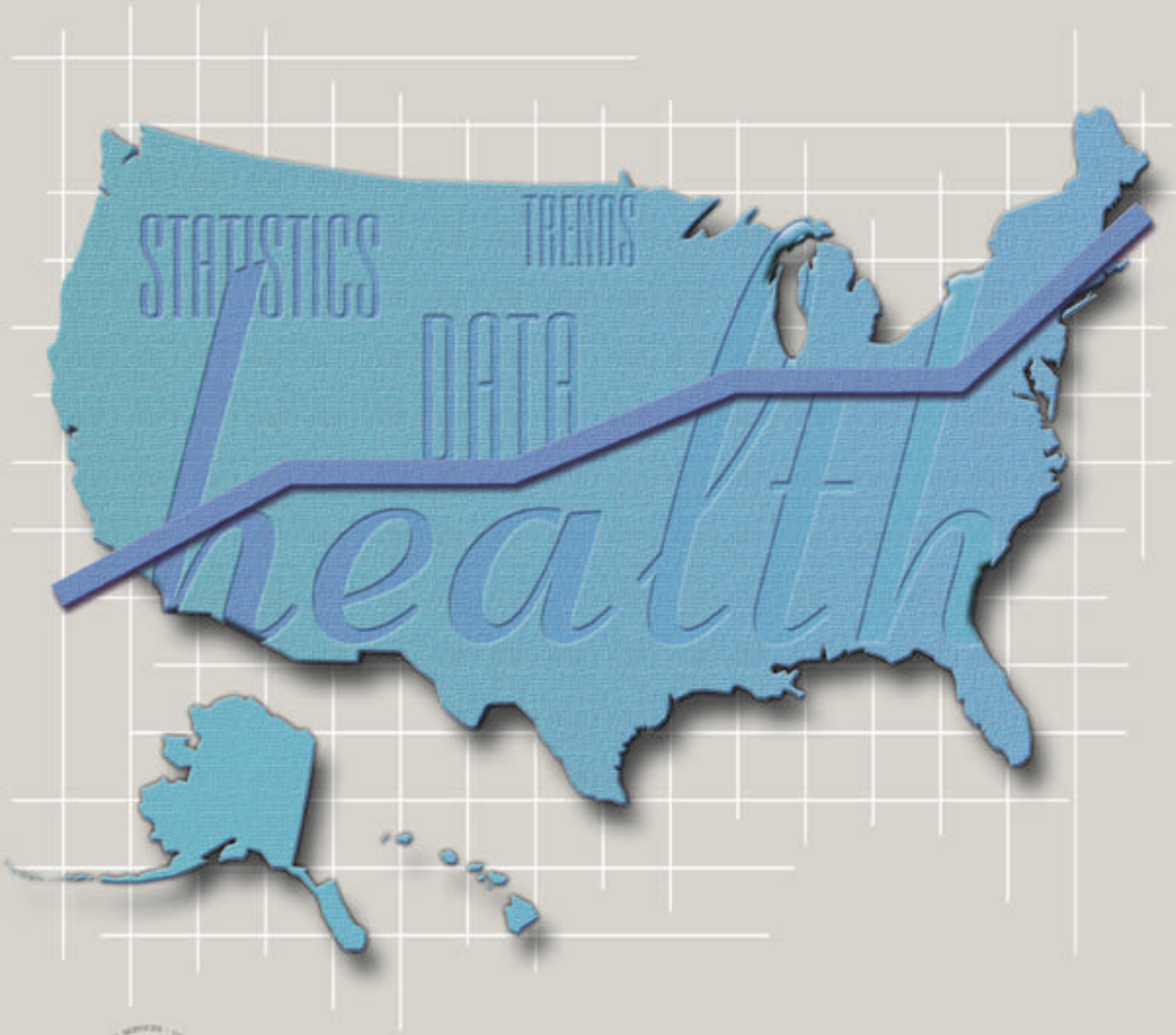
Chartbook on Trends in the Health of Americans

Excerpted From Health, United States, 2002



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

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

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Preface

The *Chartbook on Trends in the Health of Americans* is an excerpt from *Health, United States, 2002* and includes highlights and appendixes I and II from the complete report.

Health, United States, 2002 is the 26th report on the health status of the Nation, and is submitted by the Secretary of the Department of Health and Human Services to the President and Congress of the United States in compliance with Section 308 of the Public Health Service Act. This report was compiled by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). The National Committee on Vital and Health Statistics served in a review capacity.

The *Health, United States* series presents national trends in health statistics. Major findings are presented in the highlights section. The report includes a chartbook, trend tables, extensive appendixes, and an index.

Chartbook

The *Chartbook on Trends in the Health of Americans* assesses the Nation's health by presenting trends and current information on selected determinants and measures of health status. Determinants of health considered in the chartbook include demographic factors, health insurance coverage, health behaviors and risk factors, and preventive health care. Measures of health status include mortality and limitations of activity due to chronic health conditions. Many measures are shown separately for persons of different ages because of the strong effect of age on health, as well as differences in causes of morbidity and mortality across the age span. Selected figures also highlight differences in determinants and measures of health status by such characteristics as sex, race, and Hispanic origin.

Trend Tables

The chartbook section is followed by 147 trend tables organized around four major subject areas: health status and determinants, health care utilization, health care resources, and health care expenditures. A major criterion used in selecting the trend tables is availability of comparable national data over a period of several years. The tables report data for selected years to highlight major trends in health statistics. Earlier editions of *Health, United States* may present data for additional years that are not included in the current printed report. Where possible, these additional years of data are available in Excel spreadsheet files on the *Health, United States* home page. Tables with additional data years are listed in Appendix III.

Racial and Ethnic Data

Many tables in *Health, United States* present data according to race and Hispanic origin consistent with Department-wide emphasis on expanding racial and ethnic detail when presenting health data. Trend data on race and ethnicity are in the greatest detail possible, after taking into account the quality of data, the amount of missing data, and the number of observations. The large differences in health status by race and Hispanic origin documented in this report may be explained by several factors including socioeconomic status, health practices, psychosocial stress and resources, environmental exposures, discrimination, and access to health care. New standards for Federal data on race and ethnicity are described in Appendix II under *Race*.

Changes in This Edition

Each volume of *Health, United States* is prepared with the goal of maximizing its usefulness as a standard reference source while maintaining its continuing relevance. Comparability is fostered by including similar trend tables in each volume. Currency is maintained by adding new tables each year to reflect emerging topics in public health and improving the content of ongoing tables. New to *Health, United States, 2002* is a table on the 10 Leading Health Indicators and associated measures from the Healthy People 2010 goals and objectives for improving the health of the Nation (table 52). Table 64 on use of selected substances, based on data from the redesigned National Household Survey of Drug Abuse (NHSDA), has been reformatted to include additional substances. A new table provides data on the proportion of the population with health insurance coverage through health maintenance organizations by private insurance, Medicaid, and Medicare, based on the National Health Interview Survey (NHIS) (table 132). State health expenditure data from National Health Accounts were added in the following new tables: per capita expenditures for total personal health care, hospital care, physician services, nursing home and home health care, and drugs (table 140); and

expenditures for Medicare (table 141) and Medicaid (table 142) as a percent of total personal health care expenditures.

The use of the Tenth Revision of the *International Classification of Diseases* (ICD–10) for classifying and coding cause-of-death starting with 1999 data introduced discontinuities in mortality trends between 1998 and 1999. Discontinuities due to differences in classification between ICD–9 and ICD–10 were minimized for some causes of death (ischemic heart disease and unintentional injuries in table 30, and cerebrovascular diseases in tables 30 and 38) by using ICD–9 codes that more closely resemble the codes for ICD–10 and revising the corresponding death rates for 1980–98. Starting with this edition of *Health, United States*, 1980–98 death rates for these three causes of death differ from previous editions. To facilitate evaluation of mortality change between 1998 and 1999, comparability-modified rates for 1998 were added to each mortality trend table for comparison with 1999 death rates (tables 30, 31, 35, 37–43, and 45–48).

The table on occupational disease deaths (table 49) was expanded to include both males and females 15 years of age and over and the number of occupational diseases was increased.

Appendixes

Appendix I describes each data source used in the report and provides references for further information about the sources. Appendix I is reorganized with data sources listed alphabetically within two broad categories: Government Sources and Private and Global Sources.

Appendix II is an alphabetical listing of terms used in the report. It also presents standard populations used for age adjustment (tables I, II, and III); ICD codes for causes of death shown in *Health, United States* from the Sixth through Tenth Revisions and the years when the Revisions were in effect (tables IV and V); comparability ratios between ICD–9 and ICD–10 for selected causes (table VI); ICD–9–CM codes for external cause-of-injury, diagnostic, and procedure categories (tables VII, IX, and X); industry codes from the Standard Industrial Classification Manual (table VIII); and sample tabulations of NHIS data comparing the 1977 and 1997 Standards for Federal data on race and Hispanic origin (tables XI and XII).

Appendix III lists tables for which additional years of trend data are available electronically in Excel spreadsheet files on the *Health, United States* home page and CD-ROM, described below under Electronic Access.

The Index to Trend Tables is a useful tool for locating data by topic. Tables are cross-referenced by such topics as Child and adolescent health, Women's health, Elderly population, Nutrition-related data, State data, American Indian, Asian, Black, and Hispanic origin populations, Education, Poverty status, Disability, and Metropolitan/nonmetropolitan data.

Electronic Access

Health, United States may be accessed on the World Wide Web at www.cdc.gov/nchs/hus.htm. From the *Health, United States* home page, one may also subscribe to the *Health, United States* listserv.

Health, United States, 2002, the chartbook, and each of the 147 individual trend tables are available as separate Acrobat .pdf files on the Web. Individual tables are downloadable as Excel spreadsheet files. Pdf and spreadsheet files for selected tables will be updated on the Web if more current data become available near the time when the printed report is released. Readers who register for the listserv will be notified of these table updates. Previous editions of *Health, United States* and chartbooks, starting with the 1993 edition, also may be accessed from the *Health, United States* home page.

Health, United States is also available, along with other NCHS reports, on a CD-ROM entitled "Publications from the National Center for Health Statistics, featuring *Health, United States, 2002*," vol 1 no 8, 2002. These publications can be viewed, searched, printed, and saved using Adobe Acrobat software on the CD-ROM.

Copies of the Report

Copies of *Health, United States, 2002* and the CD-ROM may be purchased from the Government Printing Office through links to GPO on the *Health, United States* home page.

Questions?

For answers to questions about this report, contact:

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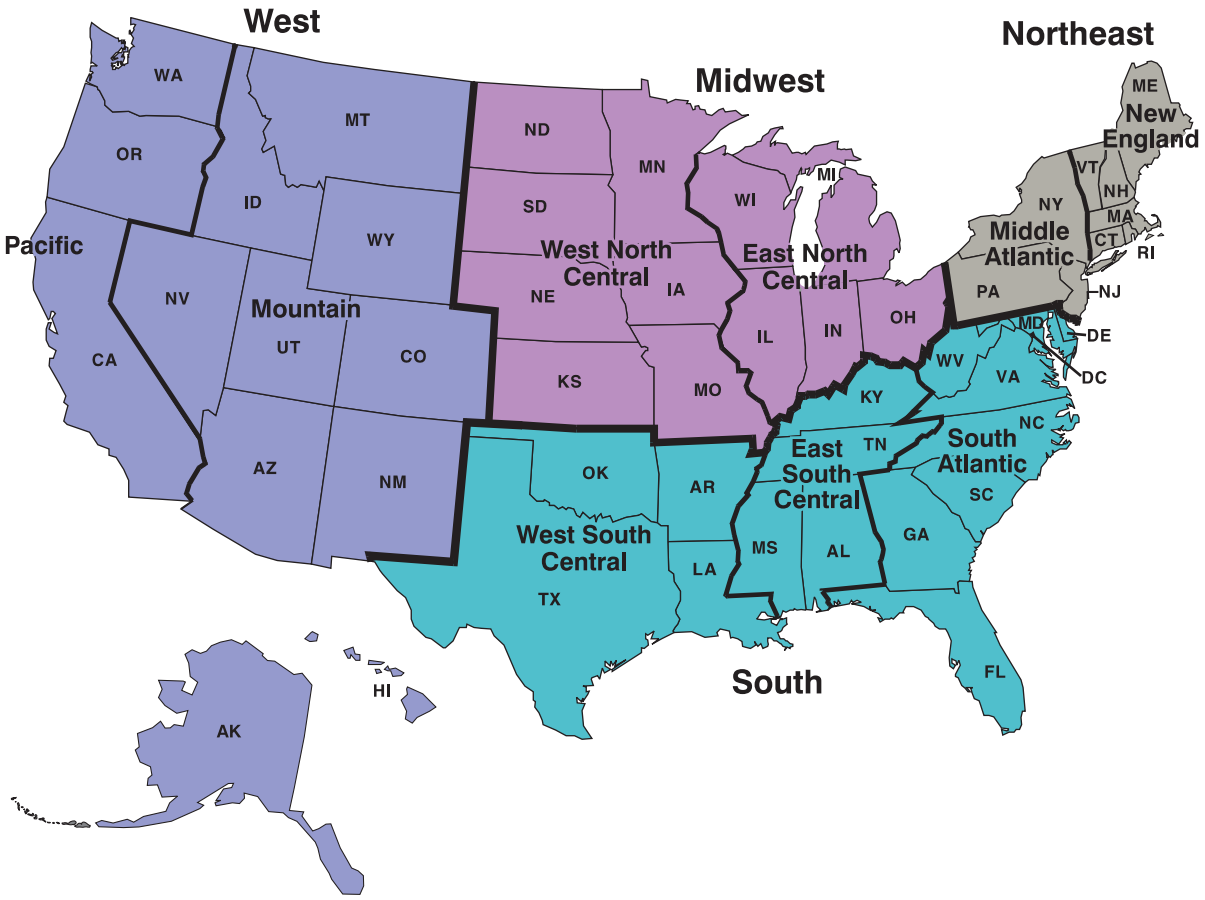
Geographic Regions and Divisions of the United States



Highlights

Highlights

Health Status and Determinants

Population characteristics

Important changes in the U.S. population will shape future efforts to improve health and health care. Two major changes in the demographic characteristics of the U.S. population are the growth of the elderly population and the increasing racial and ethnic diversity of the Nation.

From 1950 to 2000 the proportion of the population that is **elderly** rose from 8 to 12 percent. By 2050 it is projected that one in five Americans will be 65 years of age or over (figure 2).

The **racial and ethnic composition** of the Nation has changed over time. The Hispanic population and the Asian and Pacific Islander population have grown more rapidly than other racial and ethnic groups in recent decades. In 2000 more than 12 percent of the U.S. population identified themselves as Hispanic and almost 4 percent as Asian or Pacific Islander (figure 3).

In 2000 the percent of Americans living in **poverty** dropped to 11.3 percent overall. However, the poverty rate differs significantly among population subgroups. More than one-quarter of black and Hispanic children lived in poor families in 2000 (figure 4 and table 2).

Fertility

Birth rates for teens have continued to decline, while birth rates for women 20–44 years of age increased in 2000. The overall fertility rate increased for the third year in 2000 after dropping each year during 1990–97.

The **birth rate for teenagers** declined for the ninth consecutive year in 2000, to 48.5 births per 1,000 women aged 15–19 years, an all-time low for the Nation. Between 1991 and 2000 the teen birth rate declined more for 15–17 year olds than for 18–19 year olds (by 29 percent compared with 16 percent) (table 3).

The **birth rate for unmarried women** increased 2 percent in 2000 to 45.2 births per 1,000 unmarried women ages 15–44 years, but was still 4 percent below its high in 1994. The birth rate for unmarried black women increased slightly in 2000 to 72.5 per 1,000, after having declined steadily over the past decade, and the birth rate for unmarried Hispanic women increased for the second year to 97.3 per 1,000 (table 9).

Health Behaviors and Risk Factors

Health behaviors and risk factors have a significant effect on health outcomes. Cigarette smoking increases the risk of lung cancer, heart disease, emphysema, and other respiratory diseases. Overweight and obesity increase the risk of death and disease as well as the severity of disease. Regular physical activity reduces mortality, lessens the risk of disease, and enhances physical functioning. Heavy and chronic use of alcohol and use of illicit drugs increase the risk of disease and injuries. Environmental exposures also affect health. For example, poor air quality contributes to respiratory illness, cardiovascular disease, and cancer.

Since 1990 the percent of **adults who smoke** cigarettes has declined only slightly. In 2000, 26 percent of men and 21 percent of women were smokers. Cigarette smoking by adults is strongly associated with educational attainment. Adults with less than a high school education were almost three times as likely to smoke as those with a bachelor's degree or more education in 2000 (figure 7 and tables 61 and 62).

The percent of **high school students who smoke** cigarettes increased in the early 1990s. Since 1997 the percent of students who smoke has declined. In 2001, 29 percent of high school students reported smoking during the past month (figure 7).

Cigarette smoking during pregnancy is a risk factor for poor birth outcomes such as low birthweight and infant death. In 2000 the proportion of mothers who smoked cigarettes during pregnancy declined to 12 percent, down from 20 percent in 1989. Smoking rates for mothers ages 18–19 years decreased in 2000, after increasing each year since 1995. Mothers in this age group remained more likely to smoke during pregnancy than mothers at other ages (figure 7 and table 11).

The prevalence of **overweight and obesity** among adults has increased substantially since 1976–80. In 1999 an estimated 61 percent of adults 20–74 years of age were overweight with 27 percent obese, based on preliminary data (figure 8).

The prevalence of **overweight** among children and adolescents rose from 1976–80 to 1999. In 1999 an estimated 13 percent of children 6–11 years of age and 14 percent of adolescents 12–19 years of age were overweight, based on preliminary data (figure 8).

Almost 40 percent of adults reported that they did not engage in **physical activity during leisure time** in 2000. The percent of adults who were physically inactive increased with age, and at most ages women were more likely to be inactive than men (figure 10).

Among current drinkers, 43 percent of men and 19 percent of women reported drinking **five or more alcoholic drinks in a day** on at least one day in the past year in 2000. This level of alcohol consumption was most common among young adults 18–24 years of age (table 67).

The prevalence of **illicit drug use** within the past 30 days among youths 12–17 years of age remained essentially unchanged between 1999 and 2000 at about 10 percent. The percent of youths reporting illicit drug use increased with age, ranging from 3 percent among those 12–13 years to over 16 percent among those 16–17 years in 2000 (table 64).

The number of **cocaine-related emergency department episodes** per 100,000 population for persons 35 years and over increased steadily throughout the 1990s to 68 per 100,000 in 2000. Among those 26–34 years, the age group with the highest episode rate, the 2000 rate (155 per 100,000) declined for the second year in a row. The same patient may be involved in multiple drug-related episodes (table 66).

In 2000 about one-half of **substance abuse clients in specialty treatment units** were receiving treatment for both alcoholism and drug abuse (table 86).

The presence of unacceptable levels of ground-level **ozone** is the largest source of air pollution. In 2000 approximately 42 percent of the U.S. population lived in areas designated as nonattainment areas for established health-based standards for ozone (table 52).

Morbidity

Limitation of activity due to chronic health conditions and self-assessed (or family member-assessed) health status are two summary measures of morbidity presented in this report. Additional measures of morbidity that are presented include the incidence of specific diseases, injury-related emergency department use, and suicide attempts.

Limitation of activity due to chronic health conditions occurs about twice as often among boys as girls and is significantly higher among school-age children than preschoolers. Among children 5–17 years, 9 percent of boys and 5 percent of girls had an activity limitation in 1998–2000 with the majority classified as having a limitation based on participation in special education (figure 15).

Limitations in handling personal care needs such as bathing (**activities of daily living or ADLs**) and routine needs such as shopping (**instrumental activities of daily living or IADLs**) increase sharply with age among the noninstitutionalized population. Among adults 75 years of age and over, nearly 10 percent reported ADL limitations and nearly 20 percent reported IADL limitations in 1998–2000 (figure 16 and table 58).

The relative importance of different **chronic conditions** as causes of activity limitation differs by age. Among younger adults 18–44 years the most frequently mentioned chronic conditions causing limitations were arthritis and other musculoskeletal conditions and mental illness in 1998–2000. Among adults 45 years of age and older arthritis and other musculoskeletal conditions and heart and other circulatory conditions outranked other conditions as causes of activity limitation (figure 17).

The percent of noninstitutionalized adults reporting **fair or poor health** increases substantially through middle and old age. In 2000 about 1 in 10 persons 45–54 years of age reported fair or poor health status compared with 1 in 5 persons ages 55–64 years, 1 in 4 persons ages 65–74 years, and 1 in 3 persons 75 years of age and older (table 59).

Of the more than 40,000 new **AIDS cases** in 2000, 3 out of 4 were male. New AIDS cases dropped more for men than for women in 2000. Among males 13 years of age and over, 11 percent fewer new AIDS cases were reported in 2000 than in 1999 while among females in the same age group, 4 percent fewer cases were reported (table 54).

Syphilis facilitates transmission of HIV disease. The incidence rate of primary and secondary syphilis in 2000 (2.2 cases per 100,000 population) was the lowest since national reporting began in 1941. However, the average annual rate of decline in primary and secondary syphilis slowed to 8 percent between 1998 and 2000, following average reductions of

more than 20 percent per year since the last major syphilis epidemic peaked in 1990 (table 53).

Gonorrhea causes infertility and also facilitates transmission of HIV disease. In 1998–2000 gonorrhea incidence was relatively stable at 132 cases per 100,000 population, following an average annual decline of 11 percent between 1990 and 1997 (table 53).

In 2000 the reported rate for **chlamydial infection** was 257 cases per 100,000 persons. Rates of reported chlamydial infection have been increasing annually since the late 1980s when public programs for screening and treatment of women were first established to avert pelvic inflammatory disease and related complications (table 53).

Incidence rates for **all cancers combined** declined in the 1990s for males but not for females. Between 1990 and 1998 age-adjusted cancer incidence rates declined on average more than 2 percent per year for non-Hispanic white males and Hispanic males and almost 2 percent for black males. Although there was no significant change in cancer incidence for females overall, among Hispanic females rates decreased on average 1 percent per year, and among Asian or Pacific Islander females rates increased almost 1 percent per year (table 56).

The most frequently diagnosed **cancer sites in males** are prostate, followed by lung and bronchus and colon and rectum. Cancer incidence at these sites is higher for black males than for males of other racial and ethnic groups. In 1998 age-adjusted cancer incidence rates for black males exceeded those for white males by 64 percent for prostate, 43 percent for lung and bronchus, and 11 percent for colon and rectum (table 56).

Breast cancer is the most frequently diagnosed cancer among females. Breast cancer incidence is higher for non-Hispanic white females than for females in other racial and ethnic groups. In 1998 age-adjusted breast cancer incidence rates for non-Hispanic white females exceeded those for black females by 27 percent, for Asian or Pacific Islander females by 46 percent, and for Hispanic females by 78 percent (table 56).

Injuries accounted for 37 percent of all visits to emergency departments (ED) in 1999–2000. The proportion of ED visits that were injury-related declined with age from 41 percent for children and adults under 45 years of age to 33 percent for persons 45–64 years and 26 percent for those 65 years and over. In 1999–2000 falls was the most often cited reason for injury-related ED visits among persons 45 years of age and older (tables 83 and 84).

Between 1993 and 2001 the percent of high school students who reported attempting suicide (8–9 percent) and whose **suicide attempts** required medical attention (about 3 percent) remained fairly constant. Girls were more likely than boys to consider or attempt suicide and were also more likely to make an attempt that required medical attention. However, in 1999 adolescent boys (15–19 years of age) were five times as likely to die from suicide as were adolescent girls, in part reflecting their choice of more lethal methods, such as firearms (tables 47 and 60).

Mortality Trends

Life expectancy and infant mortality are measures often used to gauge the overall health of a population. Over the past 50 years overall mortality has declined substantially among Americans of all ages.

In 2000 **life expectancy** at birth for the total population reached a record high of 76.9 years, based on preliminary data. In 1999 life expectancy was 76.7 years (table 28).

During the 20th century **life expectancy** at birth increased from 48 to 74 years for males and from 51 to 79 years for females. Life expectancy at age 65 rose from 12 to 16 years for men and from 12 to 19 years for women (figure 18).

In 2000 the **infant mortality** rate declined to a record low of 6.9 infant deaths per 1,000 live births, based on preliminary data. In 1999 the infant mortality rate was 7.1 per 1,000 (table 23).

Between 1950 and 1999 the **infant mortality rate** declined by about 75 percent. Substantial declines occurred in mortality during the first month of life (neonatal) as well as after the first month of life (postneonatal) (figure 19 and table 23).

Since 1950 **mortality among children and young adults** (ages 1–24 years) has declined by more than one-half. Overall mortality at ages 1–24 years has declined, in part, due to decreases in death rates for unintentional injuries, cancer, heart disease, and infectious diseases. Homicide and suicide rates generally increased over this period, but have declined since the mid-1990s (figures 21 and 22).

Between 1950 and 1999 **mortality among adults 25–44 years** declined by more than 40 percent overall. Death rates

for unintentional injuries, cancer, heart disease, and tuberculosis decreased substantially during this period. Suicide rates rose through 1980 and have since declined slightly. HIV disease was the leading cause of death in this age group in the mid-1990s; with decreasing HIV disease death rates, it dropped to the fifth leading cause of death in 1999 (figures 23 and 24).

Since 1950 **mortality among adults 45–64 years** has decreased by nearly 50 percent overall. During this period death rates for heart disease, stroke, and unintentional injury decreased while cancer mortality rose slowly through the 1980s and then declined. Cancer is the leading cause of death for 45–64 year olds, accounting for more than one-third of deaths in this age group in 1999 (figures 25 and 26).

During the past 50 years **mortality among elderly persons 65 years of age and over** has dropped by about one-third. During this period death rates for heart disease and stroke have declined sharply while the death rate for cancer rose until 1995 and has since decreased slightly (figure 27).

Disparities in Mortality

Despite overall declines in mortality, racial and ethnic disparities as well as gender disparities in mortality persist. The gap in life expectancy between the sexes and between the black and white populations has been narrowing.

Infant mortality rates have declined for all racial and ethnic groups, but large disparities remain. In 1997–99 the infant mortality rate was highest for infants of non-Hispanic black mothers (13.9 deaths per 1,000 live births) and lowest for infants of Chinese mothers (3.3 per 1,000 live births) (figure 20 and table 20).

Infant mortality increases as mother's level of education decreases. In 1999 the mortality rate for infants of mothers with less than 12 years of education was 57 percent higher than for infants of mothers with 13 or more years of education. This disparity was more marked among non-Hispanic white infants, for whom mortality among infants of mothers with less than a high school education was more than twice that for infants of mothers with more than a high school education (table 21).

Life expectancy at birth increased more for **males** than for **females** between 1990 and 2000, reducing the difference in life expectancy between the sexes. The difference in life expectancy between males and females narrowed from 7 years in 1990 to 5.5 years in 1999 and 5.4 years in 2000 (preliminary data) (table 28).

During the 1990s **mortality from lung cancer** declined for **men** and increased for **women**. Although these trends reduced the sex differential for this cause of death, the age-adjusted death rate for lung cancer was still 89 percent higher for men than for women in 1999 and 84 percent higher in 2000 (preliminary data) (table 40).

During the 1990s mortality from **chronic lower respiratory diseases** remained relatively stable for **men** while it increased for **women**. These trends reduced the gap between the sexes for this cause of death. In 1990 the age-adjusted death rate for males was more than 100 percent higher than for females. In 1999 the difference between the rates had been reduced to 52 percent, and in 2000, to 45 percent (preliminary data) (table 42).

Between 1990 and 2000 **life expectancy at birth** increased more for the **black** than for the **white population**, thereby narrowing the gap in life expectancy between these two racial groups. In 1990 life expectancy at birth was 7 years longer for the white than for the black population. By 1999 the difference had narrowed to 5.9 years and by 2000, to 5.6 years (preliminary data) (table 28).

Overall mortality was one-third higher for **black Americans** than for white Americans in 1999, compared with 37 percent higher in 1990. In 1999 age-adjusted death rates for the black population exceeded those for the white population by 38 percent for **stroke**, 28 percent for **heart disease**, 27 percent for **cancer**, and more than 700 percent for **HIV disease** (table 30).

The **5-year survival rate** for black females diagnosed in 1989–97 with breast cancer was 15 percentage points lower than for white females. In 1999 **breast cancer mortality** was 35 percent higher for black females than for white females, compared with 15 percent higher in 1990 (tables 41 and 57).

Homicide rates among young black males 15–24 years of age and among **young Hispanic males** were nearly 50 percent lower in 1999 than in the early 1990s when homicide rates peaked for these groups. In spite of these downward trends, homicide was still the leading cause of death for young black males and the second leading cause for young Hispanic males in 1999, and homicide rates for young black and Hispanic males remained substantially higher than for young non-Hispanic white males (table 46).

Since 1995 death rates for **HIV disease** declined sharply **for black males and Hispanic males** 25–44 years of age. In spite of these declines, HIV disease was still the leading cause of death for black males 25–44 years of age and the third leading cause for Hispanic males 25–44 years of age in 1999, and HIV death rates remained much higher for black and Hispanic males than for non-Hispanic white males in this age group (table 43).

In 1999 the death rate for **motor vehicle-related injuries for young American Indian males** 15–24 years of age was almost twice the rate for young white males, and the **suicide** rate for young American Indian males was double the rate for young white males. Death rates for the American Indian population are known to be underestimated (tables 45 and 47).

Between 1990 and 1999 death rates for **stroke** declined for white males 45–54 and 55–64 years of age but not for **Asian American males** in these age groups. In 1999 death rates for stroke were 31–40 percent higher for middle-aged Asian American males than for middle-aged white males. Death rates for the Asian American population are also known to be underestimated (table 38).

Occupational Health

Improvements in workplace safety constitute a major public health achievement in the 20th century. Despite important accomplishments, preventable injuries and deaths continue to occur.

In 1999–2000 the **occupational injuries with lost workdays** rate, 2.8 per 100 full-time equivalents (FTEs) in the private sector, was at its lowest level in 2 decades. The industries reporting the highest injury rates in 2000 were transportation, communication, and public utilities (4.1 per 100 FTEs), and construction and manufacturing (both reporting 4.0) (table 51).

Between 1992 and 2000 the **occupational injury death rate** decreased 17 percent to 4.3 deaths per 100,000 employed workers. Mining, the industry with the highest death rate in 2000 (30 per 100,000), accounted for less than 3 percent of all occupational injury deaths. Construction, with a death rate of 13 per 100,000, accounted for 20 percent of all occupational injury deaths in 2000 (table 50).

A total of 2,739 **pneumoconiosis deaths**, for which pneumoconiosis was the underlying or nonunderlying cause of death, occurred in 1999, compared with 4,151 deaths in 1980. Pneumoconiosis deaths are largely associated with occupational exposures and can be prevented through effective control of worker exposure to occupational dusts (table 49).

Health Care Utilization and Resources

Preventive Health Care

Use of preventive health services helps reduce morbidity and mortality from disease. Use of several different types of preventive services has been increasing. However, disparities in use of preventive health care by race and ethnicity and by family income remain.

Between 1990 and 2000 the percent of mothers receiving **prenatal care** in the first trimester of pregnancy increased from 76 to 83 percent. Although increases occurred for all racial and ethnic groups, in 2000 the percent of mothers with early prenatal care still varied substantially, from 69 percent for American Indian mothers to 91–92 percent for Japanese and Cuban mothers (figures 11 and 12 and table 6).

In 2000, 76 percent of children 19–35 months of age received the combined **vaccination** series of 4 doses of DTP (diphtheria-tetanus-pertussis/acellular pertussis) vaccine, 3 doses of polio vaccine, 1 dose of measles-containing vaccine, and 3 doses of Hib (Haemophilus influenzae type b) vaccine. Children living below the poverty threshold were less likely to have received the combined vaccination series than were children living at or above poverty (71 percent compared with 78 percent) (table 73).

Annual **influenza vaccination** can prevent complications of influenza illness and one dose of **pneumococcal vaccine** can reduce the risk of invasive pneumococcal disease. Between 1989 and 2000 the percent of elderly adults reporting influenza vaccination within the past year doubled to 65 percent and the percent ever receiving a pneumococcal vaccine increased from 14 to 53 percent (figure 13).

Between 1987 and 2000 the percent of women 40 years of age and over who reported a **mammogram** within the past 2 years more than doubled from 29 to 70 percent. Women with less than a high school education are much less likely than those with some college education to report a recent mammogram (58 percent compared with 76 percent in 2000) (table 82).

Uninsurance and Access to Health Care

Access to health care is important for preventive care and for prompt treatment of illness and injuries. Indicators of access to health care services include having a usual source of health care, having a recent health care contact, and use of the emergency department. Health insurance coverage is a major determinant of access to health care.

The percent of the nonelderly population with no health insurance coverage (either public or private) fluctuated around 16–17 percent between 1994 and 2000. Among the nonelderly population, poor and near poor persons are much more likely than others to be **uninsured** (figures 5 and 6 and table 129).

The likelihood of being **uninsured** varies substantially among the States. In 2000 the percent of the nonelderly population with no health care coverage varied from less than 10 percent in New Hampshire, Rhode Island, Pennsylvania, and Wisconsin to more than 20 percent in Florida, Louisiana, Oklahoma, Texas, New Mexico, Montana, and Alaska (table 147).

Twelve percent of **children** under 18 years of age had **no health insurance coverage** in 2000. Children with low family income were more likely than higher income children to lack coverage (26 percent among those with family income 1–1.5 times the poverty level compared with 6 percent among those with income at least twice the poverty level) (table 129).

Seven percent of **children** under 18 years of age had **no usual source of health care** in 1999–2000. Uninsured children were substantially more likely to be without a usual source of care than insured children (29 percent compared with 4 percent) (table 76).

Thirteen percent of **children** under 18 years of age had **no health care visit** to a doctor or clinic within the past 12 months in 1999–2000. Uninsured children were nearly three times as likely to be without a recent visit as insured children (30 percent compared with 11 percent) (table 75).

One in 5 **children** under 18 years of age had an **emergency department (ED) visit** within the past 12 months in 2000. Children with Medicaid coverage were more likely than those with private coverage to have had an ED visit within the past 12 months (29 percent compared with 18 percent) (table 77).

Among **adults 18–64 years of age**, the uninsured were more than 4 times as likely as those with health insurance coverage to have **no usual source of health care** in 1999–2000 (47 percent compared with 11 percent). Men in this age group were twice as likely as women to be without a usual source of health care (24 percent compared with 12 percent) (percents are age adjusted) (table 78).

Emergency department (ED) use among nonelderly adults 18–64 years of age is greater among those covered by Medicaid than among the privately insured or uninsured. Forty-two percent of nonelderly adults with Medicaid reported at least one ED visit in 2000 compared with 18 percent of the privately insured and 20 percent of the uninsured (percents are age adjusted) (table 79).

Use of dental care is greater among persons with higher family incomes. In 2000 almost three-quarters of persons with higher family income (at least twice the poverty level) had a **dental visit** in the past year compared with about one-half of persons with family income less than twice the poverty level (percents are age adjusted) (table 80).

Outpatient Care

Major changes continue to occur in the delivery of health care in the United States, driven in large part by the need to rein in rising costs. Use of inpatient services has decreased while use of outpatient services, such as outpatient surgery, home health care, and hospice care, has increased.

In 2000, 63 percent of all **surgical operations** in community hospitals were performed on outpatients, up from 51 percent in 1990 and 16 percent in 1980 (table 96).

Between 1996 and 2000 use of **home health care** by persons 65 years of age and over declined from 547 to 276 per 10,000 population, after increasing steadily between 1992 and 1996. The recent decline was a result of the Balanced Budget Act of 1997, which imposed stricter limits on the use of home health services funded by Medicare and interim limits on Medicare payments to home health agencies from October 1997 until a prospective payment system was implemented for Medicare home health agencies in October 2000 (data are age adjusted) (table 88).

Use of **hospice care** by persons 65 years of age and over increased by 83 percent to 25 patients per 10,000 population during the period 1994–2000. Among the elderly use of hospice services was slightly higher for males than for females (27 compared with 23 patients per 10,000 in 2000). Cancer was the most common diagnosis among hospice patients (data are age adjusted) (table 89).

Inpatient Care and Resources

Use of hospital inpatient services has declined, as has the number of beds in community hospitals. Nursing home use has also declined.

Between 1985 and 2000 the **hospital discharge rate** declined 24 percent, from 151 to 115 discharges per 1,000 population, while **average length of stay** declined 1.7 days, from 6.6 to 4.9 days (data are age adjusted) (table 91).

Use of hospital inpatient care is greater among the poor than among those with higher family income (at least twice the poverty level). In 2000 among nonelderly persons, the hospital discharge rate for the poor was more than twice the rate for those with higher family income (172 and 82 per 1,000 population). Average length of stay was 1.3 days longer for poor than for higher income persons (4.7 and 3.4 days) (data are age adjusted) (table 90).

Between 1990 and 2000 the number of **community hospital beds** declined from about 927,000 to about 824,000. Community hospital occupancy, estimated at 64 percent in 2000, has been relatively stable since the mid-1990s, after declining from 67 percent in 1990 and 76 percent in 1980 (table 107).

In 1999 there were almost 1.5 million elderly **nursing home residents** 65 years of age and over. More than one-half of the elderly residents were 85 years of age and over and almost three-fourths were female. Between the mid-1970s and 1999, nursing home utilization rates increased for the black population and decreased for the white population (table 97).

In 2000 there were 1.8 million **nursing home beds** in facilities certified for use by Medicare and Medicaid beneficiaries. Between 1995 and 2000 nursing home bed occupancy in those facilities was relatively stable, estimated at 82 percent in 2000 (table 111).

Health Care Expenditures

National Health Expenditures

After 25 years of double-digit annual growth in national health expenditures, the rate of growth slowed during the 1990s. At the end of the decade the rate of growth started edging up again. In 2000 health expenditures increased by almost 7 percent. The United States continues to spend more on health than any other industrialized country.

In 2000 **national health care expenditures** in the United States totaled $1.3 trillion, increasing 6.9 percent from the previous year compared with a 5.7 percent increase in 1999. In the mid-1990s annual growth had slowed somewhat, following an average annual growth rate of 11 percent during the 1980s (table 113).

The rate of increase in the medical care component of the **Consumer Price Index** (CPI) rose to 4.6 percent in 2001 from 3.4 percent per year during 1995–2000. During the last two years, the CPI for hospital services showed the greatest price increases (6.6 percent in 2001 and 6.0 percent in 2000) compared with other components of medical care (table 114).

In 2000 **health expenditures as a percent of the gross domestic product (GDP)** increased to 13.2 percent, up from 13.1 percent the previous three years (table 113).

The United States spends a larger **share of the GDP on health** than any other major industrialized country. In 1998 the United States devoted 13.1 percent of the GDP to health compared with 10.3–10.4 percent each in Switzerland and Germany and 9.3–9.4 percent in Canada, France, and Norway, countries with the next highest shares (table 112).

Expenditures by Type of Care and Source of Funds

During the last few years expenditures for prescription drugs have grown at a faster rate than any other type of health expenditure. The sources of funds for medical care differ substantially according to the type of medical care being provided.

Expenditures for hospital care accounted for 32 percent of all national health expenditures in 2000. Physician services accounted for 22 percent of the total in 2000, prescription drugs for 9 percent, and nursing home care for 7 percent (table 116).

From 1995–2000 the average annual rate of increase for **prescription drug expenditures** (15 percent) was higher than for any other type of health expenditure. During the first half of the decade expenditures for home health care increased more rapidly (19 percent per year) than other types of expenditures (table 116).

In 2000 **prescription drug expenditures** increased 17 percent and prescription drugs posted a 4.4 percent rate of price increase in the Consumer Price Index. In 2001 the price of prescription drugs increased 5.4 percent (tables 114 and 116).

In 2000, 46 percent of **prescription drug expenditures** were paid by private health insurance (up from one-quarter at the beginning of the decade), 32 percent by out-of-pocket payments (down from 59 percent in 1990), and 17 percent by Medicaid. Although Medicare is the Federal program that funds health care for the elderly, and the elderly are the highest per capita consumers of prescription drugs, only 2 percent of prescription drug expenses were paid by Medicare in 2000 (table 117).

In 1998, 88 percent of elderly persons in the civilian noninstitutionalized population had a **prescribed medicine expense**. The average annual out-of-pocket prescribed medicine expense per elderly person with expense was $531 (table 118).

In 1998, 95 percent of **elderly persons** in the civilian noninstitutionalized population reported **medical expenses** averaging $6,300 per person with expense. Fifteen percent of expenses were paid out-of-pocket, 14 percent by private insurance, and 68 percent by public programs (mainly Medicare and Medicaid) (table 118).

In 2000, 33 percent of **personal health care expenditures** were paid by the Federal Government and 11 percent by State and local government; private health insurance paid 35 percent and consumers paid 17 percent out-of-pocket (table 117).

In 2000 the major **sources of funds** for hospital care were Medicare (31 percent) and private health insurance (33 percent). Physician services were also primarily funded by private health insurance (48 percent) and Medicare (21 percent). In contrast, nursing home care was financed primarily by Medicaid (48 percent) and out-of-pocket payments (27 percent) (table 117).

In 1999 the average monthly charge per **nursing home** resident was $3,891. Residents for whom the source of payment was private insurance, family support, or their own income paid close to the average charge, compared with an average monthly charge of $5,800 when Medicare was the payor and $3,500 when Medicaid was the source of payment (table 123).

Publicly Funded Health Programs

The two major publicly funded health programs are Medicare and Medicaid. Medicare is funded by the Federal Government and reimburses elderly and disabled persons for their health care. Medicaid is funded jointly by the Federal and State Governments to provide health care for the poor. Medicaid benefits and eligibility vary by State.

In 2000 the **Medicare** program had 40 million enrollees and expenditures of $222 billion (table 134).

In 2000 **hospital insurance** (HI) accounted for 59 percent of Medicare expenditures. Expenditures for home health agency care decreased to 3 percent of HI expenditures in 2000, down from 14 percent in 1995 (table 134).

In 2000 **supplementary medical insurance** (SMI) accounted for 41 percent of Medicare expenditures. One-fifth of SMI expenditures in 2000 were payments to managed care organizations and the remainder were payments for fee-for-service utilization (table 134).

Of the 29 million **Medicare enrollees in the fee-for-service program** in 1999, 13 percent were 85 years of age and over and 13 percent were under 65 years of age. Among elderly fee-for-service Medicare enrollees, payments increased with age from an average of $4,000 per year per enrollee for those aged 65–74 years to $7,400 for those 85 years and over. Average payments per fee-for-service enrollee declined in 1998 and 1999 (table 135).

In 1998, 82 percent of **Medicare beneficiaries** were non-Hispanic white, 9 percent were non-Hispanic black, and 7 percent were Hispanic. Some 21–24 percent of Hispanic and non-Hispanic black beneficiaries were persons under 65 entitled to **Medicare through disability** compared with 11 percent of non-Hispanic white beneficiaries (table 136).

In 1999 **Medicare payments per enrollee** varied by State, ranging from less than $4,000 in Hawaii, Montana, Utah, North Dakota, South Dakota, Idaho, and Iowa to more than $6,200 in New York, New Jersey, Maryland, the District of Columbia, and Louisiana (table 144).

In 1998 **Medicaid** vendor payments totaled $142 billion for 41 million recipients (table 137).

In 1998 children under the age of 21 years accounted for 47 percent of **Medicaid recipients** but only 16 percent of expenditures. Aged, blind, and disabled persons accounted for

26 percent of recipients and 71 percent of expenditures (table 137).

In 1998, 22 percent of **Medicaid payments** went to nursing facilities, 15 percent to inpatient general hospitals, 14 percent to prepaid health care, and 10 percent to prescribed drugs (table 138).

In 1999 spending on health care by the **Department of Veterans Affairs** was $17.9 billion. Fifty-four percent of inpatients and 40 percent of outpatients were low-income veterans without a service-connected disability (table 139).

Private Health Insurance

More than 70 percent of the population under 65 years of age has private health insurance, most of which is obtained through the workplace. The share of employees' total compensation devoted to health insurance had been declining in recent years, but increased in 2000 and again in 2001 due to increases in health insurance premiums.

Between 1995 and 2000 the age-adjusted proportion of the population under 65 years of age with **private health insurance** fluctuated between 71 and 73 percent after declining from 77 percent in 1984. More than 90 percent of private coverage was obtained through the workplace (a current or former employer or union) in 2000 (figure 5 and table 127).

In 2001 **private employers' health insurance costs** per employee-hour worked increased to $1.28 up from $1.09 in 2000. Among private employers the share of total compensation devoted to health insurance was 6.2 percent in 2001, up from 5.5 percent in 2000 (table 120).

Health Maintenance Organizations (HMOs)

An HMO is a prepaid health plan delivering comprehensive care to members through designated providers. Almost 30 percent of all persons in the United States are enrolled in HMOs.

Enrollment in HMOs totaled 80 million persons or 28 percent of the U.S. population in 2001. HMO enrollment varied from 21–22 percent in the Midwest and South to 35 percent in the Northeast and 41 percent in the West. HMO enrollment increased steadily through 1999 but declined by nearly 2 million between 1999 and 2001. The number of HMO plans decreased by 16 percent, to 541 plans during these 2 years (table 132).

In 2001 the percent of the population enrolled in **HMOs** varied among the **States**, from 0 in Alaska to 44 percent in Massachusetts and 53 percent in California. Other States with 38 percent or more of the population enrolled in HMOs in 2001 included New Hampshire, Connecticut, and Maryland (table 146).

In 2000, 38 percent of children had health insurance coverage through a **private, Medicaid, or Medicare HMO** compared with about one-third of adults 18–64 years of age and one-quarter of the elderly. Nine percent of children (12 percent of those under 6 years of age) were in a Medicaid HMO compared with less than 3 percent of nonelderly adults. Fifteen percent of the elderly were in a Medicare HMO and 13 percent in a private HMO (table 131).

The proportion of the elderly population enrolled in **Medicare HMOs** in 2000 ranged from 8 percent in the Midwest to 31 percent in the West (table 131).

State Health Expenditures

Total personal health care per capita expenditures and its components vary substantially among the States.

Personal health care per capita expenditures averaged $3,800 in 1998, but varied among the States from $2,700 in Utah to $4,800 in Massachusetts. Higher expenditures were clustered in the New England and Mideastern States with lower per capita expenditures in the Rocky Mountain, Southwestern, and Far West States (table 140).

The components of personal health care expenditures also vary significantly by State. **Hospital care** per capita expenditures in 1998 ranged from $1,030 in Utah to $1,800 in New York. **Physician** and other professional services per capita expenditures varied from $760 in Utah to $1,350 in Minnesota. Per capita expenditures for **nursing home care** ranged from $90 in Alaska to $860 in Connecticut (table 140).

Twenty-one percent of all personal health care expenditures were paid by **Medicare** in 1998, up from 17 percent in 1991. The Medicare share of State health expenditures in 1998 varied from 8 percent in Alaska to 25–27 percent in Mississippi, Louisiana, and Pennsylvania and 28 percent in Florida (table 141).

The share of personal health care expenditures paid by **Medicaid** increased from 13 percent in 1991 to 16 percent in 1995 through 1998. The Medicaid share of personal health care expenditures was less than 10 percent in Nevada and Virginia, and reached 21 percent in the District of Columbia, Rhode Island, and Maine, and 31 percent in New York (table 142).

Chartbook on Trends in the Health of Americans

Chartbook on Trends in the Health of Americans

As the Nation considers health policies and programs for the 21st century, it is important to examine recent trends in health and health care. Fashioning effective policies and programs depends on knowledge of past achievements and understanding of current health problems. During the 20th century, the health of Americans improved significantly. Achievements of the past century include sizeable increases in life expectancy, reflecting sharp decreases in infant mortality and important declines in death rates at other ages. Effective public health efforts, improved health care, and economic prosperity have all contributed to declines in mortality (1). Policies and programs that have controlled infectious disease, improved safety in workplaces and homes, educated Americans about healthier lifestyles, and increased access to health care are only a few of the ways public health efforts have enhanced health. Ensuring healthier and safer lives in the 21st century will require continuing efforts to monitor health outcomes and the myriad of factors affecting health and health care.

The *Chartbook on Trends in the Health of Americans* assesses the current state of the Nation's health by describing trends in selected determinants and measures of health status. It also examines differences in health outcomes and risk factors for major groups within the national population. Selection of the measures used in the chartbook was difficult because no single, limited set of measures can fully summarize the health of a large and diverse population. Any set of health measures involves some arbitrary choices and a good case could be made for including a number of other measures of health. In selecting measures for the chartbook, several factors were considered: whether the measure was commonly used by health researchers and policy makers, whether the measure was understood by a wide range of users, and whether information was available over time. As a group, the measures featured in the chartbook were selected to cover major topics of public health concern. In addition to sociodemographic information that provides the context within which to interpret health measures, the topics covered include: health insurance coverage, health-related risk factors, use of preventive care, limitation of activity caused by chronic health conditions, and mortality. Several figures in the chartbook are related to the topics covered by the Leading Health Indicators in *Healthy People 2010* (2,3). Connections to the Leading Health Indicators are specified in the notes to the appropriate figures. Further information on the Leading Health Indicators is presented in *Health, United States, 2002*, table 52 and in Appendix II, Leading Health Indicators.

Organization of the Chartbook

Figures in the chartbook have been grouped into six sections covering selected health determinants and outcomes. The first section (figures 1–4) presents major demographic, economic, and social factors influencing health: growth and aging of the national population, changing patterns of racial and ethnic diversity, and low income. The second section (figures 5–6) describes trends over time in health insurance coverage and characteristics of the uninsured. The third section (figures 7–10) focuses on specific risk factors associated with increased risk of disease and death: cigarette smoking, overweight and obesity, and lack of physical activity. The fourth section (figures 11–14) presents trends in use of two types of preventive health care: prenatal care beginning during the first trimester of pregnancy and vaccination for influenza and pneumococcal disease among the elderly. The fifth section (figures 15–17) shows the percent of children and adults who have limitation of activity caused by chronic health conditions, and the prevalence of specific chronic health conditions causing activity limitation. Finally, the sixth section (figures 18–28) describes trends over time in mortality by showing changes in life expectancy at birth and at 65 years of age since 1901, changes in infant mortality since 1950, and age- and cause-specific death rates for children and adults since 1950.

Many measures are shown separately for persons of different ages because of the strong effect age has on most health outcomes. Selected figures in the chartbook also highlight current differences in health and health determinants by variables such as sex, race, and Hispanic origin. Some estimates are age adjusted using the age distribution of the 2000 standard population. Time trends for some measures are shown on a logarithmic scale to emphasize the rate of change and to enable measures with large differences in magnitude to be shown on the same chart (figures 1, 19, 21, 23, 25, and 27). Other trends are shown on a linear scale to emphasize absolute differences over time (figures 3, 5, 7, 8, 11, 13, and 18). Time trends for some measures are not presented because of the relatively short amount of time that

comparable national estimates are available (physical activity, figures 9 and 10; and limitation of activity caused by chronic health conditions, figures 15–17).

Following the figures in the chartbook is a section containing data tables for each figure that show the data points graphed. For some measures, standard errors for the data points are provided and data not shown in the figures may be included. Additional information about the health measures is included in the notes to each data table as well as in Appendix II. Finally, the 147 trend tables in the body of *Health, United States, 2002* supplement the broad picture of the Nation's health presented in the chartbook by providing detailed data for many groups within the United States. Additional measures of health status and determinants as well as information on health care use, health care resources, and health care expenditures are presented in these trend tables.

Chartbook Data Sources

Health-related and demographic data presented in this chartbook are from several national data systems. These are listed below and described in Appendix I.

Population counts and projections are from the U.S. Census Bureau. Poverty rates are based on data from the Current Population Survey. The National Health Interview Survey supplied data on health insurance coverage, adult cigarette smoking, adult physical inactivity, adult vaccination, and activity limitation due to chronic health conditions. The Youth Risk Behavior Survey provided data on smoking and physical activity among high school students. The National Health and Nutrition Examination Survey was the source of data on overweight and obesity. Data from the National Vital Statistics System were used to estimate life expectancy, death rates, and use of early prenatal care. The National Linked File of Live Births and Infant Deaths provided data for estimates of infant mortality according to the race and Hispanic origin of the mother.

Conclusions

During the 20th century, the health of Americans significantly improved. Trends in the age-specific death rates for the leading causes of death in 1999 indicate that the rates for many causes have declined since 1950. Among children and young adults (1–24 years of age), mortality has declined, in part, because of decreases in death rates for unintentional injuries, cancer, and heart disease. Declines in deaths due to infectious diseases, which did not rank among the leading causes of death in 1999, also contributed to the decrease in child mortality. Among younger (25–44 years) and older (45–64 years) working-age adults, decreases in death rates for unintentional injuries, heart disease, and stroke (for those 45–64 years) have lowered the overall risk of death. Finally, among the elderly, marked decreases in death rates for heart disease and stroke have increased the average number of years Americans can expect to live after age 65.

Recent declines in death rates for many leading causes of death reflect the influence of healthier life styles, greater use of preventive care, public health efforts, and advances in medicine. Decreased cigarette smoking among adults is a prime example of a risk factor for disease and death that has contributed to recent declines in mortality. Improvements in medical care and increased use of preventive health care have contributed to increases in life expectancy at all ages. The increasing percent of mothers who report beginning prenatal care during the first trimester of pregnancy and the increasing percent of elderly persons who have been vaccinated against influenza and pneumococcal disease illustrate the role for preventive health care throughout the life span. Public health and private efforts to improve motor vehicle transportation safety, as well as safety in homes and workplaces, have contributed to lower death rates due to unintentional injuries for children and adults. Finally, the decline in the death rate for HIV disease in the 1990s demonstrates how new medical treatments can dramatically decrease the number of deaths caused by a particular disease.

For some important determinants of health, recent trends have not been favorable. Increases in overweight and obesity, and high levels of physical inactivity among adults are significant risk factors for chronic disease that have not shown improvement. The rising prevalence of overweight in children and adolescents, and the high percent of adolescents not engaging in recommended amounts of physical activity raise additional concerns for future health outcomes.

Another measure of the health of Americans is the percent of children and adults limited in their everyday activities because of chronic health conditions. Among community-dwelling children and adults, the percent reporting activity limitation caused by a chronic health condition increases markedly with age. Less than 10 percent of children have an activity

limitation. In contrast, nearly one-half of adults 75 years of age and over report an activity limitation. The chronic health conditions that cause limitation of activity among younger and older adults differ. Among adults 45 years of age and over, arthritis and other musculoskeletal conditions, and heart disease (including other circulatory conditions) are most often mentioned as causes of activity limitation. Among younger adults (18–44 years of age) the two most frequently mentioned causes of activity limitation include arthritis and other musculoskeletal conditions, and mental illness.

Efforts to improve health in the 21st century will be shaped by important changes in the U.S. population. The fraction of the population 65 years of age and over is increasing. With this increase, there will be more elderly Americans living longer with chronic health conditions. As Americans meet this challenge, it will be in the context of a Nation that is growing more racially and ethnically diverse. Socioeconomic and cultural differences among racial and ethnic groups in the United States will likely continue to influence patterns of disease, disability, and health care use in the future. Finally, persons living in poverty and near-poverty remain a segment of the national population at higher risk for worse health outcomes and in need of greater access to health care.

Despite impressive gains in health for the Nation as a whole, large differences in health and health care use among racial and ethnic groups remain (4). This chartbook illustrates important racial and ethnic differences in use of early prenatal care and infant mortality rates, for example, as well as differences in vaccination rates among the elderly and health insurance coverage among the nonelderly. Many of the 147 trend tables that follow the chartbook section provide information on racial, ethnic, and socioeconomic disparities in other measures of health and health care. Future progress in improving the health of the Nation will require sustained efforts to eliminate these disparities, such as the Health and Human Services Initiative to Eliminate Racial and Ethnic Disparities in Health. Continued collection and dissemination of reliable and accurate information about health and health care will be critical for monitoring these disparities and charting future trends in the health of Americans.

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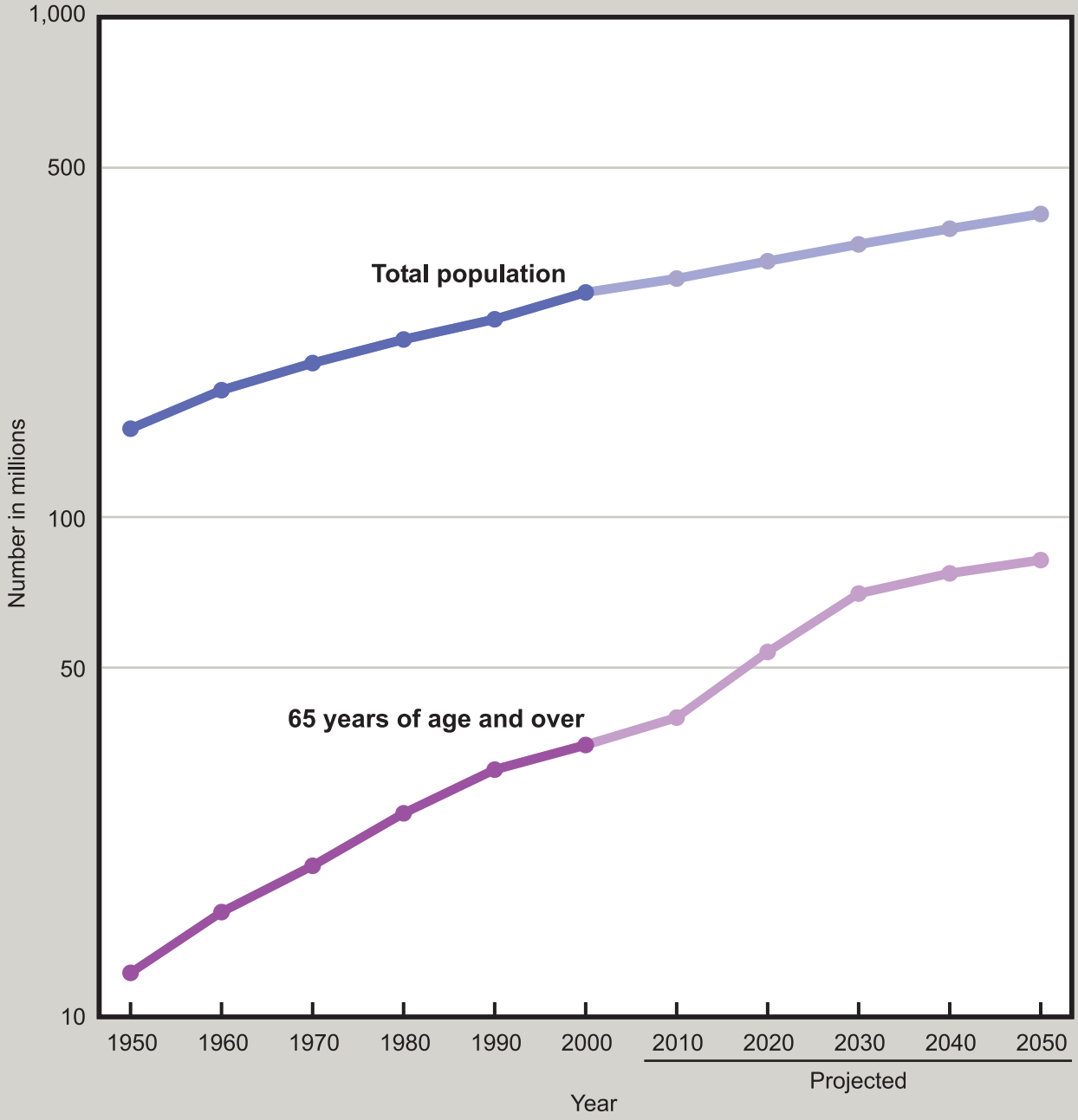
Figure 1. Total and elderly population: United States, 1950-2050



NOTES: Data are plotted on the log scale. See Data Table for data points graphed and additional notes.

SOURCE: U.S. Census Bureau, 1950-2000 decennial censuses and 2010-50 middle series population projections.

Age

From 1950 to 2000 the total resident population of the United States increased from 150 million to 281 million representing an average annual growth rate of 1 percent (figure 1). During the same time period, the elderly population (65 years of age and over) grew twice as rapidly. Projections indicate that the total population will increase more slowly over the next 50 years and the elderly population will increase more rapidly.

During the past 50 years, the U.S. population has grown older (figure 2). From 1950 to 2000 the percent under 18 years of age fell from 31 percent to 26 percent while the percent elderly rose from 8 percent to 12 percent. From 2000 to 2050 a small decline in the percent of the population under 18 years of age is anticipated while a sizeable increase in the percent elderly is expected. As the "baby boom" generation turns 65, beginning in 2011, the size of the elderly population will grow substantially. By 2050 it is projected that one in five Americans will be elderly.

The aging of the population has important consequences for the health care system (1). As the elderly fraction of the population increases, more services will be required for the treatment and management of chronic and acute health conditions. Providing health care services needed by Americans of all ages will be a major challenge in the 21st century.

Reference

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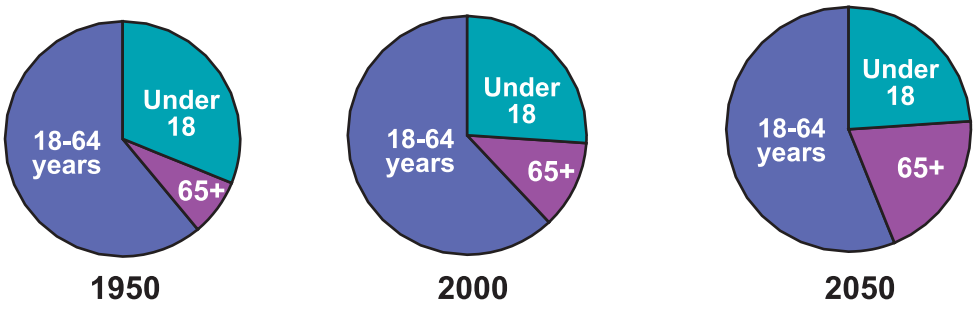
Figure 2. Percent of population in 3 age groups: United States, 1950, 2000, and 2050



NOTE: See Data Table for data points graphed and additional notes.

SOURCE: U.S. Census Bureau, 1950 and 2000 decennial censuses and 2050 middle series population projections.

Race and Ethnicity

Changes in the racial and ethnic composition of the population have important consequences for the Nation's health since many measures of disease and disability differ significantly by race and ethnicity (*Health, United States, 2002*, trend tables). One of the overarching goals of U.S. public health policy is elimination of racial and ethnic disparities in health.

Diversity has long been a characteristic of the U.S. population, but the racial and ethnic composition of the Nation has changed over time. In recent decades the percent of the population of Hispanic origin and Asian or Pacific Islander race has risen (figure 3). In 2000 over a quarter of adults and more than a third of children identified themselves as Hispanic, as black, as Asian or Pacific Islander, or as American Indian or Alaska Native.

In the 1980 and 1990 decennial censuses, Americans could choose only one racial category to describe their race (1). In 2000 the question on race was modified to allow the choice of more than one racial category. Although overall a small percent of persons of non-Hispanic origin selected two or more races in 2000, a higher percent of children than adults were described as being of more than one race. The number of American adults identifying themselves or their children as multiracial is expected to increase in the future (2).

In 2000 the percent of persons reporting two or more races also varied considerably among racial groups. For example, the percent of all persons reporting a specified race who mentioned that race in combination with one or more other racial groups was 3 percent for white persons and 40 percent for American Indians and Alaska Natives (3).

References

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2. Waters MC. Immigration, intermarriage, and the challenges of measuring racial/ethnic identities. Am J Public Health 90(11):1735–7. 2000.
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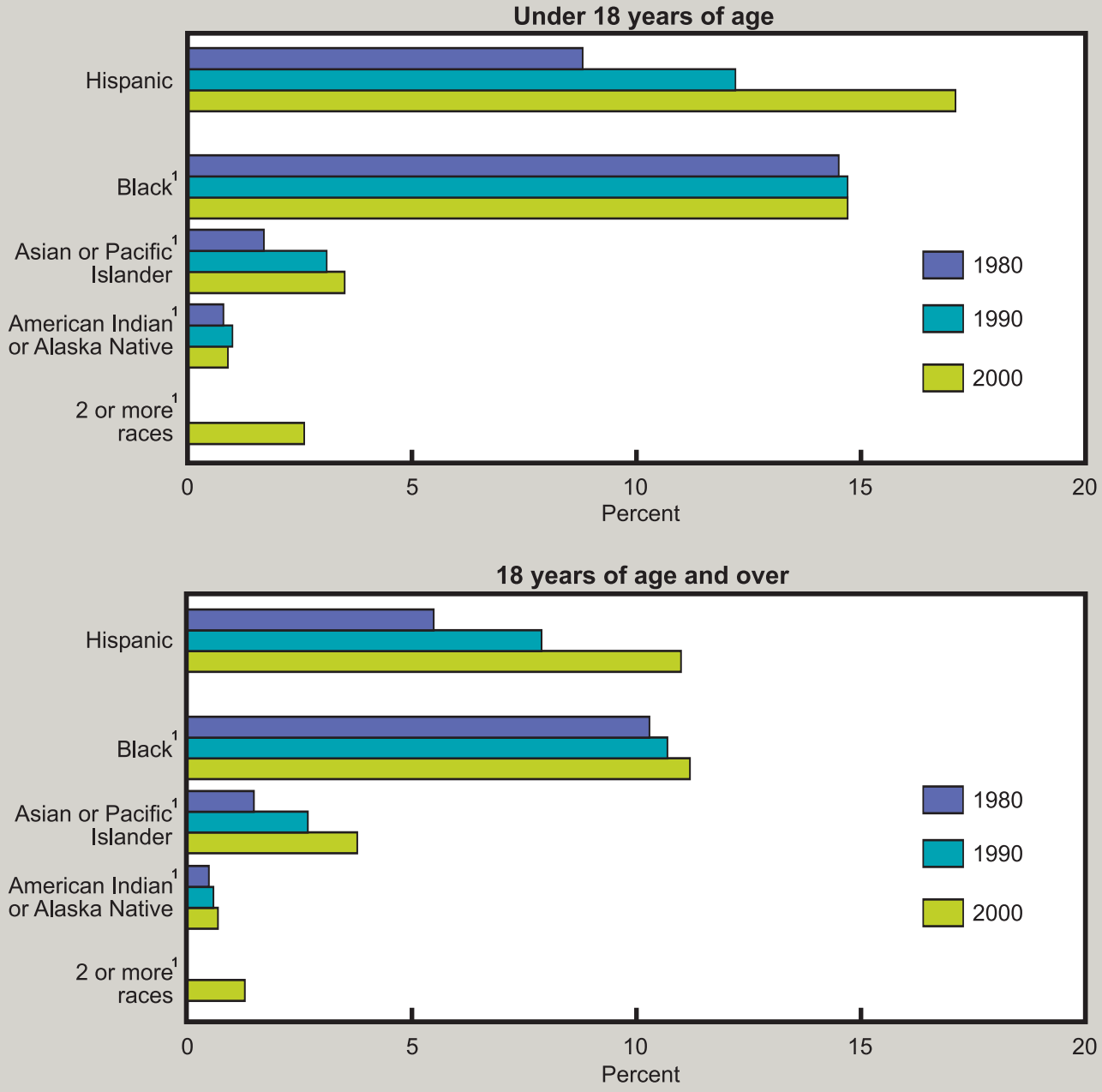
Figure 3. Percent of population in selected race and Hispanic origin groups by age: United States, 1980-2000



[1]Not Hispanic

NOTES: Persons of Hispanic origin may be of any race. Race data for 2000 are not directly comparable with data from 1980 and 1990. Individuals could report only one race in 1980 and 1990, and more than one race in 2000. Persons who selected more than one race in 2000 are shown as having two or more races and are not included in any other racial category; persons in single race categories in 2000 selected only one race. In 2000 the category "Asian or Pacific Islander" includes Asian and Native Hawaiian or Other Pacific Islander. See Data Table for data points graphed and additional notes.

SOURCES: U.S. Census Bureau, 1980-2000 decennial censuses.

Low Income

Children and adults in families with incomes below or near the Federal poverty level have worse outcomes on many measures of health than those with higher incomes (see Appendix II, Poverty level for a definition of the Federal poverty level). Although, in some cases, illness can lead to poverty, more often poverty causes poor health by its connection with inadequate nutrition, substandard housing, exposure to environmental hazards, unhealthy lifestyles, and decreased access to and use of health care services (1).

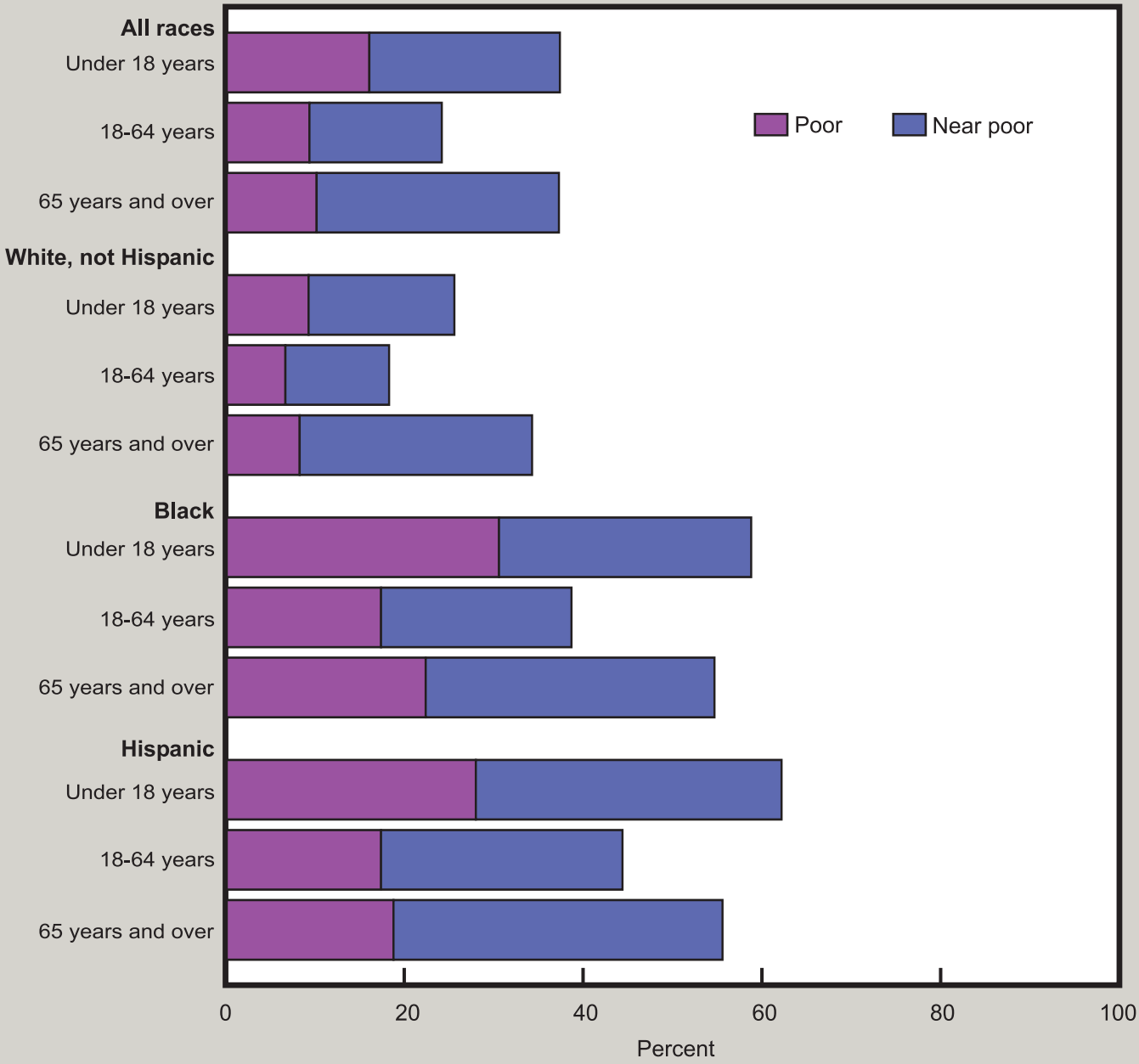
In 2000 the overall percent of Americans living in poverty dropped to 11.3 percent, the lowest level since 1973. Recent declines in poverty have included persons of all ages and most racial and ethnic groups (2). However, in 2000 the percent of persons living in poverty continued to differ significantly by age, race, and ethnicity (figure 4).

For the population as a whole, children were more likely than either working-age adults or elderly persons to be poor. But both children and elderly persons were more likely than working-age adults to be poor or near poor. At all ages, a higher percent of black and Hispanic persons than non-Hispanic white persons were poor or near poor. In 2000 more than a quarter of black and Hispanic children were poor and more than one-half were either poor or near poor. Also more than one-half of elderly black and Hispanic persons were either poor or near poor.

References

1. Pamuk E, Makuc D, Heck K, Reuben C, Lochner K. Socioeconomic Status and Health Chartbook. Health, United States, 1998. Hyattsville, Maryland: National Center for Health Statistics. 1998.
2. Dalaker J. Poverty in the United States: 2000. Current population reports, series P-60 no 214. Washington, DC: U.S. Government Printing Office. 2001.

Figure 4. Low income population by age, race, and Hispanic origin: United States, 2000



NOTES: Poor is defined as family income less than 100 percent of the poverty level and near poor as 100-199 percent of the poverty level. See Data Table for data points graphed and additional notes.

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

Health Insurance

Health insurance coverage is an important determinant of access to health care (1). Uninsured children and nonelderly adults are substantially less likely to have a usual source of health care or a recent health care visit than their insured counterparts (*Health, United States, 2002*, tables 72, 75, 76, and 78). The major source of coverage for persons under 65 years of age is private employer-sponsored group health insurance. Private health insurance may also be purchased on an individual basis, but it costs more and generally provides less coverage than group insurance. Public programs such as Medicaid provide coverage for many low-income children and adults.

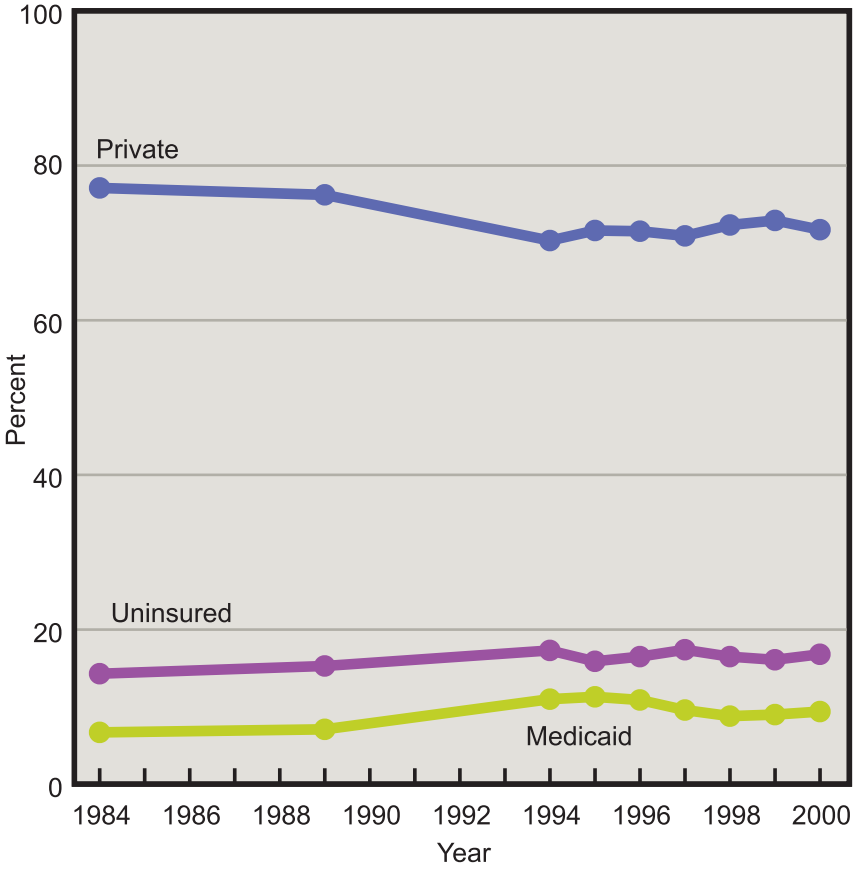
Between 1994 and 2000 the age-adjusted percent of the nonelderly population with no health insurance coverage fluctuated between 16 and 17 percent, after rising from 14 percent in 1984 (figure 5).

In 2000 over 40 million Americans under 65 years of age reported having no health insurance coverage. The percent of nonelderly adults without health insurance coverage decreases with age. In 2000 adults 18–24 years of age were most likely to lack coverage and those 55–64 years of age were least likely (figure 6). Persons with incomes below or near the poverty level were almost four times as likely to have no health insurance coverage as those with incomes twice the poverty level or higher. Hispanic persons and non-Hispanic black persons were more likely to lack health insurance than non-Hispanic white persons. Persons of Mexican origin were more likely to be uninsured than non-Hispanic black persons or other Hispanics.

Reference

1. Institute of Medicine. Committee on the Consequences of Uninsurance. Coverage matters: Insurance and health care. Washington, DC: National Academy Press. 2001.

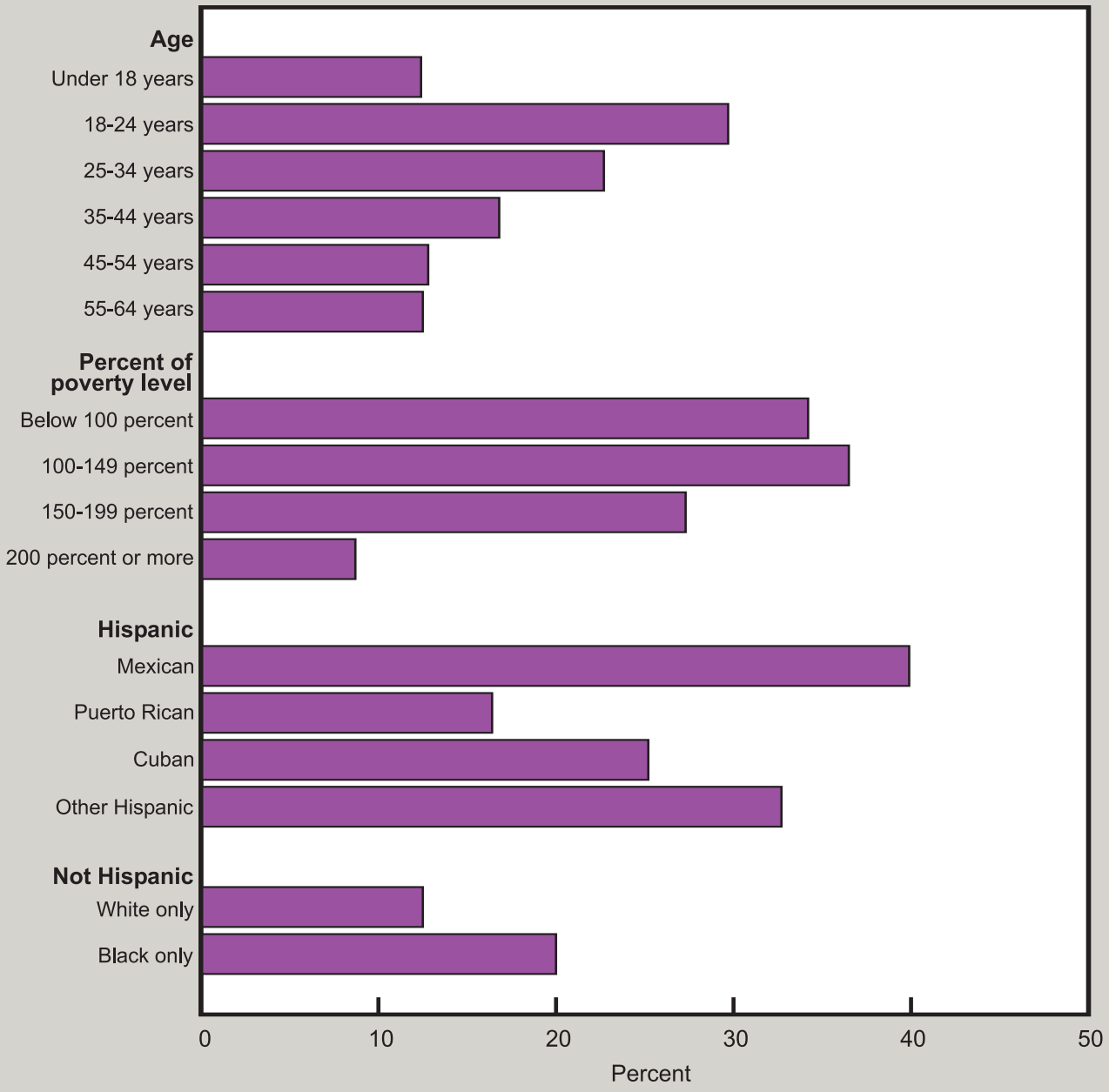
Figure 5. Health insurance coverage among persons under 65 years of age: United States, 1984-2000



NOTES: Percents are age adjusted. See Data Table for data points graphed, standard errors, and additional notes. Figure is related to the *Healthy People 2010* Leading Health Indicator on access to health care.

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

Figure 6. No health insurance coverage among persons under 65 years of age by selected characteristics: United States, 2000



NOTES: Percents by poverty level, Hispanic origin, and race are age adjusted. See Data Table for data points graphed, standard errors, and additional notes. Figure is related to the *Healthy People 2010* Leading Health Indicator on access to health care.

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

Smoking

As the leading cause of preventable death and disease in the United States, smoking is associated with significantly increased risk of heart disease, stroke, lung cancer, and chronic lung diseases (1). During pregnancy smoking contributes to elevated risk of miscarriage, premature delivery, and having a low birthweight infant. Preventing smoking among teenagers is critical since smoking usually begins in adolescence (2). Decreasing cigarette smoking among adolescents and adults is a major public health objective for the Nation.

Among adult men and women, cigarette smoking declined substantially following the first Surgeon General's Report on smoking in 1964 (figure 7). Since 1990, though, the decline in the percent of adults who smoke has slowed. In 2000, 25 percent of men and 21 percent of women were smokers. Cigarette smoking by adults continues to be strongly associated with educational attainment. Among adults, persons with less than a high school education were almost three times as likely to smoke as those with a bachelor's degree or more education (*Health, United States, 2002,* table 62).

Among high school students, the percent reporting recent cigarette smoking decreased between 1997 and 2001 after increasing in the early 1990s. During the last decade, a similar percent of male and female students reported smoking. In 2001 white and Hispanic students were more likely than black students to report current smoking (3).

Among mothers with a live birth, the percent reporting smoking during pregnancy declined between 1989 and 2000 (4). Twelve percent of mothers with a live birth in 2000 reported smoking during pregnancy. Maternal smoking declined for all racial and ethnic groups in the 1990s, but differences among these groups persist (*Health, United States, 2002*, table 11). In 2000 the percent of mothers reporting smoking during pregnancy was highest for American Indian or Alaska Native mothers (20 percent) and lowest for Chinese mothers (0.6 percent).

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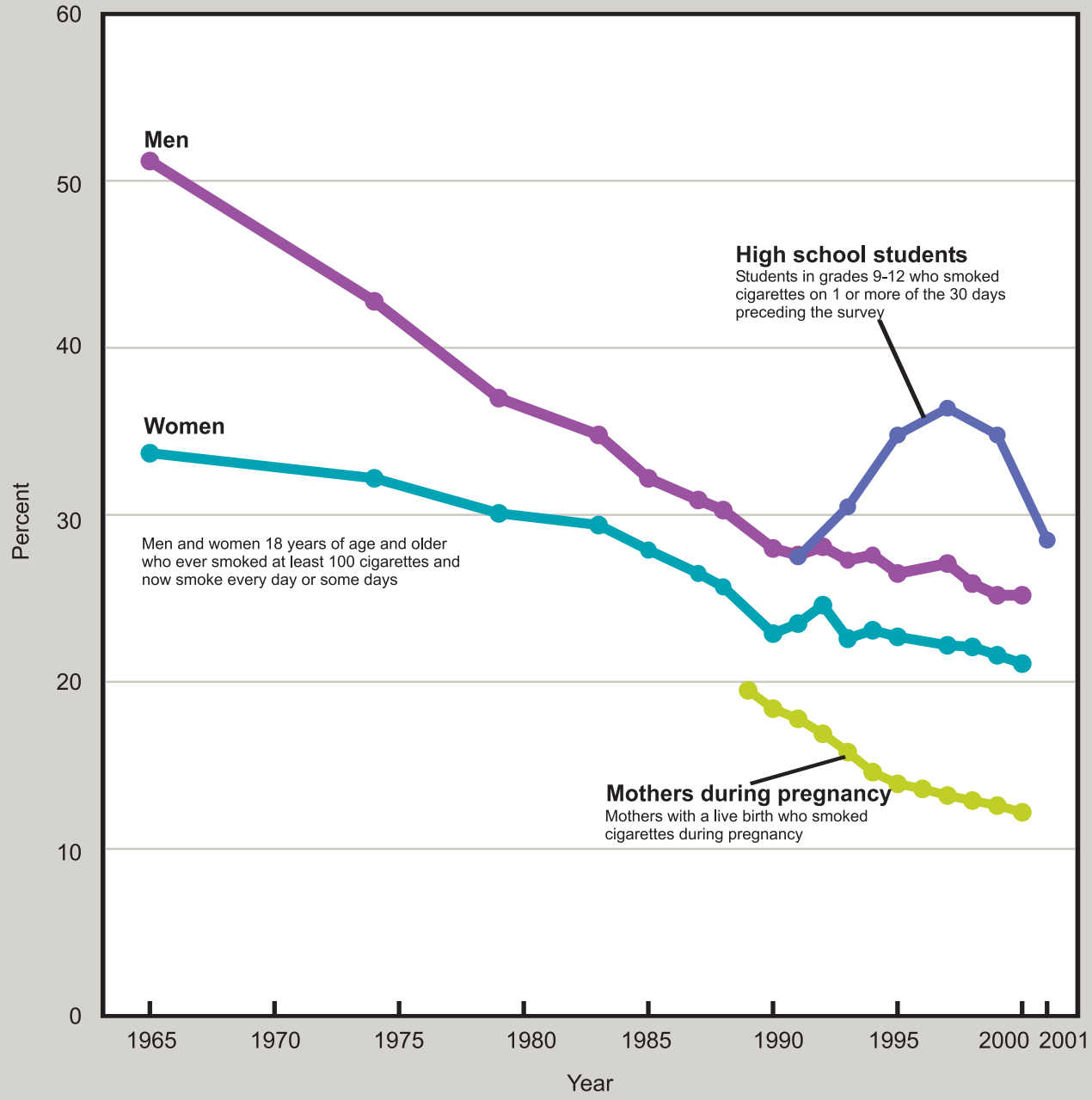
1. Centers for Disease Control and Prevention. Tobacco use—United States, 1900–1999. MMWR 48(43):986–93. 1999.
2. U.S. Department of Health and Human Services. Preventing tobacco use among young people: A report of the Surgeon General. Atlanta, Georgia: Centers for Disease Control and Prevention. 1994.
3. Centers for Disease Control and Prevention. Trends in cigarette smoking among high school students—United States, 1991–2001. MMWR 51(19):409–12. 2002.
4. Mathews TJ. Smoking during pregnancy in the 1990s. National vital statistics reports; vol 49 no 7. Hyattsville, Maryland: National Center for Health Statistics. 2001.

Figure 7. Cigarette smoking among men, women, high school students, and mothers during pregnancy: United States, 1965-2001



NOTES: Percents for men and women are age adjusted. See Data Table for data points graphed, standard errors, and additional notes. Figure is related to the Healthy People 2010 Leading Health Indicator on tobacco use.

SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey (data for men and women); National Vital Statistics System (data for mothers during pregnancy); National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey (data for high school students).

Overweight and Obesity

Many epidemiologic and actuarial studies have shown that increased body weight is associated with excess mortality (1). Among adults, overweight and obesity substantially elevate the risk of illness from heart disease, diabetes, and some types of cancer. Overweight and obesity are also factors that increase the severity of disease associated with hypertension, arthritis, and other musculoskeletal problems (2). Among children and adolescents, obesity increases the risk of high cholesterol, hypertension, and diabetes (3). Diet, physical activity, genetic factors, and health conditions contribute to overweight in children and adults.

Results from a series of national health examination surveys indicate that the prevalence of overweight and obesity changed little between the early 1960s and 1980 (figure 8). Findings from the 1988–94 survey, however, showed substantial increases in overweight and obesity among adults. The upward trend in overweight reflected primarily an increase in the percent of adults who were obese. Preliminary estimates from the 1999 survey indicate that overweight and obesity have continued to increase. In 1999, 61 percent of adults were overweight with 27 percent obese.

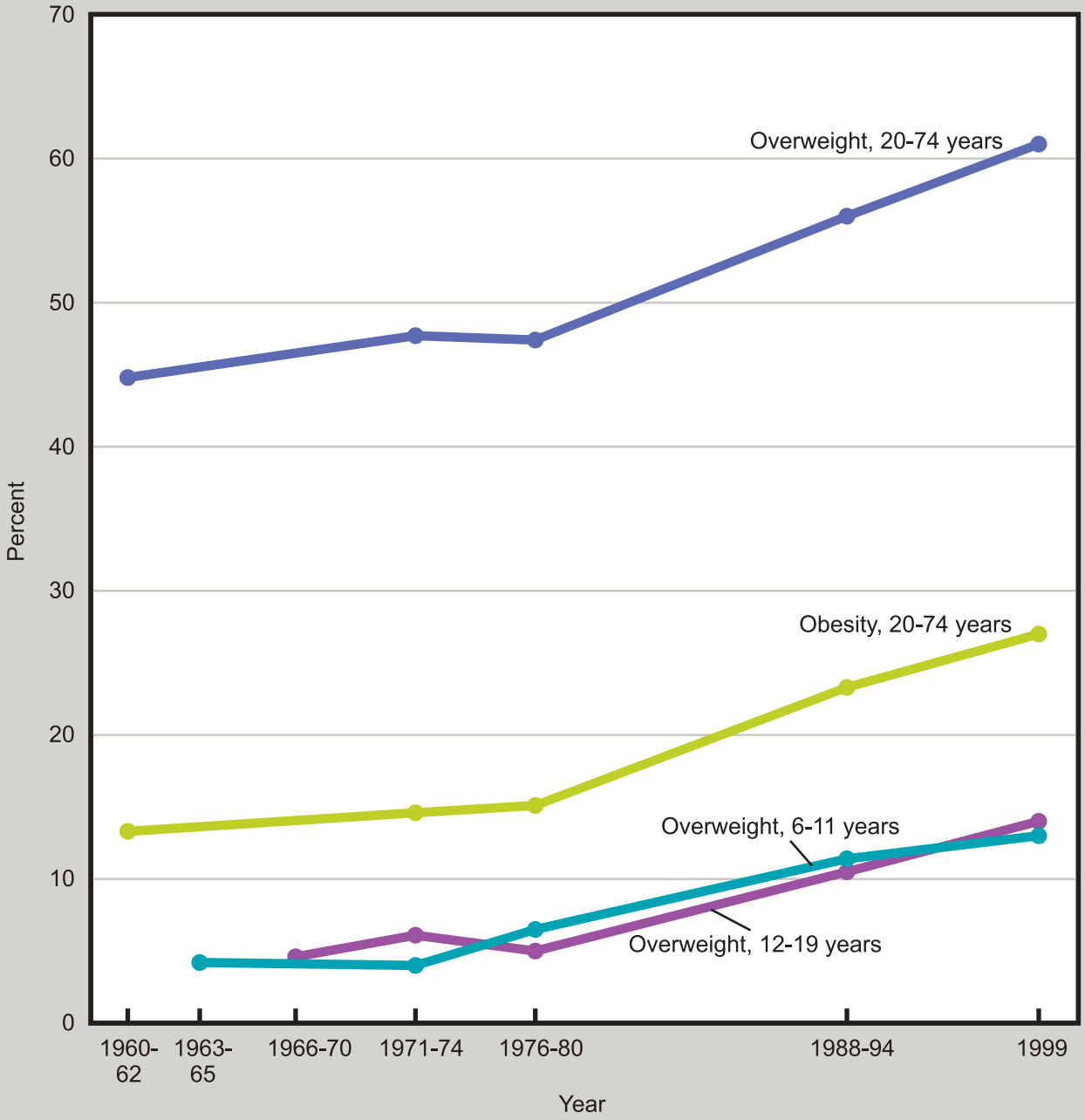
The prevalence of overweight and obesity vary by sex. In 1988–94, 61 percent of men were overweight in comparison to 51 percent of women. Among overweight men a third were obese; among overweight women about one-half were obese (*Health, United States, 2002*, table 70).

The percent of children (6–11 years of age) and adolescents (12–19 years of age) who are overweight has also risen. Among children and adolescents, the percent overweight increased after the mid-1970s. Preliminary estimates from the 1999 survey indicate that 13 percent of children and 14 percent of adolescents were overweight. In contrast to adults, the percent of overweight children and adolescents in 1988–94 did not differ by sex (*Health, United States, 2002*, table 71).

References

1. Allison DB, Fontaine KR, Manson JE, et al. Annual deaths attributable to obesity in the United States. JAMA 282(16):1530–8. 1999.
2. U.S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity. Rockville, Maryland: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General. 2001.
3. Dietz WH. Health consequences of obesity in youth: Childhood predictors of adult disease. Pediatrics 101(3 Pt 2):518–25. 1998.

Figure 8. Overweight and obesity by age: United States, 1960-99



NOTES: Percents for adults are age adjusted. Overweight for children is defined as a body mass index (BMI) at or above the sex- and age-specific 95th percentile BMI cut points from the 2000 CDC Growth Charts: United States. Overweight for adults is defined as a BMI greater than or equal to 25 and obesity as a BMI greater than or equal to 30. 1999 data are preliminary estimates. See Data Table for data points graphed, standard errors, and additional notes. Figure is related to the *Healthy People 2010* Leading Health Indicator on overweight and obesity.

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

Physical Activity

Many epidemiologic and clinical studies have shown the benefits of regular physical activity for reducing mortality, preventing cardiovascular disease, and enhancing physical functioning (1). Regular physical activity lessens the risk of heart disease, diabetes, colon cancer, high blood pressure, osteoporosis, and arthritis. It also improves symptoms associated with mental health conditions such as depression and anxiety. Although vigorous physical activity produces the greatest cardiovascular benefits, moderate amounts of physical activity are associated with lower levels of mortality. Among the elderly, even small amounts of physical activity may improve cardiovascular functioning (2).

In 2001, 38 percent of female high school students and 24 percent of male high school students reported a level of physical activity that did not meet the criteria for the recommended amount of either moderate or vigorous physical activity (figure 9). The percent reporting a lack of moderate and vigorous physical activity was lower among students in 9th grade than among students in 10th–12th grade. Between 1999 and 2001 the percent of students reporting a lack of moderate and vigorous physical activity remained stable.

In 2000, 39 percent of adults reported that they did not engage in physical activity during leisure time (figure 10), about the same as in 1997 (3). Among men and women, the percent of adults who were physically inactive increased with age. Among noninstitutionalized elderly persons 75 years of age and over, more than one-half indicated being physically inactive during leisure time. At most ages, women more often reported being physically inactive than men.

References

1. U.S. Department of Health and Human Services. Physical activity and health: A report of the Surgeon General. Atlanta, Georgia: Centers for Disease Control and Prevention. 1996.
2. Mensink GB, Ziese T, Kok FJ. Benefits of leisure-time physical activity on the cardiovascular risk profile at older age. Int J Epidemiol 28(4):659–66. 1999.
3. National Center for Health Statistics. Prevalence of sedentary leisure-time behavior among adults in the United States. Available from www.cdc.gov/nchs/products/pubs/pubd/hestats/3and4/sedentary.htm accessed on 3/12/02.

Figure 9. High school students not engaging in recommended amounts of physical activity (neither moderate nor vigorous) by grade and sex: United States, 2001

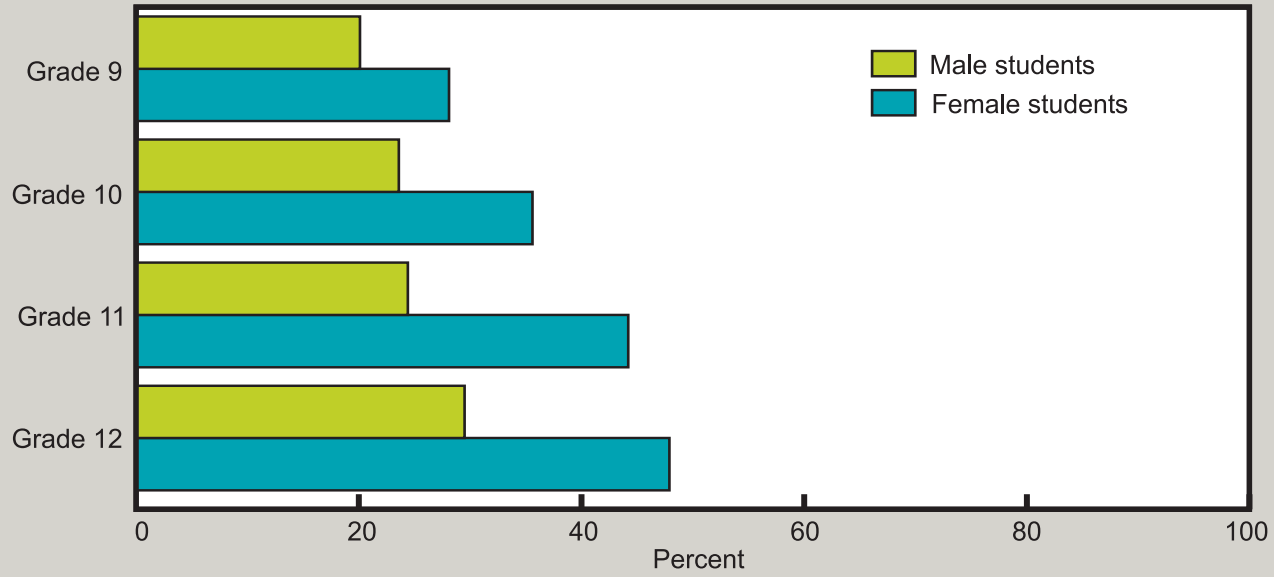
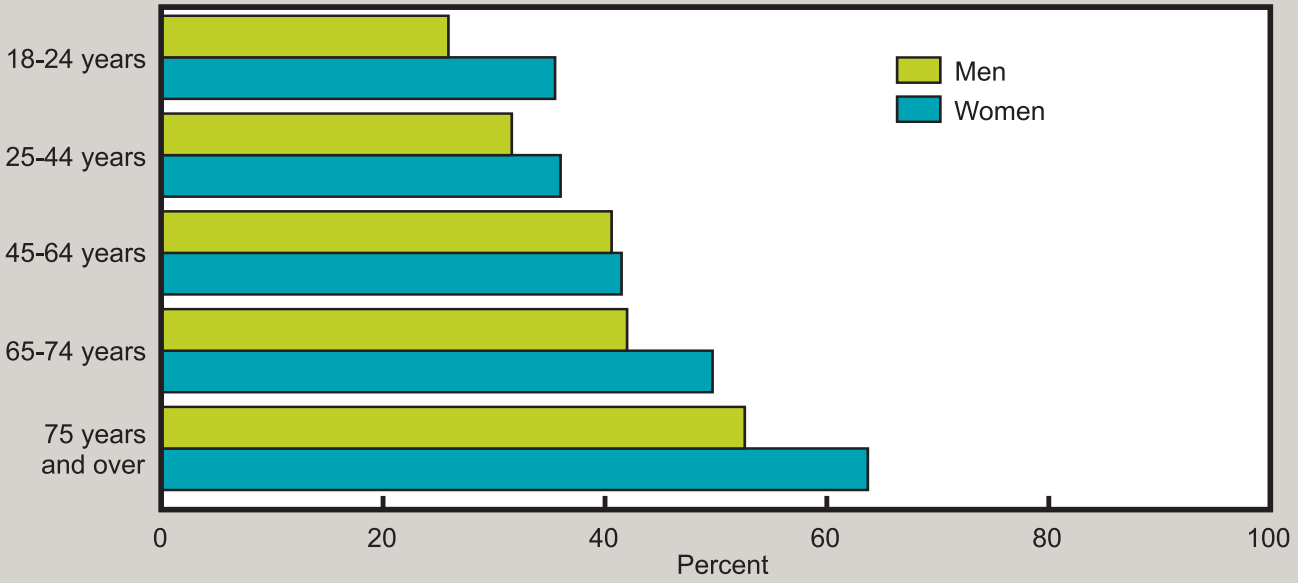


Figure 10. Adults not engaging in leisure-time physical activity by age and sex: United States, 2000



NOTES: See Data Tables for data points graphed, standard errors, and additional notes. Figures are related to the *Healthy People 2010* Leading Health Indicator on physical activity.

SOURCE for figure 9: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey.

SOURCE for figure 10: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

Prenatal Care

Prenatal care that begins in the first trimester and continues throughout pregnancy reduces the risk of maternal morbidity and poor birth outcomes. Attitudes toward pregnancy, lifestyle factors, and cultural beliefs have been suggested as reasons women delay prenatal care. Financial and health insurance problems are among the most important barriers to such care (1). Expansion of Medicaid coverage for pregnancy-related services has increased availability and use of prenatal care by low-income women (2).

During the last 30 years, the percent of mothers reporting early prenatal care has risen (figure 11). This upward trend reflects increases during the 1970s and the 1990s. By 2000, 83 percent of mothers reported receiving early prenatal care.

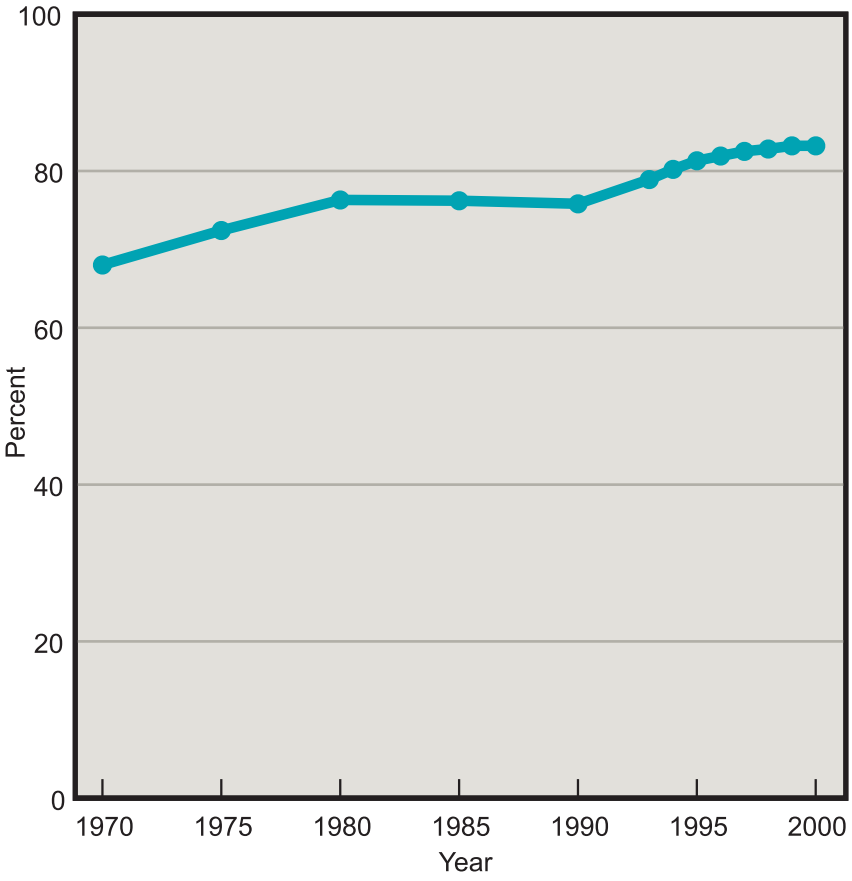
Increases in use of early prenatal care have been observed among mothers in all major racial and ethnic groups. Increases in use of prenatal care in the 1990s were greatest for those with the lowest rates of care: Hispanic, non-Hispanic black, and American Indian or Alaska Native women (*Health, United States, 2002*, table 6).

There continue to be important racial and ethnic differences in the percent of mothers reporting early prenatal care (figure 12). In 2000 the percent was higher for non-Hispanic white women than for non-Hispanic black women, American Indian or Alaska Native women, and most groups of Hispanic women. For Hispanic and Asian mothers, the percent with early prenatal care varied among subgroups. Among Hispanic mothers, Cuban women had the highest levels of early prenatal care; among Asian or Pacific Islander mothers, Japanese and Chinese women had the highest levels of early prenatal care.

References

1. Lewis CT, Mathews TJ, Heuser RL. Prenatal care in the United States, 1980–94. National Center for Health Statistics. Vital Health Stat 21(54). 1996.
2. Rowland D, Salganicoff A, Keenan PS. The key to the door: Medicaid's role in improving health care for women and children. Annu Rev Public Health 20:403–26. 1999.

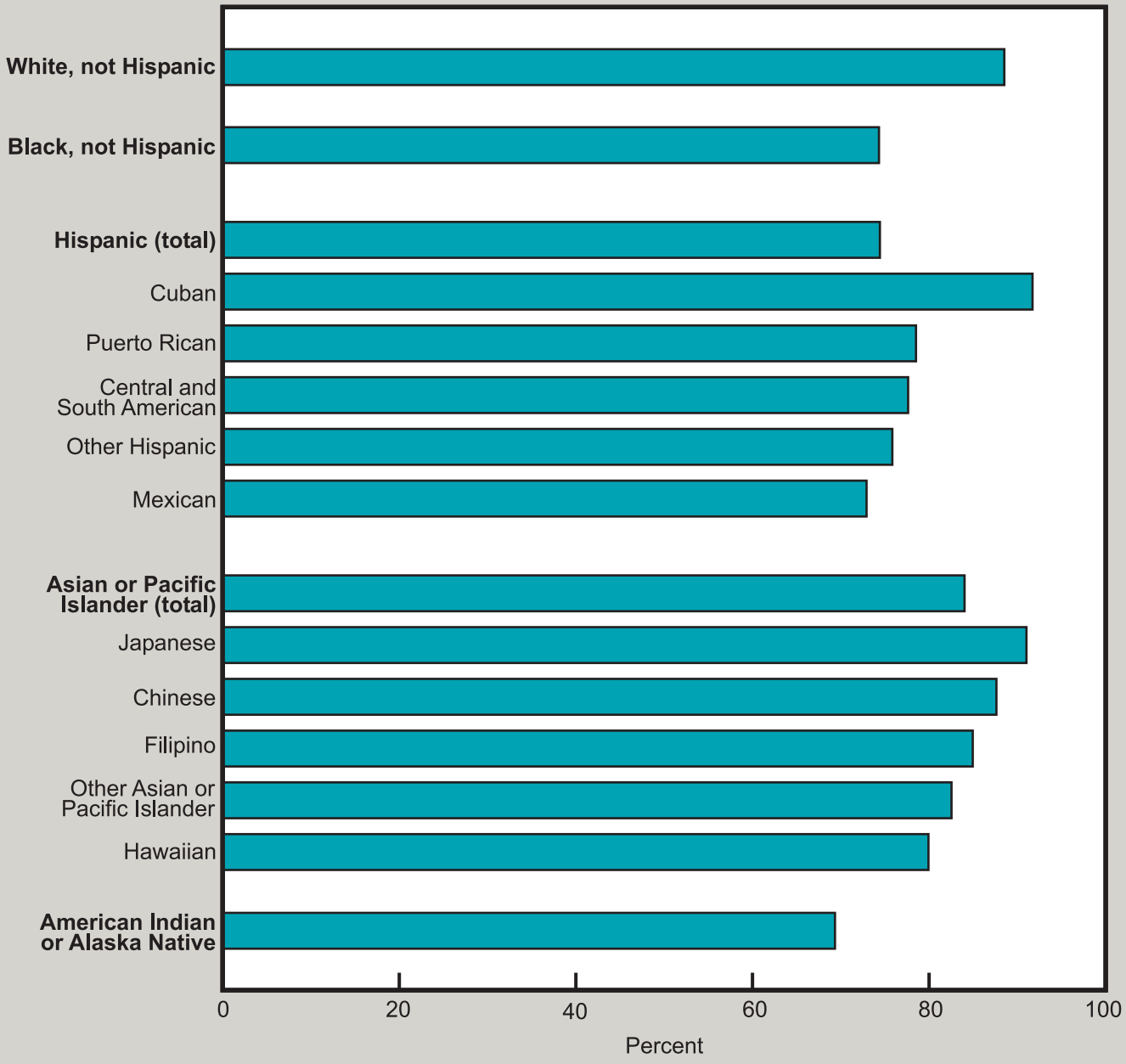
Figure 11. Early prenatal care among mothers: United States, 1970-2000



NOTES: Early prenatal care begins during the first trimester of pregnancy. Figure is related to the *Healthy People 2010* Leading Health Indicator on access to health care.

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

Figure 12. Early prenatal care by detailed race and Hispanic origin of mother: United States, 2000



NOTES: Early prenatal care begins during the first trimester of pregnancy. The Hispanic origin categories include persons of any race. The race groups, Asian or Pacific Islander and American Indian or Alaska Native, include persons of Hispanic and non-Hispanic origin. Figure is related to the *Healthy People 2010* Leading Health Indicator on access to health care.

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

Adult Vaccination

In the United States influenza epidemics result in the death of more than 18,000 persons 65 years of age and over each year (1). Pneumococcal disease accounts for more deaths than any other vaccine-preventable bacterial disease. Annual influenza vaccination and one dose of pneumococcal polysaccharide vaccine can lessen the risk of illness and subsequent complications among elderly persons. Medicare has covered the cost of influenza and pneumococcal vaccination since 1993 (2).

Between 1989 and 2000 the percent of noninstitutionalized adults 65 years of age and over who reported an influenza vaccination within the past year more than doubled to 65 percent (figure 13). During the same period the percent of elderly adults ever having received a pneumococcal vaccine also increased sharply from 14 percent to 53 percent. Several factors have been suggested as contributing to these increases: greater acceptance of preventive health care by consumers and practitioners, improved Medicare coverage for these vaccines, and wider delivery of this care by health care providers other than physicians (2).

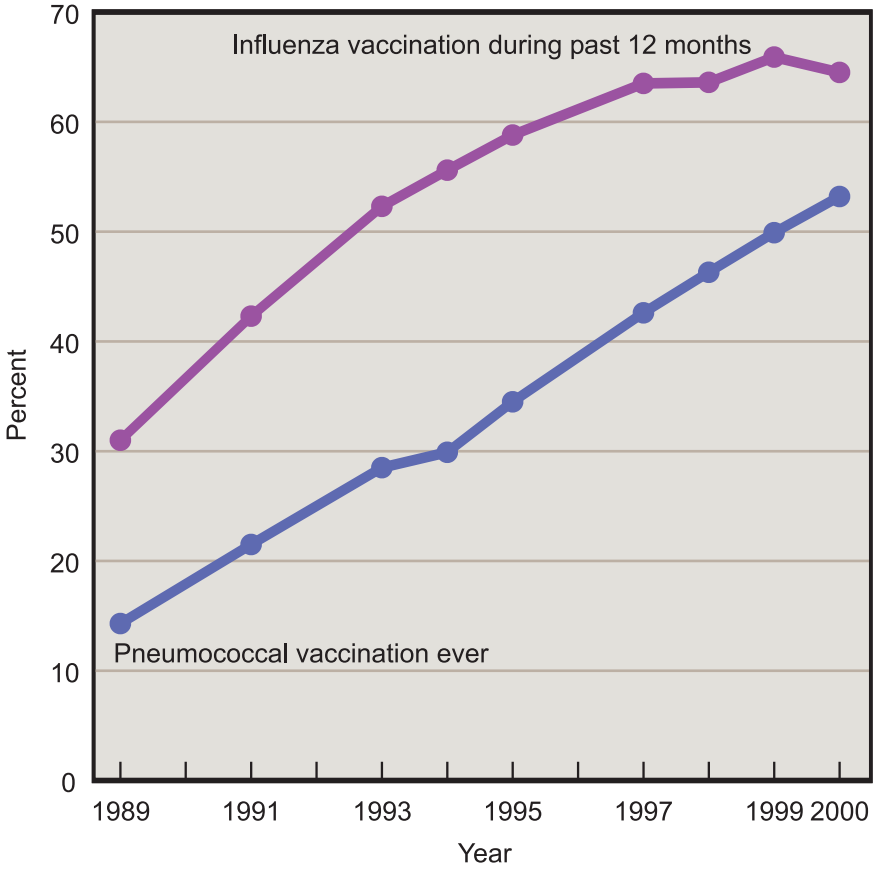
The level of coverage varied significantly by race and Hispanic origin in 2000 (figure 14). Among elderly non-Hispanic white adults, 67 percent were vaccinated against influenza and 57 percent against pneumococcal disease. Among elderly non-Hispanic black and Hispanic adults, slightly over one-half were vaccinated against influenza, and about a third against pneumococcal disease.

References

1. Centers for Disease Control and Prevention. Influenza and pneumococcal vaccination levels among persons aged ≥65 years—United States, 1999. MMWR 50(25):532–37. 2001.

2. Centers for Disease Control and Prevention. Influenza, pneumococcal, and tetanus toxoid vaccination of adults—United States, 1993–1997. MMWR 49(SS-9):39–62. 2000.

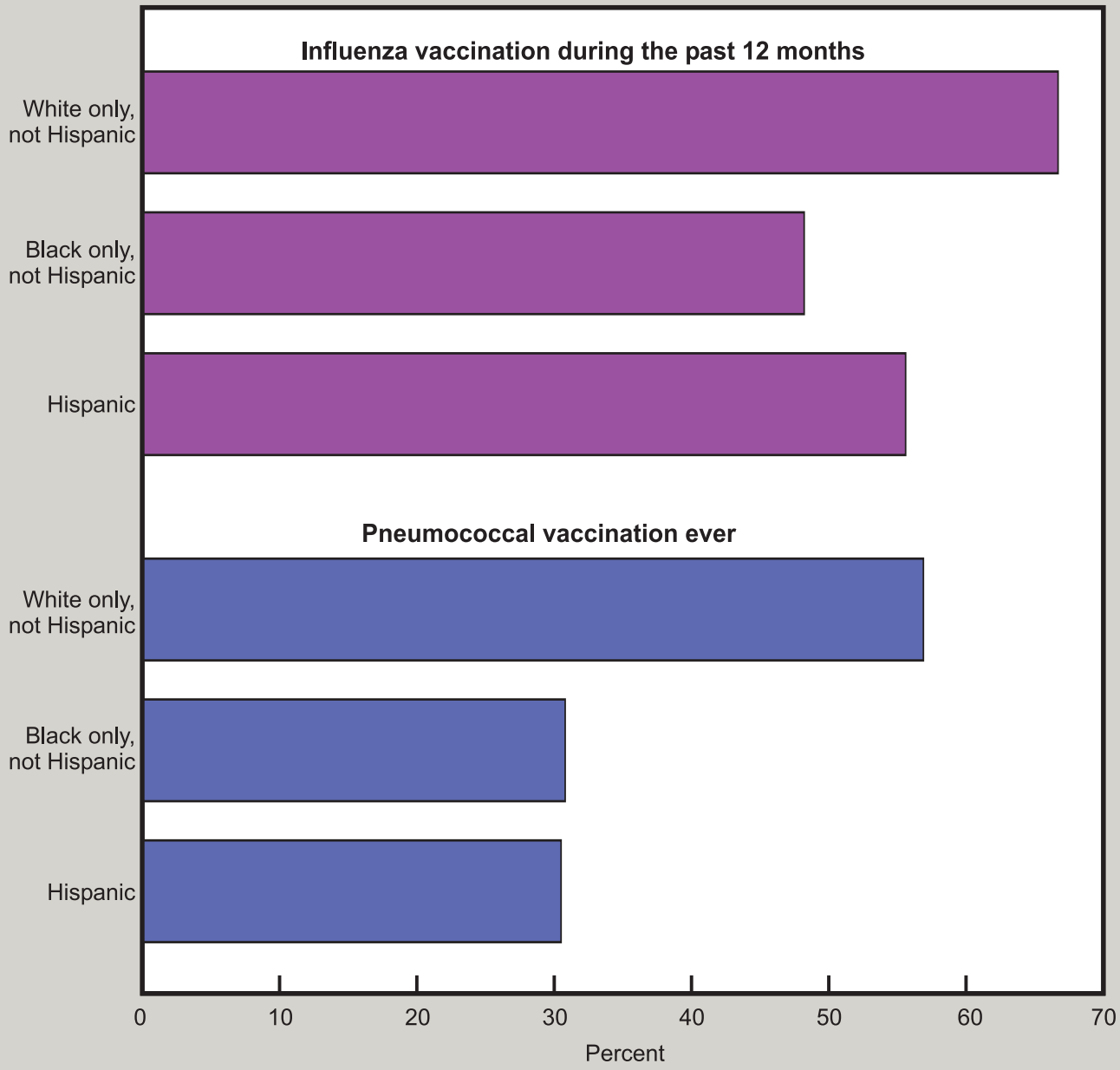
Figure 13. Influenza and pneumococcal vaccination among adults 65 years of age and over: United States, 1989-2000



NOTES: Percents vaccinated are for the civilian noninstitutionalized population and are age adjusted. See Data Table for data points graphed, standard errors, and additional notes. Figure is related to the *Healthy People 2010* Leading Health Indicator on immunization.

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

Figure 14. Influenza and pneumococcal vaccination among adults 65 years of age and over by race and Hispanic origin: United States, 2000



NOTES: Percents vaccinated are for the civilian noninstitutionalized population and are age adjusted. Hispanics may be of any race. See Data Table for data points graphed, standard errors, and additional notes. Figure is related to the *Healthy People 2010* Leading Health Indicator on immunization.

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

Child Limitation of Activity

Limitation of activity due to chronic physical, mental, or emotional disorders or deficits is a broad measure of health and functioning. Among children chronic health conditions that limit activity include, but are not restricted to, hearing, visual, and speech problems; learning disabilities; mental retardation and other developmental problems (such as cerebral palsy); mental and emotional problems; and a variety of chronic health conditions (such as asthma). The long-term impact of activity limitation in children can often be ameliorated by use of health care and educational services.

The identification of activity limitation in children is sometimes uncertain because children are learning and mastering new activities as they develop. As a result some variation in children's activities may be due to differences in the pace of development. Estimates of the number of children with an activity limitation vary depending on the type of disabilities included and the methods used to identify them (1).

The National Health Interview Survey (NHIS) identifies children with activity limitation in two ways: by asking about specific limitations in play, self-care, walking, memory, and other activities and by determining if a child receives special education or early intervention services. Comparable national data on activity limitation have been available since 1997 (see Appendix I, National Health Interview Survey). Between 1997 and 2000 levels of activity limitation among children remained about the same (*Health, United States, 2002*, table 58).

In 1998–2000 limitation of activity due to chronic health conditions occurred twice as often among boys as among girls (figure 15). Among preschoolers (under 5 years of age), 4 percent of boys as compared with 2 percent of girls had an activity limitation. Among school-age children (5–11 years of age) and adolescents (12–17 years of age), 9 percent of boys had an activity limitation compared with about 5 percent of girls. Physiological, maturational, behavioral, and social differences between boys and girls have been suggested as explanations for the higher prevalence of activity limitation in boys (2).

The percent of children with activity limitation was significantly higher among school-age children and adolescents than among preschoolers. For boys and girls, the higher percent of school-age children and adolescents with activity limitation was largely explained by the number of children identified solely by participation in special education. About 7 percent of school-age and adolescent boys and 3–4 percent of girls were classified as having activity limitation only by their participation in special education.

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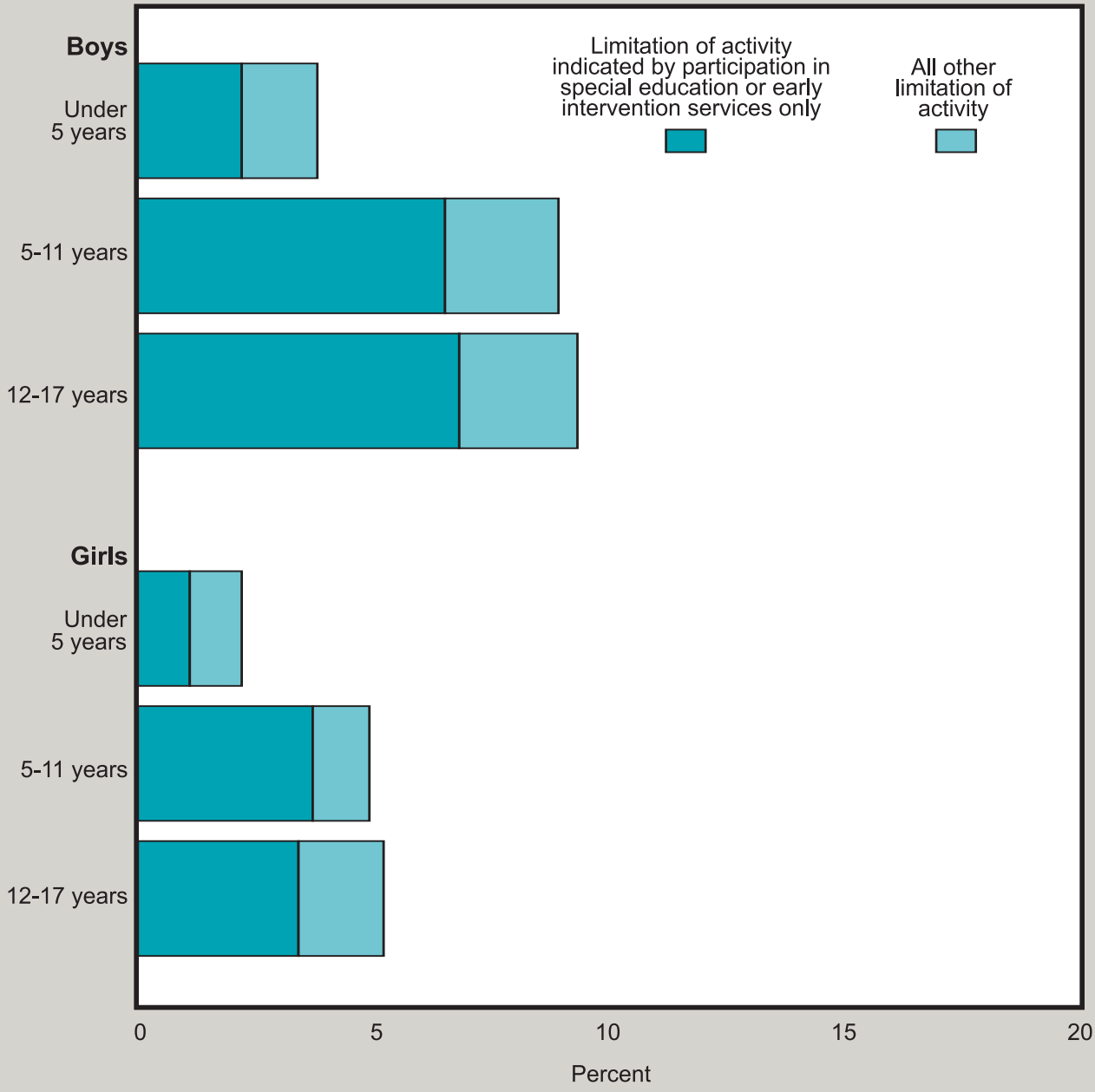
2. Jans L, Stoddard S. Chartbook on women and disability in the United States: An InfoUse report. Washington, DC: U.S. National Institute on Disability and Rehabilitation Research. 1999.

Figure 15. Limitation of activity caused by 1 or more chronic health conditions among children by sex and age: United States, 1998-2000



NOTES: Data are for noninstitutionalized children. The category of "all other limitation of activity" may include children receiving special education or early intervention services. See Data Table for data points graphed, standard errors, and additional notes.

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

Adult Limitation of Activity

Measuring limitations in everyday activities due to chronic physical, mental, or emotional problems is one way to assess the impact of health conditions on self-care and social participation (1). Chronic health conditions can alter the ability of adults to lead independent lives by affecting a person's capacity to carry out a variety of activities. The effect that chronic health conditions have on activity limitation may vary with the availability of supportive and health care services.

In the National Health Interview Survey (NHIS), limitation of activity in adults includes limitations in handling personal care needs, activities of daily living (ADLs), and routine needs instrumental activities of daily living (IADLs). For both sets of activities, limitation is defined as needing the help of another person to do an activity. Limitation of activity in NHIS also includes limitations in having a job outside the home, walking, remembering, and other activities. Comparable national data on activity limitation have been available since 1997 (see Appendix I, National Health Interview Survey). Between 1997 and 2000 the age-adjusted percent of adults reporting any activity limitation caused by a chronic health condition declined by about 13 percent (*Health, United States, 2002*, table 58).

Limitations in ADLs among noninstitutionalized adults are more prevalent among the elderly than among adults of working age (figure 16). Less than 1 percent of adults 18–44 years of age report an ADL limitation in contrast to nearly 10 percent of persons 75 years of age and over.

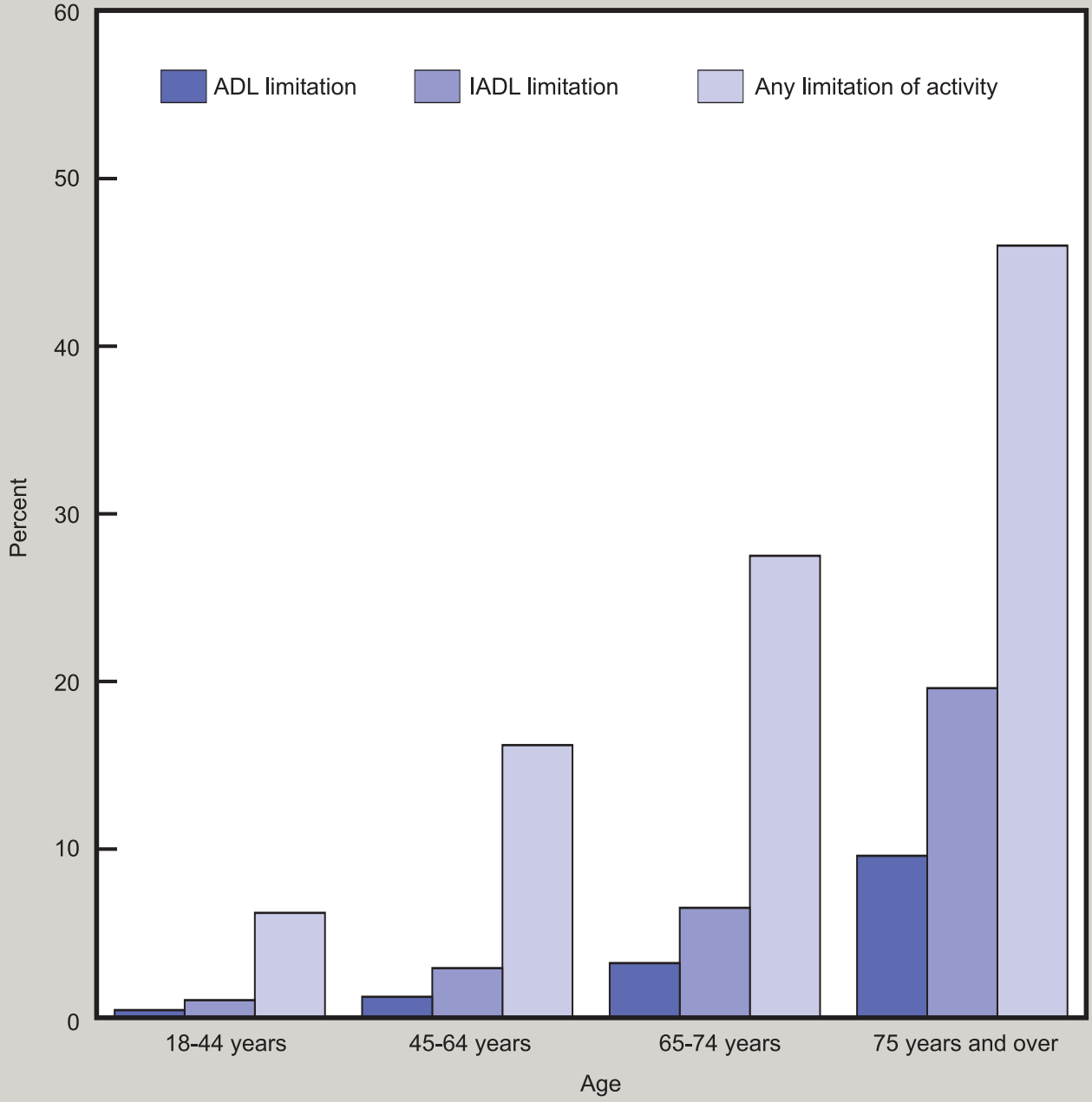
Limitations in IADLs, as well as limitations in any activity, affect a higher percent of noninstitutionalized elderly adults than adults of working age. Among persons 75 years of age and over, nearly one-fifth of adults report needing the help of other persons to do routine activities such as household chores and shopping (IADLs) and nearly one-half say their activities are limited in some way due to a chronic physical, mental, or emotional problem.

Limitations in ADLs, IADLs, and any activity are higher among poor elderly persons than nonpoor elderly persons. In 1998–2000 the percent of elderly persons with an IADL limitation, for example, was substantially higher among poor (22 percent) than nonpoor persons (9 percent) (for related data, see *Health, United States, 2002*, table 58).

Reference

1. Guralnik JM, Fried LP, Salive ME. Disability as a public health outcome in the aging population. Annu Rev Public Health 17:25–46. 1996.

Figure 16. Limitation of activity caused by 1 or more chronic health conditions among adults by age: United States, 1998-2000



NOTES: Data are for the civilian noninstitutionalized population. ADL is an activity of daily living. IADL is an instrumental activity of daily living. "Any activity limitation" may include limitations in ADLs and IADLs. See Data Table for data points graphed, standard errors, and additional notes.

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

Chronic Health Conditions

Health surveys that measure limitation of activity have typically asked about the conditions causing these restrictions. Limitation of activity may be caused by more than one health condition. Health conditions usually refer to broad categories of disease and impairment rather than medical diagnoses and reflect the understanding the general public has of factors causing disability or limitation of activity (1). Despite differences among various health surveys conducted in Western industrialized countries, several chronic conditions are consistently mentioned as important causes of disability. Among these, arthritis and other musculoskeletal conditions and circulatory conditions are often identified as leading causes of disability.

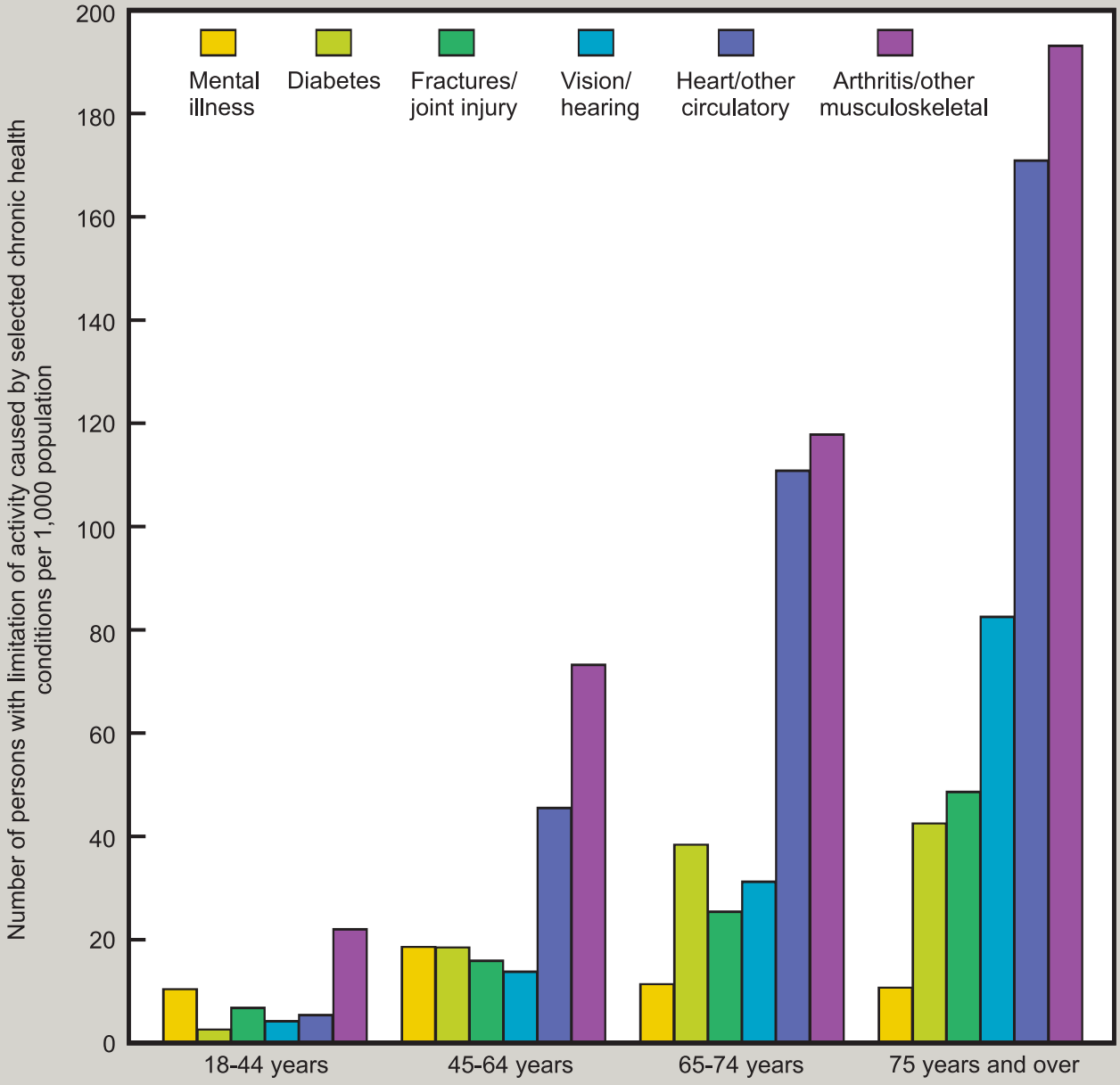
Chronic health conditions causing limitation of activity are generally more common among elderly than among younger adults (figure 17). In 1998–2000 the prevalence of arthritis and other musculoskeletal conditions causing activity limitation, for example, was 22 per 1,000 adults 18–44 years of age in contrast to 193 per 1,000 adults 75 years of age and over. Other leading causes of activity limitation such as heart and other circulatory problems, difficulties with vision and hearing, diabetes and respiratory problems, were also more prevalent among the elderly than among working-age adults. Disabling mental illness, however, followed a different pattern. The highest rates of mental illness causing activity limitation were reported by adults 45–64 years of age.

The relative importance of various chronic conditions causing limitation of activity differed for adults of various ages. Among younger adults 18–44 years of age, the most frequently mentioned chronic conditions causing limitations in activity were arthritis and other musculoskeletal conditions, and mental illness. Among adults 45 years of age and over, arthritis and other musculoskeletal conditions, and heart and other circulatory conditions outranked other conditions as causes of activity limitation.

Reference

1. Fujiura GT, Rutkowski-Kmitta V. Counting disability. In: Albrecht GL, Seelman KD, Bury M, eds. Handbook of disability studies. Thousand Oaks, California: Sage Publications, 69–96. 2001.

Figure 17. Selected chronic health conditions causing limitation of activity among adults by age: United States, 1998-2000



NOTES: Data are for the civilian noninstitutionalized population. Persons may report more than one chronic health condition as the cause of their activity limitation. Selected chronic health conditions include the three leading causes of activity limitation among adults in each age category. See Data Table for data points graphed, standard errors, and additional notes.

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

Life Expectancy

Life expectancy is a measure often used to gauge the overall health of a population. As a summary measure of mortality, life expectancy represents the average number of years of life that could be expected if current death rates were to remain constant. Shifts in life expectancy are often used to describe trends in mortality. Life expectancy at birth is strongly influenced by infant and child mortality. Life expectancy later in life reflects death rates at or above a given age and is independent of the effect of mortality at younger ages (1).

During the 20th century, life expectancy at birth increased from 48 to 74 years for men and from 51 to 79 years for women (figure 18). Improvements in nutrition, housing, hygiene, and medical care contributed to decreases in death rates throughout the lifespan. Prevention and control of infectious diseases had a profound impact on life expectancy in the first half of the 20th century (2).

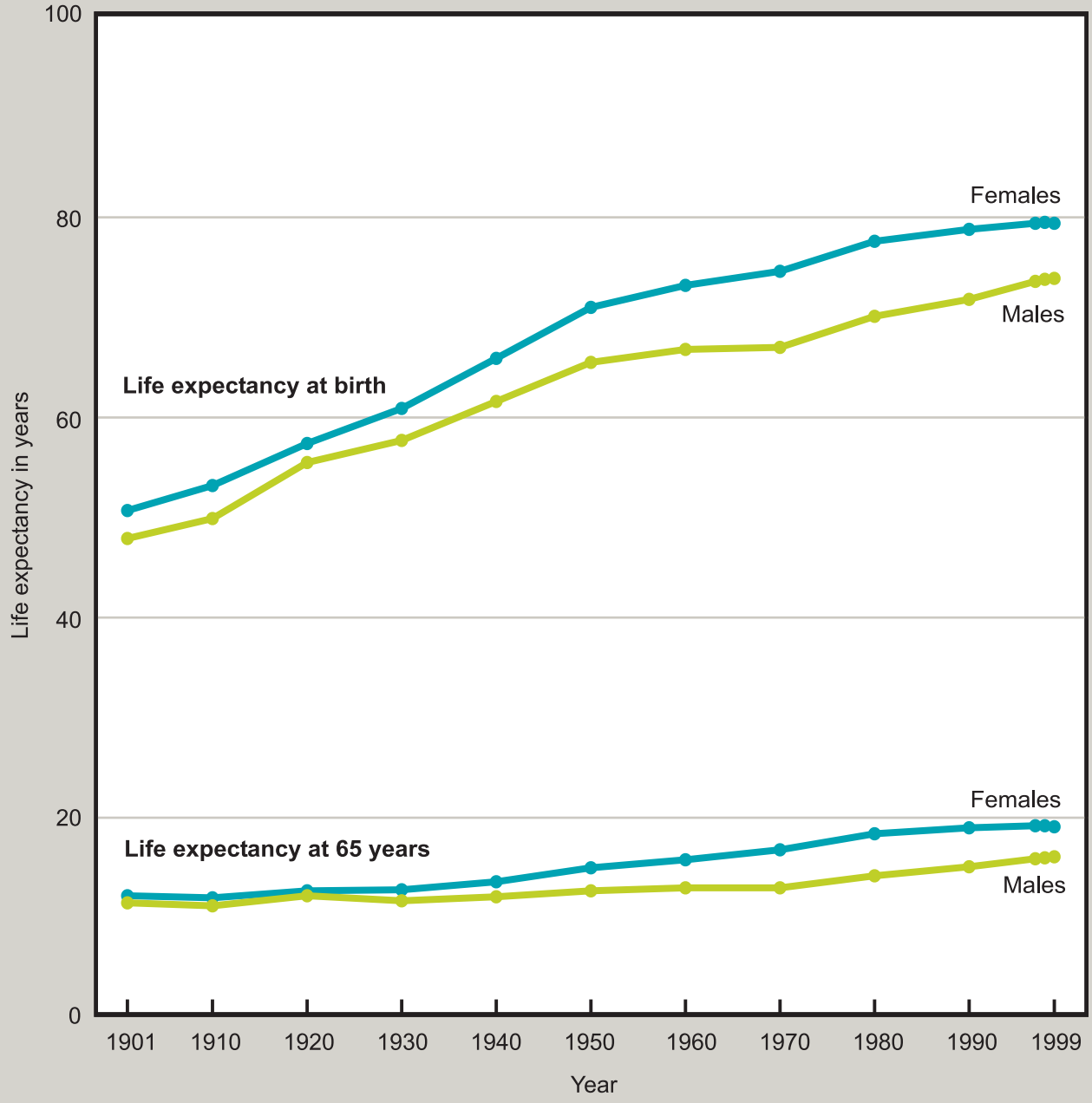
During the last century, life expectancy at age 65 also increased. Among men, life expectancy at age 65 rose from 12 to 16 years and among women from 12 to 19 years. In contrast to life expectancy at birth, which increased sharply early in the century, life expectancy at age 65 improved primarily after 1950. Improved access to health care, advances in medicine, healthier lifestyles, and better health before 65 are factors underlying decreased death rates among the elderly (3).

Longer life expectancies at birth in many other developed countries suggest the possibility of improving longevity in the United States (*Health, United States, 2002*, table 27). Decreasing death rates of less advantaged groups could raise life expectancy in the United States (*Health, United States, 2002*, table 28).

References

1. Arriaga EE. Measuring and explaining the change in life expectancies. Demography 21(1):83–96. 1984.
2. Centers for Disease Control and Prevention. Achievements in public health, 1900–1999: Control of infectious diseases. MMWR 48(29):621–9. 1999.
3. Fried LP. Epidemiology of aging. Epidemiol Rev 22(1):95–106. 2000.

Figure 18. Life expectancy at birth and at 65 years of age by sex: United States, 1901-99



NOTE: See Data Table for data points graphed and additional notes.

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

Infant Mortality

Infant mortality, the risk of death during the first year of life, is related to the underlying health of the mother, public health practices, socioeconomic conditions, and availability and use of appropriate health care for infants and pregnant women. Disorders related to short gestation and low birthweight, and congenital malformations are the leading causes of death during the first month of life (neonatal mortality). Sudden Infant Death Syndrome (SIDS) and congenital anomalies rank as the leading causes of infant deaths after the first month of life (postneonatal mortality) (1).

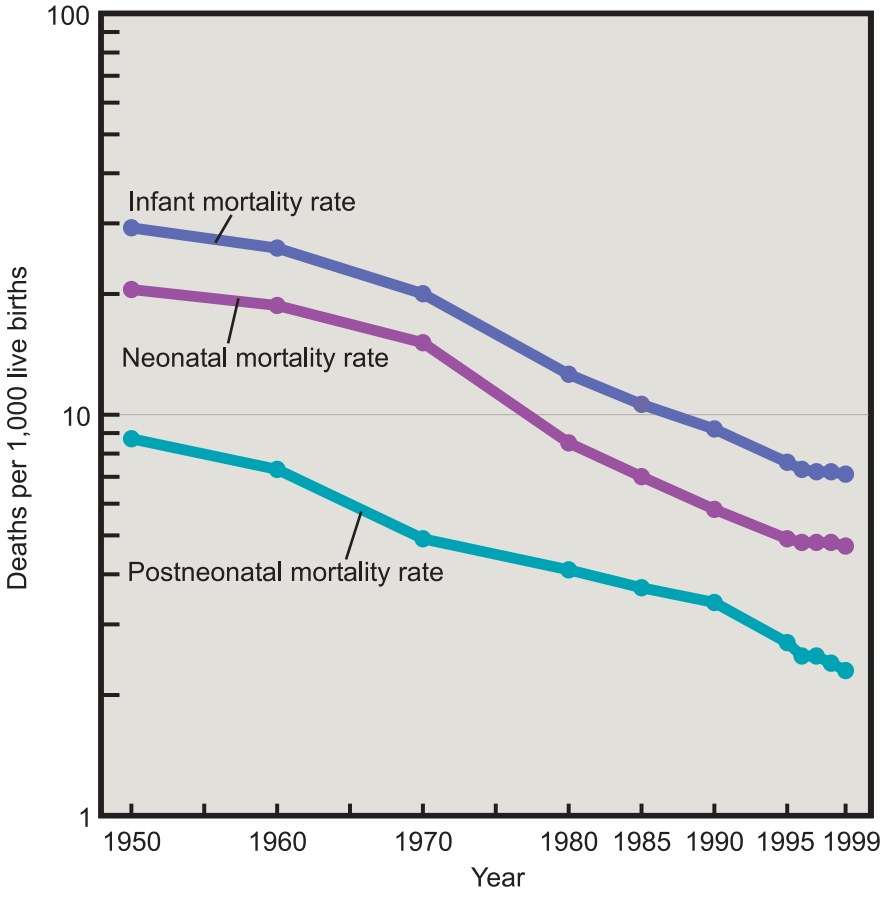
Between 1950 and 1999 the infant mortality rate declined by about 75 percent (figure 19). Substantial declines occurred for both neonatal and postneonatal mortality. In 1999 the infant mortality rate was 7.1 deaths per 1,000 live births with two-thirds of all infant deaths occurring during the neonatal period. Declines in infant mortality have been linked to improved access to health care, advances in neonatal medicine, and educational campaigns such as the "Back to Sleep" campaign to curb fatalities caused by SIDS (2).

Infant mortality rates have declined for all racial and ethnic groups, but large disparities remain (*Health, United States, 2002*, table 20). During 1997–99 the infant mortality rate was highest for infants of non-Hispanic black and American Indian or Alaska Native mothers (figure 20). Infants of Chinese mothers had the lowest infant mortality rate. Among Hispanic mothers, the infant mortality rate was highest for Puerto Rican mothers and lowest for Cuban mothers.

References

1. Anderson RN. Deaths: Leading causes for 1999. National vital statistics reports; vol 29 no 11. Hyattsville, Maryland: National Center for Health Statistics. 2001.
2. American Academy of Pediatrics Task Force on Infant Positioning and SIDS. Positioning and SIDS. Pediatrics 89(6):1120–6. 1992.

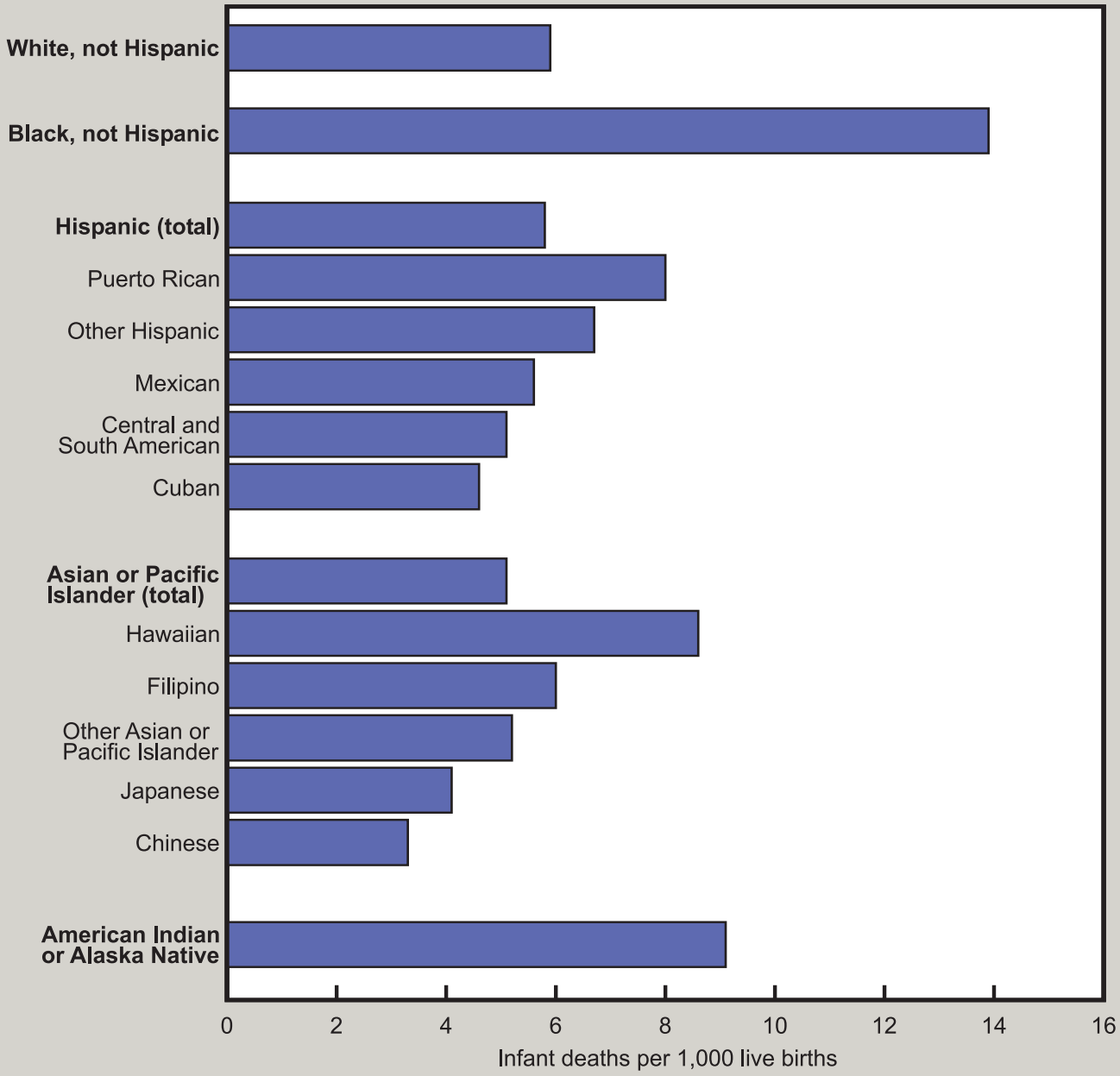
Figure 19. Infant, neonatal, and postneonatal mortality rates: United States, 1950-99



NOTES: Infant is defined as under 1 year of age, neonatal as under 28 days of age, and postneonatal as between 28 days and 1 year of age. See Data Table for data points graphed and additional notes. Data are plotted on the log scale.

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

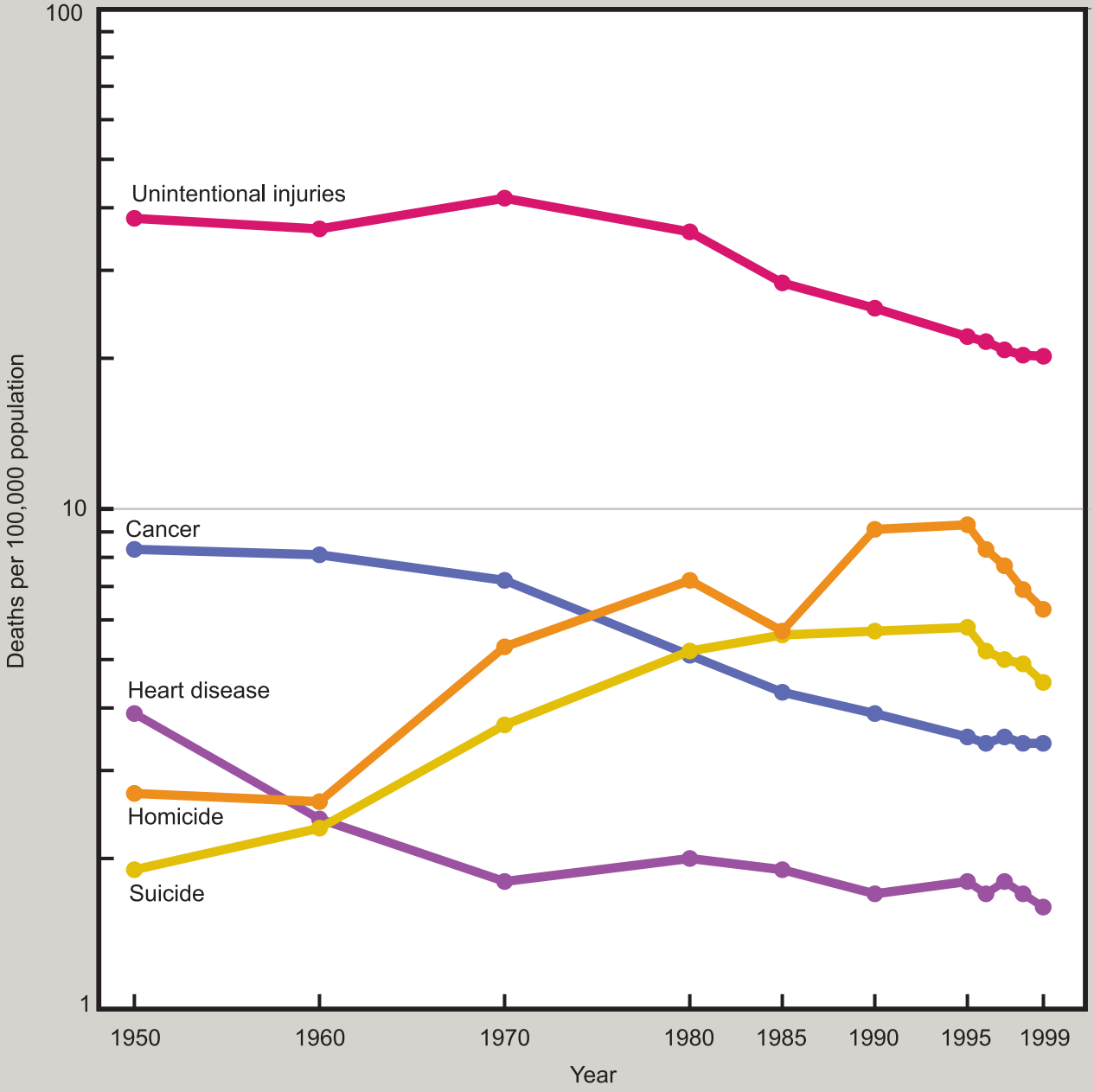
Figure 20. Infant mortality rates by detailed race and Hispanic origin of mother: United States, 1997-99



NOTES: Infant is defined as under 1 year of age. The Hispanic origin categories include persons of any race. The race groups, Asian or Pacific Islander and American Indian or Alaska Native, include persons of Hispanic and non-Hispanic origin. See Data Table for data points graphed and additional notes.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Linked Birth/Infant Death Data Sets.

Figure 21. Death rates for leading causes of death among persons 1-24 years of age: United States, 1950-99



NOTES: Death rates are age adjusted to the year 2000 standard population using three age groups: 1-4 years, 5-14 years, and 15-24 years. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD-6), 1960 death rates on the ICD-7, 1970 death rates on the ICDA-8, 1980-1998 death rates on ICD-9, and 1999 death rates on the ICD-10. Causes of death shown are the five leading causes of death among persons 1-24 years of age in 1999. See Data Table for data points graphed and additional notes. Data are plotted on the log scale.

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

Child and Young Adult Mortality

During the past 50 years mortality among children and young adults (1–24 years of age) has declined by more than one-half. In 1999 the five leading causes of death for this age group were related to either injury or chronic diseases. In 1950, in contrast, two of the five leading causes of death were infectious diseases (influenza/pneumonia and tuberculosis).

Unintentional injuries have been the leading cause of death for children and young adults throughout the past 50 years. Death rates for unintentional injuries have been declining since 1970 (figure 21). In 1999 more than 40 percent of all deaths to persons 1–24 years of age resulted from unintentional injuries (figure 22). Nearly three-quarters of these deaths occurred to persons 15–24 years of age (1).

Homicide and suicide were the second and third leading causes of death in this age group in 1999. Most of these deaths were among persons 15–24 years of age: 86 percent of homicides and 94 percent of suicides in this age group occurred to persons 15–24 years of age. Between 1960 and the mid-1990s, homicide and suicide rates among persons 1–24 years of age increased. Since the mid-1990s homicide and suicide rates have declined.

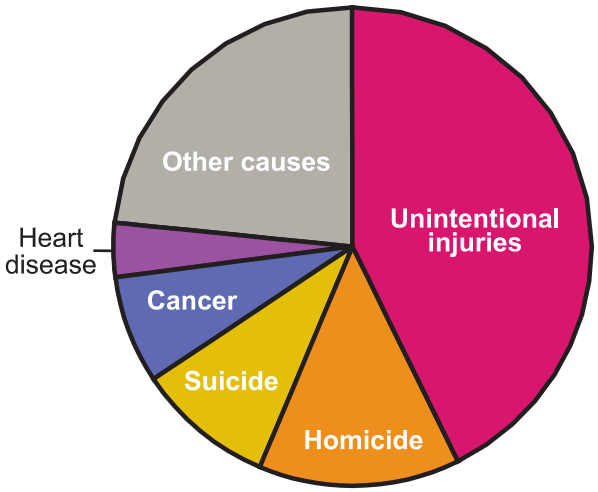
Homicide and suicide rates vary by age, sex, and race. Males 15–24 years of age are at substantially higher risk of homicide and suicide than younger persons or females. Among males 15–24 years of age, homicide rates for black males were eight times as great as for white males in 1999 (*Health, United States, 2002*, tables 46 and 47).

Death rates for the other leading causes of death, cancer and heart disease, have also declined with the greatest decline in cancer mortality occurring during 1960–95 and the greatest decline in heart disease mortality during 1950–70. In 1999 cancer and heart disease together accounted for about 10 percent of deaths among persons 1–24 years of age.

Reference

1. Hoyert DL, Arias E, Smith BL, Murphy SL, Kochanek KD. Deaths: Final data for 1999. National vital statistics reports; vol 49 no 8. Hyattsville, Maryland: National Center for Health Statistics. 2001.

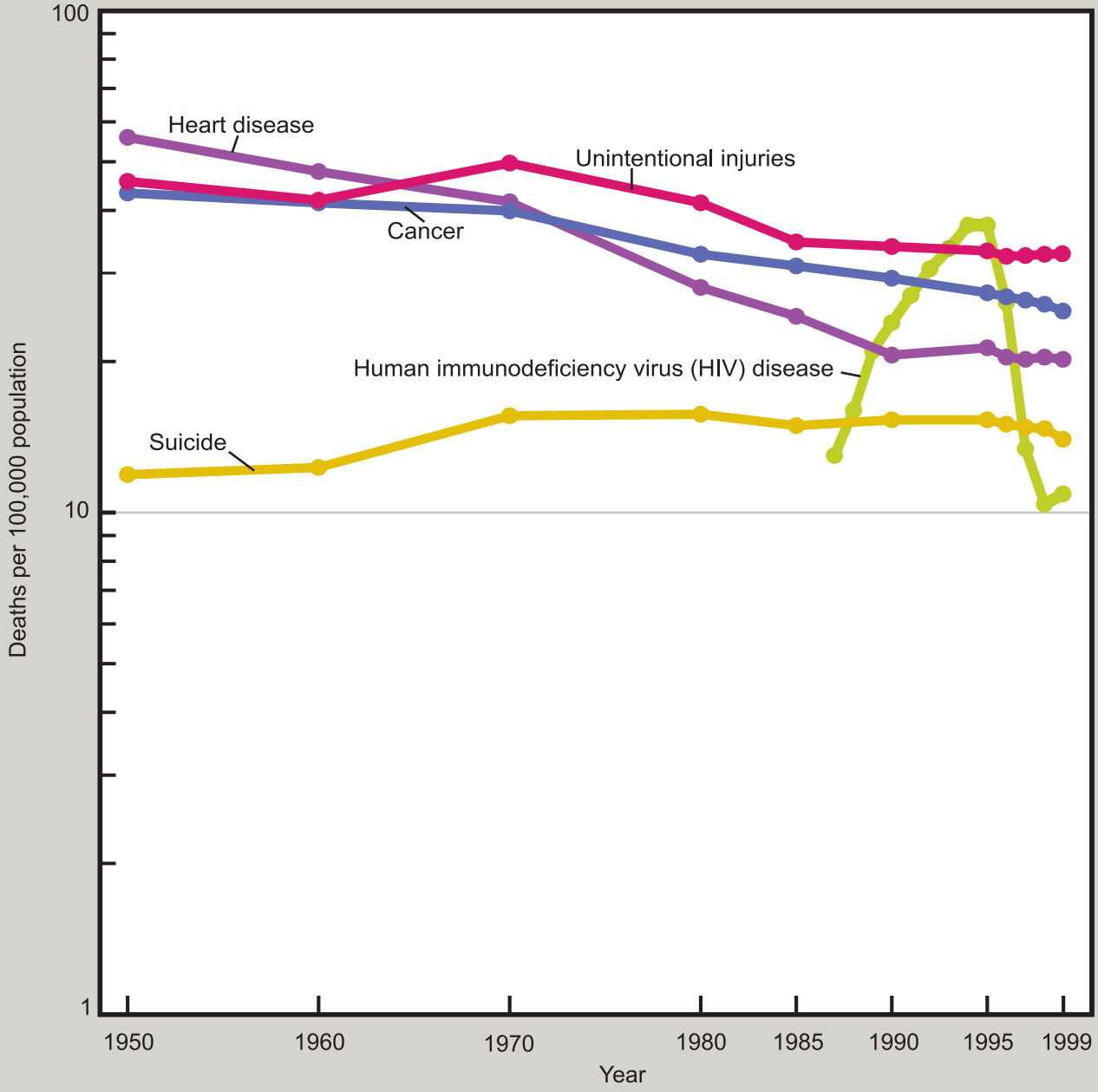
Figure 22. Percent of deaths due to leading causes of death among persons 1-24 years of age: United States, 1999



NOTE: See Data Table for data points graphed and additional notes.

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

Figure 23. Death rates for leading causes of death among persons 25-44 years of age: United States, 1950-99



NOTES: Death rates are age adjusted to the year 2000 standard population using two age groups: 25-34 years and 35-44 years. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD-6), 1960 death rates on the ICD-7, 1970 death rates on the ICDA-8, 1980-1998 death rates on ICD-9, and 1999 death rates on the ICD-10. Causes of death shown are the five leading causes of death among persons 25-44 years of age in 1999. See Data Table for data points graphed and additional notes. Data are plotted on the log scale.

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

Adult Mortality: 25–44 Years of Age

Since 1950 mortality among adults 25–44 years of age has declined by more than 40 percent. Underlying the overall decline in the death rate have been both favorable and unfavorable trends in the leading causes of death (figure 23). Four of the five leading causes of death in 1999 were also leading causes of death in 1950. But tuberculosis, which was one of the top five causes of death in 1950, is no longer a significant cause of death for adults 25–44 years of age.

Mortality from heart disease has declined by more than 60 percent since 1950, with most of the decrease occurring by 1990. Mortality from unintentional injury and cancer has also declined, with most of the decrease occurring after 1970. Altogether unintentional injury, cancer, and heart disease, the three leading causes of death among persons 25–44 years of age in 1999, accounted for about one-half of all deaths in this age group (figure 24).

In contrast to the declines for the top three causes of death, the suicide rate among persons 25–44 years rose between 1950 and 1980 but has declined slightly since 1980. Suicide, the fourth leading cause of death among young working-age adults in 1999, was responsible for 9 percent of deaths in this age group.

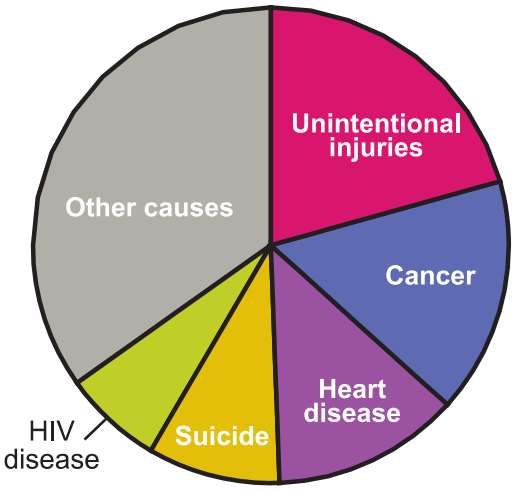
The fifth leading cause of death in 1999, human immunodeficiency virus (HIV) disease, has been an important cause of mortality among persons 25–44 years of age since the late 1980s (1). After rising rapidly in the late 1980s and the early 1990s, the HIV disease death rate began to fall sharply in the late 1990s with the introduction of new antiretroviral therapies.

HIV disease death rates among persons 25–44 years of age vary substantially by sex, race, and Hispanic origin. The risk of death is higher for males than females and is much higher for black persons and Hispanic persons than for those in other racial and ethnic groups. The HIV disease death rate for black females, for example, was 12 times the rate for white females in 1999 (*Health, United States, 2002*, table 43).

Reference

1. Centers for Disease Control and Prevention. HIV and AIDS—United States, 1981–2000. MMWR 50(21):430–4. 2001.

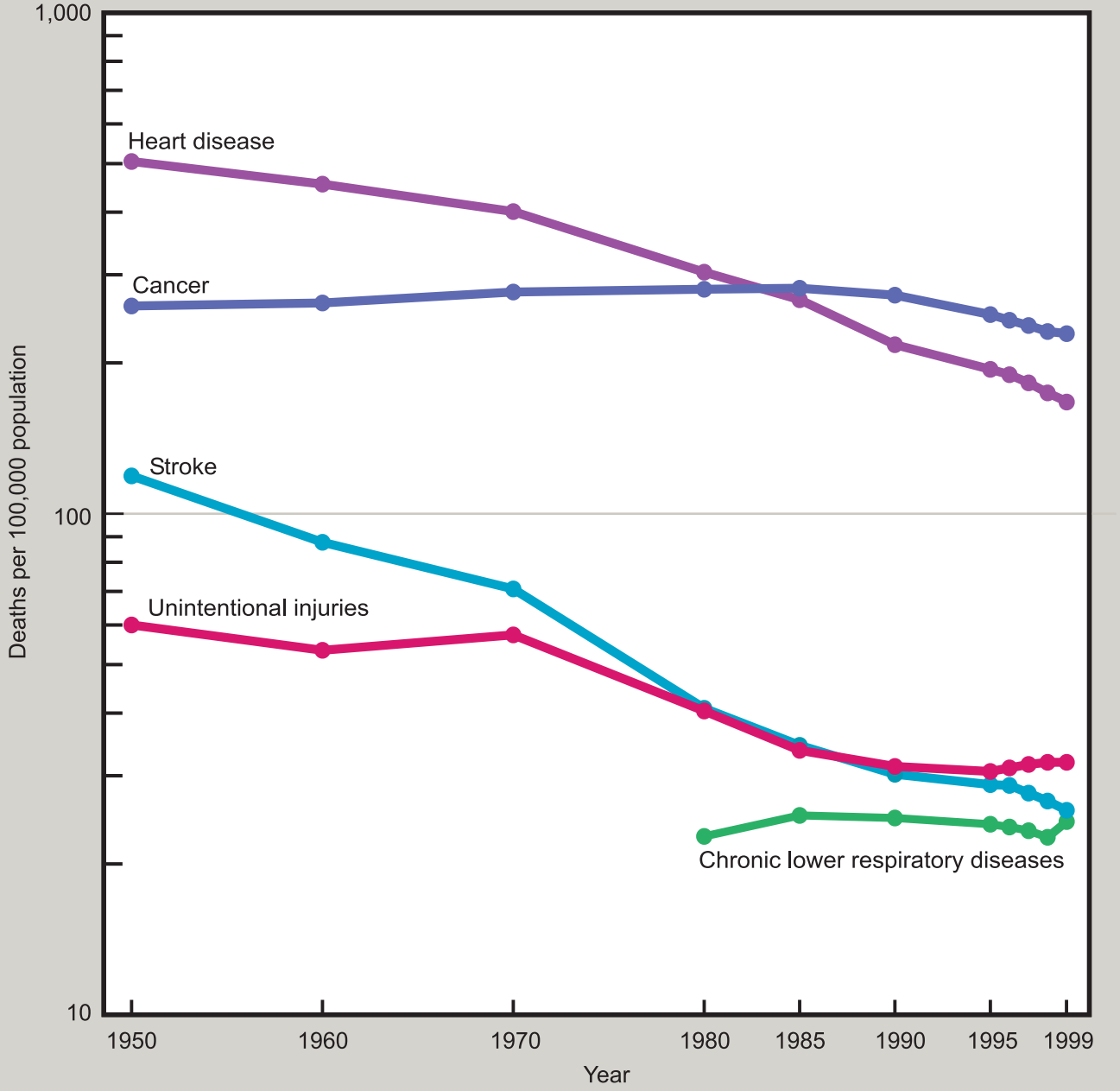
Figure 24. Percent of deaths due to leading causes of death among persons 25-44 years of age: United States, 1999



NOTE: See Data Table for data points graphed and additional notes.

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

Figure 25. Death rates for leading causes of death among persons 45-64 years of age: United States, 1950-99



NOTES: Death rates are age adjusted to the year 2000 standard population using two age groups: 45-54 years and 55-64 years. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD-6), 1960 death rates on the ICD-7, 1970 death rates on the ICDA-8, 1980-1998 death rates on ICD-9, and 1999 death rates on the ICD-10. Causes of death shown are the five leading causes of death among persons 45-64 years of age in 1999. See Data Table for data points graphed and additional notes. Data are plotted on the log scale.

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

Adult Mortality: 45–64 Years of Age

Death rates for persons 45–64 years of age have declined substantially over the past 50 years. Since 1950 mortality in this age group has decreased by nearly 50 percent overall. Four of the five leading causes of death in 1999 were also the leading causes of death in 1950. Tuberculosis, which ranked in the top five causes in 1950, was the cause of only a small number of deaths in 1999.

The death rates for heart disease and stroke among persons 45–64 years of age declined substantially between 1950 and 1999 (figure 25). During this period the death rate for heart disease declined by almost 70 percent and the death rate for stroke by nearly 80 percent. Advances in the prevention and treatment of heart disease and stroke rank among the major public health achievements of the 20th century (1).

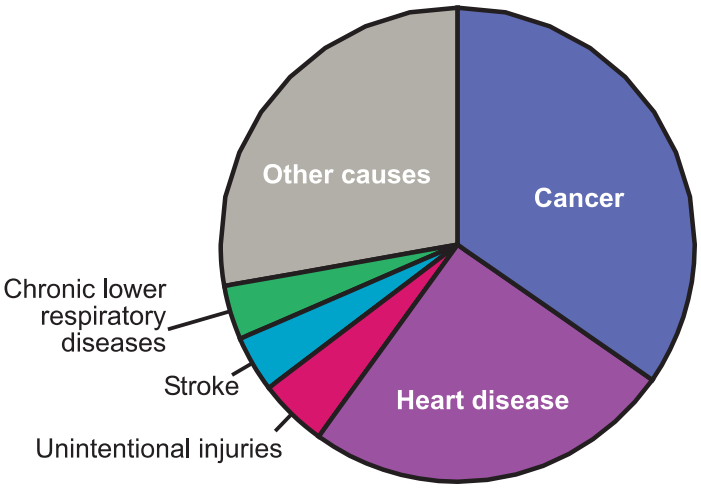
In contrast to the large declines in heart disease and stroke mortality, the death rate for cancer among persons 45–64 years of age rose slowly through the 1980s and then declined. Cancer was the leading cause of death among persons 45–64 years of age, accounting for more than one-third of the deaths in this age group in 1999 (figure 26).

In 1999 cancer, heart disease, stroke, and chronic lower respiratory diseases together accounted for nearly 70 percent of all deaths in this age group. Both biological and socioeconomic factors are strongly associated with death among older working-age adults. Men had a higher death rate than women, and adults with a high school education or less had a death rate more than twice as high as the rate for adults with more than a high school education in 1999 (2).

References

1. Centers for Disease Control and Prevention. Achievements in public health, 1900–1999: Decline in deaths from heart disease and stroke—United States, 1900–1999. MMWR 48(30):649–56. 1999.
2. Hoyert DL, Arias E, Smith BL, Murphy SL, Kochanek KD. Deaths: Final data for 1999. National vital statistics reports; vol 49 no 8. Hyattsville, Maryland: National Center for Health Statistics. 2001.

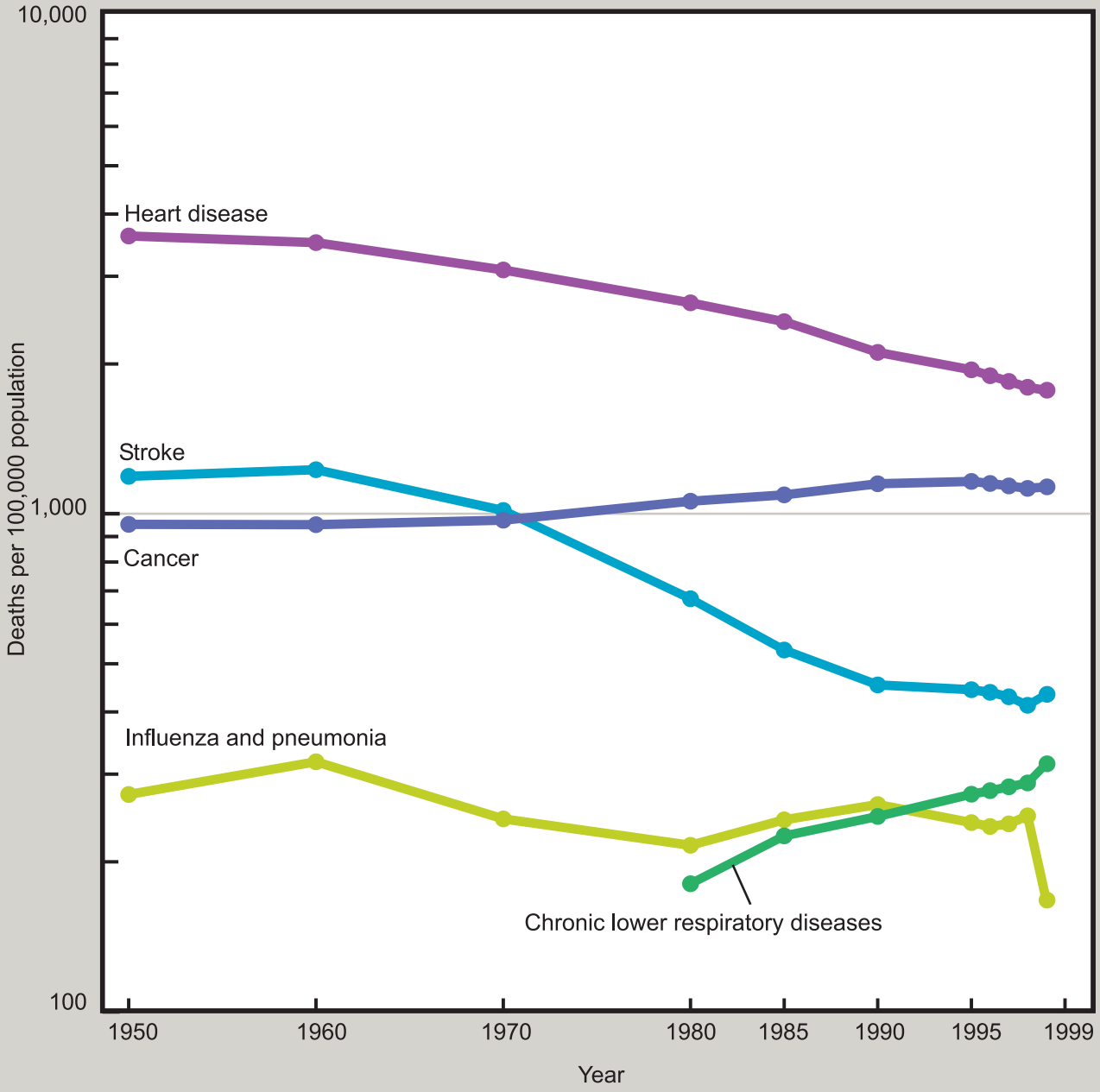
Figure 26. Percent of deaths due to leading causes of death among persons 45-64 years of age: United States, 1999



NOTE: See Data Table for data points graphed and additional notes.

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

Figure 27. Death rates due to leading causes of death among persons 65 years of age and over: United States, 1950-99



NOTES: Death rates are age adjusted to the year 2000 standard population using three age groups: 65-74 years, 75-84 years, and 85 years and over. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD-6), 1960 death rates on the ICD-7, 1970 death rates on the ICDA-8, 1980-1998 death rates on ICD-9, and 1999 death rates on the ICD-10. Causes of death shown are the five leading causes of death among persons 65 years of age and over in 1999. See Data Table for data points graphed and additional notes. Data are plotted on the log scale.

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

Adult Mortality: Elderly

Three-quarters of all deaths in the United States occur among persons 65 years of age and over (*Health, United States, 2002*, table 33). During the past 50 years overall death rates have declined by about one-third for older persons. Chronic diseases have caused most of the deaths among the elderly throughout the 50-year period.

The death rate for heart disease among the elderly declined between 1950 and 1999 by more than 50 percent and the death rate for stroke by more than 60 percent (figure 27). Trends in the other leading causes of death among the elderly varied. The death rate for cancer, the second leading cause of death for the elderly in 1999, rose between 1950 and 1995 and has decreased slightly since 1995. The death rate for the fourth leading cause of death, chronic lower respiratory diseases, has increased since 1980 reflecting, in large part, the effects of cigarette smoking (1).

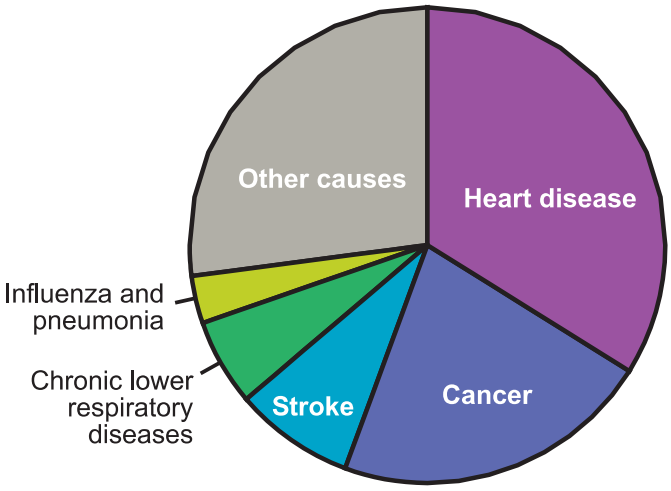
The large difference in the death rate due to influenza and pneumonia between 1998 and 1999 reflects, in large part, changes in the coding of this cause of death. A comparison of the comparability-modified 1998 rate with the 1999 rate indicates a decline of only 3 percent (see data table for figure 27 and Appendix II, Comparability ratio).

In 1999 the underlying cause in over one-third of the deaths to persons 65 years of age and over was heart disease (figure 28). The second leading cause of death, cancer, accounted for about a fifth of all deaths. Each of the other leading causes of death (stroke, chronic lower respiratory diseases, and influenza and pneumonia) accounted for less than 10 percent of deaths to the elderly.

Reference

1. Office of the Surgeon General, U.S. Public Health Service. The health consequences of smoking: Chronic obstructive lung disease. Rockville, Maryland: U.S. Department of Health and Human Services. 1984.

Figure 28. Percent of deaths due to leading causes of death among persons 65 years of age and over: United States, 1999



NOTE: See Data Table for data points graphed and additional notes.

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

Data table for figure 1. Total and elderly population: United States, 1950–2050

Year	Total	65 years and over
	Number in thousands	
1950	150,216	12,257
1960	179,326	16,207
1970	203,212	20,066
1980	226,546	25,549
1990	248,710	31,242
2000	281,422	34,992
2010	299,862	39,715
2020	324,927	53,733
2030	351,070	70,319
2040	377,350	77,177
2050	403,687	81,999

NOTES: Data are for the resident population. Data for 1950 exclude Alaska and Hawaii. See Appendix II, Population.

SOURCES: U.S. Census Bureau, 1980 Census of Population, General Population Characteristics, United States Summary (PC80-1-B1) [includes data for 1950–80]; 1990 Census of Population, General Population Characteristics, United States Summary (CO-1-1); 2000 Census of Population, Profiles of General Demographic Characteristics, United States, www.census.gov/prod/cen2000/dp1/2kh00.pdf accessed on September 27, 2001; Projections of the Total Resident Population by 5-Year Age Groups, and Sex with Special Age Categories: Middle Series, 2006 to 2010 through 2050 to 2070, www.census.gov/population/projections/nation/summary/np-t3-c.txt to np-t3-g.txt accessed on September 27, 2001.

Data table for figure 2. Percent of population in 3 age groups: United States, 1950, 2000, and 2050

Year	All ages	Under 18 years	18–64 years	65 years and over
	Percent			
1950	100.0	31.3	60.6	8.2
2000	100.0	25.7	61.9	12.4
2050	100.0	23.7	56.0	20.3

NOTES: Data are for the resident population. Data for 1950 exclude Alaska and Hawaii. See Appendix II, Population.

SOURCES: U.S. Census Bureau, 1980 Census of Population, General Population Characteristics, United States Summary (PC80-1-B1) [includes data for 1950]; 2000 Census of Population, Profiles of General Demographic Characteristics, United States, www.census.gov/prod/cen2000/dp1/2kh00.pdf accessed on September 27, 2001; Projections of the Total Resident Population by 5-Year Age Groups, and Sex with Special Age Categories: Middle Series, 2050 to 2070, www.census.gov/population/projections/nation/summary/np-t3-g.txt accessed on September 27, 2001.

Data table for figure 3. Percent of population in selected race and Hispanic origin groups by age: United States, 1980–2000

Race and Hispanic origin	All ages			Under 18 years			18 years and over		
	1980	*1990*	*2000*	*1980*	*1990*	*2000*	*1980*	*1990*	*2000*
	Percent								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Hispanic or Latino	6.4	9.0	12.5	8.8	12.2	17.1	5.5	7.9	11.0
Not Hispanic or Latino									
White	79.7	75.6	69.1	74.0	68.9	60.9	82.0	78.0	72.0
Black or African American	11.5	11.7	12.1	14.5	14.7	14.7	10.3	10.7	11.2
Asian or Pacific Islander	1.6	2.8	3.7	1.7	3.1	3.5	1.5	2.7	3.8
American Indian or Alaska Native	0.6	0.7	0.7	0.8	1.0	0.9	0.5	0.6	0.7
Other race	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.1
2 or more races	. . .	. . .	1.6	. . .	. . .	2.6	. . .	. . .	1.3

. . . Category not applicable.

NOTES: Data are for the resident population. Persons of Hispanic origin may be of any race. Race data for 2000 are not directly comparable with data from 1980 and 1990. Individuals could report only one race in 1980 and 1990, and more than one race in 2000. Persons who selected more than one race in 2000 are shown as having two or more races and are not included in any other racial category; persons in single race categories in 2000 selected only one race. In 2000 the category, Asian or Pacific Islander, includes Asian and Native Hawaiian or Other Pacific Islander. See Appendix II, Hispanic origin and Race.

SOURCES: U.S. Census Bureau, 1980 Census of Population PC80-1-C1, tables 100, 121, 131, and 167; 1990 Census of Population 1990-CP-1-1, table 3; and Census 2000 Redistricting Data (P.L. 94–171), www.census.gov/population/cen2000/phc-t1/tab01.pdf, accessed on August 17, 2001.

Data table for figure 4. Low income population by age, race, and Hispanic origin: United States, 2000

Age, race, and Hispanic origin	*Poor*	*Near poor*
	Percent	
All races and origins		
All ages	11.3	17.9
Under 18 years	16.1	21.3
18–64 years	9.4	14.8
65 years and over	10.2	27.1
White, not Hispanic or Latino		
All ages	7.5	14.7
Under 18 years	9.3	16.3
18–64 years	6.7	11.6
65 years and over	8.3	26.0
Black or African American		
All ages	22.0	24.4
Under 18 years	30.6	28.2
18–64 years	17.4	21.3
65 years and over	22.4	32.3
Hispanic or Latino		
All ages	21.2	30.1
Under 18 years	28.0	34.2
18–64 years	17.4	27.0
65 years and over	18.8	36.8

NOTES: Data are for the civilian noninstitutionalized population. Black race includes persons of both Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Poor is defined as family income less than 100 percent of the poverty level and near poor as 100–199 percent of the poverty level. See Appendix II, Poverty level. See related *Health, United States, 2002,* table 2.

SOURCES: Dalaker J. Poverty in the United States: 2000. Current population reports, series P-60 no 214. Washington, DC: U.S. Government Printing Office. 2001; Table 2. Age, Sex, Household Relationship, Race and Hispanic Origin by Ratio of Income to Poverty Level: 2000, ferret.bls.census.gov/macro/032001/pov/new02_001.htm to new02_006.htm accessed on March 26, 2002.

Data table for figure 5. Health insurance coverage among persons under 65 years of age: United States, 1984–2000

Year	Health insurance coverage					
	Private		*Medicaid*		*Uninsured*	
	Percent	*SE*	*Percent*	*SE*	*Percent*	*SE*
1984	77.1	0.6	6.7	0.3	14.3	0.4
1989	76.2	0.4	7.1	0.2	15.3	0.3
1994	70.3	0.4	11.0	0.3	17.3	0.3
1995	71.6	0.4	11.3	0.2	15.9	0.2
1996	71.5	0.5	10.9	0.3	16.5	0.3
1997	70.9	0.3	9.6	0.2	17.4	0.2
1998	72.3	0.4	8.8	0.2	16.5	0.2
1999	72.9	0.3	9.0	0.2	16.1	0.2
2000	71.7	0.3	9.4	0.2	16.8	0.2

SE Standard error.

NOTES: Data are for the civilian noninstitutionalized population. Percents are age adjusted to the 2000 standard population using three age groups: under 18 years, 18–44 years, and 45–64 years. Medicaid includes other public assistance through 1996; includes State-sponsored health plans starting in 1997; and includes Child Health Insurance Program (CHIP) starting in 1999. Uninsured persons are not covered by private insurance, Medicaid, CHIP, public assistance (through 1996), State-sponsored or other government-sponsored health plans (starting in 1997), Medicare, or military plans. Percents do not add to 100 because the percent of persons with Medicare, military plans, and other government-sponsored plans is not shown and because persons with both private insurance and Medicaid appear in both categories. See Appendix II, Age adjustment and Health insurance coverage. See related *Health, United States, 2002,* tables 127–129.

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

Data table for figure 6. No health insurance coverage among persons under 65 years of age by selected characteristics: United States, 2000

Characteristic	*Percent*	*SE*
Age		
Under 18 years	12.4	0.3
18–24 years	29.7	0.7
25–34 years	22.7	0.5
35–44 years	16.8	0.4
45–54 years	12.8	0.3
55–64 years	12.5	0.4
Percent of poverty level		
Below 100 percent	34.2	0.8
100–149 percent	36.5	1.0
150–199 percent	27.3	0.9
200 percent or more	8.7	0.2
Hispanic or Latino		
Mexican	39.9	0.9
Puerto Rican	16.4	1.3
Cuban	25.2	2.2
Other Hispanic	32.7	1.4
Not Hispanic or Latino		
White only	12.5	0.3
Black or African American only	20.0	0.6

SE Standard error.

NOTES: Data are for the civilian noninstitutionalized population. Percents by poverty level, race, and Hispanic origin are age adjusted to the year 2000 standard population using three age groups: under 18 years, 18–44 years, and 45–64 years. Persons of Hispanic origin may be of any race. Uninsured persons are not covered by private insurance, Medicaid, Child Health Insurance Program (CHIP), State-sponsored or other government-sponsored health plans, Medicare, or military plans. Percent of poverty level was unknown for 26 percent of sample persons under 65 years of age in 2000. See Appendix II, Age adjustment, Health insurance coverage, Poverty, and Race. See related *Health, United States, 2002,* table 129.

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

Data table for figure 7. Cigarette smoking among men, women, high school students, and mothers during pregnancy: United States, 1965–2001

Year	Men		Women		High school students		Mothers during pregnancy
	Percent	SE	Percent	SE	Percent	SE	Percent
1965	51.2	0.3	33.7	0.3	- - -	- - -	- - -
1974	42.8	0.5	32.2	0.4	- - -	- - -	- - -
1979	37.0	0.5	30.1	0.5	- - -	- - -	- - -
1983	34.8	0.6	29.4	0.4	- - -	- - -	- - -
1985	32.2	0.5	27.9	0.4	- - -	- - -	- - -
1987	30.9	0.4	26.5	0.4	- - -	- - -	- - -
1988	30.3	0.4	25.7	0.3	- - -	- - -	- - -
1989	- - -	- - -	- - -	- - -	- - -	- - -	19.5
1990	28.0	0.4	22.9	0.3	- - -	- - -	18.4
1991	27.6	0.4	23.5	0.3	27.5	1.4	17.8
1992	28.1	0.5	24.6	0.5	- - -	- - -	16.9
1993	27.3	0.6	22.6	0.4	30.5	1.0	15.8
1994	27.6	0.5	23.1	0.5	- - -	- - -	14.6
1995	26.5	0.6	22.7	0.5	34.8	1.1	13.9
1996	- - -	- - -	- - -	- - -	- - -	- - -	13.6
1997	27.1	0.4	22.2	0.4	36.4	1.2	13.2
1998	25.9	0.4	22.1	0.4	- - -	- - -	12.9
1999	25.2	0.5	21.6	0.4	34.8	1.3	12.6
2000	25.2	0.4	21.1	0.4	- - -	- - -	12.2
2001	- - -	- - -	- - -	- - -	28.5	1.0	- - -

SE Standard error.
- - - Data not available.

NOTES: Data for men and women are for the civilian noninstitutionalized population. Percents for men and women are age adjusted to the 2000 standard population using five age groups: 18–24 years, 25–34 years, 35–44 years, 45–64 years, and 65 years and over. Cigarette smoking is defined as follows: among men and women 18 years and over, those who ever smoked 100 cigarettes in their lifetime and now smoke every day or some days; among high school students (grades 9–12), those who smoked cigarettes on 1 or more of the 30 days preceding the survey; and among mothers with a live birth, those who smoked during pregnancy. See Appendix II, Age adjustment and Cigarette smoking. See related *Health, United States, 2002,* tables 11 and 61.

SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey (data for men and women); National Vital Statistics System (data for mothers during pregnancy); National Center for Chronic Disease Prevention and Health Promotion, Youth Risk Behavior Survey (data for high school students).

Data table for figure 8. Overweight and obesity by age: United States, 1960–99

Year	Children, 6–11 years		Adolescents, 12–19 years		Adults, 20–74 years			
	Overweight				Overweight		Obesity	
	Percent	SE	Percent	SE	Percent	SE	Percent	SE
1960–62	- - -	- - -	- - -	- - -	44.8	1.0	13.3	0.6
1963–65	4.2	0.4	- - -	- - -	- - -	- - -	- - -	- - -
1966–70	- - -	- - -	4.6	0.3	- - -	- - -	- - -	- - -
1971–74	4.0	0.5	6.1	0.7	47.7	0.7	14.6	0.5
1976–80	6.5	0.6	5.0	0.6	47.4	0.8	15.1	0.5
1988–94	11.4	1.0	10.5	0.9	56.0	0.9	23.3	0.7
1999	13.0	- - -	14.0	- - -	61.0	- - -	27.0	- - -

SE Standard error.
- - - Data not available.

NOTES: Data are for the civilian noninstitutionalized population. Percents for adults are age adjusted to the 2000 standard population using five age groups: 20–34 years, 35–44 years, 45–54 years, 55–64 years, and 65–74 years. Overweight for children is defined as a body mass index (BMI) at or above the sex- and age-specific 95th percentile BMI cut points from the 2000 CDC Growth Charts: United States. Overweight for adults is defined as a BMI greater than or equal to 25 and obesity as a BMI greater than or equal to 30. Data for 1966–70 are for adolescents 12–17 years, not 12–19 years. Pregnant adolescents were excluded beginning in 1971–74. Pregnant women 20 years of age and over were excluded in all years. 1999 data are preliminary estimates from the 1999 National Health and Nutrition Examination Survey (NHANES). 1999 data are limited in sample size and geographic coverage and, therefore, are subject to more sampling error than multi-year NHANES. As a result, annual prevalence estimates may fluctuate more than those from multi-year NHANES. See Appendix II, Age adjustment and Body mass index (BMI). See related *Health, United States, 2002,* tables 70 and 71.

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

Data table for figure 9. High school students not engaging in recommended amounts of physical activity (neither moderate nor vigorous) by grade and sex: United States, 2001

Grade	All students		Male students		Female students	
	Percent	SE	Percent	SE	Percent	SE
Grade 9	24.3	1.4	20.1	1.6	28.1	1.9
Grade 10	29.6	0.9	23.6	1.1	35.6	1.7
Grade 11	34.4	1.2	24.4	1.3	44.2	1.6
Grade 12	38.9	1.4	29.5	2.1	47.9	1.2
All grades	31.2	0.7	24.2	0.8	37.9	1.2

SE Standard error.

NOTES: The recommended amount of moderate physical activity for high school students is at least 30 minutes of activities, which do not cause sweating or hard breathing, on 5 or more of the past 7 days. The recommended amount of vigorous physical activity is at least 20 minutes of activities, which cause sweating and hard breathing, on 3 or more of the past 7 days. The recommended amounts of physical activity for high school students are based on the Healthy People 2010 objectives 22–6 and 22–7 (moderate and vigorous activity in adolescents).

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

Data table for figure 10. Adults not engaging in leisure-time physical activity by age and sex: United States, 2000

Age	Total		Men		Women	
	Percent	SE	Percent	SE	Percent	SE
18–24 years	30.7	1.0	25.9	1.4	35.5	1.4
25–44 years	33.8	0.6	31.6	0.8	36.0	0.7
45–64 years	41.0	0.7	40.6	1.0	41.5	0.8
65–74 years	46.2	1.1	42.0	1.6	49.7	1.3
75 years and over	59.4	1.2	52.6	2.0	63.7	1.3

SE Standard error.

NOTES: Data are for the civilian noninstitutionalized population. Leisure-time physical inactivity is defined as not engaging in at least 10 minutes of physical activity which causes an increase in sweating, breathing, or heart rate.

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

Data table for figure 11. Early prenatal care among mothers: United States, 1970–2000

Year	Percent
1970	68.0
1975	72.4
1980	76.3
1985	76.2
1990	75.8
1993	78.9
1994	80.2
1995	81.3
1996	81.9
1997	82.5
1998	82.8
1999	83.2
2000	83.2

NOTES: Early prenatal care begins during the first trimester of pregnancy. See related *Health, United States, 2002,* table 6.

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

Data table for figure 12. Early prenatal care by detailed race and Hispanic origin of mother: United States, 2000

Race and Hispanic origin of mother	Percent
White, not Hispanic or Latino	88.5
Black or African American, not Hispanic or Latino	74.3
Hispanic or Latino	74.4
Cuban	91.7
Puerto Rican	78.5
Central and South American	77.6
Other and unknown Hispanic or Latino	75.8
Mexican	72.9
Asian or Pacific Islander	84.0
Japanese	91.0
Chinese	87.6
Filipino	84.9
Other Asian or Pacific Islander	82.5
Hawaiian	79.9
American Indian or Alaska Native	69.3

NOTES: Early prenatal care begins during the first trimester of pregnancy. Hispanic origin categories include persons of any race. The race groups, Asian or Pacific Islander and American Indian or Alaska Native, include persons of Hispanic and non-Hispanic origin. See related *Health, United States, 2002,* table 6.

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

Data table for figure 13. Influenza and pneumococcal vaccination among adults 65 years of age and over: United States, 1989–2000

Year	Influenza vaccination during past 12 months		Pneumococcal vaccination ever	
	Percent	SE	Percent	SE
1989	31.0	0.5	14.3	0.4
1990	- - -	- - -	- - -	- - -
1991	42.3	0.7	21.5	0.6
1992	- - -	- - -	- - -	- - -
1993	52.3	0.9	28.5	0.8
1994	55.6	0.9	29.9	0.8
1995	58.8	0.9	34.5	0.9
1996	- - -	- - -	- - -	- - -
1997	63.5	0.7	42.6	0.7
1998	63.6	0.7	46.3	0.8
1999	65.9	0.8	49.9	0.8
2000	64.5	0.7	53.2	0.8

SE Standard error.
- - - Data not available.

NOTES: Data are for the civilian noninstitutionalized population and are age adjusted to the 2000 standard population using two age groups: 65–74 years and 75 years and over. See Appendix II, Age adjustment.

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

Data table for figure 14. Influenza and pneumococcal vaccination among adults 65 years of age and over by race and Hispanic origin: United States, 2000

Race and Hispanic origin	Influenza vaccination during past 12 months		Pneumococcal vaccination ever	
	Percent	SE	Percent	SE
Not Hispanic or Latino				
White only	66.7	0.8	56.9	0.8
Black or African American only	48.2	2.3	30.8	2.1
Hispanic or Latino	55.6	2.6	30.5	2.7

SE Standard error.

NOTES: Data are for the civilian noninstitutionalized population and are age adjusted to the 2000 standard population using two age groups: 65–74 years and 75 years and over. Hispanics may be of any race. See Appendix II, Age adjustment and Race.

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

Data table for figure 15. Limitation of activity caused by 1 or more chronic health conditions among children by sex and age: United States, 1998–2000

Sex and age	*Limitation of activity indicated by participation in special education or early intervention services only*		*All other limitation of activity*		*Any limitation of activity*	
	Percent	*SE*	*Percent*	*SE*	*Percent*	*SE*
Boys						
Under 5 years	2.2	0.2	1.6	0.2	3.8	0.2
5–11 years	6.5	0.2	2.4	0.2	8.9	0.3
12–17 years	6.8	0.3	2.5	0.2	9.3	0.3
Girls						
Under 5 years	1.1	0.1	1.1	0.1	2.2	0.2
5–11 years	3.7	0.2	1.2	0.1	4.8	0.3
12–17 years	3.4	0.2	1.8	0.2	5.2	0.3

SE Standard error.

NOTES: Data are for noninstitutionalized children. Children with limitation of activity caused by chronic health conditions may be identified by enrollment in special programs (special education or early intervention services) or by some other activity limitation. The category, all other limitation of activity, may include children receiving special education or early intervention services. In 1998 data cover only July–December due to an error with the computer-assisted personal interview (CAPI) during January–June. See Appendix II, Limitation of activity.

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

Data table for figure 16. Limitation of activity caused by 1 or more chronic health conditions among adults by age: United States, 1998–2000

Age	*ADL limitation*		*IADL limitation*		*Any limitation of activity*	
	Percent	*SE*	*Percent*	*SE*	*Percent*	*SE*
18–44 years	0.4	0.0	1.0	0.0	6.2	0.1
45–64 years	1.2	0.1	2.9	0.1	16.2	0.2
65–74 years	3.2	0.2	6.5	0.2	27.5	0.4
75 years and over	9.6	0.3	19.6	0.4	46.0	0.6

SE Standard error.

NOTES: Data are for the civilian noninstitutionalized population. Limitation of activity is assessed by asking respondents a series of questions about limitations in their ability to perform activities usual for their age group because of a physical, mental, or emotional problem. Respondents are asked about limitations in activities of daily living (ADLs), instrumental activities of daily living (IADLs), limitations in work, walking, memory, and other activities. Persons may report limitations for an ADL, an IADL, and some other activity. Any limitation of activity may include limitations in ADLs and IADLs. For adults identified as having limitation of activity, the causal health conditions are determined and respondents are considered limited if one or more of these conditions is chronic. In 1998 data cover only July–December due to an error with the computer-assisted personal interview (CAPI) during January–June. See Appendix II, Activities of daily living, Instrumental activities of daily living, and Limitation of activity. See related *Health, United States, 2002,* table 58.

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

Data table for figure 17. Selected chronic health conditions causing limitation of activity among adults by age: United States, 1998–2000

	Number of persons with limitation of activity caused by selected chronic health conditions per 1,000 population							
	18–44 years		*45–64 years*		*65–74 years*		*75 years and over*	
Type of chronic health condition	*Rate*	*SE*	*Rate*	*SE*	*Rate*	*SE*	*Rate*	*SE*
Mental illness	10.4	0.4	18.6	0.8	11.4	1.0	10.7	1.0
Diabetes	2.6	0.2	18.5	0.7	38.4	1.8	42.5	2.0
Fractures/joint injury	6.8	0.3	15.9	0.7	25.4	1.4	48.6	2.2
Vision/hearing	4.2	0.3	13.8	0.6	31.2	1.6	82.5	3.0
Heart/other circulatory	5.4	0.3	45.5	1.2	110.8	3.0	170.9	4.1
Arthritis/other musculoskeletal	22.0	0.6	73.2	1.5	117.8	3.1	193.1	4.3

SE Standard error.

NOTES: Data are for the civilian noninstitutionalized population. Selected chronic health conditions include the three leading causes of activity limitation among adults in each age category. Conditions refer to response categories in the National Health Interview Survey; some conditions include several response categories. "Mental illness" includes depression, anxiety or emotional problem, and other mental conditions. "Heart/other circulatory" includes heart problem, stroke problem, hypertension or high blood pressure, and other circulatory system conditions. "Arthritis/other musculoskeletal" includes arthritis/rheumatism, back or neck problem, and other musculoskeletal system conditions. Persons may report more than one chronic health condition as the cause of their activity limitation. In 1998 data cover only July–December due to an error with the computer-assisted personal interview (CAPI) during January–June. See Appendix II, Activities of daily living, Instrumental activities of daily living, and Limitation of activity.

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

Data table for figure 18. Life expectancy at birth and at 65 years of age by sex: United States, 1901–99

	At birth		*At 65 years*	
Year	*Male*	*Female*	*Male*	*Female*
	Life expectancy in years			
1900–02	47.9	50.7	11.5	12.2
1909–11	49.9	53.2	11.2	12.0
1919–21	55.5	57.4	12.2	12.7
1929–31	57.7	60.9	11.7	12.8
1939–41	61.6	65.9	12.1	13.6
1949–51	65.5	71.0	12.7	15.0
1959–61	66.8	73.2	13.0	15.8
1969–71	67.0	74.6	13.0	16.8
1979–81	70.1	77.6	14.2	18.4
1989–91	71.8	78.8	15.1	19.0
1997	73.6	79.4	15.9	19.2
1998	73.8	79.5	16.0	19.2
1999	73.9	79.4	16.1	19.1

NOTES: Life expectancies prior to 1997 are from decennial life tables based on census data and deaths for a 3-year period around the census year. Beginning in 1997, the annual life tables are complete life tables based on a methodology similar to that used for decennial life tables. Alaska and Hawaii were included beginning in 1959. For decennial periods prior to 1929–31, data are limited to registration States: 1900–02 and 1909–11, 10 States and the District of Columbia; 1919–21, 34 States and the District of Columbia. Deaths to nonresidents were excluded beginning in 1970. See Appendix II, Life expectancy. See related *Health, United States, 2002,* table 28.

SOURCES: Anderson RN. United States life tables, 1997. National vital statistics reports; vol 47 no 28. Hyattsville, Maryland: National Center for Health Statistics. 1999 (data for 1900–97); Anderson RN. United States life tables, 1998. National vital statistics reports; vol 48 no 18. Hyattsville, Maryland: National Center for Health Statistics. 2001 (data for 1998); Hoyert DL, Arias E, Smith BL. Deaths: Final data for 1999. National vital statistics reports; vol 49 no 8. Hyattsville, Maryland: National Center for Health Statistics. 2001 (data for 1999).

Data table for figure 19. Infant, neonatal, and postneonatal mortality rates: United States, 1950–99

Year	*Infant*	*Neonatal*	*Post-neonatal*
	Deaths per 1,000 live births		
1950	29.2	20.5	8.7
1960	26.0	18.7	7.3
1970	20.0	15.1	4.9
1980	12.6	8.5	4.1
1985	10.6	7.0	3.7
1990	9.2	5.8	3.4
1995	7.6	4.9	2.7
1996	7.3	4.8	2.5
1997	7.2	4.8	2.5
1998	7.2	4.8	2.4
1999	7.1	4.7	2.3

NOTES: Infant is defined as under 1 year of age, neonatal as under 28 days of age, and postneonatal as between 28 days and 1 year of age. See related *Health, United States, 2002,* table 20.

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

Data table for figure 20. Infant mortality rates by detailed race and Hispanic origin of mother: United States, 1997–99

Race and Hispanic origin of mother	*Infant deaths per 1,000 live births*
White, not Hispanic or Latino	5.9
Black or African American, not Hispanic or Latino	13.9
Hispanic or Latino	5.8
Puerto Rican	8.0
Other and unknown Hispanic or Latino	6.7
Mexican	5.6
Central and South American	5.1
Cuban	4.6
Asian or Pacific Islander	5.1
Hawaiian	8.6
Filipino	6.0
Other Asian or Pacific Islander	5.2
Japanese	4.1
Chinese	3.3
American Indian or Alaska Native	9.1

NOTES: Infant is defined as under 1 year of age. Hispanic origin categories include persons of any race. The race groups, Asian or Pacific Islander and American Indian or Alaska Native, include persons of Hispanic and non-Hispanic origin. See related *Health, United States, 2002,* table 20.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, National Linked Birth/Infant Death Data Sets.

Data table for figure 21. Death rates for leading causes of death among persons 1–24 years of age: United States, 1950–99

Year	1–24 years						15–24 years					
	All causes	*Unintentional injuries*	*Homicide*	*Suicide*	*Cancer*	*Heart disease*	*All causes*	*Unintentional injuries*	*Homicide*	*Suicide*	*Cancer*	*Heart disease*
	Deaths per 100,000 population						Deaths per 100,000 population					
1950	100.8	38.1	2.7	1.9	8.3	3.9	128.1	54.8	5.8	4.5	8.6	6.8
1960	81.2	36.3	2.6	2.3	8.1	2.4	106.3	56.0	5.6	5.2	8.3	4.0
1970	83.6	41.8	5.3	3.7	7.2	1.8	127.7	68.7	11.3	8.8	8.3	3.0
1980	70.7	35.8	7.2	5.2	5.1	2.0	115.4	61.7	15.4	12.3	6.3	2.9
1985	58.6	28.3	5.7	5.6	4.3	1.9	94.9	47.9	11.7	12.8	5.4	2.8
1990	58.4	25.2	9.1	5.7	3.9	1.7	99.2	43.9	19.7	13.2	4.9	2.5
1995	55.2	22.1	9.3	5.8	3.5	1.8	95.3	38.5	20.0	13.3	4.6	2.9
1996	52.1	21.6	8.3	5.2	3.4	1.7	89.6	38.1	17.9	12.0	4.5	2.7
1997	49.9	20.8	7.7	5.0	3.5	1.8	86.2	36.5	16.6	11.4	4.5	3.0
1998	47.8	20.3	6.9	4.9	3.4	1.7	82.3	35.9	14.6	11.1	4.6	2.8
1998 (Comparability-modified)	47.8	20.9	6.9	4.9	3.4	1.7	82.3	37.0	14.6	11.1	4.6	2.8
1999	47.0	20.2	6.3	4.5	3.4	1.6	81.2	36.2	13.2	10.3	4.6	2.8

NOTES: Death rates for 1–24 years of age are age adjusted to the year 2000 standard population using three age groups: 1–4 years, 5–14 years, and 15–24 years. Causes of death shown are the five leading causes of death among persons 1–24 years of age in 1999. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD–6), 1960 death rates on the ICD–7, 1970 death rates on the ICDA–8, and 1980–98 death rates on the ICD–9. 1998 (Comparability-modified) death rates use comparability ratios to adjust the rate to be comparable to records classified according to the ICD–10. 1999 death rates are based on the ICD–10. Comparability ratios for selected ICD revisions are available at www.cdc.gov/nchs/data/comp2.pdf. Homicide refers to deaths due to assault. Suicide refers to deaths from intentional self-harm. Suicide is not a cause of death for children under 5 years of age. Cancer refers to malignant neoplasms. See Appendix II, Age adjustment, Cause of death, and Comparability ratio. See related *Health, United States, 2002,* tables 36, 37, 39, 46, and 47.

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

Data table for figure 22. Percent of deaths due to leading causes of death among persons 1–24 years of age: United States, 1999

Cause of death	*1–24 years*	*15–24 years*
	Percent	
Unintentional injuries	42.9	44.5
Homicide	13.4	16.3
Suicide	9.5	12.7
Cancer	7.3	5.6
Heart disease	3.5	3.5
Other causes	23.5	17.3

NOTES: 1999 deaths are coded according to the tenth revision of the International Classification of Disease (ICD–10). Homicide refers to deaths due to assault. Suicide refers to deaths from intentional self-harm. Suicide is not a cause of death for children under 5 years of age. Cancer refers to malignant neoplasms. See Appendix II, Cause of death. See related *Health, United States, 2002,* tables 37, 39, 46, and 47.

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

Data table for figure 23. Death rates for leading causes of death among persons 25–44 years of age: United States, 1950–99

Year	All causes	Unintentional injuries	Cancer	Heart disease	Suicide	Year	Human immuno-deficiency virus (HIV) disease
	Deaths per 100,000 population					Deaths per 100,000 population	
1950	276.9	45.7	43.3	55.9	11.9	1987	13.0
1960	229.8	41.9	41.4	47.8	12.3	1988	16.0
1970	243.1	49.7	39.9	41.6	15.6	1989	21.0
1980	185.9	41.4	32.7	28.1	15.7	1990	23.9
1985	169.8	34.6	31.0	24.6	14.9	1991	27.1
1990	185.0	33.9	29.3	20.6	15.3	1992	30.6
1995	195.6	33.2	27.4	21.3	15.3	1993	33.6
1996	178.3	32.4	26.9	20.4	15.0	1994	37.4
1997	163.1	32.5	26.5	20.2	14.8	1995	37.4
1998	158.7	32.7	26.0	20.4	14.7	1996	26.2
1998 (Comparability-modified)	158.7	33.7	26.1	20.1	14.6	1997	13.4
1999	157.9	32.8	25.2	20.2	14.0	1998	10.4
						1998 (Comparability-modified)	12.0
						1999	10.9

NOTES: Death rates are age adjusted to the year 2000 standard population using two age groups: 25–34 years and 35–44 years. Causes of death shown are the five leading causes of death among persons 25–44 years of age in 1999. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD–6), 1960 death rates on the ICD–7, 1970 death rates on the ICDA–8, and 1980–98 death rates on the ICD–9. 1998 (Comparability-modified) death rates use comparability ratios to adjust the rate to be comparable to records classified according to the ICD–10. 1999 death rates are based on the ICD–10. Comparability ratios for selected ICD revisions are available at www.cdc.gov/nchs/data/comp2.pdf. Cancer refers to malignant neoplasms. Suicide refers to deaths from intentional self-harm. See Appendix II, Age adjustment, Cause of death, and Comparability ratio. See related *Health, United States, 2002,* tables 36, 37, 39, 43, and 47.

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

Data table for figure 24. Percent of deaths due to leading causes of death among persons 25–44 years of age: United States, 1999

Cause of death	Percent
Unintentional injuries	20.8
Cancer	15.9
Heart disease	12.8
Suicide	8.9
Human immunodeficiency virus (HIV) disease	6.9
Other causes	34.8

NOTES: 1999 deaths are coded according to the tenth revision of the International Classification of Disease (ICD–10). Cancer refers to malignant neoplasms. Suicide refers to deaths from intentional self-harm. See Appendix II, Cause of death. See related *Health, United States, 2002,* tables 37, 39, 43, and 47.

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

Data table for figure 25. Death rates for leading causes of death among persons 45–64 years of age: United States, 1950–99

Year	All causes	Cancer	Heart disease	Unintentional injuries	Stroke	Chronic lower respiratory diseases
	Deaths per 100,000 population					
1950	1,265.3	259.8	504.8	60.0	119.0	- - -
1960	1,140.7	263.4	454.9	53.4	87.7	- - -
1970	1,094.9	277.0	401.0	57.3	70.8	- - -
1980	883.5	280.6	303.5	40.4	40.9	22.7
1985	823.7	281.9	267.4	33.7	34.5	25.0
1990	757.6	273.1	217.5	31.3	30.2	24.7
1995	717.2	249.8	194.2	30.6	28.8	24.0
1996	700.6	243.4	189.5	31.1	28.7	23.7
1997	679.4	237.5	182.5	31.6	27.7	23.3
1998	662.0	231.1	174.3	31.9	26.7	22.6
1998 (Comparability-modified)	662.0	232.7	171.8	32.9	28.3	23.7
1999	660.9	228.8	167.1	31.9	25.6	24.3

- - - Data not available.

NOTES: Death rates are age adjusted to the year 2000 standard population using two age groups: 45–54 years and 55–64 years. Causes of death are the five leading causes of death among persons 45–64 years of age in 1999. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD–6), 1960 death rates on the ICD–7, 1970 death rates on the ICDA–8, and 1980–98 death rates on the ICD–9. 1998 (Comparability-modified) death rates use comparability ratios to adjust the rate to be comparable to records classified according to the ICD–10. 1999 death rates are based on the ICD–10. Comparability ratios for selected ICD revisions are available at www.cdc.gov/nchs/data/comp2.pdf. Death rates for chronic lower respiratory diseases are not available prior to 1980 because of changes in medical terminology and the classification of these terms in the relevant ICD revisions. Cancer refers to malignant neoplasms. Stroke refers to cerebrovascular diseases. See Appendix II, Age adjustment, Cause of death, and Comparability ratio. See related *Health, United States, 2002,* tables 37, 38, 39, and 42.

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

Data table for figure 26. Percent of deaths due to leading causes of death among persons 45–64 years of age: United States, 1999

Cause of death	Percent
Cancer	34.6
Heart disease	25.3
Unintentional injuries	4.8
Stroke	3.9
Chronic lower respiratory diseases	3.7
Other causes	27.7

NOTES: 1999 deaths are coded according to the tenth revision of the International Classification of Disease (ICD–10). Cancer refers to malignant neoplasms. Stroke refers to cerebrovascular diseases. See Appendix II, Cause of death. See related *Health, United States, 2002,* tables 37, 38, 39, and 42.

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

Data table for figure 27. Death rates due to leading causes of death among persons 65 years of age and over: United States, 1950–99

Year	All causes	Heart disease	Cancer	Stroke	Chronic lower respiratory diseases	Influenza and pneumonia
	Deaths per 100,000 population					
1950	7,933.3	3,613.3	952.4	1,188.8	- - -	273.0
1960	7,536.4	3,503.6	950.9	1,225.9	- - -	317.7
1970	6,717.5	3,089.4	971.0	1,015.5	- - -	243.9
1980	5,900.2	2,652.9	1,060.2	675.3	180.7	215.8
1985	5,694.0	2,431.0	1,091.2	532.6	225.5	242.9
1990	5,395.9	2,108.8	1,149.3	453.1	246.8	260.7
1995	5,313.8	1,946.1	1,161.6	443.3	273.5	239.7
1996	5,265.9	1,893.6	1,150.4	437.9	277.9	235.5
1997	5,226.6	1,844.0	1,137.9	428.8	282.9	238.4
1998	5,181.4	1,794.8	1,124.8	412.4	288.0	247.4
1998 (Comparability-modified)	5,181.4	1,769.4	1,132.5	436.7	301.8	172.8
1999	5,237.5	1,771.5	1,132.8	434.0	314.6	167.5

- - - Data not available.

NOTES: Death rates are age adjusted to the year 2000 standard population using three age groups: 65–74 years, 75–84 years, and 85 years and over. Causes of death shown are the five leading causes of death among persons 65 years of age and over in 1999. 1950 death rates are based on the sixth revision of the International Classification of Disease (ICD–6), 1960 death rates on the ICD–7, 1970 death rates on the ICDA–8, and 1980–98 death rates on the ICD–9. 1998 (Comparability-modified) death rates use comparability ratios to adjust the rate to be comparable to records classified according to the ICD–10. 1999 death rates are based on the ICD–10. Comparability ratios for selected ICD revisions are available at www.cdc.gov/nchs/data/comp2.pdf. Death rates for chronic lower respiratory diseases are not shown prior to 1980 because of changes in medical terminology and the classification of these terms in the relevant ICD revisions. Cancer refers to malignant neoplasms. Stroke refers to cerebrovascular diseases. See Appendix II, Age adjustment, Cause of death, and Comparability ratio. See related *Health, United States, 2002,* tables 36, 37, 38, 39, and 42.

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

Data table for figure 28. Percent of deaths due to leading causes of death among persons 65 years of age and over: United States, 1999

Cause of death	Percent
Heart disease	33.8
Cancer	21.7
Stroke	8.3
Chronic lower respiratory diseases	6.0
Influenza and pneumonia	3.2
Other causes	27.0

NOTES: 1999 deaths are coded according to the tenth revision of the International Classification of Disease (ICD–10). Cancer refers to malignant neoplasms. Stroke refers to cerebrovascular diseases. See Appendix II, Cause of death. See related *Health, United States, 2002,* tables 37, 38, 39, and 42.

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

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Appendix I

Data Sources

This report consolidates the most current data on the health of the population of the United States, the availability and use of health resources, and health care expenditures. The information was obtained from the data files and/or published reports of many Federal Government and private and global agencies and organizations. In each case, the sponsoring agency or organization collected data using its own methods and procedures. Therefore, the data in this report vary considerably with respect to source, method of collection, definitions, and reference period.

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 impact of an illness, such as days lost from work or limitation of activity. These data are limited by the amount of information a respondent remembers or is willing to report. Detailed medical information, such as precise diagnoses or the types of operations performed, may not be known and, if so, will not be reported. Health care providers, such as physicians and hospitals, usually have good diagnostic information but little or no information about the socioeconomic characteristics of individuals or the impact of illnesses on individuals.

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. Such statistics do not include data for military personnel who are usually young, for institutionalized people who may be any age, or for nursing home residents who are usually old.

All data collection systems are subject to error, and records may be incomplete or contain inaccurate information. People may not remember essential information, a question may not mean the same thing to different respondents, and some institutions or individuals may not respond at all. It is not always possible to measure the magnitude of these errors or their impact on the data. Where possible, table notes describe the universe and method of data collection, to enable the user to place his or her own evaluation on the data. In many instances data do not add to totals because of rounding.

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, cigarette use is measured by the National Health Interview Survey, the National Household Survey of Drug Abuse, the Monitoring the Future Survey, and the Youth Risk Behavior Survey.

Overall estimates generally have relatively small sampling errors, but estimates for certain population subgroups may be based on small numbers and have relatively large sampling errors. Numbers of births and deaths from the vital statistics system represent complete counts (except for births in those States where data are based on a 50-percent sample for certain years). Therefore, they are not subject to sampling error. However, when the figures are used for analytical purposes, such as the comparison of rates over a period, the number of events that actually occurred may be considered as one of a large series of possible results that could have arisen under the same circumstances. When the number of events is small and the probability of such an event is small, considerable caution must be observed in interpreting the conditions described by the figures. 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.

Descriptive summaries of the data sets that follow provide a general overview of study design, methods of data collection, and reliability and validity of the data. The agency or organization that sponsored the data collection is specified. More complete and detailed discussions are in the publications and Web sites listed at the end of each summary. The entries are listed alphabetically by dataset name.

Government Sources

Abortion Surveillance

Centers for Disease Control and Prevention National Center for Chronic Disease Prevention and Health Promotion

In 1969 CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) began abortion surveillance to document the number and characteristics of women obtaining legal induced abortions, monitor unintended pregnancy, and assist efforts to identify and reduce preventable causes of morbidity and mortality associated with abortions. For each year from 1973–97 abortion data have been available from 52 reporting areas: 50 States, the District of Columbia, and New York City. Beginning in 1998, abortion data are available only from 48 reporting areas coming from central health agencies. The total number of legal induced abortions is available for all reporting areas; however, not all areas collect information on the characteristics of women who obtain abortions. Furthermore the number of States reporting each characteristic and the number of States with complete data for each characteristic varies from year to year. State data with more than 15 percent unknown for a given characteristic are excluded from the analysis of that characteristic.

For 48 reporting areas, data concerning the number and characteristics of women who obtain legal induced abortions are provided by central health agencies such as State health departments and the health departments of New York City and the District of Columbia. In general the procedures are reported by the State in which the procedure is performed. However, two reporting areas (the District of Columbia and Wisconsin) report characteristics of abortions only for area/State residents; characteristics for out-of-area/State residents are unavailable.

The total number of abortions reported to CDC is about 10 percent less than the total estimated independently by the Alan Guttmacher Institute (AGI), a not-for-profit organization for reproductive health research, policy analysis, and public education. See AGI Abortion Survey in Appendix I below.

For more information, see Centers for Disease Control and Prevention, CDC Surveillance Summaries, May 2002. *Morbidity and Mortality Weekly Report* 2002;51 (NoSS-3), Abortion Surveillance—United States, 1998; or contact: Director, Division of Reproductive Health, NCCDPHP, CDC, Atlanta, GA 30341; or visit the NCCDPHP surveillance and research Web site at www.cdc.gov/nccdphp/drh/surveil.htm.

Aerometric Information Retrieval System (AIRS)

Environmental Protection Agency

The Environmental Protection Agency's Aerometric Information Retrieval System (AIRS) compiles data on ambient air levels of particulate matter smaller than 10 microns (PM-10), lead, carbon monoxide, sulphur dioxide, nitrogen dioxide, and tropospheric ozone. These pollutants were identified in the Clean Air Act of 1970 and in its 1977 and 1990 amendments because they pose significant threats to public health. The National Ambient Air Quality Standards (NAAQS) define for each pollutant the maximum concentration level (micrograms per cubic meter) that cannot be exceeded during specific time intervals. Data shown in this publication reflect percent of the population living in nonattainment areas that exceed the NAAQS for a pollutant in a calendar year and population data from the Bureau of the Census. For 1996 and later years, estimates of the population in the year 2000 are used for this calculation.

Nonattainment areas may include single counties, multiple counties, parts of counties, municipalities, or combinations of the preceding jurisdictions. When an area is designated as "nonattainment," it retains this status for 3 years, regardless of annual changes in air quality. Nonattainment areas may also include jurisdictions in which the source of the pollutants is located, even if that jurisdiction meets all NAAQS. The areas monitored may change over time to reflect changes in air quality or the pollutants being monitored.

The EPA's ambient air quality monitoring program is carried out by State and local agencies and consists of three major categories of monitoring stations, State and Local Air Monitoring Stations (SLAMS), National Air Monitoring Stations (NAMS), and Special Purpose Monitoring Stations (SPMS), that measure the criteria pollutants. Additionally, a fourth category of a monitoring station, the Photochemical Assessment Monitoring Stations (PAMS), which measures ozone precursors (approximately 60 volatile hydrocarbons and carbonyl) has been required by the 1990 Amendments to the Clean Air Act.

SLAMS consist of a network of about 4,000 monitoring stations whose size and distribution is largely determined by

the needs of State and local air pollution control agencies to meet their respective State implementation plan requirements. The NAMS (1,080 stations) are a subset of the SLAMS network with emphasis being given to urban and multi-source areas. In effect they are key sites under SLAMS, with emphasis on areas of maximum concentrations and high population density. SPMS provide for special studies needed by the State and local agencies to support State implementation plans and other air program activities. SPMS are not permanently established and can be adjusted easily to accommodate changing needs and priorities. SPMS are used to supplement the fixed monitoring network as circumstances require and resources permit.

For more information, write: Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, NC 27711; or visit the EPA Office of Air Quality Planning and Standards home page at www.epa.gov/oar/oaqps.

AIDS Surveillance

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Acquired immunodeficiency syndrome (AIDS) surveillance is conducted by health departments in each State, territory, and the District of Columbia. 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 to CDC without personal identifiers.

AIDS surveillance data are used to detect epidemiologic trends, to identify unusual cases requiring followup, and for semiannual publication in the *HIV/AIDS Surveillance Report*. Studies to determine the completeness of reporting of AIDS cases meeting the national surveillance definition suggest reporting at greater than or equal to 90 percent.

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. A growing number of States require confidential reporting of persons with HIV infection and participate in CDC's integrated HIV/AIDS surveillance system that compiles information on the population of persons newly diagnosed and living with HIV infection.

For more information on AIDS surveillance, see: Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, published semiannually; or contact: Chief, Surveillance Branch, Division of HIV/AIDS Prevention—Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), Centers for Disease Control and Prevention, Atlanta, GA 30333; or visit the NCHSTP home page at www.cdc.gov/nchstp/od/nchstp.html.

Census of Fatal Occupational Injuries (CFOI)

Bureau of Labor Statistics

The Census of Fatal Occupational Injuries (CFOI), administered by the Bureau of Labor Statistics (BLS) in conjunction with participating State agencies, compiles comprehensive and timely information on fatal work injuries occurring in the 50 States and the District of Columbia. To compile counts that are as complete as possible, the BLS census uses diverse sources to identify, verify, and profile fatal work injuries. Key information about each workplace fatality (occupation and other worker characteristics, equipment or machinery involved, and circumstances of the event) is obtained by cross-referencing the source records. Work relationship is verified for each work injury fatality by using at least two independent source documents. For a fatality to be included in the census, the decedent must have been employed (that is, working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job. These criteria are generally broader than those used by Federal and State agencies administering specific laws and regulations. Fatalities that occur during a person's commute to or from work are excluded from the census counts.

Data for the CFOI are compiled from various Federal, State, and local administrative sources—including death certificates, workers' compensation reports and claims, reports to various regulatory agencies, medical examiner reports, and police

reports—as well as news reports. Diverse sources are used because studies have shown that no single source captures all job-related fatalities. Source documents are matched so that each fatality is counted only once. To ensure that a fatality occurred while the decedent was at work, information is verified from two or more independent source documents or from a source document and a followup questionnaire.

States may identify additional fatal work injuries after data collection closeout for a reference year. In addition, other fatalities excluded from the published count because of insufficient information to determine work relationship may subsequently be verified as work related. States have up to 1 year to update their initial published State counts. Occupational fatalities and rates shown in this report are revised, except for the most recent year, and may differ from original data published by CFOI. Increases in the published counts based on additional information have averaged less than 100 fatalities per year, or less than 1.5 percent of the total.

For more information, see: Bureau of Labor Statistics, *National Census of Fatal Occupational Injuries, 2000*. Washington, DC. U.S. Department of Labor. August 2001; or visit the CFOI Internet site at stats.bls.gov/oshfat1.htm.

Consumer Price Index (CPI)

Bureau of Labor Statistics

The Consumer Price Index (CPI) is a monthly measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The all-urban index (CPI-U) introduced in 1978 covers residents of metropolitan areas as well as residents of urban parts of nonmetropolitan areas (about 87 percent of the U.S. population in 2000).

In calculating the index, price changes for the various items in each location were averaged together with weights that represent their importance in the spending of all urban consumers. Local data were then combined to obtain a U.S. city average.

The index measures price changes from a designated reference date, 1982–84, which equals 100. An increase of 22 percent, for example, is shown as 122. Change can also be expressed in dollars as follows: the price of a base period "market basket" of goods and services bought by all urban consumers has risen from $100 in 1982–84 to $177.10 in 2001.

The current revision of the CPI, completed in 2000, reflects spending patterns based on the Survey of Consumer Expenditures from 1993 to 1995, the 1990 Census of Population, and the ongoing Point-of-Purchase Survey. Using an improved sample design, prices for the goods and services required to calculate the index are collected in urban areas throughout the country and from retail and service establishments. Data on rents are collected from tenants of rented housing and residents of owner-occupied housing units. Food, fuels, and other goods and services are priced monthly in urban locations. Price information is obtained through visits or calls by trained BLS field representatives using computer-assisted telephone interviews.

The earlier 1987 revision changed the treatment of health insurance in the cost-weight definitions for medical care items. This change has no effect on the final index result but provides a clearer picture of the role of health insurance in the CPI. As part of the revision, three new indexes have been created by separating previously combined items, for example, eye care from other professional services and inpatient and outpatient treatment from other hospital and medical care services.

Effective January 1997 the hospital index was restructured by combining the three categories—room, inpatient services, and outpatient services—into one category, hospital services. Differentiation between inpatient and outpatient and among service types are under this broad category. In addition new procedures for hospital data collection identify a payor, diagnosis, and the payor's reimbursement arrangement from selected hospital bills.

A new geographic sample and item structure were introduced in January 1998 and expenditure weights were updated to 1993–95. Pricing of a new housing sample using computer-assisted data collection started in June 1998. In January 1999 the index was rebased from the 1982–84 time period to 1993–95.

For more information, see: Bureau of Labor Statistics, *Handbook of Methods*, BLS Bulletin 2490, U.S. Department of Labor, Washington, DC. April 1997; Revising the Consumer Price Index, *Monthly Labor Review*, Dec 1996. U.S. Department of Labor, Bureau of Labor Statistics, Washington, DC; IK Ford and D Ginsburg, Medical Care and the Consumer Price Index, National Bureau of Economic

Research, Research Studies in Income and Wealth vol. 62; or visit the BLS home page at www.bls.gov.

Current Population Survey (CPS)

Bureau of the Census

The Current Population Survey (CPS) is a household sample survey of the civilian noninstitutionalized population conducted monthly by the U.S. Bureau of the Census for the Department of Labor, Bureau of Labor Statistics (BLS). CPS provides estimates of employment, unemployment, and other characteristics of the general labor force, the population as a whole, and various other population subgroups.

The CPS survey is conducted by the Bureau of the Census for the Department of Labor. The CPS sample is located in 754 sample areas, with coverage in every State and the District of Columbia. Beginning with 2001 estimates are based on interviews of an expanded sample of 60,000 households per month. Prior to 2001 estimates were based on 50,000 households per month. In an average month the nonresponse rate is about 6–7 percent. In 1994 major changes were introduced, which included a complete redesign of the questionnaire and the introduction of computer-assisted interviewing for the entire survey. In addition, there were revisions to some of the labor force concepts and definitions.

The estimation procedure used involves inflation by the reciprocal of the probability of selection, adjustment for nonresponse, and ratio adjustment. Beginning in 1994 new population controls that were based on the 1990 census adjusted for the estimated population undercount were used.

For more information on the CPS, visit the BLS home page at www.bls.gov/cps.

Drug Abuse Warning Network (DAWN)

Substance Abuse and Mental Health Services Administration

The Drug Abuse Warning Network (DAWN) is a large-scale, ongoing drug abuse data collection system based on information from hospital emergency departments (EDs) and from medical examiner facilities. The major objectives of the DAWN data system include monitoring of drug-abuse patterns and trends, identification of substances associated with drug-abuse episodes, and assessment of drug-related consequences and other health hazards. Estimates reported in this publication are from the hospital ED component of DAWN.

Hospitals eligible for DAWN are non-Federal, short-stay general hospitals that have a 24-hour emergency department. Since 1988 the DAWN emergency department data have been collected from a representative sample of these hospitals located throughout the coterminous United States, including 21 oversampled metropolitan areas. Within each facility, a designated DAWN reporter is responsible for identifying eligible drug-abuse episodes by reviewing emergency department records and abstracting and submitting data on each reportable case. To be included in DAWN, the patient presenting to the ED must meet all of the following four criteria: (a) patient was between ages 6 and 97 years and was treated in the hospital's ED; (b) patient's presenting problem(s) for the ED visit was induced by or related to drug use, regardless of when drug use occurred; (c) episode involved use of an illegal drug or use of a legal drug or other chemical substance contrary to directions; (d) patient's reason for using the substance(s) was dependence, suicide attempt or gesture, and/or psychic effect.

The data from the DAWN sample are used to generate estimates of the total number of emergency department drug-abuse episodes and drug mentions in all eligible hospitals in the coterminous United States and in the 21 metropolitan areas. Overall, a response rate of 81 percent of sample hospitals was obtained in the 2000 survey.

For further information, see Substance Abuse and Mental Health Services Administration, Office of Applied Studies. *Emergency Department Trends from the Drug Abuse Warning Network, Preliminary Estimates January–June 2001 with Revised Estimates 1994 to 2000,* DAWN Series D-20, DHHS Publication No. (SMA) 02–3634, Rockville, MD. 2002 or write: Office of Applied Studies, Substance Abuse and Mental Health Services Administration, Room 16–105, 5600 Fishers Lane, Rockville, MD 20857; or visit the SAMHSA home page at www.drugabusestatistics.samhsa.gov.

Employer Costs for Employee Compensation

Bureau of Labor Statistics

Employer costs for employee compensation cover all occupations in private industry, excluding farms and households and State and local governments. These cost

levels are published once a year with the payroll period including March 12th as the reference period.

The cost levels are based on compensation cost data collected for the Bureau of Labor Statistics Employment Cost Index (ECI), released quarterly. Employee Benefits Survey (EBS) data are jointly collected with the ECI data. Cost data were collected from the ECI's March 1993 sample that consisted of about 23,000 occupations within 4,500 sample establishments in private industry and 7,000 occupations within 1,000 establishments in State and local governments. The sample establishments are classified industry categories based on the 1987 Standard Industrial Classification (SIC) system, as defined by the U.S. Office of Management and Budget. Within an establishment, specific job categories are selected to represent broader major occupational groups such as professional specialty and technical occupations. The cost levels are calculated with current employment weights each year.

For more information, see: U.S. Department of Labor, Bureau of Labor Statistics, *Employment Cost Indexes 1975–99*, Bulletin 2532, Oct. 2000; or visit the BLS home page at www.bls.gov.

Employment and Earnings

Bureau of Labor Statistics

The Division of Monthly Industry Employment Statistics and the Division of Employment and Unemployment Analysis of the Bureau of Labor Statistics publish data on employment and earnings. The data are collected by the U.S. Bureau of the Census, State Employment Security Agencies, and State Departments of Labor in cooperation with BLS. The major data source is the Current Population Survey (CPS), a household interview survey conducted monthly by the U.S. Bureau of the Census to collect labor force data for BLS. The CPS is described separately in this appendix. Data based on establishment records are also compiled each month from mail questionnaires by BLS, in cooperation with State agencies.

For more information, see: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, Jan. 2002, vol 49 no 1, Washington, DC. U.S. Government Printing Office. Jan. 2002; or visit the BLS home page at www.bls.gov.

Inventory of Mental Health Organizations (IMHO)

Substance Abuse and Mental Health Services Administration (SAMHSA)

The Survey and Analysis Branch of SAMHSA's Center for Mental Health Services conducted a biennial Inventory of Mental Health Organizations and General Hospital Mental Health Services (IMHO/GHMHS) from 1986 until 1994. The core questionnaire included versions designed for specialty mental health organizations and another for non-Federal general hospitals with separate psychiatric services. The response rate to most of the items on the inventory was relatively high (90 percent or better). However, for some inventory items, the response rate may have been somewhat lower.

IMHO/GHMHS has been the primary source for Center for Mental Health Services data included in *Health, United States*. The data system was based on questionnaires mailed every other year to mental health organizations in the United States, including psychiatric hospitals, non-Federal general hospitals with psychiatric services, Department of Veterans Affairs psychiatric services, residential treatment centers for emotionally disturbed children, freestanding outpatient psychiatric clinics, partial care organizations, freestanding day-night organizations, and multiservice mental health organizations, not elsewhere classified.

IMHO/GHMHS was a redesign of three previous inventory systems with more complicated data collection procedures. In 1998 the IMHO/GHMHS was replaced by the Survey of Mental Health Organizations, General Hospital Mental Health Services, and Managed Behavioral Health Care Organizations (SMHO). A brief 100% inventory of organizations was conducted by postcard and used to provide basic information on all organizations and as a sampling frame from which to draw a sample for a more in-depth sample survey. The sample survey questionnaire differed from the previous core questionnaires mainly by inclusion of questions relating to managed behavioral health care organizations.

Other surveys conducted by the Survey and Analysis Branch are the Client/Patient Sample Survey and the Inventory of the Juvenile Justice System. The Client/Patient Sample Survey encompasses patients admitted to State and county mental hospitals, private mental hospitals, multiservice mental health organizations, the psychiatric services of non-Federal general hospitals and Department of Veterans Affairs medical centers,

residential treatment centers for emotionally disturbed children, and freestanding outpatient and partial care programs. The Inventory of the Juvenile Justice System provides data on the number of organizations providing services to inpatients, outpatient and residential treatment clients. The purpose of these surveys is to determine the sociodemographic, clinical, and treatment characteristics of patients served by these organizations.

For more information, write: Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Room 15C-04, 5600 Fishers Lane, Rockville, MD 20857. For further information on mental health and data from the 1997 Client/Patient Sample Survey, see: Center for Mental Health Services, *Mental Health, United States, 2000*. Manderscheid R, Henderson MJ, eds. DHHS Pub. No. (SMA) 01–3537. Washington, DC; or visit the Center for Mental Health Services home page at www.samhsa.gov/cmhs/cmhs.htm.

Medicaid Data System

Centers for Medicare and Medicaid Services

Many State Medicaid agencies continue to submit data annually to the Centers for Medicare & Medicaid Services (CMS) (formerly known as Health Care Financing Administration (HCFA)) using the Form HCFA-2082, *Statistical Report on Medical Care: Eligibles, Recipients, Payments, and Services*. However, the majority of Medicaid data are derived from the Medicaid Statistical Information System (MSIS). States participating in MSIS provide CMS with a larger database through submission of computer tapes. CMS then extracts comparable data to produce a mirror copy of the HCFA-2082 report. The Federal reporting period is between October 1 and September 30 of the fiscal year.

The following information may help when using Medicaid data:

- CMS performs many statistical edits to ensure consistency and identification of aberrant and missing data. CMS may substitute cell values only when necessary in order to maintain consistency.
- Medical Vendor Payments exclude lump sum adjustments (such as payments to disproportionate share hospitals). States must adjust payments to qualified hospitals that provide inpatient services to a disproportionate number of Medicaid recipients and/or other low-income persons.
- The number of recipients and eligibles reported on the HCFA-2082 are referred to as "Unduplicated," which simply means that each person is counted once based on their eligibility grouping (for example, Aged or Blind or Disabled) when they first receive medical services.
- The Medicaid data presented in *Health, United States* are contained in the Medicaid statistical system (HCFA-2082 Report and the MSIS tapes). Data reported on the quarterly Medicaid financial report (HCFA-64) submitted to CMS by States for reimbursement may differ from the Medicaid statistical report, primarily because the HCFA-64 includes disproportionate share hospital payments, payments to health maintenance organizations and Medicare, and quarterly payment adjustments.

For further information on Medicaid data, see *Medicaid Statistics, Program and Financial Statistics, Fiscal Year 1997*, HCFA Pub. No. 10129, Health Care Financing Administration, Baltimore, MD. U.S. Government Printing Office, May 1999; or call the Medicaid Hotline at 410-786-0165. For additional information and data visit the CMS Web site at www.hcfa.gov.

Medical Expenditure Panel Survey (MEPS)

Agency for Healthcare Research and Quality

The 1996 and 1997 Medical Expenditure Panel Surveys (MEPS) update the 1987 National Medical Expenditure Survey (NMES). MEPS is designed to understand how the growth of managed care and other changes in the health care delivery system affect the use, type, and costs of health care. MEPS consists of four components:

- The Household Component (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 conducted by the National Center for Health Statistics. The sample sizes for HC are approximately 10,000 families in 1996 and 1998–2000, 13,500 families in 1997 and 2001, and 15,000 families annually beginning in 2002. The panel design of the survey features several rounds of interviewing covering two full calendar years. Data are collected on health status, health insurance coverage, health care use and expenditures, and sources of payment for health services.
- The Nursing Home Component (NHC) gathered information from a sample of approximately 800 nursing homes and more than 5,000 residents in 1996. Data were

collected on characteristics of the facilities and services offered, expenditures and sources of payment on an individual resident level, and resident characteristics, including functional limitation, cognitive impairment, age, income, and insurance coverage, and the availability and use of community-based care prior to nursing home admission.

- Data are collected in the Medical Provider Component (MPC) to improve the accuracy of expenditure estimates derived solely from the Household Component (HC). MPC is particularly useful in obtaining expenditure information for persons enrolled in managed care plans and Medicaid recipients. MPC collects data from hospitals, physicians, and home health providers that were reported in HC as providing care to the MEPS sample persons. Sample sizes for MPC vary from year to year depending on the HC sample size and the MPC sampling rates for providers.
- The Insurance Component (IC) consisted of two subcomponents. The household sample collected detailed information from employers and union officials on the health insurance held by and offered to respondents to the MEPS HC. The list sample collected data on the types and costs of workplace health insurance from 40,000 business establishments and governments.

For further information on MEPS, visit the AHRQ home page at www.meps.ahrq.gov.

Medicare Current Beneficiary Survey (MCBS)

Centers for Medicare and Medicaid Services

The Medicare Current Beneficiary Survey (MCBS) is a continuous survey of a nationally representative sample of about 18,000 aged and disabled Medicare beneficiaries enrolled in Medicare Part A (hospital insurance), or Part B (medical insurance), or both, and residing in households or long-term care facilities. The survey provides comprehensive time-series data on utilization of health services, health and functional status, health care expenditures, and health insurance and beneficiary information (such as income, assets, living arrangement, family assistance, and quality of life). The longitudinal design of the survey allows each sample person to be interviewed 3 times a year for 4 years, whether he or she resides in the community or a facility or moves between the two settings, using the version of the questionnaire appropriate to the setting. Sample persons in the community are interviewed using computer-assisted personal interviewing (CAPI) survey instruments. Because long-term care facility residents often are in poor health, information about institutionalized patients is collected from proxy respondents such as nurses and other primary care givers affiliated with the facility. The sample is selected from the Medicare enrollment files with oversampling among disabled persons under age 65 and among persons 80 years of age and over.

Medicare claims are linked to survey-reported events to produce the Cost and Use file that provides complete expenditure and source of payment data on all health care services, including those not covered by Medicare.

For more information about MCBS, see: A profile of the Medicare Current Beneficiary Survey, by GS Adler. Health Care Financing Review, vol 15 no 4. Health Care Financing Administration. Washington, DC. Public Health Service. 1994. For further information on the MCBS, visit the CMS home page at www.hcfa.gov.

Medicare National Claims History Files

Centers for Medicare and Medicaid Services

The Medicare Common Working File (CWF) is a Medicare Part A and Part B benefit coordination and claims validation system. There are two National Claims History (NCH) files, the *NCH 100 percent Nearline File*, and the *NCH Beneficiary Program Liability (BPL) File.* These NCH files contain claims records and Medicare beneficiary information. The NCH 100 percent Nearline File contains all institutional and physician/supplier claims from CWF. It provides records of every claim submitted, including all adjustment claims. The NCH BPL file contains Medicare Part A and Part B beneficiary liability information (such as deductible and coinsurance amounts remaining). These records include all Part A and Part B utilization and entitlement data. Records for 1999 were maintained on more than 39 million enrollees and 48,735 institutional providers including 6,162 hospitals, 14,991 skilled nursing facilities, 9,029 home health agencies, 2,289 hospices, 3,002 outpatient physical therapy facilities, 543 comprehensive outpatient rehabilitation facilities, 3,580 end-state renal dialysis facilities, 3,515 rural health clinics, 1,000 community mental health centers, 2,742 ambulatory surgical centers, and 1,882 federally qualified health centers. Over 1 billion claims were processed in fiscal year 1999.

Data from the NCH files provide information about enrollee use of benefits for a point in time or over an extended period. Statistical reports are produced on enrollment, characteristics of participating providers, reimbursement, and services used.

For further information on the NCH files see: Centers for Medicare and Medicaid Services, Office of Information Services, Enterprise Data Base Group, Division of Information Distribution, Data Users Reference Guide; or call the Medicare Hotline at 410-786-3689. For further information on Medicare, visit the CMS home page at www.hcfa.gov.

Monitoring the Future Study (MTF)

National Institute on Drug Abuse

Monitoring the Future Study (MTF) is a large-scale epidemiological survey of drug use and related attitudes. It has been conducted annually since 1975 under a series of investigator-initiated research grants from the National Institute on Drug Abuse to the University of Michigan's Institute for Social Research. MTF is composed of three substudies: (a) annual survey of high school seniors initiated in 1975; (b) ongoing panel studies of representative samples from each graduating class that have been conducted by mail since 1976; and (c) annual surveys of 8th and 10th graders initiated in 1991.

The survey design is a multistage random sample with stage one being selection of particular geographic areas, stage two selection of one or more schools in each area, and stage three selection of students within each school. Data are collected using self-administered questionnaires conducted in the classroom by representatives of the Institute for Social Research. Dropouts and students who are absent on the day of the survey are excluded. Recognizing that the dropout population is at higher risk for drug use, this survey was expanded to include similar nationally representative samples of 8th and 10th graders in 1991. Statistics that are published in the *Dropout Rates in the United States: 1999* (published by the National Center for Educational Statistics, Pub. No. NCES 2001–022) stated that among persons 15–16 years and 17 years of age, 3.4 percent have dropped out of school, while the dropout percent increases to 4.7 percent of persons 18 years of age, and to 11.1 percent for persons 19 years of age. Therefore, surveying eighth graders (where dropout rates are much lower than for high school seniors) should be effective for picking up students at higher risk for drug use.

Approximately 44,300 8th, 10th, and 12th graders in 424 schools were surveyed in 2001. In 2001 the annual senior samples comprised roughly 13,300 seniors in 134 public and private high schools nationwide, selected to be representative of all seniors in the continental United States. The 10th-grade samples involved about 14,300 students in 137 schools in 2001, and the 2001 eighth-grade samples had approximately 16,800 students in 153 schools. Response rates of 82 percent, 88 percent, and 90 percent for 12th, 10th, and 8th-graders in 2001 have been relatively constant across time. Absentees constitute virtually all of the nonrespondents.

For further information on Monitoring the Future Study, see: National Institute on Drug Abuse, National Survey Results on Drug Use from the Monitoring the Future Study, 1975–2000, Vol. I, Secondary School Students, NIH Pub. No. 01–4924, Bethesda, MD: Public Health Service, printed August 2001; or visit the NIDA home page at www.nida.nih.gov or the Monitoring the Future home page at www.monitoringthefuture.org.

National Ambulatory Medical Care Survey (NAMCS)

Centers for Disease Control and Prevention
National Center for Health Statistics

The National Ambulatory Medical Care Survey (NAMCS) is a continuing national probability sample of ambulatory medical encounters. The scope of the survey covers physician-patient encounters in the offices of non-Federally employed physicians classified by the American Medical Association or American Osteopathic Association as "office-based, patient care" physicians. Patient encounters with physicians engaged in prepaid practices—health maintenance organizations (HMOs), independent practice organizations (IPAs), and other prepaid practices—are included in NAMCS. Excluded are visits to hospital-based physicians, visits to specialists in anesthesiology, pathology, and radiology, and visits to physicians who are principally engaged in teaching, research, or administration. Telephone contacts and nonoffice visits are excluded, also.

A multistage probability design is employed. The first-stage sample consists of 84 primary sampling units (PSUs) in 1985 and 112 PSUs in 1992 selected from about 1,900 such units into which the United States has been divided. In each sample PSU, a sample of practicing non-Federal office-based

physicians is selected from master files maintained by the American Medical Association and the American Osteopathic Association. The final stage involves systematic random samples of office visits during randomly assigned 7-day reporting periods. In 1985 the survey excluded Alaska and Hawaii. Starting in 1989 the survey included all 50 States.

In 1999 a sample of 2,499 physicians was selected, 1,728 were in scope and 1,087 participated in the survey for a response rate of 63 percent. Data were provided on 20,760 records. In the 2000 survey a sample of 3,000 physicians was selected, 2,049 were in scope and 1,388 participated for a response rate of 68 percent. Data were provided on 27,369 records.

The estimation procedure used in NAMCS has three basic components: inflation by the reciprocal of the probability of selection, adjustment for nonresponse, and ratio adjustment to fixed totals.

For more detailed information on NAMCS, see: Cherry DK. National Ambulatory Medical Care Survey: 2000 summary. Advance data from vital and health statistics; no. 328. Hyattsville, MD: National Center for Health Statistics. 2002; or visit the NHCS section of the NCHS home page at www.cdc.gov/nchs.

National Health Accounts

Centers for Medicare and Medicaid Services

Estimates of expenditures for health based on National Health Accounts are compiled annually by type of expenditure and source of funds by the Office of the Actuary. The American Hospital Association (AHA) data on hospital finances are the primary source for estimates relating to hospital care. The salaries of physicians and dentists on the staffs of hospitals, hospital outpatient clinics, hospital-based home health agencies, and nursing home care provided in the hospital setting are considered to be components of hospital care. Expenditures for home health care and for services of health professionals (for example, doctors, chiropractors, private duty nurses, therapists, and podiatrists) are estimated primarily using a combination of data from the U.S. Bureau of the Census Services Annual Survey and the quinquennial Census of Service Industries.

The estimates of retail spending for prescription drugs are based on household and industry data on prescription drug transactions. Expenditures for other medical nondurables and vision products and other medical durables purchased in retail outlets are based on estimates of personal consumption expenditures prepared by the U.S. Department of Commerce's Bureau of Economic Analysis, U.S. Bureau of Labor Statistics/Consumer Expenditure Survey; the 1987 National Medical Expenditure Survey and the 1996 Medical Expenditure Panel Survey conducted by the Agency for Healthcare Research and Quality; and spending by Medicare and Medicaid. Those durable and nondurable products provided to inpatients in hospitals or nursing homes, and those provided by licensed professionals or through home health agencies are excluded here, but are included with the expenditure estimates of the provider service category.

Nursing home expenditures cover care rendered in establishments providing inpatient nursing and health-related personal care through active treatment programs for medical and health-related conditions. These establishments cover skilled nursing and intermediate care facilities, including those for the mentally retarded. Spending estimates are primarily based upon data from the U.S. Bureau of the Census Services Annual Survey and the quinquennial Census of Service Industries.

Expenditures for construction include those spent on the erection or renovation of hospitals, nursing homes, medical clinics, and medical research facilities, but not for private office buildings providing office space for private practitioners. Expenditures for noncommercial research (the cost of commercial research by drug companies is assumed to be imbedded in the price charged for the product; to include this item again would result in double counting) are developed from information gathered by the National Institutes of Health and the National Science Foundation.

Source of funding estimates likewise come from a multiplicity of sources. Data on the Federal health programs are taken from administrative records maintained by the servicing agencies. Among the sources used to estimate State and local government spending for health are the U.S. Bureau of the Census' Government Finances, and the National Academy of Social Insurance reports on State-operated Workers' Compensation programs. Federal and State-local expenditures for education and training of medical personnel are excluded from these measures where they are separable. For the private financing of health care, data on the financial experience of health insurance organizations come from special Centers for Medicare & Medicaid Services analyses of private health insurers, and from the Bureau of Labor

Statistics' survey on the cost of employer-sponsored health insurance and on consumer expenditures. Information on out-of-pocket spending from the U.S. Bureau of the Census Services Annual Survey; U.S. Bureau of Labor Statistics Consumer Expenditure Survey; the 1987 National Medical Expenditure Survey and the 1996 Medical Expenditure Panel Survey conducted by the Agency for Healthcare Research and Quality; and from private surveys conducted by the American Hospital Association, American Medical Association, American Dental Association, and IMS Health, an organization that collects data from the pharmaceutical industry, is used to develop estimates of direct spending by customers.

For more specific information on definitions, sources, and methods used in the National Health Accounts contact: Office of the Actuary, Centers for Medicare & Medicaid Services, 7500 Security Blvd., Baltimore, MD 21244-1850; or visit the Centers for Medicare & Medicaid Services home page at www.hcfa.gov.

Estimates of State Health Expenditures

Estimates of personal health care spending by State are created using the same definitions of health care sectors used in producing the National Health Expenditures (NHE). The same data sources used in creating NHE are also used to create State estimates whenever possible. Additional sources are employed when surveys used to create valid national estimates lack sufficient sample size to create valid State-level estimates. State-level data are used to estimate the State-by-State distribution of health spending, and the NHE national totals for the specific type of service or source of funds are used to control the level of State-by-State distributions. This procedure implicitly assumes that national spending estimates can be created more accurately than State-specific expenditures.

The NHE data that were used as national totals for these State estimates were published in *Health, United States, 2001*, and differ from the sum of State estimates. This NHE data included expenditures for persons living in U.S. territories and for military and Federal civilian employees and their families stationed overseas. The sum of the State-level expenditures exclude health spending for those groups. NHE published in this edition of *Health, United States* not only reflect new data and benchmark revisions incorporated after completion of the State estimates, but incorporate a conceptual revision to exclude spending for persons living in U.S. territories and military and Federal civilian employees and their families living overseas.

State estimates in this edition of *Health, United States, 2002* present data based on the location of the beneficiary's residence. This differs from State estimates published in *Health, United States, 2001*, which presented spending based on the health care provider's location. State estimates were first constructed based on the provider's location because data available to estimate spending by State primarily comes from providers and represents the State-of-provider location. However, the most useful unit for analyzing spending trends and differences are per capita units, which are based on spending estimates for the State in which people reside. Therefore, we adjusted State-of-provider-based expenditures to a State-of-residence basis using interstate border-crossing flow patterns that represent travel patterns across State borders for health care.

Data for the interstate border-crossing flow patterns are based on Medicare claims. Medicare is the only comprehensive source upon which to base interstate flows of spending between State-of-provider and State-of-beneficiary residence. Data for non-Medicare payers (excluding Medicaid) are also based on Medicare flow patterns, but are further adjusted for age specific service mix variation in hospital and physician services. Medicaid services are not adjusted because we assume that care provided to eligible State residents is most often provided by in-State providers; therefore, we assume that spending by Medicaid is identical on a residence and on a provider basis.

In addition to differences noted earlier, national totals for residence-based State health expenditures may differ slightly from national totals for provider-based expenditures due to inflows and outflows of health care spending to the U.S. territories. Because flow patterns are based on Medicare data, we are able to adjust for services that Medicare beneficiaries receive outside of the U.S., and for services received by Medicare beneficiaries in the U.S. who either live in the U.S. territories or in other countries. Similar adjustments for the non-Medicare, non-Medicaid population are not possible.

For more information contact: Office of the Actuary, Centers for Medicare & Medicaid Services, 7500 Security Blvd., Baltimore, MD 21244-1850; or visit the Centers for Medicare & Medicaid Services home page at www.hcfa.gov.

National Health and Nutrition Examination Survey (NHANES)

Centers for Disease Control and Prevention
National Center for Health Statistics

For the first program or cycle of the National Health Examination Survey (NHES I), 1960–62, data were collected on the total prevalence of certain chronic diseases as well as the distributions of various physical and physiological measures, including blood pressure and serum cholesterol levels. For that program, a highly stratified, multistage probability sample of 7,710 adults, of whom 86.5 percent were examined, was selected to represent the 111 million civilian noninstitutionalized adults 18–79 years of age in the United States at that time. The sample areas consisted of 42 primary sampling units (PSUs) from the 1,900 geographic units.

NHES II (1963–65) and NHES III (1966–70) examined probability samples of the Nation's noninstitutionalized children ages 6–11 years (NHES II) and 12–17 years (NHES III) focusing on factors related to growth and development. Both cycles were multistage, stratified probability samples of clusters of households in land-based segments and used the same 40 PSUs. NHES II sampled 7,417 children with a response rate of 96 percent. NHES III sampled 7,514 youth with a response rate of 90 percent.

For more information on NHES I, see: Gordon T, Miller HW. Cycle I of the Health Examination Survey: Sample and response, United States, 1960–62. National Center for Health Statistics. Vital Health Stat 11(1). 1974. For more information on NHES II, see: Plan, operation, and response results of a program of children's examinations. National Center for Health Statistics. Vital Health Stat 1(5). 1967. For more information on NHES III, see: Schaible WL. Quality control in a National Health Examination Survey. National Center for Health Statistics. Vital Health Stat 2(44). 1972.

In 1971 a nutrition surveillance component was added and the survey name was changed to the National Health and Nutrition Examination Survey (NHANES). In NHANES I, conducted from 1971 to 1974, a major purpose was to measure and monitor indicators of the nutrition and health status of the American people through dietary intake data, biochemical tests, physical measurements, and clinical assessments for evidence of nutritional deficiency. Detailed examinations were given by dentists, ophthalmologists, and dermatologists with an assessment of need for treatment. In addition, data were obtained for a subsample of adults on overall health care needs and behavior, and more detailed examination data were collected on cardiovascular, respiratory, arthritic, and hearing conditions.

The NHANES I target population was the civilian noninstitutionalized population 1–74 years of age residing in the coterminous United States, except for people residing on any of the reservation lands set aside for the use of American Indians. The sample design was a multistage, stratified probability sample of clusters of persons in land-based segments. The sample areas consisted of 65 PSUs selected from the 1,900 PSUs in the coterminous United States. A subsample of persons 25–74 years of age was selected to receive the more detailed health examination. Groups at high risk of malnutrition were oversampled at known rates throughout the process. Household interviews were completed for more than 96 percent of the 28,043 persons selected for the NHANES I sample, and about 75 percent (20,749) were examined.

For NHANES II, conducted from 1976 to 1980, the nutrition component was expanded from the one fielded for NHANES I. In the medical area primary emphasis was placed on diabetes, kidney and liver functions, allergy, and speech pathology. The NHANES II target population was the civilian noninstitutionalized population 6 months–74 years of age residing in the United States, including Alaska and Hawaii.

NHANES II used a multistage probability design that involved selection of PSUs, segments (clusters of households) within PSUs, households, eligible persons, and finally, sample persons. The sample design provided for oversampling among persons 6 months–5 years of age, 60–74 years of age, and those living in poverty areas. A sample of 27,801 persons was selected for NHANES II. Of this sample 20,322 (73.1 percent) were examined. Race information for NHANES I and NHANES II was determined primarily by interviewer observation.

The estimation procedure used to produce national statistics for NHANES I and NHANES II involved inflation by the reciprocal of the probability of selection, adjustment for nonresponse, and poststratified ratio adjustment to population totals. Sampling errors also were estimated to measure the reliability of the statistics.

For more information on NHANES I, see: Miller HW. Plan and operation of the Health and Nutrition Examination Survey, United States, 1971–73. National Center for Health Statistics.

Vital Health Stat 1(10a) and 1(10b). 1977 and 1978; and Engel A, Murphy RS, Maurer K, Collins E. Plan and operation of the NHANES I Augmentation Survey of Adults 25–74 years, United States, 1974–75. National Center for Health Statistics. Vital Health Stat 1(14). 1978.

For more information on NHANES II, see: McDowell A, Engel A, Massey JT, Maurer K. Plan and operation of the second National Health and Nutrition Examination Survey, 1976–80. National Center for Health Statistics. Vital Health Stat 1(15). 1981. For information on nutritional applications of these surveys, see: Yetley E, Johnson C. Nutritional applications of the Health and Nutrition Examination Surveys (HANES). Ann Rev Nutr 7:441–63. 1987.

The Hispanic Health and Nutrition Examination Survey (HHANES), conducted during 1982–84, was similar in content and design to the previous National Health and Nutrition Examination Surveys. The major difference between HHANES and the previous national surveys is that HHANES used a probability sample of three special subgroups of the population living in selected areas of the United States rather than a national probability sample. The three HHANES universes included approximately 84, 57, and 59 percent of the respective 1980 Mexican-, Cuban-, and Puerto Rican-origin populations in the continental United States. Hispanic ethnicity of these populations was determined by self-report.

In the HHANES three geographically and ethnically distinct populations were studied: Mexican Americans living in Texas, New Mexico, Arizona, Colorado, and California; Cuban Americans living in Dade County, Florida; and Puerto Ricans living in parts of New York, New Jersey, and Connecticut. In the Southwest 9,894 persons were selected (75 percent or 7,462 were examined), in Dade County 2,244 persons were selected (60 percent or 1,357 were examined), and in the Northeast 3,786 persons were selected (75 percent or 2,834 were examined).

For more information on HHANES, see: Maurer KR. Plan and operation of the Hispanic Health and Nutrition Examination Survey, 1982–84. National Center for Health Statistics. Vital Health Stat 1(19). 1985.

The third National Health and Nutrition Examination Survey (NHANES III) is a 6-year survey covering the years 1988–94. Over the 6-year period, 39,695 persons were selected for the survey of which 30,818 (77.6 percent) were examined in the mobile examination center. The NHANES III target population is the civilian noninstitutionalized population 2 months of age and over. The sample design provides for oversampling among children 2–35 months of age, persons 70 years of age and over, black Americans, and Mexican Americans. Race is reported for the household by the respondent.

Although some of the specific health areas have changed from earlier NHANES surveys, the following goals of the NHANES III are similar to those of earlier NHANES surveys:

- estimate the national prevalence of selected diseases and risk factors
- estimate national population reference distributions of selected health parameters
- document and investigate reasons for secular trends in selected diseases and risk factors

Two new additional goals for the NHANES III survey are:

- contribute to an understanding of disease etiology
- investigate the natural history of selected diseases

For more information on NHANES III, see: Ezzati TM, Massey JT, Waksberg J, et al. Sample design: Third National Health and Nutrition Examination Survey. National Center for Health Statistics. Vital Health Stat 2(113). 1992; Plan and operation of the Third National Health and Nutrition Examination Survey, 1988–94. National Center for Health Statistics. Vital Health Stat 1(32). 1994; or visit the NCHS home page at www.cdc.gov/nchs.

National Health Interview Survey (NHIS)

Centers for Disease Control and Prevention
National Center for Health Statistics

The National Health Interview Survey (NHIS) is a continuing nationwide sample survey in which data are collected through personal household interviews. Information is obtained on personal and demographic characteristics including race and ethnicity by self-reporting or as reported by an informant. Information is also obtained on illnesses, injuries, impairments, chronic conditions, utilization of health resources, and other health topics.

The sample design plan of NHIS follows a multistage probability design that permits a continuous sampling of the civilian noninstitutionalized population residing in the United States. The survey is designed in such a way that the sample

scheduled for each week is representative of the target population, and the weekly samples are additive over time. The household response rate for the ongoing portion of the survey (core) has been between 94 and 98 percent over the years. In recent years the total household response rate was 92 percent in 1997, 90 percent in 1998, 88 percent in 1999, and 89 percent in 2000. Response rates for special health topics (supplements) have generally been lower. For example, the response rate was 80 percent for the 1994 Year 2000 Supplement, which included questions about cigarette smoking and use of such preventive services as mammography. In 1997 the final response rate for the sample adult supplement was 80 percent, 74 percent in 1998, 70 percent in 1999, and 72 percent in 2000. In 1997 the final response rate for the sample child supplement was 84 percent, 82 percent in 1998, 78 percent in 1999, and 79 percent in 2000.

In 1985 NHIS adopted several new sample design features although, conceptually, the sampling plan remained the same as the previous design. Two major changes included reducing the number of primary sampling locations from 376 to 198 for sampling efficiency and oversampling the black population to improve the precision of the statistics. The sample was designed so that a typical NHIS sample for the data collection years 1985–94 consisted of approximately 7,500 segments containing about 59,000 assigned households. Of these households, an expected 10,000 were vacant, demolished, or occupied by persons not in the target population of the survey. The expected sample of 49,000 occupied households yielded a probability sample of about 127,000 persons. In 1994 the sample numbered 116,179 persons.

In 1995 the NHIS sample was redesigned again. Major design changes included increasing the number of primary sampling units from 198 to 358 and oversampling the black and Hispanic populations to improve the precision of the statistics. The sample was designed so that a typical NHIS sample for the data collection years 1995–2004 will consist of approximately 7,000 segments. The expected sample of 44,000 occupied respondent households will yield a probability sample of about 106,000 persons. In 1997 the sample numbered 103,477 persons; 98,785 persons in 1998, 97,059 persons in 1999, and 100,618 persons in 2000.

The NHIS questionnaire fielded from 1982 to 1996 consisted of two parts: a set of basic health and demographic items known as the Core questionnaire and one or more sets of questions on current health topics (supplements). Information was collected from responsible family members residing in the household. Proxy responses were acceptable for Core and Supplement questionnaires when family members were not present at the time of interview. Data for children were collected from proxy respondents.

In 1997 the NHIS questionnaire was redesigned and consists of three parts: a basic module, a periodic module, and a topical module. The basic module functions as the new Core questionnaire and comprises three components (Family Core, Sample Adult Core, Sample Child Core). For the Family Core, information is obtained about all members of the family by interviewing any adult members of the household who are present and who may respond for themselves and as proxies for other members of the family. Information in the Family Core component is obtained by asking respondents or proxy respondents a series of questions in an unfolding family style. For example, questions on activity limitation were asked as follows: “Are you/any family members limited in activities?” If so, “Who is this?” For the Sample Adult Core, one adult in the household is randomly selected to participate; proxy respondents are not used in this component. For families with children under 18 years of age, one child in the household is randomly selected for participation in the Sample Child Core. Data for this component are collected from a knowledgeable adult in the household. Starting with 1998 periodic and topical modules are incorporated into selected years of the NHIS.

In 1997 the collection methodology changed from paper and pencil questionnaires to computer-assisted personal interviewing (CAPI). The NHIS questionnaire was also revised extensively in 1997. In some instances, basic concepts measured in NHIS changed and in other instances the same concepts were measured in different ways. While some questions remain the same over time, they may be preceded by different questions or topics. For some questions, there was a change in the reference period for reporting an event or condition. Because of the extensive redesign of the questionnaire in 1997 and introduction of the CAPI method of data collection, data from 1997 and later years may not be comparable with data from earlier years.

For more information about the survey design, methods used in estimation, and general qualifications of the data obtained from the survey, see: Botman SL, Moore TF, Moriarity CL, Parsons VL. Design and estimation for the National Health Interview Survey, 1995–2004. National Center for Health Statistics. Vital Health Stat 2(130). 2000; Massey JT, Moore TF, Parsons VL, Tadros W. Design and estimation for the

National Health Interview Survey, 1985–94. National Center for Health Statistics. Vital Health Stat 2(110). 1989; Kovar MG, Poe GS. The National Health Interview Survey design, 1973–84, and procedures, 1975–83. National Center for Health Statistics. Vital Health Stat 1(18). 1985; Bloom B, Tonthat L. Summary Health Statistics for U.S. Children: National Health Interview Survey, 1997. National Center for Health Statistics. Vital Health Stat 10(203). 2002; Blackwell DL, Tonthat L. Summary Health Statistics for the U.S. Population: National Health Interview Survey, 1997. National Center for Health Statistics. Vital Health Stat 10(204). 2002; Blackwell DL, Collins JG, Coles R. Summary Health Statistics for U.S. Adults: National Health Interview Survey, 1997. National Center for Health Statistics. Vital Health Stat 10(205). 2002; or visit the NHIS section of the NCHS home page at www.cdc.gov/nchs.

National Health Provider Inventory (NHPI)

Centers for Disease Control and Prevention
National Center for Health Statistics

The National Master Facility Inventories (NMFIs), forerunners of the National Health Provider Inventory (NHPI), were a series of inventories of inpatient health facilities in the United States conducted by NCHS. The inventories included hospitals, nursing and related-care homes, and other custodial care facilities. The last NMFI was conducted in 1982. In 1986 a different inventory was conducted, the Inventory of Long-Term Care Places (ILTCP). This was an inventory of nursing and related-care homes and facilities for the mentally retarded. NHPI was conducted in 1991. This was an inventory of nursing homes, board and care homes, home health agencies, and hospices. NMFI, ILTCP, and NHPI served as sampling frames for the NCHS National Nursing Home Survey and National Home and Hospice Care Survey.

National Home and Hospice Care Survey (NHHCS)

Centers for Disease Control and Prevention
National Center for Health Statistics

The National Home and Hospice Care Survey (NHHCS) is a sample survey of health agencies and hospices. Initiated in 1992, it was also conducted in 1993, 1994, 1996, 1998, and 2000. The original sampling frame consisted of all home health care agencies and hospices identified in the 1991 National Health Provider Inventory (NHPI). The 1992 sample contained 1,500 agencies. These agencies were revisited during the 1993 survey (excluding agencies that had been found to be out of scope for the survey). In 1994 in-scope agencies identified in the 1993 survey were revisited, along with 100 newly identified agencies added to the sample. For 1996 the universe was again updated, and a new sample of 1,200 agencies was drawn. In 1998 the updated sampling frame consisted of 16,500 home health and hospice agencies. A sample of 1,350 agencies was selected. In 2000, of 15,451 agencies in the sampling frame, 1,800 were sampled and the response rate was 96.4 percent.

The sample design for the 1992–94 NHHCS was a stratified three-stage probability design. Primary sampling units were selected at the first stage, agencies were selected at the second stage, and current patients and discharges were selected at the third stage. The sample design for the 1996, 1998, and 2000 NHHCS has a two-stage probability design, in which agencies were selected at the first stage and current patients and discharges were selected at the second stage. Current patients were those on the rolls of the agency as of midnight the day before the survey. Discharges were selected to estimate the number of discharges from the agency during the year before the survey. After the samples were selected, a patient questionnaire was completed for each current patient and discharge by interviewing the staff member most familiar with the care provided to the patients. The respondent was requested to refer to the medical records for each patient.

For additional information see: Haupt BJ. Development of the National Home and Hospice Care Survey. National Center for Health Statistics. Vital Health Stat 1(33). 1994; or visit the NHCS home page at www.cdc.gov/nchs.

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), initiated in 1992, is a continuing annual national probability sample of visits by patients to emergency departments (EDs) and outpatient departments (OPDs) of non-Federal, short-stay or general hospitals. Telephone contacts are excluded.

A four-stage probability sample design is used in NHAMCS, involving samples of primary sampling units (PSUs), hospitals with EDs and/or OPDs within PSUs, EDs within hospitals and/or clinics within OPDs, and patient visits within EDs and/or clinics. In 1999 the hospital response rate for NHAMCS was 93 percent for EDs and 86 percent for OPDs. In 2000 the hospital response rate was 94 percent for EDs and 88 percent for OPDs. Hospital staff were asked to complete Patient Record Forms (PRF) for a systematic random sample of patient visits occurring during a randomly assigned 4-week reporting period. On the PRF, up to three physicians' diagnoses were collected and coded by NCHS to the *International Classification of Diseases, Clinical Modification* (ICD–9–CM). Additionally, if the cause-of-injury check box was marked on the PRF, up to three external causes of injury were coded by NCHS to the ICD–9–CM Supplementary Classification of External Causes of Injury and Poisoning. In 1999 the number of PRFs completed for EDs was 21,103 and for OPDs 29,487. In 2000 the number of PRFs completed for EDs was 25,622 and for OPDs 27,510.

For more detailed information on NHAMCS, see: McCaig LF, McLemore T. Plan and operation of the National Hospital Ambulatory Medical Care Survey. National Center for Health Statistics. Vital Health Stat 1(34). 1994; or visit the NHCS section of the NCHS home page at www.cdc.gov/nchs.

National Hospital Discharge Survey (NHDS)

Centers for Disease Control and Prevention
National Center for Health Statistics

The National Hospital Discharge Survey (NHDS) is a continuing nationwide sample survey of short-stay hospitals in the United States. The scope of NHDS encompasses patients discharged from noninstitutional hospitals, exclusive of military and Department of Veterans Affairs hospitals, located in the 50 States and the District of Columbia. Only hospitals having six or more beds for patient use are included in the survey and, before 1988, those in which the average length of stay for all patients was less than 30 days. In 1988 the scope was altered slightly to include all general and children's general hospitals regardless of length of stay. Although all discharges of patients from these hospitals are within the scope of the survey, discharges of newborn infants from all hospitals are excluded from *Health, United States*.

The original sample was selected in 1964 from a frame of short-stay hospitals listed in the National Master Facility Inventory. A two-stage stratified sample design was used, with hospitals stratified according to bed size and geographic region. Sample hospitals were selected with probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals. Within each sample hospital, a systematic random sample of discharges was selected from the daily listing sheet. Initially, the within-hospital sampling rates for selecting discharges varied inversely with the probability of hospital selection, so that the overall probability of selecting a discharge was approximately the same across the sample. Those rates were adjusted for individual hospitals in subsequent years to control the reporting burden of those hospitals.

In 1985, for the first time, two data-collection procedures were used for the survey. The first was the traditional manual system of sample selection and data abstraction. In the manual system, sample selection and transcription of information from the hospital records to abstract forms were performed by either the hospital staff or representatives of NCHS or both. The second was an automated method, used in approximately 17 percent of the sample hospitals in 1985, involving the purchase of data tapes from commercial abstracting services. These tapes were then subjected to the NCHS sampling, editing, and weighting procedures.

In 1988 NHDS was redesigned. The hospitals with the most beds and/or discharges annually were selected with certainty, but the remaining sample was selected using a three-stage stratified design. The first stage is a sample of PSUs used by the National Health Interview Survey. Within PSUs, hospitals were stratified or arrayed by abstracting status (whether subscribing to a commercial abstracting service) and within abstracting status arrayed by type of service and bed size. Within these strata and arrays, a systematic sampling scheme with probability proportional to the annual number of discharges was used to select hospitals. The rates for systematic sampling of discharges within hospitals varied inversely with probability of hospital selection within the PSU. Discharge records from hospitals submitting data via commercial abstracting services and selected State data systems (approximately 40 percent of sample hospitals) were arrayed by primary diagnoses, patient sex and age group, and date of discharge before sampling. Otherwise, the procedures for sampling discharges within hospitals were the same as those used in the prior design.

In 2000 the hospital sample was updated by continuing the sampling process among hospitals that were NHDS-eligible

for the sampling frame in 2000 but not in 1997. The additional hospitals were added at the end of the list for the strata where they belonged, and the systematic sampling was continued as if the additional hospitals had been present during the initial sample selection. Hospitals that were no longer NHDS-eligible were deleted. A similar updating process occurred in 1991, 1994, and 1997.

The basic unit of estimation for NHDS is the sample patient abstract. The estimation procedure involves inflation by the reciprocal of the probability of selection, adjustment for nonresponding hospitals and missing abstracts, and ratio adjustments to fixed totals. In 1999, 513 hospitals were selected, 487 were within scope, 458 participated (94 percent), and 300,460 medical records were abstracted. In 2000, 509 hospitals were selected, 481 were within scope, 434 participated (90 percent), and 313,259 medical records were abstracted.

For more detailed information on the design of NHDS and the magnitude of sampling errors associated with NHDS estimates, see: Popovic JR. 1999 National Hospital Discharge Summary: Annual summary with detailed diagnosis and procedure data. National Center for Health Statistics. Vital Health Stat 13(151). 2001; Dennison C, Pokras R. Design and operation of the National Hospital Discharge Survey: 1988 redesign. National Center for Health Statistics. Vital Health Stat 1(39). 2000; or visit the NHCS section of the NCHS home page at www.cdc.gov/nchs.

National Household Survey on Drug Abuse (NHSDA)

Substance Abuse and Mental Health Services

Data on trends in use of tobacco, alcohol, and illicit drugs among persons 12 years of age and over are from the National Household Survey on Drug Abuse (NHSDA), sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). The survey covers the civilian noninstitutionalized population 12 years of age and over 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 NHSDA survey has been conducted since 1971. In 1999 NHSDA underwent a major redesign affecting the method of data collection, sample design, sample size, and oversampling. Because of the differences in methodology and impact of the new design on data collection, comparisons should not be made between data from the redesigned surveys (1999 onward) and data obtained from surveys prior to 1999. Beginning in 1999 the survey used a combination of computer-assisted personal interview (CAPI) conducted by the interviewer and a computer-assisted self-interview (ACASI). Use of ACASI is designed to provide the respondent with a highly private and confidential means of responding to questions and to increase the level of honest reporting of illicit drug use and other sensitive behaviors.

The 1999–2000 NHSDA sample design used a State-based sampling plan. This sample employed a 50-State design with an independent, multistage area probability sample for each of the 50 States and the District of Columbia. The eight States with the largest population (which together account for 48 percent of the total U.S. population age 12 years and over) were designated as large sample States (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas). For these States, the design provided a sample large enough to support direct State estimates. For the remaining 42 States and the District of Columbia, smaller, but adequate, samples were selected to support State estimates using small-area estimation (SAE) techniques. The 1999–2000 NHSDA design also oversampled youths and young adults, so that each State's sample was approximately equally distributed among three major age groups: 12–17 years, 18–25 years, and 26 years and older. To enhance the precision of trend measurement, half of the first-stage sampling units (area segments) in the 1999 sample were also in the 2000 sample. However, all of the households included in the 2000 sample were new.

Each State was stratified into regions (48 regions in each of eight large States, 12 regions in each of 42 small States and the District of Columbia). At the first stage of sampling, eight area segments were selected in each region, for a total of 7,200 sample units nationally. In these segments, 169,769 addresses were screened and 71,764 persons were interviewed within the screened addresses in 2000. The survey was conducted from January through December 2000. Weighted response rates for household screening and for interviewing were 92.8 percent and 73.9 percent, respectively. A description of the methodology can be found in Summary

of Findings from the 2000 National Household Survey on Drug Abuse, available from SAMHSA.

Direct survey estimates considered to be unreliable due to unacceptably large sampling errors are not shown in table 64 in this report, and are noted by asterisks (*). The criterion used for suppressing all direct survey estimates was based on the relative standard error (*rse*), which is defined as the ratio of the standard error (*se*) over the estimate. Proportion estimates (p) within the range [$0<p<1$], rates, and corresponding estimated number of users were suppressed if:

$$[se(p) / p] / [-ln(p)] > 0.175 \text{ when } p<0.5$$

or

$$[se(p) / (1-p)] / [-ln(1-p)] > 0.175 \text{ when } p \geq 0.5$$

The separate formulae for $p<0.5$ and $p \geq 0.5$ produce a symmetric suppression rule; that is, if p is suppressed, then so will $1-p$. This is an ad hoc rule that requires an effective sample size in excess of 50. When $0.05<p<0.95$, the symmetric properties of the rule produce a local maximum effective sample size of 68 at $p = 0.5$. Thus, estimates with these values of p along with effective sample sizes falling below 68 are suppressed. A local minimum effective sample size of 50 occurs at $p = 0.2$ and again at $p = 0.8$ within this same interval; so, estimates are suppressed for values of p with effective sample sizes below 50. A minimum effective sample size of 68 was added to the suppression criteria in the 2000 NHSDA. As p approaches 0.00 or 1.00 outside the interval (0.05, 0.95), the suppression criteria will still require increasingly larger effective sample sizes. Also new to the 2000 survey is a minimum nominal sample size suppression criteria ($n = 100$) that protects against unreliable estimates caused by small design effects and small nominal sample sizes. Prevalence estimates are also suppressed if they are close to zero or 100 percent (i.e., if $p<.00005$ or if $p>.99995$).

For more information on the National Household Survey on Drug Abuse (NHSDA), see: NHSDA Series: H-13 Summary of Findings from the 2000 National Household Survey on Drug Abuse, DHHS Pub No (SMA) 01–3549; or write: Office of Applied Studies, Substance Abuse and Mental Health Services Administration, Room 16C-06, 5600 Fishers Lane, Rockville, MD 20857; or visit the SAMHSA Web site at www.drugabusestatistics.samhsa.gov.

National Immunization Survey (NIS)

Centers for Disease Control and Prevention
National Center for Health Statistics and
National Immunization Program

The National Immunization Survey (NIS) is a continuing nationwide telephone sample survey to gather data on children 19–35 months of age. Estimates of vaccine-specific coverage are available for national, State, and 28 urban areas considered to be high risk for undervaccination.

NIS uses a two-phase sample design. First, a random-digit-dialing (RDD) sample of telephone numbers is drawn. When households with age-eligible children are contacted, the interviewer collects information on the vaccinations received by all age-eligible children. In 2000 the overall response rate was 67 percent, yielding data for 34,087 children aged 19–35 months. The interviewer also collects information on the vaccination providers. In the second phase, all vaccination providers are contacted by mail. The vaccination information from providers was obtained for 69 percent of all children who were eligible for provider followup in 2000. Providers' responses are combined with information obtained from the households to provide a more accurate estimate of vaccination coverage levels. Final estimates are adjusted for noncoverage of nontelephone households.

The statistical methodology for estimating vaccination coverage rates for NIS data was changed in 1998. The new methodology facilitates valid statistical analyses and accounts for the survey's complex sampling design. In *Health, U.S., 2002* estimates for years before 1998 were revised to reflect this change. Small differences exist between the revised vaccination coverage estimates and those in previous editions of *Health, United States* and in MMWRs published before 1998.

For more information about the survey design and methods used in estimation, see: Zell ER, Ezzati-Rice TM, Battaglia PM, Wright RA. National Immunization Survey: The Methodology of a Vaccination Surveillance System. Public Health Reports 115:65–77. 2000; or visit the NCHS home page at www.cdc.gov/nchs.

National Medical Expenditure Survey (NMES)

Agency for Healthcare Research and Quality

The Household Survey (HS) and the Medical Provider Survey (MPS) components of the 1987 National Medical Expenditure Survey (NMES) were designed to provide nationally representative estimates of the health status, health insurance coverage, and health care use and expenditures for the U.S. civilian noninstitutionalized population for the calendar year 1987. HS consisted of four rounds of household interviews. Income was collected in a special supplement administered early in 1988. Events under the scope of MPS included medical services provided by or under the direction of a physician, all hospital events, and home health care. The sample of events included in MPS was all events for persons covered by Medicaid and for a 25 percent sample of HS respondents. For the first core household interview, 17,500 households were selected. The 12-month joint core questionnaire/health questionnaire/access supplement response rate for the household component of NMES was 72 percent. Missing expenditure data were imputed.

For further information see: Hahn B and Lefkowitz D. Annual expenses and sources of payment for health care services (AHRQ Pub. No. 93–0007). National Medical Expenditure Survey Research Findings 14, Agency for Healthcare Research and Quality. Rockville, MD. Public Health Service. Nov. 1992.

National Notifiable Diseases Surveillance System (NNDSS)

Centers for Disease Control and Prevention Epidemiology Program Office

The Epidemiology Program Office (EPO) of CDC, in partnership with the Council of State and Territorial Epidemiologists (CSTE), operates the National Notifiable Diseases Surveillance System. The purpose of this system is primarily to provide weekly provisional information on the occurrence of diseases defined as notifiable by CSTE. The system also provides summary data on an annual basis. State epidemiologists report cases of notifiable diseases to EPO, and EPO tabulates and publishes these data in the *Morbidity and Mortality Weekly Report (MMWR)* and the *Summary of Notifiable Diseases, United States* (entitled *Annual Summary* before 1985). Notifiable disease surveillance is conducted by public health practitioners at local, State, and national levels to support disease prevention and control activities.

Notifiable disease reports are received from health departments in the 50 States, five territories, New York City, and the District of Columbia. Policies for reporting notifiable disease cases can vary by disease or reporting jurisdiction, depending on case status classification (i.e., confirmed, probable, or suspect). CSTE and CDC annually review the status of national infectious disease surveillance and recommend additions or deletions to the list of nationally notifiable diseases based on the need to respond to emerging priorities. For example, Q fever and tularemia became nationally notifiable in 2000. However, reporting nationally notifiable diseases to CDC is voluntary. Reporting is currently mandated by law or regulation only at the local and State level. Therefore, the list of diseases that are considered notifiable varies slightly by State. For example, reporting of cyclosporiasis to CDC is not done by some States in which this disease is not notifiable to local or State authorities. More information regarding notifiable diseases, including case definitions for these conditions, is available on the Internet at www.cdc.gov/epo/dphsi/phs.htm.

Notifiable disease data are useful for analyzing disease trends and determining relative disease burdens. However, these data must be interpreted in light of reporting practices. Some diseases that cause severe clinical illness (for example, plague and rabies) are most likely reported accurately if diagnosed by a clinician. However, persons who have diseases that are clinically mild and infrequently associated with serious consequences (for example, salmonellosis) might not seek medical care from a health care provider. Even if these less severe diseases are diagnosed, they are less likely to be reported.

The degree of completeness of data reporting also is influenced by the diagnostic facilities available; the control measures in effect; public awareness of a specific disease; and the interests, resources, and priorities of State and local officials responsible for disease control and public health surveillance. Finally, factors such as changes in case definitions for public health surveillance, introduction of new diagnostic tests, or discovery of new disease entities can cause changes in disease reporting that are independent of the true incidence of disease.

For more information, see: Centers for Disease Control and Prevention, Summary of Notifiable Diseases, United States, 1999 *Morbidity and Mortality Weekly Report* 48(53) Public Health Service, DHHS, Atlanta, GA, 2000; or write: Chief, Surveillance Systems Branch, Division of Public Health Surveillance and Informatics. Epidemiology Program Office, Centers for Disease Control and Prevention, 4770 Buford Highway, MS K74, Atlanta, GA 30341–3717; or visit the EPO home page at www.cdc.gov/epo.

National Nursing Home Survey (NNHS)

Centers for Disease Control and Prevention
National Center for Health Statistics

NCHS conducted six National Nursing Home Surveys, the first survey from August 1973–April 1974; the second from May–December 1977; the third from August 1985–January 1986; the fourth from July–December 1995; the fifth from July–December 1997; and the sixth from July–December 1999.

For the initial National Nursing Home Survey (NNHS) conducted in 1973–74, the universe included only those nursing homes that provided some level of nursing care. Homes providing only personal or domiciliary care were excluded. The sample of 2,118 homes was selected from the 17,685 homes that provided some level of nursing care and were listed in the 1971 National Master Facility Inventory (NMFI) or those that opened for business in 1972. Data were obtained from about 20,600 staff and 19,000 residents. Response rates were 97 percent for facilities, 88 percent for expenses, 82 percent for staff, and 98 percent for residents.

The 1977 NNHS encompassed all types of nursing homes, including personal care and domiciliary care homes. The sample of about 1,700 facilities was selected from 23,105 nursing homes in the sampling frame, which consisted of all homes listed in the 1973 NMFI and those opening for business between 1973 and December 1976. Data were obtained from about 13,600 staff, 7,000 residents, and 5,100 discharged residents. Response rates were 95 percent for facilities, 85 percent for expenses, 81 percent for staff, 99 percent for residents, and 97 percent for discharges.

The 1985 NNHS was similar to the 1973–74 survey in that it excluded personal or domiciliary care homes. The sample of 1,220 homes was selected from a sampling frame of 20,479 nursing and related-care homes. The frame consisted of all homes in the 1982 NMFI; homes identified in the 1982 Complement Survey of NMFI "missing" from the 1982 NMFI; facilities that opened for business between 1982 and June 1984; and hospital-based nursing homes obtained from the Centers for Medicare and Medicaid Services. Information on the facility was collected through a personal interview with the administrator. Accountants were asked to complete a questionnaire on expenses or provide a financial statement. Resident data were provided by a nurse familiar with the care provided to the resident. The nurse relied on the medical record and personal knowledge of the resident. In addition to employee data that were collected during the interview with the administrator, a sample of registered nurses completed a self-administered questionnaire. Discharge data were based on information recorded in the medical record. Additional data about the current and discharged residents were obtained in telephone interviews with next of kin. Data were obtained from 1,079 facilities, 2,763 registered nurses, 5,243 current residents, and 6,023 discharges. Response rates were 93 percent for facilities, 68 percent for expenses, 80 percent for registered nurses, 97 percent for residents, 95 percent for discharges, and 90 percent for next of kin.

The 1995, 1997, and 1999 NNHS were similar to the 1985 and 1973–74 NNHS in that they included only nursing homes that provided some level of nursing care. Homes providing only personal or domiciliary care were excluded. The 1995 sample of 1,500 homes was selected from a sampling frame of 17,500 nursing homes. The frame consisted of an updated version of the 1991 National Health Provider Inventory (NHPI). Data were obtained from about 1,400 nursing homes and 8,000 current residents. Data on current residents were provided by a staff member familiar with the care received by residents and from information contained in residents' medical records.

The 1997 sample of 1,488 nursing homes was the same basic sample used in 1995. Excluded were out-of-scope and out-of-business places identified in the 1995 survey. Included were a small number of additions to the sample from a supplemental frame of places not in the 1995 frame. The 1997 NNHS included the discharge component not available in the 1995 survey.

The 1999 sample of 1,423 nursing homes was the same basic sample used in 1995 and 1997. The 1999 sample of 1,423 nursing homes was selected from a sampling frame of 18,419. The frame consisted of the most current National Health Provider Inventory. A supplemental frame was used to

add facilities not in the 1997 frame. Like the 1995 and 1997 surveys, the 1999 survey excluded out-of-scope and out-of-business nursing homes identified in 1997. The 1999 NNHS included a discharge resident component.

Statistics for the National Nursing Home Surveys are derived by a multistage estimation procedure that provides essentially unbiased national estimates and has three major components: (a) inflation by the reciprocals of the probabilities of sample selection, (b) adjustment for nonresponse, and (c) ratio adjustment to fixed totals. The surveys are adjusted for three types of nonresponse: (1) when an eligible nursing facility did not respond; (2) when the facility failed to complete the sampling lists; and (3) when the facility did not complete the facility questionnaire but did complete the questionnaire for residents in the facility.

For more information on the 1973–74 NNHS, see: Meiners MR. Selected operating and financial characteristics of nursing homes, United States, 1973–74 National Nursing Home Survey. National Center for Health Statistics. Vital Health Stat 13(22). 1975. For more information on the 1977 NNHS, see: Van Nostrand JF, Zappolo A, Hing E, et al. The National Nursing Home Survey, 1977 summary for the United States. National Center for Health Statistics. Vital Health Stat 13(43). 1979. For more information on the 1985 NNHS, see: Hing E, Sekscenski E, Strahan G. The National Nursing Home Survey: 1985 summary for the United States. National Center for Health Statistics. Vital Health Stat 13(97). 1989. For more information on the 1995 NNHS, see: Strahan G. An overview of nursing homes and their current residents: Data from the 1995 National Nursing Home Survey. Advance data from vital and health statistics; no 280. Hyattsville, MD: National Center for Health Statistics. 1997. For more information on the 1997 NNHS, see: The National Nursing Home Survey: 1997 summary. National Center for Health Statistics. Vital Health Stat 13(147). 2000. For more information on the 1999 NNHS, see: Advance data report available in the summer of 2002. Information about the 1995, 1997, 1999, and 2001 NNHS is also available at the NHCS section of the NCHS home page at www.cdc.gov/nchs.

National Patient Care Database

Department of Veterans Affairs

The Department of Veterans Affairs (VA) maintains the National Patient Care Database that includes data files on patient treatment, patient census, outpatient clinic, and budget information. Data from the three patient files are collected locally at each VA medical center and are transmitted to the national databank at the VA Austin Automated Center, where they are stored and used to provide nationwide statistics, reports, and comparisons.

The *patient treatment file (PTF)* collects data at the time of the patient's discharge on each episode of inpatient care provided to patients at VA hospitals, VA nursing homes, VA domiciliaries, community nursing homes, and other non-VA facilities. The PTF record contains the scrambled social security number, dates of inpatient treatment, date of birth, State and county of residence, type of disposition, place of disposition after discharge, as well as the ICD–9–CM diagnostic and procedure or operative codes for each episode of care.

The *patient census file* collects data on each patient remaining in a VA medical facility at midnight on a selected date of each year, normally September 30. This file includes patients admitted to VA hospitals, VA nursing homes, and VA domiciliaries. The census record includes information similar to that reported in the patient treatment file record.

The *outpatient clinic file (OPC)* collects data on each instance of medical treatment provided to a veteran in an outpatient setting. The OPC record includes the age, scrambled social security number, State and county of residence, VA eligibility code, clinic(s) visited, purpose of visit, and the date of visit for each episode of care.

For more information, write: Department of Veterans Affairs, Office of Policy and Planning, Policy Analysis Service, 810 Vermont Ave., NW, Washington, DC 20420; or visit the VA home page at www.va.gov.

National Survey of Ambulatory Surgery (NSAS)

Centers for Disease Control and Prevention
National Center for Health Statistics

The National Survey of Ambulatory Surgery (NSAS) is a nationwide sample survey of ambulatory surgery patient discharges from short-stay non-Federal hospitals and freestanding surgery centers. NSAS was conducted annually between 1994 and 1996. The sample consisted of eligible hospitals listed in the 1993 SMG Hospital Market Database and the 1993 SMG Freestanding Outpatient Surgery Center Database or Medicare Provider-of-Service files. Facilities

specializing in dentistry, podiatry, abortion, family planning, or birthing were excluded.

A three-State stratified cluster design was used, and facilities were stratified according to primary sampling unit (PSU). The second stage consisted of the selection of facilities from sample PSUs, and the third stage consisted of a systematic random sample of cases from all locations within a facility where ambulatory surgery was performed. Locations within hospitals dedicated exclusively to dentistry, podiatry, pain block, abortion, or small procedures (sometimes referred to as "lump and bump" rooms) were not included. In 1996, of the 751 hospitals and freestanding ambulatory surgery centers selected for the survey, 601 were in-scope and 488 responded for an overall response rate of 81 percent. These facilities provided information for approximately 125,000 ambulatory surgery discharges. Up to six procedures were coded to the *International Classification of Diseases, 9th Revision, Clinical Modification*. Estimates were derived using a multistage estimation procedure: inflation by reciprocals of the probabilities of selection; adjustment for nonresponse; and population weighting ratio adjustments.

For more detailed information on the design of NSAS, see: McLemore T, Lawrence L. Plan and operation of the National Survey of Ambulatory Surgery. National Center for Health Statistics. Vital Health Stat 1(37). 1997; or visit the NHCS section of the NCHS home page at www.cdc.gov/nchs.

National Survey of Family Growth (NSFG)

Centers for Disease Control and Prevention
National Center for Health Statistics

Data from the National Survey of Family Growth (NSFG) are based on samples of women ages 15–44 years in the civilian noninstitutionalized population of the United States. The first and second cycles, conducted in 1973 and 1976, excluded most women who had never been married. The third, fourth, and fifth cycles, conducted in 1982, 1988, and 1995, included all women ages 15–44 years.

The purpose of the survey is to provide national data on factors affecting birth and pregnancy rates, adoption, and maternal and infant health. These factors 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.

Interviews are conducted in person by professional female interviewers using a standardized questionnaire. In 1973–88 the average interview length was about 1 hour. In 1995 the average interview lasted about 1 hour and 45 minutes. In all cycles black women were sampled at higher rates than white women, so that detailed statistics for black women could be produced.

Interviewing for Cycle 1 of NSFG was conducted from June 1973 to February 1974. Counties and independent cities of the United States were sampled to form a frame of primary sampling units (PSUs), and 101 PSUs were selected. From these 101 PSUs, 10,879 women 15–44 years of age were selected, 9,797 of these were interviewed. Most never-married women were excluded from the 1973 NSFG.

Interviewing for Cycle 2 of NSFG was conducted from January to September 1976. From 79 PSUs, 10,202 eligible women were identified; of these, 8,611 were interviewed. Again, most never-married women were excluded from the sample for the 1976 NSFG.

Interviewing for Cycle 3 of NSFG was conducted from August 1982 to February 1983. The sample design was similar to that in Cycle 2: 31,027 households were selected in 79 PSUs. Household screener interviews were completed in 29,511 households (95.1 percent). Of the 9,964 eligible women identified, 7,969 were interviewed. For the first time in NSFG, Cycle 3 included women of all marital statuses.

Interviewing for Cycle 4 was conducted between January and August 1988. The sample was obtained from households that had been interviewed in the National Health Interview Survey in the 18 months between October 1, 1985 and March 31, 1987. For the first time, women living in Alaska and Hawaii were included so that the survey covered women from the noninstitutionalized population of the entire United States. The sample was drawn from 156 PSUs; 10,566 eligible women ages 15–44 years were sampled. Interviews were completed with 8,450 women.

Between July and November 1990, 5,686 women were interviewed by telephone in the first NSFG telephone reinterview. The average length of interview in 1990 was 20 minutes. The response rate for the 1990 telephone reinterview was 68 percent of those responding to the 1988 survey and still eligible for the 1990 survey.

Interviewing for Cycle 5 of NSFG was conducted between January and October 1995. The sample was obtained from

households that had been interviewed in 198 PSUs in the National Health Interview Survey in 1993. Of the 13,795 eligible women in the sample, 10,847 were interviewed. For the first time, Hispanic as well as black women were sampled at a higher rate than other women.

In order to make national estimates from the sample for the millions of women ages 15–44 years in the United States, data for the interviewed sample women were (a) inflated by the reciprocal of the probability of selection at each stage of sampling (for example, if there was a 1 in 5,000 chance that a woman would be selected for the sample, her sampling weight was 5,000), (b) adjusted for nonresponse, and (c) forced to agree with benchmark population values based on data from the Current Population Survey of the U.S. Bureau of the Census (this last step is called "poststratification").

Quality control procedures for selecting and training interviewers, and coding, editing, and processing data were built into NSFG to minimize nonsampling error.

More information on the methodology of NSFG is available in the following reports: French DK. National Survey of Family Growth, Cycle I: Sample design, estimation procedures, and variance estimation. National Center for Health Statistics. Vital Health Stat 2(76). 1978; Grady WR. National Survey of Family Growth, Cycle II: Sample design, estimation procedures, and variance estimation. National Center for Health Statistics. Vital Health Stat 2(87). 1981; Bachrach CA, Horn MC, Mosher WD, Shimizu I. National Survey of Family Growth, Cycle III: Sample design, weighting, and variance estimation. National Center for Health Statistics. Vital Health Stat 2(98). 1985; Judkins DR, Mosher WD, Botman SL. National Survey of Family Growth: Design, estimation, and inference. National Center for Health Statistics. Vital Health Stat 2(109). 1991; Goksel H, Judkins DR, Mosher WD. Nonresponse adjustments for a telephone followup to a National In-Person Survey. Journal of Official Statistics 8(4):417–32. 1992; Kelly JE, Mosher WD, Duffer AP, Kinsey SH. Plan and operation of the 1995 National Survey of Family Growth. Vital Health Stat 1(36). 1997; Potter FJ, Iannacchione VG, Mosher WD, Mason RE, Kavee JD. Sampling weights, imputation, and variance estimation in the 1995 National Survey of Family Growth. Vital Health Stat 2(124). 1998; or visit the NCHS home page at www.cdc.gov/nchs.

National Survey of Substance Abuse Treatment Services (N-SSATS)

Substance Abuse and Mental Health Services Administration

The National Survey of Substance Abuse Treatment Services (N-SSATS), formerly the Uniform Facility Data Set (UFDS), is part of the Drug and Alcohol Services Information System (DASIS) maintained by the Substance Abuse and Mental Health Services Administration (SAMHSA). N-SSATS is a census of all known substance abuse treatment facilities. It seeks information from all specialized facilities that treat substance abuse. These include facilities that treat only substance abuse, as well as specialty substance abuse units operating within larger mental health (for example, community mental health centers), general health (for example, hospitals), social service (for example, family assistance centers), and criminal justice (for example, probation departments) agencies. N-SSATS solicits data concerning facility and client characteristics for a specific reference day (on or about October 1) including number of individuals in treatment, substance of abuse (alcohol, drugs, or both), and types of services. Public and private facilities are included.

Treatment facilities contacted through N-SSATS are identified from the Inventory of Substance Abuse Treatment Services (I-SATS), formerly the National Master Facility Inventory, which lists all known substance abuse treatment facilities. Response rates to the surveys were 88, 91, and 94 percent in 1997, 1998, and 2000, respectively. The full survey was not conducted in 1999.

For further information on N-SSATS, contact: Office of Applied Studies, Substance Abuse and Mental Health Services Administration, Room 16–105, 5600 Fishers Lane, Rockville, MD 20857; or visit the OAS statistical information section of the SAMHSA home page: www.drugabusestatistics.samhsa.gov.

National Vital Statistics System

Centers for Disease Control and Prevention National Center for Health Statistics

Through the National Vital Statistics System, the National Center for Health Statistics (NCHS) collects and publishes data on births, deaths, marriages, and divorces in the United States. Fetal deaths are classified and tabulated separately

from other deaths. The Division of Vital Statistics obtains information on births and deaths from the registration offices of all States, New York City, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. Geographic coverage for births and deaths has been complete since 1933. Trend tables in this book show data for the aggregate of 50 States, New York City, and the District of Columbia, as well as for each individual State and the District of Columbia.

Until 1972 microfilm copies of all death certificates and a 50-percent sample of birth certificates were received from all registration areas and processed by NCHS. In 1972 some States began sending their data to NCHS through the Cooperative Health Statistics System (CHSS). States that participated in the CHSS program processed 100 percent of their death and birth records and sent the entire data file to NCHS on computer tapes. Currently, the data are sent to NCHS through the Vital Statistics Cooperative Program (VSCP), following the same procedures as CHSS. The number of participating States grew from 6 in 1972 to 46 in 1984. Starting in 1985 all 50 States and the District of Columbia participated in VSCP.

In most areas practically all births and deaths are registered. The most recent test of the completeness of birth registration, conducted on a sample of births from 1964 to 1968, showed that 99.3 percent of all births in the United States during that period were registered. No comparable information is available for deaths, but it is generally believed that death registration in the United States is at least as complete as birth registration.

U.S. Standard Certificates—U.S. Standard Live Birth and Death Certificates and Fetal Death Reports are revised periodically, allowing careful evaluation of each item and addition, modification, and deletion of items. Beginning with 1989 revised standard certificates replaced the 1978 versions. The 1989 revision of the birth certificate includes items to identify the Hispanic parentage of newborns and to expand information about maternal and infant health characteristics. The 1989 revision of the death certificate includes items on educational attainment and Hispanic origin of decedents, as well as changes to improve the medical certification of cause of death. Standard certificates recommended by NCHS are modified in each registration area to serve the area's needs. However, most certificates conform closely in content and arrangement to the standard certificate, and all certificates contain a minimum data set specified by NCHS. For selected items, reporting areas expanded during the years spanned by this report. For items on the birth certificate, the number of reporting States increased for mother's education, prenatal care, marital status, Hispanic parentage, and tobacco use; and on the death certificate, for educational attainment and Hispanic origin of the decedent.

Birth File

The birth file is comprised of demographic and medical information from birth certificates. Demographic information, such as race and ethnicity, is provided by the mother at the time of birth. Medical and health information is based on hospital records. Additional information follows for selected items on the birth certificate.

Race—Data on birth rates, birth characteristics, and fetal death rates for 1980 and more recent years for liveborn infants and fetal deaths are presented in this report according to race of mother, unless specified otherwise. Before 1980 data were tabulated by race of newborn and fetus, taking into account the race of both parents. If the parents were of different races and one parent was white, the child was classified according to the race of the other parent. When neither parent was white, the child was classified according to father's race, with one exception: if either parent was Hawaiian, the child was classified Hawaiian. Before 1964, if race was unknown, the birth was classified as white. Beginning in 1964 unknown race was classified according to information on the previous record.

Maternal age—Mother's age was reported on the birth certificate by all States. Data are presented for mother's age 10–49 years through 1996 and 10–54 years starting in 1997, based on mother's date of birth or age as reported on the birth certificate. The age of mother is edited for upper and lower limits. When the age of the mother is computed to be under 10 years or 55 years or over (50 years or over in 1964–96), it is considered not stated and imputed according to the age of the mother from the previous birth record of the same race and total birth order (total of fetal deaths and live births). Before 1963 not stated ages were distributed in proportion to the known ages for each racial group. Beginning in 1997 the birth rate for the maternal age group 45–49 years includes data for mother's age 50–54 years in the numerator and is based on the population of women 45–49 years in the denominator.

Maternal education—Mother's education was reported on the birth certificate by 38 States in 1970. Data were not available

from Alabama, Arkansas, California, Connecticut, Delaware, District of Columbia, Georgia, Idaho, Maryland, New Mexico, Pennsylvania, Texas, and Washington. In 1975 these data were available from four additional States, Connecticut, Delaware, Georgia, Maryland, and the District of Columbia, increasing the number of States reporting mother's education to 42 and the District of Columbia. Between 1980 and 1988 only three States, California, Texas, and Washington, did not report mother's education. In 1988 mother's education was also missing from New York State outside New York City. In 1989–91 mother's education was missing only from Washington and New York State outside New York City. Starting in 1992 mother's education was reported by all 50 States and the District of Columbia.

Prenatal care—Prenatal care was reported on the birth certificate by 39 States and the District of Columbia in 1970. Data were not available from Alabama, Alaska, Arkansas, Connecticut, Delaware, Georgia, Idaho, Massachusetts, New Mexico, Pennsylvania, and Virginia. In 1975 these data were available from three additional States, Connecticut, Delaware, and Georgia, increasing the number of States reporting prenatal care to 42 and the District of Columbia. Starting in 1980 prenatal care information was available for the entire United States.

Marital status—Mother's marital status was reported on the birth certificate by 39 States and the District of Columbia in 1970, and by 38 States and the District of Columbia in 1975. The incidence of births to unmarried women in States with no direct question on marital status was assumed to be the same as the incidence in reporting States in the same geographic division. Starting in 1980 for States without a direct question, marital status was inferred by comparing the parents' and child's surnames and other information concerning the father. In 1980–96 marital status was reported on the birth certificates of 41–45 States. In 1997, all but four States (Connecticut, Michigan, Nevada, and New York) and, in 1998, all but two States (Michigan and New York) included a direct question about mother's marital status on their birth certificates.

Hispanic origin—In 1980 and 1981 information on births of Hispanic parentage was reported on the birth certificate by the following 22 States: Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Maine, Mississippi, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Texas, Utah, and Wyoming. In 1982 Tennessee, and in 1983 the District of Columbia began reporting this information. Between 1983 and 1987 information on births of Hispanic parentage was available for 23 States and the District of Columbia. In 1988 this information became available for Alabama, Connecticut, Kentucky, Massachusetts, Montana, North Carolina, and Washington, increasing the number of States reporting information on births of Hispanic parentage to 30 States and the District of Columbia. In 1989 this information became available from an additional 17 States, increasing the number of Hispanic-reporting States to 47 and the District of Columbia. In 1989 only Louisiana, New Hampshire, and Oklahoma did not report Hispanic parentage on the birth certificate. In 1990 Louisiana began reporting Hispanic parentage. Hispanic origin of the mother was reported on the birth certificates of 49 States and the District of Columbia in 1991 and 1992; only New Hampshire did not provide this information. Starting in 1993 Hispanic origin of mother was reported by all 50 States and the District of Columbia. In 1990, 99 percent of birth records included information on mother's origin.

Tobacco use—Information on tobacco use during pregnancy became available for the first time in 1989 with revision of the U.S. Standard Birth Certificate. In 1989 data on tobacco use were collected by 43 States and the District of Columbia. The following States did not require the reporting of tobacco use in the standard format on the birth certificate: California, Indiana, Louisiana, Nebraska, New York, Oklahoma, and South Dakota. In 1990 information on tobacco use became available from Louisiana and Nebraska, increasing the number of reporting States to 45 and the District of Columbia. In 1991–93, with the addition of Oklahoma to the reporting area, information on tobacco use was available for 46 States and the District of Columbia; in 1994–98, 46 States, the District of Columbia, and New York City reported tobacco use; in 1999 information on tobacco use became available from Indiana and New York, increasing the number of reporting States to 48, the District of Columbia, and New York City; and in 2000, with the addition of South Dakota, the reporting area included 49 States, the District of Columbia, and New York City. During 1989–2000 California did not require the reporting of tobacco use in the standard format on the birth certificate.

Mortality File

The mortality data file is comprised of demographic and medical information from death certificates. Demographic

information is provided by the funeral director based on information supplied by an informant. Medical certification of cause of death is provided by a physician, medical examiner, or coroner. The mortality data file is a fundamental source of cause-of-death information by demographic characteristics and for geographic areas, such as States. The mortality file is one of the few sources of comparable health-related data for smaller geographic areas in the United States and over a long time period. Mortality data can be used not only to present the characteristics of those dying in the United States, but also to determine life expectancy and to compare mortality trends with other countries. Additional information follows for selected items on the death certificate.

Education of decedent—Information on educational attainment of decedents became available for the first time in 1989 due to revision of the U.S. Standard Certificate of Death. Mortality data by educational attainment for 1989 were based on data from 20 States and by 1994–96 increased to 45 States and the District of Columbia. In 1994–96 the following States either did not report educational attainment on the death certificate or the information was more than 20 percent incomplete: Georgia, Kentucky, Oklahoma, Rhode Island, and South Dakota. In 1997–2000 information on decedent's education was available from Oklahoma, increasing the reporting area to 46 States and the District of Columbia. Information on the death certificate about the decedent's educational attainment is reported by the funeral director based on information provided by an informant such as next of kin.

Calculation of unbiased death rates by educational attainment based on the National Vital Statistics System requires that the reporting of education on the death certificate be complete and consistent with the reporting of education on the Current Population Survey, the source of population estimates that form the denominators for death rates. Death records with education not stated have not been included in the calculation of rates. Therefore the levels of the rates shown in this report are underestimated by approximately the percent not stated, which ranged from 3 to 5 percent.

The validity of information about the decedent's education was evaluated by comparing self-reported education obtained in the Current Population Survey with education on the death certificate for decedents in the National Longitudinal Mortality Survey (NLMS). (Sorlie PD, Johnson NJ: Validity of education information on the death certificate, Epidemiology 7(4):437–9, 1996.) Another analysis compared self-reported education collected in the first National Health and Nutrition Examination Survey (NHANES I) with education on the death certificate for decedents in the NHANES I Epidemiologic Followup Study. (Makuc DM, Feldman JJ, Mussolino ME: Validity of education and age as reported on death certificates, American Statistical Association 1996 Proceedings of the Social Statistics Section, 102–6, 1997.) Results of both studies indicated that there is a tendency for some people who did not graduate from high school to be reported as high school graduates on the death certificate. This tendency results in overstating the death rate for high school graduates and understating the death rate for the group with less than 12 years of education. The bias was greater among older than younger decedents and somewhat greater among black than white decedents.

In addition, educational gradients in death rates based on the National Vital Statistics System were compared with those based on the NLMS, a prospective study of persons in the Current Population Survey. Results of these comparisons indicate that educational gradients in death rates based on the National Vital Statistics System were reasonably similar to those based on NLMS for white persons 25–64 years of age and black persons 25–44 years of age. The number of deaths for persons of Hispanic origin in NLMS was too small to permit comparison for this ethnic group.

Hispanic origin—In 1985 mortality data by Hispanic origin of decedent were based on deaths to residents of the following 17 States and the District of Columbia whose data on the death certificate were at least 90 percent complete on a place-of-occurrence basis and of comparable format: Arizona, Arkansas, California, Colorado, Georgia, Hawaii, Illinois, Indiana, Kansas, Mississippi, Nebraska, New York, North Dakota, Ohio, Texas, Utah, and Wyoming. In 1986 New Jersey began reporting Hispanic origin of decedent, increasing the number of reporting States to 18 and the District of Columbia in 1986 and 1987. In 1988 Alabama, Kentucky, Maine, Montana, North Carolina, Oregon, Rhode Island, and Washington were added to the reporting area, increasing the number of States to 26 and the District of Columbia. In 1989 an additional 18 States were added, increasing the Hispanic reporting area to 44 States and the District of Columbia. In 1989 only Connecticut, Louisiana, Maryland, New Hampshire, Oklahoma, and Virginia were not included in the reporting area. Starting with 1990 data in this book, the criterion was changed to include States whose data were at least 80 percent complete. In 1990 Maryland, Virginia, and Connecticut, in 1991 Louisiana, and in 1993 New

Hampshire were added, increasing the reporting area for Hispanic origin of decedent to 47 States and the District of Columbia in 1990, 48 States and the District of Columbia in 1991 and 1992, and 49 States and the District of Columbia in 1993–96. Only Oklahoma did not provide this information in 1993–96. Starting in 1997 Hispanic origin of decedent was reported by all 50 States and the District of Columbia. Based on data from the U.S. Bureau of the Census, the 1990 reporting area encompassed 99.6 percent of the U.S. Hispanic population. In 1990 more than 96 percent of death records included information on origin of decedent.

Race and Hispanic origin—Death rates by race and Hispanic origin are based on information from death certificates (numerators of the rates) and on population estimates from the Census Bureau (denominators). Race and ethnicity information on the death certificate are reported by the funeral director as provided by an informant, often the surviving next of kin, or, in the absence of an informant, on the basis of observation. Race and ethnicity information from the census is by self-report. To the extent that race and Hispanic origin are inconsistent between these two data sources, death rates will be biased. Studies have shown that persons self-reported as American Indian, Asian, or Hispanic on census and survey records may sometimes be reported as white or non-Hispanic on the death certificate, resulting in an underestimation of deaths and death rates for the American Indian, Asian, and Hispanic groups. Bias also results from undercounts of some population groups in the census, particularly young black and white males and elderly persons, resulting in an overestimation of death rates. The net effects of misclassification and undercoverage result in overstated death rates for the white population and black population estimated to be 1 percent and 5 percent, respectively; and understated death rates for other population groups estimated as follows: American Indians, 21 percent; Asian or Pacific Islanders, 11 percent; and Hispanics, 2 percent. For more information, see Rosenberg HM, Maurer JD, Sorlie PD, Johnson NJ, et al. Quality of death rates by race and Hispanic origin: A summary of current research, 1999. National Center for Health Statistics. Vital Health Stat 2(128). 1999.

Infant and maternal mortality rates are calculated with denominators comprising the number of live births rather than population estimates. Starting with 1980 infant and maternal mortality trends are based on maternal race and ethnicity of the live birth in the denominator. Before 1980 infant and maternal mortality trends were based on child's race in the denominator, which took into account the race of both parents. Infant and maternal mortality trends for Hispanics began with 1985 and are based on Hispanic origin of mother.

Vital event rates for the *American Indian or Alaska Native population* shown in this book are based on the total U.S. resident population of American Indians and Alaska Natives as enumerated by the U.S. Bureau of Census. In contrast the Indian Health Service calculates vital event rates for this population based on U.S. Bureau of Census county data for American Indians and Alaska Natives who reside on or near reservations.

Mortality data in *Health, United States* are presented for four major race groups, white, black, American Indian or Alaska Native, and Asian or Pacific Islander, in accordance with 1977 U.S. Office of Management and Budget (OMB) standards for presenting *Federal statistics on race*. Over the next several years, major changes will occur in the way Federal agencies collect and tabulate data on race and Hispanic origin, in accordance with the 1997 guidelines from OMB (see Appendix II, Race). The major difference between the 1977 and 1997 guidelines is adoption of data-collection procedures in which respondents can identify with more than one race group.

For more information, see: National Center for Health Statistics, Technical Appendix, *Vital Statistics of the United States, 2000*, Vol. I, Natality, and Vol. II, Mortality, Part A available on the NCHS home page at www.cdc.gov/nchs. Click on Vital Statistics, Birth Data and Mortality Data.

Multiple Cause of Death File

The National Center for Health Statistics (NCHS) is responsible for compiling and publishing annual national statistics on causes of death. In carrying out this responsibility, NCHS adheres to the World Health Organization Nomenclature Regulations. These Regulations require that (1) cause of death be coded in accordance with the current revision of the International Classification of Diseases (ICD) (see Appendix II, table VI and ICD); and (2) underlying cause of death be selected in accordance with international rules. Traditionally, national mortality statistics have been based on a count of deaths with one underlying cause assigned for each death. National single-cause mortality statistics go back to the year 1900.

Starting with data year 1968, electronic files exist with multiple cause of death information. These files contain codes for all diagnostic terms and related codable information recorded on the death certificate. These codes comprise the entity axis, and are the input for a software program called TRANSAX. The TRANSAX program eliminates redundant entity axis codes and combines other entity axis codes to create the best set of ICD codes for a record. The output of the TRANSAX program is the record axis. Record axis data are generally used for research and analysis of multiple or nonunderlying cause of death. Because the function of the TRANSAX program is not to select a single underlying cause of death, record axis data may or may not include the underlying cause. Tabulations of underlying and nonunderlying cause of death in table 49 (selected occupational diseases) are compiled by searching underlying cause of death and record axis data.

National Linked File of Live Births and Infant Deaths

National linked files of live births and infant deaths are data sets for research on infant mortality. To create these data sets, death certificates are linked with corresponding birth certificates for infants who die in the United States before their first birthday. Linked data files include all variables on the national natality file, including the more accurate racial and ethnic information, as well as variables on the national mortality file, including cause of death and age at death. The linkage makes available for the analysis of infant mortality extensive information from the birth certificate about the pregnancy, maternal risk factors, and infant characteristics and health items at birth. Each year 97–98 percent of infant death records are linked to their corresponding birth records.

National linked files of live births and infant deaths were first produced for the 1983 birth cohort. Birth cohort linked file data are available for 1983–91 and period linked file data for 1995–99. Data for 1995 and after are not strictly comparable with birth cohort data for earlier years. While birth cohort linked files have methodological advantages, their production incurs substantial delays in data availability, since it is necessary to wait until the close of a second data year to include all infant deaths to the birth cohort.

Starting with data year 1995, more timely linked file data are produced in a period data format preceding the release of the corresponding birth cohort format. Other changes to the data set starting with 1995 data include addition of record weights to correct for the 2.2–2.5 percent of records that could not be linked and addition of an imputation for not stated birthweight. The 1995–99 weighted mortality rates are less than 1 percent to 4.1 percent higher than unweighted rates for the same period. The 1995–99 weighted mortality rates with imputed birthweight are less than 1 percent to 6.3 percent higher than unweighted rates with imputed birthweight for the same period.

For more information, see: Mathews TJ, MacDorman MF, Menacker F. Infant mortality statistics from the 1999 period linked birth/infant death data set. National vital statistics reports; vol 50 no 4. Hyattsville, MD: National Center for Health Statistics. 2002; or visit the NCHS home page at www.cdc.gov/nchs.

Compressed Mortality File (CMF)

The Compressed Mortality File (CMF) used to compute death rates by urbanization level is a county-level national mortality and population database. The mortality database of CMF is derived from the detailed mortality files of the National Vital Statistics System starting with 1968. The population database of CMF is derived from intercensal and postcensal population estimates and census counts of the resident population of each U.S. county by age, race, and sex. Counties are categorized according to level of urbanization based on an NCHS-modified version of the 1993 rural-urban continuum codes for metropolitan and nonmetropolitan counties developed by the Economic Research Service, U.S. Department of Agriculture. See Appendix II, *Urbanization*. For more information about CMF, contact: D. Ingram, Division of Health and Utilization Analysis, National Center for Health Statistics, 6525 Belcrest Road, Hyattsville, MD 20782.

Nurse Supply Estimates

Health Resources and Services Administration

Nursing estimates in this report are based on a model developed by the Bureau of Health Professions to meet the requirements of Section 951, P.L. 94–63. The model estimates the following for each State: (a) population of nurses currently licensed to practice; (b) supply of full- and part-time practicing nurses (or available to practice); and (c) full-time equivalent supply of nurses practicing full time plus one-half of those practicing part time (or available on that basis). The three estimates are divided into three levels

of highest educational preparation: associate degree or diploma, baccalaureate, and master's and doctorate. Among the factors considered are new graduates, changes in educational status, nursing employment rates, age, migration patterns, death rates, and licensure phenomena. The base data for the model are derived from the National Sample Surveys of Registered Nurses, conducted by the Division of Nursing, Bureau of Health Professions, HRSA. Other data sources include National League for Nursing for data on nursing education and National Council of State Boards of Nursing for data on licensure. For further information, visit HRSA's Division of Nursing home page at: www.bhpr.hrsa.gov/nursing.

Online Survey Certification and Reporting Database (OSCAR)

Centers for Medicare and Medicaid Services

The Online Survey Certification and Reporting (OSCAR) database has been maintained by the Centers for Medicare and Medicaid Services (CMS), formerly the Health Care Financing Administration (HCFA), since 1992. OSCAR is an updated version of the Medicare and Medicaid Automated Certification System that has been in existence since 1972. OSCAR is an administrative database containing detailed information on all Medicare and Medicaid health care providers in addition to all currently certified Medicare and Medicaid nursing home facilities in the United States and Territories. (Data for the Territories are not shown in this report.) The purpose of the nursing home facility survey certification process is to ensure that nursing facilities meet the current CMS long-term care requirements and thus can participate in serving Medicare and Medicaid beneficiaries. Included in the OSCAR database are all certified nursing facilities, certified hospital-based nursing homes, and certified units for other types of nursing home facilities (for example, life-care communities or board and care homes). Facilities not included in OSCAR are all noncertified facilities (that is, facilities that are only licensed by the State and are limited to private payment sources) and nursing homes that are part of the Department of Veterans Affairs. Also excluded are nursing homes that are intermediate care facilities for the mentally retarded.

Information on the number of beds, residents, and resident characteristics is collected during an inspection of all certified facilities. The information in OSCAR is based on each facility's own administrative record system in addition to interviews with key administrative staff members.

All certified nursing homes are inspected by representatives of the State survey agency (generally the department of health) at least once every 15 months. Therefore a complete census must be based on a 15-month reporting cycle rather than a 12-month cycle. Some nursing homes are inspected twice or more often during any given reporting cycle. In order to avoid overcounting, the data must be edited and duplicates removed. Data editing and compilation were performed by Cowles Research Group and published in the group's *Nursing Home Statistical Yearbook* series.

For more information, see: Cowles CM, 1995 Nursing Home Statistical Yearbook. 1996 Nursing Home Statistical Yearbook. 1997 Nursing Home Statistical Yearbook. Anacortes, WA: Cowles Research Group (CRG), 1995; 1997; 1998; Cowles CM, 1998 Nursing Home Statistical Yearbook. 1999 Nursing Home Statistical Yearbook. 2000 Nursing Home Statistical Yearbook. Washington, DC: American Association of Homes and Services for the Aging (AAHSA), 1999; 2000, 2001; HCFA: OSCAR Data Users Reference Guide, 1995, available from CMS, Health Standards and Quality Bureau, HCFA/HSQB S2 11-07, 7500 Security Boulevard, Baltimore, MD 21244; or visit the CMS home page at www.hcfa.gov or www.cms.gov or the CRG Web page at www.longtermcareinfo.com/crg. The e-mail contact for CRG is MickCowles@aol.com and for AAHSA is akerman@aahsa.org.

Population Census

Bureau of the Census

The census of population has been taken in the United States every 10 years since 1790. In the 1990 and 2000 censuses, data were collected on sex, race, age, and marital status from 100 percent of the enumerated population. More detailed information such as income, education, housing, occupation, and industry were collected from a representative sample of the population. For most of the country, one out of six households (about 17 percent) received the more detailed questionnaire. In places of residence estimated to have less than 2,500 population, 50 percent of households received the long form. The question on race for Census 2000 was different from the one for the 1990 census in several ways. Most significantly, respondents were given the option of selecting one or more race categories to indicate their racial identities (see Appendix II, *Race*).

For more information, see: U.S. Bureau of the Census, *1990 Census of Population, General Population Characteristics*, Series 1990, CP–1; or visit the Census Bureau home page at www.census.gov.

Population Estimates

Bureau of the Census

National population estimates are derived by using decennial census data as benchmarks and data available from various agencies as follows: births and deaths (National Center for Health Statistics); immigrants (Immigration and Naturalization Service); Armed Forces (Department of Defense); net movement between Puerto Rico and the U.S. mainland (Puerto Rico Planning Board); and Federal employees abroad (Office of Personnel Management and Department of Defense). State estimates are based on similar data and a variety of other data series, including school statistics from State departments of education and parochial school systems. Current estimates are consistent with official decennial census figures and do not reflect estimated decennial census underenumeration.

After decennial population censuses, intercensal population estimates for the preceding decade are prepared to replace postcensal estimates. Intercensal population estimates are more accurate than postcensal estimates because they take into account the census of population at the beginning and end of the decade. Intercensal estimates have been prepared for the 1960s, 1970s, and 1980s to correct 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 during the 1960s (379,000). However, for the 1970s it amounted to almost 5 million and for the 1980s, 1.5 million.

For more information, see: U.S. Bureau of the Census, U.S. population estimated by age, sex, race, and Hispanic origin: 1990–96, release PPL–57, March 1997; or visit the Census Bureau home page at www.census.gov.

Surveillance, Epidemiology, and End Results Program (SEER)

National Cancer Institute

In the Surveillance, Epidemiology, and End Results (SEER) Program, the National Cancer Institute (NCI) contracts with 11 population-based registries throughout the United States to provide data on all residents diagnosed with cancer during the year and to provide current followup information on all previously diagnosed patients.

This report covers residents of one of the following geographic areas at the time of the initial diagnosis of cancer: Atlanta, Georgia; Detroit, Michigan; Seattle-Puget Sound, Washington; San Francisco-Oakland, Los Angeles, and San Jose-Monterey, California; Connecticut; Iowa; New Mexico; Utah; and Hawaii.

Population estimates used to calculate incidence rates are obtained from the U.S. Bureau of the Census. NCI uses estimation procedures as needed to obtain estimates for years and races not included in data provided by the U.S. Bureau of the Census. Rates presented in this report may differ somewhat from previous reports due to revised population estimates and the addition and deletion of small numbers of incidence cases.

Life tables used to determine normal life expectancy when calculating relative survival rates were obtained from NCHS and in-house calculations. Separate life tables are used for each race-sex-specific group included in the SEER Program.

For further information, see: Ries LAG, Eisner MP, Kosary CL, et al. (eds). *SEER Cancer Statistics Review 1973–98*. National Cancer Institute. Bethesda, MD. 2001; or visit the SEER home page at www.seer.cancer.gov.

Survey of Occupational Injuries and Illnesses (SOII)

Bureau of Labor Statistics

Since 1971 the Bureau of Labor Statistics (BLS) has conducted an annual survey of establishments in the private sector to collect statistics on occupational injuries and illnesses. The Survey of Occupational Injuries and Illnesses is a Federal/State program in which employer reports are collected from about 169,000 private industry establishments and processed by State agencies cooperating with BLS. Data for the mining industry and for railroad activities are provided by Department of Labor's Mine Safety and Health Administration and Department of Transportation's Federal Railroad Administration. Excluded from the survey are self-employed individuals; farmers with fewer than 11 employees; private households; Federal Government

agencies; and employees in State and local government agencies. Establishments are classified in industry categories based on the 1987 Standard Industrial Classification (SIC) Manual, as defined by the Office of Management and Budget.

Survey estimates of occupational injuries and illnesses are based on a scientifically selected probability sample, rather than a census of the entire population. An independent sample is selected for each State and the District of Columbia that represents industries in that jurisdiction. BLS includes all the State samples in the national sample.

Establishments included in the survey are instructed in a mailed questionnaire to provide summary totals of all entries for the previous calendar year to its Log and Summary of Occupational Injuries and Illnesses (OSHA No. 200 form). Additionally, from the selected establishments, approximately 550,000 injuries and illnesses with days away from work are sampled to obtain demographic and detailed case characteristic information. An occupational injury is any injury such as a cut, fracture, sprain, or amputation, that results from a work-related event or from a single instantaneous exposure in the work environment. An occupational illness is any abnormal condition or disorder other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or diseases that may be caused by inhalation, absorption, ingestion, or direct contact. Lost workday cases involve days away from work, days of restricted work activity, or both. The response rate is about 92 percent.

The number of injuries and illnesses reported in any given year can be influenced by the level of economic activity, working conditions and work practices, worker experience and training, and the number of hours worked. Long-term latent illnesses caused by exposure to carcinogens are believed to be understated in the survey's illness measures. In contrast, new illnesses such as contact dermatitis and carpal tunnel syndrome are easier to relate directly to workplace activity.

For more information, see: Bureau of Labor Statistics, Workplace Injuries and Illnesses in 2000, Washington, DC. U.S. Department of Labor, December 2001; or visit the BLS occupational safety and health Internet site at www.stats.bls.gov/oshhome.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) is conducted by the Centers for Disease Control and Prevention's National Center for Chronic Disease Prevention and Health Promotion to monitor the prevalence of priority health risk behaviors among high school students in grades 9–12 that contribute to morbidity and mortality in both adolescence and adulthood.

The national YRBS of high school students was conducted in 1990, 1991, 1993, 1995, 1997, 1999, and 2001. The national YRBS school-based surveys employ a three-stage cluster sample design to produce a nationally representative sample of students in grades 9–12 attending public and private high schools. The first-stage sampling frame contains primary sampling units (PSUs) consisting of large counties or groups of smaller, adjacent counties. The PSUs are then stratified based on degree of urbanization and relative percent of black and Hispanic students in the PSU. The PSUs are selected from these strata with probability proportional to school enrollment size. At the second sampling stage, schools are selected with probability proportional to school enrollment size. To enable separate analysis of data for black and Hispanic students, schools with substantial numbers of black and Hispanic students are sampled at higher rates than all other schools. The third stage of sampling consists of randomly selecting one or two intact classes of a required subject from grades 9–12 at each chosen school. All students in the selected classes are eligible to participate in the survey. 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. SUDAAN was used to compute standard errors. The sample size for the 2001 YRBS was 13,601. The school response rate was 75 percent, and the student response rate was 83 percent, for an overall response rate of 63 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 for behavioral or other reasons are not surveyed. Second, the

extent of underreporting or overreporting cannot be determined, although the survey questions demonstrate good test-retest reliability.

For further information on the YRBS, see: CDC. Youth risk behavior surveillance—United States, 1999. CDC surveillance summaries, June 9, 2000. MMWR 2000:49(SS-05); CDC. Youth risk behavior surveillance—United States, 2001. CDC surveillance summaries, MMWR, available summer of 2002; or write: Director, Division of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 4770 Buford Highway NE, Mail Stop K-32, Atlanta, GA 30341-3717; or visit the Division of Adolescent and School Health home page at www.cdc.gov/nccdphp/dash.

Private and Global Sources

Alan Guttmacher Institute Abortion Survey

The Alan Guttmacher Institute (AGI) conducts periodic surveys of abortion providers. Data are collected from hospitals, nonhospital clinics, and physicians identified as providers of abortion services. A universal survey of 3,092 hospitals, nonhospital clinics, and individual physicians was compiled. To assess the completeness of the provider and abortion counts, supplemental surveys were conducted of a sample of obstetrician-gynecologists and a sample of hospitals (not in original universe) that were identified as providing abortion services through the American Hospital Association Survey.

The number of abortions estimated by AGI through the mid- to late-1980s was about 20 percent higher than the number reported to the Centers for Disease Control and Prevention (CDC). Since 1989 the AGI estimates have been about 12 percent higher than those reported by CDC.

For more information, write: The Alan Guttmacher Institute, 120 Wall Street, New York, NY 10005; or visit AGI's home page at www.agi-usa.org.

American Association of Colleges of Osteopathic Medicine

The American Association of Colleges of Osteopathic Medicine (AACOM) compiles data on various aspects of osteopathic medical education for distribution to the profession, the government, and the public. Questionnaires are sent annually to all schools of osteopathic medicine requesting information on characteristics of applicants and students, curricula, faculty, grants, contracts, revenues, and expenditures. The response rate is 100 percent.

For more information, see: *Annual Statistical Report, 2000*, American Association of Colleges of Osteopathic Medicine: Rockville, MD, 2001; or visit the AACOM home page at www.aacom.org.

American Association of Colleges of Pharmacy

The American Association of Colleges of Pharmacy (AACP) compiles data on the Colleges of Pharmacy, including information on student enrollment and types of degrees conferred. Data are collected through an annual survey; the response rate is 100 percent.

For further information, see: *Profile of Pharmacy Students*. The American Association of Colleges of Pharmacy, 1426 Prince Street, Alexandria, VA; or visit the AACP home page at www.aacp.org.

American Association of Colleges of Podiatric Medicine

The American Association of Colleges of Podiatric Medicine (AACPM) compiles data on the Colleges of Podiatric Medicine, including information on the schools and enrollment. Data are collected annually through written questionnaires. The response rate is 100 percent.

For further information, write: The American Association of Colleges of Podiatric Medicine, 1350 Piccard Drive, Suite 322, Rockville, MD 20850-4307; or visit the AACPM home page at www.aacpm.org.

American Dental Association

The Division of Educational Measurement of the American Dental Association (ADA) conducts annual surveys of predoctoral dental educational institutions. The questionnaire, mailed to all dental schools, collects information on student characteristics, financial management, and curricula.

For more information, see: American Dental Association, *1999–2000 Survey of Predoctoral Dental Educational*

Institutions. Chicago, IL. 2001; or visit the ADA home page at www.ada.org.

Annual Census of Hospitals

American Medical Association

From 1920 to 1953 the Council on Medical Education and Hospitals of the AMA conducted annual censuses of all hospitals registered by the AMA.

In each annual census, questionnaires were sent to hospitals asking for the number of beds, bassinets, births, and patients admitted; average census of patients; lists of staff doctors and interns; and other information of importance at the particular time. Response rates were always nearly 100 percent.

The community hospital data from 1940 and 1950 presented in this report were calculated using published figures from the AMA Annual Census of Hospitals. Although the hospital classification scheme used by the AMA in published reports is not strictly comparable with the definition of community hospitals, methods were employed to achieve the greatest comparability possible.

For more information on the AMA Annual Census of Hospitals, see: American Medical Association, Hospital Service in the United States, *Journal of the American Medical Association* 116(11):1055–1144. 1941; 146(2):109–184. 1951; or visit the AMA home page at www.ama-assn.org.

Annual Survey of Hospitals

American Hospital Association

Data from the American Hospital Association (AHA) annual survey are based on questionnaires sent to all hospitals, AHA-registered and nonregistered, in the United States and its associated areas. U.S. Government hospitals located outside the United States were excluded. Overall, the average response rate over the past 5 years has been approximately 83 percent. For nonreporting hospitals and for the survey questionnaires of reporting hospitals on which some information was missing, estimates were made for all data except those on beds, bassinets, and facilities. Data for beds and bassinets of nonreporting hospitals were based on the most recent information available from those hospitals. Facilities and services and inpatient-service area data include only reporting hospitals and, therefore, do not include estimates.

Estimates of other types of missing data were based on data reported the previous year, if available. When unavailable, estimates were based on data furnished by reporting hospitals similar in size, control, major service provided, length of stay, and geographic and demographic characteristics.

For more information on the AHA Annual Survey of Hospitals, see: Health Forum, LLC, an affiliate of the American Hospital Association, Hospital Statistics, 2002. Chicago, IL. 2002; or visit the AHA home page at www.aha.org.

Association of American Medical Colleges

The Association of American Medical Colleges (AAMC) collects information on student enrollment in medical schools through the annual Liaison Committee on Medical Education questionnaire, the fall enrollment questionnaire, and the American Medical College Application Service (AMCAS) data system. Other data sources are the institutional profile system, the premedical students questionnaire, the minority student opportunities in medicine questionnaire, the faculty roster system, data from the Medical College Admission Test, and one-time surveys developed for special projects.

For more information, see: Association of American Medical Colleges, *Statistical Information Related to Medical Education*, Washington, DC. 2000, or visit the AAMC home page at www.aamc.org.

Association of Schools and Colleges of Optometry

The Association of Schools and Colleges of Optometry (ASCO) compiles data on various aspects of optometric education including data on schools and enrollment. Questionnaires are sent annually to all the schools and colleges of optometry. The response rate is 100 percent.

For further information, write: Annual Survey of Optometric Educational Institutions, Association of Schools and Colleges of Optometry, 6110 Executive Blvd., Suite 690, Rockville, MD 20852; or visit the ASCO home page at www.opted.org.

Association of Schools of Public Health

The Association of Schools of Public Health (ASPH) compiles data on schools of public health in the United States and Puerto Rico. Questionnaires are sent annually to all member schools, and the response rate is 100 percent.

Unlike health professional schools that emphasize specific clinical occupations, schools of public health offer study in specialty areas such as biostatistics, epidemiology, environmental and occupational health, health administration, health planning, nutrition, maternal and child health, social and behavioral sciences, and other population-based sciences.

For further information, write: Association of Schools of Public Health, 1101 15th Street, NW, Suite 910, Washington, DC 20005; or visit the ASPH home page at www.asph.org.

Demographic Yearbook

United Nations

The Statistical Office of the United Nations prepares the *Demographic Yearbook*, a comprehensive collection of international demographic statistics.

Questionnaires are sent annually and monthly to more than 220 national statistical services and other appropriate government offices. Data forwarded on these questionnaires are supplemented, to the extent possible, by data taken from official national publications and by correspondence with the national statistical services. To ensure comparability, rates, ratios, and percents have been calculated in the statistical office of the United Nations.

Lack of international comparability among estimates arises from differences in concepts, definitions, and time of data collection. The comparability of population data is affected by several factors, including (a) definitions of the total population, (b) definitions used to classify the population into its urban and rural components, (c) difficulties relating to age reporting, (d) extent of over- or underenumeration, and (e) quality of population estimates. The completeness and accuracy of vital statistics data also vary from one country to another. Differences in statistical definitions of vital events may also influence comparability.

International demographic trend data are available on a CD-ROM entitled United Nations, 2000. Demographic Yearbook—Historical Supplement 1948–97. CD-ROM Special Issue. United Nations publication sales number E/F.99.XIII.12.

For more information, see: United Nations, *Demographic Yearbook 1999*, United Nations, New York, 2001; or visit the United Nations home page at www.un.org or their Web site locator at www.unsystem.org.

National Health Maintenance Organization Census

InterStudy

From 1976 to 1980 the Office of Health Maintenance Organizations conducted a census of health maintenance organizations (HMOs). Since 1981 InterStudy has conducted the census. A questionnaire is sent to all HMOs in the United States asking for updated enrollment, profit status, and Federal qualification status. New HMOs are also asked to provide information on model type. When necessary, information is obtained, supplemented, or clarified by telephone. For nonresponding HMOs State-supplied information or the most current available data are used.

In 1985 a large increase in the number of HMOs and enrollment was partly attributable to a change in the categories of HMOs included in the census: Medicaid-only and Medicare-only HMOs have been added. Also component HMOs, which have their own discrete management, can be listed separately, whereas, previously the oldest HMO reported for all of its component or expansion sites, even when the components had different operational dates or were different model types.

For further information, see: *The InterStudy Competitive Edge*. InterStudy Publications, St. Paul, MN. 2001; or visit the InterStudy home page at www.hmodata.com.

National League for Nursing

The division of research of the National League for Nursing (NLN) conducts The Annual Survey of Schools of Nursing in October of each year. Questionnaires are sent to all graduate nursing programs (master's and doctoral), baccalaureate programs designed exclusively for registered nurses, basic registered nursing programs (baccalaureate, associate degree, and diploma), and licensed practical nursing programs. Data on enrollments, first-time admissions, and graduates are completed for all nursing education programs. Response rates

of approximately 80 percent are achieved for other areas of inquiry.

For more information, see: National League for Nursing, *Nursing Data Review* 1997, New York, NY. 1997; or visit the NLN home page at www.nln.org.

Organization for Economic Cooperation and Development Health Data

Organization for Economic Cooperation and Development (OECD)

OECD provides annual data on statistical indicators on health and economic policies collected from 30 member countries beginning in the 1960s. The international comparability of health expenditure estimates depends on the quality of national health accounts in OECD member countries. In recent years the OECD health accounts have become an informal standard for reporting on health care systems. Additional limitations in international comparisons include differing boundaries between health care and other social care particularly for the disabled and elderly, and underestimation of private expenditures on health. For further information see www.oecd.org.

Physician Masterfile

American Medical Association

A masterfile of physicians has been maintained by the American Medical Association (AMA) since 1906. The Physician Masterfile contains data on almost every physician in the United States, members and nonmembers of the AMA, and on those graduates of American medical schools temporarily practicing overseas. The file also includes graduates of international medical schools who are in the United States and meet education standards for primary recognition as physicians.

A file is initiated on each individual upon entry into medical school or, in the case of international graduates, upon entry into the United States. Between 1969–85 a mail questionnaire survey was conducted every 4 years to update the file information on professional activities, self-designated area of specialization, and present employment status. Since 1985 approximately one-third of all physicians are surveyed each year.

For more information on the AMA Physician Masterfile, see: Division of Survey and Data Resources, American Medical Association, *Physician Characteristics and Distribution in the U.S., 2002–2003* ed. Chicago, IL. 2002; or visit the AMA home page at www.ama-assn.org.

World Health Statistics Annual

World Health Organization

The World Health Organization (WHO) prepares the *World Health Statistics Annual*, an annual volume of information on vital statistics and causes of death designed for use by the medical and public health professions. Each volume is the result of a joint effort by the national health and statistical administrations of many countries, the United Nations, and WHO. United Nations estimates of vital rates and population size and composition, where available, are reprinted directly in the *Statistics Annual*. For those countries for which the United Nations does not prepare demographic estimates, primarily smaller populations, the latest available data reported to the United Nations and based on reasonably complete coverage of events are used.

Information published on infant mortality is based entirely on official national data either reported directly or made available to WHO.

Selected life table functions are calculated from the application of a uniform methodology to national mortality data provided to WHO, in order to enhance their value for international comparisons. The life table procedure used by WHO may often lead to discrepancies with national figures published by countries, due to differences in methodology or degree of age detail maintained in calculations.

The international comparability of estimates published in the *World Health Statistics Annual* is affected by the same problems as is the United Nations *Demographic Yearbook*. Cross-national differences in statistical definitions of vital events, in the completeness and accuracy of vital statistics data, and in the comparability of population data are the primary factors affecting comparability.

For more information, see: World Health Organization, *World Health Statistics Annual 1999*, World Health Organization, Geneva, 2001; World Health Statistics 1997–99 at www.who.int/whosis; or visit the WHO home page at www.who.int.

Appendix II

Definitions and Methods

Appendix II is an alphabetical listing of terms used in *Health, United States*. It includes cross-references to related terms and synonyms. It also describes the methods used for calculating age-adjusted rates, average annual rate of change, relative standard error, birth rates, death rates, and years of potential life lost. Appendix II includes standard populations used for age adjustment (tables I, II, and III); *International Classification of Diseases* (ICD) codes for cause of death from the Sixth through Tenth Revisions and the years when the Revisions were in effect (tables IV and V); comparability ratios between ICD–9 and ICD–10 for selected causes (table VI); ICD–9–CM codes for external cause-of-injury, diagnostic, and procedure categories (tables VII, IX, and X); and industry codes from the Standard Industrial Classification Manual (table VIII). New standards for presenting Federal data on race and ethnicity are described under *Race* and sample tabulations of NHIS data comparing the 1977 and 1997 Standards for Federal data on race and Hispanic origin are presented in tables XI and XII.

Abortion—The Centers for Disease Control and Prevention's (CDC) surveillance system counts legal induced abortions only. For surveillance purposes, legal abortion is defined as a procedure performed by a licensed physician or someone acting under the supervision of a licensed physician to induce the termination of a pregnancy.

Acquired immunodeficiency syndrome (AIDS)—All 50 States and the District of Columbia report AIDS cases to CDC using a uniform surveillance case definition and case report form. The case reporting definitions were expanded in 1985 *(MMWR* 1985; 34:373–5); 1987 *(MMWR* 1987; 36 (supp. no. 1S): 1S–15S); 1993 for adults and adolescents *(MMWR* 1992; 41 (no. RR-17): 1–19); and 1994 for pediatric cases *(MMWR* 1994; 43 (no. RR-12): 1–19). The revisions incorporated a broader range of AIDS-indicator diseases and conditions and used HIV diagnostic tests to improve the sensitivity and specificity of the definition. The 1993 expansion of the case definition caused a temporary distortion of AIDS incidence trends. In 1995 new treatments for HIV and AIDS (protease inhibitors) were approved. These therapies have prevented or delayed the onset of AIDS and premature death among many HIV-infected persons. AIDS surveillance data are published semiannually by CDC in the HIV/AIDS Surveillance Report. See related *Human immunodeficiency virus (HIV) infection*.

Active physician—See *Physician*.

Activities of daily living (ADL)—Activities of daily living are activities related to personal care and include bathing or showering, dressing, getting in or out of bed or a chair, using the toilet, and eating. In the National Health Interview Survey respondents were asked about needing the help of another person with personal care needs because of a physical, mental, or emotional problem. Persons are considered to have an ADL limitation if any causal condition is chronic.

In the Medicare Current Beneficiary Survey a sample person who had any difficulty performing an activity by him or herself and without special equipment, or did not perform the activity at all because of health problems, was categorized as having a limitation in that activity. The limitation may have been temporary or chronic at the time of the interview. Sample persons who were administered a community interview answered health status and functioning questions themselves if able to do so. A proxy, such as a nurse, answered questions about the sample person's health status and functioning for those in a long-term care facility. See related *Instrumental activities of daily living (IADL)*; *Limitation of activity*.

Addition—An addition to a psychiatric organization is defined by the Center for Mental Health Services as a new admission, a readmission, a return from long-term leave, or a transfer from another service of the same organization or another organization. See related *Mental health organization; Mental health service type*.

Admission—The American Hospital Association defines admissions as patients, excluding newborns, accepted for inpatient services during the survey reporting period. See related *Days of care; Discharge; Patient*.

Age—Age is reported as age at last birthday, that is, age in completed years, often calculated by subtracting date of birth from the reference date, with the reference date being the date of the examination, interview, or other contact with an individual.

Age adjustment—Age adjustment, using the direct method, is the application of age-specific rates in a population of interest to a standardized age distribution in order to eliminate differences in observed rates that result from age differences in population composition. This adjustment is usually done when comparing two or more populations at one point in time or one population at two or more points in time.

Age-adjusted rates are calculated by the direct method as follows:

$$\sum_{i=1}^{n} r_i \times (p_i / P)$$

where r_i = rate in age group i in the population of interest

p_i = standard population in age group i

$$P = \sum_{i=1}^{n} p_i$$

n = total number of age groups over the age range of the age-adjusted rate

Age adjustment by the direct method requires use of a standard age distribution. The standard for age adjusting death rates and estimates from most surveys in *Health, United States* is the year 2000 projected U.S. resident population. Starting with *Health, United States, 2001*, the year 2000 population replaces the 1940 U.S. population for age adjusting mortality statistics. The 2000 standard population also replaces the 1970 civilian noninstitutionalized population and 1980 U.S. resident population, which previously had been used as standard age distributions for age adjusting estimates from NCHS surveys.

The year 2000 standard has implications for race and ethnic differentials in mortality. For example, the mortality ratio for the black and white populations is reduced from 1.6 using the 1940 standard to 1.4 using the year 2000 standard, reflecting the greater weight that the year 2000 standard gives to the older population where race differentials in mortality are smaller.

For more information on implementing the new population standard for age adjusting death rates, see Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National vital statistics reports; vol 47 no 3. Hyattsville, Maryland: National Center for Health Statistics. 1998. For more information on the derivation of age adjustment weights for use with NCHS survey data, see Klein RJ, Schoenborn CA. Age Adjustment Using the 2000 Projected U.S. Population. Healthy People Statistical Notes no 20. Hyattsville, Maryland: National Center for Health Statistics. 2001. Both reports are available through the NCHS home page at www.cdc.gov/nchs. The year 2000 projected U.S. resident population is available through the Bureau of the Census home page at www.census.gov/prod/1/pop/p25–1130/table2.

Table I. Projected year 2000 U.S. population and proportion distribution by age for age adjusting death rates

Age	*Population*	*Proportion distribution (weights)*	*Standard million*
Total	274,634,000	1.000000	1,000,000
Under 1 year	3,795,000	0.013818	13,818
1–4 years	15,192,000	0.055317	55,317
5–14 years	39,977,000	0.145565	145,565
15–24 years	38,077,000	0.138646	138,646
25–34 years	37,233,000	0.135573	135,573
35–44 years	44,659,000	0.162613	162,613
45–54 years	37,030,000	0.134834	134,834
55–64 years	23,961,000	0.087247	87,247
65–74 years	18,136,000	0.066037	66,037
75–84 years	12,315,000	*0.044842	44,842
85 years and over	4,259,000	0.015508	15,508

*Figure is rounded up instead of down to force total to 1.0.

SOURCE: Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National vital statistics reports; vol 47 no 3. Hyattsville, Maryland: National Center for Health Statistics. 1998.

Table II. Numbers of live births and mother's age groups used to adjust maternal mortality rates to live births in the United States in 1970

Mother's age	*Number*
All ages	3,731,386
Under 20 years	656,460
20–24 years	1,418,874
25–29 years	994,904
30–34 years	427,806
35 years and over	233,342

SOURCE: U.S. Bureau of the Census: Population estimates and projections. *Current Population Reports.* Series P-25, No. 499. Washington, D.C.: U.S. Government Printing Office, May 1973.

Mortality data—Death rates are age adjusted to the year 2000 standard population (table I). Age-adjusted rates are calculated using age-specific death rates per 100,000 population rounded to 1 decimal place. Adjustment is based on 11 age groups with two exceptions. First,

age-adjusted death rates for black males and black females in 1950 are based on nine age groups, with under 1 year and 1–4 years of age combined as one group and 75–84 years and 85 years of age combined as one group. Second, age-adjusted death rates by educational attainment for the age group 25–64 years are based on four 10-year age groups (25–34 years, 35–44 years, 45–54 years, and 55–64 years).

Age-adjusted rates for years of potential life lost (YPLL) before age 75 years also use the year 2000 standard population and are based on eight age groups (under 1 year, 1–14 years, 15–24 years, and 10-year age groups through 65–74 years).

Maternal mortality rates for pregnancy, childbirth, and the puerperium are calculated as the number of deaths per 100,000 live births. These rates are age adjusted to the 1970 distribution of live births by mother's age in the United States as shown in table II. See related *Rate: Death and related rates; Years of potential life lost*.

National Health Interview Survey—Estimates based on the National Health Interview Survey (NHIS) are age adjusted to the year 2000 projected resident population (table III). Information on the age groups used in the age adjustment procedure is contained in the footnotes on the relevant tables. Prior to the 2000 edition of *Health, United States* these estimates were age adjusted to the 1970 civilian noninstitutionalized population.

Health Care Surveys—Estimates based on the National Hospital Discharge Survey (NHDS), the National Survey of Ambulatory Surgery (NSAS), the National Ambulatory Medical Care Survey (NAMCS), the National Hospital Ambulatory Medical Care Survey (NHAMCS), the National Nursing Home Survey (NNHS) (resident rates table), and the National Home and Hospice Care Survey (NHHCS) are age adjusted to the year 2000 standard population (table III). Information on the age groups used in the age adjustment procedure is contained in the footnotes to the relevant tables.

National Health and Nutrition Examination Survey—Estimates based on the National Health Examination Survey (NHES) and the National Health and Nutrition Examination Survey (NHANES) are age adjusted to the year 2000 standard population using five age groups: 20–34 years, 35–44 years, 45–54 years, 55–64 years, and 65–74 years (table III). Prior to the 2000 edition of *Health, United States* these estimates were age adjusted to the 1980 U.S. resident population.

Table III. Projected year 2000 U.S. resident population and age groups used to age adjust survey data

Survey and age	*Number in thousands*
NHIS, NAMCS, NHAMCS, NHHCS, NNHS, NHDS, and NSAS	
All ages	274,634
18 years and over	203,851
25 years and over	117,593
40 years and over	118,180
65 years and over	34,710
Under 18 years	70,783
2–17 years	63,229
18–44 years	108,150
18–24 years	26,258
25–34 years	37,233
35–44 years	44,659
45–64 years	60,991
45–54 years	37,030
55–64 years	23,961
65–74 years	18,136
75 years and over	16,574
40–64 years:	
40–49 years	42,285
50–64 years	41,185
NHES and NHANES	
20–74 years	179,276
20–34 years	55,490
35–44 years	44,659
45–54 years	37,030
55–64 years	23,961
65–74 years	18,136
SAMHSA's DAWN	
6 years and over	251,751
6–11 years	24,282
12–17 years	23,618
18–25 years	29,679
26–34 years	33,812
35 years and over	140,360

SOURCE: U.S. Bureau of Census: Current Population Reports. P25–1130. Population Projections of the United States by Age, Sex, Race, and Hispanic Origin, table 2. U.S. Government Printing Office, Washington, DC, 1996.

AIDS—See *Acquired immunodeficiency syndrome*.

Air quality standards—See *National ambient air quality standards*.

Air pollution—See *Pollutant*.

Alcohol abuse treatment clients—See *Substance abuse treatment clients*.

Alcohol consumption—Starting with the 1997 National Health Interview Survey, information on alcohol consumption is collected in the sample adult questionnaire. Adult respondents are asked two screening questions about lifetime alcohol consumption: "In any one year, have you had at least 12 drinks of any type of alcoholic beverage? In your entire life, have you had at least 12 drinks of any type of alcoholic beverage?" Persons who report at least 12 drinks in a lifetime are then asked a series of questions about alcohol consumption in the past year: "In the past year, how often did you drink any type of alcoholic beverage? In the past year, on those days that you drank alcoholic beverages, on the average, how many drinks did you have? In the past year, on how many days did you have 5 or more drinks of any alcoholic beverage?"

In the 1999–2000 National Household Survey on Drug Abuse information about how recent and the frequency of the consumption of alcoholic beverages was obtained for all persons 12 years of age and over. An extensive list of examples of the kinds of beverages covered was given to respondents prior to the question administration. A "drink" is defined as a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it. Those times when the respondent had only a sip or two from a drink are not considered consumption. Alcohol use is based on the following questions: "During the past 30 days, on how many days did you drink one or more drinks of an alcoholic beverage?", "On the days that you drank during the past 30 days, how many drinks did you usually have?", and "During the past 30 days, on how many days did you have 5 or more drinks on the same occasion?"

The Monitoring the Future Study, a school-based survey of secondary school students, collects information on alcohol use using self-completed questionnaires. Information on consumption of alcoholic beverages, defined as beer, wine, wine coolers, and liquor, is based on the following question: "On how many occasions (if any) have you had alcohol to drink—more than just a few sips—in the last 30 days?" Students responding affirmatively are then asked "How many times have you had five or more drinks in a row in the last two weeks?" For this question, a "drink" means a 12-ounce can (or bottle) of beer, a 4-ounce glass of wine, a 12-ounce bottle (or can) of wine cooler, or a mixed drink or shot of liquor.

Ambulatory care—Health care provided to persons without their admission to a health facility.

Ambulatory surgery—According to the National Survey of Ambulatory Surgery (NSAS), ambulatory surgery refers to previously scheduled surgical and nonsurgical procedures performed on an outpatient basis in a hospital or freestanding ambulatory surgery center's general or main operating rooms, satellite operating rooms, cystoscopy rooms, endoscopy rooms, cardiac catheterization labs, and laser procedure rooms. Procedures performed in locations dedicated exclusively to dentistry, podiatry, abortion, pain block, or small procedures were not included. In NSAS, data on up to six surgical and nonsurgical procedures are collected and coded. See related *Outpatient surgery; Procedure*.

Average annual rate of change (percent change)—In *Health, United States* average annual rates of change or growth rates are calculated as follows:

$$[(P_n / P_o)^{1/N} - 1] \times 100$$

where P_n = later time period

P_o = earlier time period

N = number of years in interval.

This geometric rate of change assumes that a variable increases or decreases at the same rate during each year between the two time periods.

Average length of stay—In the National Health Interview Survey, average length of stay per discharged patient is computed by dividing the total number of hospital days for a specified group by the total number of discharges for that group. Similarly, in the National Hospital Discharge Survey, average length of stay is computed by dividing the total number of days of care, counting the date of admission but not the date of discharge, by the number of patients discharged. The American Hospital Association computes average length of stay by dividing the number of inpatient days by the number of admissions. See related *Days of care; Discharge; Patient*.

Bed—Any bed that is set up and staffed for use by inpatients is counted as a bed in a facility. For the American Hospital Association the count is the average number of beds, cribs, and pediatric bassinets during the entire reporting period. In the Health Care Financing Administration's Online Survey

Certification and Reporting database, all beds in certified facilities are counted on the day of certification inspection. The World Health Organization defines a hospital bed as one regularly maintained and staffed for the accommodation and full-time care of a succession of inpatients and situated in a part of the hospital where continuous medical care for inpatients is provided. The Center for Mental Health Services counts the number of beds set up and staffed for use in inpatient and residential treatment services on the last day of the survey reporting period. See related *Hospital; Mental health organization; Mental health service type; Occupancy rate*.

Birth cohort—A birth cohort consists of all persons born within a given period of time, such as a calendar year.

Birth rate—See *Rate: Birth and related rates*.

Birthweight—The first weight of the newborn obtained after birth. Low birthweight is defined as less than 2,500 grams or 5 pounds 8 ounces. Very low birthweight is defined as less than 1,500 grams or 3 pounds 4 ounces. Before 1979 low birthweight was defined as 2,500 grams or less and very low birthweight as 1,500 grams or less.

Body mass index (BMI)—BMI is a measure that adjusts bodyweight for height. It is calculated as weight in kilograms divided by height in meters squared. Overweight for children and adolescents is defined as BMI at or above the sex- and age-specific 95th percentile BMI cut points from the 2000 CDC Growth Charts (www.cdc.gov/growthcharts/). Healthy weight for adults is defined as a BMI of 18.5 to less than 25; overweight, as greater than or equal to a BMI of 25; and obesity, as greater than or equal to a BMI of 30. BMI cut points are defined in the Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2000. U.S. Department of Agriculture, Agricultural Research Service, Dietary Guidelines Advisory Committee, p. 23, or access on the Internet at www.health.gov/dietaryguidelines/dgac/; NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults—The Evidence Report. Obes Res 1998;6:51S-209S or access on the Internet at www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.htm; and in U.S. Department of Health and Human Services. *Tracking Healthy People 2010*. Washington, DC: U.S. Government Printing Office, November 2000. Objectives 19.1, 19.2, and 19.3, or access on the Internet at www.health.gov/healthypeople/document/html/volume2/19nutrition.htm.

Cause of death—For the purpose of national mortality statistics, every death is attributed to one underlying condition, based on information reported on the death certificate and using the international rules for selecting the underlying cause of death from the conditions stated on the death certificate. The underlying cause is defined by the World Health Organization (WHO) as the disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence, which produced the fatal injury. Generally more medical information is reported on death certificates than is directly reflected in the underlying cause of death. The conditions that are not selected as underlying cause of death constitute the nonunderlying cause of death, also known as multiple cause of death.

Cause of death is coded according to the appropriate revision of the *International Classification of Diseases* (ICD) (see table IV). Effective with deaths occurring in 1999, the United States began using the Tenth Revision of the ICD (ICD–10); during the period 1979–98, causes of death were coded and classified according to the Ninth Revision (ICD–9). Table V lists ICD codes for the Sixth through Tenth Revisions for causes of death shown in *Health, United States*.

Each of these revisions has produced discontinuities in cause-of-death trends. These discontinuities are measured using comparability ratios. These measures of discontinuity are essential to the interpretation of mortality trends. For further discussion, see the Mortality Technical Appendix

Table IV. Revision of the *International Classification of Diseases (ICD)* according to year of conference by which adopted and years in use in the United States

Revision of the International Classification of Diseases	*Year of conference by which adopted*	*Years in use in United States*
First	1900	1900–1909
Second	1909	1910–1920
Third	1920	1921–1929
Fourth	1929	1930–1938
Fifth	1938	1939–1948
Sixth	1948	1949–1957
Seventh	1955	1958–1967
Eighth	1965	1968–1978
Ninth	1975	1979–1998
Tenth	1992	1999–

Table V. Cause-of-death codes, according to applicable revision of *International Classification of Diseases (ICD)*

Cause of death (Tenth Revision titles)	*Sixth and Seventh Revisions*	*Eighth Revision*	*Ninth Revision*	*Tenth Revision*
Communicable diseases	. . .	. . .	001–139, 460–466, 480–487, 771.3	A00–B99, J00–J22
Chronic and noncommunicable diseases	. . .	. . .	140–459, 470–478, 490–799	C00–I99, J30–R99
Injuries	. . .	. . .	E800–E869, E880–E929, E950–E999	V01–Y34, Y85–Y87, Y89
Meningococcal Infection	. . .	. . .	036	A39
Septicemia	. . .	. . .	038	A40–A41
Human immunodeficiency virus (HIV) disease[1]	. . .	. . .	*042–*044	B20–B24
Malignant neoplasms	140–205	140–209	140–208	C00–C97
Colon, rectum, and anus	153–154	153–154	153, 154	C18–C21
Trachea, bronchus, and lung	162–163	162	162	C33–C34
Breast	170	174	174–175	C50
Prostate	177	185	185	C61
In situ neoplasms and benign neoplasms	. . .	. . .	210–239	D00–D48
Diabetes mellitus	260	250	250	E10–E14
Anemias	. . .	. . .	280–285	D50–D64
Meningitis	. . .	. . .	320–322	G00, G03
Alzheimer's disease	. . .	. . .	331.0	G30
Diseases of heart	6th: 410–443 7th: 400–402, 410–443	390–398, 402, 404, 410–429	390–398, 402, 404–429	I00–I09, I11, I13, I20–I51
Ischemic heart disease	. . .	. . .	410–414, 429.2	I20–I25
Cerebrovascular diseases	330–334	430–438	430–434, 436–438	I60–I69
Atherosclerosis	. . .	. . .	440	I70
Influenza and pneumonia	480–483, 490–493	470–474, 480–486	480–487	J10–J18
Chronic lower respiratory diseases	241, 501, 502, 527.1	490–493, 519.3	490–496	J40–J47
Chronic liver disease and cirrhosis	581	571	571	K70, K73–K74
Nephritis, nephrotic syndrome, and nephrosis	. . .	. . .	580–589	N00–N07, N17–N19, N25–N27
Pregnancy, childbirth, and the puerperium	640–689	630–678	630–676	A34, O00–O95, O98–O99
Congenital malformations, deformations, and chromosomal abnormalities	. . .	. . .	740–759	Q00–Q99
Certain conditions originating in the perinatal period	. . .	. . .	760–779	P00–P96
Newborn affected by maternal complications of pregnancy	. . .	. . .	761	P01
Newborn affected by complications of placenta, cord, and membranes	. . .	. . .	762	P02
Disorders related to short gestation and low birthweight, not elsewhere classified	. . .	. . .	765	P07
Birth trauma	. . .	. . .	767	P10–P15
Intrauterine hypoxia and birth asphyxia	. . .	. . .	768	P20–P21
Respiratory distress of newborn	. . .	. . .	769	P22
Sudden infant death syndrome	. . .	. . .	798.0	R95
Unintentional injuries[2]	E800–E936, E960–E965	E800–E929, E940–E946	E800–E869, E880–E929	V01–Y34, Y85–Y87, Y89
Motor vehicle-related injuries[2]	E810–E835	E810–E823	E810–E825	V02–V04, V09.0, V09.2, V12–V14, V19.0–V19.2, V19.4–V19.6, V20–V79, V80.3–V80.5, V81.0–V81.1, V82.0–V82.1, V83–V86, V87.0–V87.8, V88.0–V88.8, V89.0, V89.2
Suicide	E963, E970–E979	E950–E959	E950–E959	X60–X84, Y87.0
Homicide	E964, E980–E983	E960–E969	E960–E969	X85–Y09, Y87.1
Injury by firearms	. . .	E922, E955, E965, E970, E985	E922, E955.0–E955.4, E965.0–E965.4, E970, E985.0–E985.4	W32–W34, X72–X74, X93–X95, Y22–Y24, Y35.0

. . . Cause-of-death code numbers are not provided for causes not shown in *Health, United States*.
[1]Categories for coding human immunodeficiency virus infection were introduced in 1987. The * indicates codes are not part of the Ninth Revision.
[2]In the public health community, the term "unintentional injuries" is preferred to "accidents" and "motor vehicle-related injuries" to "motor vehicle accidents."

available on the NCHS web site at www.cdc.gov/nchs/about/major/dvs/mortdata.htm. See related *Comparability ratio; International Classification of Diseases*.

Cause-of-death ranking—Selected causes of death of public health and medical importance comprise tabulation lists and are ranked according to the number of deaths assigned to these causes. The top-ranking causes determine the leading causes of death. Certain causes on the tabulation lists are not ranked if, for example, the category title represents a group title (such as Major cardiovascular diseases and Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified); or the category title begins with the words "Other" and "All other." In addition when one of the titles that represents a subtotal (such as Malignant neoplasms) is ranked, its component parts are not ranked. The tabulation lists used for ranking in the *Tenth Revision of the International Classification of Diseases* (ICD) include the List of 113 Selected Causes of Death, which replaces the ICD–9 List of 72 Selected Causes, HIV infection and Alzheimer's disease; and the ICD–10 List of 130 Selected Causes of Infant Death, which replaces the ICD–9 List of 60 Selected Causes of Infant Death and HIV infection. Causes that are tied receive the same rank; the next cause is assigned the rank it would have received had the lower-ranked causes not been tied, i.e., skip a rank. See related *International Classification of Diseases*.

Cigarette smoking—In the National Health Interview Survey (NHIS) information about cigarette smoking is obtained for adults 18 years of age and over. Starting in 1993 current smokers are identified based on the following two questions: "Have you ever smoked 100 cigarettes in your lifetime?" and "Do you now smoke cigarettes every day, some days, or not at all?" Persons who have ever smoked 100 cigarettes and who now smoke every day or some days are defined as current smokers. Before 1992 current smokers were identified based on a positive response to the following two questions: "Have you ever smoked 100 cigarettes in your lifetime?" and "Do you smoke now?" (traditional definition). In 1992 the definition of current smoker in the NHIS was modified to specifically include persons who smoked on "some days." (revised definition). In 1992 cigarette smoking data were collected for a half-sample with half the respondents (one-quarter sample) using the traditional smoking questions and the other half of respondents (one-quarter sample) using the revised smoking question ("Do you smoke every day, some days, or not at all?"). An unpublished analysis of the 1992 traditional smoking measure revealed that the crude percent of current smokers 18 years of age and over remained the same as 1991. The statistics for 1992 combine data collected using the traditional and the revised questions.

In 1993–95 estimates of cigarette smoking prevalence were based on a half-sample. Smoking data were not collected in 1996. Starting in 1997 smoking data have been collected in the sample adult questionnaire. For further information on survey methodology and sample sizes pertaining to the NHIS cigarette smoking data for data years 1965–92 and other sources of cigarette smoking data available from the National Center for Health Statistics, see: National Center for Health Statistics, *Bibliographies and Data Sources, Smoking Data Guide,* no. 1, DHHS pub. no. (PHS) 91-1308-1, Public Health Service. Washington, DC: U.S. Government Printing Office. 1991.

In the National Household Survey on Drug Abuse information on current cigarette smoking is obtained for all persons 12 years of age and over based on the following question: "During the past 30 days, have you smoked part or all of a cigarette?"

In the Youth Risk Behavior Survey information on current cigarette smoking is obtained from high school students (starting in 1991) based on the following question: "During the past 30 days, on how many days did you smoke cigarettes?"

In the Monitoring the Future Survey information on current cigarette smoking is obtained for high school seniors (starting in 1975) and eighth graders (starting in 1991) based on the following question: "How frequently have you smoked cigarettes during the past 30 days?"

In natality data, information on cigarette smoking of the mother during pregnancy is based on Yes No responses to the birth certificate item "Other risk factors for this pregnancy: Tobacco use during pregnancy."

Civilian noninstitutionalized population; Civilian population—See *Population*.

Cocaine-related emergency department episodes—The Drug Abuse Warning Network monitors selected adverse medical consequences of cocaine and other drug abuse episodes by measuring contacts with hospital emergency departments. Contacts may be for drug overdose, unexpected drug reactions, chronic abuse, detoxification, or other reasons in which drug use is known to have occurred.

Cohort fertility—Cohort fertility refers to the fertility of the same women at successive ages. Women born during a 12-month period constitute a birth cohort. Cohort fertility for birth cohorts of women is measured by central birth rates, which represent the number of births occurring to women of an exact age divided by the number of women of that exact age. Cumulative birth rates by a given exact age represent the total childbearing experience of women in a cohort up to that age. Cumulative birth rates are sums of central birth rates for specified cohorts and show the number of children ever born up to the indicated age. For example, the cumulative birth rate for women exactly 30 years of age as of January 1, 1960, is the sum of the central birth rates for the 1930 birth cohort for the years 1944 (when its members were age 14) through 1959 (when they were age 29). Cumulative birth rates are also calculated for specific birth orders at each exact age of woman. The percent of women who have not had at least one live birth by a certain age is found by subtracting the cumulative first birth rate for women of that age from 1,000 and dividing by 10. For method of calculation, see Heuser RL. *Fertility tables for birth cohorts by color: United States, 1917–73*. Rockville, Maryland: NCHS. 1976. See related *Rate: Birth and related rates*.

Community hospitals—See *Hospital*.

Comparability ratio—About every 10–20 years the *International Classification of Diseases* (ICD) is revised to stay abreast of advances in medical science and changes in medical terminology. Each of these revisions produces breaks in the continuity of cause-of-death statistics. Discontinuities across revisions are due to changes in classification and rules for selecting underlying cause of death. Classification and rule changes impact cause-of-death trend data by shifting deaths away from some cause-of-death categories and into others. Comparability ratios measure the effect of changes in classification and coding rules. For causes shown in table VI, comparability ratios range between 0.9754 and 1.0588, except for influenza and pneumonia, with a comparability ratio of 0.6982, indicating that influenza and pneumonia is about 30 percent less likely to be selected as the underlying cause of death in ICD–10 than in ICD–9; and HIV disease with a comparability ratio of 1.1448, indicating that HIV disease is more than 14 percent more likely to be selected as the underlying cause.

Another factor also contributes to discontinuities in death rates across revisions. For selected causes of death, the ICD–9 codes used to calculate death rates for 1980 through 1998 differ from the ICD–9 codes most nearly comparable with the corresponding ICD–10 cause-of-death category. Examples of these causes are ischemic heart disease, cerebrovascular diseases, trachea, bronchus and lung cancer, unintentional injuries, and homicide. To address this source of discontinuity, mortality trends for 1980–98 were recalculated using ICD–9 codes that are more comparable with codes for corresponding ICD–10 categories. Table V shows the ICD–9 codes used for these causes. While this modification may lessen the discontinuity between the Ninth and Tenth Revisions, the effect on the discontinuity between the Eighth and Ninth Revisions is not measured.

Preliminary comparability ratios shown in table VI are based on a comparability study in which the same deaths were coded by both the Ninth and Tenth Revisions. The comparability ratio was calculated by dividing the number of

Table VI. Comparability of selected causes of death between the Ninth and Tenth Revisions of the *International Classification of Diseases (ICD)*

Cause of death[1]	*Preliminary comparability ratio*[2]
Human immunodeficiency virus (HIV) disease	1.1448
Malignant neoplasms	1.0068
Colon, rectum, and anus	0.9993
Trachea, bronchus, and lung	0.9837
Breast	1.0056
Prostate	1.0134
Diabetes mellitus	1.0082
Diseases of heart	0.9858
Ischemic heart diseases	0.9990
Cerebrovascular diseases	1.0588
Influenza and pneumonia	0.6982
Chronic lower respiratory diseases	1.0478
Chronic liver disease and cirrhosis	1.0367
Pregnancy, childbirth, and the puerperium	*
Unintentional injuries	1.0305
Motor vehicle-related injuries	0.9754
Suicide	0.9962
Homicide	0.9983
Injury by firearms	0.9973
Chronic and noncommunicable diseases	1.0100
Injuries	1.0117
Communicable diseases	0.8536
HIV disease	1.1448
Other communicable diseases	0.8023

*Figure does not meet standards of reliability or precision.
[1]See table V for ICD–9 and ICD–10 cause-of-death codes.
[2]Ratio of number of deaths classified by ICD–10 to number of deaths classified by ICD–9.

SOURCE: Anderson RN, Miniño AM, Hoyert DL, Rosenberg HM. Comparability of cause-of-death classification between ICD–9 and ICD–10: Preliminary estimates. National Vital Statistics Reports. Vol 49 No 2. Hyattsville, Maryland: National Center for Health Statistics. 2001.

deaths classified by ICD–10 by the number of deaths classified by ICD–9. The resulting ratios represent the net effect of the Tenth Revision on cause-of-death statistics and can be used to adjust mortality statistics for causes of death classified by the Ninth Revision to be comparable with cause-specific mortality statistics classified by the Tenth Revision.

The application of comparability ratios to mortality statistics helps to make the analysis of change between 1998 and 1999 more accurate and complete. The 1998 comparability-modified death rate is calculated by multiplying the comparability ratio by the 1998 death rate. Comparability-modified rates should be used to estimate mortality change between 1998 and 1999.

Caution should be taken when applying the comparability ratios presented in table VI to age-, race-, and sex-specific mortality data. Demographic subgroups may sometimes differ with regard to their cause-of-death distribution, and this would result in demographic variation in cause-specific comparability ratios.

For more information, see Anderson RN, Miniño AM, Hoyert DL, Rosenberg HM. Comparability of cause of death between ICD–9 and ICD–10: Preliminary estimates; and Kochanek KD, Smith BL, Anderson RN. Deaths: Preliminary data for 1999. National vital statistics reports. vol 49 no 2 and vol 49 no 3. Hyattsville, MD: National Center for Health Statistics. 2001. See related *Cause of death; International Classification of Diseases;* tables IV and V.

Compensation—See *Employer costs for employee compensation*.

Condition—A health condition is a departure from a state of physical or mental well-being. In the National Health Interview Survey, a *chronic condition* refers to any condition lasting 3 months or more or is a condition classified as chronic regardless of its time of onset (for example, diabetes, heart conditions, emphysema, and arthritis). The National Nursing Home Survey uses a specific list of chronic conditions, also disregarding time of onset.

Consumer Price Index (CPI)—The CPI is prepared by the U.S. Bureau of Labor Statistics. It is a monthly measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The medical care component of CPI shows trends in medical care prices based on specific indicators of hospital, medical, dental, and drug prices. A revision of the definition of CPI has been in use since January 1988. See related *Gross domestic product; Health expenditures, national; Appendix I, Consumer Price Index*.

Crude birth rate; Crude death rate—See *Rate: Birth and related rates; Rate: Death and related rates*.

Days of care—According to the American Hospital Association, days, hospital days, or inpatient days are the number of adult and pediatric days of care rendered during the entire reporting period. Days of care for newborns are excluded.

In the National Health Interview Survey, hospital days during the year refer to the total number of hospital days occurring in the 12-month period before the interview week. A hospital day is a night spent in the hospital for persons admitted as inpatients.

In the National Hospital Discharge Survey, days of care refers to the total number of patient days accumulated by patients at the time of discharge from non-Federal short-stay hospitals during a reporting period. All days from and including the date of admission but not including the date of discharge are counted. See related *Admission; Average length of stay; Discharge; Hospital; Patient*.

Death rate—See *Rate: Death and related rates*.

Dental visit—In the National Health Interview Survey respondents are asked "About how long has it been since you last saw or talked to a dentist? Include all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists as well as hygienists." This question was not asked for children under 2 years of age for years 1997–99 and under 1 year of age for 2000 and beyond.

Diagnosis—See *First-listed diagnosis*.

Diagnostic and other nonsurgical procedures—See *Procedure*.

Discharge—The National Health Interview Survey defines a hospital discharge as the completion of any continuous period of stay of one night or more in a hospital as an inpatient. According to the National Hospital Discharge Survey and the American Hospital Association, discharge is the formal release of an inpatient by a hospital (excluding newborn infants), that

is, the termination of a period of hospitalization (including stays of 0 nights) by death or by disposition to a place of residence, nursing home, or another hospital. See related *Admission; Average length of stay; Days of care; Patient*.

Domiciliary care homes—See *Nursing home*.

Drug abuse treatment clients—See *Substance abuse treatment clients*.

Education—Two approaches to defining educational categories are used in this report. The more recent approach used to collect and present survey data defines educational categories based on information about educational credentials, such as diplomas and degrees. The older approach defines educational categories based on years of education completed.

Beginning in 1997 the National Health Interview Survey (NHIS) questionnaire was changed to ask "What is the highest level of school ___ has completed or the highest degree received?" Responses were used to categorize individuals according to educational credentials (for example, no high school diploma or general educational development (GED) high school equivalency diploma; high school diploma or GED; some college, no bachelor's degree; bachelor's degree or higher).

Prior to 1997 the education variable in NHIS was measured by asking, "What is the highest grade or year of regular school ___ has ever attended?" and "Did ___ finish the grade/year?" Responses were used to categorize individuals according to years of education completed (for example, less than 12 years, 12 years, 13–15 years, 16 or more years). Years of educational attainment are currently used to present vital statistics data.

Data from the 1996 and 1997 NHIS were used to compare distributions of educational attainment for adults 25 years of age and over using categories based on educational credentials (1997) with categories based on years of education completed (1996). A larger percent of persons reported "some college" than "13–15 years" of education and a correspondingly smaller percent reported "high school diploma or GED" than "12 years of education." In 1997, 19 percent of adults reported no high school diploma, 31 percent a high school diploma or GED, 26 percent some college, and 24 percent a bachelor's degree or higher. In 1996, 18 percent of adults reported less than 12 years of education, 37 percent 12 years of education, 20 percent 13–15 years, and 25 percent 16 or more years of education.

See related Appendix I, *National Vital Statistics System*. For further information on measurement of education, see: Kominski R and Siegel PM. Measuring education in the Current Population Survey. *Monthly Labor Review*, September 1993: 34–38.

Emergency department—According to the National Hospital Ambulatory Medical Care Survey (NHAMCS), an emergency department is a hospital facility that provides unscheduled outpatient services to patients whose conditions require immediate care and is staffed 24 hours a day. Off-site emergency departments open less than 24 hours are included if staffed by the hospital's emergency department. See related *Emergency department visit; Outpatient department*.

Emergency department visit—Starting with the 1997 National Health Interview Survey, respondents to the sample adult and sample child questionnaires are asked about the number of visits to hospital emergency rooms during the past 12 months. In the National Hospital Ambulatory Medical Care Survey an emergency department visit is a direct personal exchange between a patient and a physician or other health care providers working under the physician's supervision, for the purpose of seeking care and receiving personal health services. See related *Emergency department; Injury-related visit*.

Employer costs for employee compensation—This is a measure of the average cost per employee hour worked to employers for wages and salaries and benefits. Wages and salaries are defined as the hourly straight-time wage rate, or for workers not paid on an hourly basis, straight-time earnings divided by the corresponding hours. Straight-time wage and salary rates are total earnings before payroll deductions, excluding premium pay for overtime and for work on weekends and holidays, shift differentials, nonproduction bonuses, and lump-sum payments provided in lieu of wage increases. Production bonuses, incentive earnings, commission payments, and cost-of-living adjustments are included in straight-time wage and salary rates. Benefits covered are paid leave—paid vacations, holidays, sick leave, and other leave; supplemental pay—premium pay for overtime and work on weekends and holidays, shift differentials, nonproduction bonuses, and lump-sum payments provided in lieu of wage increases; insurance benefits—life, health, and

sickness and accident insurance; retirement and savings benefits—pension and other retirement plans and savings and thrift plans; legally required benefits—social security, railroad retirement and supplemental retirement, railroad unemployment insurance, Federal and State unemployment insurance, workers' compensation, and other benefits required by law, such as State temporary disability insurance; and other benefits—severance pay and supplemental unemployment plans.

Expenditures—See *Health expenditures, national*.

Family income—For purposes of the National Health Interview Survey and National Health and Nutrition Examination Survey, all people within a household related to each other by blood, marriage, or adoption constitute a family. Each member of a family is classified according to the total income of the family. Unrelated individuals are classified according to their own income. In the National Health and Nutrition Examination Survey and the National Health Interview Survey (in years prior to 1997) family income was the total income received by members of a family (or by an unrelated individual) in the 12 months before the interview. Starting in 1997 the National Health Interview Survey has been collecting family income data for the calendar year prior to the interview. (For example, 1997 family income data are based on 1996 calendar year information.) Family income includes wages, salaries, rents from property, interest, dividends, profits and fees from their own businesses, pensions, and help from relatives. In the National Health Interview Survey, family income data are used in the computation of poverty level. For data years 1990–96, about 16–18 percent of persons had missing data on poverty level. Missing values were imputed for family income using a sequential hot deck within matrix cells imputation approach. A detailed description of the imputation procedure as well as data files with imputed annual family income for 1990–96 are available from NCHS on CD-ROM NHIS Imputed Annual Family Income 1990–96, series 10, no 9A. See related *Poverty level*.

Federal hospitals—See *Hospital*.

Federal physicians—See *Physician*.

Fee-for-service health insurance—This is private (commercial) health insurance that reimburses health care providers on the basis of a fee for each health service provided to the insured person. Also known as indemnity health insurance. See related *Health insurance coverage*.

Fertility rate—See *Rate: Birth and related rates*.

Fetal death—In the World Health Organization's definition, also adopted by the United Nations and the National Center for Health Statistics, a fetal death is death before the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. For statistical purposes, fetal deaths are classified according to gestational age. In this report tabulations are shown for fetal deaths with stated or presumed gestation of 20 weeks or more and of 28 weeks or more, the latter gestational age group also known as late fetal deaths. See related *Gestation; Live birth; Rate: Death and related rates*.

First-listed diagnosis—In the National Hospital Discharge Survey, this is the first recorded final diagnosis on the medical record face sheet (summary sheet).

First-listed external cause of injury—In the National Hospital Ambulatory Medical Care Survey, this is the first-listed external cause of injury coded from the Patient Record Form (PRF). Up to three causes of injury can be reported on the PRF. Injuries are coded by NCHS to the *International Classification of Diseases, Ninth Revision, Clinical Modification* Supplementary Classification of External Causes of Injury and Poisoning. See table VII for a listing of injury categories and codes. See related *Injury-related visit*.

General hospitals—See *Hospital*.

Table VII. Codes for first-listed external causes of injury from the *International Classification of Diseases, Ninth Revision, Clinical Modification*

External cause of injury category	*E-Code numbers*
Unintentional	E800–E869, E880–E929
Motor vehicle traffic	E810–E819
Falls	E880–E886, E888
Struck by or against objects or persons	E916–E917
Caused by cutting and piercing instruments or objects	E920
Intentional (suicide and homicide)	E950–E969

General hospitals providing separate psychiatric services—See *Mental health organization*.

Geographic region and division—The 50 States and the District of Columbia are grouped for statistical purposes by the U.S. Bureau of the Census into 4 geographic regions and 9 divisions. The groupings are as follows:

- Northeast
  - New England
    - Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
  - Middle Atlantic
    - New York, New Jersey, Pennsylvania
- Midwest
  - East North Central
    - Ohio, Indiana, Illinois, Michigan, Wisconsin
  - West North Central
    - Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas
- South
  - South Atlantic
    - Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida
  - East South Central
    - Kentucky, Tennessee, Alabama, Mississippi
  - West South Central
    - Arkansas, Louisiana, Oklahoma, Texas
- West
  - Mountain
    - Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada
  - Pacific
    - Washington, Oregon, California, Alaska, Hawaii

Gestation—For the National Vital Statistics System and the Centers for Disease Control and Prevention's Abortion Surveillance, the period of gestation is defined as beginning with the first day of the last normal menstrual period and ending with the day of birth or day of termination of pregnancy. See related *Abortion; Fetal death; Live birth*.

Gross domestic product (GDP)—GDP is the market value of the goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the suppliers (that is, the workers and, for property, the owners) may be either U.S. residents or residents of the rest of the world. See related *Consumer Price Index; Health expenditures, national*.

Health care contact—Starting in 1997 the National Health Interview Survey has been collecting information on health care contacts with doctors and other health care professionals. This information is collected in a detailed section pertaining to all types of health care contacts. Analyses of the percent of children without a health care visit are based upon the following question: "During the past 12 months, how many times has ___ seen a doctor or other health care professional about (his/her) health at a doctor's office, a clinic, or some other place? Do not include times ____was hospitalized overnight, visits to hospital emergency rooms, home visits, or telephone calls." Beginning in 2000 dental visits were also excluded. Analyses of the distribution of health care visits are based on a summary measure combining information about visits to doctors' offices or clinics, emergency departments, and home visits. See related *Emergency department visit; Home visit*.

Health expenditures, national—See related *Consumer Price Index; Gross domestic product*.

Health services and supplies expenditures—These are outlays for goods and services relating directly to patient care plus expenses for administering health insurance programs and government public health activities. This category is equivalent to total national health expenditures minus expenditures for research and construction.

National health expenditures—This measure estimates the amount spent for all health services and supplies and health-related research and construction activities consumed in the United States during the calendar year. Detailed estimates are available by source of expenditures (for example, out-of-pocket payments, private health insurance, and government programs), and by type of expenditures (for example, hospital care, physician services, and drugs), and are in current dollars for the year of report. Data are compiled from a variety of sources.

Nursing home expenditures—These cover care rendered in establishments primarily engaged in providing inpatient nursing and rehabilitative services and continuous personal care services to persons requiring nursing care (skilled nursing and intermediate care facilities, including those for the mentally retarded) and continuing care retirement communities with on-site nursing care facilities. The costs of long-term care provided by hospitals are excluded.

Personal health care expenditures—These are outlays for goods and services relating directly to patient care. The expenditures in this category are total national health expenditures minus expenditures for research and construction, expenses for administering health insurance programs, and government public health activities.

Private expenditures—These are outlays for services provided or paid for by nongovernmental sources—consumers, insurance companies, private industry, philanthropic, and other nonpatient care sources.

Public expenditures—These are outlays for services provided or paid for by Federal, State, and local government agencies or expenditures required by governmental mandate (such as workmen's compensation insurance payments).

Health insurance coverage—National Health Interview Survey (NHIS) respondents were asked about their health insurance coverage in the previous month in 1993–96 and at the time of the interview in other years. Questions on health insurance coverage were expanded starting in 1993 compared with previous years. In 1997 the entire questionnaire was redesigned and data were collected using a computer-assisted personal interview (CAPI).

Respondents are covered by private health insurance if they indicate private health insurance or if they are covered by a single service hospital plan, except in 1997 and 1998 when no information on single service plans was obtained. Private health insurance includes managed care such as health maintenance organizations (HMOs).

Until 1996 persons were defined as having Medicaid or other public assistance coverage if they indicated that they had either Medicaid or other public assistance, or if they reported receiving Aid to Families with Dependent Children (AFDC) or Supplemental Security Income (SSI). After welfare reform in late 1996, Medicaid was delinked from AFDC and SSI. Starting in 1997 persons have been considered covered by Medicaid if they report Medicaid or a State-sponsored health program. Starting in 1998 persons are considered covered by Medicaid if they report being covered by the Child Health Insurance Program (CHIP) or the State Child Health Insurance Program (SCHIP).

Medicare or military health plan coverage is also determined in the interview and, starting in 1997, other government-sponsored program coverage is determined as well.

If respondents do not report coverage under one of the above types of plans and they have unknown coverage under either private health insurance or Medicaid, they are considered to have unknown coverage.

The remaining respondents are considered uninsured. The uninsured are persons who do not have coverage under private health insurance, Medicare, Medicaid, public assistance, a State-sponsored health plan, other government-sponsored programs, or a military health plan. Persons with only Indian Health Service coverage are considered uninsured. Estimates of the percent of persons who are uninsured based on the NHIS (table 129) may differ slightly from those based on the March Current Population Survey (CPS) (table 147) due to differences in survey questions, recall period, and other aspects of survey methodology. See related *Fee-for-service health insurance; Health maintenance organization; Managed care; Medicaid; Medicare*.

Health maintenance organization (HMO)—An HMO is a prepaid health plan delivering comprehensive care to members through designated providers, having a fixed monthly payment for health care services, and requiring members to be in a plan for a specified period of time (usually 1 year). Pure HMO enrollees use only the prepaid capitated health services of the HMOs panel of medical care providers. Open-ended HMO enrollees use the prepaid HMO health services but in addition may receive medical care from providers who are not part of the HMOs panel. There is usually a substantial deductible, copayment, or coinsurance associated with use of nonpanel providers. These open-ended products are governed by State HMO regulations. HMO model types are:

Group—An HMO that delivers health services through a physician group that is controlled by the HMO unit or an

HMO that contracts with one or more independent group practices to provide health services.

Individual practice association (IPA)—An HMO that contracts directly with physicians in independent practice, and/or contracts with one or more associations of physicians in independent practice, and/or contracts with one or more multispecialty group practices. The plan is predominantly organized around solo-single-specialty practices.

Mixed—An HMO that combines features of group and IPA. This category was introduced in mid-1990 because HMOs are continually changing and many now combine features of group and IPA plans in a single plan.

See related *Managed care*.

Health services and supplies expenditures—See *Health expenditures, national*.

Health status, respondent-assessed—Health status was measured in the National Health Interview Survey by asking the respondent "Would you say _____'s health is excellent, very good, good, fair, or poor?"

Healthy People 2010—Healthy People 2010 is the prevention agenda for the Nation. It is a statement of national health objectives designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats. Healthy People 2010 is a set of health objectives for the Nation to achieve over the first decade of the new century. More information on Healthy People 2010 is available on the Web at www.health.gov/healthypeople. See related *Leading Health Indicators*.

Hispanic origin—Hispanic origin includes persons of Mexican, Puerto Rican, Cuban, Central and South American, and other or unknown Latin American or Spanish origins. Persons of Hispanic origin may be of any race. In the National Health Interview Survey questionnaire, questions on Hispanic origin precede questions on race. See related *Race*.

HIV—See *Human immunodeficiency virus (HIV) disease*.

Home health care—Home health care as defined by the National Home and Hospice Care Survey is care provided to individuals and families in their place of residence for promoting, maintaining, or restoring health; or for minimizing the effects of disability and illness including terminal illness.

Home visit—Starting in 1997 the National Health Interview Survey has been collecting information on home visits received during the past 12 months. Respondents are asked "During the past 12 months, did you receive care at home from a nurse or other health care professional? What was the total number of home visits received?" These data are combined with data on visits to doctors' offices, clinics, and emergency departments to provide a summary measure of health care visits. See related *Emergency department visit; Health care contact*.

Hospice care—Hospice care as defined by the National Home and Hospice Care Survey is a program of palliative and supportive care services providing physical, psychological, social, and spiritual care for dying persons, their families, and other loved ones. Hospice services are available in home and inpatient settings.

Hospital—According to the American Hospital Association, hospitals are licensed institutions with at least six beds whose primary function is to provide diagnostic and therapeutic patient services for medical conditions by an organized physician staff, and have continuous nursing services under the supervision of registered nurses. The World Health Organization considers an establishment to be a hospital if it is permanently staffed by at least one physician, can offer inpatient accommodation, and can provide active medical and nursing care. Hospitals may be classified by type of service, ownership, size in terms of number of beds, and length of stay. In the National Hospital Ambulatory Medical Care Survey (NHAMCS) hospitals include all those with an average length of stay for all patients of less than 30 days (short-stay) or hospitals whose specialty is general (medical or surgical) or children's general. Federal hospitals and hospital units of institutions and hospitals with fewer than six beds staffed for patient use are excluded. See related *Average length of stay; Bed; Days of care; Emergency department; Outpatient department; Patient*.

Community hospitals traditionally included all non-Federal short-stay hospitals except facilities for the mentally retarded. In the revised definition the following additional sites are excluded: hospital units of institutions, and alcoholism and chemical dependency facilities.

Federal hospitals are operated by the Federal Government.

For profit hospitals are operated for profit by individuals, partnerships, or corporations.

General hospitals provide diagnostic, treatment, and surgical services for patients with a variety of medical conditions. According to the World Health Organization, these hospitals provide medical and nursing care for more than one category of medical discipline (for example, general medicine, specialized medicine, general surgery, specialized surgery, and obstetrics). Excluded are hospitals, usually in rural areas, that provide a more limited range of care.

Nonprofit hospitals are operated by a church or other nonprofit organization.

Psychiatric hospitals are ones whose major type of service is psychiatric care. See related *Mental health organization*.

Registered hospitals are hospitals registered with the American Hospital Association. About 98 percent of hospitals are registered.

Short-stay hospitals in the National Hospital Discharge Survey are those in which the average length of stay is less than 30 days. The National Health Interview Survey defines short-stay hospitals as any hospital or hospital department in which the type of service provided is general; maternity; eye, ear, nose, and throat; children's; or osteopathic.

Specialty hospitals, such as psychiatric, tuberculosis, chronic disease, rehabilitation, maternity, and alcoholic or narcotic, provide a particular type of service to the majority of their patients.

Hospital-based physician—See *Physician*.

Hospital days—See *Days of care*.

Human immunodeficiency virus (HIV) disease—Mortality coding: Starting with data year 1999 and the introduction of the Tenth Revision of the *International Classification of Diseases* (ICD–10), the title for this cause of death was changed to HIV disease from HIV infection and the ICD codes changed to B20-B24. Beginning with data for 1987, NCHS introduced category numbers *042-*044 for classifying and coding HIV infection as a cause of death in ICD–9. HIV infection was formerly referred to as human T-cell lymphotropic virus-III/lymphadenopathy-associated virus (HTLV-III/LAV) infection. The asterisk before the category numbers indicates that these codes were not part of the original ICD–9. Before 1987 deaths involving HIV infection were classified to Deficiency of cell-mediated immunity (ICD–9 279.1) contained in the title All other diseases; to Pneumocystosis (ICD–9 136.3) contained in the title All other infectious and parasitic diseases; to Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues; and to a number of other causes. Therefore, before 1987, death statistics for HIV infection are not strictly comparable with data for 1987 and later years, and are not shown in this report.

Morbidity coding: The National Hospital Discharge Survey codes diagnosis data using the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD–9–CM). Discharges with diagnosis of HIV as shown in *Health, United States* have at least one HIV diagnosis listed on the face sheet of the medical record and are not limited to the first-listed diagnosis. During 1984 and 1985 only data for AIDS (ICD–9–CM 279.19) were included. In 1986–94 discharges with the following diagnoses were included: acquired immunodeficiency syndrome (AIDS), human immunodeficiency virus (HIV) infection and associated conditions, and positive serological or viral culture findings for HIV (ICD–9–CM 042–044, 279.19, and 795.8). Beginning in 1995 discharges with the following diagnoses were included: human immunodeficiency virus (HIV) disease and asymptomatic human immunodeficiency virus (HIV) infection status (ICD–9–CM 042 and V08). See related *Acquired immunodeficiency syndrome; Cause of death; International Classification of Diseases; International Classification of Diseases, Ninth Revision, Clinical Modification*.

ICD; ICD codes—See *Cause of death; International Classification of Diseases*.

Illicit drug use—In the 1999–2000 National Household Survey on Drug Abuse (NHSDA), information on illicit drug use was collected for all persons 12 years of age and over. Information on any illicit drug use, including marijuana or hashish, cocaine, heroin, hallucinogens, and nonmedical use of prescription drugs is based on the following questions:

"During the past 30 days, on how many days did you use (specific illicit drug)?"

The Monitoring the Future Study, a school-based survey of secondary school students, collects information on marijuana use using self-completed questionnaires. The information is based on the following questions: "On how many occasions (if any) have you used marijuana in the last 30 days?" and "On how many occasions (if any) have you used hashish in the last 30 days?" Questions on cocaine use include the following: "On how many occasions (if any) have you taken "crack" (cocaine in chunk or rock form) during the last 30 days?" and "On how many occasions (if any) have you taken cocaine in any other form during the last 30 days?" Questions on inhalant use (sniffed glue, or breathed the contents of aerosol spray cans, or inhaled other gases or sprays in order to get high) and MDMA ("ecstasy") follow a similar format.

Incidence—Incidence is the number of cases of disease having their onset during a prescribed period of time. It is often expressed as a rate (for example, the incidence of measles per 1,000 children 5–15 years of age during a specified year). Incidence is a measure of morbidity or other events that occur within a specified period of time. See related *Prevalence*.

Individual practice association (IPA)—See *Health maintenance organization (HMO)*.

Industry of employment—Industries are classified according to the *Standard Industrial Classification (SIC) Manual* of the Office of Management and Budget. Two editions of the SIC are used for coding industry data in *Health, United States*: the 1977 supplement to the 1972 edition and the 1987 edition. The changes between versions include a few detailed titles created to correct or clarify industries or to recognize changes within the industry. Codes for major industry divisions (table VIII) were not changed between versions.

Establishments engaged in the same kind of economic activity are classified by the same industry code, regardless of type of ownership—corporations, sole proprietorships, and government agencies. Data from the Census of Fatal Occupational Injuries are therefore further broken out by private sector and government. Data from the Survey of Occupational Injuries and Illnesses are provided for the private sector only and exclude the self-employed.

Table VIII. Codes for industries, according to the *Standard Industrial Classification (SIC) Manual*

Industry	*Code numbers*
Agriculture, forestry, and fishing	01–09
Mining	10–14
Construction	15–17
Manufacturing	20–39
Transportation and public utilities	40–49
Wholesale trade	50–51
Retail trade	52–59
Finance, insurance, and real estate	60–67
Services	70–89
Public administration	91–97

The category "Private sector" includes all industry divisions except public administration and military. The category "Not classified" is used for fatalities for which there was insufficient information to determine a specific industry classification.

Infant death—An infant death is the death of a live-born child before his or her first birthday. Deaths in the first year of life may be further classified according to age as neonatal and postneonatal. Neonatal deaths are those that occur before the 28th day of life; postneonatal deaths are those that occur between 28 and 365 days of age. See related *Live birth; Rate: Death and related rates*.

Injury—See *First-listed external cause of injury.*

Injury-related visit—In the National Hospital Ambulatory Medical Care Survey an emergency department visit was considered injury related if, on the Patient Record Form (PRF), the checkbox for injury was indicated. In addition, injury visits were identified if the physician's diagnosis or the patient's reason for visit code was injury related . See related *Emergency department visit; First-listed external cause of injury*.

Inpatient care—See *Mental health service type*.

Inpatient days—See *Days of care*.

Instrumental activities of daily living (IADL)—Instrumental activities of daily living are activities related to independent living and include preparing meals, managing money, shopping for groceries or personal items, performing light or heavy housework and using a telephone. If a sample person from the Medicare Current Beneficiary Survey had any difficulty performing an activity by him or herself and without

special equipment, or did not perform the activity at all because of health problems, the person was categorized as having a limitation in that activity. The limitation may have been temporary or chronic at the time of the interview. Sample persons who were administered a community interview answered health status and functioning questions themselves if able to do so. A proxy, such as a nurse, answered questions about the sample person's health status and functioning for long-term care facility interview. In the National Health Interview Survey respondents are asked about needing the help of another person for handling routine IADL needs due to a physical, mental, or emotional problem. Persons are considered to have an IADL limitation if any causal condition is chronic. See related *Activities of daily living (ADL); Limitation of activity*.

Insured—See *Health insurance coverage*.

Intermediate care facilities—See *Nursing home*.

International Classification of Diseases (ICD)—The ICD provides the ground rules for coding and classifying cause-of-death data. The ICD is developed collaboratively between the World Health Organization (WHO) and 10 international centers, one of which is housed at NCHS. The purpose of the ICD is to promote international comparability in the collection, classification, processing, and presentation of health statistics. Since the beginning of the century, the ICD has been modified about once every 10 years, except for the 20-year interval between ICD–9 and ICD–10 (see table IV). The purpose of the revisions is to stay abreast with advances in medical science. New revisions usually introduce major disruptions in time series of mortality statistics (see tables V and VI). For more information, see www.cdc.gov/nchs/about/major/dvs/icd10des.htm. See related *Cause of death; Comparability ratio; International Classification of Diseases, Ninth Revision, Clinical Modification*.

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD–9–CM)—The ICD–9–CM is based on and is completely compatible with the *International Classification of Diseases, Ninth Revision*. In *Health, United States* the ICD–9–CM is used to code morbidity data and starting with data year 1999 ICD–10 is used to code mortality data. Diagnostic categories and code number inclusions for ICD–9–CM are shown in table IX; procedures and code number inclusions are shown in table X.

ICD–9–CM is arranged in 17 main chapters. Most of the diseases are arranged according to their principal anatomical site, with special chapters for infective and parasitic diseases; neoplasms; endocrine, metabolic, and nutritional diseases; mental diseases; complications of pregnancy and childbirth; certain diseases peculiar to the perinatal period; and ill-defined conditions. In addition, two supplemental classifications are provided: classification of factors influencing health status and contact with health services and classification of external causes of injury and poisoning. For more information, see www.cdc.gov/nchs/icd9.htm. See related *International Classification of Diseases*.

Late fetal death rate—See *Rate: Death and related rates*.

Leading causes of death—See *Cause-of-death ranking*.

Leading Health Indicators—The Leading Health Indicators (LHIs) highlight major risk factors Americans face and draw attention to the most significant areas where individual and community action regarding health improvements need to be made. Five of the indicators relate primarily to individual behaviors including physical activity, overweight and obesity, tobacco use, substance abuse, and responsible sexual behavior. The other five address mental health, injury and violence, environmental quality, immunization, and access to health care. The LHIs will be used to measure important determinants of the Nation's health during the first decade of the twenty-first century. More information on the LHIs is available on the World Wide Web at www.health.gov/healthypeople/LHI/. See related *Healthy People 2010*.

Length of stay—See *Average length of stay*.

Life expectancy—Life expectancy is the average number of years of life remaining to a person at a particular age and is based on a given set of age-specific death rates, generally the mortality conditions existing in the period mentioned. Life expectancy may be determined by race, sex, or other characteristics using age-specific death rates for the population with that characteristic. See related *Rate: Death and related rates*.

Limitation of activity—In the National Health Interview Survey limitation of activity refers to a long-term reduction in a person's capacity to perform the usual kind or amount of activities associated with his or her age group due to a chronic condition. Limitation of activity is assessed by asking

Table IX. Codes for diagnostic categories from the *International Classification of Diseases, Ninth Revision, Clinical Modification*

Diagnostic category	*Code numbers*
Females with delivery	V27
Human immunodeficiency virus (HIV) (1984–85)	279.19
(1986–94)	042–044, 279.19, 795.8
(Beginning in 1995)	042, V08
Malignant neoplasms	140–208
Large intestine and rectum	153–154, 197.5
Trachea, bronchus, and lung	162, 197.0, 197.3
Breast	174–175, 198.81
Prostate	185
Diabetes	250
Alcohol and drug	291–292, 303–305
Serious mental illness	295–298
Diseases of the nervous system and sense organs	320–389
Diseases of the circulatory system	390–459
Diseases of heart	391–392.0, 393–398, 402, 404, 410–416, 420–429
Ischemic heart disease	410–414
Acute myocardial infarction	410
Congestive heart failure	428.0
Cerebrovascular diseases	430–438
Diseases of the respiratory system	460–519
Pneumonia	466.1, 480–487.0
Asthma	493
Hyperplasia of prostate	600
Decubitus ulcers	707.0
Diseases of the musculoskeletal system and connective tissue	710–739
Osteoarthritis	715
Intervertebral disc disorders	722
Injuries and poisoning	800–999
Fracture, all sites	800–829
Fracture of neck of femur (hip)	820

respondents a series of questions about limitations in their ability to perform activities usual for their age group because of a physical, mental, or emotional problem. Respondents are asked about limitations in activities of daily living, instrumental activities of daily living, play, school, work, difficulty walking or remembering, and any other activity limitations. For reported limitations, the causal health conditions are determined and respondents are considered limited if one or more of these conditions is chronic.

Sample persons from the Medicare Current Beneficiary Survey who report no limitations in the activities of daily living (ADL) or instrumental activities of daily living (IADL) due to health problems are included in the category "none." Sample persons with limitations in at least one IADL, but no ADL, are included in the category "IADL" only. Sample persons with ADL limitations are categorized by the number of limitations (1 to 2, 3 to 5) regardless of the number of IADL limitations. See related *Activities of daily living; Condition; Instrumental activities of daily living*.

Live birth—In the World Health Organization's definition, also adopted by the United Nations and the National Center for Health Statistics, a live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life such as heartbeat, umbilical cord pulsation, or definite movement of voluntary muscles, whether the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born. See related *Gestation; Rate: Birth and related rates*.

Live-birth order—In the National Vital Statistics System this item from the birth certificate refers to the total number of live births the mother has had, including the present birth as recorded on the birth certificate. Fetal deaths are excluded. See related *Live birth*.

Low birthweight—See *Birthweight*.

Table X. Codes for procedure categories from the *International Classification of Diseases, Ninth Revision, Clinical Modification*

Procedure category	*Code numbers*
Extraction of lens	13.1–13.6
Insertion of prosthetic lens (pseudophakos)	13.7
Myringotomy with insertion of tube	20.01
Tonsillectomy, with or without adenoidectomy	28.2–28.3
Coronary angioplasty (Prior to 1997)	36.0
(Beginning in 1997)	36.01–36.05, 36.09
Coronary artery bypass graft	36.1
Cardiac catheterization	37.21–37.23
Pacemaker insertion or replacement	37.7–37.8
Carotid endarterectomy	38.12
Endoscopy of large or small intestine with or without biopsy	45.11–45.14, 45.16, 45.21–45.25
Cholecystectomy	51.2
Prostatectomy	60.2–60.6
Bilateral destruction or occlusion of fallopian tubes	66.2–66.3
Hysterectomy	68.3–68.7, 68.9
Cesarean section	74.0–74.2, 74.4, 74.99
Repair of current obstetrical laceration	75.5–75.6
Reduction of fracture	76.7, 79.0–79.3
Arthroscopy of knee	80.26
Excision or destruction of intervertebral disc	80.5
Total hip replacement	81.51
Lumpectomy	85.21
Mastectomy	85.4
Angiocardiography with contrast material	88.5

Managed care—Managed care is a health care plan that integrates the financing and delivery of health care services by using arrangements with selected health care providers to provide services for covered individuals. Plans are generally financed using capitation fees. There are significant financial incentives for members of the plan to use the health care providers associated with the plan. The plan includes formal programs for quality assurance and utilization review. Health maintenance organizations (HMOs), preferred provider organizations (PPOs), and point of service (POS) plans are examples of managed care. See related *Health maintenance organization; Preferred provider organization*.

Marital status—Marital status is classified through self-reporting into the categories married and unmarried. The term married encompasses all married people including those separated from their spouses. Unmarried includes those who are single (never married), divorced, or widowed. The Abortion Surveillance Reports of the Centers for Disease Control and Prevention classified separated people as unmarried before 1978.

Maternal mortality rate—See *Rate: Death and related rates*.

Medicaid—Medicaid was authorized by Title XIX of the Social Security Act in 1965 as a jointly funded cooperative venture between the Federal and State governments to assist States in the provision of adequate medical care to eligible needy persons. Medicaid is the largest program providing medical and health-related services to America's poorest people. Within broad Federal guidelines, each of the States establishes its own eligibility standards; determines the type, amount, duration, and scope of services; sets the rate of payment for services; and administers its own program. Thus, the Medicaid program varies considerably from State to State, as well as within each State over time. See related *Health expenditures, national; Health maintenance organization; Medicare*.

Medical specialties—See *Physician specialty*.

Medical vendor payments—Under the Medicaid program, medical vendor payments are payments (expenditures) to medical vendors from the State through a fiscal agent or to a health insurance plan. Adjustments are made for Indian Health Service payments to Medicaid, cost settlements, third party recoupments, refunds, voided checks, and other financial settlements that cannot be related to specific provided claims. Excluded are payments made for medical

care under the emergency assistance provisions, payments made from State medical assistance funds that are not federally matchable, disproportionate share hospital payments, cost sharing or enrollment fees collected from recipients or a third party, and administration and training costs.

Medicare—This is a nationwide health insurance program providing health insurance protection to people 65 years of age and over, people entitled to social security disability payments for 2 years or more, and people with end-stage renal disease, regardless of income. The program was enacted July 30, 1965, as Title XVIII, *Health Insurance for the Aged of the Social Security Act*, and became effective on July 1, 1966. It consists of two separate but coordinated programs, hospital insurance (Part A) and supplementary medical insurance (Part B). See related *Health expenditures, national; Health maintenance organization; Medicaid*.

Mental health organization—The Center for Mental Health Services defines a mental health organization as an administratively distinct public or private agency or institution whose primary concern is provision of direct mental health services to the mentally ill or emotionally disturbed. Excluded are private office-based practices of psychiatrists, psychologists, and other mental health providers; psychiatric services of all types of hospitals or outpatient clinics operated by Federal agencies other than the Department of Veterans Affairs (for example, Public Health Service, Indian Health Service, Department of Defense, and Bureau of Prisons); general hospitals that have no separate psychiatric services but admit psychiatric patients to nonpsychiatric units; and psychiatric services of schools, colleges, halfway houses, community residential organizations, local and county jails, State prisons, and other human service providers. The major types of mental health organizations are described below.

Freestanding psychiatric outpatient clinics provide only outpatient services on either a regular or emergency basis. A psychiatrist generally assumes the medical responsibility for services.

General hospitals providing separate psychiatric services are non-Federal general hospitals that provide psychiatric services in either a separate psychiatric inpatient, outpatient, or partial hospitalization service with assigned staff and space.

Multiservice mental health organizations directly provide two or more of the program elements defined under mental health service type and are not classifiable as a psychiatric hospital, general hospital, or residential treatment center for emotionally disturbed children. (The classification of a psychiatric or general hospital or residential treatment center for emotionally disturbed children takes precedence over a multiservice classification, even if two or more services are offered.)

Partial care organizations provide a program of ambulatory mental health services.

Private mental hospitals are operated by a sole proprietor, partnership, limited partnership, corporation, or nonprofit organization, primarily for the care of persons with mental disorders.

Psychiatric hospitals are hospitals concerned primarily with providing inpatient care and treatment for the mentally ill. Psychiatric inpatient units of Department of Veterans Affairs general hospitals and Department of Veterans Affairs neuropsychiatric hospitals are combined into the category Department of Veterans Affairs psychiatric hospitals because of their similarity in size, operation, and length of stay.

Residential treatment centers for emotionally disturbed children must meet all of the following criteria: (a) Is not licensed as a psychiatric hospital and has the primary purpose of providing individually planned mental health treatment services in conjunction with residential care; (b) Includes a clinical program directed by a psychiatrist, psychologist, social worker, or psychiatric nurse with a graduate degree; (c) Serves children and youth primarily under the age of 18; and (d) Has the primary diagnosis for the majority of admissions as mental illness, classified as other than mental retardation, developmental disability, or substance-related disorders, according to DSM-II/ICDA-8 or DSM-IIIR/ICD–9–CM codes.

State and county mental hospitals are under the auspices of a State or county government or operated jointly by a State and county government.

See related *Addition; Mental health service type*.

Mental health service type—This term refers to the following kinds of mental health services:

24-hour mental health care, formerly called inpatient care, provides care in a mental health hospital setting.

Less than 24-hour care, formerly called outpatient or partial care treatment, provides mental health services on an ambulatory basis.

Residential treatment care provides overnight mental health care in conjunction with an intensive treatment program in a setting other than a hospital. Facilities may offer care to emotionally disturbed children or mentally ill adults.

See related *Addition; Mental health organization*.

Metropolitan statistical area (MSA)—The Office of Management and Budget (OMB) defines metropolitan areas according to published standards that are applied to Census Bureau data. The collective term "metropolitan area" includes metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). An MSA is a county or group of contiguous counties that contains at least one city with a population of 50,000 or more or a Census Bureau-defined urbanized area of at least 50,000 with a metropolitan population of at least 100,000. In addition to the county or counties that contain all or part of the main city or urbanized area, an MSA may contain other counties that are metropolitan in character and are economically and socially integrated with the main city. If an MSA has a population of 1 million or more and meets requirements specified in the standards, it is termed a CMSA, consisting of two or more major components, each of which is recognized as a PMSA. In New England, cities and towns, rather than counties, are used to define MSAs. Counties that are not within an MSA are considered to be nonmetropolitan.

For National Health Interview Survey (NHIS) data before 1995, metropolitan population is based on MSAs as defined by OMB in 1983 using the 1980 Census. Starting with the 1995 NHIS, metropolitan population is based on MSAs as defined by OMB in 1993 using the 1990 Census. For further information on metropolitan areas, see U.S. Department of Commerce, Bureau of the Census, *State and Metropolitan Area Data Book*. See related *Urbanization*.

Multiservice mental health organizations—See *Mental health organization*.

National ambient air quality standards—The Federal Clean Air Act of 1970, amended in 1977 and 1990, requires the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards. EPA has set specific standards for each of six major pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter whose aerodynamic size is equal to or less than 10 microns (PM-10). Each pollutant standard represents a maximum concentration level (micrograms per cubic meter) that cannot be exceeded during a specified time interval. A county meets the national ambient air quality standards if none of the six pollutants exceed the standard during a 12-month period. See related *Particulate matter; Pollutant*.

Neonatal mortality rate—See *Rate: Death and related rates*.

Non-Federal physicians—See *Physician*.

Nonpatient revenues—Nonpatient revenues are those revenues received for which no direct patient care services are rendered. The most widely recognized source of nonpatient revenues is philanthropy. Philanthropic support may be direct from individuals or may be obtained through philanthropic fund raising organizations such as the United Way. Support may also be obtained from foundations or corporations. Philanthropic revenues may be designated for direct patient care use or may be contained in an endowment fund where only the current income may be tapped.

Nonprofit hospitals—See *Hospital*.

Notifiable disease—A notifiable disease is one that, when diagnosed, health providers are required, usually by law, to report to State or local public health officials. Notifiable diseases are those of public interest by reason of their contagiousness, severity, or frequency.

Nursing care—The following definition of nursing care applies to data collected in National Nursing Home Surveys through 1977. Nursing care is provision of any of the following services: application of dressings or bandages; bowel and bladder retraining; catheterization; enema; full bed bath; hypodermic, intramuscular, or intravenous injection; irrigation; nasal feeding; oxygen therapy; and temperature-pulse-respiration or blood pressure measurement. See related *Nursing home*.

Nursing care homes—See *Nursing home*.

Nursing home—In the Online Survey Certification and Reporting database, a nursing home is a facility that is certified and meets the Health Care Financing Administration's long-term care requirements for Medicare and Medicaid eligibility. In the National Master Facility Inventory (NMFI), which provided the sampling frame for 1973–74, 1977, and 1985 National Nursing Home Surveys, a nursing home was an establishment with three or more beds that provided nursing or personal care services to the aged, infirm, or chronically ill. The following definitions of nursing home types applied to facilities listed in the NFMI. The 1977 National Nursing Home Survey included personal care homes and domiciliary care homes while the National Nursing Home Surveys of 1973–74, 1985, 1995, 1997, and 1999 excluded them.

Nursing care homes must employ one or more full-time registered or licensed practical nurses and must provide nursing care to at least one-half the residents.

Personal care homes with nursing have some but fewer than one-half the residents receiving nursing care. In addition, such homes must employ one or more registered or licensed practical nurses or must provide administration of medications and treatments in accordance with physicians' orders, supervision of self-administered medications, or three or more personal services.

Personal care homes without nursing have no residents who are receiving nursing care. These homes provide administration of medications and treatments in accordance with physicians' orders, supervision of self-administered medications, or three or more personal services.

Domiciliary care homes primarily provide supervisory care but also provide one or two personal services.

The following definitions of certification levels apply to data collected in National Nursing Home Surveys of 1973–74, 1977, and 1985:

Skilled nursing facilities provide the most intensive nursing care available outside a hospital. Facilities certified by Medicare provide posthospital care to eligible Medicare enrollees. Facilities certified by Medicaid as skilled nursing facilities provide skilled nursing services on a daily basis to individuals eligible for Medicaid benefits.

Intermediate care facilities are certified by the Medicaid program to provide health-related services on a regular basis to Medicaid eligibles who do not require hospital or skilled nursing facility care but do require institutional care above the level of room and board.

Not certified facilities are not certified as providers of care by Medicare or Medicaid.

Beginning with the 1995 through the 1999 National Nursing Home Surveys, nursing homes have been defined as facilities that routinely provide nursing care services and have three or more beds set up for residents. Facilities may be certified by Medicare or Medicaid or not certified but licensed by the state as a nursing home. The facilities may be freestanding or a distinct unit of a larger facility.

See related *Nursing care; Resident*.

Nursing home expenditures—See *Health expenditures, national*.

Obesity—See *Body Mass Index (BMI)*.

Occupancy rate—The American Hospital Association defines hospital occupancy rate as the average daily census divided by the average number of hospital beds during a reporting period. Average daily census is defined by the American Hospital Association as the average number of inpatients, excluding newborns, receiving care each day during a reporting period. The occupancy rate for facilities other than hospitals is calculated as the number of residents reported at the time of the interview divided by the number of beds reported. In the Online Survey Certification and Reporting database, occupancy is the total number of residents on the day of certification inspection divided by the total number of beds on the day of certification.

Office—In the National Ambulatory Medical Care Survey, an office is any location for a physician's ambulatory practice other than hospitals, nursing homes, other extended care facilities, patients' homes, industrial clinics, college clinics, and family planning clinics. Offices in health maintenance organizations and private offices in hospitals are included. See related *Office visit; Outpatient visit; Physician*.

Office-based physician—See *Physician*.

Office visit—In the National Ambulatory Medical Care Survey, an office visit is any direct personal exchange between an ambulatory patient and a physician or members of his or her staff for the purposes of seeking care and rendering health services. See related *Outpatient visit*.

Operations—See *Procedure*.

Outpatient department—According to the National Hospital Ambulatory Medical Care Survey (NHAMCS), an outpatient department (OPD) is a hospital facility where nonurgent ambulatory medical care is provided. The following are examples of the types of OPDs excluded from the NHAMCS: ambulatory surgical centers, chemotherapy, employee health services, renal dialysis, methadone maintenance, and radiology. See related *Emergency department; Outpatient visit*.

Outpatient surgery—According to the American Hospital Association, outpatient surgery is performed on patients who do not remain in the hospital overnight and occurs in inpatient operating suites, outpatient surgery suites, or procedure rooms within an outpatient care facility. Outpatient surgery is a surgical operation, whether major or minor, performed in operating or procedure rooms. A surgical operation involving more than one surgical procedure is considered one surgical operation. See related *Ambulatory surgery; Procedure*.

Outpatient visit—The American Hospital Association defines outpatient visits as visits for receipt of medical, dental, or other services by patients who are not lodged in the hospital. Each appearance by an outpatient to each unit of the hospital is counted individually as an outpatient visit. In the National Hospital Ambulatory Medical Care Survey an outpatient department visit is a direct personal exchange between a patient and a physician or other health care provider working under the physician's supervision for the purpose of seeking care and receiving personal health services. See related *Emergency department visit; Outpatient department*.

Overweight—See *Body mass index (BMI)*.

Partial care organization—See *Mental health organization*.

Partial care treatment—See *Mental health service type*.

Particulate matter—Particulate matter is defined as particles of solid or liquid matter in the air, including nontoxic materials (soot, dust, and dirt) and toxic materials (for example, lead, asbestos, suspended sulfates, and nitrates). See related *National ambient air quality standards; Pollutant*.

Patient—A patient is a person who is formally admitted to the inpatient service of a hospital for observation, care, diagnosis, or treatment. See related *Admission; Average length of stay; Days of care; Discharge; Hospital*.

Percent change—See *Average annual rate of change*.

Perinatal mortality rate; ratio—See *Rate: Death and related rates*.

Personal care homes with or without nursing—See *Nursing home*.

Personal health care expenditures—See *Health expenditures, national*.

Physician—Physicians, through self-reporting, are classified by the American Medical Association and others as licensed doctors of medicine or osteopathy, as follows:

> *Active (or professionally active) physicians* are currently practicing medicine for a minimum of 20 hours per week. Excluded are physicians who are not practicing, practicing medicine less than 20 hours per week, have unknown addresses, or specialties not classified (when specialty information is presented).
>
> *Federal physicians* are employed by the Federal Government; non-Federal or civilian physicians are not.
>
> *Hospital-based physicians* spend the plurality of their time as salaried physicians in hospitals.
>
> *Office-based physicians* spend the plurality of their time working in practices based in private offices.

Data for physicians are presented by type of education (doctors of medicine and doctors of osteopathy); place of education (U.S. medical graduates and international medical graduates); activity status (professionally active and inactive); employment setting (Federal and non-Federal); area of specialty; and geographic area. See related *Office; Physician specialty*.

Physician specialty—A physician specialty is any specific branch of medicine in which a physician may concentrate.

Data are based on physician self-reports of their primary area of specialty. Physician data are broadly categorized into two general areas of practice: generalists and specialists.

Generalist physicians are synonymous with primary care generalists and only include physicians practicing in the general fields of family and general practice, general internal medicine, and general pediatrics. They specifically exclude primary care specialists.

Primary care specialists practice in the subspecialties of general and family practice, internal medicine, and pediatrics. The primary care subspecialties for family practice include geriatric medicine and sports medicine. Primary care subspecialties for internal medicine include diabetes, endocrinology and metabolism, hematology, hepatology, cardiac electrophysiology, infectious diseases, diagnostic laboratory immunology, geriatric medicine, sports medicine, nephrology, nutrition, medical oncology, and rheumatology. Primary care subspecialties for pediatrics include adolescent medicine, critical care pediatrics, neonatal-perinatal medicine, pediatric allergy, pediatric cardiology, pediatric endocrinology, pediatric pulmonology, pediatric emergency medicine, pediatric gastroenterology, pediatric hematology/oncology, diagnostic laboratory immunology, pediatric nephrology, pediatric rheumatology, and sports medicine.

Specialist physicians practice in the primary care specialties, in addition to all other specialist fields not included in the generalist definition. Specialist fields include allergy and immunology, aerospace medicine, anesthesiology, cardiovascular diseases, child and adolescent psychiatry, colon and rectal surgery, dermatology, diagnostic radiology, forensic pathology, gastroenterology, general surgery, medical genetics, neurology, nuclear medicine, neurological surgery, obstetrics and gynecology, occupational medicine, ophthalmology, orthopedic surgery, otolaryngology, psychiatry, public health and general preventive medicine, physical medicine and rehabilitation, plastic surgery, anatomic and clinical pathology, pulmonary diseases, radiation oncology, thoracic surgery, urology, addiction medicine, critical care medicine, legal medicine, and clinical pharmacology.

See related *Physician*.

Pollutant—A pollutant is any substance that renders the atmosphere or water foul or noxious to health. See related *National ambient air quality standards; Particulate matter*.

Population—The U.S. Bureau of the Census collects and publishes data on populations in the United States according to several different definitions. Various statistical systems then use the appropriate population for calculating rates.

Total population is the population of the United States, including all members of the Armed Forces living in foreign countries, Puerto Rico, Guam, and the U.S. Virgin Islands. Other Americans abroad (for example, civilian Federal employees and dependents of members of the Armed Forces or other Federal employees) are not included.

Resident population includes persons whose usual place of residence (that is, the place where one usually lives and sleeps) is in one of the 50 States or the District of Columbia. It includes members of the Armed Forces stationed in the United States and their families. It excludes international military, naval, and diplomatic personnel and their families located in this county and residing in embassies or similar quarters. Also excluded are international workers and international students in this country and Americans living abroad. The resident population is usually the denominator when calculating birth and death rates and incidence of disease. The resident population is also the denominator for selected population-based rates that use numerator data from the National Nursing Home Survey.

Civilian population is the resident population excluding members of the Armed Forces. However, families of members of the Armed Forces are included. This population is the denominator in rates calculated for the NCHS National Hospital Discharge Survey, the National Home and Hospice Care Survey, and the National Survey of Ambulatory Surgery.

Civilian noninstitutionalized population is the civilian population not residing in institutions. Institutions include correctional institutions, detention homes, and training schools for juvenile delinquents; homes for aged and dependent persons (for example, nursing homes and convalescent homes); homes for dependent and neglected children; homes and schools for mentally or

physically handicapped persons; homes for unwed mothers; psychiatric, tuberculosis, and chronic disease hospitals; and residential treatment centers. Census Bureau estimates of the civilian noninstitutionalized population are used to calculate sample weights for the NCHS National Health Interview Survey, National Health and Nutrition Examination Survey, and National Survey of Family Growth, and as denominators in rates calculated for the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey.

Postneonatal mortality rate—See *Rate: Death and related rates*.

Poverty level—Poverty statistics are based on definitions originally developed by the Social Security Administration. These include a set of money income thresholds that vary by family size and composition. Families or individuals with income below their appropriate thresholds are classified as below the poverty level. These thresholds are updated annually by the U.S. Bureau of the Census to reflect changes in the Consumer Price Index for all urban consumers (CPI-U). For example, the average poverty threshold for a family of four was $17,029 in 1999 and $13,359 in 1990. For more information, see U.S. Bureau of the Census: *Consumer Income and Poverty 1999.* Series P-60. Washington, DC: U.S. Government Printing Office. Also see www.census.gov/hhes/poverty.html. See related *Consumer Price Index; Family income*.

Preferred provider organization (PPO)—This is a health plan generally consisting of hospital and physician providers. The PPO provides health care services to plan members usually at discounted rates in return for expedited claims payment. Plan members can use PPO or non-PPO health care providers; however, financial incentives are built into the benefit structure to encourage utilization of PPO providers. See related *Managed care*.

Prevalence—Prevalence is the number of cases of a disease, infected persons, or persons with some other attribute present during a particular interval of time. It is often expressed as a rate (for example, the prevalence of diabetes per 1,000 persons during a year). See related *Incidence*.

Primary admission diagnosis—In the National Home and Hospice Care Survey the primary admission diagnosis is the first-listed diagnosis at admission on the patient's medical record as provided by the agency staff member most familiar with the care provided to the patient.

Primary care specialties—See *Physician specialty*.

Private expenditures—See *Health expenditures, national*.

Procedure—The National Hospital Discharge Survey (NHDS) and the National Survey of Ambulatory Surgery (NSAS) define a procedure as a surgical or nonsurgical operation, diagnostic procedure, or therapeutic procedure (such as respiratory therapy) recorded on the medical record of discharged patients. A maximum of four procedures per discharge in NHDS and up to six procedures per discharge in NSAS were recorded and coded to the *International Classification of Diseases, Ninth Revision, Clinical Modification*. Previous editions of *Health, United States* classified procedures into surgical and diagnostic and other nonsurgical procedures. The distinction between surgical and diagnostic and nonsurgical procedures has become less meaningful due to development of minimally invasive and noninvasive surgery. Thus the practice of classifying procedures as surgical or diagnostic has been discontinued. See related *Ambulatory surgery; Outpatient surgery*.

Proprietary hospitals—See *Hospital*.

Psychiatric hospitals—See *Hospital; Mental health organization*.

Public expenditures—See *Health expenditures, national*.

Public health activities—Public health activities may include any of the following essential services of public health—surveillance, investigations, education, community mobilization, workforce training, research, and personal care services delivered or funded by governmental agencies.

Race—In 1977 the Office of Management and Budget (OMB) issued Race and Ethnic Standards for Federal Statistics and Administrative Reporting in order to promote comparability of data among Federal data systems. The 1977 Standards called for the Federal Government's data systems to classify individuals into the following four racial groups: American Indian or Alaska Native, Asian or Pacific Islander, black, and white. Depending on the data source, the classification by race was based on self-classification or on observation by an interviewer or other person filling out the questionnaire.

In 1997 new standards were announced for classification of individuals by race within the Federal Government's data systems (*Federal Register*, 62FR58781–58790). The 1997 Standards have five racial groups: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. These five categories are the minimum set for data on race in Federal statistics. The 1997 Standards also offer an opportunity for respondents to select more than one of the five groups, leading to many possible multiple race categories. As with the single race groups, data for the multiple race groups are to be reported when estimates meet agency requirements for reliability and confidentiality. The 1997 Standards allow for observer or proxy identification of race but clearly state a preference for self-classification. The Federal government considers race and Hispanic origin to be two separate and distinct concepts. Thus Hispanics may be of any race. Federal data systems are required to comply with the 1997 Standards by 2003.

Data systems included in *Health, United States,* other than the National Health Interview Survey (NHIS), generally do not permit tabulation of estimates for the detailed race and ethnicity categories shown in tables XI and XII, either because race data based on the 1997 standard categories are not yet available, or because there are insufficient numbers of observations to meet statistical reliability or confidentiality requirements. Starting with *Health, United States, 2002* race-specific estimates based on the NHIS are tabulated using the 1997 Standards for data years 1999 and beyond. Prior to data year 1999, the 1977 Standards were used. Because of the differences between the two Standards, the race-specific estimates shown in trend tables based on the NHIS for 1999 and later years are not strictly comparable with estimates for earlier years. Each trend table based on the NHIS includes a footnote that discusses differences between estimates tabulated using the two Standards for data year 1999.

Tables XI and XII illustrate NHIS data tabulated by race and Hispanic origin according to the 1997 and 1977 Standards for two health statistics (cigarette smoking and private health insurance coverage). In these illustrations, three separate tabulations using the 1997 Standards are shown: 1) Race: mutually exclusive race groups, including several multiple race combinations; 2) Race, any mention: race groups that are not mutually exclusive because each race category includes all persons who mention that race; and 3) Hispanic origin and race: detailed race and Hispanic origin with a multiple race total category. Where applicable, comparison tabulations by race and Hispanic origin are shown based on the 1977 Standards. Because there are more race groups with the 1997 Standards, the sample size of each race group under the 1997 Standards is slightly smaller than the sample size under the 1977 Standards. Only those few multiple race groups with sufficient numbers of observations to meet standards of statistical reliability are shown. Tables XI and XII also illustrate changes in labels and group categories in the 1997 Standards. The race designation of Black was changed to Black or African American and the ethnicity designation of Hispanic was changed to Hispanic or Latino.

Additional information is provided in Appendix I under National Vital Statistics System. See related *Hispanic origin*.

Rate—A rate is a measure of some event, disease, or condition in relation to a unit of population, along with some specification of time. See related *Age adjustment; Population*.

- *Birth and related rates*

  Birth rate is calculated by dividing the number of live births in a population in a year by the midyear resident population. For census years, rates are based on unrounded census counts of the resident population, as of April 1. For the noncensus years of 1981–89 and 1991, rates are based on national estimates of the resident population, as of July 1, rounded to 1,000s. Population estimates for 5-year age groups are generated by summing unrounded population estimates before rounding to 1,000s. Starting in 1992 rates are based on unrounded national population estimates. Birth rates are expressed as the number of live births per 1,000 population. The rate may be restricted to births to women of specific age, race, marital status, or geographic location (specific rate), or it may be related to the entire population (crude rate). See related *Cohort fertility; Live birth*.

  Fertility rate is the total number of live births, regardless of age of mother, per 1,000 women of reproductive age, 15–44 years.

- *Death and related rates*

  Death rate is calculated by dividing the number of deaths in a population in a year by the midyear resident population. For census years, rates are based on unrounded census counts of the resident population, as

Table XI. Current cigarette smoking by persons 18 years of age and over, according to race and Hispanic origin under the 1977 and 1997 Standards for Federal data on race and ethnicity: United States, average annual 1993–95

1997 Standards	*Sample size*	*Percent*	*Standard error*	*1977 Standards*	*Sample size*	*Percent*	*Standard error*
			Race				
White only	46,228	25.2	0.26	White	46,664	25.3	0.26
Black or African American only	7,208	26.6	0.64	Black	7,334	26.5	0.63
American Indian and Alaska Native only	416	32.9	2.53	American Indian and Alaska Native	480	33.9	2.38
Asian only	1,370	15.0	1.19	Asian and Pacific Islander	1,411	15.5	1.22
2 or more races total	786	34.5	2.00				
Black or African American; White	83	*21.7	6.05				
American Indian and Alaska Native; White	461	40.0	2.58				
			Race, any mention				
White, any mention	46,882	25.3	0.26				
Black or African American, any mention	7,382	26.6	0.63				
American Indian and Alaska Native, any mention	965	36.3	1.71				
Asian, any mention	1,458	15.7	1.20				
Native Hawaiian and Other Pacific Islander, any mention	53	*17.5	5.10				
			Hispanic origin and race				
Not Hispanic or Latino:				Non-Hispanic:			
White only	42,421	25.8	0.27	White	42,976	25.9	0.27
Black or African American only	7,053	26.7	0.65	Black	7,203	26.7	0.64
American Indian and Alaska Native only	358	33.5	2.69	American Indian and Alaska Native	407	35.4	2.53
Asian only	1,320	14.8	1.21	Asian and Pacific Islander	1,397	15.3	1.24
2 or more races total	687	35.6	2.15				
Hispanic or Latino	5,175	17.8	0.65	Hispanic	5,175	17.8	0.65

*Relative standard error 20–30 percent.

NOTES: The 1997 Standards for Federal data on race and ethnicity set five single race groups (White, Black, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) and allow respondents to report one or more race groups. Estimates for single race and multiple race groups not shown above do not meet standards for statistical reliability or confidentiality (relative standard error greater than 30 percent). Race groups under the 1997 Standards were based on the question, "What is the group or groups which represents _____ race?" For persons who selected multiple groups, race groups under the 1977 Standards were based on the additional question, "Which of those groups would you say best represents ____ race?" Race-specific estimates in this table were calculated after excluding respondents of other and unknown race. Other published race-specific estimates are based on files in which such responses have been edited. Percents are age adjusted to the year 2000 standard using three age groups: Under 18 years, 18–44 years, and 45–64 years of age. See Appendix II, Age adjustment.

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

of April 1. For the noncensus years of 1981–89 and 1991, rates are based on national estimates of the resident population, as of July 1, rounded to 1,000s. Population estimates for 10-year age groups are generated by summing unrounded population estimates before rounding to 1,000s. Starting in 1992 rates have been based on unrounded national population estimates. Rates for the Hispanic and non-Hispanic white populations in each year are based on unrounded State population estimates for States in the Hispanic reporting area. Death rates are expressed as the number of deaths per 100,000 population. The rate may be restricted to deaths in specific age, race, sex, or geographic groups or from specific causes of death (specific rate) or it may be related to the entire population (crude rate).

Fetal death rate is the number of fetal deaths with stated or presumed gestation of 20 weeks or more divided by the sum of live births plus fetal deaths, stated per 1,000 live births plus fetal deaths. *Late fetal death rate* is the number of fetal deaths with stated or presumed gestation of 28 weeks or more divided by the sum of live births plus late fetal deaths, stated per 1,000 live births plus late fetal deaths. See related *Fetal death; Gestation*.

Infant mortality rate based on period files is calculated by dividing the number of infant deaths during a calendar year by the number of live births reported in the same

Table XII. Private health care coverage for persons under 65 years of age, according to race and Hispanic origin under the 1977 and 1997 Standards for Federal data on race and ethnicity: United States, average annual 1993–95

1997 Standards	*Sample size*	*Percent*	*Standard error*	*1977 Standards*	*Sample size*	*Percent*	*Standard error*
			Race				
White only	168,256	76.1	0.28	White	170,472	75.9	0.28
Black or African American only	30,048	53.5	0.63	Black	30,690	53.6	0.63
American Indian and Alaska Native only	2,003	44.2	1.97	American Indian and Alaska Native	2,316	43.5	1.85
Asian only	6,896	68.0	1.39	Asian and Pacific Islander	7,146	68.2	1.34
Native Hawaiian and Other Pacific Islander only	173	75.0	7.43				
2 or more races total	4,203	60.9	1.17				
Black or African American; White	686	59.5	3.21				
American Indian and Alaska Native; White	2,022	60.0	1.71				
Asian; White	590	71.9	3.39				
Native Hawaiian and Other Pacific Islander; White	56	59.2	10.65				
			Race, any mention				
White, any mention	171,817	75.8	0.28				
Black or African American, any mention	31,147	53.6	0.62				
American Indian and Alaska Native, any mention	4,365	52.4	1.40				
Asian, any mention	7,639	68.4	1.27				
Native Hawaiian and Other Pacific Islander, any mention	283	68.7	6.23				
			Hispanic origin and race				
Not Hispanic or Latino:				Non-Hispanic:			
White only	146,109	78.9	0.27	White	149,057	78.6	0.27
Black or African American only	29,250	53.9	0.64	Black	29,877	54.0	0.63
American Indian and Alaska Native only	1,620	45.2	2.15	American Indian and Alaska Native	1,859	44.6	2.05
Asian only	6,623	68.2	1.43	Asian and Pacific Islander	6,999	68.4	1.40
Native Hawaiian and Other Pacific Islander only	145	76.4	7.79				
2 or more races total	3,365	62.6	1.18				
Hispanic or Latino	31,040	48.8	0.74	Hispanic	31,040	48.8	0.74

NOTES: The 1997 Standards for Federal data on race and ethnicity set five single race groups (White, Black, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander) and allow respondents to report one or more race groups. Estimates for single race and multiple race groups not shown above do not meet standards for statistical reliability or confidentiality (relative standard error greater than 30 percent). Race groups under the 1997 Standards were based on the question, "What is the group or groups which represents _____ race?" For persons who selected multiple groups, race groups under the 1977 Standards were based on the additional question, "Which of those groups would you say best represents ____ race?" Race-specific estimates in this table were calculated after excluding respondents of other and unknown race. Other published race-specific estimates are based on files in which such responses have been edited. Percents are age adjusted to the year 2000 standard using three age groups: Under 18 years, 18–44 years, and 45–64 years of age. See Appendix II, Age adjustment.

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

year. It is expressed as the number of infant deaths per 1,000 live births. *Neonatal mortality rate* is the number of deaths of children under 28 days of age, per 1,000 live births. *Postneonatal mortality rate* is the number of deaths of children that occur between 28 days and 365 days after birth, per 1,000 live births. See related *Infant death*.

Birth cohort infant mortality rates are based on linked birth and infant death files. In contrast to period rates in which the births and infant deaths occur in the same period or calendar year, infant deaths constituting the numerator of a birth cohort rate may have occurred in the same year as, or in the year following, the year of birth. The birth cohort infant mortality rate is expressed as the number of infant deaths per 1,000 live births. See related *Birth cohort*.

Perinatal relates to the period surrounding the birth event. Rates and ratios are based on events reported in a calendar year. *Perinatal mortality rate* is the sum of late fetal deaths plus infant deaths within 7 days of birth divided by the sum of live births plus late fetal deaths, stated per 1,000 live births plus late fetal deaths.

Perinatal mortality ratio is the sum of late fetal deaths plus infant deaths within 7 days of birth divided by the number of live births, stated per 1,000 live births.

Maternal death is defined by the World Health Organization as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. Maternal death is one for which the certifying physician has designated a maternal condition as the underlying cause of death. Maternal conditions are those assigned to Pregnancy, childbirth, and the puerperium, ICD–10 codes A34, O00-O95, O98-O99 (see table V). *Maternal mortality rate* is defined as the number of maternal deaths per 100,000 live births. The maternal mortality rate is a measure of the likelihood that a pregnant woman will die from maternal causes. The number of live births used in the denominator is a proxy for the population of pregnant women who are at risk of a maternal death. Changes have been made in the classification and coding of maternal deaths between ICD–9 and ICD–10, effective with mortality data for 1999. ICD–10 changes pertain to indirect maternal causes and timing of death relative to pregnancy. If only indirect maternal causes of death (i.e., a previously existing disease or a disease that developed during pregnancy which was not due to direct obstetric causes but was aggravated by physiologic effects of pregnancy) are reported in Part I and pregnancy is reported in either Part I or Part II, ICD–10 classifies this as a maternal death. ICD–9 only classified the death as maternal if pregnancy was reported in Part I. Some State death certificates include a separate question regarding pregnancy status. A positive response to the question is interpreted as "pregnant" being reported in Part II of the cause-of-death section of the death certificate. If the medical certifier did not specify when death occurred relative to the pregnancy, it is assumed that the pregnancy terminated 42 days or less prior to death. Under ICD–10 a new category has been added for deaths from maternal causes that occurred more than 42 days after delivery or termination of pregnancy (O96-O97). In 1999 there were 15 such deaths.

Region—See *Geographic region and division*.

Registered hospitals—See *Hospital*.

Registered nursing education—Registered nursing data are shown by level of educational preparation. Baccalaureate education requires at least 4 years of college or university; associate degree programs are based in community colleges and are usually 2 years in length; and diploma programs are based in hospitals and are usually 3 years in length.

Registration area—The United States has separate registration areas for birth, death, marriage, and divorce statistics. In general, registration areas correspond to States and include two separate registration areas for the District of Columbia and New York City. All States have adopted laws that require registration of births and deaths and reporting of fetal deaths. It is believed that more than 99 percent of births and deaths occurring in this country are registered.

The *death registration area* was established in 1900 with 10 States and the District of Columbia, and the *birth registration area* was established in 1915, also with 10 States and the District of Columbia. Both areas have covered the entire United States since 1933. Currently, Puerto Rico, U.S. Virgin Islands, and Guam each constitutes a separate registration area, although their data are not included in statistical tabulations of U.S. resident data. See related *Reporting area*.

Relative standard error—The relative standard error (RSE) is a measure of an estimate's reliability. The RSE of an estimate is obtained by dividing the standard error of the estimate ($SE(r)$) by the estimate itself (r). This quantity is expressed as a percent of the estimate and is calculated as follows: $\text{RSE} = 100 \times (SE(r)/r)$.

Relative survival rate—The relative survival rate is the ratio of the observed survival rate for the patient group to the expected survival rate for persons in the general population similar to the patient group with respect to age, sex, race, and calendar year of observation. The 5-year relative survival rate is used to estimate the proportion of cancer patients potentially curable. Because over one-half of all cancers occur in persons 65 years of age and over, many of these individuals die of other causes with no evidence of recurrence of their cancer. Thus, because it is obtained by adjusting observed survival for the normal life expectancy of the general population of the same age, the relative survival rate is an estimate of the chance of surviving the effects of cancer.

Reporting area—In the National Vital Statistics System, the reporting area for such basic items on the birth and death certificates as age, race, and sex, is based on data from residents of all 50 States in the United States and the District of Columbia (DC). The reporting area for selected items such as Hispanic origin, educational attainment, and marital status, is based on data from those States that require the item to be reported, whose data meet a minimum level of completeness (such as 80 or 90 percent), and are considered to be sufficiently comparable to be used for analysis. In 1993–96 the reporting area for Hispanic origin of decedent on the death certificate included 49 States and DC. Starting in 1997 the Hispanic reporting area includes all 50 States and DC. See related *Registration area; National Vital Statistics System,* Appendix I.

Resident—In the Online Survey Certification and Reporting database, all residents in certified facilities are counted on the day of certification inspection. In the National Nursing Home Survey, a resident is a person on the roster of the nursing home as of the night before the survey. Included are all residents for whom beds are maintained even though they may be on overnight leave or in a hospital. See related *Nursing home*.

Resident population—See *Population*.

Residential treatment care—See *Mental health service type*.

Residential treatment centers for emotionally disturbed children—See *Mental health organization*.

Rural—See *Urbanization*.

Self-assessment of health—See *Health status, respondent-assessed*.

Short-stay hospitals—See *Hospital*.

Skilled nursing facilities—See *Nursing home*.

Smoker—See *Cigarette smoking*.

Specialty hospitals—See *Hospital*.

State health agency—The agency or department within State government headed by the State or territorial health official. Generally, the State health agency is responsible for setting statewide public health priorities, carrying out national and State mandates, responding to public health hazards, and assuring access to health care for underserved State residents.

Substance abuse treatment clients—In the Substance Abuse and Mental Health Services Administration's National Survey of Substance Abuse Treatment Services, substance abuse treatment clients have been admitted to treatment and have been seen on a scheduled appointment basis at least once in the month before the survey reference date or were inpatients on the survey reference date. Types of treatment include 24-hour detoxification, 24-hour rehabilitation or residential care, and outpatient care.

Suicidal ideation—Suicidal ideation is having thoughts of suicide or of taking action to end one's own life. Suicidal ideation includes all thoughts of suicide, both when the thoughts include a plan to commit suicide and when they do not include a plan. Suicidal ideation is measured in the Youth Risk Behavior Survey by the question "During the past 12 months, did you ever seriously consider attempting suicide?"

Surgical operations—See *Procedure*.

Surgical specialties—See *Physician specialty*.

Uninsured—See *Health insurance coverage*.

Urbanization—In this report, death rates are presented according to the urbanization level of the decedent's county of residence. Counties and county equivalents were assigned to one of five urbanization levels based on their classification in the Urban Influence code system (December 1996 Revision) developed by the Economic Research Service, U.S. Department of Agriculture. There are three levels for metropolitan counties and two levels for nonmetropolitan counties. The categorization of counties as metropolitan or nonmetropolitan in the Urban Influence code system is based on the June 1993 OMB definition of metropolitan areas (the application of the 1990 metropolitan area standards to the 1990 decennial census data). Metropolitan areas include metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). See *Metropolitan statistical area,* Appendix II for definitions of metropolitan and nonmetropolitan counties.

The Urban Influence code system classifies metropolitan counties as either large metro (counties in MSA/PMSAs of 1 million or more population) or small metro (counties in

MSA/PMSAs of less than 1 million population). For this report, the large metro category of the Urban Influence code system was divided into two urbanization levels: large central metro and large fringe metro. Thus, metropolitan counties were assigned to one of three metropolitan urbanization levels: (a) *large central*—counties in large (1 million or more population) MSA/PMSAs that contain all or part of the largest central city of the MSA/PMSA; (b) *large fringe*—counties in large (1 million or more population) MSA/PMSAs that do not contain any part of the largest central city of the MSA/PMSA (counties in a few PMSAs with less than 1 million population were assigned to the large fringe urbanization level because the PMSA in which they are located is adjacent to a large central county of the CMSA); and (c) *small*—counties in small (less than 1 million population) MSA/PMSAs.

The Urban Influence code system divides nonmetropolitan counties into seven categories based on adjacency to a metropolitan area and size of the largest city. A county is considered to have a city with a specified size if it includes all or part of the city. The seven categories were collapsed into two categories: (d) *nonmetro counties with a city of 10,000 or more population* and (e) *nonmetro counties without a city of 10,000 or more population*.

Usual source of care—Usual source of care was measured in the National Health Interview Survey (NHIS) in 1993 and 1994 by asking the respondent "Is there a particular person or place that ____usually goes to when ____is sick or needs advice about ___health?" In the 1995 and 1996 NHIS, the respondent was asked "Is there one doctor, person, or place that ____usually goes to when ____is sick or needs advice about ____health?" Starting in 1997 the respondent has been asked "Is there a place that ____usually goes when he/she is sick or you need advice about (his/her) health?" Persons who report the emergency department as their usual source of care are defined as having no usual source of care in this report.

Wages and salaries—See *Employer costs for employee compensation*.

Years of potential life lost—Years of potential life lost (YPLL) is a measure of premature mortality. Starting with *Health, United States, 1996–97*, YPLL is presented for persons under 75 years of age because the average life expectancy in the United States is over 75 years. YPLL-75 is calculated using the following eight age groups: under 1 year, 1–14 years, 15–24 years, 25–34 years, 35–44 years, 45–54 years, 55–64 years, 65–74 years. The number of deaths for each age group is multiplied by years of life lost, calculated as the difference between age 75 years and the midpoint of the age group. For the eight age groups, the midpoints are 0.5, 7.5, 19.5, 29.5, 39.5, 49.5, 59.5, and 69.5. For example, the death of a person 15–24 years of age counts as 55.5 years of life lost. Years of potential life lost is derived by summing years of life lost over all age groups. In *Health, United States, 1995* and earlier editions, YPLL was presented for persons under 65 years of age. For more information, see Centers for Disease Control. *MMWR*. Vol 35 no 25S, suppl. 1986.

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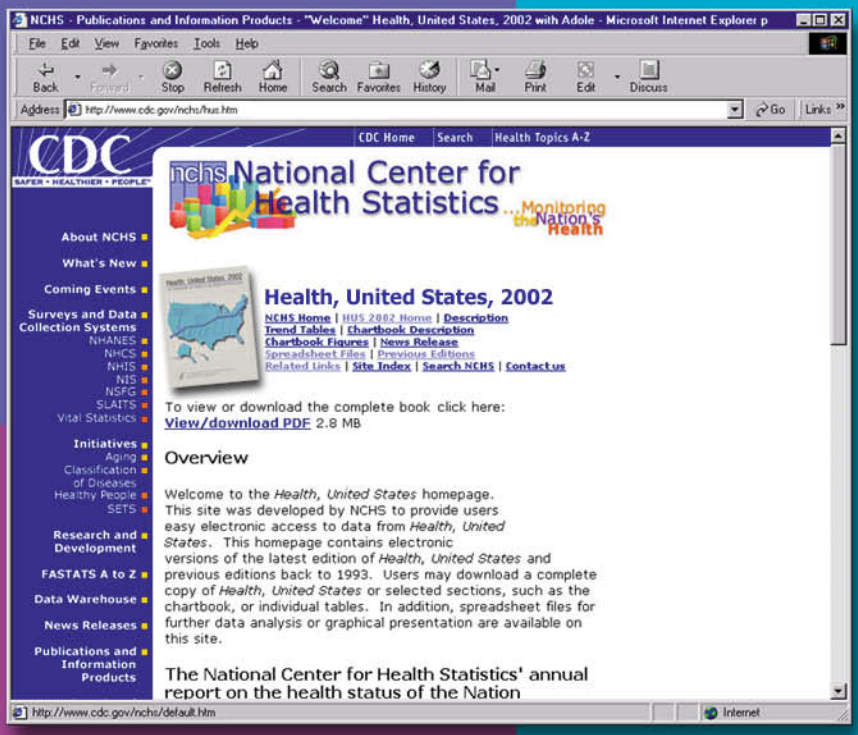

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