among adolescent women steadily declined during 1991–2004; birth rates fell 33 percent among adolescents 15–19 years of age and 50 percent among adolescents 10–14 years of age during this period(5). Birth rates for black teenagers fell more steeply between 1991 and 2004 (declining 47 percent) than did rates for other population groups (5).

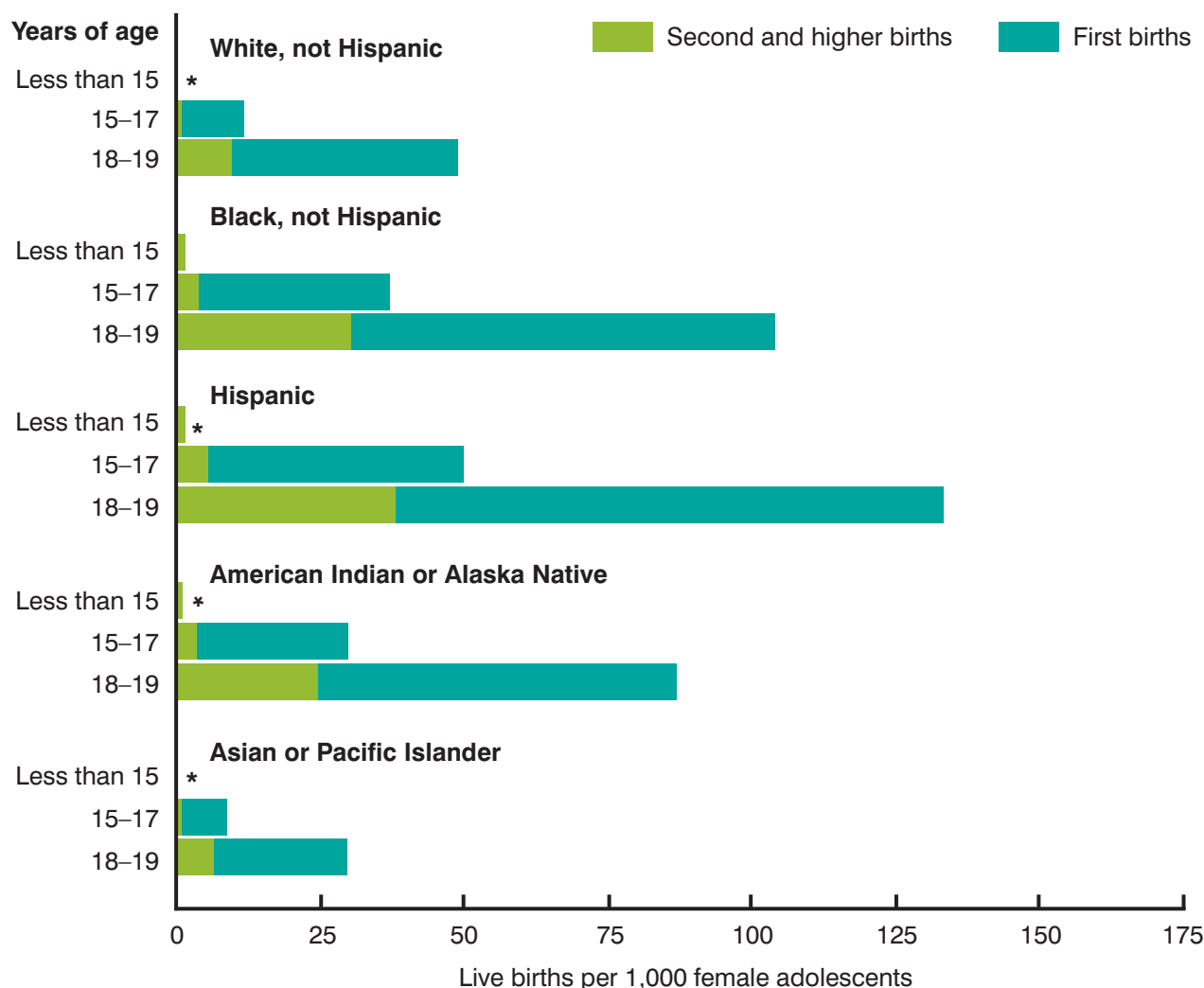
■ Adolescent mothers are much less likely than older women to receive timely prenatal care and are more likely to commence care in the third trimester or have no care at all (1). They are also more likely to smoke during pregnancy. In 2004, 14 percent of adolescent mothers 15–19 years of age smoked during pregnancy (6).

■ Characteristics of adolescents' mothers influence their timing of a first birth. For female adolescents whose mother also had an adolescent birth, 23 percent had a birth before age 20 compared with 8 percent whose mother delayed childbearing until after age 20 (7).

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Figure 22. Birth rates among adolescents 10–19 years of age, by birth order, age group, and race and Hispanic origin: United States, 2004



*Rates based on fewer than 50 events are considered unreliable; rates based on fewer than 20 events are considered highly unreliable and are not shown.

NOTES: Live births of unknown birth order are distributed proportionally. Persons of Hispanic origin

may be of any race. See data table for data points and data for ages 20–24 years.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Birth File.

Sexually Transmitted Diseases

■ Sexually transmitted diseases (STDs) are the most commonly reported infectious diseases among sexually active adolescents. Compared with older adults, sexually active adolescents (10–19 years of age) and young adults (20–24 years of age) are at higher risk for acquiring STDs for a combination of behavioral, biological, and cultural reasons (1). Adolescents are more likely to have multiple sexual partners and short-term relationships, to engage in unprotected intercourse, and to have partners who are themselves at high risk for STDs (1,2). Adolescent women may have a physiologically increased susceptibility to infection because of increased cervical ectopy (1).

■ Sexually active adolescents often face barriers to receiving STD prevention services, such as concern about confidentiality, discomfort with facilities and services designed for adults, lack of insurance or ability to pay, and lack of transportation (1).

■ Chlamydia, gonorrhea, and syphilis are the most common bacterial causes of STDs and are curable with antimicrobials. Syphilis is relatively rare among adolescents. When left untreated, chlamydia and gonorrhea can cause pelvic inflammatory disease, abscesses in the fallopian tubes and ovaries, and chronic pelvic pain; they may also result in ectopic pregnancy or infertility (3). In young men, untreated infections can cause urethritis and epididymitis. STDs may also increase susceptibility to HIV infections two to five times (3).

■ Chlamydia remains the most commonly reported infectious disease in the United States. In 2004, female adolescents 15–19 years of age had higher reported rates of chlamydial infections than those of adolescent males and older persons of either gender; rates among young women 20–24 years of age were nearly as high (data table for Figure 23). The higher reported rates of chlamydia among adolescents and young women than among their male counterparts are primarily attributable to detection of asymptomatic infection in young women through screening, whereas chlamydia among their sex partners may not be diagnosed or reported (1).

■ The availability of urine tests for chlamydia may be contributing to increased detection of chlamydia in young men (3); reported chlamydia rates among adolescent males rose by 50 percent between 1998 and 2004.

■ Gonorrhea is the second most commonly reported notifiable disease in the United States. In 2004, rates of gonorrhea were also higher for female adolescents 15–19 years of age than for adolescent males and older persons (3).

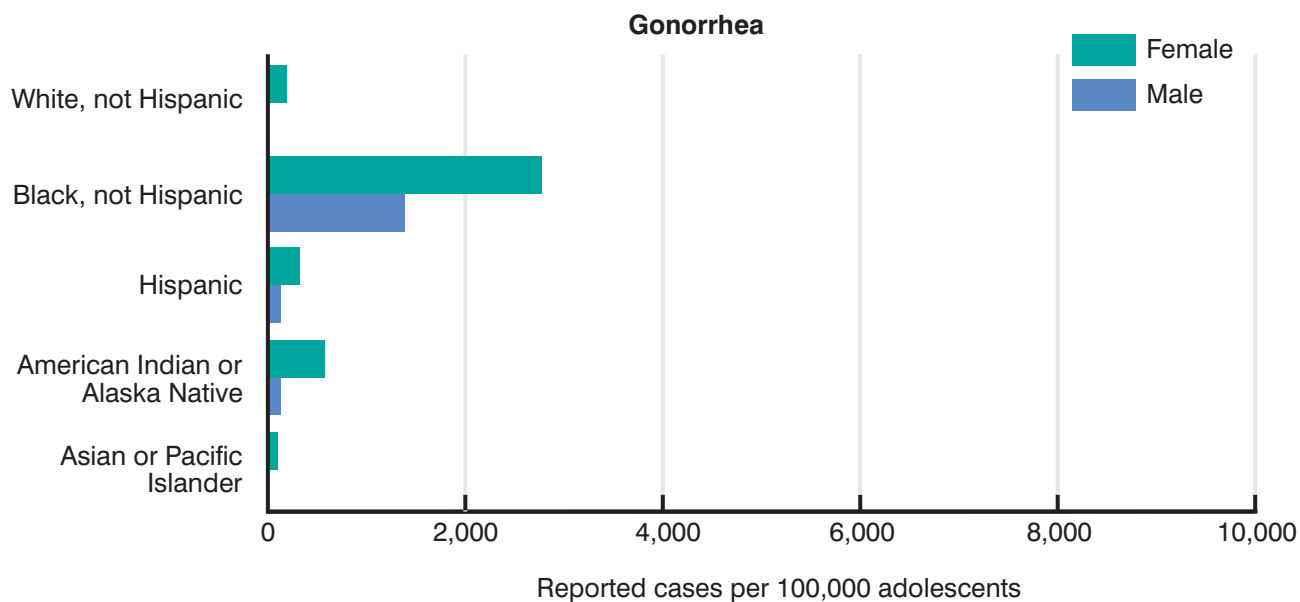
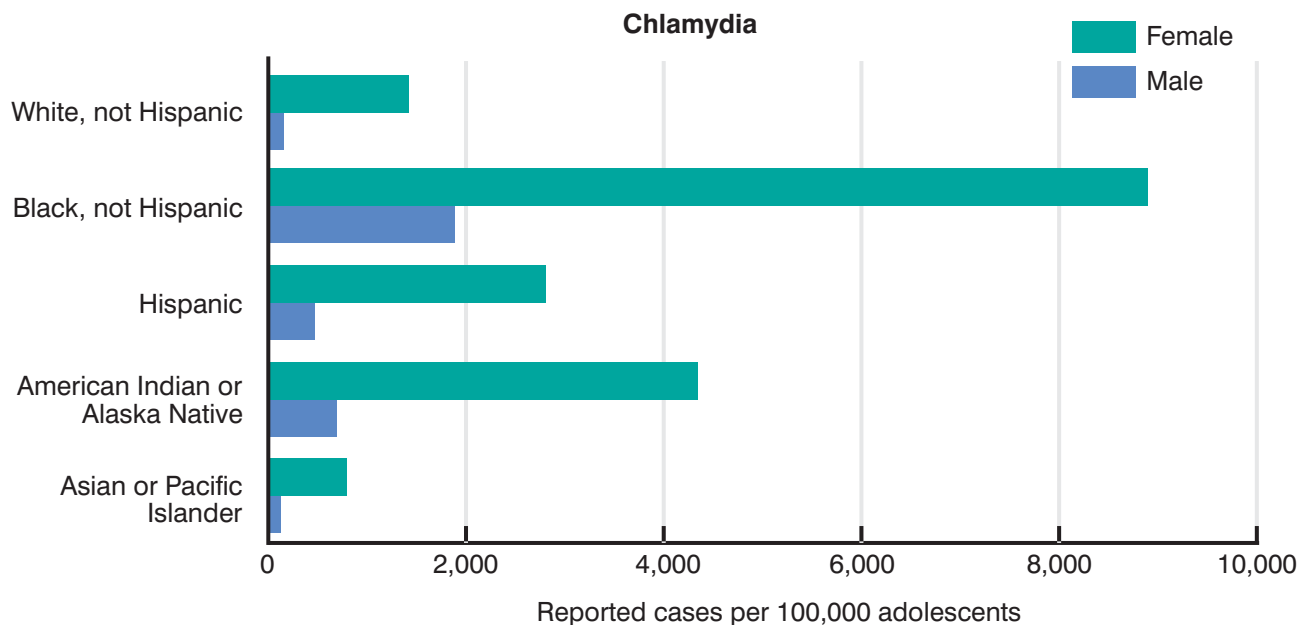
■ Between 1998 (4) and 2004, the gonorrhea rate for female adolescents 15–19 years of age declined almost 22 percent; among male adolescents in the same age group, the decline was 29 percent.

■ Black adolescents are disproportionately affected by chlamydia and gonorrhea. In 2004, non-Hispanic black adolescents had higher rates of chlamydia and gonorrhea than did adolescents in other racial and ethnic groups (Figure 23).

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Figure 23. Sexually transmitted disease rates reported for adolescents 15–19 years of age, by gender and race and Hispanic origin: United States, 2004



NOTES: Persons of Hispanic origin may be of any race. See data table for data points and data for ages 10–14 and 20–24 years.

SOURCE: Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, STD Surveillance.

Acquired Immunodeficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV)

Acquired immunodeficiency syndrome (AIDS), with its associated morbidity and mortality, results from infection with human immunodeficiency virus (HIV). Sexual activity and drug use activities among adolescents place them at high risk for HIV transmission.

Surveillance data on HIV infections provide a more complete picture of the epidemic and the need for prevention and care services than the picture provided by AIDS data alone. However, the number of new HIV diagnoses does not necessarily reflect trends in HIV incidence (i.e., new infections) because some people with new diagnoses were infected recently, whereas others were infected some time in the past (1).

- Among female adolescents, the most common method of transmission of HIV infection is through high risk heterosexual contact (Figure 24). Young women are at risk for sexually transmitted HIV for several reasons, including biologic vulnerability, lack of recognition of their partners' risk factors, inequality in relationships, and having sex with older men who are more likely to be infected with HIV (2).

- Among male adolescents, the most common method of HIV transmission is males having sex with males (MSM). According to a recent CDC study of young men (aged 15–22 years) who have had sex with men, more than one-half did not let other people know they were sexually attracted to men (3). MSM who do not disclose their sexual orientation are less likely to seek HIV testing. If they become infected, they are less likely to know it. Furthermore, because MSM who do not disclose their sexual orientation are more likely to have one or more female sex partners, MSM who become infected may transmit the virus to women as well as to men.

- The proportion of adolescents and young adults with AIDS varies by race and ethnicity. The black population is disproportionately affected by AIDS, accounting for 69 percent of AIDS cases reported among adolescents aged 13–19 years in 2005 (4).

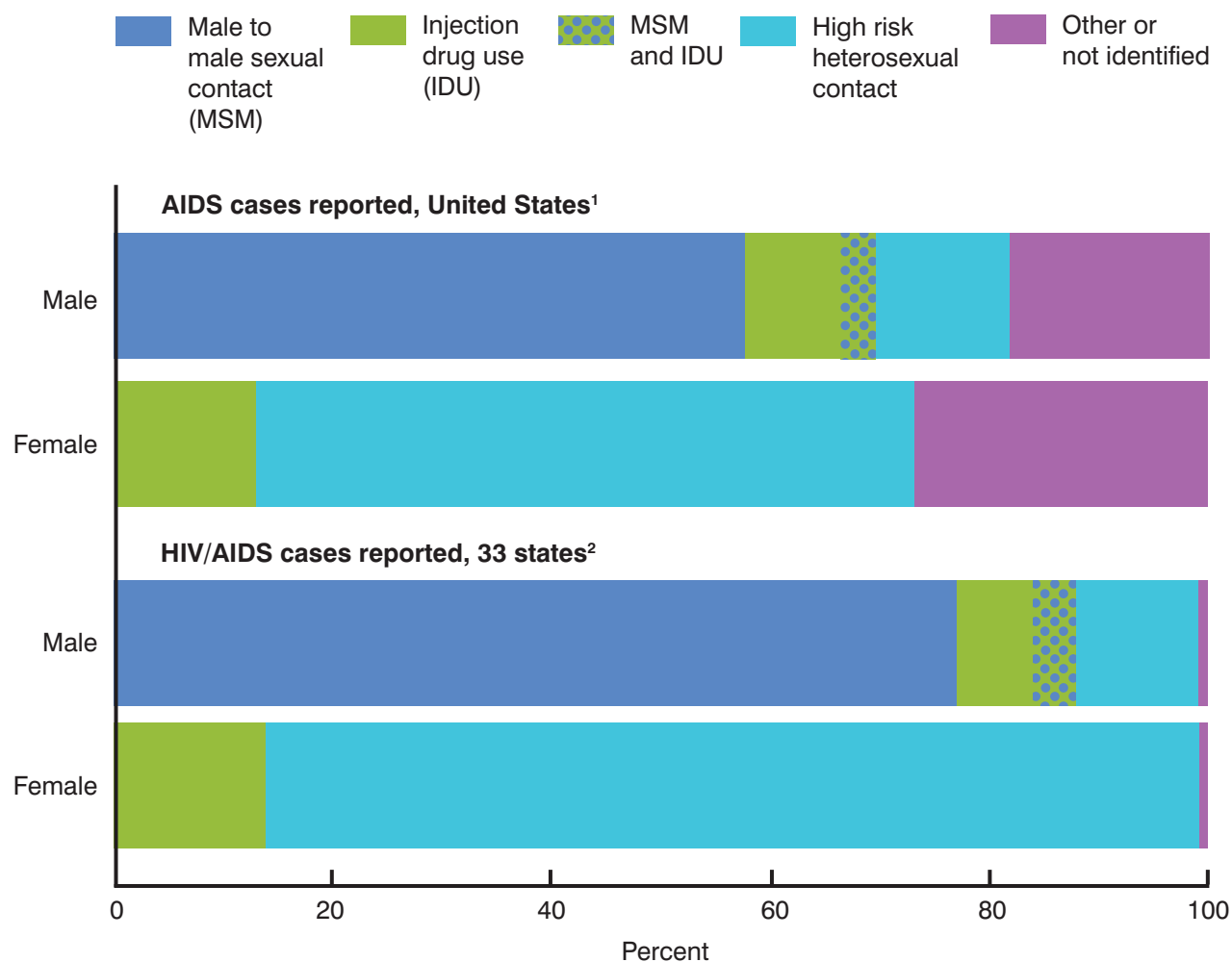
As treatment has become more available, trends in new AIDS diagnoses no longer accurately represent trends in new HIV infections; these data now represent persons who are tested

late in the course of HIV infection, who have limited access to care, or for whom treatment has failed (2).

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Figure 24. Acquired immunodeficiency syndrome (AIDS) and Human immunodeficiency virus (HIV) transmission categories for adolescents 13–19 years of age, by gender: United States and 33 states with confidential reporting, 2001–2005



¹Includes Puerto Rico and Virgin Islands.

²Data for HIV/AIDS cases are from 33 states with confidential name-based HIV infection reporting since at least 2001.

NOTES: High risk heterosexual contact is contact with a person known to have or at high risk for HIV infection. Other category includes hemophilia, blood transfusion, perinatal, and risk factor not reported or not identified.

Data for HIV/AIDS cases include persons with a diagnosis of HIV infection regardless of AIDS status at diagnosis. See data table for data points, estimated numbers of cases, data for ages 20–24 years, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, HIV/AIDS Surveillance System.

Risk Behaviors

Sexual Contact

Many different factors in adolescents' lives affect their sexual health and responsible sexual behavior. Gender, age, and race and ethnicity play a role, as do attitudes, involvement in activities, academic performance, and relationships with parents (1,2). Early puberty and early menstruation increase the likelihood of being sexually experienced, and teenagers who appear older or more physically developed are more likely to be involved in sexual activity than their peers (2).

■ In 2002, approximately one-half of adolescents 15–17 years of age had ever engaged in some form of sexual contact with the opposite sex during their life (Figure 25b). By age 18–19 years, the proportion increased to 78 percent of males and 83 percent of females. Every type of sexual contact among adolescents and young adults increased with age from 15–17 years of age to 20–24 years of age (data table for Figure 25b).

■ Oral sex was slightly more common than vaginal intercourse among males 15–17 and 18–19 years of age and females 15–17 years of age.

■ In 2002, 46 percent of never-married female and male adolescents 15–19 years of age had ever had intercourse (3).

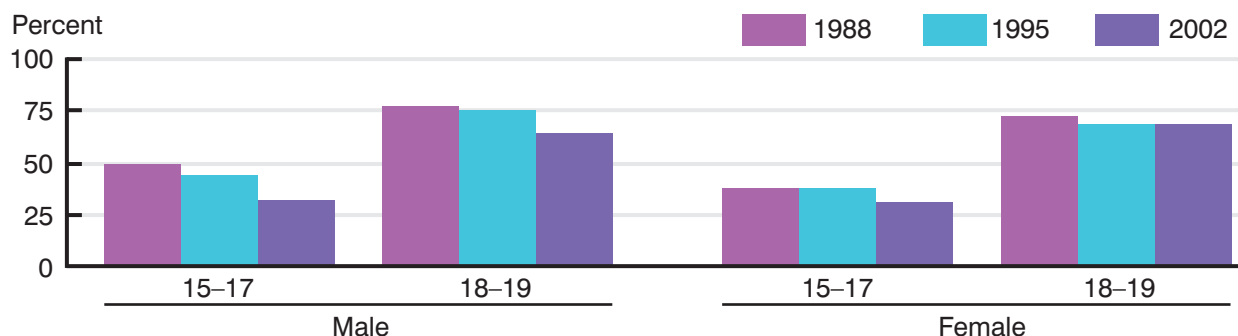
■ The percentage of never-married male adolescents 15–17 and 18–19 years of age who had ever had intercourse declined significantly between 1995 and 2002 (Figure 25a) (3).

■ About three-fourths of female adolescents who were sexually active in 2002 had a first male partner who was the same age or up to 3 years older than they were (3). Eight percent had a first partner who was 6 or more years older. For the majority of female teenagers, their first sexual partner was someone with whom they were “going steady” (3).

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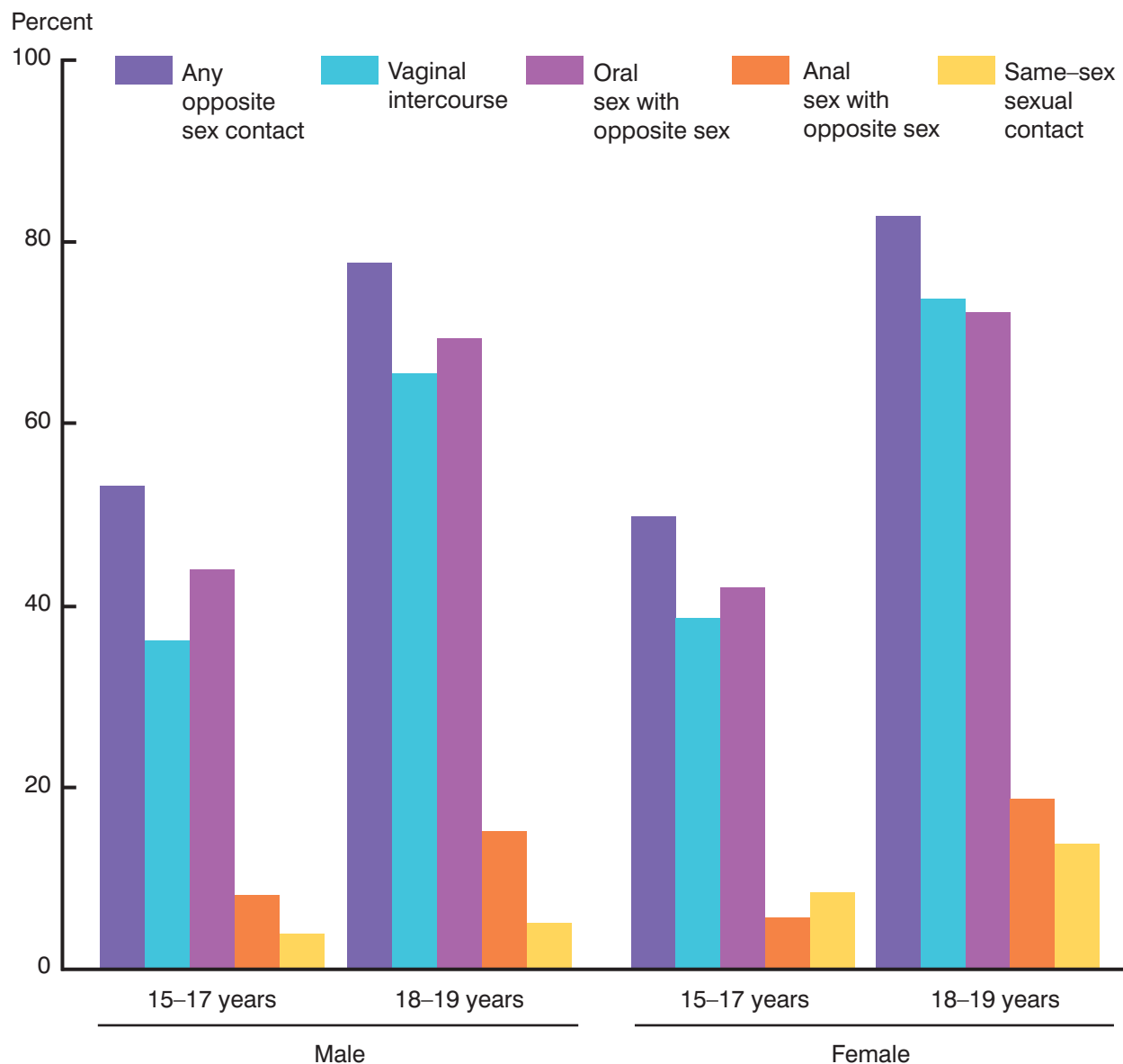
Figure 25a. Adolescents 15–19 years of age who have ever had sexual intercourse, by age and gender: United States, 1988–2002



NOTES: Percentages reflect heterosexual vaginal intercourse only, not other types of sexual activity. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth.

Figure 25b. Ever had any sexual contact among adolescents 15–19 years of age, by type of contact, age, and gender: United States, 2002



NOTES: Same-sex contact was measured with substantially different questions for males and females. See data table for data point, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth.

Sexual Partners

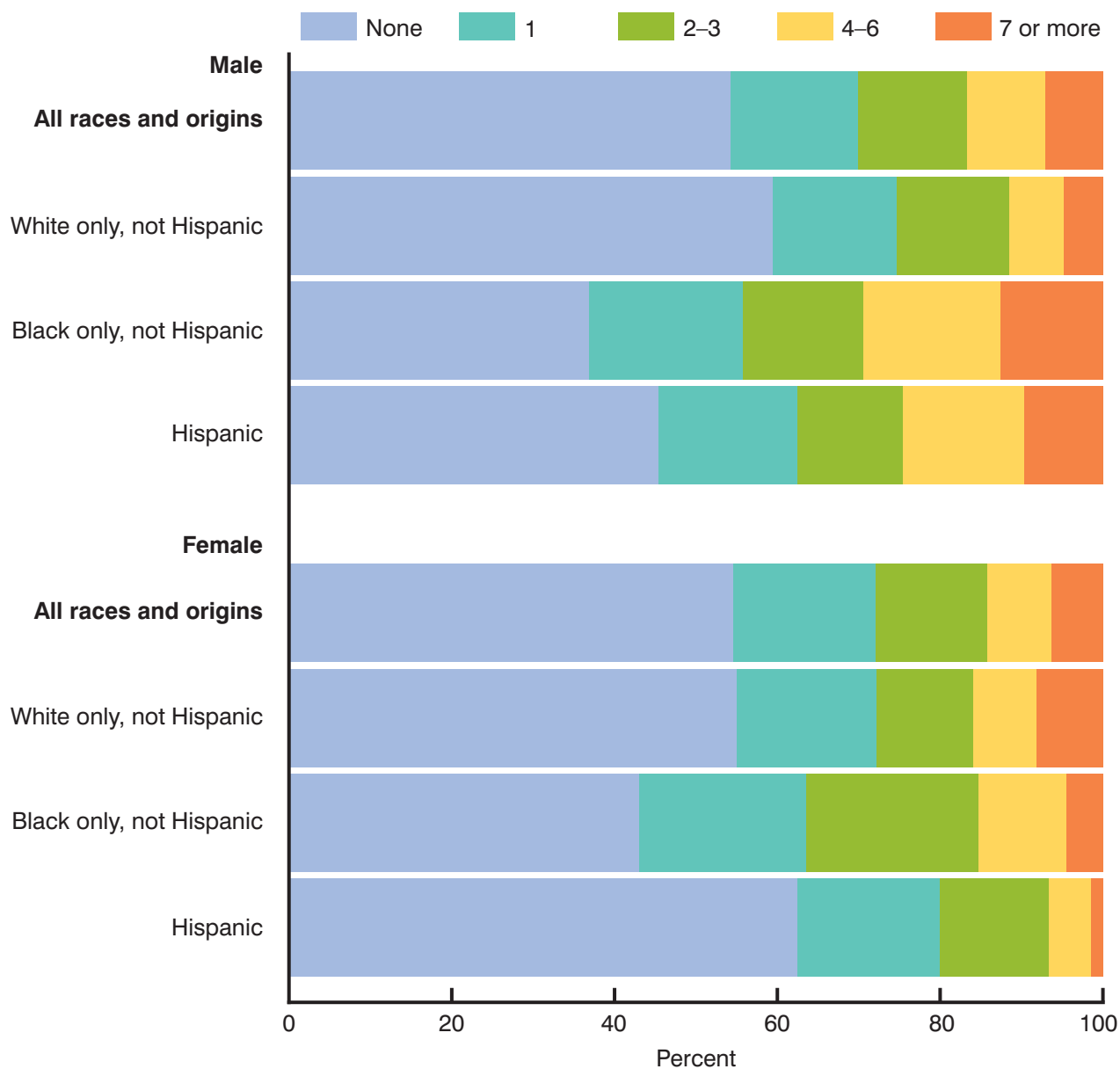
Sexually active adolescents increase their risks of becoming HIV infected, contracting other STDs, and becoming pregnant unintentionally. Teenagers who begin having sex at younger ages are exposed to these risks over a longer period of time. Those who have had multiple sex partners further increase their risk of becoming pregnant and acquiring sexually transmitted diseases, including HIV infection.

- In 2002, just under one-third of male and female adolescents 15–17 years of age had ever had heterosexual vaginal intercourse (were sexually experienced). Among adolescents 18–19 years of age, approximately two-thirds had ever had sexual intercourse (Figure 25a).
- Among adolescents who have had heterosexual vaginal intercourse, the majority have had intercourse with more than one partner in their lifetime (Figure 26). In 2002, the distribution of the number of lifetime sexual partners was similar for male and female adolescents within each age group (data table for Figure 26).
- The number of lifetime sexual partners varied by race and ethnicity. Among never-married male adolescents 15–19 years of age, 29 percent of non-Hispanic black and 25 percent of Hispanic males had more than three sexual partners, compared with 12 percent of non-Hispanic white males. In contrast, among female adolescents, 15 percent of non-Hispanic white teenagers and non-Hispanic black teenagers had more than three sexual partners, compared with only 7 percent of Hispanic teenagers.
- Age at first intercourse is an important factor in the level of sexual risk behaviors among adolescents. Adolescents who begin having intercourse at an earlier age are more likely to have a higher number of partners (1).

Reference

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Figure 26. Number of sexual partners in lifetime among adolescents 15–19 years of age, by gender and race and Hispanic origin: United States, 2002



NOTES: Percentages reflect heterosexual vaginal intercourse only, not other types of sexual activity. Persons of Hispanic origin may be of any race. See data table for data points, data by age group, and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth.

Cigarette Smoking

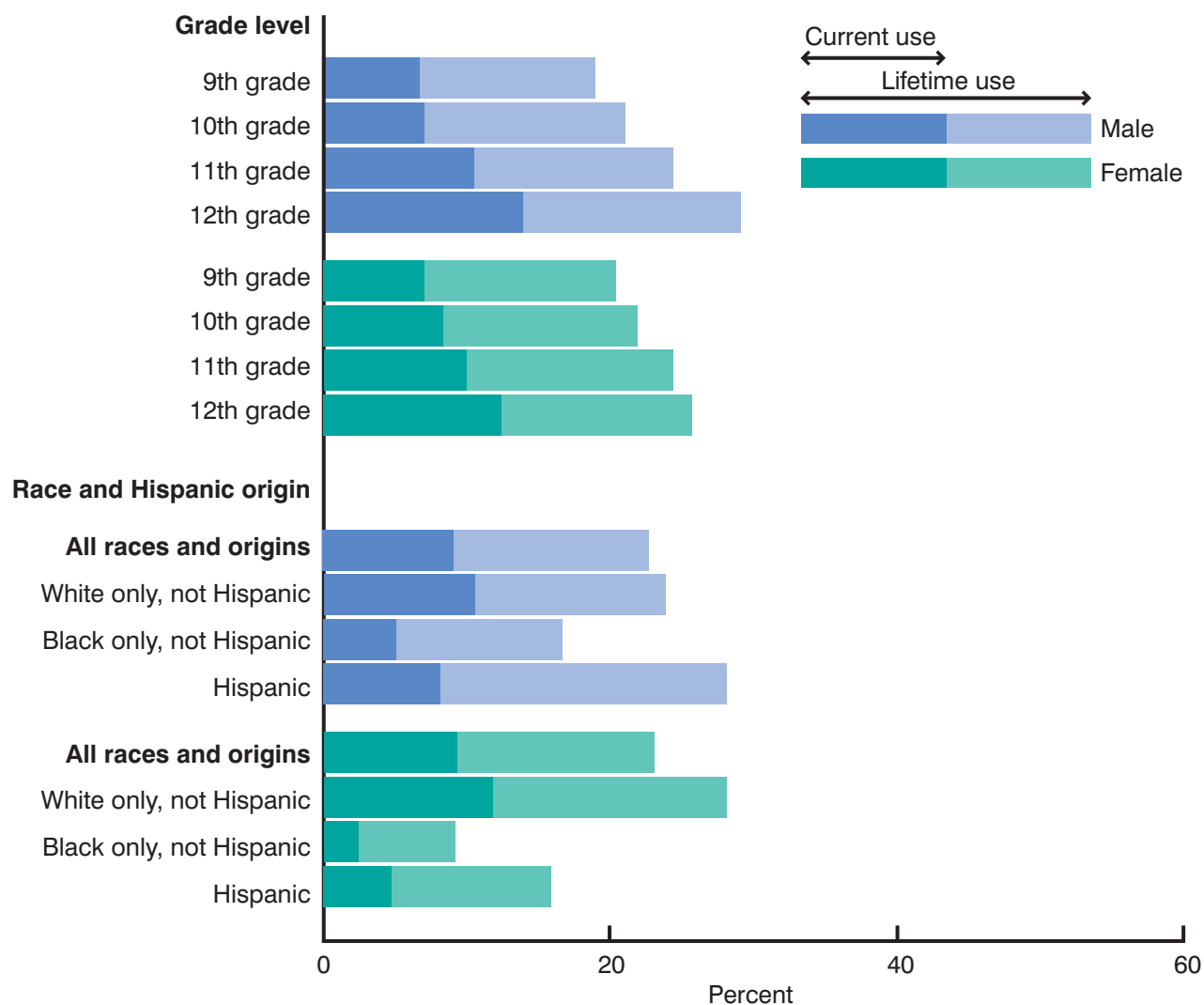
Smoking has serious long-term effects on health, including the risk of nicotine addiction, smoking-related diseases, and premature death (1). Most young people who smoke regularly continue to smoke throughout adulthood. Over 80 percent of adults who are addicted to tobacco began smoking as adolescents (2).

- In 2005, almost one-fourth of all high school students reported smoking cigarettes on one or more days in the previous 30 days (current smoking), and about 9 percent reported smoking frequently (that is, on 20 or more days).
- The percentage of students who reported current cigarette smoking increased with grade level, as did the percentage who reported frequent smoking (Figure 27). The proportion of frequent smokers nearly doubled between 9th and 12th grades.
- Many adolescents begin smoking cigarettes before reaching 9th grade. In 2005, 16 percent of students had smoked a whole cigarette before 13 years of age (3).
- Rates of cigarette smoking differ substantially among racial and ethnic groups. In 2005, non-Hispanic white and Hispanic students were more likely to smoke cigarettes than non-Hispanic black students were.
- Among the 23 percent of students who reported current cigarette use, 55 percent had tried to quit smoking cigarettes during the 12 months preceding the survey (3).
- The trend in cigarette smoking among adolescents has changed over the past 15 years. The percentage of students who reported current cigarette use increased between 1991 and 1997 (from 28 percent to 36 percent) and then decreased during the 1997 to 2005 period (from 36 percent to 23 percent). Similarly, the percentage of students who reported frequent cigarette use increased between 1991 and 1999 (from 13 percent to 17 percent) and then fell between 1999 and 2005 (from 17 percent to 9 percent) (3).
- In addition to cigarettes, adolescents are at risk from other forms of tobacco use. In 2005, 8 percent of students used smokeless tobacco in the past month (14 percent of male students and 2 percent of female students), and 14 percent smoked cigars (19 percent of male students and 9 percent of female students) (3).

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3. CDC. Youth risk behavior surveillance—United States, 2005. *MMWR* 55(SS-5). 9 June 2006.

Figure 27. Current cigarette smoking among students in grades 9–12 by grade level, gender, and race and Hispanic origin: United States, 2005



NOTES: Current smokers are students who smoked cigarettes on one or more of the past 30 days; frequent smokers are students who smoked cigarettes on 20 or more of the past 30 days. Persons of Hispanic origin may be of any race. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Alcohol Use

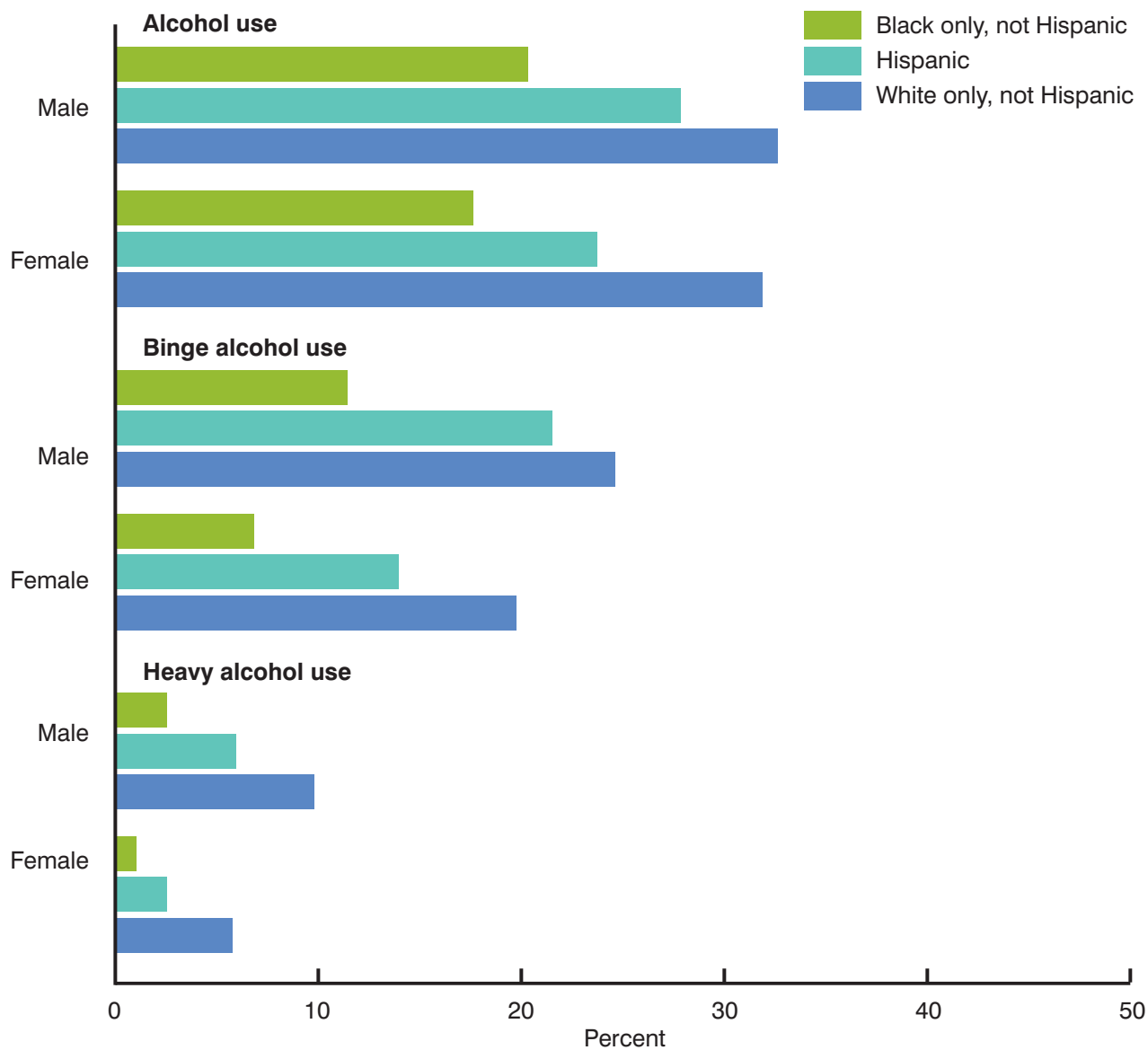
Alcohol is the most commonly used psychoactive substance during adolescence, even though the minimum legal drinking age is 21 years. Alcohol use is associated with motor vehicle crashes, injuries, and deaths; problems in school and the workplace; and fighting, crime, and other activities with serious consequences (1). Binge alcohol use (binge drinking), in which five or more drinks are consumed on one occasion, and heavy drinking, in which binge drinking occurs on 5 or more days in the past month, increase the likelihood of negative outcomes (2).

- In 2005, 28 percent of adolescents 12–20 years of age reported drinking alcohol in the past month. Binge drinking was reported by 19 percent of adolescents and heavy alcohol use was reported by 6 percent ([data table for Figure 28](#)).
- Alcohol use, binge alcohol use, and heavy alcohol use increased significantly between ages 12–13 years and 18–20 years. One-half of all persons 18–20 years of age had used alcohol in the past month and more than one-third reported binge drinking in the past month.
- Alcohol use varies by race and ethnicity. In 2005, non-Hispanic white adolescents were significantly more likely to engage in alcohol use than were non-Hispanic black adolescents ([Figure 28](#)).
- Adolescents who combine drinking and driving are at an increased risk of injury or death. In 2005, 15 percent of students in the 11th and 12th grades reported driving after drinking alcohol ([data table for Figure 29b](#)) (3).
- Adolescents who begin drinking before age 15 are four times as likely to be alcohol dependent as those who delay drinking until at least age 21 (2).

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Figure 28. Alcohol use, binge alcohol use, and heavy alcohol use in the past 30 days among adolescents 12–20 years of age, by gender and race and Hispanic origin: United States, 2005



NOTES: Binge alcohol use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. Heavy alcohol use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Persons of Hispanic origin may be of any race. See data table for data points, data on age and detailed race, standard errors, and additional notes.

SOURCE: Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies, National Survey on Drug Use and Health.

Drinking and Driving and Seatbelt Use

Between 1970 and 2004, death rates for motor vehicle-related injuries for teenagers and young adults 15–24 years of age decreased by 81 percent. Yet, teenagers and young adults 15–24 years of age have among the highest death rates for motor vehicle traffic-related injuries of any age group (1). Research has shown that seatbelts, when properly used, reduce the risk of moderate to critical injury and fatal injury (2). In states with strict seatbelt laws, teenage seatbelt use is consistently higher (3).

Alcohol use and driving a vehicle are a deadly combination. In 2005, almost one-fifth of young drivers 16–20 years of age involved in fatal motor vehicle traffic-related crashes were intoxicated (4). Young drivers are less likely to use restraints if they have been drinking alcohol. In 2004, three-fourths of young drivers who had been drinking and were killed in a crash were not wearing seatbelts (5).

■ Among high school students, riding with a driver who had been drinking was more common than not using a seatbelt or drinking and driving (Figure 29a). The percentage of high school students in grades 9 through 12 who rode with a driver who had been drinking alcohol decreased from 40 percent to 29 percent between 1991 and 2005. In 2005, male and female high school students were equally likely to ride with a driver who had been drinking (data table for Figure 29b). Hispanic students were significantly more likely than their non-Hispanic white and black counterparts to ride with a driver who had been drinking (Figure 29b).

■ The percentage of high school students in 11th and 12th grade who drove after drinking alcohol declined from almost 17 percent to 10 percent between 1991 and 2005. In 2005, non-Hispanic black 11th- and 12th-grade students were less likely to drive after drinking than non-Hispanic white or Hispanic students.

■ Between 1991 and 2005, the percentage of high school students in grades 9 through 12 who never or rarely wore seatbelts while riding in a car driven by someone else decreased from 26 percent to 10 percent. Although the percentage of students not wearing seatbelts declined for both males and females, almost 13 percent of male high school students compared with 9 percent of female high school students rarely or never used a seatbelt in 2005. Seatbelt use did not differ significantly by race and ethnicity.

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Figure 29a. Drinking and driving and seatbelt use among students in grades 9–12: United States, 1991–2005

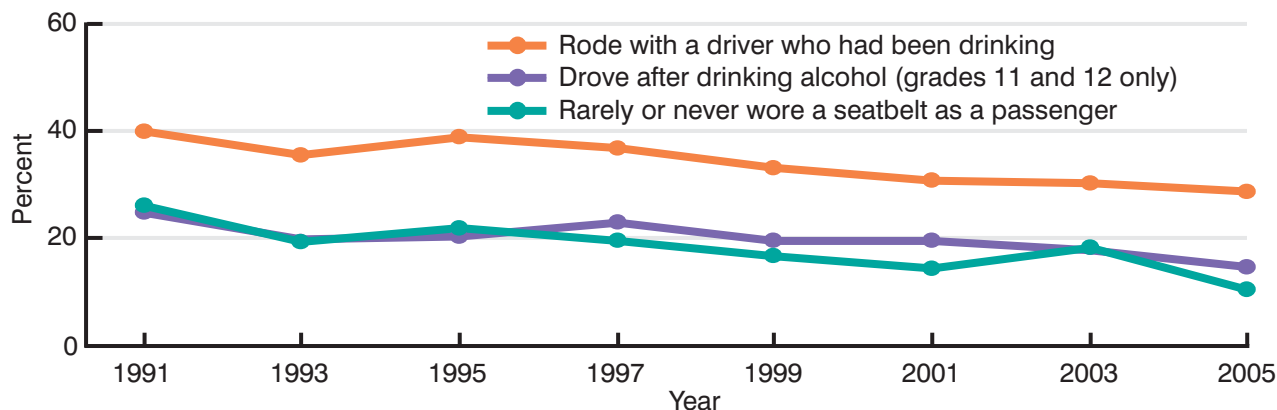
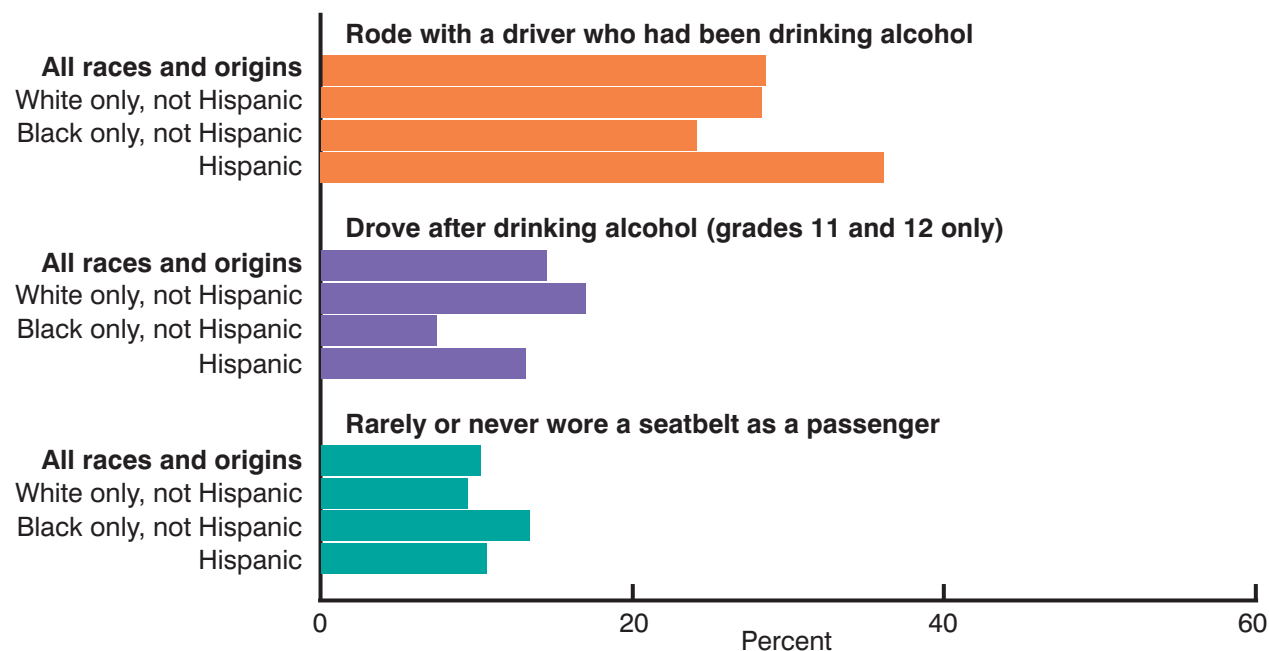


Figure 29b. Drinking and driving and seatbelt use among students in grades 9–12, by race and Hispanic origin: United States, 2005



NOTES: Rode with a driver who had been drinking alcohol is defined as students who during the past 30 days rode one or more times in a car or other vehicle driven by someone who had been drinking alcohol; drove after drinking is defined as students who during the past 30 days drove a car or other vehicle one or more times when they had been drinking alcohol; rarely or never wore a seatbelt is defined as students who rarely or

never wore a seatbelt when riding in a car driven by someone else. Persons of Hispanic origin may be of any race. See data table for data points, data by grade level and gender, and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Use of Marijuana and Other Illicit Drugs

Drug use by adolescents can have immediate and long-term health and social consequences. Marijuana is the most commonly used illicit drug among high school students.

The use of marijuana can produce adverse physical, mental, emotional, and behavioral changes, and it can be addictive (1). Marijuana use can also impair short-term memory, verbal skills, and judgment, as well as distort perception (1). Research has shown that marijuana use may weaken the immune system and possibly increase a user's likelihood of cancer (1). Marijuana smoke, like cigarette smoke, can damage the lungs (1). Increasing use of marijuana by very young teenagers may have a profoundly negative effect on their development (1).

- In 2005, one-fifth of students in grades 9 through 12 reported using marijuana one or more times in the past month (data table for Figure 30). Among male students, current use increased significantly by grade level (Figure 30). Male students were slightly more likely than female students to have used marijuana in the past 30 days.

- Among all students in grades 9 through 12, the prevalence of marijuana use in the past month has declined by 24 percent overall since 1999 (2).

- In 2005, almost 4 in 10 students reported having used marijuana one or more times during their life. Lifetime use of marijuana increased significantly between grades 9 and 12 for both male and female students.

Adolescents face health consequences from other illicit drug use as well, particularly stimulants such as cocaine and amphetamines. Stimulants are drugs that increase the activity of the sympathetic nervous system and produce a sense of euphoria or the feeling of being more awake. Cocaine is a powerfully addictive stimulant drug associated with acute cardiovascular or cerebrovascular emergencies, such as a heart attack or stroke.

- In 2005, almost 8 percent of students in grades 9–12 reported using some form of cocaine (powder, crack, or freebase) during their lifetime and more than 3 percent reported using cocaine in the past 30 days (2).

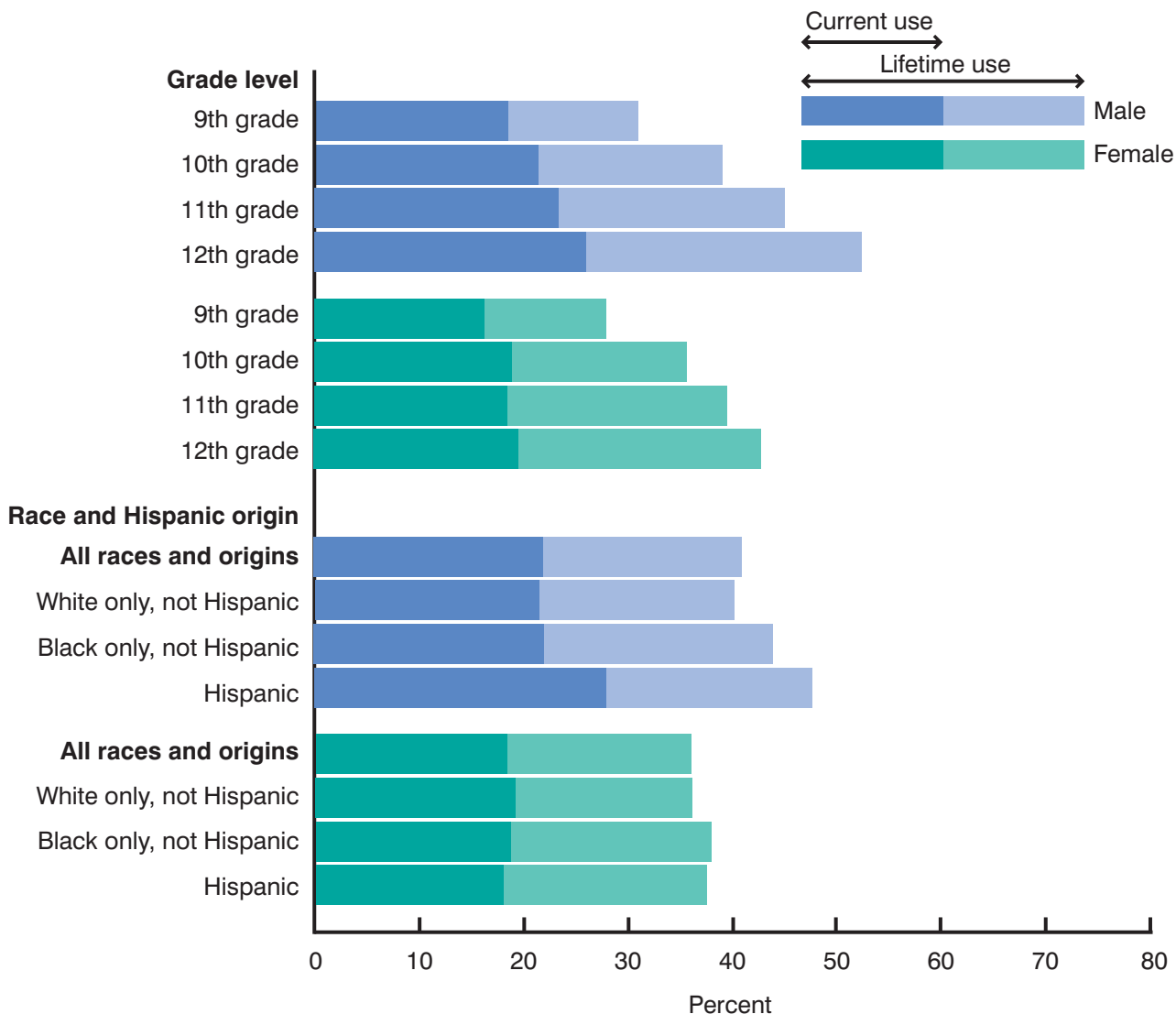
Amphetamines (including methamphetamines) are synthetic stimulants. Regular use of amphetamines can cause chronic sleep problems, mood swings, irregular heartbeat, high blood pressure, weight loss, and nutritional problems. High doses of the drug can result in nerve damage, chronic psychosis, paranoia, and hallucinations.

- In 2005, 6 percent of students in grades 9–12 reported using methamphetamines during their lifetime and 4 percent reported using amphetamines in the past 30 days (2).

References

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2. CDC. Youth risk behavior surveillance—United States, 2005. MMWR 55(SS–5). 9 June 2006.

Figure 30. Marijuana use in the past 30 days and lifetime use among students in grades 9–12, by grade level, gender, and race and Hispanic origin: United States, 2005



NOTES: Current marijuana use is defined as students who used marijuana one or more times in the past 30 days; lifetime marijuana use is defined as students who have used marijuana one or more times during their life. Persons of Hispanic origin may be of any race. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Weapon Carrying

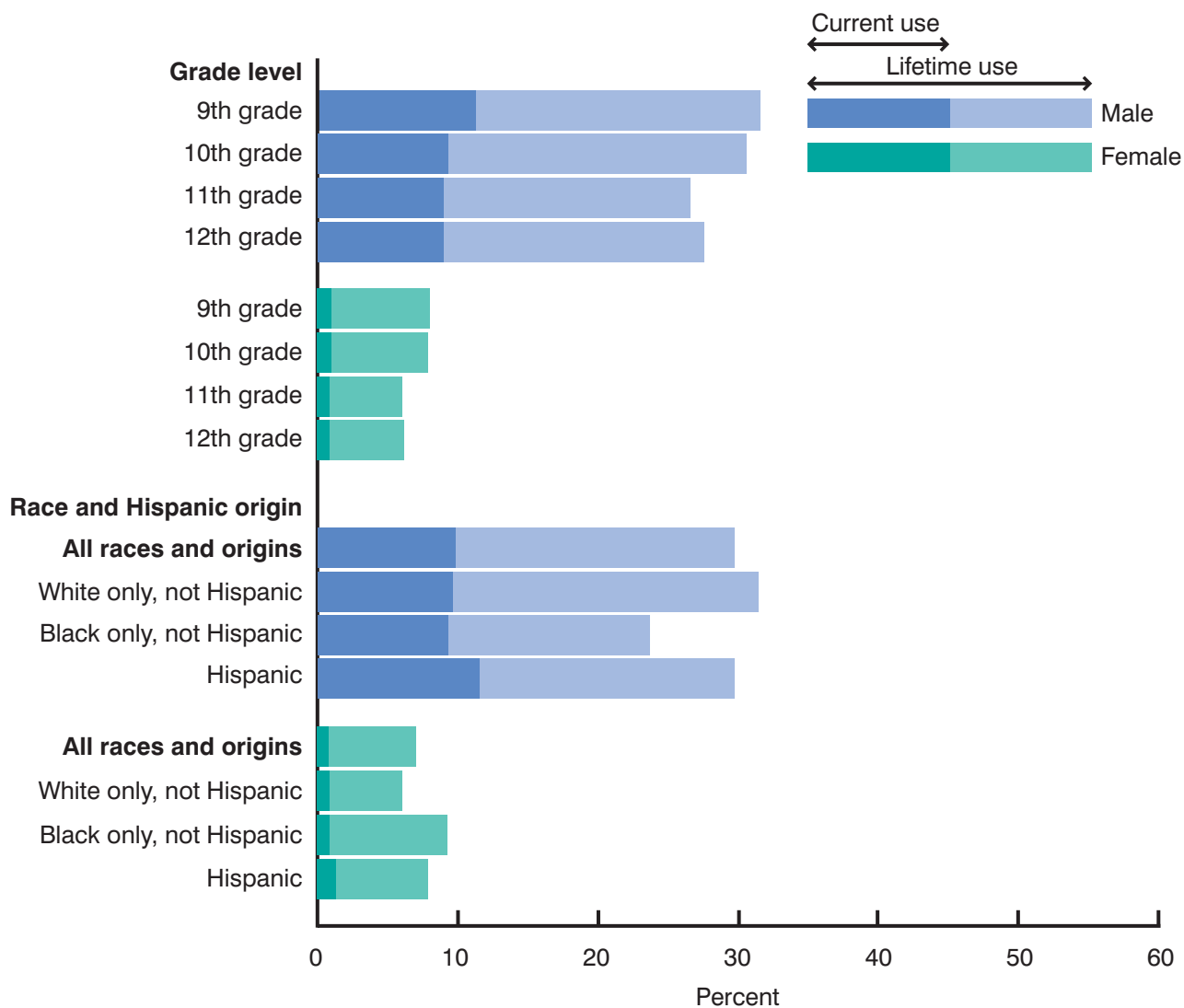
Weapon carrying is associated with the most serious injuries resulting from violence. Carrying a weapon significantly increases the risk that a violent argument will result in death, disability, or other serious injury (1). Although weapon carrying does not always lead to injury, it is strongly associated with exposure to intimidation and threats as well as perceptions of fear and vulnerability (2,3).

- In 2005, 19 percent of high school students reported carrying a gun or other weapon, such as a knife or club, in the past 30 days (data table for Figure 31). Five percent of high school students reported carrying a gun.
- Male students were significantly more likely than female students to report carrying a gun or other weapon (Figure 31). Among both male and female students, the percentage of students who reported carrying a weapon did not differ significantly between 9th and 12th grade.
- The proportion of students who reported bringing a weapon on school property was smaller than the overall proportion of students who carried weapons. In 2005, almost 7 percent of all students brought a weapon to school; 10 percent of male students carried a weapon on school property compared with less than 3 percent of female students (4).
- Not all violence-related behavior involves weapons. In 2005, 36 percent of students were involved in a physical fight one or more times in the past 12 months (4). The prevalence of having been in a physical fight was 43 percent for male students compared with 28 percent for female students.
- The percentage of students who carried a weapon decreased between 1991 and 1999 (from 26 percent to 17 percent) and then did not change significantly between 1999 and 2005 (17–18 percent). The percentage of students who were in a physical fight decreased between 1991 and 2003 from 43 percent to 33 percent and then increased in 2005 to 36 percent (4).

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4. CDC. Youth risk behavior surveillance—United States, 2005. *MMWR* 55(SS–5). 9 June 2006.

Figure 31. Weapon carrying in the past 30 days among students in grades 9–12, by gender, grade level, and race and Hispanic origin: United States, 2005



NOTES: Weapon carrying includes carrying weapons such as a gun, knife, or club on one or more of the past 30 days. Persons of Hispanic origin may be of any race. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Physical Activity

Physical activity provides important health and emotional benefits for adolescents. It helps build and maintain healthy bones, muscles, and joints; helps control weight, build lean muscle, and reduce fat; prevents or delays the development of high blood pressure; and helps reduce blood pressure in some adolescents with hypertension (1). Physical activity, along with a healthy diet, plays an important role in the prevention of overweight and obesity.

Additionally, participation in physical activity and sports is associated with social well-being, as well as physical and mental health, among young people. Studies have found participation in physical activity increases adolescents' self-esteem and reduces anxiety and stress (2). Students who participate in interscholastic sports are less likely to be regular and heavy smokers or use drugs (1), and they are more likely to stay in school and have good conduct and high academic achievement (1). In contrast, low levels of physical activity among adolescents have been associated with other negative health behaviors (1).

- In 2005, 36 percent of adolescents in grades 9–12 engaged in the currently recommended levels of physical activity; that is, they participated in physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes per day on 5 or more of the 7 days preceding the survey ([data table for Figure 32](#)).

- Adolescents' participation in physical activity at the currently recommended level differs by gender. Male students were substantially more likely than female students to have participated in physical activity at the currently recommended level ([Figure 32](#)).

- Adolescents' participation in physical activity at recommended levels also differs by race and ethnicity. Overall, non-Hispanic white students were more likely than non-Hispanic black students to have participated in physical activity at the currently recommended level.

- Although the currently recommended level of physical activity produces the greatest health benefits, adolescents can also benefit from moderate to vigorous physical activity, which is 20 minutes of vigorous activity three or more times a week or 30 minutes of moderate activity five or more times a week. In 2005, 69 percent of students in grades 9–12 participated in moderate to vigorous physical activity.

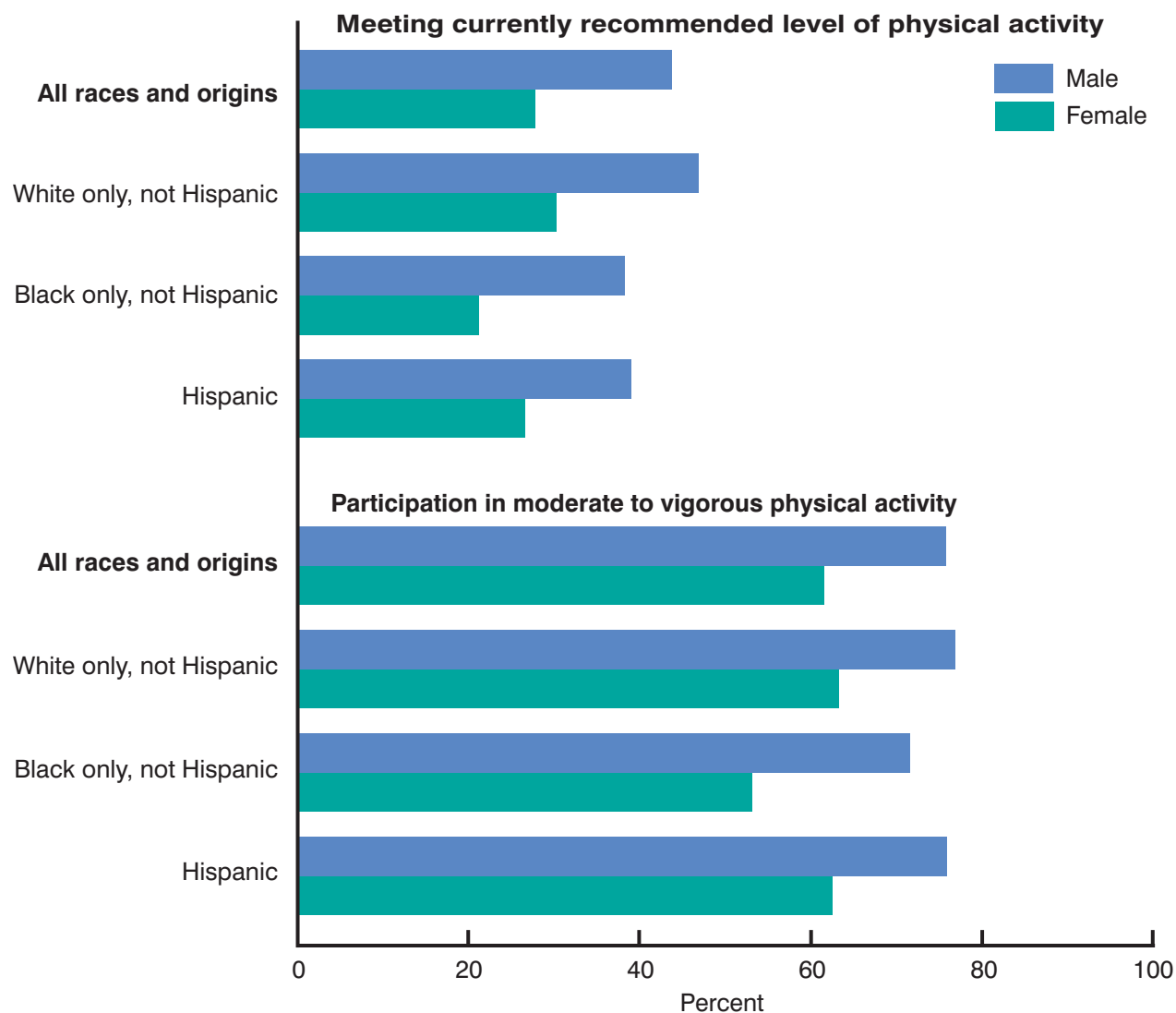
- In 2005, non-Hispanic white and Hispanic students were more likely than non-Hispanic black students to participate in moderate to vigorous physical activity.

- In 2005, participation in moderate to vigorous physical activity among students decreased from 74 percent for 9th grade students to 62 percent for 12th grade students ([data table for Figure 32](#)).

References

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2. U.S. Department of Health and Human Services. Physical activity and health: A report of the Surgeon General. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 1996.

Figure 32. Participation in physical activity among students in grades 9–12, by gender and race and Hispanic origin: United States, 2005



NOTES: The currently recommended level of physical activity for students is defined as any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes per day on 5 or more of the past 7 days; moderate to vigorous physical activity is defined as participation in at least 20 minutes of vigorous physical activity on 3 or more of

the past 7 days and/or at least 30 minutes of moderate physical activity on 5 or more of the past 7 days. See data table for data points, data by grade level, and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Dietary Risk Behavior

Eating is controlled by many factors, including appetite, food availability, and family, peer, and cultural practices, as well as attempts at voluntary control. Dieting to a body weight leaner than what is needed for health is often promoted by current fashion trends, sales campaigns for special foods, and in some activities and professions (1).

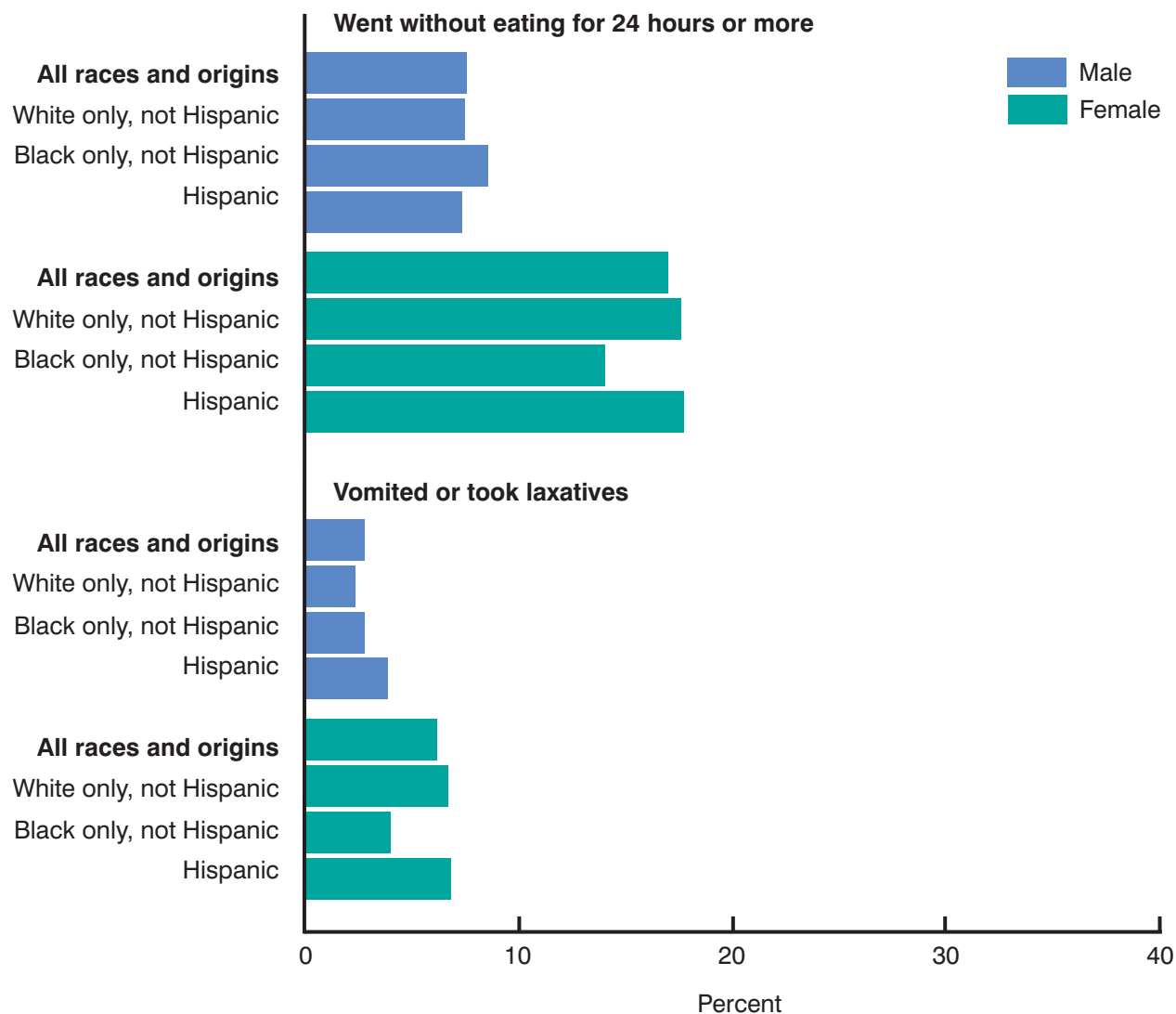
Teenagers who practice extreme dieting—such as fasting, making themselves throw up, taking diet pills, or using laxatives—are more likely to smoke, drink alcohol, use marijuana, exercise intensely, and attempt suicide (2). Despite taking extreme measures to lose weight, extreme dieters are less likely to make healthy choices, such as exercising moderately and eating five servings of fruits and vegetables each day (2). In 2005, 12 percent of high school students reported not eating for 24 hours or more in the past 30 days to lose weight or to keep from gaining weight ([data table for Figure 33](#)). Almost 5 percent of high school students reported vomiting or taking a laxative for the same purpose.

- Female students were more than twice as likely to report these dietary risk behaviors as male students were ([Figure 33](#)).
- Among female students, non-Hispanic black students were significantly less likely to report vomiting or taking a laxative than were their non-Hispanic white and Hispanic counterparts. The proportion of male students who reported dietary risk behaviors was similar across racial and ethnic groups.

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2. Rafiroiu AC, Sargent RG, Parra-Medina D, Drane WJ, Valois RF. Covariations of adolescent weight-control, health-risk, and health-promoting behaviors. *Am J Health Behav* 27(1): 3-14. 2003.

Figure 33. Dietary risk behavior in the past 30 days among students in grades 9–12, by gender and race and Hispanic origin: United States, 2005



NOTES: Went without eating for 24 hours or more is defined as students who went without eating for 24 hours or more to lose weight or to keep from gaining weight during the past 30 days; vomited or took laxatives is defined as students who vomited or took laxatives to lose weight or to keep from gaining weight during the past 30 days. Persons of Hispanic

origin may be of any race. See data table for data points, data by grade level, and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Health Care Access and Utilization

Health Care Coverage

Access to and use of health care services for adolescents is dependent, to a great degree, on the ability to pay for services. Compared with their insured counterparts, the uninsured are more likely to lack a usual source of care, have unmet health care needs, and go without contact with a physician during the course of the year (1).

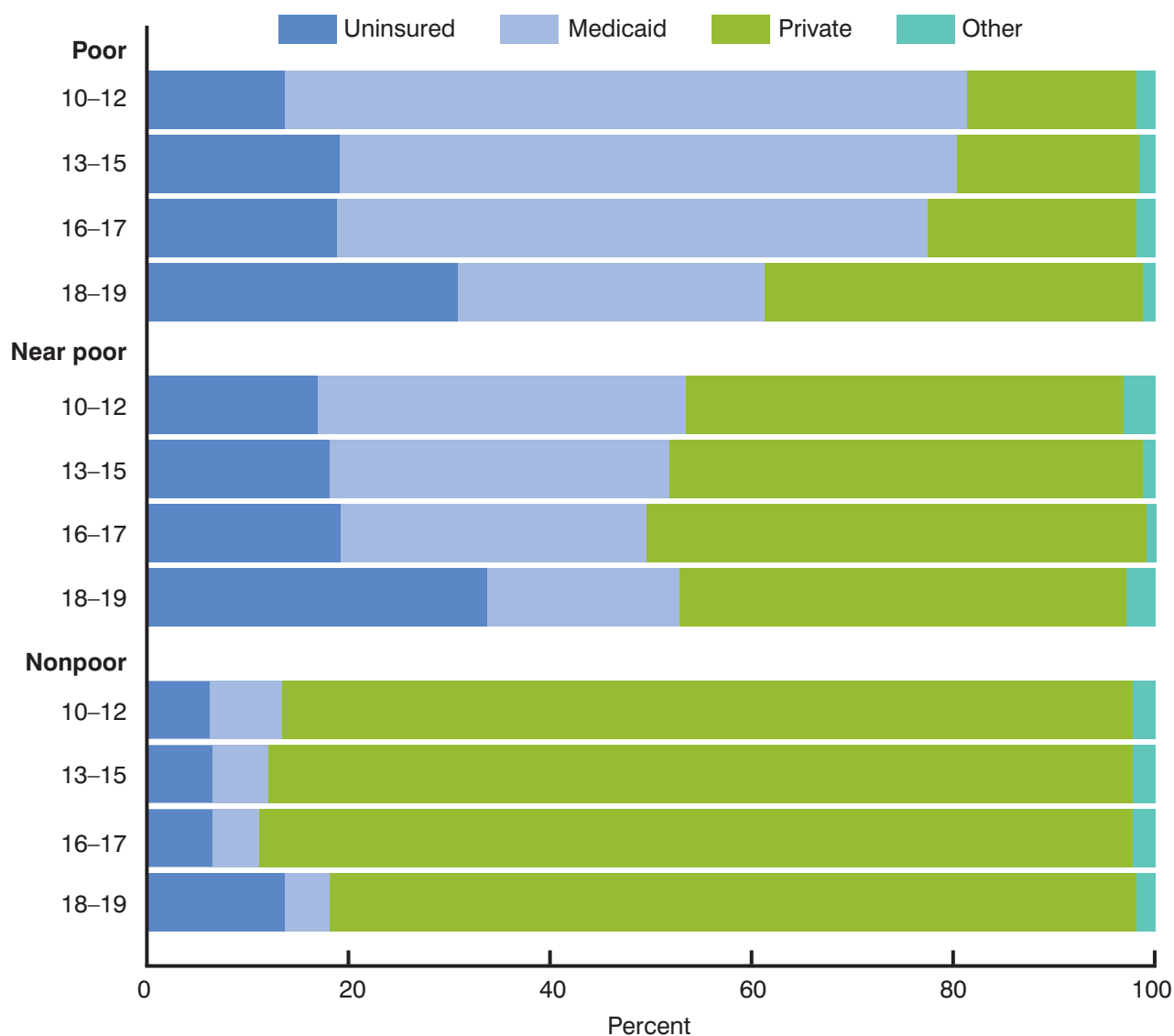
- Family income is a key factor in the likelihood that an adolescent will be uninsured. The large majority of poor and near poor adolescents under age 19 are eligible for public coverage through Medicaid or State Children's Health Insurance Program (SCHIP). Nonetheless, in 2005, one-fifth of adolescents in families below the poverty level had no health insurance, compared with 8 percent of adolescents in families with income at twice the poverty threshold or greater ([data table for Figure 34](#)).

- Adolescents 18–19 years of age are more likely to be uninsured than younger adolescents, reflecting lower rates of both public and private coverage ([Figure 34](#)).

Reference

1. NCHS. Health, United States, 2006, with chartbook on trends in the health of Americans. Hyattsville, MD: National Center for Health Statistics. 2006.

Figure 34. Current health care coverage of adolescents 10–19 years of age, by age and poverty status: United States, 2005



NOTES: Insurance status is at the time of interview. Poverty status is derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor families have income of

200 percent of the poverty threshold or more. See data table for data points, data by age group, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Health Care Visits

Adolescents have lower rates of health care utilization than those of younger and older persons, despite the health problems that affect the adolescent population, such as sexually transmitted diseases, emotional and behavioral health problems, unintended pregnancy, drug and alcohol abuse, injuries, and violence (1). Routine health care for adolescents includes physical examinations, preventive interventions and education, observations, and screening, as well as sick care (2).

- Among female adolescents 10–19 years of age, the percentage without a recent health care visit varied slightly by age (Figure 35). In contrast, older male adolescents (18–19 years of age) were more likely than their younger counterparts to lack a recent health care visit.

- Uninsured adolescents are less likely to receive care than those with coverage. In 2005, the proportion of adolescents who had not visited a physician or other health professional in the past year was more than three times as high for adolescents without health insurance as for those with health insurance. Among uninsured adolescents, the proportion that did not have at least one health care visit in the past year was similar for white non-Hispanic, black non-Hispanic, and Hispanic teenagers.

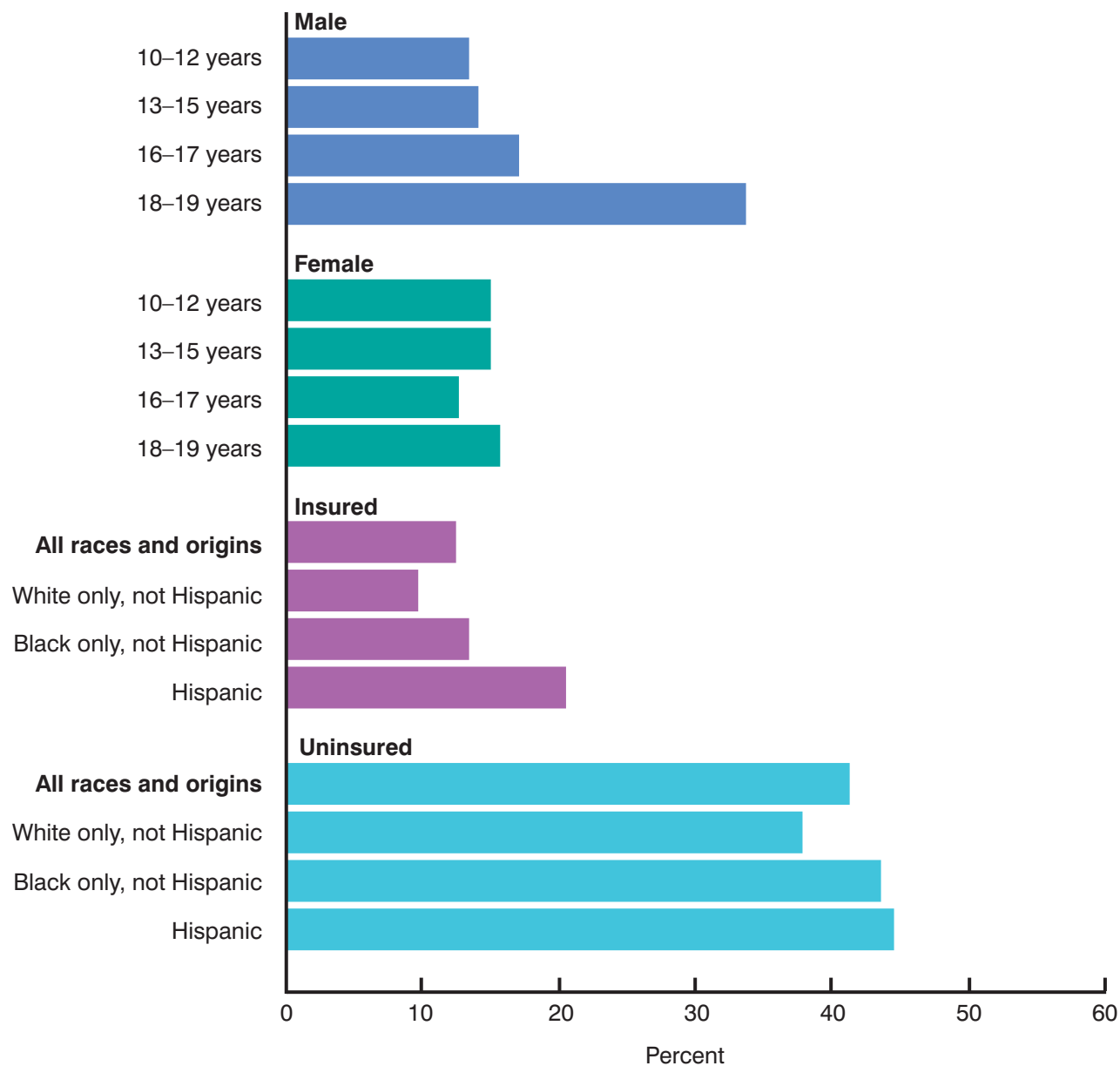
- Having health insurance did not always assure that an adolescent would have at least one health care visit in the past year. Hispanic adolescents with health insurance were less likely to have at least one health care visit than non-Hispanic white and non-Hispanic black adolescents with health insurance.

- Adolescents 10–19 years of age are less likely to have had a recent health care visit than children less than 10 years of age. In 2005, 83 percent of adolescents had one or more contacts with a physician or other health care professional compared with 91 percent of children less than 10 years of age (3).

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2. Green M, editor. Bright futures: Guidelines for health supervision of infants, children, and adolescents. Arlington, VA: National Center for Education in Maternal and Child Health. 1994.
3. CDC. National Center for Health Statistics, National Health Interview Survey. Unpublished analysis. 2006.

Figure 35. Lack of a health care visit in the past 12 months among adolescents 10–19 years of age, by age, gender, race and Hispanic origin, and insurance status: United States, 2005



NOTES: Health care visit is defined as being seen by a physician or other health professional in a doctor's office, clinic, or some other place. Excluded are visits to emergency rooms, hospitalization, home visits, and telephone calls. Persons of Hispanic origin may be of any

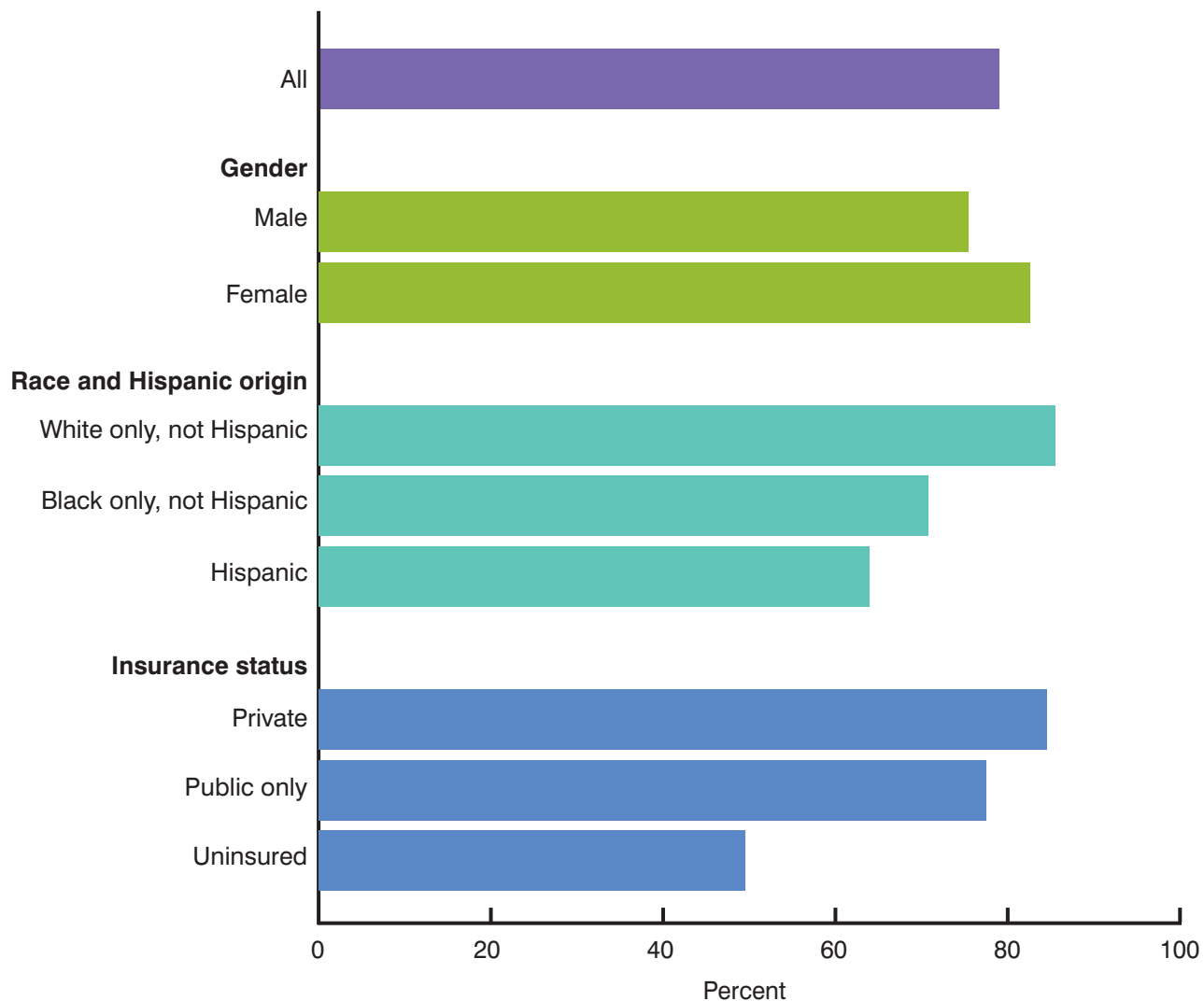
race. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Health Care Expenses

- In 2004, 80 percent of adolescents 10–21 years of age incurred out-of-pocket expenses for health care (Figure 36). Adolescents with expenses incurred, on average, \$1,514 of out-of-pocket expenses annually (data table for Figure 36). Female adolescents (83 percent) were more likely to have incurred out-of-pocket health care expenses than their male counterparts (76 percent).
- The proportion of adolescents with out-of-pocket health care expenses decreased with age (data table for Figure 36).
- Out-of-pocket health care expense varied by race and ethnicity. In 2004, 86 percent of non-Hispanic white adolescents 10–21 years of age had out-of-pocket expenses compared with 71 percent of non-Hispanic black adolescents and 65 percent of Hispanic adolescents.
- Out-of-pocket health care expenses also varied by insurance coverage. In 2004, adolescents with public or private health insurance were considerably more likely to have incurred out-of-pocket expenses than those without health insurance; only one-half of the uninsured had incurred out-of-pocket expenses compared with more than three-fourths of those with public or private coverage.
- Among those with out-of-pocket expenses, the average annual amount spent out-of-pocket was higher for insured adolescents than for those who were uninsured; on average, adolescents with any private insurance spent \$1,581 out-of-pocket annually, and adolescents with only public insurance spent \$1,439 annually, compared with \$1,087 spent by adolescents who were uninsured (data table for Figure 36).

Figure 36. Any out-of-pocket expenses for health care incurred by adolescents 10–21 years of age, by gender, race and Hispanic origin, and insurance status: United States, 2004



NOTES: Expenses include inpatient hospital and physician services, ambulatory physician and nonphysician services, home health services, dental services, and other medical equipment, supplies, and services that were purchased or rented during 2004. Persons of Hispanic origin may be of any race. See data

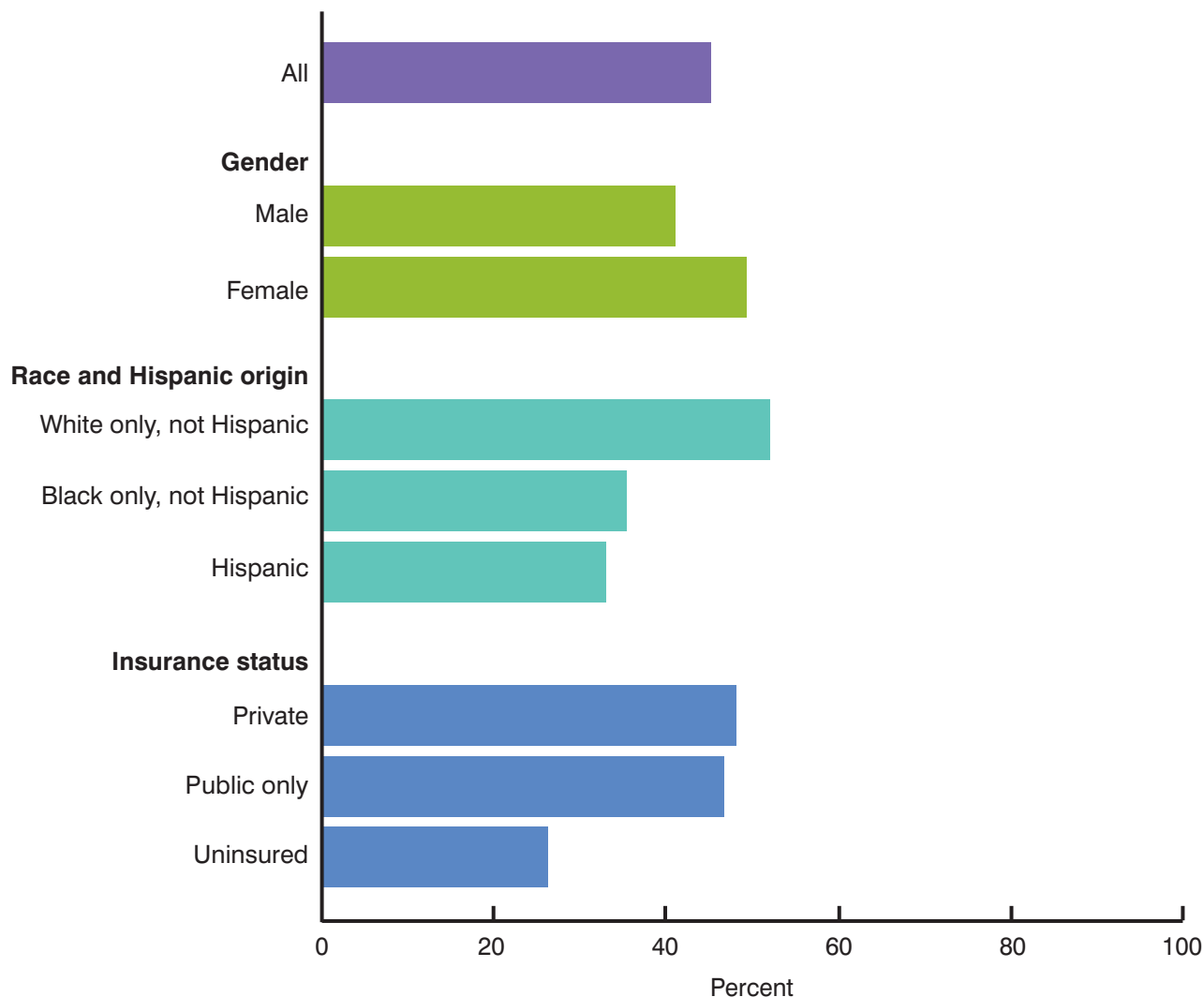
table for data points, data by age groups, and standard errors.

SOURCE: Agency for Healthcare Research and Quality, Center for Cost and Financing Studies, Medical Expenditure Panel Survey.

Medical Prescription Expenses

- In 2004, 45 percent of adolescents 10–21 years of age incurred out-of-pocket expenses for prescribed medication during the calendar year (Figure 37). The proportion of adolescents with prescription drug expenses was similar across all age groups. Female adolescents (49 percent) were more likely than males (41 percent) to have out-of-pocket prescription expenses.
- The proportion of adolescents with out-of-pocket prescription expenses varied by race and ethnicity. In 2004, more than one-half of non-Hispanic white adolescents 10–21 years of age had out-of-pocket prescription expenses compared with about one-third of non-Hispanic black and Hispanic adolescents.
- Out-of-pocket prescription expenses also varied by insurance status. In 2004, the proportion of adolescents who had out-of-pocket expenses in the past year was almost twice as high for adolescents with private or public health insurance as for those without health insurance.
- In 2004, the average out-of-pocket prescription expense for adolescents with expenses was \$389 (data table for Figure 37).
- The average annual amount spent out-of-pocket for prescribed medication among those with any expense was twice as high for insured adolescents as for those who were uninsured. Adolescents with any private insurance spent, on average, \$394 annually on prescriptions, and adolescents with only public insurance spent \$432 annually, compared with \$204 spent by adolescents who were uninsured.

Figure 37. Any out-of-pocket expenses for prescribed medicine incurred by adolescents 10–21 years of age, by gender, race and Hispanic origin, and insurance status: United States, 2004



NOTES: Expenses include all prescribed medications that were purchased or refilled during 2004. Persons of Hispanic origin may be of any race. See data table for data points graphed, data by age groups, and standard errors.

SOURCE: Agency for Healthcare Research and Quality, Center for Cost and Financing Studies, Medical Expenditure Panel Survey.

Unmet Health Care Needs for Adolescents with Special Health Care Needs

Consistent access to a wide range of health care services is particularly important for adolescents with special health care needs (SHCN) (1). Adolescents with SHCN are defined as “those who have a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by [adolescents] generally” (1). Adolescents meeting the definition represent a wide range of levels of functional abilities, and they need access to a broad array of medical and support services to maintain their physical, mental, and emotional health and development.

- Sixteen percent of adolescents 10–17 years of age had SHCN in 2001. Male adolescents were more likely to have special needs (18 percent) than female adolescents were (13 percent) (1).
- Need for a particular service was based on parental report of the perceived need for that service. Among the most commonly needed services for adolescents with SHCN are dental care, specialist care, preventive care, prescription medication, and eyeglasses or vision care (Figure 38b). The services that parents most commonly perceived as being needed among adolescents with SHCN were prescription medications (87 percent) and dental care (85 percent).
- A specific service need was considered unmet if the parent reported that an adolescent did not receive all of the service that the parent perceived as being needed. Adolescents may not receive services they need for various reasons, including financial barriers, lack of access to providers, competing demands on families’ time, and adolescents’ willingness to receive care (1).
- In 2001, 19 percent of adolescents with SHCN were reported to have an unmet need for one or more health care services (Figure 38a). Almost 11 percent of those needing dental care did not receive all that was needed, whereas only 2 percent who needed prescription medication did not receive all the medications needed.
- Services needed but not obtained were most common among uninsured adolescents; almost one-half of uninsured adolescents had at least one unmet need.

References

1. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. The National survey of children with special health care needs: Chartbook 2001. Rockville, MD: U.S. Department of Health and Human Services. 2004.

Figure 38a. Unmet health service needs among adolescents 10–17 years of age with special health care needs, by number of services needed but not obtained and insurance status: United States, 2001

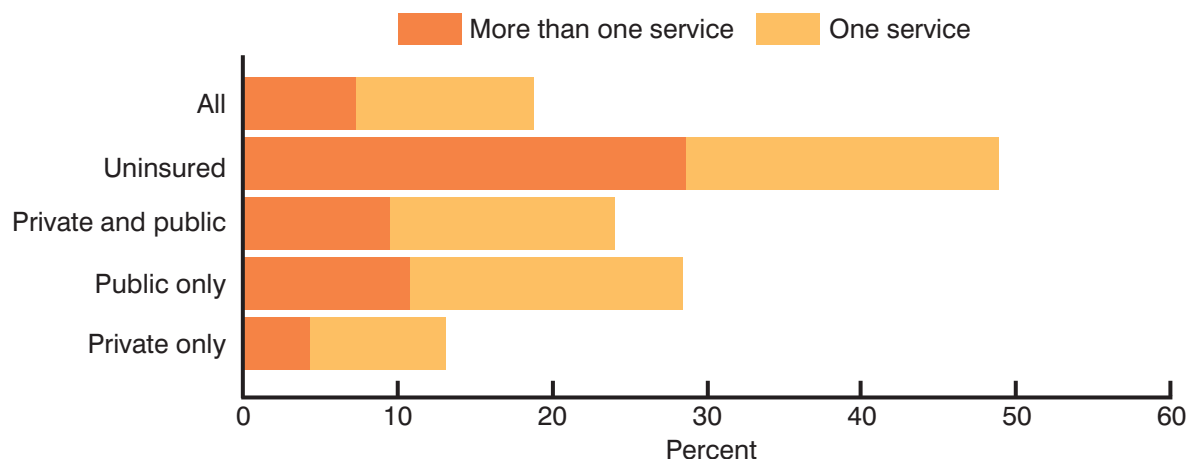
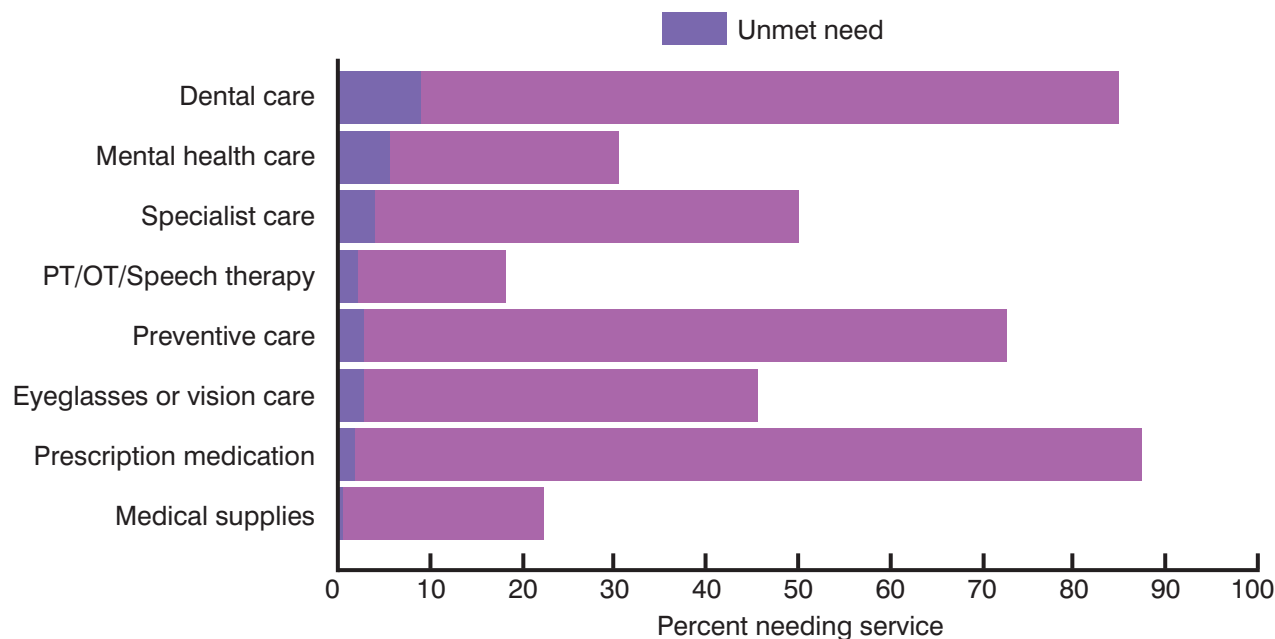


Figure 38b. Selected health service needs among adolescents 10–17 years of age with special health care needs, by type of service needed: United States, 2001



NOTES: Unmet need is defined as not receiving all of the service that was needed and is based on parents' perceived need. PT is physical therapy and OT is occupational therapy. See data table for data points, standard errors, and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children with Special Health Care Needs.

Family Planning and Reproductive Health Medical Services

To meet reproductive health care needs of adolescents and young adults, routine family planning and reproductive health care services are available in a wide range of settings, including community-based clinics, school-based and school-linked health clinics, family planning clinics, and physicians' offices. These services are also available through health maintenance organizations (HMOs). Sexual and reproductive health services encompass three main areas: contraceptive services, maternal health services, and services related to STDs, including HIV or AIDS.

The Family Planning Program, authorized under Title X of the Public Health Act, is the only federal program that is solely for the provision of family planning and reproductive health care. Title X was designed to make contraceptive supplies and services available to low-income and uninsured women (1). Title X clinics also provide a number of preventive health services such as pelvic exams, STD and HIV screening, and pregnancy diagnosis and counseling. Women served by the clinic system are generally young and low income (2). Those who are employed often work at entry-level jobs that offer no health benefits, and many are still in school.

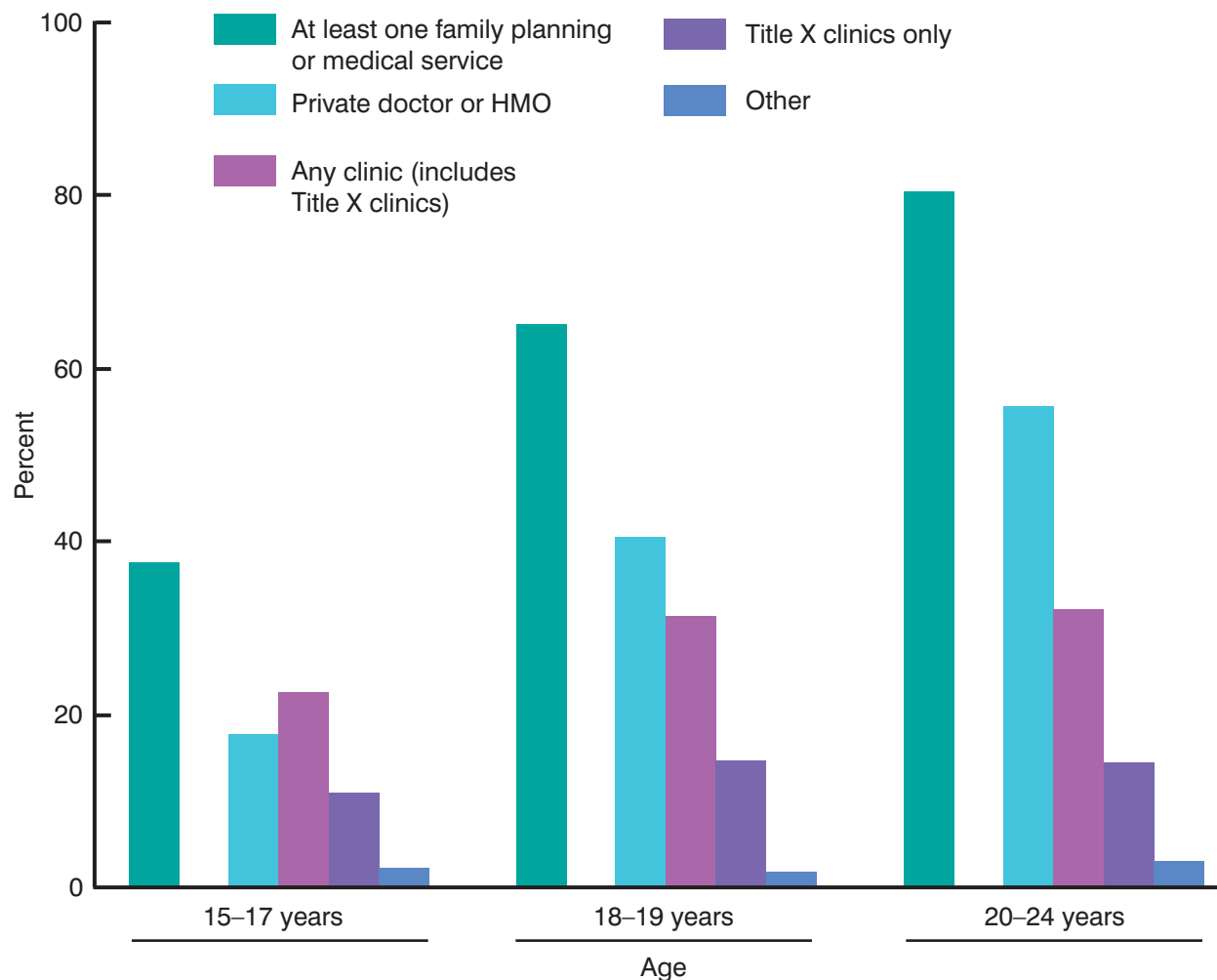
■ In 2002, the percentage of young women who received at least one family planning or reproductive health service in the past year increased with age from 38 percent at ages 15–17 years to 81 percent at ages 20–24 years (Figure 39).

■ Among young women 15–24 years of age who received at least one family planning or reproductive health service, the proportion who received services from a private doctor or HMO increased with age. In contrast, the proportion who received services at a Title X clinic decreased with age, from 30 percent of 15–17 year-olds to 18 percent of 20–24 year-olds.

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Figure 39. Receipt of at least one family planning or reproductive health medical service in the past year among female adolescents 15–19 years of age and young adults 20–24 years of age, by type of provider and age group: United States, 2002



NOTES: Family planning services include sterilizing operation, birth control method, checkup or medical test related to birth control, counseling about birth control, counseling about getting sterilized, emergency contraception, or counseling about emergency contraception. Medical services include Pap smear, pelvic exam, prenatal care, postpartum care, counseling, testing or treatment for sexually transmitted infections, abortion, or pregnancy test. Percent in Title X clinics is also included in any clinic. HMO is health maintenance

organization. Other is any other place not listed. Percentages for provider types do not add to total who “received at least one family planning or medical service” because women may have received more than one service and reported more than one provider. See data table for data points.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth.

Dental Visits

Professional preventive dental care on a routine basis may prevent oral disease or disclose existing disease in its early stages. The adolescent patient whose oral health has not been monitored routinely by a dentist may have advanced caries, periodontal disease, or other oral involvement in need of professional evaluation and treatment (1).

Good nutrition and oral hygiene care practiced at home are particularly important during the teen years. Proper diet, brushing, and flossing play an important role in maintaining and preserving healthy teeth. Dental sealants—plastic coatings applied by a dentist to the chewing surfaces of the back teeth—and use of fluoride are also effective preventive measures (2).

- In 2005, 71 percent of adolescents 10–19 years and young adults 20–24 years had at least one dental visit in the past year. The proportion with a recent dental visit decreased with age, from 84 percent for adolescents 10–15 years of age to 73 percent for those 16–19 years of age, and 54 percent for young adults 20–24 years of age ([data table for Figure 40](#)).

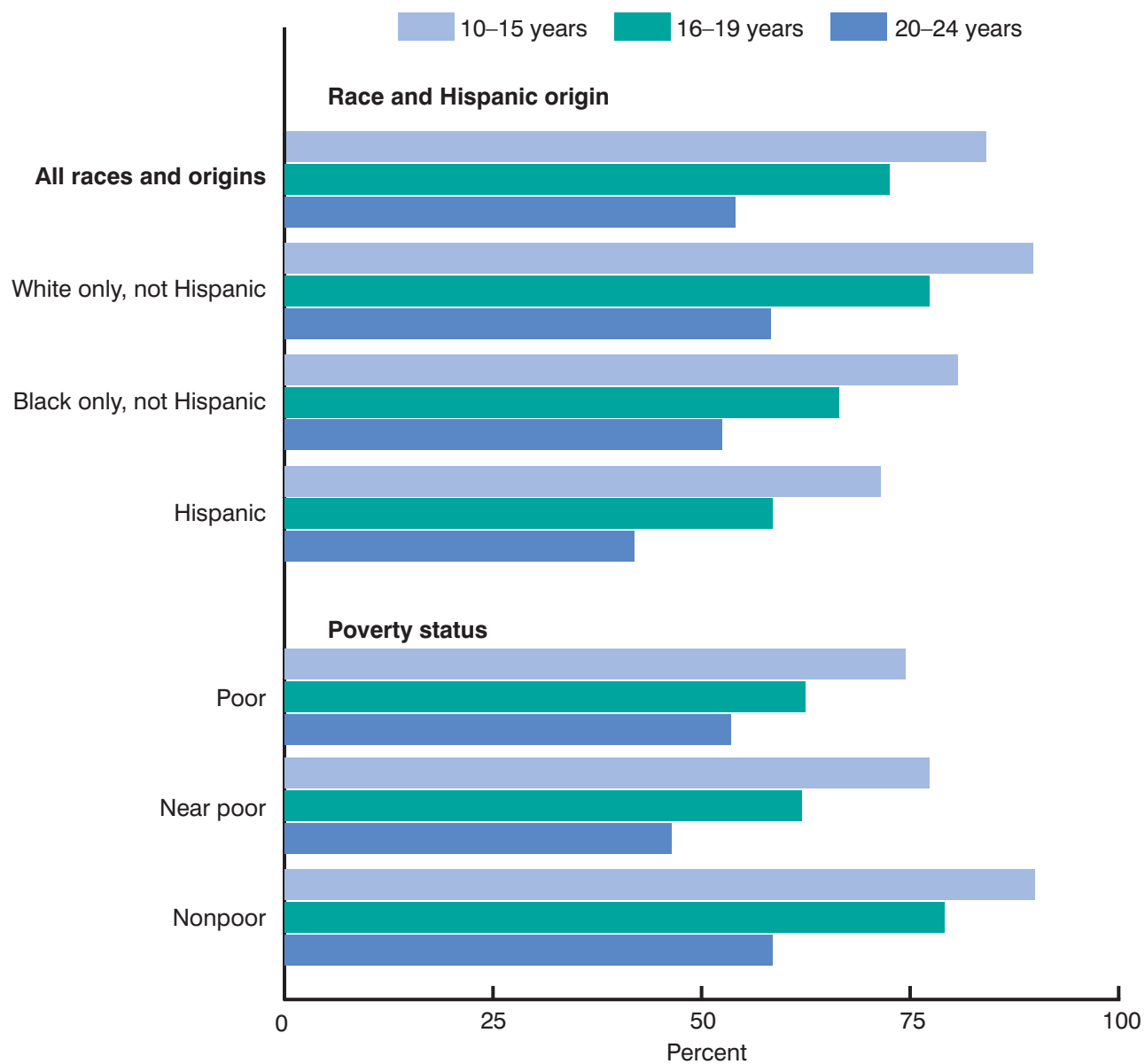
- The proportion of adolescents and young adults with a recent dental visit varied by race and Hispanic origin. Non-Hispanic white adolescents and young adults were more likely to have a dental visit than their non-Hispanic black and Hispanic counterparts ([Figure 40](#)). The disparities were apparent in all age groups.

- Disparities in the proportion with a recent dental visit were also apparent by socioeconomic status. Adolescents from families with incomes at 200 percent of the poverty threshold or more were significantly more likely to have a dental visit than were adolescents in families near or below the poverty threshold.

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Figure 40. At least one dental visit in the past year among adolescents 10–19 years of age and young adults 20–24 years of age, by age group, race and Hispanic origin, and poverty status: United States, 2005



NOTES: Poverty status is derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor families have income of 200 percent of the poverty

threshold or more. Persons of Hispanic origin may be of any race. See data table for data points and standard errors.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Data table for Figure 1. Distribution of adolescents 10–19 years of age by race and Hispanic origin (percent): United States, 1980–2050

Year	Race and Hispanic origin			Race					
	White, not Hispanic	Black, not Hispanic	Hispanic	White	Black	American Indian or Alaska Native	Asian	Asian or Pacific Islander	Two or more races
1980	75.6	14.2	7.9	83.1	14.5	0.8	---	1.6	---
1985	72.5	14.5	9.7	81.5	15.0	1.0	---	2.6	---
1990	69.4	14.7	11.7	80.1	15.3	1.1	---	3.4	---
1995	67.0	14.8	13.4	79.4	15.5	1.2	---	3.9	---
2000	63.3	14.7	15.5	77.5	15.3	1.3	3.7	---	2.0
2005	60.7	15.0	17.5	76.6	15.8	1.3	3.8	---	2.4
Projected									
2010	57.8	---	20.0	76	15.5	---	4.2	---	---
2020	53.7	---	23.1	74.6	15.3	---	4.9	---	---
2030	51.0	---	24.7	73.2	15.5	---	5.4	---	---
2040	47.6	---	27.0	71.7	15.4	---	6.2	---	---
2050	44.3	---	28.9	69.8	15.7	---	7.0	---	---

--- Category not applicable.

NOTES: Standard errors are not available. Data are for the resident population. Persons of Hispanic origin may be of any race. Race data for 2000 and beyond conform to the 1997 Office of Management and Budget Standards for Federal Data on Race and Ethnicity and are not directly comparable with data for earlier years. Individuals could report only one race in 1980–1995, and more than one race beginning in 2000. Persons who selected only one race in 2000 and beyond are shown in single-race categories; persons who selected more than one race in 2000 and beyond are shown as having 2 or more races and are not included in the single-race categories. In 1980–1995, the Asian category includes Asian and Native Hawaiian or other Pacific Islander; in 2000 and beyond this category included only Asian.

SOURCES: U.S. Census Bureau. Population data for 1980 and 1985 are from: U.S. population estimates by age, sex, race, and Hispanic origin: 1980–1991. Current Population Reports. Series P-25, No. 1095. Washington: U.S. Government Printing Office, Feb 1993.

Population data for 1990 and 1995 are from: National Center for Health Statistics. Bridged-race intercensal estimates of the July 1, 1990–July 1, 1999, United States resident population by county, single-year of age, sex, race, and Hispanic origin, prepared by the U.S. Census Bureau with support from the National Cancer Institute. 2004. [cited 2007 June 24]. Available from: www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm.

Population data for 2000–2005 are from: U.S. population estimates by age, sex, race, and Hispanic origin: July 1, 2005. [cited 2007 June 24]. Available from: www.census.gov/ipc/www/usinterimproj/.

Population estimates for 2010–2050 are from: U.S. interim projections by age, sex, race, and Hispanic origin (internet). Available from: www.census.gov/population/www/usinterimproj.html.

Data table for Figure 2. Poverty status among adolescents 10–17 years of age, by family structure and race and Hispanic origin: United States, 2005

<i>Family structure, race, and Hispanic origin</i>	<i>Poor</i>	<i>Near poor</i>
	Percent	
All adolescents:		
All races and origins	15.5	20.3
White only, not Hispanic	8.6	15.0
Black only, not Hispanic	31.1	26.4
Hispanic	25.9	32.8
Adolescents in married couple families:		
All races and origins	7.2	16.6
White only, not Hispanic	3.5	11.6
Black only, not Hispanic	12.8	19.8
Hispanic	17.6	34.1
Adolescents in female householder families:		
All races and origins	36.1	29.1
White, not Hispanic	26.5	26.4
Black, not Hispanic	44.2	30.9
Hispanic	45.8	32.3

NOTES: Standard errors are not available. Poverty status is derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor families have income of 200 percent of the poverty threshold or more. Persons of Hispanic origin may be of any race.

SOURCE: U.S. Census Bureau, Current Population Survey, March Supplement 2006.

Data table for Figure 3. Status dropout rates among adolescents and young adults 16–24 years of age, by age, gender, and race and Hispanic origin, and region: United States, 2004

<i>Characteristic</i>	<i>Status dropout rate</i>	<i>SE¹</i>	<i>Percent distribution of all dropouts</i>	<i>SE¹</i>
Age				
16 years	3.8	0.4	4.5	0.5
17 years	5.2	0.5	5.6	0.6
18 years	10.6	0.7	10.6	0.7
19 years	11.2	0.7	11.7	0.8
20–24 years	12.6	0.3	67.6	1.1
Total	10.3	0.2	100.0	n/a
Gender				
Male	11.6	0.3	56.8	1.2
Female	9.0	0.3	43.2	1.2
Race and Hispanic origin				
Hispanic	23.8	0.7	39.8	1.3
Not Hispanic:				
White	6.8	0.2	40.6	1.2
Black or African American	11.8	0.7	15.8	0.9
Asian/Pacific Islander	3.6	0.9	1.5	0.3
More than one race	6.1	1.5	1.0	0.3
Region				
Northeast	8.8	0.5	16.3	0.8
Midwest	8.0	0.4	17.8	0.9
South	11.4	0.4	39.1	1.2
West	12.2	0.6	26.9	1.1

¹SE is standard error.

NOTES: Status dropout rate is the percentage of the civilian noninstitutionalized population 16–24 years of age who are not in high school and have not earned a high school credential (either a diploma or equivalency credential such as a General Education Development [GED] certificate), irrespective of when they dropped out. Beginning in 2003, respondents were able to identify themselves as being more “than one race.” Persons who reported only one race are included in single-race categories; persons who reported more than one race are shown as having two or more races and are not included in single-race categories. Persons of Hispanic origin may be of any race. Due to small sample size, American Indians or Alaska Natives are included in the total but are not shown separately.

SOURCE: U.S. Census Bureau, Current Population Survey, October 2004.

Data table for Figure 4. Limitation of activity caused by selected chronic health conditions among adolescents 10–17 years of age, by gender, race and Hispanic origin, and poverty status: United States, average annual 2004–2005

Type of chronic health condition	Gender					
	Total		Male		Female	
	Rate	SE ¹	Rate	SE ¹	Rate	SE ¹
<i>Conditions per 1,000 population</i>						
Any chronic condition	8.6	0.2	10.7	0.3	6.4	0.3
Learning disability	26.1	1.2	29.4	1.7	22.7	1.6
Attention Deficit/Hyperactivity Disorder	23.0	1.2	34.8	1.9	10.7	1.1
Other mental, emotional, or behavioral problem	14.4	0.9	20.0	1.4	8.6	1.0
Mental retardation or other developmental problem	11.0	0.8	12.9	1.1	9.0	1.0
Asthma or breathing problem	5.8	0.6	6.0	0.8	5.5	0.8
Speech problem	7.4	0.6	9.7	1.0	5.0	0.7
<i>Race and Hispanic origin</i>						
	White only, not Hispanic		Black only, not Hispanic		Hispanic	
	Rate	SE ¹	Rate	SE ¹	Rate	SE ¹
Any chronic condition	9.0	0.3	9.9	0.6	6.8	0.4
Learning disability	26.3	1.6	28.3	3.0	23.7	2.2
Attention Deficit/Hyperactivity Disorder	24.0	1.5	28.6	3.3	14.7	1.8
Other mental, emotional, or behavioral problem	13.3	1.1	21.2	2.8	12.1	1.5
Mental retardation or other developmental problem	10.9	1.0	12.9	2.1	10.2	1.4
Asthma or breathing problem	5.0	0.7	9.6	1.8	4.8	1.1
Speech problem	7.8	0.8	6.3	1.4	6.9	1.2
<i>Poverty status</i>						
	Poor		Near poor		Not poor	
	Rate	SE ¹	Rate	SE ¹	Rate	SE ¹
Any chronic condition	12.1	0.6	10.0	0.6	7.3	0.3
Learning disability	34.6	3.3	31.3	3.2	22.0	1.5
Attention Deficit/Hyperactivity Disorder	30.7	3.5	26.4	2.8	19.9	1.4
Other mental, emotional, or behavioral problem	23.8	2.7	17.7	2.1	10.7	1.0
Mental retardation or other developmental problem	15.4	2.2	13.2	2.0	9.0	0.9
Asthma or breathing problem	11.1	2.1	5.7	1.3	4.3	0.6
Speech problem	7.7	1.6	8.8	1.5	6.8	0.8

¹SE is standard error.

NOTES: Data are for noninstitutionalized adolescents. Adolescents with limitation of activity caused by chronic health conditions were either identified by current use of special education or by a limitation in their ability to perform activities usual for their age group because of a physical, mental, or emotional problem. Conditions refer to response categories in the National Health Interview Survey. The selected health conditions are classified as chronic in this analysis. These conditions are not mutually exclusive: adolescents who were reported to have more than one chronic health condition as the cause of their activity limitation were counted in each reported category. Persons of Hispanic origin may be of any race. The income groups are derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor families have income of 200 percent of the poverty threshold or more.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Data table for Figure 5a. Overweight among adolescents 12–19 years of age: United States, selected years 1966–1970 through 2003–2004

<i>Year</i>	<i>Percent</i>	<i>SE¹</i>
1966–1970	4.6	0.3
1971–1974	6.1	0.6
1976–1980	5.0	0.5
1988–1994	10.5	0.9
1999–2000	14.9	0.9
2001–2002	16.7	1.1
2003–2004	17.4	1.7

¹SE is standard error.

NOTES: Overweight is defined as body mass index (BMI) at or above the gender- and age-specific 95th percentile BMI cutoff points from the 2000 CDC Growth Charts: United States. Advance data from vital and health statistics; no 314. Hyattsville, Maryland: National Center for Health Statistics. 2000. Age is at the time of examination at mobile examination center. Estimates for females exclude pregnant adolescents.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey.

Data table for Figure 5b. Overweight among adolescents 12–19 years of age, by gender, race and Hispanic origin, and poverty status: United States, average annual 2001–2004

<i>Race and Hispanic origin</i>	<i>Male</i>		<i>Female</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
All races and origins	17.9	1.2	16.0	1.5
Not Hispanic:				
White only	17.9	1.7	14.6	2.0
Black only	17.7	1.4	23.8	1.6
Mexican	20.0	1.5	17.1	1.7

<i>Poverty status</i>	<i>All adolescents</i>	
	<i>Percent</i>	<i>SE</i>
Poor	18.2	1.5
Near poor	17.0	1.8
Nonpoor	16.3	1.4

¹SE is standard error.

NOTES: Overweight is defined as body mass index (BMI) at or above the gender- and age-specific 95th percentile BMI cutoff points from the 2000 CDC Growth Charts: United States. Advance data from vital and health statistics; no 314. Hyattsville, Maryland: National Center for Health Statistics. 2000. Age is at the time of examination at mobile examination center. Estimates for females exclude pregnant adolescents. All races category includes adolescents of all races and Hispanic origins, not just those shown separately. The two non-Hispanic race categories shown in the table conform to the 1997 OMB Standards for Federal Data on Race and Ethnicity; estimates are for persons who reported only one racial group. Persons of Mexican origin may be of any race. The income groups are derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor families have income of 200 percent of the poverty threshold or more.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey

Data table for Figure 6. Untreated dental caries among adolescents 12–19 years of age and young adults 20–24 years of age, by age, race and Hispanic origin, poverty status, and gender: United States, average annual 2001–2004

<i>Race and Hispanic origin, poverty status, and gender</i>	<i>12–15 years</i>		<i>16–19 years</i>		<i>20–24 years</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
Total	16	1.2	21.2	1.7	29.9	2.4
Not Hispanic:						
White only	13.3	2.0	17.0	2.1	25.5	3.8
Black only	20.5	1.7	30.4	2.3	41.0	4.3
Mexican	22.0	2.6	27.9	2.3	35.4	4.3
Poor	26.1	3.4	28.8	3.2	34.6	5.9
Near poor	22.6	2.4	27.3	3.4	33.4	3.7
Nonpoor	10.0	1.2	13.5	1.6	22.6	3.3
Male	15.2	1.4	22.4	1.8	32.9	3.2
Female	16.8	1.8	19.9	2.3	27.2	2.8

¹SE is standard error.

NOTES: Untreated dental caries refers to untreated coronal caries, that is caries on the crown or enamel surface of the tooth. Root caries are not included. Total category includes adolescents of all races and Hispanic origins, not just those shown separately. The two non-Hispanic race categories shown in the table conform to the 1997 OMB Standards for Federal Data on Race and Ethnicity; estimates are for persons who reported only one racial group. Persons of Mexican origin may be of any race. The income groups are derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor families have income of 200 percent of the poverty threshold or more.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey.

Data table for Figure 7. Suicide ideation and attempts among students in grades 9–12, by grade level, gender, and race and Hispanic origin; United States, 2005

Grade level, race, and Hispanic origin	All students		Male		Female	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Seriously considered suicide						
All students, grades 9–12	16.9	0.5	12.0	0.5	21.8	0.7
9th grade	17.9	1.1	12.2	1.4	23.9	1.3
10th grade	17.3	0.8	11.9	1.0	23.0	1.0
11th grade	16.8	0.9	11.9	1.0	21.6	1.5
12th grade	14.8	0.9	11.6	1.1	18.0	1.4
White only, not Hispanic	16.9	0.6	12.4	0.7	21.5	0.9
Black only, not Hispanic	12.2	0.8	7.0	0.9	17.1	1.1
Hispanic	17.9	0.9	11.9	1.1	24.2	1.6
Suicide attempt						
All students, grades 9–12	8.4	0.4	6.0	0.6	10.8	0.5
9th grade	10.4	0.8	6.8	1.3	14.1	0.9
10th grade	9.1	0.7	7.6	1.1	10.8	0.9
11th grade	7.8	0.8	4.5	0.8	11.0	1.3
12th grade	5.4	0.6	4.3	0.8	6.5	0.8
White only, not Hispanic	7.3	0.5	5.2	0.6	9.3	0.8
Black only, not Hispanic	7.6	1.1	5.2	1.4	9.8	1.2
Hispanic	11.3	0.8	7.8	1.2	14.9	1.1
Injurious suicide attempt						
All students, grades 9–12	2.3	0.2	1.8	0.2	2.9	0.3
9th grade	3.0	0.4	2.1	0.6	4.0	0.6
10th grade	2.3	0.3	2.2	0.5	2.4	0.4
11th grade	2.2	0.4	1.4	0.4	2.9	0.6
12th grade	1.6	0.3	1.0	0.3	2.2	0.4
White only, not Hispanic	2.1	0.2	1.5	0.3	2.7	0.4
Black only, not Hispanic	2.0	0.4	1.4	0.6	2.6	0.5
Hispanic	3.2	0.5	2.8	0.7	3.7	0.7

¹SE is standard error.

NOTES: Response is for the 12 months preceding the survey. Among students attempting suicide, 13 percent did not report seriously considering suicide. A subset of those attempting suicide had an injurious suicide attempt. An injurious suicide attempt resulted in an injury, poisoning or overdose that was treated by a doctor or nurse. Students with an injurious suicide attempt are also included in the category "suicide attempt." Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 8. Emergency department visit, hospital discharge, and death rates among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004

Age	Male		Female	
	Rate	SE ¹	Rate	SE ¹
Emergency department visits				
Visits per 10,000 adolescents				
10 years	2,552.4	165.0	2,423.5	170.0
11 years	2,663.6	196.9	2,482.5	171.0
12 years	2,945.7	192.6	2,144.1	170.7
13 years	2,487.1	178.2	2,305.8	137.4
14 years	2,829.4	170.1	3,005.0	213.0
15 years	2,972.0	168.4	2,833.9	175.3
16 years	2,768.4	164.8	3,864.2	218.4
17 years	3,060.0	192.2	4,423.7	233.6
18 years	3,413.9	170.2	5,346.8	263.3
19 years	3,482.0	192.3	5,444.4	276.2
Hospital discharges				
Discharges per 10,000 adolescents				
10 years	245.8	27.3	190.8	26.6
11 years	234.5	24.1	234.6	31.4
12 years	255.0	29.9	214.1	24.0
13 years	255.0	28.5	271.5	29.2
14 years	299.6	30.5	349.8	33.3
15 years	342.8	33.2	477.3	36.3
16 years	322.8	29.2	632.1	39.6
17 years	331.6	24.9	863.9	46.6
18 years	330.6	20.6	1,078.8	54.7
19 years	309.7	20.6	1,362.0	64.6
Deaths				
Deaths per 10,000 adolescents				
10 years	1.7	0.0	1.3	0.0
11 years	1.7	0.1	1.3	0.1
12 years	2.2	0.1	1.4	0.1
13 years	2.5	0.1	1.7	0.1
14 years	3.2	0.1	2.0	0.1
15 years	4.4	0.1	2.5	0.1
16 years	7.2	0.1	3.7	0.1
17 years	9.1	0.1	4.2	0.1
18 years	12.0	0.1	4.8	0.1
19 years	13.6	0.2	4.7	0.1

0.0 Quantity more than zero but less than 0.05.

¹SE is standard error.

NOTE: See "Technical Notes" for discussion of emergency department visits, hospital discharges, and death rates.

SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey, National Hospital Discharge Survey, and National Vital Statistics System, Mortality File.

Data table for Figure 9. Initial emergency department visit rates for injury among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004

<i>Age and gender</i>	<i>Injury</i>	
	<i>Rate</i>	<i>SE</i> ¹
Male		
Visits per 10,000 adolescents		
10–11 years	1,295.7	72.5
12–13 years	1,502.0	88.9
14–15 years	1,606.3	91.9
16–17 years	1,539.0	86.7
18–19 years	1,608.9	88.0
Female		
10–11 years	949.7	78.4
12–13 years	839.2	69.0
14–15 years	1,179.0	85.6
16–17 years	1,329.3	80.0
18–19 years	1,403.3	95.0

¹SE is standard error.

NOTE: See [“Technical Notes”](#) for discussion of emergency department visits.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Data table for Figure 10. Initial emergency department visit rates for selected external causes of injury among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004

<i>Age and cause of injury</i>	<i>Male</i>		<i>Female</i>	
	<i>Rate</i>	<i>SE</i> ¹	<i>Rate</i>	<i>SE</i> ¹
	Visits per 10,000 adolescents			
Struck by or against				
10–11 years	363.9	38.5	163.5	25.2
12–13 years	456.9	42.8	171.8	25.6
14–15 years	558.2	48.1	287.0	41.8
16–17 years	435.2	42.1	252.9	33.7
18–19 years	435.9	40.2	221.3	31.9
Cut or pierce				
10–11 years	92.4	19.5	77.3	17.0
12–13 years	97.1	16.9	43.5	9.9
14–15 years	168.7	25.4	60.8	12.0
16–17 years	126.3	18.5	109.8	20.4
18–19 years	207.7	29.3	69.7	14.5
Fall				
10–11 years	250.1	27.3	260.4	29.0
12–13 years	322.9	34.5	209.0	26.9
14–15 years	280.9	30.6	216.4	27.6
16–17 years	240.6	34.8	185.1	28.2
18–19 years	195.2	25.3	169.3	28.6
Motor vehicle traffic				
10–11 years	96.4	21.2	66.1	16.4
12–13 years	76.5	14.2	70.0	17.5
14–15 years	80.7	18.3	141.9	23.5
16–17 years	262.6	35.2	316.5	35.9
18–19 years	247.3	38.6	390.6	42.4

¹SE is standard error.

NOTE: See [“Technical Notes”](#) for discussion of emergency department visits.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Data table for Figure 11. Initial emergency department visit rates for selected injury diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004

<i>Age and injury diagnosis</i>	<i>Male</i>		<i>Female</i>	
	<i>Rate</i>	<i>SE</i> ¹	<i>Rate</i>	<i>SE</i> ¹
	Visits per 10,000 adolescents			
Fractures				
10–11 years	204.7	26.0	165.3	26.1
12–13 years	305.7	38.1	116.6	21.8
14–15 years	351.9	34.8	85.3	18.2
16–17 years	148.8	23.2	120.1	21.6
18–19 years	161.6	23.5	80.4	20.5
Sprains and strains				
10–11 years	157.6	26.1	172.8	29.7
12–13 years	267.0	33.8	215.4	26.1
14–15 years	321.2	38.8	364.7	49.3
16–17 years	303.4	34.9	358.6	51.8
18–19 years	297.3	33.8	386.9	45.2
Open wounds				
10–11 years	340.8	44.3	176.5	25.2
12–13 years	343.0	34.0	123.7	22.5
14–15 years	316.1	30.6	132.0	24.2
16–17 years	322.7	35.0	171.8	26.6
18–19 years	475.5	45.9	163.3	21.8
Contusions				
10–11 years	305.1	37.5	193.7	32.2
12–13 years	226.4	27.4	169.5	27.3
14–15 years	263.8	30.8	219.1	26.6
16–17 years	298.3	34.8	249.3	34.2
18–19 years	237.3	30.5	263.5	40.9

¹SE is standard error.

NOTE: See ["Technical Notes"](#) for a discussion of emergency department visits.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Data table for Figure 12. Emergency department visit rates for selected noninjury diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004

Age and diagnosis	Male		Female	
	Rate	SE ¹	Rate	SE ¹
Upper respiratory infections				
Visits per 10,000 adolescents				
10–11 years	268.4	45.6	311.7	37.5
12–13 years	163.4	22.9	292.7	35.7
14–15 years	196.9	31.9	244.2	33.8
16–17 years	181.3	25.5	288.3	41.7
18–19 years	223.2	33.0	345.5	37.7
Asthma				
10–11 years	94.0	21.1	66.6	15.2
12–13 years	57.3	15.2	52.4	13.7
14–15 years	61.7	15.0	61.8	13.8
16–17 years	75.9	20.3	90.0	24.0
18–19 years	42.7	11.7	65.0	15.3
Abdominal symptoms				
10–11 years	156.1	24.8	222.2	30.4
12–13 years	138.4	24.3	154.0	26.1
14–15 years	73.6	17.3	209.3	28.8
16–17 years	91.0	22.0	301.3	34.7
18–19 years	133.4	21.5	377.1	41.0
Sexually transmitted diseases				
10–11 years	*	*	*	*
12–13 years	*	*	*	*
14–15 years	*	*	*	*
16–17 years	*	*	61.4	14.8
18–19 years	*	*	134.0	23.8
Urinary tract infections				
10–11 years	*	*	77.0	21.2
12–13 years	*	*	*	*
14–15 years	*	*	77.1	17.8
16–17 years	*	*	145.6	26.1
18–19 years	*	*	386.6	49.1
Pregnancy-related diagnoses				
10–11 years . . . . .	...	...	*	*
12–13 years . . . . .	...	...	*	*
14–15 years . . . . .	...	...	54.4	13.8
16–17 years . . . . .	...	...	162.7	21.8
18–19 years . . . . .	...	...	493.0	51.2

* Figure does not meet standards of reliability or precision; relative standard error is greater than 30 percent.

... Category not applicable.

¹SE Standard error.

NOTE: See "Technical Notes" for discussion of emergency department visits.

SOURCE: Centers for Disease Control and Prevention. National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Data table for Figure 13. Alcohol-related emergency department visit rates among adolescents 14–20 years of age and young adults 21–24 years of age, by age group and gender: United States, average annual 2002–2004

<i>Age</i>	<i>Total</i>	<i>SE</i> ¹	<i>Male</i>	<i>SE</i> ¹	<i>Female</i>	<i>SE</i> ¹
Emergency department visits per 10,000 population						
14–20 years	82.1	6.7	99.9	9.6	63.7	8.4
14–17 years	49.0	6.5	64.7	10.7	*32.5	7.3
18–20 years	127.7	13.4	148.8	20.1	106.1	17.4
21–24 years	149.8	12.5	184.0	18.5	115.8	18.5

* Figure does not meet standards of reliability or precision.

¹SE is standard error.

NOTES: Rates are for the civilian noninstitutionalized population. An emergency department visit was considered alcohol-related if the checkbox for alcohol was indicated, the physician's diagnosis was alcohol-related (ICD–9–CM 291, 303, 305.0, 425.5, 535.30, 571.1–.3, 760.71, 980, or V-113), an alcohol-related related external cause-of-injury code was present (ICD–9–CM E710 or E860), or the patient's reason for the visit was alcohol-related.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Ambulatory Medical Care Survey.

Data table for Figure 14. Short-stay hospital discharge rates for injury, non-injury, and pregnancy-related diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004

<i>Gender and age</i>	<i>Injury</i>		<i>Noninjury</i>		<i>Pregnancy-related</i>	
	<i>Rate</i>	<i>SE</i> ¹	<i>Rate</i>	<i>SE</i> ¹	<i>Rate</i>	<i>SE</i> ¹
Discharges per 10,000 adolescents						
Female						
10–11 years	17.5	3.1	195.1	25.6	*	*
12–13 years	18.5	2.6	220.0	23.6	*	*
14–15 years	33.0	3.9	314.5	29.2	65.3	6.9
16–17 years	40.6	3.9	338.5	26.2	368.5	20.3
18–19 years	42.4	4.7	303.6	19.8	874.1	45.9
Male						
10–11 years	32.9	5.1	207.2	20.5	...	...
12–13 years	39.3	4.9	215.7	24.5	...	...
14–15 years	60.0	5.7	260.9	27.1	...	...
16–17 years	70.4	5.8	256.8	21.9	...	...
18–19 years	80.7	6.1	239.5	15.8	...	...

* Figure does not meet standards of reliability or precision; relative standard error is greater than 30 percent.

... Category not applicable.

¹SE is standard error.

NOTES: Cause-specific hospital discharge data are defined based on the first-listed diagnosis. Non-injury discharges exclude pregnancy-related diagnoses. See "Technical Notes" for discussion of hospital diagnoses.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Discharge Survey.

Data table for Figure 15. Short-stay hospital discharge rates for selected diagnoses among adolescents 10–19 years of age, by age and gender: United States, average annual 2002–2004

Gender and age	Male		Female	
	Rate	SE ¹	Rate	SE ¹
Discharges per 10,000 adolescents				
Asthma				
10–11 years	17.7	3.3	13.9	2.9
12–13 years	18.7	3.7	10.0	1.8
14–15 years	8.7	1.5	8.6	2.1
16–17 years	7.7	1.9	11.3	1.8
18–19 years	5.4	1.3	6.7	1.4
Psychoses				
10–11 years	15.9	4.0	11.7	3.7
12–13 years	26.9	6.4	42.2	10.6
14–15 years	43.3	9.5	78.2	15.5
16–17 years	53.7	10.5	70.8	11.9
18–19 years	52.8	6.6	54.9	7.8
Fractures				
10–11 years	13.8	2.5	7.0	1.4
12–13 years	16.0	2.2	6.3	1.3
14–15 years	22.4	3.7	3.7	1.0
16–17 years	18.0	2.6	7.4	1.4
18–19 years	25.1	2.9	9.9	2.6
Poisoning				
10–11 years	*	*	*	*
12–13 years	*	*	4.1	1.0
14–15 years	4.5	1.1	17.5	2.5
16–17 years	7.3	1.3	17.1	2.4
18–19 years	8.4	1.5	16.1	2.4

* Figure does not meet standards of reliability or precision; relative standard error is greater than 30 percent.

¹SE is standard error.

NOTES: Diagnoses-specific hospital discharge data are based on the first-listed diagnosis. See "Technical Notes" for discussion of hospital diagnoses.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Discharge Survey.

Data table for Figure 16. Death rates for injury, by intent of injury and natural causes among adolescents 10–19 years of age and young adults 20–24 years of age, by age and gender: United States, average annual 2002–2004

Gender and age	Injury									
	All injury		Unintentional		Suicide		Homicide		Natural cause	
	Rate	SE ¹	Rate	SE ¹	Rate	SE ¹	Rate	SE ¹	Rate	SE ¹
Deaths per 100,000 adolescents										
Male										
10 years	7.8	0.4	6.5	0.3	0.6	0.1	0.6	0.1	9.2	0.4
11 years	8.0	0.4	6.6	0.3	0.7	0.1	0.5	0.1	8.6	0.4
12 years	11.5	0.4	8.9	0.4	1.3	0.1	1.0	0.1	10.1	0.4
13 years	13.9	0.5	9.6	0.4	2.5	0.2	1.4	0.1	11.0	0.4
14 years	20.9	0.6	14.1	0.5	3.7	0.2	2.7	0.2	11.4	0.4
15 years	30.8	0.7	19.0	0.5	5.7	0.3	5.4	0.3	13.4	0.5
16 years	55.8	0.9	36.7	0.8	9.1	0.4	9.2	0.4	15.9	0.5
17 years	73.0	1.1	46.5	0.9	11.2	0.4	14.3	0.5	17.3	0.5
18 years	100.6	1.3	60.9	1.0	15.5	0.5	22.4	0.6	19.6	0.6
19 years	113.7	1.3	65.6	1.0	19.5	0.6	26.2	0.6	22.3	0.6
20–24 years	112.0	0.6	61.6	0.4	20.5	0.3	26.6	0.3	26.8	0.3
Female										
10 years	5.1	0.3	4.4	0.3	*	*	0.5	0.1	8.2	0.4
11 years	4.9	0.3	4.1	0.3	*	*	0.6	0.1	7.6	0.4
12 years	5.4	0.3	4.4	0.3	0.5	0.1	0.5	0.1	8.2	0.4
13 years	7.5	0.3	5.6	0.3	1.1	0.1	0.7	0.1	9.5	0.4
14 years	10.6	0.4	7.7	0.4	1.7	0.2	1.0	0.1	9.6	0.4
15 years	15.6	0.5	11.3	0.4	2.4	0.2	1.7	0.2	9.8	0.4
16 years	25.7	0.7	20.6	0.6	2.8	0.2	1.9	0.2	11.3	0.4
17 years	29.6	0.7	23.6	0.6	2.9	0.2	2.7	0.2	11.9	0.4
18 years	33.6	0.8	26.3	0.7	3.1	0.2	3.6	0.2	14.4	0.5
19 years	31.4	0.7	23.4	0.6	3.1	0.2	4.0	0.3	15.6	0.5
20–24 years	27.8	0.3	18.9	0.2	3.5	0.1	4.4	0.1	20.1	0.3

* Figure does not meet standards of reliability or precision; there are fewer than 20 deaths in this category.

¹SE is standard error.

NOTE: See "Technical Notes" for discussion of cause of death coding.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Mortality File.

Data table for Figure 17. Death rates for motor vehicle traffic-related and firearm-related injuries among adolescents 10–19 years of age and young adults 20–24 years of age, by age, gender, and race and Hispanic origin: United States, average annual 2002–2004

Age, race, and Hispanic origin	Motor vehicle deaths				Firearm-related deaths			
	Female		Male		Female		Male	
	Rate	SE ¹	Rate	SE ¹	Rate	SE	Rate	SE ¹
Deaths per 100,000 adolescents								
10 years	2.9	0.2	3.3	0.2	*	0.1	0.6	0.1
11 years	2.6	0.2	3.3	0.2	0.4	0.1	0.6	0.1
12 years	2.5	0.2	4.5	0.3	*	0.1	1.5	0.2
13 years	3.8	0.2	5.3	0.3	0.6	0.1	2.3	0.2
14 years	5.8	0.3	8.4	0.4	1.0	0.1	4.4	0.3
15 years	9.2	0.4	12.5	0.4	1.7	0.2	8.1	0.4
16 years	17.9	0.5	27.3	0.7	2.1	0.2	13.8	0.5
17 years	20.6	0.6	35.1	0.7	3.1	0.2	19.0	0.5
18 years	22.6	0.6	44.9	0.8	3.1	0.2	29.0	0.7
19 years	19.3	0.6	45.9	0.9	3.4	0.2	35.4	0.7
20–24 years	13.8	0.2	39.9	0.4	4.0	0.1	36.1	0.3
Ages 10–19 years								
All races and origins	10.6	0.1	18.8	0.2	1.6	0.1	11.3	0.1
White only, not Hispanic	12.5	0.2	20.6	0.2	1.2	0.1	6.3	0.1
Black only, not Hispanic	6.8	0.3	13.3	0.4	3.3	0.2	30.2	0.6
Hispanic	7.3	0.3	18.6	0.4	1.5	0.1	14.0	0.4
American Indian or Alaska Native	17.6	1.4	26.4	1.7	3.3	0.6	13.1	1.2
Asian or Pacific Islander	5.6	0.5	9.9	0.6	0.8	0.1	5.0	0.4

* Figure does not meet standards of reliability or precision; there are fewer than 20 deaths in this category.

¹SE is standard error.

NOTES: See "Technical Notes" for discussion of cause of death coding. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Mortality File.

Data table for Figure 18a. Violent crime victimization rates among adolescents 12–19 years of age and young adults 20–24 years of age, by gender, age group, and type of victimization: United States, 2004

Gender and age group	Type of victimization				
	Total	Simple assault	Aggravated assault	Robbery	Rape/sexual assault
Victimizations per 1,000 persons in age group					
Male					
12–15 years	64.7	49.4	8.2	7.2	0.0*
16–19 years	54.7	32.3	16.0	6.4	0.0*
20–24 years	44.5	26.7	12.9	4.2	0.6*
Female					
12–15 years	34.1	25.1	4.1	0.4*	4.5
16–19 years	36.8	22.0	6.6	3.1*	5.1
20–24 years	41.6	29.2	6.0	2.0*	4.4

* Estimate is based on fewer than 10 events in the sample population.

NOTES: Standard errors are not available. Violent crimes include simple and aggravated assault, robbery, rape, and sexual assault.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey.

Data table for Figure 18b. Violent crime victimization rates among adolescents 12–19 years of age and young adults 20–24 years of age, by age group: United States, 1985–2005

Year	Age groups		
	12–15 years	16–19 years	20–24 years
Victimizations per 1,000 persons in age group			
1985	79.6	89.4	82.0
1986	77.1	80.8	80.1
1987	87.2	92.4	85.5
1988	83.7	95.9	80.2
1989	92.5	98.2	78.8
1990	101.1	99.1	86.1
1991	94.5	122.6	103.6
1992	111.0	103.7	95.2
1993	115.5	114.2	91.6
1994	118.6	123.9	100.4
1995	113.1	106.6	85.8
1996	95.0	102.8	74.5
1997	87.9	96.3	68.0
1998	82.5	91.3	67.5
1999	74.4	77.5	68.7
2000	60.1	64.4	49.5
2001	55.1	55.9	44.9
2002	44.4	58.3	47.6
2003	51.6	53.1	43.5
2004	49.7	46.0	43.2
2005	44.0	44.3	47.1

NOTES: Standard errors are not available. Violent crimes include simple and aggravated assault, robbery, rape, and sexual assault.

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics, National Crime Victimization Survey.

Data table for Figure 19. Dating violence and being forced to have sexual intercourse among students in grades 9–12, by grade level, gender, and race and Hispanic origin: United States, 2005

Grade level, race, and Hispanic origin	All students		Male		Female	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Dating violence						
All students, grades 9–12	9.2	0.3	9.0	0.4	9.3	0.4
9th grade	7.4	0.5	7.0	0.9	7.7	0.7
10th grade	8.7	0.6	7.8	0.8	9.7	0.9
11th grade	9.9	0.7	10.4	0.9	9.4	1.0
12th grade	11.1	0.6	11.4	0.8	10.7	0.9
White only, not Hispanic	8.2	0.4	8.0	0.5	8.5	0.5
Black only, not Hispanic	11.9	0.9	11.8	1.1	12.0	1.1
Hispanic	9.9	0.7	10.9	1.0	9.0	1.0
Forced intercourse						
All students, grades 9–12	7.5	0.4	4.2	0.4	10.8	0.6
9th grade	6.1	0.4	3.5	0.6	8.7	1.0
10th grade	7.2	0.6	3.8	0.7	10.7	0.8
11th grade	7.9	0.8	4.2	0.6	11.6	1.4
12th grade	9.0	0.7	5.3	0.5	12.7	1.3
White only, not Hispanic	6.9	0.4	3.1	0.4	10.8	0.8
Black only, not Hispanic	9.3	0.5	7.1	1.2	11.5	1.2
Hispanic	7.8	0.7	6.4	0.9	9.4	1.1

¹SE is standard error.

NOTES: Dating violence is the percentage of students who were hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months; forced intercourse is the percentage of students who have ever been physically forced to have intercourse when they did not want to. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 20. Contraceptive use among never-married female adolescents 15–19 years of age who have had sexual intercourse in the past 3 months, by specified method used at last intercourse and race and Hispanic origin: United States, 2002

<i>Contraceptive use during last intercourse</i>	<i>Sexually active never-married females who had sexual intercourse in the past 3 months</i>					
	<i>All races and origins</i>		<i>White only, not Hispanic</i>		<i>Black only, not Hispanic</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
Any method	83.2	2.2	89.7	2.0	74.8	5.8
Condom	54.3	3.0	60.8	3.3	49.9	6.1
Pill (oral contraceptive)	34.2	3.0	40.7	3.7	27.8	6.2
Other hormonal method	9.1	1.8	8.0	2.0	18.6	4.7
Dual methods (hormonal and condom)	19.5	2.5	22.5	3.0	23.3	5.3
No method	16.8	2.2	10.3	2.0	25.2	5.8

¹SE is standard error.

NOTES: Estimates do not add to 100%. Data are not shown separately for "other methods," which include all other methods besides condom and hormonal methods (i.e., withdrawal, IUD, sterilization, female condom, diaphragm, cervical cap, spermicidal foam, jelly, cream, or suppository, sponge, periodic abstinence, and "other" methods). Categories are not mutually exclusive. Condom includes condom use alone or in combination with any other method. Pill includes pill use alone or in combination with any other method. Other hormonal includes Depo-Provera® injectable, Lunelle® injectable, Norplant implants, emergency contraception, and contraceptive patch. Total column shows persons of other or unknown race and origin groups, not shown separately. Estimates for Hispanic adolescents did not meet standards of precision and reliability, and are not shown.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth. Abma JC, Martinez GM, Mosher WD, Dawson BS. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. National Center for Health Statistics. Vital Health Stat 23(24). 2004.

Data table for Figure 21a. Pregnancy rates among adolescents 15–19 years of age, by outcome of pregnancy: United States, 1990–2002

<i>Year</i>	<i>Pregnancy</i>	<i>Live birth</i>	<i>Induced abortion</i>	<i>Fetal loss</i>
Per 1,000 female adolescents				
1990	116.8	59.9	40.3	16.6
1991	116.4	61.8	37.4	17.2
1992	112.3	60.3	35.2	16.8
1993	109.4	59.0	33.9	16.5
1994	106.1	58.2	31.6	16.3
1995	101.1	56.0	29.4	15.7
1996	97.0	53.5	28.6	15.0
1997	92.7	51.3	27.1	14.3
1998	90.1	50.3	25.8	14.0
1999	86.9	48.8	24.7	13.5
2000	84.8	47.7	24.0	13.1
2001	80.6	45.3	22.8	12.4
2002	76.4	43.0	21.7	11.8

NOTES: Standard errors are not available. See "Technical Notes" for discussion of pregnancy rate estimation.

SOURCE: Ventura SJ, Abma JC, Mosher WD, Henshaw SK. Recent Trends in Teenage Pregnancy in the United States, 1990–2002. Health E-stat. National Center for Health Statistics. 2006.

Data table for Figure 21b. Pregnancy rates among adolescents 15–19 years of age, by outcome of pregnancy, age, and race and Hispanic origin: United States, 2002

<i>Race, Hispanic origin, and age</i>	<i>Pregnancy</i>	<i>Live birth</i>	<i>Induced abortion</i>	<i>Fetal loss</i>
Per 1,000 female adolescents				
White, not Hispanic				
15–17 years	25.1	13.1	7.4	4.6
18–19 years	85.3	51.9	21.0	12.4
Black, not Hispanic				
15–17 years	88.4	41.1	33.1	14.2
18–19 years	217.0	110.3	80.2	26.4
Hispanic				
15–17 years	85.1	50.7	16.8	17.6
18–19 years	210.9	133.0	46.2	31.8

NOTES: Standard errors are not available. Persons of Hispanic origin may be of any race. See "Technical Notes" for discussion of pregnancy rate estimation.

SOURCE: Ventura SJ, Abma JC, Mosher WD, Henshaw SK. Recent Trends in Teenage Pregnancy in the United States, 1990–2002. Health E-stat. National Center for Health Statistics. 2006. [cited 2007 August 1]. Available from: www.cdc.gov/nchs/products/pubs/pubd/hestats/teenpreg1990-2002/teenpreg1990-2002.htm.

Data table for Figure 22. Birth rates among adolescents 10–19 years of age, and young adults 20–24 years of age, by birth order, age group, and race and Hispanic origin: United States, 2004

<i>Birth order, race and Hispanic origin</i>	<i>Age in years</i>			
	<i>10–14</i>	<i>15–17</i>	<i>18–19</i>	<i>20–24</i>
Births per 1,000 female adolescents				
All races				
Total	0.7	22.1	70.0	101.7
First birth	0.6	19.7	52.3	47.8
Second and higher	0.0	2.2	17.3	54.0
White, not Hispanic				
Total	0.2	12.0	48.7	81.9
First birth	0.2	11.1	38.7	41.8
Second and higher	*	0.8	9.7	
Black, not Hispanic				
Total	1.6	37.1	103.9	126.9
First birth	1.6	32.6	72.9	51.3
Second and higher	0.0	4.2	30.2	75.6
Hispanic				
Total	1.3	49.7	133.5	165.3
First birth	1.2	43.7	94.8	70.8
Second and higher	*0.0	5.8	38.1	94.5
American Indian or Alaskan Native				
Total	0.9	30.0	87.0	109.7
First birth	0.9	26.2	61.8	41.5
Second and higher	*	3.7	24.6	68.2
Asian or Pacific Islander				
Total	0.2	8.9	29.6	59.8
First birth	0.2	7.9	22.9	35.6
Second and higher	*	0.9	6.5	24.2

0.0 Quantity more than zero but less than 0.05.

* Figure does not meet standards of reliability or precision; rates based on fewer than 20 events are considered highly unreliable and are not shown.

NOTES: Live births with unknown birth order are distributed proportionally. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Birth File.

Data table for Figure 23. Sexually transmitted disease rates reported for adolescents 10–19 years of age and for young adults 20–24 years of age, by age group, gender, and Hispanic origin: United States, 2004

<i>Age group, race, and Hispanic origin</i>	<i>Chlamydia</i>		<i>Gonorrhea</i>	
	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>
	Reported cases per 100,000 adolescents			
10–14 years	132.0	10.8	36.9	5.8
White, not Hispanic	50.7	1.9	10.0	0.7
Black, not Hispanic	486.4	46.2	168.9	30.6
Hispanic	113.6	12.5	17.8	2.6
American Indian or Alaska Native	210.1	26.6	27.2	5.7
Asian or Pacific Islander	30.9	1.3	5.6	1.2
15–19 years	2,761.5	458.3	610.9	252.9
White, not Hispanic	1,408.8	147.4	201.7	37.9
Black, not Hispanic	8,897.6	1,880.5	2,790.5	1,390.1
Hispanic	2,810.1	485.6	307.6	124.7
American Indian or Alaska Native	4,358.2	683.1	561.2	137.4
Asian or Pacific Islander	776.4	111.1	86.3	26.2
20–24 years	2,630.7	744.7	579.1	430.6
White, not Hispanic	1,434.6	354.3	209.3	90.7
Black, not Hispanic	7,847.8	2,730.8	2,565.4	2,408.3
Hispanic	2,924.4	685.3	291.4	193.7
American Indian or Alaska Native	4,672.4	1,144.6	612.8	304.6
Asian or Pacific Islander	963.3	250.3	109.7	66.0

NOTES: Standard errors are not available. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, STD Surveillance.

Data table for Figure 24. Acquired immunodeficiency syndrome (AIDS) and Human immunodeficiency virus (HIV) transmission categories for adolescents 13–19 years of age and young adults 20–24 years of age, by gender: United States and 33 states with confidential reporting, 2001–2005

Sex and transmission category	AIDS cases reported (United States ¹)		HIV/AIDS cases reported (33 states ²)	
	13–19 years	20–24 years	13–19 years	20–24 years
	Percent of cases			
Male	(N=1,201)	(N=5,324)	(N=3,031)	(N=11,259)
Male-to-male sexual contact	57	69	77	75
Injection drug use (IDU)	9	10	7	8
Male-to-male sexual contact and IDU	3	6	4	5
High risk heterosexual contact	12	14	11	12
Other or not identified	18	1	<1	<1
Female	(N=940)	(N=2,708)	(N=2,441)	(N=5,586)
Injection drug use (IDU)	13	17	14	14
High risk heterosexual contact	60	81	85	85
Other or not identified	27	2	<1	<1

¹Includes Puerto Rico and Virgin Islands.

²Data for HIV/AIDS cases are from 33 states with confidential name-based HIV infection reporting since at least 2001.

NOTES: Standard errors are not available. High risk heterosexual contact is contact with a person known to have, or to be at high risk for, HIV infection. Other category includes hemophilia, blood transfusion, perinatal, and risk factor not reported or not identified. The reported case counts are adjusted for reporting delays and for redistribution of cases in persons initially reported without an identified risk factor. Cases without risk factor information were proportionally redistributed. Data include persons with a diagnosis of HIV infection, regardless of AIDS status at diagnosis. This includes persons with a diagnosis of HIV infection only, a diagnosis of HIV infection and a later AIDS diagnosis, and concurrent diagnoses of HIV infection and AIDS. Data on HIV infection (not AIDS) should be interpreted with caution. HIV surveillance reports may not be representative of all persons infected with HIV because not all infected persons have been tested.

SOURCE: Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, HIV/AIDS Surveillance System.

Data table for Figure 25a. Adolescents 15–19 years of age who have ever had sexual intercourse, by age and gender: United States, 1988–2002

Sex and age	1988		1995		2002	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Male						
15–17 years	50.0	2.4	43.1	1.9	31.3	2.3
18–19 years	77.3	2.6	75.4	2.7	64.3	3.1
Female						
15–17 years	37.2	2.4	38.0	1.8	30.3	2.1
18–19 years	72.6	2.5	68.0	2.1	68.8	2.6

¹SE is standard error.

NOTE: Percentages reflect heterosexual vaginal intercourse only, not other types of sexual activity.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth. Abma JC, Martinez GM, Mosher WD, Dawson BS. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. National Center for Health Statistics. Vital Health Stat 23(24). 2004.

Data table for Figure 25b. Ever had any sexual contact among adolescents 15–19 years of age and young adults 20–24 years of age, by type of contact, age, and gender: United States, 2002

Type of sexual contact	Male						Female					
	15–17 years		18–19 years		20–24 years		15–17 years		18–19 years		20–24 years	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Opposite-sex sexual contact:												
Any sexual contact	53.2	2.2	77.7	2.1	91.4	1.4	49.8	2.2	82.9	2	91.3	1.2
Vaginal	36.3	2.4	65.5	3	87.6	1.7	38.7	2.1	73.8	2.3	87.3	1.5
Any oral.	44.0	2.2	69.5	2.3	82.3	1.8	42.0	2.3	72.3	2.6	83.1	1.5
Anal	8.1	1.4	15.2	2.1	32.6	2.0	5.6	1.0	18.7	1.9	29.6	1.7
Same-sex sexual contact:												
Any sexual contact	3.9	0.8	5.1	1.2	5.5	0.9	8.4	1.3	13.8	1.8	14.2	1.3

¹SE is standard error.

NOTES: Any oral sex includes given or received. Percent reporting specified types of sexual contact may add to more than the percent reporting “any sexual contact” because a respondent could report more than one type of sexual contact. Same-sex sexual contact is measured with substantially different questions for males and females.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth. Mosher WD, Chandra A, Jones J. Sexual behavior and selected health measures: Men and women 15–44 years of age, United States, 2002. Advance data from vital and health statistics: no 362. Hyattsville, MD: National Center for Health Statistics. 2005.

Data table for Figure 26. Number of sexual partners in lifetime among adolescents 15–19 years of age, by age, gender, and race and Hispanic origin: United States, 2002

Age, sex, race, and Hispanic origin	Number of sexual ¹ partners in lifetime									
	0		1		2–3		4–6		7 or more	
	Percent	SE ²	Percent	SE ²	Percent	SE ²	Percent	SE ²	Percent	SE ²
Never-married males	54.4	2.1	15.5	1.5	13.5	0.9	9.4	1.2	7.2	0.8
15–17 years.	68.7	2.3	13.3	1.7	9.2	1.5	4.8	1.0	4.0	0.7
18–19 years.	35.7	3.1	18.5	2.4	19.1	2.0	15.4	2.3	11.3	1.7
White only, not Hispanic	59.3	2.5	15.3	1.9	13.7	1.6	6.8	1.4	5.0	1.0
Black only, not Hispanic	36.8	4.4	18.9	3.4	15.1	3.1	16.5	2.7	12.8	2.3
Hispanic	45.2	4.3	17.4	3.3	12.7	2.6	15.1	3.3	9.6	2.6
Never-married females	54.6	1.9	17.7	1.2	13.6	1.0	7.9	1.0	6.3	0.9
15–17 years.	69.7	2.1	13.7	1.4	10.0	1.4	4.5	0.9	2.2	0.8
18–19 years.	31.2	2.6	23.9	2.4	19.3	1.9	13.0	2.2	12.6	1.9
White only, not Hispanic	54.9	2.6	17.3	1.9	12.0	1.4	7.8	1.4	7.9	1.3
Black only, not Hispanic	43.1	3.0	20.6	3.2	21.0	3.1	10.8	2.4	4.5	1.8
Hispanic	62.6	3.6	17.5	3.3	13.1	2.3	5.4	1.4	1.5	0.9

¹Heterosexual vaginal intercourse only, not other types of sexual activity.

²SE is standard error.

NOTES: Percentages may not add to 100 due to rounding. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth. Abma JC, Martinez GM, Mosher WD, Dawson BS. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. National Center for Health Statistics. Vital Health Stat 23(24). 2004.

Data table for Figure 27. Current cigarette smoking among students in grades 9–12, by gender, grade level, and race and Hispanic origin: United States, 2005

Grade level, race, and Hispanic origin	All students		Male		Female	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Current smoker						
All students, grades 9–12	23.0	1.2	22.9	1.1	23.0	1.3
9th grade	19.7	1.2	18.9	1.6	20.5	1.5
10th grade	21.4	1.6	21.1	2.0	21.9	1.7
11th grade	24.3	1.6	24.2	1.5	24.3	2.1
12th grade	27.6	1.9	29.1	1.9	26.0	2.3
White only, not Hispanic	25.9	1.5	24.9	1.4	27.0	1.9
Black only, not Hispanic	12.9	0.9	14.0	1.3	11.9	0.9
Hispanic	22.0	1.8	24.8	2.6	19.2	1.5
Frequent smoker						
All students, grades 9–12	9.4	0.8	9.3	0.8	9.3	0.8
9th grade	6.9	0.9	6.7	1.0	7.0	1.2
10th grade	7.7	0.9	7.0	1.1	8.4	1.1
11th grade	10.3	1.2	10.5	1.2	10.0	1.3
12th grade	13.2	1.3	13.9	1.4	12.5	1.7
White only, not Hispanic	11.2	0.9	10.6	0.9	11.7	1.2
Black only, not Hispanic	3.7	0.6	5.1	1.1	2.4	0.5
Hispanic	6.5	1.0	8.1	1.5	4.7	1.1

¹SE is standard error.

NOTES: Current smokers are students who smoked cigarettes on one or more of the past 30 days; frequent smokers are students who smoked cigarettes on 20 or more of the past 30 days. Persons of Hispanic origin may be of any race. Data on cigarette use are also collected by the National Survey on Drug Use & Health (NSDUH) and Monitoring the Future Study (MTF). Rates of substance use measured by these surveys are not directly comparable.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 28. Alcohol use, binge alcohol use, and heavy alcohol use in the past 30 days among adolescents 12–20 years of age, by age, gender, and race and Hispanic origin: United States, 2005

Characteristic	Alcohol use		Binge alcohol use		Heavy alcohol use	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Age						
12–20 years	28.2	0.4	18.8	0.4	6.0	0.2
12–13 years.	4.2	0.3	2.0	0.2	0.2	0.1
14–15 years.	15.1	0.5	8.0	0.4	1.7	0.2
16–17 years.	30.1	0.7	19.7	0.6	5.3	0.3
18–20 years.	51.1	0.8	36.1	0.8	13.0	0.5
Gender, race, and Hispanic origin						
Male.	28.9	0.5	21.3	0.5	7.6	0.3
White only, not Hispanic	32.6	0.7	24.7	0.7	9.8	0.4
Black only, not Hispanic	20.4	1.2	11.4	1.0	2.5	0.5
Hispanic	27.9	1.4	21.5	1.3	5.9	0.8
Female.	27.5	0.5	16.1	0.4	4.3	0.2
White only, not Hispanic	31.9	0.7	19.7	0.6	5.8	0.3
Black only, not Hispanic	17.6	1.0	6.8	0.7	1.1	0.3
Hispanic	23.7	1.3	13.9	1.0	2.5	0.5
Detailed race and Hispanic origin						
Not Hispanic	28.7	0.4	19.0	0.4	6.4	0.2
White	32.3	0.5	22.3	0.5	7.8	0.3
Black or African American	19.0	0.8	9.1	0.6	1.8	0.3
American Indian or Alaska Native.	21.7	2.9	18.1	2.6	6.0	1.7
Native Hawaiian or Other Pacific Islander	12.0	3.5	*	*	*	*
Asian	15.5	1.6	7.4	1.1	1.2	0.3
Two or more races	24.0	2.2	16.6	2.1	7.1	1.5
Hispanic	25.9	1.0	17.9	0.9	4.2	0.5

* Figure does not meet standards of reliability or precision; relative standard error is greater than 30 percent.

¹SE is standard error.

NOTES: Binge alcohol use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days. Heavy alcohol use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users. Persons of Hispanic origin may be of any race. Data on alcohol use are also collected by Monitoring the Future Study (MTF) and the Youth Risk Behavior Survey (YRBS). Rates of substance use measured by these surveys are not directly comparable.

SOURCE: Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies, National Survey on Drug Use and Health.

Data table for Figure 29a. Drinking and driving and seatbelt use among students in grades 9–12: United States, 1991–2005

Year	<i>Rode with a driver who had been drinking alcohol</i>		<i>Drove after drinking alcohol (grades 11–12 only)</i>		<i>Rarely or never wore a seatbelt as a passenger</i>	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
1991	39.9	1.1	24.6	1.5	25.9	2.7
1993	35.3	1.3	19.6	1.4	19.1	1.3
1995	38.8	1.9	20.1	1.8	21.7	1.7
1997	36.6	1.1	22.7	2.4	19.3	1.8
1999	33.1	1.1	19.5	1.3	16.4	1.4
2001	30.7	1.0	19.3	1.2	14.1	0.8
2003	30.2	1.1	17.5	1.0	18.2	2.1
2005	28.5	1.0	14.5	0.9	10.2	0.9

¹SE is standard error.

NOTE: Rode with a driver who had been drinking alcohol is defined as students who during the past 30 days rode one or more times in a car or other vehicle driven by someone who had been drinking alcohol; and drove after drinking is defined as students who during the past 30 days drove a car or other vehicle one or more times when they had been drinking alcohol; rarely or never wore seatbelts is defined as students who rarely or never wore a seatbelt when riding in a car driven by someone else.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 29b. Drinking and driving and seatbelt use among students in grades 9–12, by grade level, gender, and race and Hispanic origin: United States, 2005

Grade level, race and Hispanic origin	All students		Male		Female	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Rode with a driver who had been drinking alcohol (grades 9–12)						
All students, grades 9–12	28.5	1.0	27.2	1.0	29.6	1.2
9th grade	27.9	1.3	25.8	1.7	30.1	1.9
10th grade	27.8	1.3	26.2	1.5	29.5	1.5
11th grade	28.0	1.5	27.7	1.9	28.1	1.9
12th grade	30.1	1.2	29.5	1.5	30.7	1.9
White only, not Hispanic	28.3	1.3	26.2	1.3	30.4	1.7
Black only, not Hispanic	24.1	1.1	24.3	1.3	24.0	1.3
Hispanic	36.1	1.7	37.4	2.3	34.7	1.4
Drove after drinking alcohol (grades 11 and 12 only)						
All students, grades 11–12	14.5	0.9	16.9	1.1	12.2	0.9
11th grade	12.1	0.9	14.7	1.2	9.5	1.0
12th grade	17.1	1.2	19.2	1.4	15.0	1.6
White only, not Hispanic	16.9	1.0	18.7	1.3	15.1	1.1
Black only, not Hispanic	7.5	1.0	10.9	1.7	4.5	1.2
Hispanic	13.1	1.4	17.5	2.2	8.7	1.2
Rarely or never wore a seatbelt as a passenger (grades 9–12)						
All students, grades 9–12	10.2	0.9	12.5	1.1	7.8	0.8
9th grade	10.9	1.0	13	1.3	8.7	1.0
10th grade	8.6	0.9	9.5	1.2	7.7	0.9
11th grade	10.1	1.4	13.2	1.8	7.1	1.3
12th grade	10.8	1.0	14.1	1.4	7.5	0.9
White only, not Hispanic	9.4	1.1	11.5	1.4	7.2	0.9
Black only, not Hispanic	13.4	1.7	17.7	2.4	9.4	1.5
Hispanic	10.6	1.1	12.5	1.2	8.7	1.1

¹SE is standard error.

NOTES: Rode with a driver who had been drinking alcohol is defined as students who during the past 30 days rode one or more times in a car or other vehicle driven by someone who had been drinking alcohol; and drove after drinking is defined as students who during the past 30 days drove a car or other vehicle one or more times when they had been drinking alcohol; rarely or never wore seatbelts is defined as students who rarely or never wore a seatbelt when riding in a car driven by someone else. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 30. Marijuana use in the past month and lifetime marijuana use among students in grades 9–12, by grade level, gender, and race and Hispanic origin: United States, 2005

<i>Grade level, race, and Hispanic origin</i>	<i>All students</i>		<i>Male</i>		<i>Female</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
Current marijuana use						
All students, grades 9–12	20.2	0.8	22.1	1.0	18.2	1.0
9th grade	17.4	1.2	18.6	1.6	16.2	1.4
10th grade	20.2	1.3	21.5	1.6	18.9	1.4
11th grade	21.0	1.2	23.5	1.6	18.5	1.5
12th grade	22.8	1.2	26.1	1.2	19.5	2.0
White only, not Hispanic	20.3	1.1	21.3	1.3	19.2	1.4
Black only, not Hispanic	20.4	1.1	22.1	1.5	18.8	1.5
Hispanic	23.0	1.2	28.1	1.9	18.0	1.0
Lifetime marijuana use						
All students, grades 9–12	38.4	1.3	40.9	1.3	35.9	1.5
9th grade	29.3	1.5	30.9	1.8	27.8	1.7
10th grade	37.4	1.7	39.0	2.3	35.7	1.6
11th grade	42.3	1.9	45.1	2.0	39.4	2.4
12th grade	47.6	2.0	52.4	1.5	42.8	3.0
White only, not Hispanic	38.0	1.6	40.0	1.7	36.0	1.9
Black only, not Hispanic	40.7	1.6	43.8	1.9	37.8	2.3
Hispanic	42.6	1.9	47.7	2.3	37.5	2.2

¹SE is standard error.

NOTES: Current marijuana use is defined as students who have used marijuana one or more times in the past 30 days; lifetime marijuana use is defined as students who used marijuana one or more times during their life. Persons of Hispanic origin may be of any race. Data on marijuana use are also collected by the National Survey on Drug Use & Health (NSDUH) and Monitoring the Future Study (MTF). Rates of substance use measured by these surveys are not directly comparable.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 31. Weapon carrying in the past 30 days among students in grades 9–12, by gender, grade level, and race and Hispanic origin: United States, 2005

Grade level, race, and Hispanic origin	All students		Male		Female	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Carried a weapon						
All students, grades 9–12	18.5	0.8	29.8	1.3	7.1	0.4
9th grade.	19.9	1.2	31.6	1.9	8.1	0.9
10th grade.	19.4	1.2	30.6	1.9	7.8	0.9
11th grade.	17.1	1.1	28.6	1.8	6.1	0.7
12th grade.	16.9	0.9	27.6	1.8	6.2	0.9
White only, not Hispanic	18.7	1.1	31.4	1.8	6.0	0.5
Black only, not Hispanic	16.4	0.8	23.7	1.5	9.4	1.0
Hispanic	19.0	1.1	29.8	1.7	7.8	0.8
Carried a gun						
All students, grades 9–12	5.4	0.4	9.9	0.7	0.9	0.2
9th grade.	6.2	0.6	11.3	1.1	1.0	0.4
10th grade.	5.3	0.6	9.4	1.1	1.0	0.3
11th grade.	4.9	0.6	9.1	1.0	0.9	0.3
12th grade.	4.9	0.6	9.0	1.2	0.8	0.2
White only, not Hispanic	5.3	0.7	9.7	1.1	0.9	0.3
Black only, not Hispanic	5.0	0.5	9.4	1.0	0.9	0.2
Hispanic	6.5	0.8	11.6	1.5	1.3	0.4

¹SE is standard error.

NOTES: Weapon carrying includes carrying a weapon such as a gun, knife, or club on one or more of the past 30 days. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 32. Participation in physical activity in the past 7 days among students in grades 9–12, by grade level, gender, and race and Hispanic origin: United States, 2005

<i>Grade level, race, and Hispanic origin</i>	<i>All students</i>		<i>Male</i>		<i>Female</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
Meeting currently recommended level of physical activity						
All students, grades 9–12	35.8	1.0	43.8	1.1	27.8	1.2
9th grade	36.9	1.7	42.8	1.8	30.8	2.0
10th grade	38.5	1.4	46.8	1.9	30.0	1.7
11th grade	34.4	1.3	43.8	1.6	25.1	1.5
12th grade	32.9	1.6	41.9	1.8	24.0	1.7
White only, not Hispanic	38.7	1.3	46.9	1.3	30.2	1.6
Black only, not Hispanic	29.5	1.7	38.2	2.3	21.3	1.7
Hispanic	32.9	1.6	39.0	2.0	26.5	1.8
Participation in moderate to vigorous physical activity						
All students, grades 9–12	68.7	0.8	75.8	0.9	61.5	1.2
9th grade	73.5	1.3	78.4	1.5	68.4	2.1
10th grade	70.5	1.5	77.8	1.9	63.0	1.9
11th grade	67.4	0.8	74.2	1.4	60.7	1.3
12th grade	61.8	1.4	71.9	1.5	51.7	2.3
White only, not Hispanic	70.2	1.1	77.0	1.2	63.3	1.5
Black only, not Hispanic	62.0	1.4	71.7	1.9	53.1	1.8
Hispanic	69.4	1.7	76.0	1.8	62.6	2.5

¹SE is standard error.

NOTES: Participation in the currently recommended level of physical activity for students is defined as any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes per day on 5 or more of the past 7 days; moderate to vigorous physical activity is defined as participation in at least 20 minutes of vigorous physical activity on 3 or more of the past 7 days and/or at least 30 minutes of moderate physical activity on 5 or more of the past 7 days. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 33. Dietary risk behavior in the past 30 days among students in grades 9–12, by grade level, gender, and race and Hispanic origin: United States, 2005

Grade level, race, and Hispanic origin	All students		Male		Female	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Did not eat for 24 hours or more						
All students, grades 9–12	12.3	0.5	7.6	0.4	17.0	1.1
9th grade	13.3	0.7	8.1	1.0	18.4	1.1
10th grade	11.7	0.8	7.4	0.9	16.2	1.0
11th grade	12.1	0.8	6.8	0.8	17.2	1.4
12th grade	11.9	0.9	7.8	1.0	16.0	1.3
White only, not Hispanic	12.5	0.7	7.5	0.6	17.6	1.2
Black only, not Hispanic	11.4	0.9	8.6	1.1	14.0	1.2
Hispanic	12.6	0.6	7.4	0.7	17.7	1.0
Vomited or took laxatives						
All students, grades 9–12	4.5	0.3	2.8	0.3	6.2	0.4
9th grade	4.1	0.4	2.7	0.5	5.5	0.7
10th grade	5.1	0.6	3.0	0.6	7.2	0.9
11th grade	4.3	0.5	2.5	0.5	6.1	0.7
12th grade	4.3	0.6	2.6	0.6	5.9	0.9
White only, not Hispanic	4.4	0.4	2.3	0.4	6.7	0.6
Black only, not Hispanic	3.4	0.5	2.8	0.6	4.0	0.8
Hispanic	5.4	0.5	3.9	0.8	6.8	0.6

¹SE is standard error.

NOTES: Went without eating for 24 hours or more is defined as students who went without eating for 24 hours or more to lose weight or to keep from gaining weight during the past 30 days; vomited or took laxatives is defined as students who vomited or took laxatives to lose weight or to keep from gaining weight during the past 30 days. Persons of Hispanic origin may be of any race.

SOURCE: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

Data table for Figure 34. Current health care coverage among adolescents 10–19 years of age and young adults 20–24 years of age, by age and poverty status: United States, 2005

<i>Family income and age</i>	<i>Uninsured</i>		<i>Medicaid</i>		<i>Private health insurance</i>		<i>Other</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
Poor								
10–19 years	20.1	1.2	55.5	1.7	22.7	1.9	1.7	0.4
10–12 years	13.6	1.3	67.6	2.0	17.0	1.8	1.8	0.5
13–15 years	19.0	1.6	61.3	2.2	18.1	2.0	1.5	0.5
16–17 years	18.7	2.2	58.8	2.7	20.4	2.5	2.1	0.9
18–19 years	30.6	3.3	30.5	2.9	37.5	4.8	1.4	0.6
20–24 years	38.2	2.1	22.3	1.6	38.0	2.6	1.5	0.4
Near poor								
10–19 years	20.9	1.1	31.1	1.2	45.9	1.4	2.1	0.4
10–12 years	16.8	1.5	36.5	1.9	43.6	2.1	3.1	0.8
13–15 years	18.1	1.5	33.7	2.0	46.8	2.1	1.5	0.5
16–17 years	19.2	1.8	30.2	2.2	49.5	2.4	1.1	0.5
18–19 years	33.7	2.8	19.0	1.8	44.5	2.7	2.8	0.8
20–24 years	41.8	1.6	12.3	1.2	43.4	1.9	2.5	0.5
Nonpoor								
10–19 years	7.7	0.4	5.6	0.4	84.5	0.6	2.2	0.2
10–12 years	6.2	0.6	7.2	0.6	84.4	0.9	2.3	0.4
13–15 years	6.5	0.6	5.4	0.6	85.9	0.8	2.2	0.3
16–17 years	6.5	0.7	4.6	0.5	86.7	0.8	2.2	0.4
18–19 years	13.6	1.0	4.5	0.6	79.8	1.2	2.2	0.4
20–24 years	25.8	1.0	4.5	0.4	67.9	1.1	1.9	0.3

¹SE is standard error.

NOTES: Insurance status is at the time of interview. A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, State Children's Health Insurance Program (SCHIP), state-sponsored or other government-sponsored health plan, or military plan at the time of the interview. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service such as accidents or dental care. The health plan category "Medicaid" includes Medicaid, State Children's Health Insurance Program (SCHIP), or state-sponsored health plan. A small number of persons were covered by both public and private plans and were included in the "private" health plan category. The health plan category "other" includes Medicare (disability), military plan, or other government-sponsored health plan. Poverty status is derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor families have income less than 100 percent of the poverty threshold; near poor families have income from 100 to less than 200 percent of the poverty threshold; nonpoor families have income of 200 percent of the poverty threshold or more.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Data table for Figure 35. Lack of a health care visit in the past 12 months among adolescents 10–19 years of age, by age, sex, race and Hispanic origin, and health care coverage: United States, 2005

Age	Male		Female	
	Percent	SE ¹	Percent	SE ¹
10–19 years	18.2	1.0	14.7	0.8
10–12 years.	13.5	1.3	15.1	1.4
13–15 years.	14.1	1.3	15.0	1.4
16–17 years.	17.1	1.6	12.8	1.4
18–19 years.	33.6	3.6	15.8	2.1

Race and Hispanic origin	Insured		Uninsured	
	Percent	SE ¹	Percent	SE ¹
All races and origins	12.5	0.5	41.2	2.5
White only, not Hispanic	9.8	0.7	37.9	4.6
Black only, not Hispanic	13.5	1.5	43.5	6.0
Hispanic	20.5	1.5	44.5	3.2

¹SE is standard error.

NOTES: Health care visit is defined as being seen by a physician or other health professional in a doctor's office, clinic, or some other place. Excluded are visits to emergency rooms, hospitalizations, home visits, and telephone calls. Persons not covered by private insurance, Medicaid, State Children's Health Insurance Program (SCHIP), state-sponsored or other government-sponsored health plans, Medicare, or military plans are considered to have no health insurance coverage. Persons of Hispanic origin may be of any race.

SOURCES: Centers for Disease Control and Prevention, National Center Health Statistics, National Health Interview Survey.

Data table for Figure 36. Any out-of-pocket expenses for health care incurred by adolescents 10–21 years of age, by age group, gender, race and Hispanic origin, and insurance status: United States, 2004

Age, gender, race and Hispanic origin, and insurance status	Adolescents incurring health care expense		Mean annual out-of-pocket health care expense per person with out-of-pocket expense	
	Percent	SE ¹	Amount	SE ¹
10–21 years	79.6	0.8	\$1,514	\$ 65
10–14 years.	84.6	0.9	1,390	85
15–17 years.	81.6	1.1	1,600	121
18–21 years.	71.6	1.3	1,624	132
Male.	76.2	1.0	1,372	81
Female.	83.3	0.8	1,651	98
White only, not Hispanic	86.3	0.9	1,709	81
Black only, not Hispanic	71.3	1.9	933	109
Hispanic	64.6	1.4	1,344	258
Any private insurance.	85.4	0.9	1,581	73
Public insurance only	78.2	1.3	1,439	168
Uninsured.	50.1	2.1	1,087	170

¹SE is standard error.

NOTES: Expenses include those for inpatient hospital and physician services, ambulatory physician and nonphysician services, home health services, dental services, and other medical equipment, supplies, and services that were purchased or rented during 2004. Public insurance includes Medicaid, State Children's Health Insurance Program (SCHIP), Medicare, or other public coverage. Private insurance includes any private insurance coverage, including TRICARE. Persons in the uninsured category were uninsured for all of 2004. Persons of Hispanic origin may be of any race.

SOURCE: Agency for Healthcare Research and Quality, Center for Cost and Financing Studies, Medical Expenditure Panel Survey.

Data table for Figure 37. Any out-of-pocket expenses for prescribed medicine incurred by adolescents 10–21 years of age, by age group, sex, race and Hispanic origin, and insurance status: United States, 2004

<i>Age, race, Hispanic origin, and insurance status</i>	<i>Adolescents incurring prescribed medicine expense</i>		<i>Mean annual out-of-pocket expense per person with prescribed medicine out-of-pocket expense</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Amount</i>	<i>SE¹</i>
10–21 years	45.2	0.9	\$389	\$20
10–14 years	43.8	1.2	365	25
15–17 years	45.4	1.4	421	39
18–21 years	46.7	1.5	394	36
Male	41.1	1.1	427	32
Female	49.5	1.2	355	19
White only, not Hispanic	52.1	1.2	430	23
Black only, not Hispanic	35.4	1.9	355	61
Hispanic	33.1	1.4	271	24
Any private insurance	48.1	1.1	394	25
Public insurance only	46.7	1.7	432	37
Uninsured	26.1	2.0	204	22

¹SE is standard error.

NOTES: Expenses include all prescribed medications that were purchased or refilled during 2004. Public insurance includes Medicaid, State Children's Health Insurance Program (SCHIP), Medicare, or other public coverage. Private insurance includes any private insurance coverage, including TRICARE. Persons in the uninsured category were uninsured for all of 2004. Persons of Hispanic origin may be of any race.

SOURCE: Agency for Healthcare Research and Quality, Center for Cost and Financing Studies, Medical Expenditure Panel Survey.

Data table for Figure 38a. Unmet health service needs among adolescents 10–17 years of age with special health care needs, by number of services needed but not obtained and insurance type: United States, 2001

<i>Insurance type</i>	<i>Number of reported health services needed but not obtained</i>			
	<i>One</i>		<i>More than one</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
All	11.4	0.4	7.3	0.4
Private only	8.7	0.5	4.4	0.4
Public only	17.7	1.3	10.7	1.3
Private and public	14.5	1.5	9.5	1.6
Uninsured	20.2	2.1	28.6	2.5

¹SE is standard error.

NOTES: Service need is based on parents' perceived need. Unmet need is defined as not receiving all of the service that was needed. Public insurance includes Medicaid and State Children's Health Insurance Program (SCHIP).

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children with Special Health Care Needs.

Data table for Figure 38b. Selected health service needs among adolescents 10–17 years of age with special health care needs, by type of service and proportion of need that is unmet: United States, 2001

<i>Type of health services needed</i>	<i>Adolescents with SHCN needing service</i>		<i>Adolescents with unmet need among those needing service</i>	
	<i>Percent</i>	<i>SE¹</i>	<i>Percent</i>	<i>SE¹</i>
Dental care	84.9	0.5	10.7	0.5
Mental health care	30.5	0.6	18.3	1.0
Specialist care	50.0	0.6	8.2	0.6
Physical therapy, occupational therapy, or speech therapy	18.1	0.5	11.5	1.1
Preventive care	72.7	0.6	3.7	0.4
Eyeglasses or vision care	45.5	0.6	6.0	0.5
Prescription medication	87.4	0.5	2.2	0.3
Medical supplies	22.3	0.5	2.8	0.5

¹SE is standard error.

NOTES: Service need is based on parents' perceived need. Unmet need is defined as not receiving all of the service that was needed. Unmet need in Figure 38b is calculated as the percent with unmet need among those needing service times the percentage needing service. SHCN is special health care needs.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children with Special Health Care Needs.

Data table for Figure 39. Receipt of at least one family planning or reproductive health medical service in the past year among female adolescents 15–19 years of age and young adults 20–24 years of age, by type of provider and age group: United States, 2002

Age	At least 1 family planning or medical service Percent	Type of provider			
		Clinic		Private doctor or HMO Percent	Other Percent
		Any clinic Percent	Title X clinic Percent		
15–19 years	48.9	26.1	12.4	26.9	2.1
15–17 years.	37.6	22.6	10.9	17.6	2.3
18–19 years.	65.1	31.3	14.6	40.4	1.9
20–24 years	80.5	32.2	14.4	55.6	3.1

NOTES: Standard errors are not available. Family planning services include sterilizing operation, birth control method, checkup or medical test related to birth control, counseling about birth control, counseling about getting sterilized, emergency contraception, or counseling about emergency contraception. Medical services include Pap smear, pelvic exam, prenatal care, postpartum care, counseling, testing or treatment for sexually transmitted infections, abortion, or pregnancy test. Percent in "Title X clinic" are also included in "any clinic." HMO is health maintenance organization. Other is any other place not listed. Percentages for provider types do not add to total who "received at least one family planning or medical service" because women may have received more than one service and reported more than one provider.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth. Chandra A, Martinez GM, Mosher WD, Abma JC, Jones J. Fertility, family planning, and reproductive health of U.S. women: Data from the 2002 National Survey of Family Growth. National Center for Health Statistics. Vital Health Stat 23(25). 2005.

Data table for Figure 40. Dental visit in the past year among adolescents 10–19 years of age and young adults 20–24 years of age, by age group, sex, race and Hispanic origin, and poverty status: United States, 2005

Sex, race, Hispanic origin, and poverty status	10–15 years		16–19 years		20–24 years	
	Percent	SE ¹	Percent	SE ¹	Percent	SE ¹
Total.	84.2	0.7	72.6	1.3	54.0	1.3
Not Hispanic:						
White only	89.7	0.7	77.2	1.7	58.3	1.7
Black only	80.7	2.0	66.6	3.5	52.4	3.5
Hispanic or Latino	71.4	1.7	58.7	2.7	41.9	2.4
Poor.	74.3	2.0	62.5	3.9	53.5	2.7
Near poor	77.4	1.8	61.9	4.0	46.5	2.5
Nonpoor	90.0	0.7	79.2	1.6	58.7	1.9
Male.	83.7	0.9	69.4	2.1	51.9	1.9
Female.	84.7	1.0	75.9	1.6	56.1	1.7

¹SE is standard error.

NOTES: Persons of Hispanic origin may be of any race. The income groups are derived from the ratio of the family's income to the federal poverty threshold, given family size. Poor is less than 100 percent of the poverty threshold; near poor is between 100 and 199 percent of the poverty threshold; nonpoor is 200 percent of the poverty threshold or more.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Technical Notes

Emergency Department Visit Rates

See [Appendix II, National Hospital Medical Care Survey](#), for a description of the data source. ED visit rates in this report are based on initial visits for injury and all visits for other diagnoses. Initial injury visits include initial visits to an ED for an injury episode with either a first-listed injury diagnosis that is based on the Barell matrix definition of an injury (regardless of any mention of an external cause-of-injury code) or the first-listed valid external cause-of-injury code, which is based on the recommended framework for external causes of injury (1). Complications of care and adverse effects are excluded from both the diagnosis codes as well as the external cause codes. All other diagnoses are for visits not related to an injury except those that are pregnancy related. See [Table I](#) for a listing of the code numbers used to define the diagnostic categories.

The external cause of injury is defined using only the first-listed cause. The category “being struck by or against an object or a person” is a broad one that includes a specific code for sports-related injuries. One should note that principal diagnoses that are based on ED data are not as detailed as discharge diagnoses from inpatient settings.

Hospital Discharge Rates

See [Appendix II, National Hospital Discharge Survey \(NHDS\)](#), for a description of the data source. Cause-specific hospital discharge data from the NHDS are defined using the first-listed diagnosis. See [Table I](#) for a listing of the code numbers used to define the diagnostic categories.

Mortality

See [Appendix II, National Vital Statistics System](#), for a description of the data source. External cause of injury codes (V01–Y98) are assigned for all deaths for which the underlying cause of death listed on the death certificate was an injury. See [Table II](#) for code numbers used to define cause of death categories. The external cause of injury codes are designed to classify environmental events, circumstances, and conditions that contributed to the injury. E codes have two dimensions: cause or mechanism of injury (for example, firearm, motor vehicle, and poisoning) and intent or manner of

death (including unintentional, suicide, homicide, intent undetermined, and other).

Pregnancy Rates

Pregnancies are estimated as the sum of three outcomes: live births, induced abortions, and fetal losses (miscarriages and stillbirths) (2). See [Appendix II, National Vital Statistics System, National Survey of Family Growth, Abortion Surveillance](#), and [Alan Guttmacher Institute \(AGI\) Abortion Provider Survey](#), for a description of the data sources used to calculate the estimated number of pregnancies.

The birth data are complete counts of all live births. Induced abortion estimates in this report are national estimates that are based on abortion surveillance information which is collected from most states by the CDC’s National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) Abortion Surveillance and which is adjusted to national totals compiled by AGI from their surveys of all known abortion providers. In 2002, the NCCDPHP abortion surveillance system collected data on abortions by age for 47 states, the District of Columbia (D.C.), and New York City. No data were available for Alaska, California, and New Hampshire. The numbers of abortions published by NCCDPHP tend to be lower than the numbers published by AGI. For example, the total number of abortions reported by NCCDPHP was about 20 percent lower in 2000 than the number reported by AGI for the same reporting areas.

Information on fetal losses in this report is based on cycles 3 through 6 of the National Survey of Family Growth (NSFG), conducted in 1982, 1988, 1995, and 2002 by NCHS. This information comes from the pregnancy histories collected for each woman in the NSFG samples. The proportions of recent pregnancies (excluding induced abortions) ending in fetal loss in the years preceding each survey are used to compile estimated fetal loss rates. Data from the last four NSFG cycles have been combined in this way to provide statistical reliability because of small numbers of pregnancies, especially for teenagers. The estimates for 1990–2000 in this report have been revised to incorporate the combined fetal loss estimates from cycles 3 through 6 of the NSFG; previous estimates used data from cycle 5 only. The fetal loss figures are estimates, and variations reflect in part the extent to which pregnancies are recognized, especially at very early gestation periods. Yet, the NSFG data are preferable to vital statistics reports of fetal losses, because vital statistics data

are generally limited to losses occurring at gestations of 20 weeks or more, whereas NSFG data include all gestations. The vast majority of fetal losses occur early in pregnancy before the reporting requirements for fetal losses are in effect. Even fetal losses of 20 weeks or more are underreported in vital statistics data.

The pregnancy rates in this report are based on revised population estimates consistent with the 2000 census. In computing birth rates for the Hispanic population, births with origin of mother not stated are included with non-Hispanic births rather than being distributed. Thus, rates for the U.S. Hispanic population are underestimates of the true rates to the extent that the births with origin of mother not stated (0.8 percent in 2004) were actually to Hispanic mothers. In computing the rates, the census-based populations with origin

not stated are imputed. The effect on the rates is believed to be small.

References

1. Fingerhut L. Recommended definition of initial injury visits to emergency departments for use with the NHAMCS-ED Data. National Center for Health Statistics. Health E-Stat. [cited 2007 June 8]. Available from: www.cdc.gov/nchs/products/pubs/pubd/hestats/injury/injury.htm. 2007.
2. Ventura SJ, Abma JC, Mosher WD, Henshaw SK. Recent trends in teenage pregnancy in the United States, 1990–2002. National Center for Health Statistics. Health E-Stat. Available from: www.cdc.gov/nchs/products/pubs/pubd/hestats/teenpreg1990-2002/teenpreg1990-2002.htm. 2006.

Table I. Codes for diagnostic categories from the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD–9–CM)*

<i>Diagnostic category</i>	<i>ICD–9–CM code numbers</i>
Noninjury:	
Psychoses	90–299
Upper respiratory infection	460–465, 381, 382, 34.0
Asthma	493
STDs	54.1, 77.98, 78.10, 78.11, 78.19, 78.88, 79.4, 90–92, 94, 98.10, 98.16–.17, 98.30, 98.36–.39, 98.86, 99.0–.2, 99.40–.41, 99.5, 112.1, 131.0, 131.8–.9, 614.0–.5, 614.7–.9, 615.0–.9, 616.10, 623.5, 628.2, 647.0–.2, 980–988
Urinary tract infection	595.0, 595.9, 599.0, 590.1, 590.8, 590.9
Abdominal/gastrointestinal	789.0, 558.9, 535.0, 535.5–9, 540, 541, 531–534
Pregnancy related	630–677 or V22, V23, V27
Injury:	
Fractures ¹	800.0–829
Sprains and Strains	840–848
Open Wounds ²	870–884, 890–894
Contusions	920–924
Poisoning	960–989
External cause of injury:	
Motor vehicle traffic	E810–E819, E958.5, E988.5
Fall	E880–E886, E888, E957, E968.1, E987
Struck by, against	E916–E917, E960.0, E968.2, E973, E975
Cut/pierce	E920, E956, E966, E974, E986

¹This set of ICD codes differs from the traditional categorization of fractures that has generally included ICD codes 800–829. ICD codes for skull fracture with intracranial injuries and spinal fractures with spinal cord injuries are excluded. Those codes are categorized with internal organ injuries.
²This set of codes differs from the traditional grouping of ICD codes 870–897. Omitted are injuries to the larynx, trachea, pharynx, and thyroid, which would be categorized with internal organ injuries. In addition, codes for traumatic amputations are grouped separately.

Table II. Codes for cause of death categories from the *International Classification of Diseases, Tenth Revision (ICD-10)*

<i>Cause of death</i>	<i>ICD-10 code numbers</i>
Natural causes	A00–R99
Injury ¹	U01–U03, V01–Y36, Y85–Y87, Y89
Motor vehicle traffic	V02–V04[.1,.9], V09.2, V12–V14[.3–.9], V19[.4–.6], V20–V28[.3–.9], V29–V79[.4–.9], V80.3–V80.5, V80[.3–.5], V81.1, V82.1, V83–V86[.0–.3], V87.0– V87[.0–.8], V89.2
Firearm	U01.4, W32–W34, X72–X74, X93–X95, Y22–24, Y35.0
Unintentional injury	V01–X59, Y85–86
Suicide	U03, X60–X84, Y87.0
Homicide	U01–U03, X85–Y09, Y87.1
External cause of injury	U01–U03, V01–Y98

¹Injury codes exclude adverse effects and complications of medical care.

Appendix I – Healthy People 2010

Healthy People 2010 provides a comprehensive national agenda for health promotion and prevention of disease, disability, and premature death, and it is designed to measure U.S. progress. The *Healthy People 2010* objectives include measures of health outcomes, contributing behaviors, and health services. Of the 467 objectives, 107 were identified as important for adolescents and young adults. A total of 21 of the adolescent health objectives were identified as Critical Health Objectives representing critical health outcomes or contributing behaviors. These 21 objectives reflect many of the risk behaviors of adolescents, including tobacco use, unhealthy dietary habits, inadequate physical activity, and alcohol and other drug use, as well as behaviors that result in violence and unintentional injury. The objectives also address such health status issues as selected leading causes of mortality among adolescents and reproductive health.

Progress towards meeting the 21 objectives will result in substantial improvements in adolescent health, and meeting the targets set by the objectives will also lead to improvements in adult health because adult risk behaviors often develop during adolescence and young adulthood. In addition, adoption of healthy behaviors by adolescents will help prevent the development of many serious chronic diseases that occur later in adulthood, including lung and heart disease, certain common kinds of cancer, diabetes, and other chronic diseases.

The appendix table below lists the 21 Critical Health Objectives for adolescents associated with the topic areas in *Adolescent Health in the United States, 2007*, the baseline measures and the most recent data, the *Healthy People 2010* targets, and the figures in this report that have data related to the objectives. The measure or data source presented in the figure may differ from that used in *Healthy People 2010*.

Appendix Table. Critical health objectives

Objective number	Topic area and Critical Health Objective	Baseline (year)	Most recent data (year)	2010 target	Related figure
Health Status					
19–3.(b)	Reduce the proportion of adolescents who are overweight 12 to 19 year-olds	11% (1988–94)	17% (2003–4)	5%	5
18–2.	Reduce the rate of suicide attempts requiring medical attention 9th through 12th grade students	2.6% (1999)	2.3% (2005)	1.0%	7
6–2.	Reduce the proportion of children and adolescents who are reported to be sad, unhappy, or depressed 4 to 17 year-olds	31% (1997)	27% (2005)	17%	
16–03.(a–c)	Reduce deaths of adolescents and young adults 10 to 14 year-olds (per 100,000 population)	21.5 (1998)	18.7 (2004)	¹ 16.5	8
	15 to 19 year-olds(per 100,000 population)	69.5 (1998)	66.1 (2004)	¹ 38.0	
	20 to 24 year-olds (per 100,000 population)	92.7 (1998)	94.0 (2004)	¹ 41.5	
15–15.a	Reduce deaths caused by motor vehicle crashes 15 to 24 year-olds (per 100,000 population)	25.6 (1999)	25.8 (2004)	NA	17
26–1.a	Reduce deaths and injuries caused by alcohol-related motor vehicle crashes 15 to 24 year-olds (per 100,000 population)	11.8 (1998)	12.4 (2002)	NA	
18–1.	Reduce suicides 10 to 14 year-olds (per 100,000 population)	1.2 (1999)	1.3(2004)	NA	16
	15 to 19 year-olds (per 100,000 population)	8.0 (1999)	8.2 (2004)	NA	
15–32.	Reduce homicides 10 to 14 year-olds (per 100,000 population)	1.2 (1999)	1.0 (2004)	NA	16
	15 to 19 year-olds (per 100,000 population)	10.4 (1999)	9.3 (2004)	NA	

Appendix Table. Critical health objectives—Con.

Objective number	Topic area and Critical Health Objective	Baseline (year)	Most recent data (year)	2010 target	Related figure
Violence					
15–38.	Reduce physical fighting among adolescents 9th through 12th grade students	36% (1999)	36% (2005)	32%	
Reproductive Health					
9–7.	Reduce pregnancies among female adolescents 15 to 17 year-olds (per 1,000 population)	67 (1996)	44.4 (2002)	43	21b
25–1.(a–c)	Reduce the proportion of adolescents and young adults with Chlamydia trachomatis infections (15 to 24 year-olds)				
	Females attending family planning clinics	5.0% (1997)	6.9% (2004)	3.00%	
	Females attending STD clinics	12.2% (1997)	15.3% (2004)	3.00%	23
	Males attending STD clinics	15.7% (1997)	20.2% (2004)	3.00%	
13–5.	Reduce the number of new HIV/AIDS cases diagnosed among adolescents and young adults	DNC	---	---	24
Risk Behaviors					
25–11.(a–b)	Increase the proportion of adolescents who have never had sexual intercourse				
	9th through 12th grade students	50% (1999)	53% (2005)	56%	25a, 26
	Increase the proportion of adolescents who have had sexual intercourse, but not in the past 3 months				
	9th through 12th grade students	27% (1999)	27% (2005)	30%	
27–2.(a)	Reduce the proportion of adolescents who used tobacco products in the past month				
	9th through 12th grade students	40% (1999)	28% (2005)	21%	27
26–11.(d)	Reduce the proportion of persons engaging in binge drinking alcoholic beverages in the past month				
	12 to 17 year-olds	10.7% (2002)	9.9% (2005)	² 3.1%	28
26–10.(b)	Reduce use of marijuana in the past month				
	12 to 17 year-olds	8.2% (2002)	6.8% (2005)	0.70%	30
15–19.	Increase use of safety belts				
	9th through 12th grade students	84% (1999)	90% (2005)	92%	29a, 29b
26–6.	Reduce the proportion of adolescents who report that they rode during the previous 30 days, with a driver who had been drinking alcohol				
	9th through 12th grade students	33% (1999)	28% (2005)	30%	29a, 29b
15–39.	Reduce weapon carrying by adolescents on school property				
	9th through 12th grade students	6.9% (1999)	6.5% (2005)	4.90%	31
22–7.	Increase the proportion of adolescents who engage in vigorous physical activity				
	9th through 12th grade students	65% (1999)	64% (2005)	85%	32
Health Care Access and Utilization					
18–7.	Increase the proportion of children with mental health problems who receive treatment				
	4 to 17 year-olds	60% (2001)	64% (2005)	0.66	

--- Data are not available.

¹Baseline has been revised.

²Target has been revised.

NOTE: NA is not applicable. The Healthy People 2010 target is not applicable for specific age groups. DNC is data for specific population are not collected.

Appendix II – Data Sources

Information in *Adolescent Health in the United States, 2007* was obtained from data files and published reports from several federal government agencies. In each case, the sponsoring agency collected data using its own methods and procedures. Therefore, data in this report vary with respect to source, method of collection, and definitions. Although a detailed description and comprehensive evaluation of each data source are beyond the scope of this appendix, users should be aware of the general strengths and weaknesses of the different data collection systems. For example, population-based surveys obtain socioeconomic data, data on family characteristics, and information on the effect of an illness, such as limitation of activity. These data are limited by the amount of information a respondent remembers or is willing to report. A respondent may not know detailed medical information, such as precise diagnoses or the types of operations performed and, therefore, cannot report it. In contrast, record-based surveys, which collect data from physician and hospital records, usually have good diagnostic information but little or no information about the socioeconomic characteristics of persons or the impact of illnesses on persons.

The populations covered by different data collection systems may not be the same, and understanding the differences is critical to interpreting the data. Data on vital statistics and national expenditures cover the entire population. Most data on morbidity and utilization of health resources cover only the civilian noninstitutionalized population.

All data collection systems are subject to error, and records may be incomplete or contain inaccurate information. Respondents may not remember essential information, a question may not mean the same thing to different respondents, and some institutions or persons may not respond at all. Measuring the magnitude of these errors or their effect on the data is not always feasible. Where possible, table notes describe the universe and method of data collection to assist users in evaluating data quality.

Some information is collected in more than one survey, and estimates of the same statistic may vary among surveys because of different survey methodologies, sampling frames, questionnaires, definitions, and tabulation categories. For example, information on substance use for youth is collected in three national surveys—the National Survey on Drug Use

& Health (NSDUH), Monitoring the Future (MTF), and the Youth Risk Behavior Survey (YRBS). Rates of substance use by these surveys are not directly comparable. In this report, estimates of cigarette smoking, marijuana use, and drinking and driving are based on the YRBS (Figures 27, 29a and 29b, and 30). Estimates of alcohol use, binge alcohol use, and heavy alcohol use are based on the NSDUH (Figure 28). Unlike this report, *Health, United States, 2006* presents some estimates of substance use that are based on all three of these surveys.

Overall estimates generally have relatively small sampling errors, but estimates for certain population subgroups may be based on a small sample size and have relatively large sampling errors. Numbers of births and deaths from the vital statistics system represent complete counts. Therefore, they are not subject to sampling error. When the number of events is small and the probability of such an event is rare, estimates may be unstable and considerable caution should be observed in interpreting the statistics. Estimates that are unreliable because of large sampling errors or small numbers of events are noted with asterisks (*) in selected tables. The criteria used to designate unreliable estimates are indicated in notes to the applicable tables.

Data sources are listed alphabetically by data set name and agency.

Government Sources

Abortion Surveillance Centers for Disease Control and Prevention National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

The abortion surveillance program documents the number and characteristics of women obtaining legal induced abortions, and it compiles abortion data by state or area of occurrence. During 1973–1997, data were received from or estimated for 52 reporting areas in the United States: the 50 states, D.C., and New York City. In 1998 and 1999, CDC compiled abortion data from 48 reporting areas. Alaska, California, New Hampshire, and Oklahoma monitors unintended pregnancy and assists efforts to identify and reduce preventable causes of morbidity and mortality associated with abortions. The surveillance data include age, race and ethnicity, marital status, previous live births, period of gestation, and previous

induced abortions by women obtaining legal induced abortions. For each year since 1969, the data for these states were not estimated or reported by CDC. During 2000–2002, Oklahoma again reported these data, increasing the number of reporting areas to 49. In 2003, Alaska again reported these data and West Virginia did not, maintaining the number of reporting areas at 49. The system includes women of all ages, including adolescents, who obtain legal induced abortions.

Between 1998 and 2002, the total number of abortions reported to CDC was about 34 percent less than the total estimated by AGI. The four reporting areas (the largest of which was California) that did not report abortions to CDC in 1998 accounted for 18 percent of all abortions tallied by the AGI's 1995–1996 abortion survey.

For more information, see the NCCDPHP surveillance and research website:

www.cdc.gov/reproductivehealth/Data_Stats/index.htm.

AIDS Surveillance

Centers for Disease Control and Prevention National Center for HIV, STD, and TB Prevention (NCHSTP)

AIDS surveillance data are used to detect and monitor cases of HIV disease and AIDS in the United States. The data also help to identify epidemiologic trends, pinpoint unusual cases requiring follow-up, and inform public health efforts to prevent and control the disease. A growing number of states require confidential reporting of persons with HIV infection and participate in CDC's integrated HIV and AIDS surveillance system, which compiles information on the population of persons in whom HIV has been recently diagnosed and persons who are currently living with HIV infection. Data collected on those reported as having contracted AIDS include age, gender, race or ethnicity, mode of exposure, and geographic region.

AIDS surveillance is conducted by health departments in each state or territory and D.C. Although surveillance activities range from passive to active, most areas employ multifaceted active surveillance programs, which include four major reporting sources of AIDS information: hospitals and hospital-based physicians, physicians in nonhospital practice, public and private clinics, and medical record systems (death certificates, tumor registries, hospital discharge abstracts, and

communicable disease reports). Using a standard confidential case report form, the health departments collect information that is then transmitted electronically without personal identifiers to CDC.

Adjustments of the estimated AIDS data to account for reporting delays are calculated by a maximum likelihood statistical procedure that takes into account the differences in reporting delays among exposure, geography, race or ethnicity, age, gender, and vital status categories. The procedure is based on the assumption that reporting delays in these categories have not changed over time. AIDS surveillance data are provisional and are updated annually.

Although completeness of reporting of AIDS cases to state and local health departments differs by geographic region and patient population, studies conducted by state and local health departments indicate that the reporting of AIDS cases in most areas of the United States is more than 85 percent complete. To assess trends in AIDS cases, deaths, and prevalence, using case data adjusted for reporting delays and presented by year of diagnosis is preferable to using straight counts of cases presented by year of report.

Decreases in AIDS incidence and in the number of AIDS deaths, first noted in 1996, have been ascribed to the effect of new treatments, which prevent or delay the onset of AIDS and premature death among HIV-infected persons and result in an increase in the number of persons living with HIV and AIDS.

For more information, see the NCHSTP website:

www.cdc.gov/nchstp/od/nchstp.html.

Current Population Survey (CPS) Bureau of Labor Statistics and U.S. Census Bureau

The Current Population Survey (CPS) provides current estimates and trends in employment, unemployment, and other characteristics of the general labor force, the population as a whole, and various population subgroups. One person generally responds for all eligible members of a household.

Estimates of poverty and health insurance coverage presented in *Adolescent Health in the United States, 2007* from the CPS are derived from the Annual Social and Economic Supplement (ASEC), formerly called the Annual Demographic Supplement, or simply, the March Supplement. The ASEC collects data on family characteristics, household

composition, marital status, migration, income from all sources, information on weeks worked, time spent looking for work or on layoff from a job, occupation and industry classification of the job held longest during the year, health insurance coverage, and receipt of noncash benefits (i.e., food stamps, school lunch program, employer-provided group health insurance plan, employer-provided pension plan, personal health insurance, Medicaid, Medicare, civilian or military health care for the members of the uniformed services and their families, and energy assistance).

The CPS sample is located in 754 sample areas, with coverage in every state and D.C. The adult universe (i.e., the population of marriageable age) is composed of persons 15 years of age and over in the civilian noninstitutionalized population for CPS labor force data. The sample for the March CPS supplement is expanded to include members of the Armed Forces who are living in civilian housing or with their family on a military base, as well as additional Hispanic households that are not included in the monthly labor force estimates.

The basic CPS sample is selected from multiple frames using multiple stages of selection. Each unit is selected with a known probability to represent similar units in the universe. The sample design is state-based, with the sample in each state being independent of the others.

For more information, see the CPS website:

<http://www.census.gov/cps/>.

Medical Expenditure Panel Survey (MEPS) Agency for Healthcare Research and Quality

The Medical Expenditure Panel Survey (MEPS) produces nationally representative estimates of health care use, expenditures, sources of payment, insurance coverage, and quality of care for the U.S. civilian noninstitutionalized population. MEPS data in *Adolescent Health in the United States, 2007* include health care expenses and prescribed medicine expenses, presented by sociodemographic characteristics and type of health insurance.

The U.S. civilian noninstitutionalized population is the primary population represented. MEPS is a national probability survey conducted on an annual basis since 1996. The panel design of the survey features several rounds of interviewing covering 2 full calendar years. The MEPS consists of three components: the Household Component

(HC), the Medical Provider Component (MPC), and the Insurance Component (IC).

The HC is a nationally representative survey of the civilian noninstitutionalized population drawn from a subsample of households that participated in the prior year's National Health Interview Survey (NHIS) conducted by NCHS. Missing expenditure data are imputed using data collected in the MPC whenever possible.

The MPC collects data from hospitals, physicians, and home health providers that were reported in the HC as providing care to MEPS sample persons. Data are collected in MPC to improve the accuracy of expenditure estimates derived solely from the HC. The MPC is particularly useful in obtaining expenditure information for persons enrolled in managed care plans and Medicaid recipients. Sample sizes for the MPC vary from year to year depending on the HC sample size and the MPC sampling rates for providers.

The IC consists of two subcomponent samples: a household sample and a list sample. The household sample collects detailed information from employers on the health insurance held by and offered to respondents to the MEPS-HC. The sample size for the MEPS-HC was approximately 13,000–15,000 families annually beginning in 2002. The full-year household core response rate has generally been about 66 percent. The list sample collects data on the types and costs of workplace health insurance from a total of about 40,000 business establishments and government agencies each year.

For more information, see the MEPS website:

www.meps.ahrq.gov.

National Crime Victimization Survey (NCVS) Bureau of Justice Statistics U.S. Department of Justice

The National Crime Victimization Survey (NCVS) is the United States' primary source of information on criminal victimization, including crimes not reported to the police. The survey collects information from persons 12 years of age and over on the frequency, characteristics, and consequences of criminal victimization in the United States. The survey collects data on victimization by rape, sexual assault, robbery, assault, theft, household burglary, and motor vehicle theft.

As defined in NCVS, violent crime can be classified into three categories: simple and aggravated assault, rape or sexual assault, and robbery. Violent crime does not include personal theft, such as purse snatching, or property crimes, such as household theft. Crime victimization rates are calculated as the number of events per 1,000 population.

For more information, see the NCVS website:
www.ojp.usdoj.gov/bjs/glance/viort.htm.

National Health and Nutrition Examination Survey (NHANES) **Centers for Disease Control and Prevention** **National Center for Health Statistics**

The National Health and Nutrition Examination Survey (NHANES) program includes a series of cross-sectional nationally representative health examination surveys conducted in mobile examination units or clinics (MECs). In the first series of surveys, the National Health Examination Survey (NHES), data were collected on the prevalence of certain chronic diseases, the distributions of various physical and psychological measures, and measures of growth and development. In 1971, a nutrition surveillance component was added and the survey name changed to NHANES. The NHANES series of surveys are based on a highly stratified multistage probability sample selected to represent the civilian noninstitutionalized population. Beginning in 1999, NHANES became a continuous annual survey.

The NHANES surveys have collected data on chronic disease prevalence and conditions (including undiagnosed conditions) and factors such as obesity and smoking, serum cholesterol levels, hypertension, diet and nutritional status, immunization status, infectious disease prevalence, health insurance, and measures of environmental exposures. Other topics addressed include hearing, vision, mental health, anemia, diabetes, cardiovascular disease, osteoporosis, oral health, mental health, pharmaceuticals used, and physical fitness.

With the exception of the Hispanic Health and Nutrition Examination Survey, the NHES and NHANES provide estimates of the health status of the civilian noninstitutionalized population of the United States. NHES II and NHES III examined probability samples of U.S. noninstitutionalized children ages 6–11 years (NHES II) and 12–17 years (NHES III). Beginning in 1999, NHANES oversampled low-income persons, adolescents 12–19 years of

age, persons 60 years of age and over, African American or black persons, and persons of Mexican origin. The sample is not designed to give a nationally representative sample for the total population of Hispanics residing in the United States. For the most recent survey years, NHANES 2003–2004, 6,410 households had at least one eligible sample person identified for interviewing. A total of 12,761 eligible sample persons were identified, of which 79 percent (10,115) were interviewed and 76 percent (9,653) completed the health examination component of the survey.

The NHANES includes clinical examinations, selected medical and laboratory tests, and self-reported data. The NHANES and previous surveys interviewed persons in their homes and conducted medical examinations, including laboratory analysis of blood, urine, and other tissue samples. Medical examinations and laboratory tests follow very specific protocols and are standardized as much as possible to ensure comparability across sites and providers. From 1999–2002, as a substitute for MEC examinations, a small number of survey participants received an abbreviated health examination in their homes if they were unable to come to an MEC.

For more information, see the NHANES website:
www.cdc.gov/nchs/nhanes.htm.

National Health Interview Survey (NHIS) **Centers for Disease Control and Prevention** **National Center for Health Statistics**

The National Health Interview Survey (NHIS) monitors the health of the U.S. population through the collection and analysis of data on a broad range of health topics. A major strength of this survey lies in its ability to analyze health measures by many demographic and socioeconomic characteristics. The NHIS has been conducted annually since 1957 with a major redesign every 10 to 15 years. The NHIS covers the civilian noninstitutionalized population of the United States. Excluded are patients in long-term care facilities, persons on active duty with the Armed Forces (although their dependents are included), and U.S. nationals living in foreign countries.

The NHIS obtains information during household interviews on illnesses, injuries, activity limitation, chronic conditions, health insurance coverage, utilization of health care, and other health topics. Demographic data include age, gender,

education, race or ethnicity (reported by respondent or proxy), place of birth, income, and place of residence. Other data collected include risk factors such as lack of exercise, smoking, and alcohol consumption, as well as use of prevention services such as vaccinations, mammography, and pap smears. Special modules and supplements focus on different issues each year and have included topics such as HIV and AIDS, aging, cancer screening, prevention, alternative and complementary medicine, and many other topics.

The NHIS is a cross-sectional household interview survey. Sampling and interviewing are continuous throughout each year. The sampling plan follows a multistage area probability design that permits the representative sampling of households. From each family in the NHIS, one sample adult and, for families with children under 18 years of age, one sample child are randomly selected to participate in the Sample Adult Core and the Sample Child Core questionnaires. Because some health issues are different for children and adults, these two questionnaires differ in some items, but they both collect basic information on health status, use of health care services, health conditions, and health behaviors. Since 1997, the sample numbered about 100,000 persons, with about 30,000–36,000 persons participating in the sample adult and about 12,000–14,000 persons participating in the sample child questionnaire. In 2005, the total household response rate was 87 percent. Response rates for special health topics (supplements) have generally been lower. Since 1997, the final response rate for the sample adult supplement was 70–80 percent and 78–84 percent for the sample child supplement.

For more information, see the NHIS website:
www.cdc.gov/nchs/nhis.htm.

National Hospital Ambulatory Medical Care Survey (NHAMCS) **Centers for Disease Control and Prevention** **National Center for Health Statistics**

The National Hospital Ambulatory Medical Care Survey (NHAMCS) collects data on the utilization and provision of medical care services provided in hospital EDs and outpatient departments (OPDs). Data are collected from medical records on type of providers seen; reason for visit; diagnoses; drugs ordered, provided, or continued; and selected procedures and tests performed during the visit. Patient data include age,

gender, race, and expected source of payment. Data are also collected on selected characteristics of hospitals included in the survey. Annual data collection began in 1992.

The survey is a representative sample of visits to EDs and OPDs of nonfederal short-stay or general hospitals. Telephone contacts are excluded. Data from ED visits are presented in *Adolescent Health in the United States, 2007*. A four-stage probability sample design is used in NHAMCS. For analyses that present visit rates per population, the civilian non-institutionalized population is used as the denominator. However, visits to hospital EDs can also include persons who reside in institutional settings.

Data are collected through abstraction of medical records, completion of encounter forms, compilation of data from state and professional associations, purchase of data from commercial abstraction services, and surveys of providers. Hospital staff are asked to complete patient record forms (PRFs) for each sampled visit, but census field representatives typically abstract data for more than one-half of these visits. In any given year, the hospital sample consists of approximately 500 hospitals, of which 80 percent have EDs. The number of PRFs completed for EDs was 37,337 in 2002, 40,253 in 2003, and 36,589 in 2004. The hospital response rate for NHAMCS for EDs was 92 percent in 2002, 85 percent in 2003, and 89 percent in 2004.

For more information, see the NHCS website:
www.cdc.gov/nchs/nhcs.htm.

National Hospital Discharge Survey (NHDS) **Centers for Disease Control and Prevention** **National Center for Health Statistics**

The National Hospital Discharge Survey (NHDS) collects and produces national estimates on characteristics of inpatient stays in nonfederal short-stay hospitals in the United States. The NHDS has been conducted annually since 1965. Patient information collected includes demographics, length of stay, diagnoses, and procedures. Hospital characteristics collected include region, ownership, and bed size.

The survey design covers the 50 states and D.C. Included in the survey are hospitals with an average length of stay of less than 30 days for all inpatients, general hospitals, and children's general hospitals. Excluded are federal, military, and Department of Veterans Affairs hospitals, as well as hospital units of institutions (such as prison hospitals), and hospitals

with fewer than six beds staffed for patient use. All discharged patients from in-scope hospitals are included in the survey.

A redesign of the NHDS was implemented for the 1988 survey. Under the redesign, hospitals were selected using a modified three-stage stratified design. The basic unit of estimation for NHDS is a sampled discharge. In 2004, 501 hospitals were selected: 476 were within scope, 439 participated (92 percent), and data were collected from medical records for approximately 371,000 discharges.

Hospital utilization rates per 10,000 population were computed using estimates of the civilian population of the United States as of July 1 of each year. The estimates for 2002–2004 that appear in *Adolescent Health in the United States, 2007* were calculated using estimates of the civilian population that were based on census 2000.

For more information, see the National Health Care Survey website at <http://www.cdc.gov/nchs/nhcs.htm> or the NHDS website at www.cdc.gov/nchs/about/major/hdasd/nhds.htm.

National Survey on Drug Use & Health (NSDUH) Substance Abuse and Mental Health Services Administration

The National Survey on Drug Use & Health (NSDUH), formerly called the National Household Survey on Drug Abuse (NHSDA), collects data on substance abuse and dependence, mental health problems, and receipt of substance abuse and mental health treatment.

NSDUH reports on the prevalence, patterns, and consequences of drug and alcohol use and abuse in the general U.S. civilian noninstitutionalized population 12 years of age and over. Data are collected on the use of illicit drugs, the nonmedical use of legal drugs, and the use of alcohol and tobacco products. The survey is conducted annually and is designed to produce drug and alcohol use incidence and prevalence estimates. Data are also collected periodically on special topics of interest such as criminal behavior, treatment, mental health, and attitudes about drugs.

The NHSDA survey has been conducted since 1971. In 1999, the NHSDA underwent a major redesign affecting the method of data collection, sample design, sample size, and oversampling. In 2002, the survey underwent a name change to NSDUH, as well as additional improvements and modifications to the survey.

The survey is representative of persons 12 years of age and over in the civilian noninstitutionalized population in the United States. This includes civilians living on military bases and persons living in noninstitutionalized group quarters, such as college dormitories, rooming houses, and shelters. Persons excluded from the survey include homeless people who do not use shelters, active military personnel, and residents of institutional group quarters, such as jails and hospitals. The data collection method involves in-person interviews conducted with a sample of persons at their place of residence. Beginning in 1999, the interview has been carried out with computer assisted interviewing methodology. The survey uses a combination of computer-assisted personal-interviewing (conducted by the interviewer for some basic demographic information) and audio computer-assisted self-interviewing (ACASI) for most of the questions. ACASI provides a highly private and confidential means of responding to questions to increase the level of honest reporting of illicit drug use and other sensitive behavior. The 2005 NSDUH employed a 50-state sample design with an independent, multistage area probability sample for each of the 50 states and D.C. to support the development of both national and state-level estimates. Nationally, of the 146,912 eligible households sampled, 134,055 addresses were successfully screened for the 2005 survey, and in these screened households, a total of 83,805 sample persons were selected and 68,308 completed interviews were obtained. The survey was conducted from January to December 2005. The weighted response rate was 91 percent for household screening and 76 percent for interviewing.

Estimates of substance use for youth that are based on the NSDUH are not directly comparable with estimates that are based on Monitoring the Future (MTF) and the Youth Risk Behavior Surveillance System (YRBSS). In addition to the fact that the MTF excludes dropouts and absentees, rates are not directly comparable across these surveys because of differences in populations covered, sample design, questionnaires, interview setting, and statistical approaches to make the survey estimates generalizable to the entire population. The NSDUH survey collects data in homes, whereas the MTF and YRBSS collect data in school classrooms. The NSDUH estimates are tabulated by age, whereas the MTF and YRBSS estimates are tabulated by grade, representing different ages as well as different populations.

For more information, see the NSDUH website at <https://nsduhweb.rti.org/> or the Substance Abuse and Mental Health Services Administration, Office of Applied Studies website at oas.samhsa.gov/.

National Survey of Family Growth (NSFG) Centers for Disease Control and Prevention National Center for Health Statistics

The National Survey of Family Growth (NSFG) provides national data on factors affecting birth and pregnancy rates, adoption, and maternal and infant health. Data elements include sexual activity, marriage, divorce and remarriage, unmarried cohabitation, contraception and sterilization, infertility, breastfeeding, pregnancy loss, low birthweight, and use of medical care for family planning and infertility. Six cycles of the survey have been completed: 1973, 1976, 1982, 1988, 1995, and 2002. In cycle 6, there were 120 Primary Sampling Units, with 7,643 interviews completed among eligible women (80 percent response rate) and 4,928 interviews completed among eligible men (78 percent response rate).

Interviews are conducted in person by professional female interviewers using a standardized questionnaire. In all cycles, black women were sampled at higher rates than white women so that detailed statistics for black women could be produced. In cycles 5 and 6 (1995 and 2002), Hispanic persons were also oversampled.

For more information, see the NSFG website: www.cdc.gov/nchs/nsfg.htm.

National Vital Statistics System (NVSS) Centers for Disease Control and Prevention National Center for Health Statistics

The National Vital Statistics System (NVSS) collects and publishes official national statistics on births, deaths, fetal deaths, and, prior to 1996, marriages and divorces occurring in the United States that were based on U.S. Standard Certificates. Detailed descriptions of the two vital statistics files used in *Adolescent Health in the United States, 2007* (birth file and mortality file) are presented separately below.

The NVSS collects and presents U.S. resident data for the aggregate of 50 states, New York City, and D.C., as well as for each individual state and D.C. Vital events occurring in

the United States to non-U.S. residents and vital events occurring abroad to U.S. residents are excluded.

Birth File

Vital statistics natality data are a fundamental source of demographic, geographic, and medical and health information on all births occurring in the United States. The data are used to present the characteristics of babies and their mothers, track trends (such as birth rates for teenagers shown in this report), and compare natality trends with other countries. The birth registration area began in 1915 with 10 states and D.C. The natality file includes characteristics about the baby such as gender, birthweight, and weeks of gestation; demographic information about the parents such as age, race, Hispanic origin, parity, educational attainment, marital status, and state of residence; medical and health information, such as prenatal care, that is based on hospital records; and behavioral risk factors for the birth such as mother's tobacco use during pregnancy.

In the United States, state laws require birth certificates to be completed for all births. The registration of births is the responsibility of the professional attendant at birth, generally a physician or midwife. The birth certificate must be filed with the local registrar of the district in which the birth occurs. Each birth must be reported promptly—the reporting requirements vary from state to state, ranging from 24 hours after the birth to as much as 10 days.

Federal law mandates national collection and publication of birth and other vital statistics data. The NVSS is the result of cooperation between NCHS and the states to provide access to statistical information from birth certificates. Standard forms for the collection of the data and model procedures for the uniform registration of events are developed and recommended for state use through cooperative activities of the states and NCHS. NCHS shares the costs incurred by the states in providing vital statistics data for national use.

For more information, see the birth data website: www.cdc.gov/nchs/births.htm.

Mortality File

Vital statistics mortality data are a fundamental source of demographic, geographic, and cause-of-death information. This is one of the few sources of comparable health-related data for small geographic areas over an extended time

period. The data are used to present the characteristics of those dying in the United States, to determine life expectancy, and to compare mortality trends with other countries.

The mortality file includes demographic information on age, gender, race, Hispanic origin, state of residence, and educational attainment, as well as medical information on cause of death. The death registration area began in 1900 with 10 states and D.C.

By law, the registration of deaths is the responsibility of the funeral director. The funeral director obtains demographic data for the death certificate from an informant. The physician in attendance at the death is required to certify the cause of death. Where death is from other than natural causes, a coroner or medical examiner may be required to examine the body and certify the cause of death. Data for the entire United States refer to events occurring within the United States; data for geographic areas are by place of residence.

For more information, see the mortality data website:

<http://www.cdc.gov/nchs/deaths.htm>.

Population Census and Population Estimates Bureau of the Census Decennial Census

The United States has conducted the census of population (decennial census) every 10 years since 1790. Since 1930, the decennial census has enumerated the resident population as of April 1 of the census year. Data on gender, race, age, and marital status are collected from 100 percent of the enumerated population. More detailed information such as income, education, housing, occupation, and industry are collected from a representative sample of the population.

Race Data on the 1990 Census

The question on race on the 1990 census was based on the Office of Management and Budget's (OMB) 1977 Statistical Policy Directive 15, Race and Ethnicity Standards for Federal Statistics and Administrative Reporting. This document specified rules for the collection, tabulation, and reporting of race and ethnicity data within the federal statistical system. The 1977 standards required federal agencies to report race-specific tabulations using four single-race categories: American Indian or Alaska Native, Asian or Pacific Islander, black, and white. Under the 1977 standards, race and ethnicity were considered to be two separate and distinct

concepts. Thus, persons of Hispanic origin may be of any race.

Race Data on the 2000 Census

The question on race on the 2000 census was based on OMB's 1997 Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity (see Fed Regist 62:58781–90. 1997 Oct 30).

The 1997 Standards incorporated two major changes in the collection, tabulation, and presentation of race data. First, the 1997 standards increased the minimum set of categories to be used by federal agencies for identification of race from four to five: American Indian or Alaska Native, Asian, black or African American, Native Hawaiian or Other Pacific Islander, and white. Second, the 1997 standards included the requirement that federal data collection programs allow respondents to select one or more race categories when responding to a query on their racial identity. This provision means that there are potentially 31 race groups, depending on whether a person selects one, two, three, four, or all five of the race categories. The 1997 standards continue to call for use, when possible, of a separate question on Hispanic or Latino ethnicity and specify that the ethnicity question should appear before the question on race. Thus, under the 1997 standards, as under the 1977 standards, Hispanics may be of any race.

Bridged-Race Population Estimates for Census 2000

Race data on the 2000 census are not comparable with race data on other data systems that are continuing to collect data using the 1977 standards on race and ethnicity during the transition to full implementation of the 1997 standards. For example, most of the states in the Vital Statistics Cooperative Program have revised or plan to revise their birth and death certificates to conform to the 1997 standards after 2000. Thus, population estimates for 2000 and beyond with race categories comparable with the 1977 categories are needed so that race-specific birth and death rates can be calculated. To meet this need, NCHS, in collaboration with the U.S. Census Bureau, developed methodology to bridge the 31 race groups in census 2000 to the four single-race categories specified under the 1977 standards.

The bridging methodology was developed using information from the 1997–2000 NHIS. The NHIS provides a unique opportunity to investigate multiple-race groups because, since

1982, the NHIS has allowed respondents to choose more than one race but has also asked respondents reporting multiple races to choose a primary race. The bridging methodology developed by NCHS involved the application of regression models relating person-level and county-level covariates to the selection of a particular primary race by the multiple-race respondents. Bridging proportions derived from these models were applied by the U.S. Census Bureau to the Census 2000 Modified Race Data Summary File. This application resulted in bridged counts of the April 1, 2000, resident single-race populations for four racial groups: American Indian or Alaska Native, Asian or Pacific Islander, black, and white. As bridged-race population estimates continue to be needed for the calculation of vital rates, the Census Bureau annually produces postcensal bridged-race estimates of the July 1 resident single-race populations.

For more information about bridged-race population estimates, see the NCHS website, “U.S. Census Populations with Bridged Race Categories”: www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm.

Postcensal Population Estimates

Postcensal population estimates are estimates made for the years following a census, before the next census has been taken. National postcensal population estimates are derived annually by updating the resident population enumerated in the decennial census using a components of population change approach. Each annual series includes estimates for the current data year and revised estimates for the earlier years in the decade. The following formula is used to derive the estimates for a given year from those for the previous year, starting with the decennial census enumerated resident population as the base:

- (1) resident population
- (2) + births to U.S. resident women
- (3) – deaths to U.S. residents
- (4) + net international migration
- (5) + net movement of U.S. Armed Forces and U.S. civilian citizens

Estimates for the earlier years in a given series are revised to reflect changes in the components of change data sets (for example, births to U.S. resident women from a preliminary natality file are replaced with counts from a final natality file).

To help users keep track of which postcensal estimate is being used, each annual series is referred to as a vintage and the last year in the series is used to name the series. For example, the Vintage 2001 postcensal series has estimates for July 1, 2000, and July 1, 2001, and the Vintage 2002 postcensal series has revised estimates for July 1, 2000, and July 1, 2001, as well as estimates for July 1, 2002. The estimates for July 1, 2000, and for July 1, 2001, from the Vintage 2001 and Vintage 2002 postcensal series differ.

The Census Bureau has annually produced a postcensal series of estimates of the July 1 resident population of the United States, which is based on census 2000 by applying the components of change methodology to the Modified Race Data Summary File. These series of postcensal estimates have race data for 31 race groups, in accordance with the 1997 race and ethnicity standards. In order to compare the race data for 2000-based postcensal estimates with race data on vital records, the Census Bureau has applied the NHIS bridging methodology to each 31 race group postcensal series of population estimates to obtain bridged-race postcensal estimates (estimates for the four single-race categories: American Indian or Alaska Native, Asian or Pacific Islander, black, and white). Bridged-race postcensal population estimates are available from: www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm.

Intercensal Population Estimates

The further from the census year on which the postcensal estimates are based, the less accurate are the postcensal estimates. With the completion of the decennial census at the end of the decade, intercensal estimates for the preceding decade were prepared to replace the less accurate postcensal estimates. Intercensal population estimates take into account the census of population at the beginning and end of the decade. Thus, intercensal estimates are more accurate than postcensal estimates because they correct for the error of closure or difference between the estimated population at the end of the decade and the census count for that date. The error of closure at the national level was quite small for the 1960s (379,000). However, for the 1970s, it amounted to almost 5 million; for the 1980s, 1.5 million; and for the 1990s, about 6 million. The error of closure differentially affects age, race, gender, and Hispanic origin subgroup populations as well as the rates that are based on these populations. Vital rates that were calculated using

postcensal population estimates are routinely revised when intercensal estimates become available because the intercensal estimates correct for the error of closure.

Intercensal estimates for the 1990s with race data comparable to the 1977 standards have been derived so that vital rates for the 1990s could be revised to reflect census 2000. Calculation of the intercensal population estimates for the 1990s was complicated by the incomparability of the race data on the 1990 and 2000 censuses. The U.S. Census Bureau, in collaboration with National Cancer Institute and NCHS, derived race-specific intercensal population estimates for the 1990s using the 1990 Modified Age, Race, Sex, and Hispanic Origin File as the beginning population base and the bridged-race population estimates for April 1, 2000, as the ending population base. Bridged-race intercensal population estimates are available from www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm.

For more information, see the U.S. Census Bureau website: www.census.gov/.

Sexually Transmitted Disease (STD) Surveillance Centers for Disease Control and Prevention National Center of HIV, STD, and TB Prevention

Surveillance information on incidence and prevalence of STDs is used to inform public and private health efforts to control these diseases. Case reporting data are available for nationally notifiable chancroid, chlamydia, gonorrhea, and syphilis; surveillance of other STDs (such as genital herpes simplex virus, genital warts or other human papillomavirus infections, and trichomoniasis) are based on estimates of office visits in physicians' office practices provided by the National Disease and Therapeutic Index. STD national surveillance data have been collected since 1941.

Case reports of STDs are reported to CDC by STD surveillance systems operated by state and local STD control programs and health departments in 50 states, D.C., selected cities, 3,139 U.S. counties, and outlying areas comprising U.S. dependencies, possessions, and independent nations in free association with the United States. Data from outlying areas are not included in *Adolescent Health in the United States, 2007*.

Information is obtained from the following sources of data: (1) case reports from STD project areas; (2) prevalence data from the Regional Infertility Prevention Program, the National

Job Training Program (formerly the Job Corps), the Jail STD Prevalence Monitoring Project, the Adolescent Women Reproductive Health Monitoring Project, the Men Who Have Sex With Men Prevalence Monitoring Project, and the Indian Health Service; (3) sentinel surveillance of gonococcal antimicrobial resistance from the Gonococcal Isolate Surveillance Project (GISP); and (4) national sample surveys implemented by federal and private organizations. Because of incomplete diagnosis and reporting, the number of STD cases reported to CDC undercounts the actual number of cases occurring among the U.S. population.

For more information, see the STD Surveillance Report website at www.cdc.gov/std/stats/ or the STD Prevention website at www.cdc.gov/std/default.htm.

Youth Risk Behavior Survey (YRBS) Centers for Disease Control and Prevention National Center for Chronic Disease Prevention and Health Promotion

The national Youth Risk Behavior Survey (YRBS) monitors health risk behaviors among students in grades 9 through 12 that contribute to morbidity and mortality in both adolescence and adulthood. Data are collected on tobacco use, dietary behaviors, physical activity, alcohol and other drug use, behaviors that contribute to unintentional injuries and violence, and sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases including HIV infection.

The national YRBS of high school students was conducted in 1990, 1991, 1993, 1995, 1997, 1999, 2001, 2003, and 2005. Data are representative of high school students in public and private schools in the United States. The national YRBS school-based surveys employ a three-stage cluster sample design to produce a nationally representative sample of students in grades 9 through 12 attending public and private high schools. A weighting factor is applied to each student record to adjust for nonresponse and for the varying probabilities of selection, including those resulting from the oversampling of black and Hispanic students. The sample size for the 2005 YRBS was 13,953 students in 159 schools. The school response rate was 78 percent and the student response rate was 86 percent, for an overall response rate of 67 percent.

National YRBS data are subject to at least two limitations. First, these data apply only to adolescents who attend regular

high school. These students may not be representative of all persons in this age group because those who have dropped out of high school or attend an alternative high school are not surveyed. Second, the extent of underreporting or overreporting cannot be determined, although the survey questions demonstrate good test-retest reliability.

Estimates of substance use for youth that are based on the YRBS differ from the NSDUH and MTF. Rates are not directly comparable across these surveys because of differences in populations covered, sample design, questionnaires, interview setting, and statistical approaches to make the survey estimates generalizable to the entire population. The NSDUH survey collects data in homes, whereas the MTF and YRBS collect data in school classrooms. The NSDUH estimates are tabulated by age, whereas the MTF and YRBS estimates are tabulated by grade, representing different ages as well as different populations.

For more information, see the Division of Adolescent and School Health website: www.cdc.gov/HealthyYouth/index.htm.

Private Sources

Alan Guttmacher Institute Abortion Provider Survey

The Alan Guttmacher Institute (AGI), a nonprofit organization focused on reproductive health research, policy analysis, and public education, conducts periodic surveys of abortion providers to provide nationally representative statistics on abortion incidence.

Thirteen provider surveys have been conducted for selected data years 1973 to midyear 2001. Data were collected from clinics, physicians, and hospitals identified as potential providers of abortion services. Mailed questionnaires were sent to all potential providers, with two additional mailings and telephone follow-up for nonresponse. No surveys were conducted in 1983, 1986, 1989, 1990, 1993, 1994, 1997, or 1998. For 1999–2000, a version of the survey questionnaire was created for each of the three major categories of providers, modeled on the survey questionnaire used for AGI's data collection in 1997. All surveys asked the number of induced abortions performed at the provider's location. State health statistics agencies were contacted, requesting all available data reported by providers to each state health agency on the number of abortions performed in the survey

year. For states that provided data to AGI, the health agency figures were used for providers who did not respond to the survey. Estimates of the number of abortions performed by some providers were ascertained from knowledgeable sources in the community.

To estimate the number of abortions performed in 2001 and 2002, AGI first estimated the change in the number of abortions between 2000 and 2001, beginning with the number of abortions occurring in each state in each of those 2 years, as reported by CDC. The three states without reporting systems were excluded. AGI also eliminated the states with very incomplete or inconsistent reporting (Arizona, Maryland, Nevada, and D.C.). AGI summed the number of abortions that took place in the 44 remaining states for each year. The percentage change between 2000 and 2001 was then applied to AGI's more complete nationwide count of 1,312,990 abortions in 2000 to arrive at the national estimate for 2001. The same procedure was used to estimate the change in the number of abortions between 2001 and 2002, except that the data for both years were collected directly from state health departments because the CDC abortion surveillance report for 2002 was not yet available. For 2002, no data were available for Wyoming (in addition to the states with no reporting systems), and AGI eliminated Arizona, Colorado, D.C., and Maryland because of inconsistent reporting. AGI used the remaining 43 states for the calculations.

The number of abortions estimated by AGI through the mid-to late-1980s was about 20 percent higher than the number reported to CDC. Between 1989 and 1997, the AGI estimates were about 12 percent higher than those reported by CDC. Beginning in 1998, health departments of four states did not report abortion data to CDC. The four reporting areas (the largest of which is California) that did not report abortions to CDC in 1998 accounted for 18 percent of all abortions tallied by AGI's 1995–1996 survey. FDA approval of Mifepristone (medical abortion) in September of 2000 accounted for a small proportion (approximately 6 percent) of abortions performed in nonhospital facilities during the first half of 2001.

For more information, see the AGI website: www.guttmacher.org or write to The Alan Guttmacher Institute, 120 Wall Street, New York, NY 10005.

Appendix Table. Critical health objectives

Objective number

Topic area and Critical Health Objective

Baseline (year)

Most recent data (year)

2010 target

U.S. DEPARTMENT OF
HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention
National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300