




SAFER • HEALTHIER • PEOPLE™

# CDC Fact Book 2000/2001

September 2000

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention





# **CDC Fact Book 2000/2001**

**September 2000**



# CDC: THE NATION'S PREVENTION AGENCY

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I am pleased to share with you the *CDC Fact Book 2000/2001*. It offers a glimpse into the diversity and depth of activities of this agency as we look to a future of healthy people in a healthy world—through prevention.

CDC's distinguished history of success in disease prevention has spanned 51 years, beginning with the first national disease-elimination strategy used against malaria in 1947. Some well-known accomplishments of the Nation's prevention agency resulting from the more than 3,000 investigations of disease outbreaks include identifying Legionnaires' disease, toxic shock syndrome, Reye's syndrome, Ebola, hemorrhagic fever, hantavirus, pulmonary syndrome, and many foodborne and waterborne diseases. CDC's "Disease Detectives" are renowned worldwide for their ability to work with local authorities responding to urgent health threats by aggressively investigating outbreaks of disease or injury, identifying ways to stop transmission, and preventing further occurrence.

Each year, CDC is instrumental in accurately tracking flu strains around the globe, and as a World Health Organization Collaborating Center in using sophisticated techniques to provide scientific data essential for annually updating influenza vaccine. As part of a global partnership, CDC played a major role in the worldwide eradication of smallpox in 1977 and, as a partner in massive immunization campaigns, is on the verge of globally eradicating polio, in addition to making steady progress toward eliminating measles. In this country, vaccine-preventable childhood diseases such as measles, mumps, rubella, pertussis, and diphtheria occur at the lowest rates ever seen. CDC's sentinel surveillance permitted early identification of the AIDS epidemic, thus allowing prevention strategies to be formulated and applied to curtail its frightening growth.

The Nation has now entered the twenty-first century, but the fundamental challenge facing the CDC is the same as it was in its early days over 50 years ago—improving the quality of people's lives by preventing disease, injury, and disability.

This booklet describes, in concise terms, key indicators used in measuring the Nation's health status, current health concerns of the public, and the organization and activities of CDC in the years 2000/2001.

Jeffrey P. Koplan, M.D., M.P.H.  
Director  
Centers for Disease Control and Prevention

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## ACKNOWLEDGEMENTS

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Special thanks and appreciation go to Cindy Johnson—who managed and coordinated the many tasks, drafts, and redrafts essential to the publication of the Fact Book, and Barbara Lord—who's skill in design and layout, and insights regarding reader usability techniques were essential to the success of the Fact Book's production.

Special recognition must be accorded Lisa Broitman and Dana Silverman of the National Center for Health Statistics, who provided cheerful and enthusiastic support for this project. It was through their skill and inspiration that the health data incorporated into the Profile of the Nation's Health was assembled and presented in a manner suitable for a broad base of readers. They were ably supported in this effort by Krystal L. Davis.

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For more information visit our website at [www.cdc.gov](http://www.cdc.gov)

# CDC VISION FOR THE 21<sup>ST</sup> CENTURY

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## *HEALTHY PEOPLE IN A HEALTHY WORLD— THROUGH PREVENTION*

This vision encapsulates CDC's role as a sentinel for the health of people in the United States and throughout the world. CDC strives to promote disease prevention and health promotion goals that will foster a safe and healthful environment where health is protected, nurtured, and promoted.

### Goals

<b>Science</b>	Assure a strong science base for public health action
<b>Assessment</b>	Detect and assess threats to public health
<b>Policy</b>	Provide leadership for the Nation in prevention policy and practice
<b>Assurance</b>	Assure the public's health through the translation of research into effective community-based action

### Tools of Prevention

- Surveillance
- Health Statistics
- Epidemiology
- Laboratory
- Behavioral Risk Reduction
- Technology Transfer
- Prevention Research, Strategies, and Programs
- Health Communication and Social Marketing





## MISSION

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To promote health and quality of life by preventing and controlling disease, injury, and disability.

### *ACCOMPLISHING THE CDC MISSION*

Accomplishment of this mission is predicated on CDC's ability to build on the following agency strengths:

- Prevention strategies based on sound scientific knowledge.
- Leadership and technologic capabilities of state and local health organizations and the integration of those capabilities with private health organizations.
- Trained public health workers and leaders.
- Ability to serve a diverse population with a diverse work force.

As the Nation's prevention agency, we accomplish our mission by working with partners throughout the Nation and the world to:

- monitor health;
- detect and investigate health problems;
- conduct research to enhance prevention;
- develop and advocate sound public health policies;
- implement prevention strategies;
- promote healthy behaviors;
- foster safe and healthful environments; and
- provide leadership and training.

These functions are the backbone of CDC's mission. Each of CDC's major component organizations undertakes these activities in conducting its specific programs.



# PROFILE OF THE NATION'S HEALTH

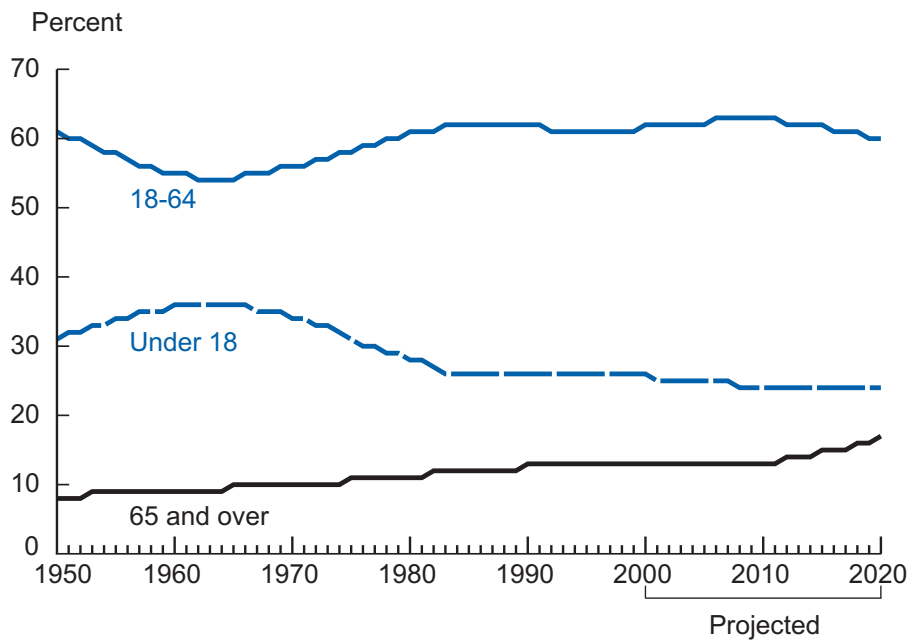
## INFANT AND CHILD HEALTH

### Number of children in the US

Between 1946 and 1964, the number of children under 18 in the U.S. increased dramatically, a result of the “baby boom.” The number of children declined in the 1970s and 1980s, but then began to increase slowly. By the early 1990s, the rate of growth in the number of children began to increase. There were 70.2 million children under age 18 in the U.S. in 1999. There were between 23 and 24 million in each of three age groups, 0–5 years, 6–11 years, and 12–17 years.

In 1999, children comprised about 26% of the population, a decrease from 36% at the end of the baby boom.

PERCENTAGE OF THE U.S. POPULATION BY AGE GROUP



SOURCE: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 311, Estimates of the Population of the United States by Single Years of Age, Color, and Sex: 1900 to 1959; Series P-25, No. 519, Estimates of the Population of the United States, by Age, Sex, and Race: April 1, 1960 to July 1, 1973; Series P-25, No. 917, Preliminary Estimates of the Population of the United States by Age, Sex, and Race: 1970 to 1981; Series P-25, No. 1130, Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050 and unpublished estimates tables for 1980-98 that are available on the Census Bureau web site.

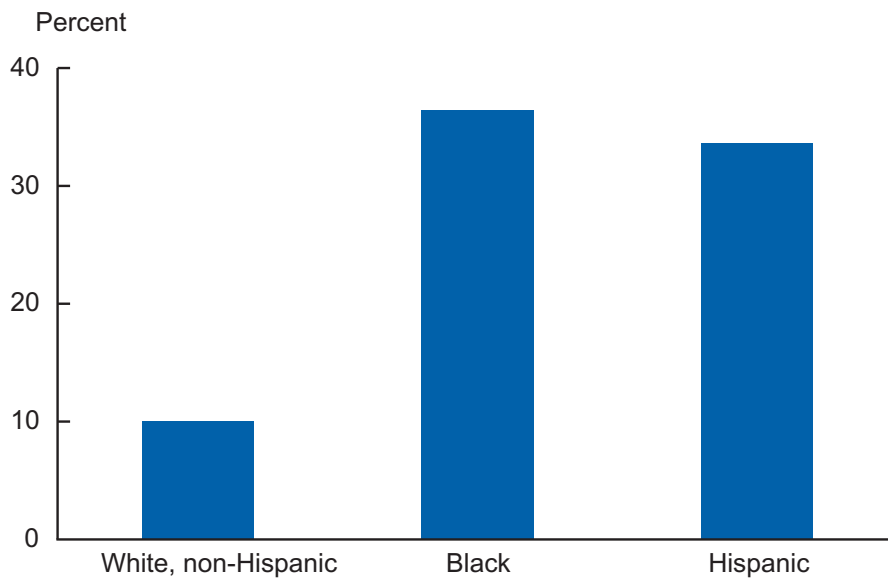
## Poverty

Good health and family income are intricately linked. Childhood poverty is related to numerous negative health outcomes, such as lead poisoning, hospital stays, or higher mortality. Low school performance, teen births, and the risk of experiencing violent crime have also been associated with childhood poverty.

Children comprise a disproportionate percentage of those living in poverty. Despite representing only about 26% of the population, children under age 18 represent nearly 40% of those living in poverty. Eighteen percent of children live in families with cash incomes below the poverty line. This rate has remained approximately the same since 1980.

Poverty rates vary by race and ethnicity. In 1998, 36.4% of black children and 33.6% of Hispanic children lived in poverty, compared to 10% of non-Hispanic white children. While the proportion of children living in poverty is smaller for non-Hispanic white children, 10%, the number of these children who live in poverty is greater than it is for either black or Hispanic children.

PERCENT OF CHILDREN LIVING IN POVERTY BY RACE

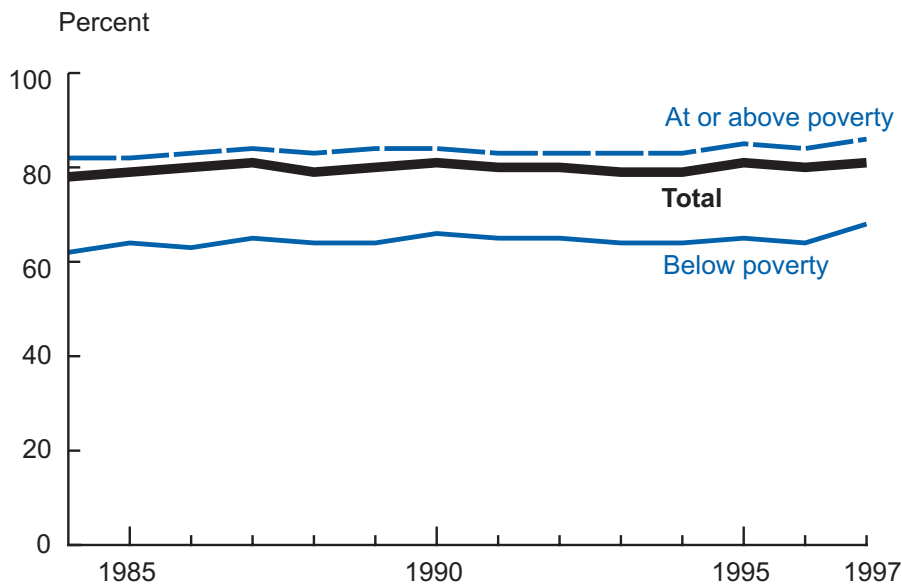


SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 1984-1997. In 1997, the National Health Interview Survey was redesigned, therefore data for 1997 are not strictly comparable with earlier data.

## Health Status

In 1997, about 81% of children under 18 were reported by their parents to be in very good or excellent health, compared with 78% in 1984. However, 86% of those living in families at or above the poverty line were reported to be in good or excellent health, compared with about 68% of children living below the poverty line. In 1984, 82% of children above the poverty line and 62% below the poverty line were reported to be in good or excellent health.

**PERCENT OF CHILDREN UNDER AGE 18  
IN VERY GOOD OR EXCELLENT HEALTH BY POVERTY STATUS**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 1984-1997. In 1997, the National Health Interview Survey was redesigned, therefore data for 1997 are not strictly comparable with earlier data.

## Access to Health Care

Children with a usual source of health care are more likely to use preventive services such as examinations, screening, immunizations, and preventive care, as well as to receive timely treatment of illness and injuries.

In 1997, 14% of children under age 18 had **no health insurance coverage**. More than 25% of children with a family income between 1 and 1.5 times the poverty level were without coverage compared with only 6% of those with family income above twice the poverty level.

In 1997–98, 13% of children under age 18 did not have a **health care visit to an office or a clinic** within the previous 12-month period. Uninsured children were nearly three times as likely as those with health insurance to be without a recent visit (29% compared with 10%).

In 1997–98, about 7% of children under age 18 had **no usual source of health care**. More than 25% of children without health insurance coverage had no usual source of health care.

In 1998, 20% of children under age 18 had an **emergency department visit** within the preceding 12 months. Children living below the poverty threshold were 50% more likely than non-poor children to have had a recent emergency room visit.

In 1998, 75% of children under age 18 had a **dental visit** in the past year. Hispanic (62%) and non-Hispanic black children (70%) were less likely than non-Hispanic white children to have had a recent dental visit (77%).

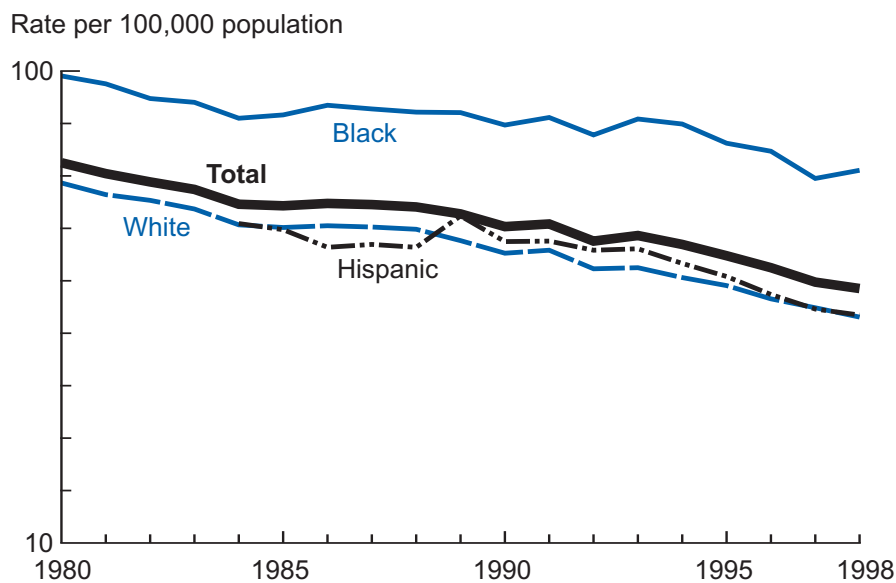
### Child Mortality

In 1998, the death rate for children ages 1–4 was 34.6 per 100,000 children. Since 1980, the death rate has declined by almost 50% for children in this age group. The leading causes of death (in order) were unintentional injuries, birth defects, homicide, and cancer.

Black children died at a higher rate than white children: 61.6 per 100,000 compared with 30.1 per 100,000, respectively.

The death rate for children ages 5–14 is less than for younger children at 19.9 per 100,000. Black children have the highest death rate for this age group as well at 29.4 deaths per 100,000, compared to 18.2 per 100,000 for whites. In this age group, the leading causes of death are unintentional injuries, cancer, homicide, and birth defects.

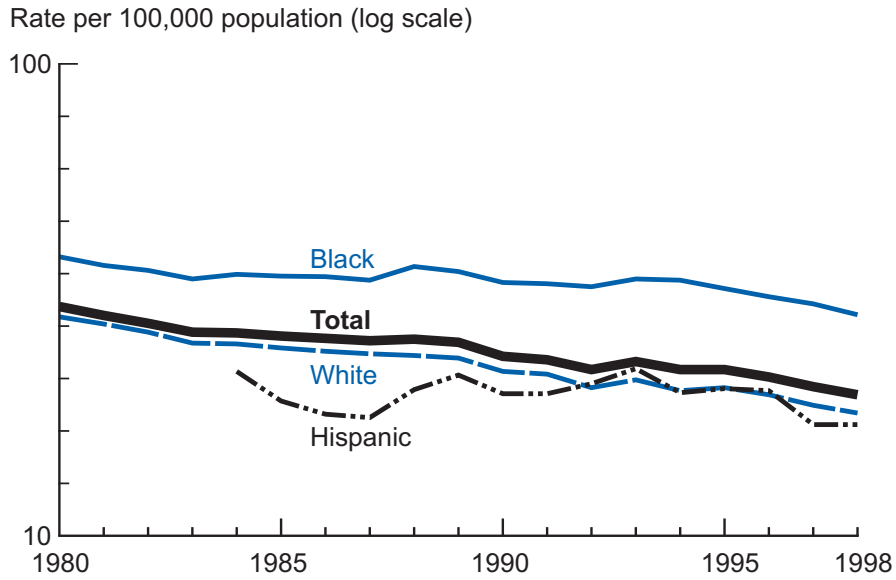
DEATH RATES AMONG CHILDREN AGES 1 TO 4 BY RACE



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

Note: Data for the Hispanic population for 1984-1996 are based on an increasing number of reporting States and for 1997-1998 are for the total United States.

DEATH RATES AMONG CHILDREN AGES 5 TO 14



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

NOTE: Data for the Hispanic population for 1984-1996 are based on an increasing number of reporting States and for 1997-1998 are for the total United States.



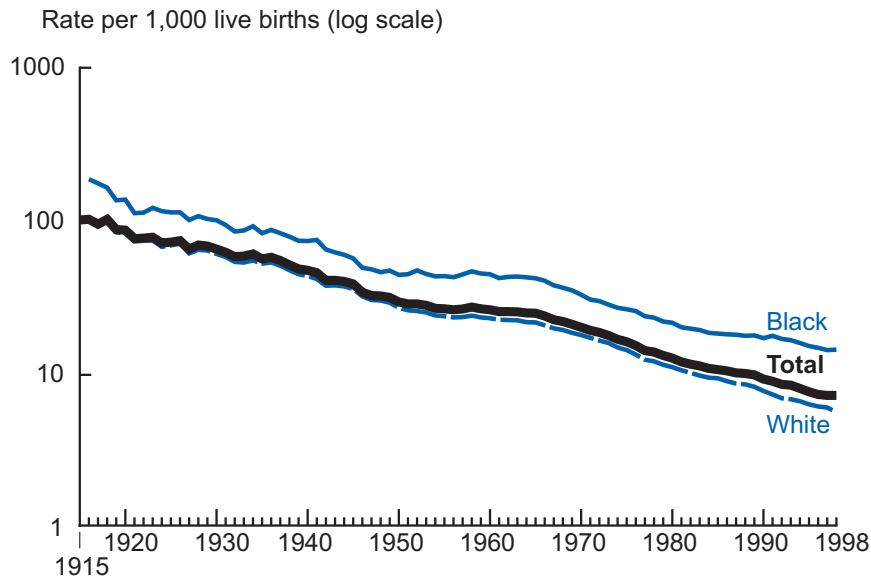
— SUCCESSES OF THE PAST CENTURY —

**Infant Mortality**

The infant mortality rate has also declined dramatically since the beginning of the century. In 1915, infants died at a rate of 99.9 per 1,000 live births. Since then, the rate decreased to 7.2 per 1,000 births in 1998. This is a significant decrease even from a decade earlier (1980) when the rate was 12.6 per 1,000.

Infants born to non-Hispanic black (13.9 per 1,000 live births) and American Indian (9.3 per 1,000 live births) women have a higher mortality rate than infants born to non-Hispanic white (6.0 per 1,000 live births), Hispanic (5.8 per 1,000 live births) or Asian or Pacific Islander women (5.5 per 100,000).

**INFANT MORTALITY RATES**



SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics. Vital statistics of the United States. 1992, Vol II, mortality, part B. Washington: Public Health Services. 1996. Hoyert DL, Kochanek KD, Murphy SL. Deaths: Final Data for 1997. National vital statistics report; vol 47 no 19. Hyattsville, Maryland: National Center for Health Statistics. 1999. Murphy SL. Deaths: Final Data for 1998. National vital statistics report; vol 48 no 11. Hyattsville, Maryland: National Center for Health Statistics. 2000.

Timely, appropriate utilization of prenatal care has likely contributed to the decrease in both infant and maternal mortality rates.

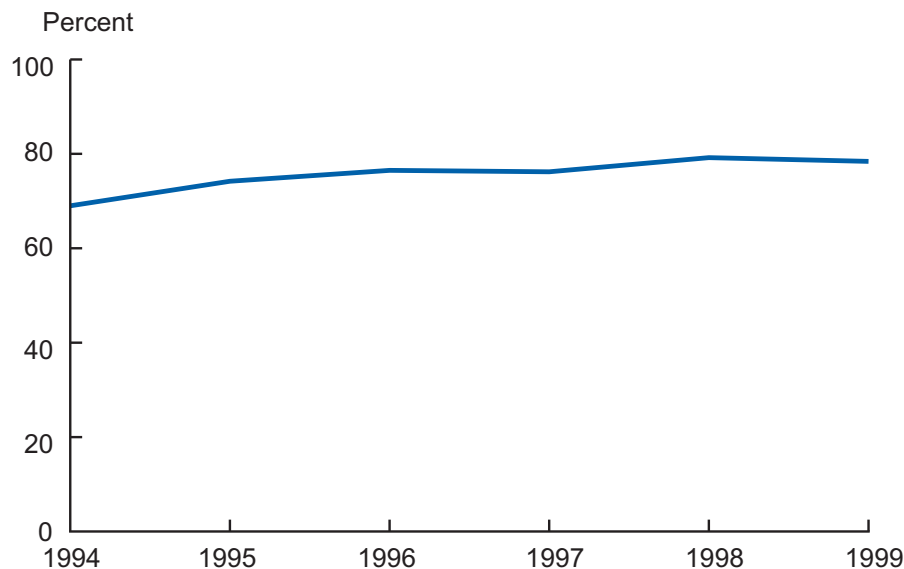
Medical technology also has helped improve the likelihood of survival for many high-risk infants, such as those born prior to full gestational development.

## Immunization

At the beginning of the century, children were likely to become sick or die from a variety of communicable diseases, such as polio or measles. The widespread use of vaccines has drastically changed that; smallpox has been eradicated, indigenous transmission of wild polio and measles have been eliminated in the U.S., and the incidence of other vaccine-preventable diseases has reached near or record lows. Today, the majority of children receive routine vaccinations to help prevent disease and death. The chart on the next page illustrates the decline in vaccine preventable diseases.

In 1994, only 69% of 2 year-old children received all recommended vaccines: 3 doses for Diphtheria, Tetanus, and Pertussis vaccine (DTP); 3 doses of Polio vaccine; 1 dose of Measles (often Measles, Mumps, Rubella, or MMR) vaccine; and 3 doses of *Haemophilus influenzae* type b vaccine (Hib). This series is often referred to as the “combined series” or 4:3:1:3. Since 1994, there have been steady improvements. In 1999, 78.4% of children have received this complete series, a near-record high.

**PERCENT OF FULLY IMMUNIZED CHILDREN AGES 19–35 MONTHS**



SOURCES: Centers for Disease Control and Prevention, National Immunization Program and National Center for Health Statistics. Data from the National Immunization Survey, 1994-1999.

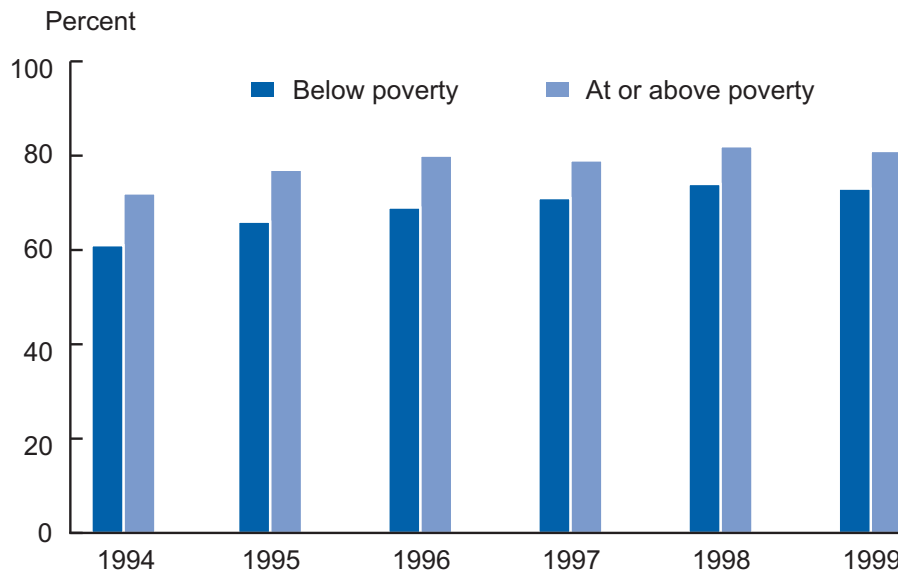
**BASELINE 20TH CENTURY ANNUAL MORBIDITY AND 1999 PROVISIONAL MORBIDITY  
from Nine Diseases with Vaccines Recommended Before 1990  
for Universal Use in Children — United States**

<b>Disease</b>	<b>Baseline 20th century annual morbidity</b>	<b>1999 Provisional morbidity</b>	<b>Percent decrease</b>
Smallpox	48,164 <sup>(1)</sup>	0	100%
Diphtheria	175,885 <sup>(2)</sup>	1	100% <sup>(3)</sup>
Pertussis	147,271 <sup>(4)</sup>	6,031	95.9%
Tetanus	1,314 <sup>(5)</sup>	33	97.5%
Poliomyelitis (paralytic)	16,316 <sup>(6)</sup>	0 <sup>(7)</sup>	100%
Measles	503,282 <sup>(8)</sup>	86	100% <sup>(3)</sup>
Mumps	152,209 <sup>(9)</sup>	352	99.8%
Rubella	47,745 <sup>(10)</sup>	238	99.5%
Congenital rubella	823 <sup>(11)</sup>	8	99.0%
Haemophilus influenza b	20,000 <sup>(12)</sup>	163 <sup>(13)</sup>	99.2%

- ( 1) Average annual number of cases during 1900-1904
- ( 2) Average annual number of reported cases during 1920-1922, 3 years before vaccine development.
- ( 3) Rounded to nearest tenth.
- ( 4) Average annual number of reported cases during 1922-1925, 4 years before vaccine development.
- ( 5) Estimated number of cases based on reported number of deaths during 1922-1926 assuming a case-fatality rate of 90%.
- ( 6) Average annual number of reported cases during 1951-1954, 4 years before vaccine licensure.
- ( 7) Excludes one case of vaccine-associated polio reported in 1998.
- ( 8) Average annual number of reported cases during 1958-1962, 5 years before vaccine licensure.
- ( 9) Number of reported cases in 1968, the first year reporting began and the first year after vaccine licensure.
- (10) Average annual number of reported cases during 1966-1968, 3 years before vaccine licensure.
- (11) Estimated number of cases based on seroprevalence data in the population and on the risk that women infected during a childbearing year would have a fetus with congenital rubella syndrome.
- (12) Estimated number of cases from population-based surveillance studies before vaccine licensure in 1985.
- (13) Includes both cases of invasive *Haemophilus influenzae* type B and cases of unknown serotype.

While coverage levels for preschool children are at an all-time high for all racial and ethnic groups, children from families at or above the poverty line were more likely to have received vaccinations than those below the poverty line. More than 20% of 2 year-olds, many of whom are poor, still have not received all recommended doses of vaccines.

**COMBINED SERIES IMMUNIZATION COVERAGE  
AMONG CHILDREN 19–35 MONTHS BY POVERTY STATUS**



SOURCES: Centers for Disease Control and Prevention. Achievements in Public Health, 1900-1999 Impact of Vaccines Universally Recommended for Children – United States, 1990-1998. MMWR, 48(12);243-248. 1999. National, state, and urban area vaccination coverage levels among children aged 19-35 months — United States, 1999. MMWR, 49(26); 585-9. 2000.

New vaccines are continually emerging, such as those for hepatitis B, chicken pox, and pneumococcal disease, all of which have become a part of routine vaccine recommendations.

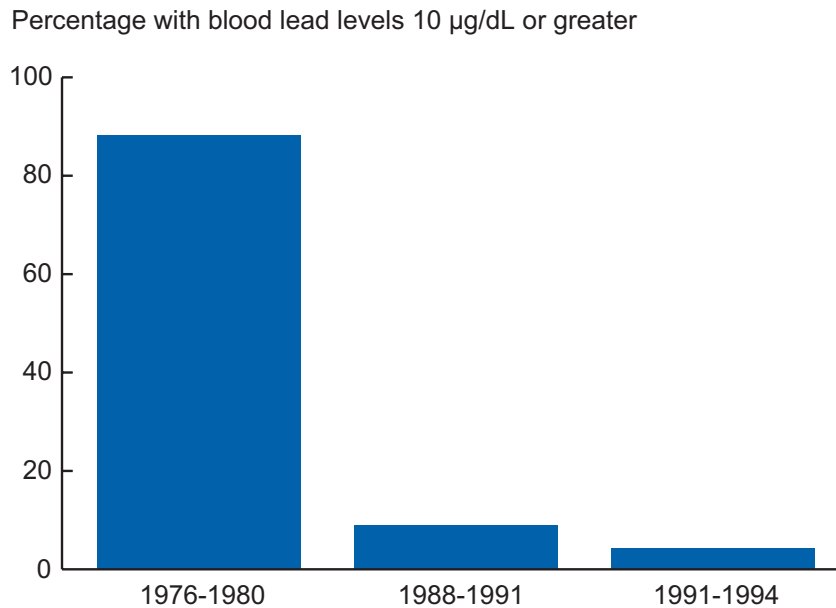
## Blood Lead Levels

Lead poisoning is an extremely serious condition, with the potential to damage a child's central nervous system, kidneys, and reproductive system, and, at high levels, can be fatal. High levels of lead in the blood are associated with decreased intelligence, impaired neurobehavioral development, decreased stature and growth, and impaired hearing acuity. Fortunately, lead poisoning is preventable.

Since the late 1970s, the amount of lead in gasoline has been reduced, which has resulted in a substantial decrease in blood lead levels in the U.S. population. Other interventions also have been instrumental in the decline in blood lead levels, such as repairing homes with lead paint, and changing housing standards to require the removal of lead paint.

The proportion of children with elevated blood lead levels fell from 88.2% in the late 1970s to 4.4% in the early 1990s. Despite the decline, high blood lead levels persist for certain populations, such as those predominantly living in poverty or in inner-cities.

### PERCENTAGE OF CHILDREN WITH ELEVATED BLOOD LEAD LEVELS, AGES 1-5



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

— FUTURE CHALLENGES —

**Overweight children**

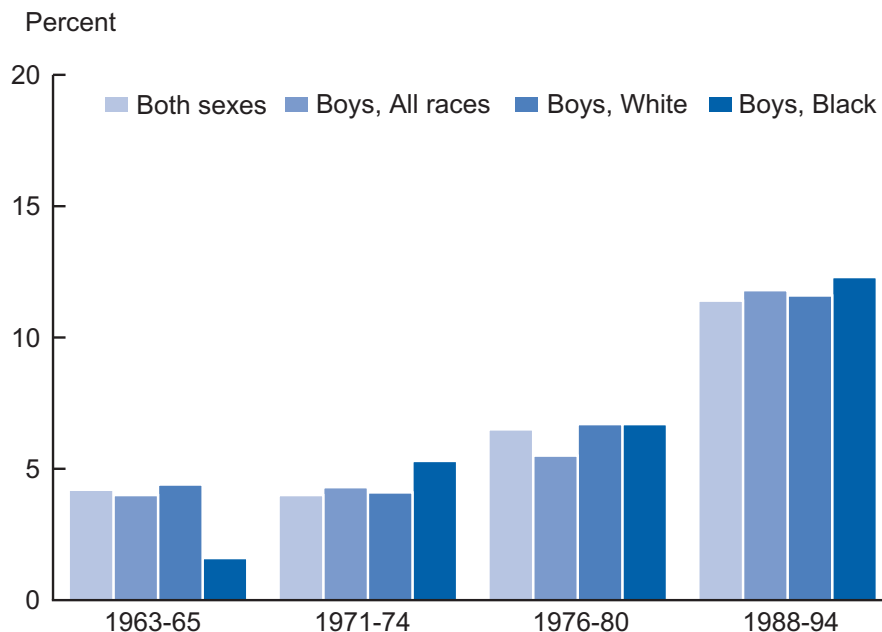
Over the past decades, the proportion of overweight children ages 6–11 has increased significantly. Overweight is defined as a body mass index—BMI—(weight in kilograms divided by height in meters squared) greater than or equal to the sex- and age-specific 95<sup>th</sup> percentile values in a U.S. reference population.

The rise in overweight prevalence can be attributed to an imbalance between caloric intake and output, such as through physical activity. The underlying causes are far more complex and may have social, cultural, economic, genetic, and psychological roots. For children, eating habits may be affected by those of their parents or primary caregivers.

In the 1960s, 4.2% of children were overweight (based on a physical exam). Three decades later the rate had more than doubled; 11.4% of children were overweight.

The percentage of overweight boys has increased from 4.0% in 1963–65 to 11.8% in 1988–1994.

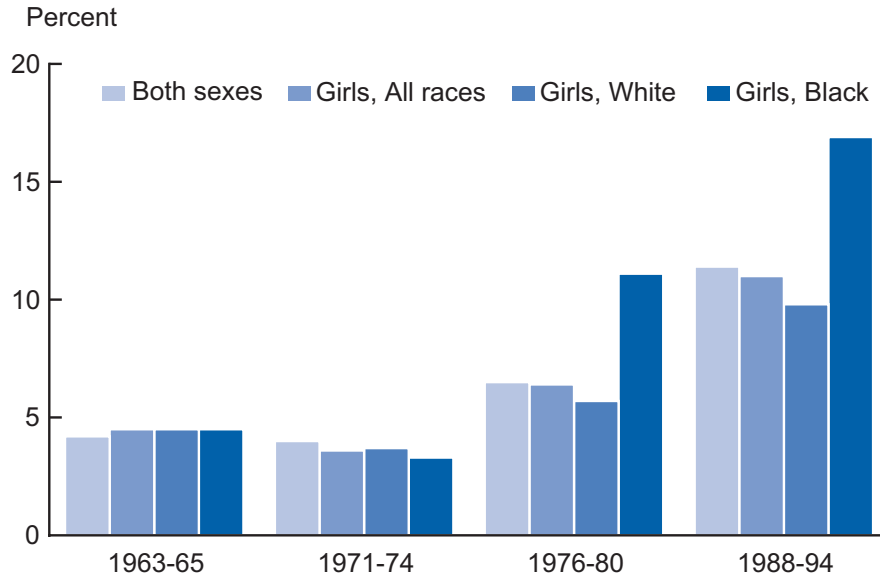
**OVERWEIGHT BOYS, AGES 6–11**



SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Examination Statistics. Unpublished data.

The percentage of overweight girls has also increased, from 4.5% in 1963–1965 to 11.0% in 1988–1994. A greater percentage of black girls (16.9%) are overweight than their white counterparts (9.8%).

OVERWEIGHT GIRLS, AGES 6–11



SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Examination Statistics. Unpublished data.

## Low Birthweight

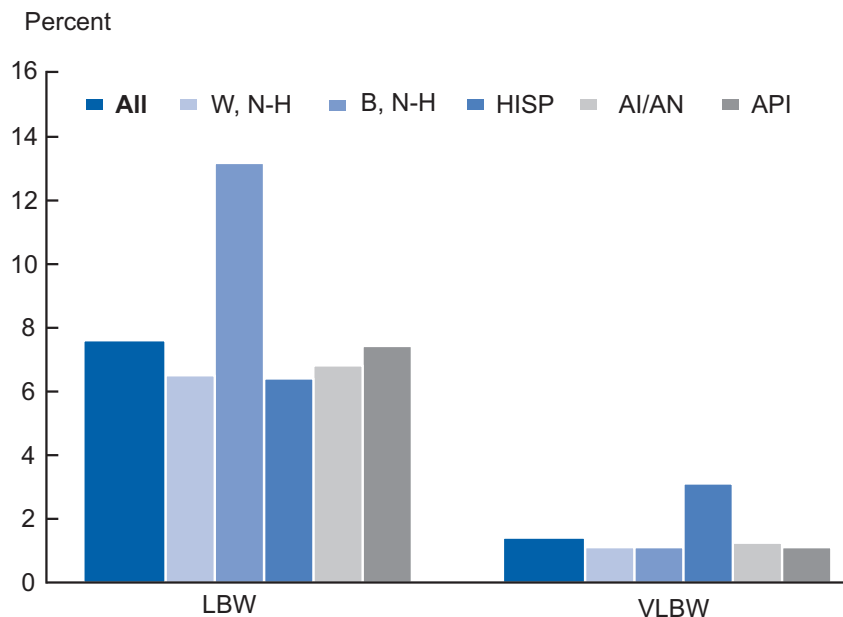
Infants born at less than 2,500 grams (or about 5.5 pounds) are considered low birthweight (LBW) and suffer from more frequent health problems than those born at a healthy weight (2,500 grams or greater). Infants born very low birthweight (less than 1,500 grams, or approximately 3.3 pounds) (VLBW) suffer even greater risk. Both LBW and VLBW infants need a great deal of care, often through childhood, and are more likely to be sick or die in the first year of life than healthy-weight infants.

In 1998, 52% of infants that did not survive the first year of life were VLBW.

Since 1984, the percentage of infants born LBW has risen from a low of 6.7% to 7.6% in 1998. VLBW has increased from 1.2% to 1.5% during this period. Some of this increase has been attributed to the increased rate of twin, triplet, and higher order births, which are at an elevated risk of LBW and VLBW.

The rates of LBW and VLBW were significantly higher among non-Hispanic black infants, compared to Hispanic and non-Hispanic white infants. In 1998, approximately 13.2% of non-Hispanic black infants were LBW, compared to 6.4% of Hispanic and 6.6% of non-Hispanic white infants.

**PERCENT LOW BIRTHWEIGHT AND VERY LOW BIRTHWEIGHT, 1998**



SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics. Data computed by the Division of Vital Statistics. Ventura SJ, Martin JA, Curtin SC, Mathews TJ, Park M. Births: Final Data for 1998. National vital statistics reports; vol 48, no 3. Hyattsville, Maryland: 2000.

Note: In the legend, white, non-Hisp. refers to white, non-Hispanic, black, non-Hisp. refers to black, non-Hispanic, Amer. Indian refers to American Indian or Alaskan Native, and API refers to Asian or Pacific Islander.

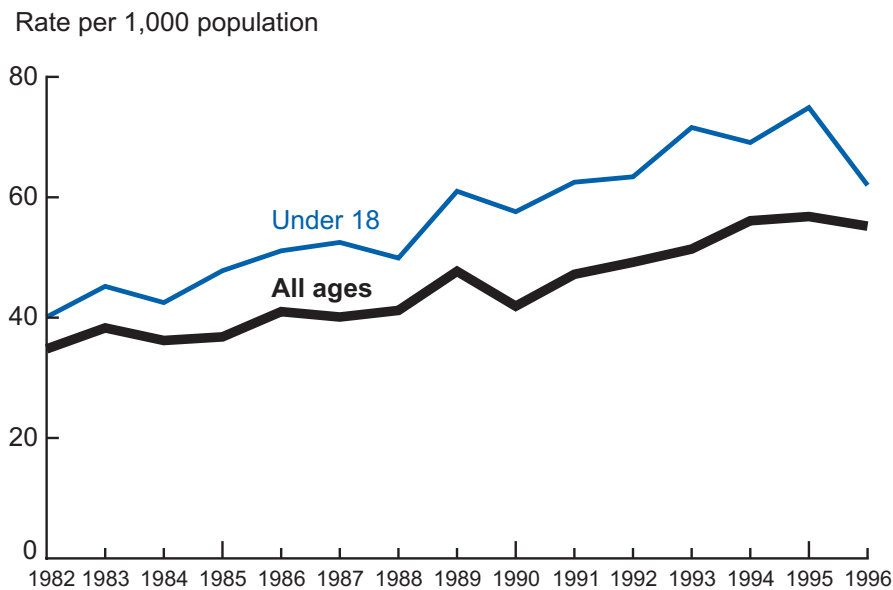


## Asthma

Rates of asthma have increased significantly in the last two decades. A chronic respiratory condition, asthma is often triggered by environmental factors, including dust, tobacco smoke, pet dander, cockroaches, and some chemicals.

Since the early 1980s, the asthma rate for those under age 18 has increased dramatically. In 1982, 40.1 per 1,000 children under age 18 had asthma; by 1996, the rate increased to 62.0 per 1,000. The asthma rate peaked in 1995 at 74.9 per 1,000 among those under age 18. Asthma disproportionately affects those who are poor and live in the inner cities.

TRENDS IN ASTHMA PREVALENCE, 1982–1996

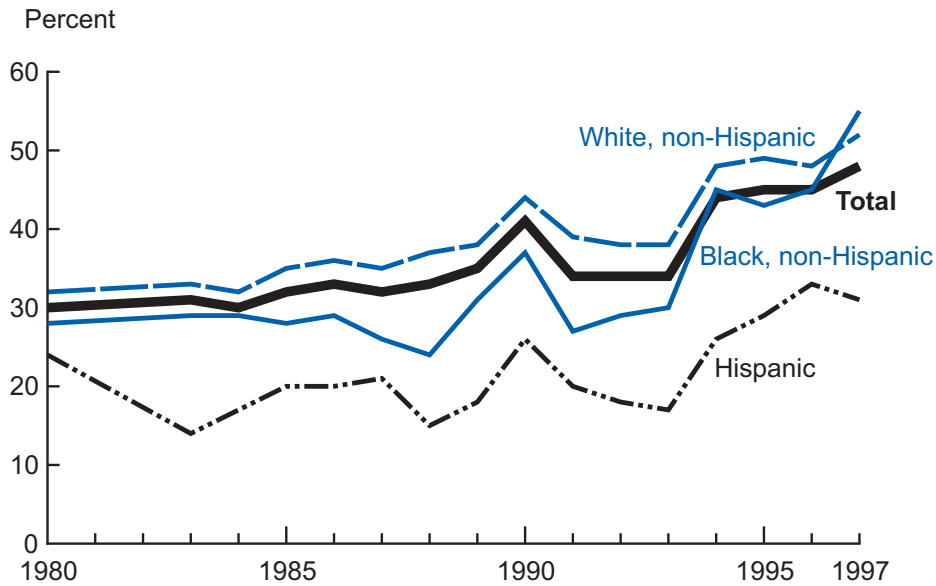


SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, Current Estimates from the National Health Interview Survey. Vital and Health Statistics, series 10. Hyattsville, Maryland: National Center for Health Statistics. Annual.

### Early Childhood Education

Children who participate in early childhood education, such as pre-school, increase their chances of success later on in school. Exposure to quality pre-school experiences have been correlated with school completion for low-income minority children, an indicator that has been associated with good health later in life. Within the past twenty years, there has been an increase in attendance in pre-school programs. However, a disparity still exists; Hispanic children are significantly less likely to attend pre-school than non-Hispanic white or non-Hispanic black children.

**CHILDREN AGES 3 TO 4 WHO ARE ENROLLED IN PRESCHOOL**



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

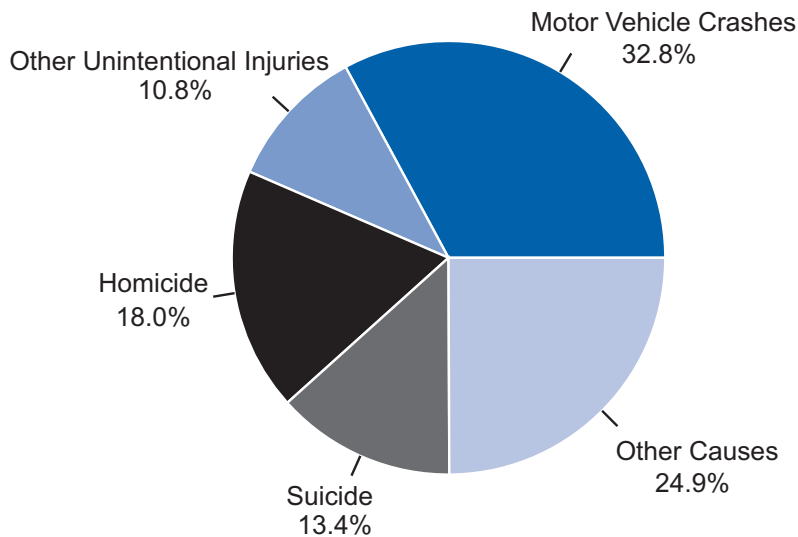
## ADOLESCENT AND YOUNG ADULT HEALTH

### Adolescent and Young Adult Mortality

In 1998, the death rate for adolescents aged 15–24 was 82.3 per 100,000, much higher than the rate for younger children (the death rate for ages 1–4 was 34.6 per 100,000 and for ages 5–14, it was 19.9 per 100,000). The rate has decreased significantly since 1980, when it was 115.4 per 100,000.

Unintentional injury is the leading cause of death for those 15–24 years old, with motor vehicle crashes, one type of unintentional injury, comprising nearly one-third of all deaths for this age group. Other leading causes include homicide and suicide.

MAJOR CAUSES OF MORTALITY AMONG 15–24 YEAR OLDS

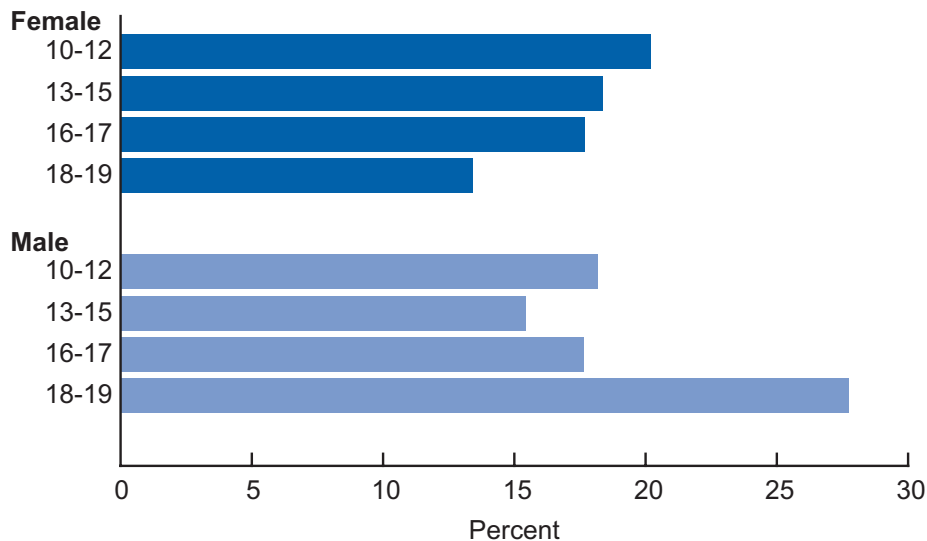


SOURCE: Murphy SL. Deaths, Final Data for 1998. National vital statistics reports; v ol 48 no 11. Hyattsville, Maryland: National Center for Health Statistics. 2000.

### Access to Health Care

Adolescents are less likely to have regular access to health care than are younger children and older persons. In 1997, 17.7% of females and 18.9% of males ages 10–19 did not have a health care visit in the past 12 months. Younger females, ages 10–12 (20.0%), were most likely than older females to have had no health care visits, with the percentage decreased as age increased: 13.3% of females ages 18–19 had no health care visit in the preceding 12 months. For males, however, the likelihood of not having a health care visit increased with age; 15.3% of males ages 13–15 did not have a health care visit compared with 27.5% of males ages 18–19. Barriers to health care include such factors as the inability to pay for services, the lack of insurance coverage or coverage limits, confidentiality concerns, and transportation issues.

PERCENT LACKING HEALTH CARE VISITS IN THE PAST 12 MONTHS



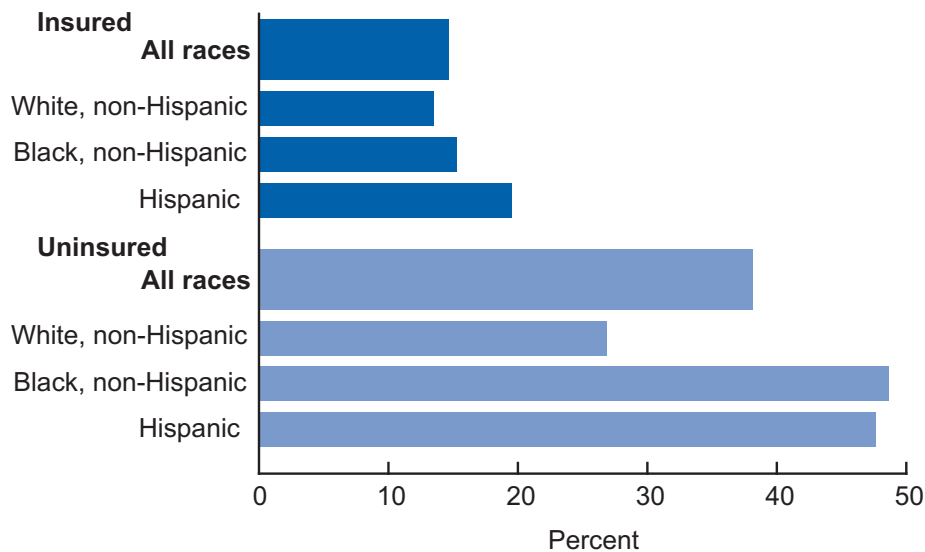
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey. 1997.

In 1997, about 1 of every 6 (17%) adolescents had **no health care coverage**.

Lack of health insurance coverage limits access to routine health care for adolescents. In 1997, the proportion of adolescents who had not had a health care visit in the past year was more than twice as high for those without health insurance than those with health insurance. Uninsured non-Hispanic black (48.2%) and uninsured Hispanic (47.3%) adolescents were more likely to have had no health care visits in the preceding 12 months than were uninsured non-Hispanic whites (26.6%).

Having access to care and a usual source of care can improve the health of an adolescent by providing preventive counseling and other health services.

**PERCENT LACKING HEALTH CARE VISITS IN THE LAST 12 MONTHS, AGES 10–19**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey. 1997.

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— *SUCCESSES OF THE PAST CENTURY* —

## Recognition of Adolescent Health

For many years, adolescent health was not treated as a separate discipline. Adolescents were seen in primary care settings by pediatricians or girls were seen by obstetricians-gynecologists. Recently, practitioners, researchers, teachers, and those who work with adolescents have clearly delineated a field that emphasizes the unique health needs and risks of adolescents and are working to address these issues.

Adolescents disproportionately partake in risky behaviors such as binge drinking, drug abuse, and smoking. As such, adolescents place themselves at risk of immediate and long term health consequences. For example, young women are at highest risk for acquaintance rape. Males and females in this age group are at high risk for HIV infection, as well as infection by other sexually transmitted diseases. These risk behaviors can have a lasting effect. Drug addiction, pregnancy, and alcoholism are obvious potential outcomes of high risk behavior. Consequences of other risk behaviors appear during adulthood; for example, those who begin smoking during adolescence are far more likely to smoke as adults, greatly increasing risk of heart disease, stroke, and cancer.

“On the basis of mortality rates alone, adolescence was previously considered one of the healthiest periods in human life. However, there is a growing recognition of the wide-ranging health problems faced by adolescents because of a combination of biological, psychological, and social factors.”

— World Health Organization,  
“Programming for Adolescent Health  
and Development”

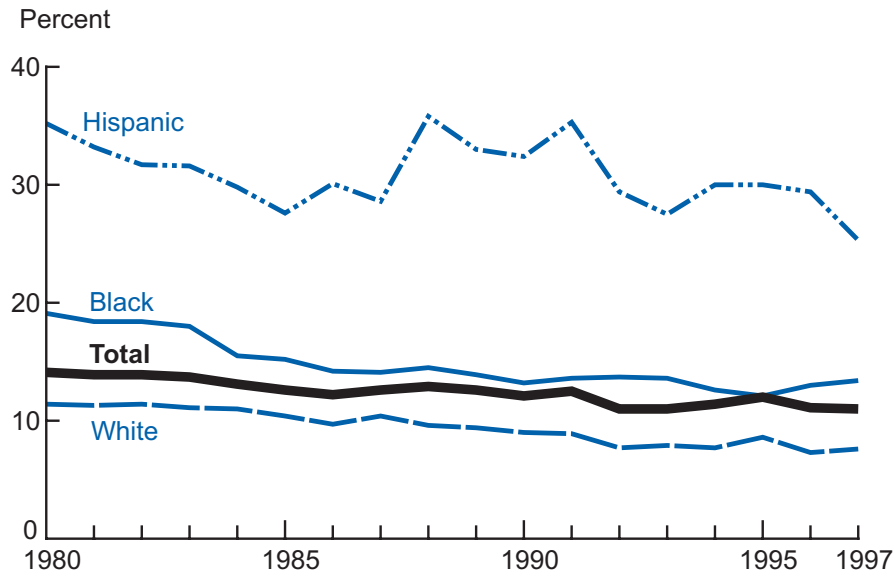
Adolescents need specific and specialized attention. In response, physicians are specializing in adolescent medicine, researchers are studying adolescents, and 50 states, 3 U.S. territories, and Washington, D.C. now have an adolescent health coordinator in their health departments. The American Medical Association (AMA) has adopted guidelines on counseling adolescents for primary care physicians, known as the Guidelines for Adolescent Preventive Services, or GAPS. According to the AMA, GAPS is designed to “improve the health and well-being of adolescents; reduce the cost of medical care over time; provide mechanisms for quality assurance.” Physicians are encouraged to practice preventive medicine with adolescents, deterring the initiation of risky behaviors.

## High School Completion Rate

High school completion is strongly associated with one's health status as an adult. Those that finish high school report better health than those that do not complete high school or those that receive a General Education Development (GED) degree.

In 1998, the rate of high school drop-out was 12%, down from 14% in 1980. Hispanics continue to have the highest rate of drop-outs, almost four times the rate of white teens. However, Hispanics also have seen the greatest decline in the drop-out rate.

PERCENTAGE OF HIGH SCHOOL DROP-OUTS



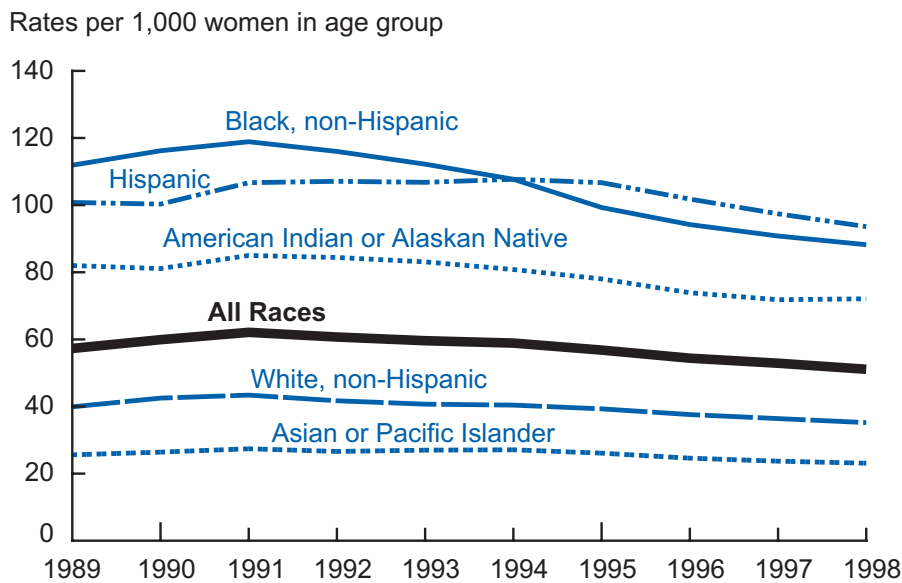
SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, unpublished tabulations; and the Department of Education, National Center for Education Statistics, Dropout Rates in the United States. Digest of Education Statistics. 1998.

### Teen Birth Rates

The rate of teenage childbearing has been declining steadily since 1991, the result of several concurrent trends. Teenage sexual activity has leveled off and contraceptive use has increased. In 1998, the birth rate for teens 15–19 was 51.1 per 1,000 births, 18% lower than the peak in 1991 when the rate was 62.1 per 1,000.

In 1998, Hispanic teenagers ages 15–19 had the highest rate of teen births at 93.6 per 1,000, 12% lower than in 1991. Non-Hispanic black teens aged 15–19 had the next highest rate, 88.2 per 1,000; this is a decline of 26% since 1991. The rate for non-Hispanic white teenagers has declined 19% since 1991 to 35.2 per 1,000. Rates have fallen for other groups as well, to 72.1 per 1,000 for American Indian teenagers and 23.1 per 1,000 for Asian or Pacific Islander teens.

#### BIRTH RATES FOR WOMEN 15–19 YEARS



SOURCE: Ventura SJ, Martin JA, Curtin SC, Mathews TJ, Park MM. Births: Final data for 1998. National vital statistics reports; vol 48 no 3. Hyattsville, Maryland: National Center for Health Statistics. 2000.

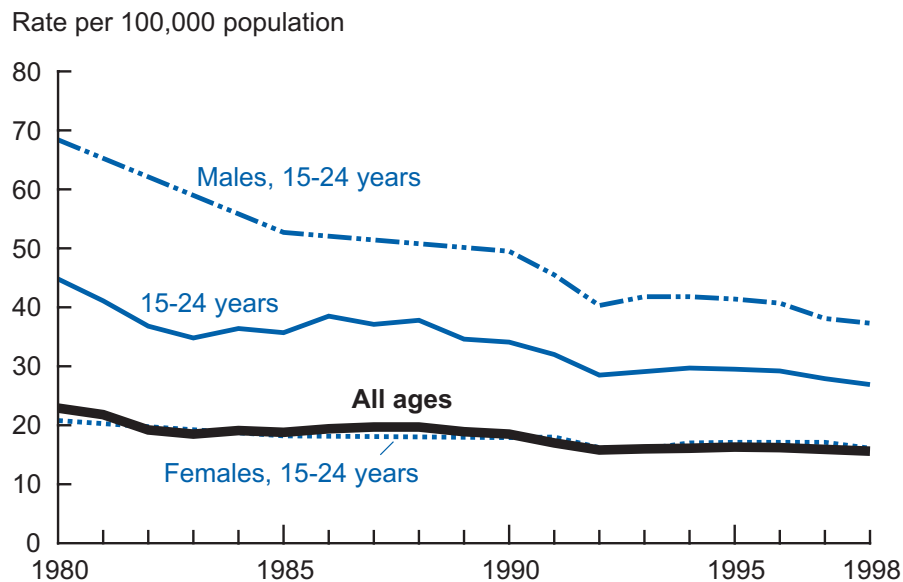


## Motor Vehicle Crashes

Injuries due to motor vehicle crashes account for a significant portion of adolescent and young adult mortality. Within the past few decades though, the rate of deaths for those 15–24 due to motor vehicle crashes has decreased from 44.8 per 100,000 in 1980 to 26.9 in 1998, a decline of approximately 40%.

Males aged 15–24 are more likely to die of injuries as a result of motor vehicle crashes than females. In 1998, the death rate for males was 37.3 per 100,000 compared to 16.1 per 100,000 for females.

**DEATH RATES FOR MOTOR VEHICLE CRASHES FOR AGES 15–24  
by Sex and Age-Adjusted Deaths Rates for All Ages**



SOURCES: *Vital Statistics of the United States, vol II, mortality, part A*, for data years 1960-1993. Public Health Service. Washington: US Government Printing Office; for 1994-1998, unpublished data; data computed by Division of Health and Utilization Analysis from numerator data compiled by Division of Vital Statistics and denominator data from table 1, US Bureau of the Census.

Drinking and driving is responsible for a large number of these adolescent deaths as well as non-fatal motor vehicle injuries. Alcohol-related motor vehicle crash deaths among 15–24 year-olds also declined, by 40%, from 21.5 per 100,000 in 1987 to 13.5 per 100,000 in 1998.

Despite these successes, there are still challenges for the future.

In 1999:

13.1% of adolescents reported **driving at least once after drinking alcohol** in the 30 days preceding the survey;

33.1% reported riding at least once with a driver who had been drinking in the 30 days preceding the survey; and

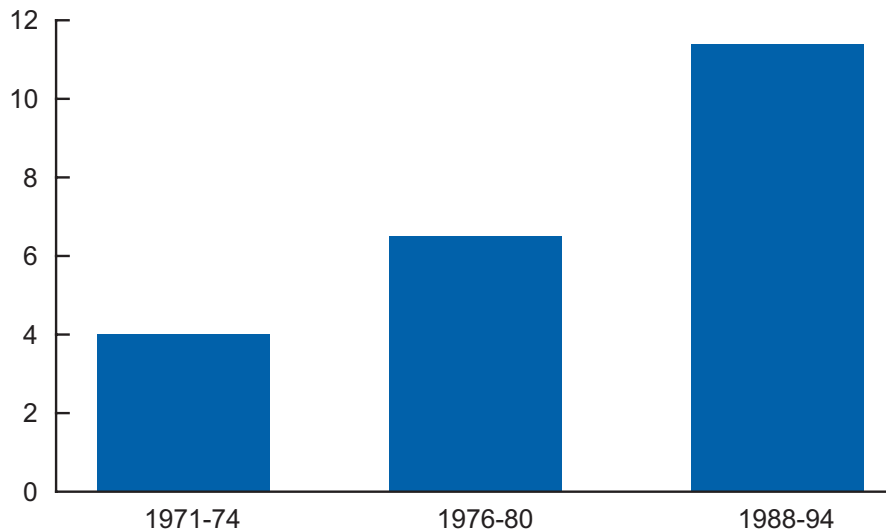
16.4% of teens reported never or rarely ever wearing a seatbelt when in a car or truck driven by someone else.

— CHALLENGES FOR THE FUTURE —

**Healthy Weight**

The prevalence of overweight adolescents (ages 12–19) has been increasing. In the early 1970s, 6.1% of adolescents were overweight (overweight is defined as body mass index [weight in kilograms divided by height in meters squared] greater than or equal to the age- and sex-specific 95<sup>th</sup> percentile values in a U.S. reference population). By 1988–1994, the percentage had almost doubled to 10.5%. In other words, *1 out of every 10* adolescents is overweight.

**PERCENTAGE OF OVERWEIGHT ADOLESCENTS, AGES 12–19**

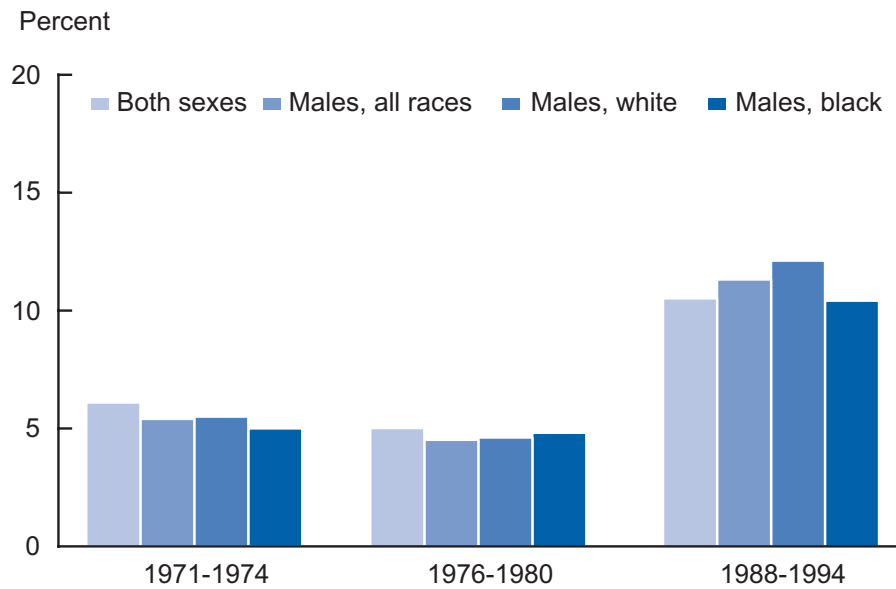


SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics. National Health and Nutrition Examination Survey.

Overall, a higher proportion of males 12–19 years old are overweight than females (11.3% and 9.7%, respectively). However, black females have the highest prevalence of overweight, 16.3%, compared to 9.0% of overweight white females. Among white males, 12% are overweight, compared to 10.4% of black males.

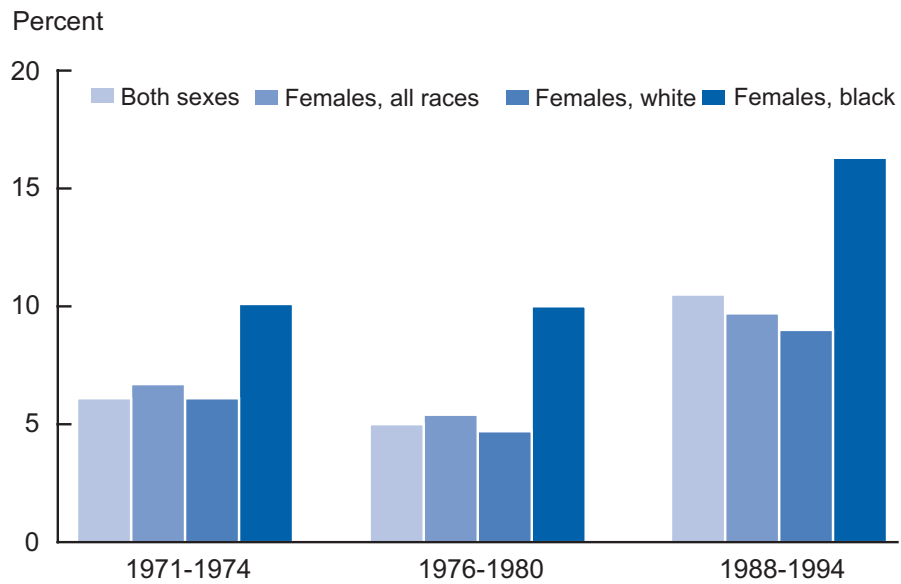
ADOLESCENT AND  
YOUNG ADULT HEALTH

OVERWEIGHT MALES, AGES 12-19



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

OVERWEIGHT FEMALES, AGES 12-19



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

Being overweight has serious health consequences for adolescents. Teens who are overweight are likely to be so in adulthood, putting them at an increased risk for hypertension, heart disease, diabetes, some cancers, and other serious conditions later in life.

As for children, overweight in teens is due to an imbalance between caloric intake and energy output such as physical activity. In 1991, 41.6% of adolescents attended physical education class daily; in 1999, only 29.1% did.

In 1999, 64.7% teens reported participating in vigorous physical activity, defined as at least 20 minutes on at least 3 of 7 days preceding the survey. Males were significantly more likely (72.3%) than females (57.1%) to participate in vigorous physical activity.

Eating disorders such as anorexia and bulimia are also serious problems among adolescents, particularly among girls during their teenage years. In 1999, 36.4% of female high school students and 23.7% of male students perceived themselves to be overweight. While some proportion of these students may truly be overweight, there are many who are not.

In 1999:

**More than 1 in 10 (12.6%) students reported not eating in the 24 hours preceding the survey to lose weight or avoid gaining weight;**

**7.6% of students reported taking diet pills, powders, or liquids without a doctor's advice to lose weight or avoid gaining weight; and**

**4.8% reported having vomited or taken laxatives to lose weight or avoid gaining weight.**

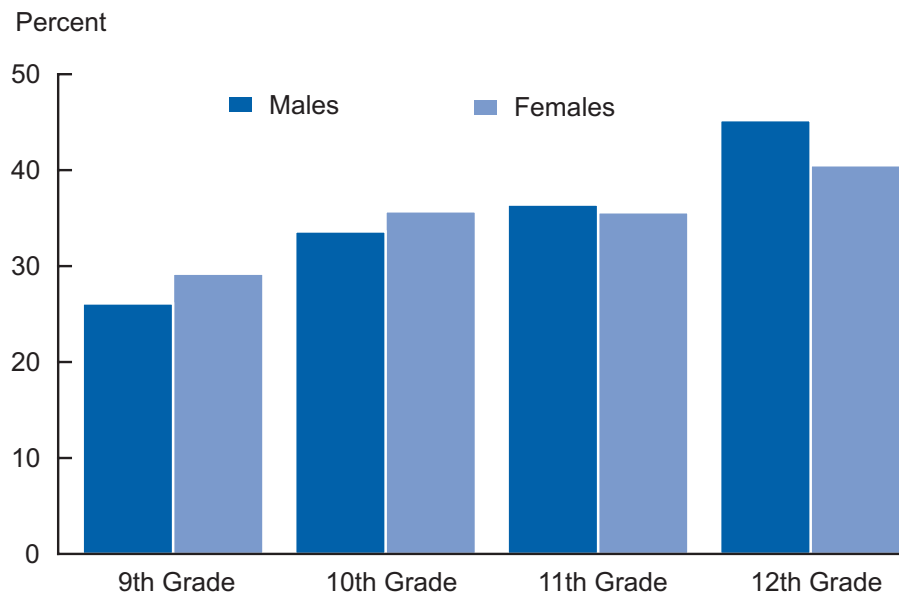
These behaviors are consistently more prevalent among females.

## Smoking

Smoking, often initiated in adolescence, is a physically addictive behavior that is the single most preventable risk factor for many of the leading causes of death, including heart disease and cancer.

In 1999, 34.8% of adolescents **reported smoking cigarettes on at least one day in the preceding 30 (“current cigarette use”)**, up from 27.5% in 1991. Since 1995, rates have remained relatively stable.

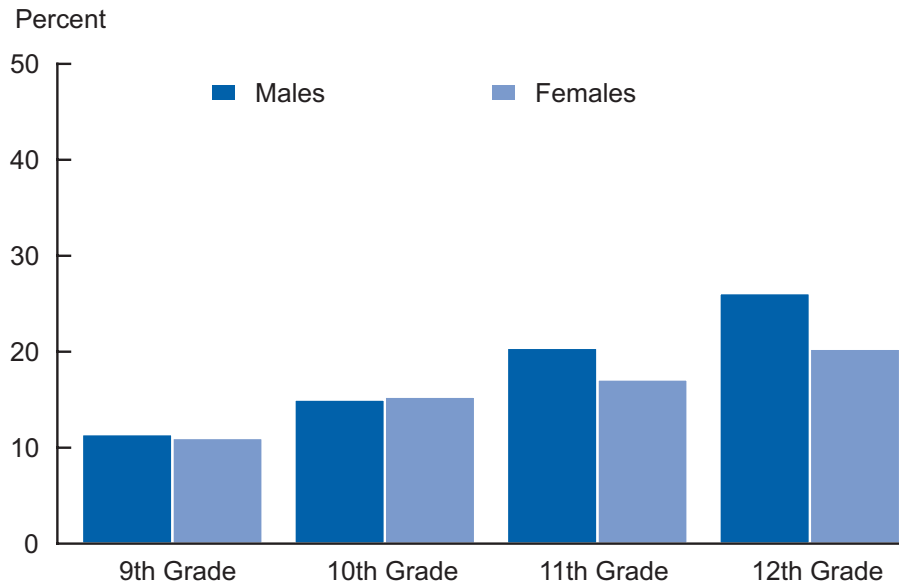
CURRENT CIGARETTE USE



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

However, the rate of **“frequent smokers,” those that reported smoking cigarettes on 20 of the preceding 30 days**, rose from 12.7% in 1991 to 16.8% in 1999. White and Hispanic students were more likely (38.6% and 32.7%, respectively) than black students (19.7%) to report current smoking. However, smoking among black youth, which had been consistently declining, increased in the past decade.

FREQUENT CIGARETTE USE



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

Older students were more likely to smoke than younger students. Forty and one-half percent of twelfth grade females reported current cigarette use, compared to 29.2% of ninth grade females. The same was true for males; 45.2% of twelfth grade males reported being current smokers, compared to 26.1% of ninth grade males.

Other surveys that examine teen smoking have reported similar findings.

It is estimated that 6,000 adolescents will try smoking and 3,000 persons under age 18 will become daily smokers each day.

## Violence

Violence perpetrated by adolescents is an issue that has gained considerable public attention in the wake of a series of disturbing shootings in schools. Despite these alarming events, some indicators of violent behaviors have decreased in the last decade.

The percentage of students that **carried a weapon** on one or more days in the preceding 30 days fell from 26.1% in 1991 to 17.3% in 1999.

Students that **carried a gun** on one or more days in the preceding 30 days also fell from 7.9% in 1993 (earliest available data) to 4.9% in 1999.

Students that **carried a weapon on school property** in the preceding 30 days fell from 11.8% in 1993 (earliest available data) to 6.9% in 1999.

In 1999, 35.7% of adolescents were **involved in a physical fight** in the preceding year, a decline from 42.5% in 1991. The number also declined for students involved in physical fights on school property in the preceding year from 16.2% in 1993 (earliest available data) to 14.2% in 1999.

New data on violent behaviors were collected for the first time in 1999:

8.8% of students reported being a victim of **dating violence**, defined as having been hit, slapped, or physically hurt on purpose by a boyfriend or girlfriend in the preceding 12 months. Black students were more likely than white students to report this (12.4% and 7.4%, respectively). Black females were nearly **twice as likely** to report being a victim of dating violence than white females (14.1 and 7.4%, respectively).

8.8% of adolescents report ever having been **forced to have sexual intercourse** against their wishes. Female students (12.5%) were more likely to report this than males (5.2%). Black and Hispanic students (11.6% and 10.5%, respectively) were more likely to report having been forced to have sexual intercourse than white students (6.7%).



## Suicide

The third leading cause of death for adolescents is suicide. Adolescence is a time of uncertainty and insecurity, enough so that many teens feel isolated with nowhere to turn in the face of serious problems.

The feeling of hopelessness is often considered to be a precursor to suicide or suicidal ideation. An understanding of the scope and extent of this feeling can assist those who work with adolescents to intervene before it is too late.

In 1999, 28.3% of students had felt so sad or hopeless almost every day for at least 2 weeks in a row during the preceding 12 months that they stopped doing some regular activities. Females (35.7%) were significantly more likely to feel this way than males (21.0%). Hispanic students (37.0%) were more likely than white (24.9%) or black (28.9%) students to feel this degree of sadness or hopelessness.

In 1999, 19.3% of adolescents **seriously considered suicide**. This number has consistently declined since 1991, when the rate was 29%. A more serious step is the **creation of a “suicide plan;”** in 1999, 14.5% of adolescents created such a plan during the preceding 12 months. Girls are more likely to attempt suicides and fail than boys. In 1999, 10.9% of female adolescents attempted suicide, compared with 5.7% of males. In the year preceding the survey, 18.3% of female adolescents made a suicide plan, compared to 10.9% of males. Approximately 8% of adolescents **attempted suicide**, a rate that has varied since 1991 when it was 7.3% (the rate rose to 8.6% in 1993 and again in 1995 to 8.7%, but fell to 7.7% in 1997).

However, boys are more likely to succeed when they do try and constitute a higher percentage of suicides than girls. In 1998 for persons 15–24, the suicide death rate was 11.1 per 100,000. The rate of suicide for males 15–24 was 18.5 per 100,000; during the same time, the rate for females was 3.3 per 100,000.

## Sexually Transmitted Diseases

The transmission of sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV) is a serious problem among adolescents. While many STDs are completely curable with antibiotics, some viral infections, such as Hepatitis, HIV, or Human Papillomavirus (HPV), can be treated but never cured. The effects of some STDs can last a lifetime; some forms of HPV are the precursor to cervical cancer, and the effects of chlamydia, if untreated, can lead to infertility. As in the case of HIV, the precursor to AIDS, the result may even be death.

While it is difficult to know exactly the prevalence of STDs, it is estimated that chlamydia, a common STD, infects:

- 308.4 per 100,000 males aged 15–19;
- 2,359.4 per 100,000 females aged 15–19;
- 432.5 per 100,000 males aged 20–24; and
- 1,952.7 per 100,000 females aged 20–24.

Adolescents are at greater risk for the transmission of STDs and HIV because of their riskier sexual behavior, such as having multiple partners or engaging in unprotected sex. Female adolescents are at a particularly higher risk, as many STDs are more easily spread from male to female and often remain undetected in females.

The transmission of STDs and HIV can be prevented largely by abstinence from sexual activity or with the effective use of barrier contraception, such as male or female condoms. In 1999, among teens in high school, 49.9% of adolescents had engaged in sexual intercourse and 36.3% were currently active, that is they reported having had sexual intercourse in the 3 months preceding the survey. Among those adolescents who were currently active, 58.0% reported using a condom during the last intercourse, an increase of 26% since 1991, when the rate was 46.2%.

## ADULT HEALTH

### Adult Mortality

In 1998, the death rate for the population **25–44** was 157.7 per 100,000. However, there were substantial differences in adult mortality by race and ethnicity. Non-Hispanic blacks died at a higher rate, 303.7 per 100,000, than Hispanics or non-Hispanic whites, 139.4 per 100,000 or 130.2 per 100,000, respectively.

The leading causes of death for all adults ages 25–44 in 1998 were: unintentional injuries, malignant neoplasms (cancer), heart disease, suicide, HIV, and homicide. The three leading causes are the same as in 1980 but suicide, which ranked fifth in 1980, moved up in ranking to fourth in 1998. Human Immunodeficiency Virus, which did not rank in the top ten in 1980, ranked fifth in 1998. Homicide fell from fourth place in 1980 to fifth place in 1998.

Based on data for 1998, the leading causes of death also differed by race and ethnicity as shown in the table. Five of the six leading causes of death are the same for the three groups but they are in different rank order. For non-Hispanic whites and Hispanics, suicide is among the six leading causes whereas among non-Hispanic blacks, the six leading causes includes stroke rather than suicide. Understanding differences in the leading causes of death is instrumental in designing appropriate public health interventions.

**ADULTS, AGES 25–44 (RATE PER 100,000 POPULATION)**

<b>Non-Hispanic white (139.4)</b>	<b>Non-Hispanic black (303.7)</b>	<b>Hispanic (130.2)</b>
Unintentional injuries (31.6)	Heart Disease (43.5)	Unintentional injuries (33.4)
Cancer (25.3)	HIV (43.3)	Cancer (16.8)
Heart Disease (18.3)	Unintentional injury (40.1)	Homicide (13.1)
Suicide (17.0)	Cancer (38.0)	HIV (12.1)
HIV (4.8)	Homicide (36.2)	Heart Disease (10.3)
Homicide (4.7)	Stroke(10.2)	Suicide (7.8)

SOURCE: Murphy SL. Deaths: Final data for 1998. National vital statistics reports; vol 48 no. 11. Hyattsville, Maryland: National Center for Health Statistics. 2000.

In 1998, the death rate for the population **45–64** was 664.0 per 100,000, with significant differences by race and ethnicity. Non-Hispanic blacks had the highest death rate, 1,184.4 per 100,000, followed by non-Hispanic whites, 623.1 per 100,000 and Hispanics 438.8 per 100,000.

For all adults aged 45–64, the leading causes of death in 1998 were: cancer, heart disease, unintentional injuries, cerebrovascular disease (stroke), diabetes, and chronic obstructive pulmonary diseases, which include emphysema, asthma, and bronchitis. In 1980, the ranking of the leading causes of death was different: heart disease, cancer, cerebrovascular disease, and unintentional injuries, chronic liver disease and cirrhosis, and chronic obstructive pulmonary diseases.

Racial and ethnic disparities also exist in the leading causes of death for this age group, as shown in the table below. For 1998, cancer and heart disease are the first and second leading causes for all three groups. Unintentional injuries, stroke and diabetes are among the six leading causes for all three groups but occupy different rankings. For non-Hispanic whites, chronic obstructive pulmonary disease is among the 6 leading causes of death whereas for non-Hispanic blacks, HIV is in this group and for Hispanics, liver disease and cirrhosis is among the leading 6 causes.

**ADULTS, AGES 45–64 (RATE PER 100,000 POPULATION)**

<b>Non-Hispanic whites (623.1)</b>	<b>Non-Hispanic blacks (1,184.4)</b>	<b>Hispanics (438.8)</b>
Cancer (230.0)	Cancer (345.3)	Cancer (136.7)
Heart Disease (164.4)	Heart Disease (327.3)	Heart Disease (110.6)
Unintentional injuries (29.8)	Stroke (68.9)	Liver Disease and Cirrhosis (31.8)
Chronic Obstructive Pulmonary Disease (24.3)	Diabetes (54.4)	Unintentional injuries (31.7)
Stroke (21.3)	Unintentional injuries (49.8)	Diabetes (28.6)
Diabetes (18.2)	HIV (37.8)	Stroke (26.5)

SOURCE: Murphy SL. Deaths: Final data for 1998. National vital statistics reports; vol 48 no. 11. Hyattsville, Maryland: National Center for Health Statistics. 2000.

### Access to Health Care

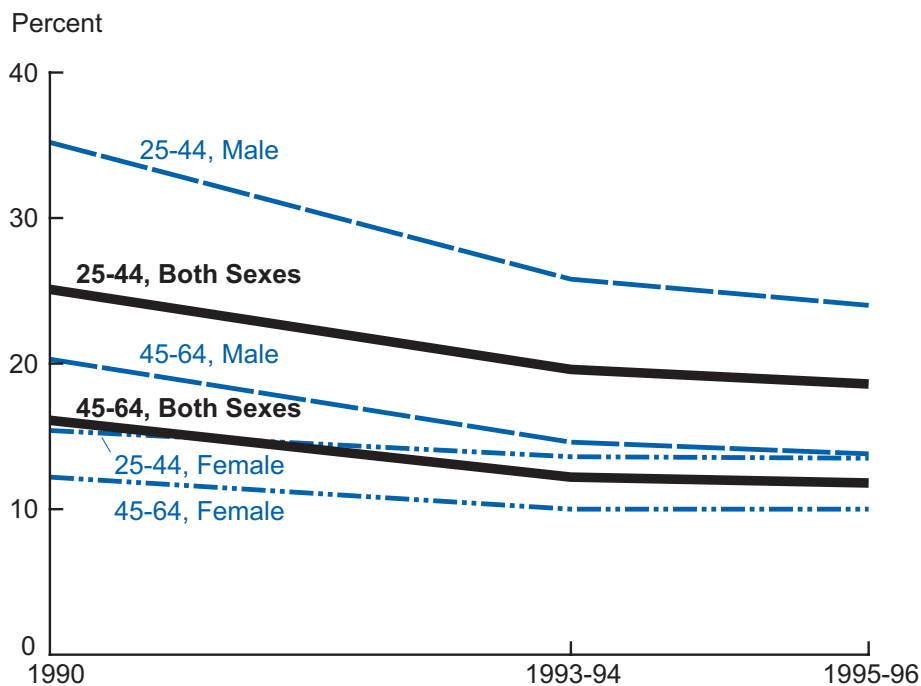
Access to health care is important for the prevention of disease, the detection of illness through screening, treatment, and management of illness and injuries. Adults who have a usual source of care are much more likely to access the health care system and obtain needed services. The percentage of adults aged **25–44** with no usual source of health care has declined within the past decade from 25% in 1990 to 18% in 1995–96.

Men in this age group were more likely than women to report having no usual source of care: 24.0% of men compared to 13.5% of women.

Adults ages **45–64** were less likely to report having no usual source of health care than their younger counterparts. In 1995–96, 11.8% of adults aged 45–64 reported no usual source of health care as compared with 18% of 25–44 year-olds.

As was the case for those 25–44, men aged 45–64 reported having no usual source of care more frequently than women: 13.8% for men and 10% for women.

**PERCENTAGE OF ADULTS WITH NO USUAL SOURCE OF HEALTH CARE**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, data computed by the Division of Health Utilization Analysis from the National Health Interview Survey, Access to Care and Health Insurance Supplement.

## Maternal Mortality

Early in the century, it was not unusual for women to die in labor, or for infants to die within the first year of life. Over the past century, the rates of both maternal and infant mortality have declined significantly in the United States, due to reasons such as: better nutrition, environmental improvements, safe drinking water, increased use of prenatal care, improved technology, and better spacing between children through family planning.

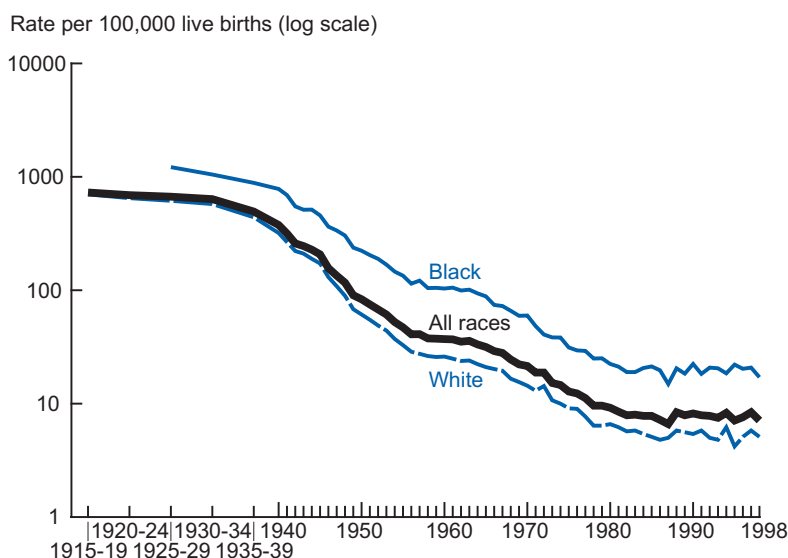
Since the beginning of the century, the rate at which women died during, or as a result of, childbirth has declined from 727.9 per 100,000 live births between 1915–1919 to 7.1 per 100,000 live births in 1998.

The sooner women seek prenatal care during pregnancy, the better chances that potential health problems will be detected, and that counseling and support will be provided to the expectant mother.

As recently as 1970, only 68% of women began prenatal care within the first trimester of pregnancy. In 1998, the rate of timely care had improved to 82.8%. In 1998, only 3.9% of women either began care late (third trimester) or had no care at all, half the proportion of mothers with late or no care in 1970 (7.9%).

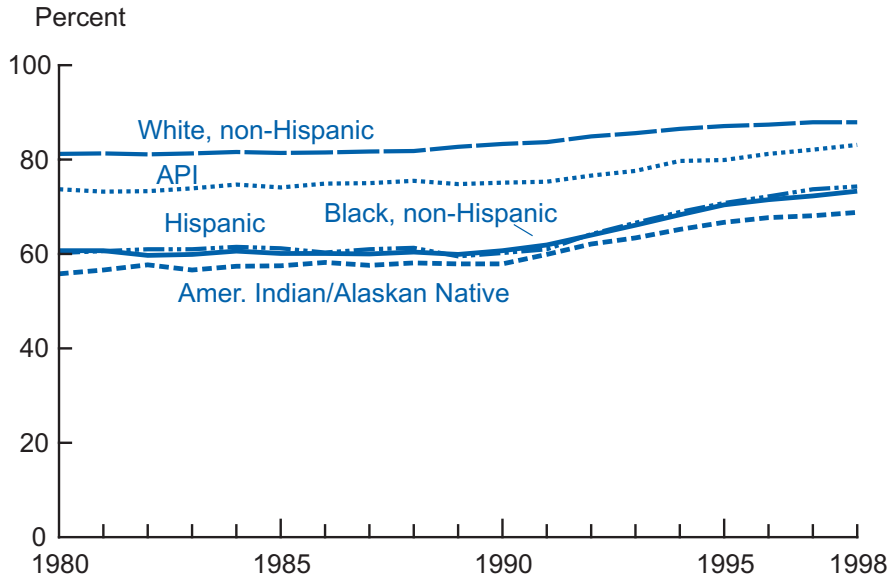
Although maternal mortality has decreased significantly in the past century, a disturbing disparity persists. In 1998, the maternal death rate for black women was 17.1 per 100,000 live births, as compared to 5.1 per 100,000 for white women.

### MATERNAL MORTALITY



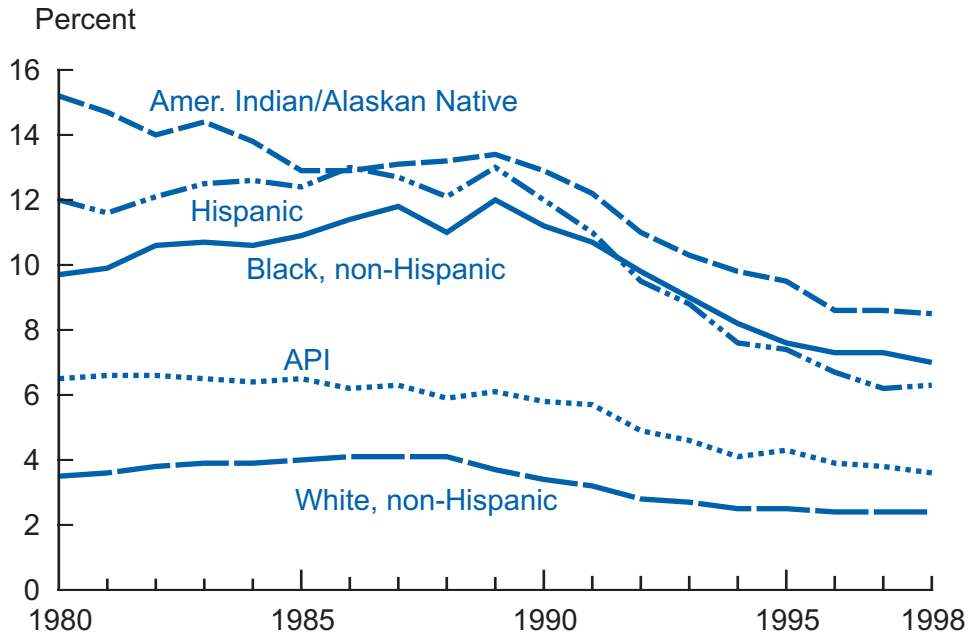
SOURCES: Centers for Disease Control, National Center for Health Statistics. Vital statistics of the United States, 1992, vol II, mortality, part B. Washington: Public Health Service. 1996. Hoyert DL, Dochanek KD, Murphy SL. Deaths: Final Data for 1997. National vital statistics report; vol 47 no. 19. Hyattsville, Maryland: National Center for Health Statistics. 1999. Murphy SL. Deaths: Final Data for 1998. National vital statistics report; vol 48 no. 11. Hyattsville, Maryland: National Center for Health Statistics.

**PERCENT OF WOMEN WITH PRENATAL CARE BEGINNING IN THE FIRST TRIMESTER OF PREGNANCY**



SOURCES: Centers for Disease Control and Prevention, National Center for HealthStatistics. Ventura SJ, Martin JA, Curtin SC, Mathews TJ, Park M. Births: Final Data for 1998. National vital statistics reports; vol 48 no 3. Hyattsville, Maryland: National Center for Health Statistics. 2000. Report of final natality statistics for each data year 1970-1997. Monthly vital statistics report. Hyattsville, Maryland.

**PERCENT OF WOMEN WITH LATE OR NO PRENATAL CARE**



SOURCES: Centers for Disease Control and Prevention, National Center for HealthStatistics. Ventura SJ, Martin JA, Curtin SC, Mathews TJ, Park M. Births: Final Data for 1998. National vital statistics reports; vol 48 no 3. Hyattsville, Maryland: National Center for Health Statistics. 2000. Report of final natality statistics for each data year 1970-1997. Monthly vital statistics report. Hyattsville, Maryland.

ADULT HEALTH

## Mental Health — Depressive Disorders

It is estimated that depressive disorders (which include unipolar depression, any bipolar depression, or dysthymia) is one of the most common set of mental conditions. In 1998, 11%, or over 9 million people, ages 25–44 and 9%, or about 5 million people ages 45–64, were affected by depressive disorders. Women are disproportionately affected; almost twice as many women (12.0%) suffer from depression as men (6.6%).

The onset of depression can occur for seemingly little or no reason or can be brought on by a traumatic loss, such as the death of a loved one.

Many therapies have been used to help treat depression, including medication and psychotherapy.

*Major depression* consists of a combination of symptoms that make normal, daily functions difficult, if not impossible.

A less severe condition, *dysthymia*, can impede daily activities but does not disable an individual.

Symptoms include:

- feeling sad, worthless, anxious, or hopeless
- decreased interest in activities that were once enjoyable
- diminished energy
- inability to concentrate or focus, feeling “fuzzy”
- disruption in eating or sleeping patterns
- recurring suicidal ideation, thoughts about death or suicide attempts
- restlessness, irritability

(Adapted from the National Institute of Mental Health, *Depression*.)



— *SUCCESSES OF THE PAST CENTURY* —

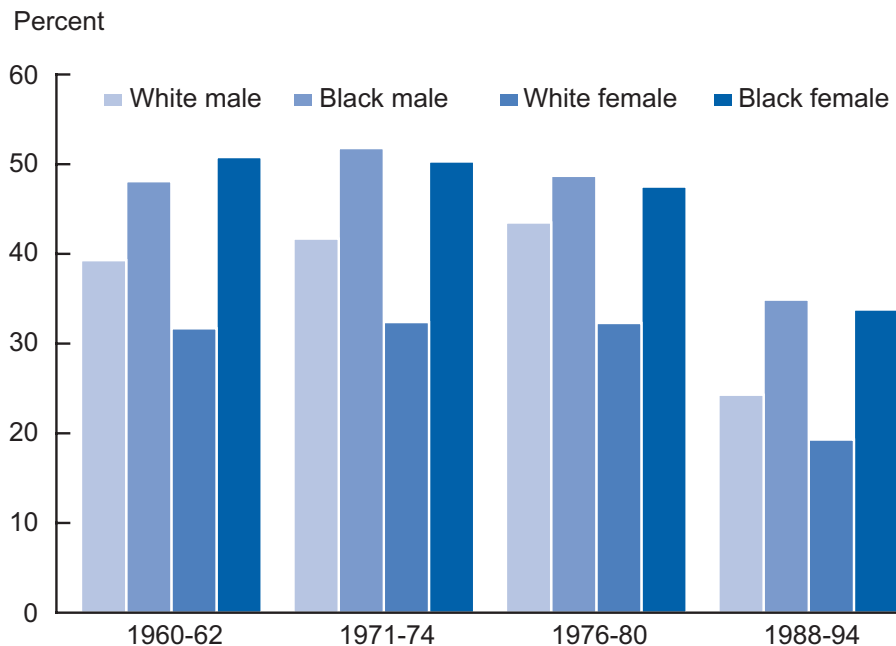
**Hypertension Rates**

Hypertension, or high blood pressure, is a risk factor for heart disease and stroke, two of the leading causes of death for adults. A person with hypertension is defined by either having elevated blood pressure (systolic pressure of at least 140 mmHg or diastolic pressure of at least 90 mmHg) or taking antihypertensive medication. The rate of hypertension has declined dramatically since 1960, when 36.9% of adults aged 20–74 had hypertension. By 1988–1994, 23.1% had hypertension.

Males continue to report a higher rate of hypertension than women; in 1988–1994, 25.3% of men and 20.8% of women had hypertension.

In addition to gender, disparities exist by race with black men reporting the highest rates of hypertension, 34.9%. Black women have the next highest rate, 33.8%, followed by white men, 24.3%. White women have the lowest rate, 19.3%.

**HYPERTENSION AMONG ADULTS AGES 20–74 YEARS, AGE ADJUSTED**



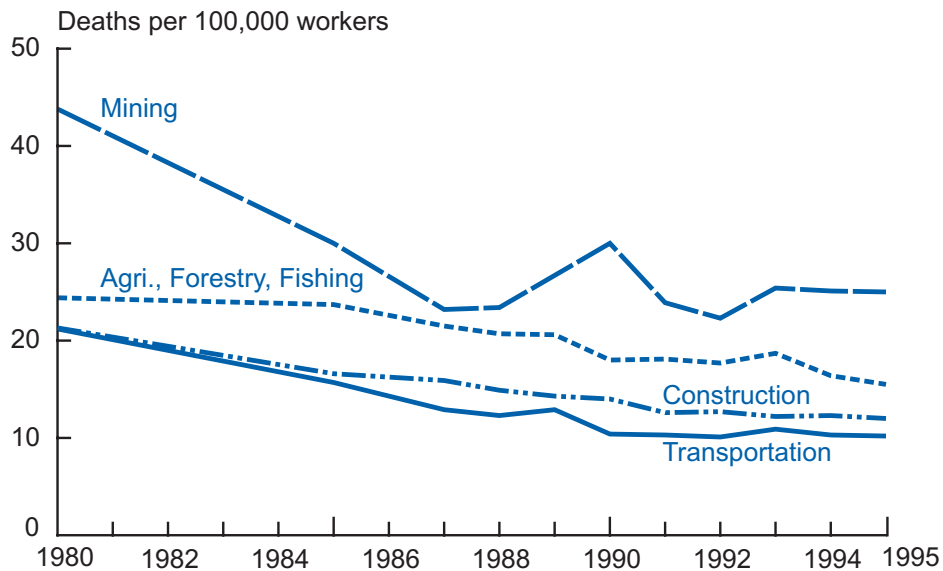
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Examination Statistics. Unpublished data.

ADULT HEALTH

## Workplace Safety — Occupational Injury Deaths

At the beginning of the 20<sup>th</sup> century, workers in the United States faced remarkably high health and safety risks on the job. Through efforts by individual workers, unions, employers, government agencies, academic scientists, and others, considerable progress has been made, especially in reducing occupational injuries. Despite major gains in workplace safety, much work remains. Workers continue to die from preventable injuries sustained on the job each day, and injury rates are actually rising among health care workers. The average rate of deaths from occupational injuries declined from 7.5 per 100,000 workers in 1980 to 4.3 per 100,000 workers in 1995. The mining industry had the highest rate of occupational injury death in 1998, 25.0 per 100,000 workers, after falling from 43.8 per 100,000 in 1980. During this period, the average death rate was 30.3 deaths per 100,000 workers. Other industries with high rates included agriculture, forestry and fishing, and construction. The leading causes of fatal occupational injury during this time included motor vehicle-related injuries, workplace homicides, and machine-related injuries.

OCCUPATIONAL INJURY DEATHS, ACCORDING TO INDUSTRY, UNITED STATES



SOURCE: Centers for Disease Control and Prevention. National Institute for Occupational Safety and Health, Division of Safety Research. National Traumatic Fatalities (NTOF) surveillance system. Morgantown, West Virginia.

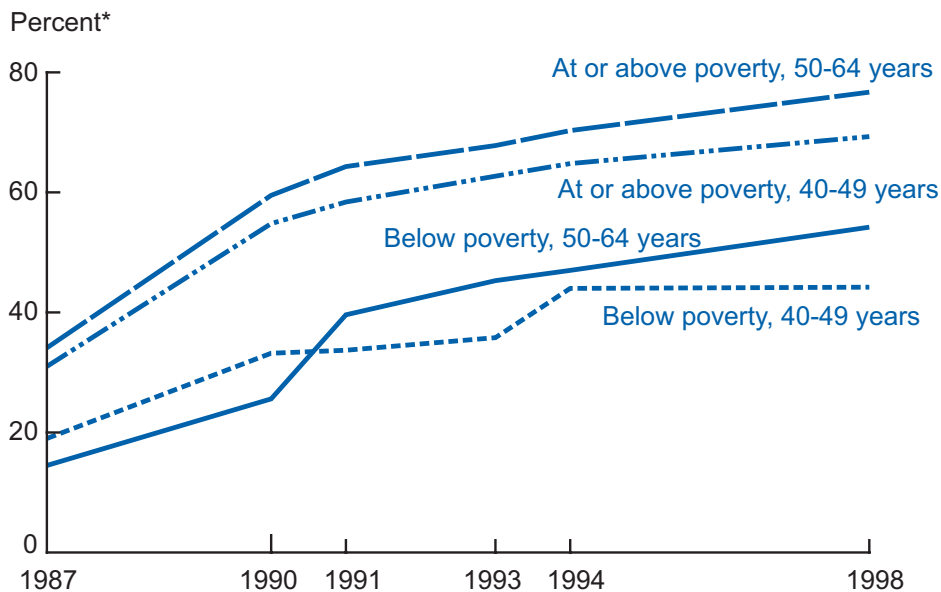
## Cancer Screening

### *Mammograms and Pap Smears*

Breast and cervical cancers are common cancers among women. Breast cancer is the second-most common cancer-related cause of death (behind lung cancer). It is estimated that 182,800 new cases will be diagnosed among women in 2000, and during that year, 40,800 women will die of this disease. Though the rates of cervical cancer have declined as a result of screening, it is estimated that 12,800 new cases will be diagnosed, and 4,600 women will die of cervical cancer in 2000.

Regular cancer screening is imperative for early detection and successful treatment. The earlier that cancer is detected, the higher the rate of survival. For breast cancer, screening methods, such as mammograms, could prevent approximately 15%–30% of all deaths for women over 40. Mammograms are used to detect masses in the breast and can detect a lump an average of 1.7 years before a woman can feel it herself. Virtually all cervical cancer deaths could be prevented with timely and appropriate screening. Papanicolaou (Pap) tests are used to detect precancerous lesions of the cervix.

**PERCENT OF WOMEN AGE 40 AND OVER WHO HAD A MAMMOGRAM, BY POVERTY STATUS**



\*Percent of women having a mammogram within the past 2 years.

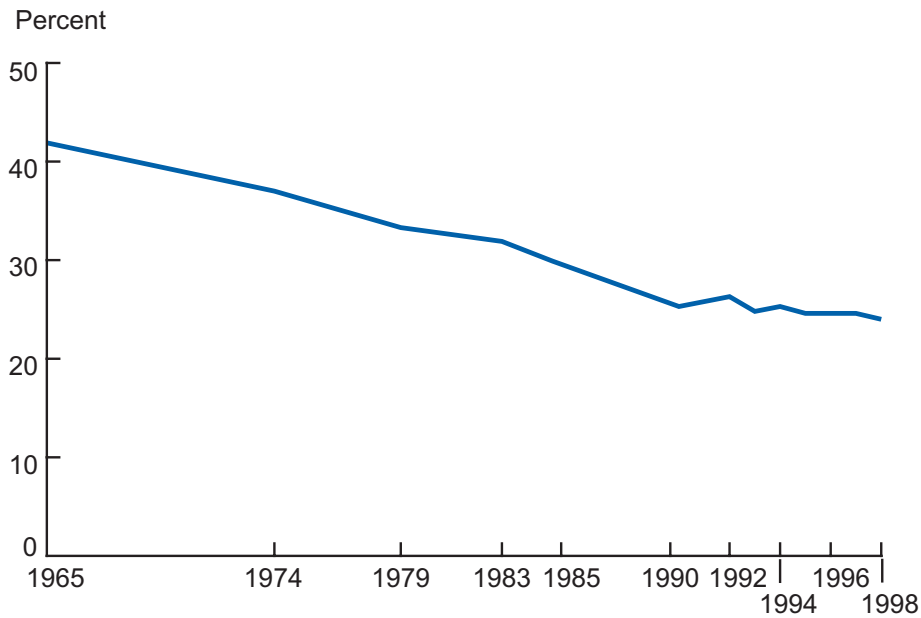
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Interview Statistics. Data from the National Health Interview Survey.

Since 1987, the rates of mammography have increased. The percentage of women ages 40–49, who reported having a mammogram has doubled within the past 2 years from 31.9% in 1987 to 63.4% in 1998. The use of mammography by women ages 50–64 increased from 31.7% to 73.7%. Women with incomes below the poverty level were less likely to receive recent mammograms; 44.2% of women 40–49 below the poverty level received mammograms within the previous 2 years, compared with 65.0% of women at or above the poverty level. Fifty four point two percent of women 50–64 years old and below the poverty level received mammograms in the previous 2 years, compared to 76.7% of women at or above poverty.

## Cigarette Smoking

Smoking is a major risk factor for heart disease, stroke, and cancer, and is the leading preventable risk factor of death in adults. In the past few decades, though, the rates of smoking have been declining. In 1965, 41.9% of adults 18 and older smoked; in 1998, only 24.0% of adults were current smokers or smoked on “some days.”

**CURRENT CIGARETTE SMOKING  
BY PERSONS 18 YEARS OF AGE AND OVER, AGE ADJUSTED**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Utilization Analysis from data compiled by the Division of Health Interview Statistics.

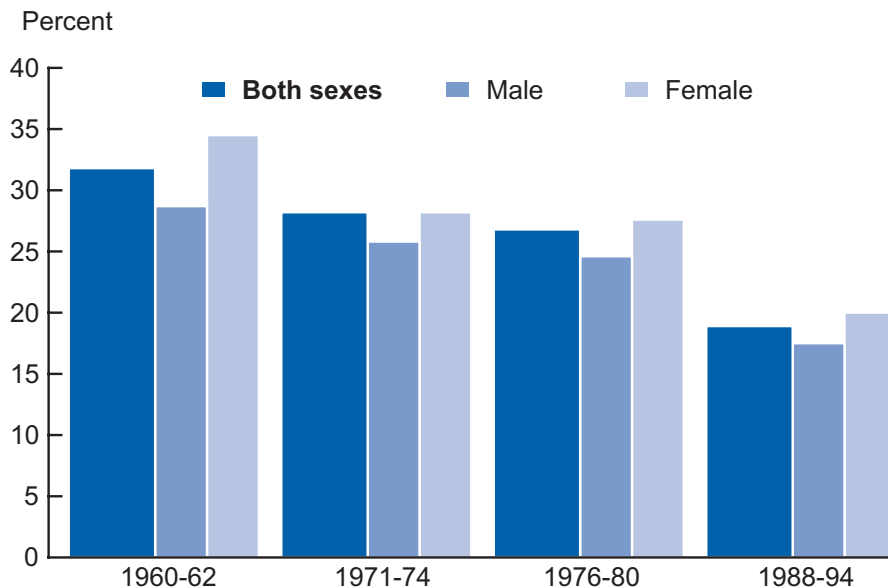
## Cholesterol Levels

The level of total cholesterol in a person's blood is a risk factor for heart disease and stroke; the higher the total cholesterol, the greater the risk. Blood cholesterol is influenced by factors such as dietary habits, physical activity, weight, heredity, age and sex, alcohol use, and stress. High cholesterol is defined as greater than or equal to 240 mg/dL.

In the past four decades, rates of high serum cholesterol have dropped from 31.8% of the adult population from 1960–62 to 18.9% in 1988–94. Females, both black and white, have the highest rate of high serum cholesterol; in 1988–94, 1 out of 5 white women (20.2%) and black women (19.4%) had the condition.

Better diet and increased exercise, as well as new medications all contribute to declines in high serum cholesterol rates.

**HIGH SERUM CHOLESTEROL  
AMONG PERSONS 20 YEARS OF AGE AND OVER, AGE ADJUSTED**



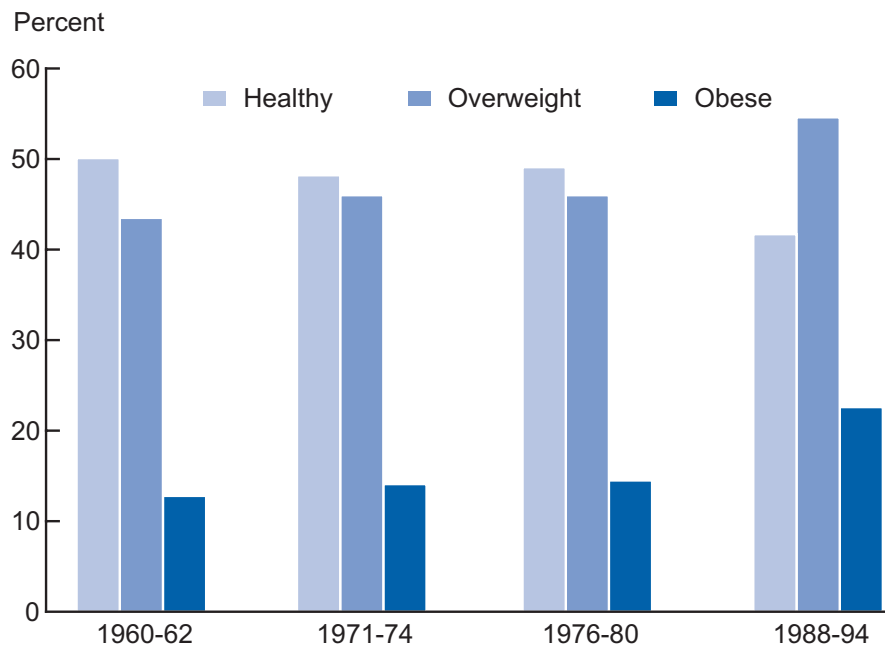
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Examination Statistics. Unpublished data.

— CHALLENGES FOR THE FUTURE —

**Obesity**

Obesity, a risk factor for many diseases and conditions, has increased dramatically in the past few decades, such that overweight people now outnumber healthy weight people. The percentage of adults who are overweight (defined as a Body Mass Index [BMI, or weight in kilograms divided by height in meters squared] greater than or equal to 25), increased from 43.5% of adults 20–74 in 1960–62 to 55% in 1988–94. The percentage of the population who are obese (defined as having a BMI of 30 or higher) has also increased from 12.8% in 1960–62 to 22.6% in 1988–94. Likewise, the percentage of adults who are a healthy weight (defined as having a BMI of 19 to less than 25) has decreased from 50.1% in 1960–62 to 41.7% in 1988–94.

**HEALTHY WEIGHT, OVERWEIGHT, AND OBESITY  
AMONG ADULTS 20–74 YEARS OF AGE**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Examination Statistics. Unpublished data.

ADULT HEALTH

## Diabetes

The term “diabetes” describes either a deficiency of insulin or a decreased ability of the body to use insulin, a hormone secreted by the pancreas. If uncontrolled, diabetes can lead to heart disease, blindness, lower limb amputation, periodontal disease, and severe kidney damage.

Approximately *15.7 million Americans have diabetes* with 798,000 new cases diagnosed each year. **One in three persons with diabetes are unaware they have the disease.** Approximately 5–10% of people with diabetes have Type 1 diabetes, sometimes known as “Juvenile Diabetes,” as it often appears during childhood, but can also be diagnosed during adolescence or adulthood. People with Type 1 diabetes are dependent on insulin to help maintain normal blood sugar levels. Type 2 diabetes, which usually appears after age 40, affects 90–95% of people with diabetes. Type 2 diabetes can often be treated by changes in diet and exercise, though some people require insulin injections. Once seen primarily in adults, the rate of Type 2 diabetes in children is increasing.

For 1998, American Indians or Alaskan Natives and blacks had a higher death rate due to diabetes-related causes than other races at a rate of 29.6 per 100,000 and 28.8 per 100,000, respectively. In 1998, the death rate of whites from diabetes-related causes was 12.0 per 100,000; the rates were 8.7 per 100,000 for Asian or Pacific Islanders and 18.4 per 100,000 for Hispanics.

Death rates due to diabetes also increase with age. People aged 25–44 died of diabetes-related causes at a rate of 3.0 per 100,000; the rate for people ages 45–64 was 22.9 per 100,000. This trend holds across racial and ethnic groups.

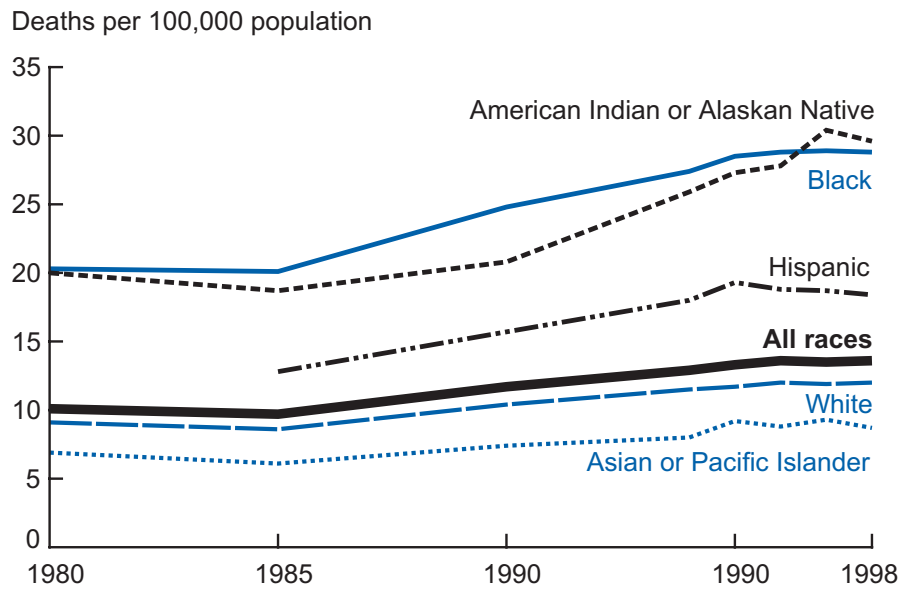
Diabetes is the leading cause of blindness for adults ages 20–74 in the U.S.

Diabetes is the leading cause of kidney failure. There are over 29,000 new cases of kidney failure each year.

About 60% of all lower limb amputations in the U.S. each year are among people with diabetes. Eighty-six thousand lower limb amputations are performed each year. Thousands of those amputations could be prevented with proper screening and patient education.



DEATH RATES FOR DIABETES 20 YEARS OF AGE AND OVER, AGE-ADJUSTED



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics. Vital statistics of the United States, vol II, mortality, part A, for data years 1950-93. Public Health Service. Washington. U.S. Government Printing Office; for 1994-98, unpublished data; data computed by the Division of Health and Utilization Analysis from numerator data compiled by the Division of Vital Statistics and denominator data from national population estimates.



## SENIOR HEALTH

### Population

Seniors are the fastest growing population group in the United States. In 2000, there are an estimated 35 million people age 65 and older, representing about 13% of the population. It is predicted that by 2030, this number will double to **seventy million** people and about 20%, or 1 in 5 Americans, will be age 65 and older. During this same time, it is expected that the percentage of people ages 18 and younger will remain approximately stable, around 26%.

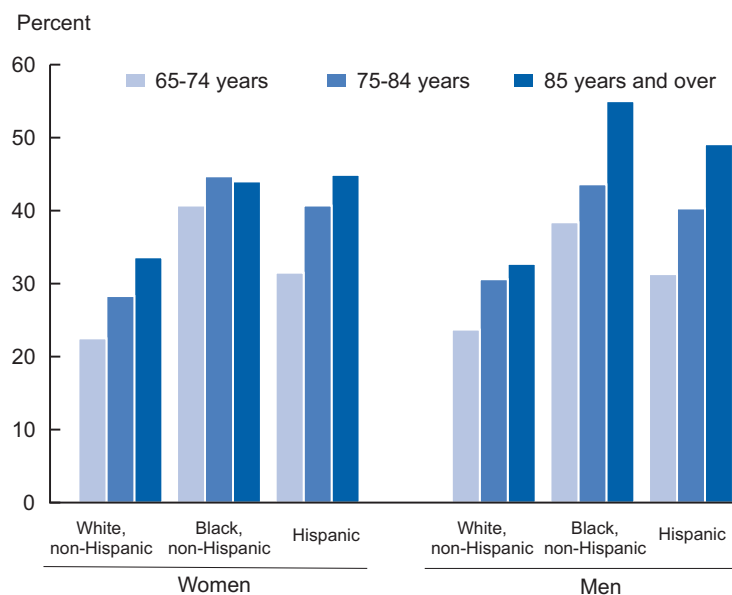
The aging of the baby boom generation contributes to the growth of this age group. Born between 1946–1964, members of this group will begin to turn 65 in 2011 and by 2030, they will all be 65 or older.

### Health Status

Older Americans reported being in worse health than their younger counterparts. In 1994–96, 28% of noninstitutionalized persons 65 and older reported their health status as being fair or poor. Only 17% of adults aged 45–64 reported the same. Over one-third of those over 85 report fair to poor health.

Self-reported health status varies by race and ethnicity as well as by age. Within each group defined by race and ethnicity, the percent with fair or poor health increases with age, except for non-Hispanic black women. Non-Hispanic whites have the smallest proportion reporting fair or poor health within each age group.

FAIR OR POOR HEALTH AMONG PERSONS 65 YEARS AND OVER



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 1994-1996.

### Leading Causes of Death

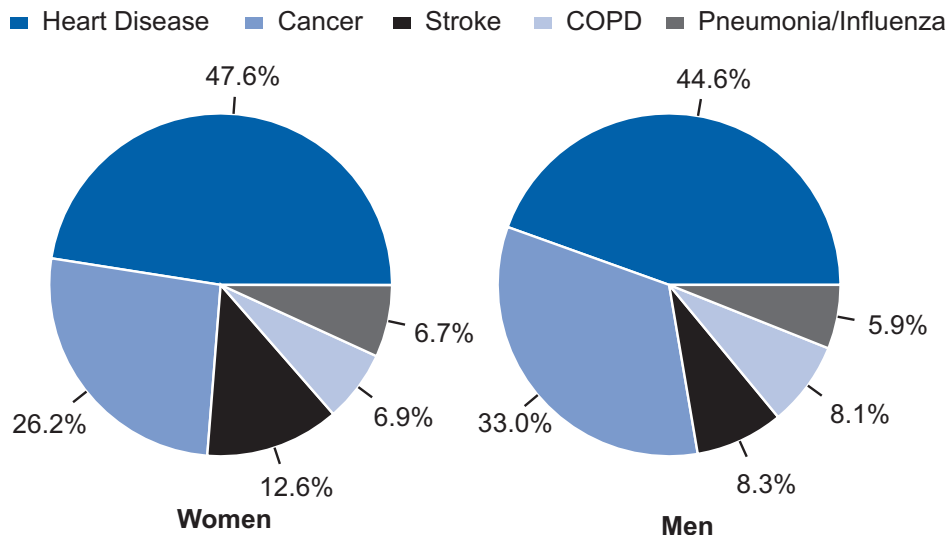
In 1998, the death rate for the population age 65 and older was 5,096.4 per 100,000. Non-Hispanic blacks had the highest death rate (5,674.8 per 100,000), followed by non-Hispanic whites (5,211.8 per 100,000) and Hispanics (3,066.8 per 100,000).

In 1998, among adults 65 and older, the leading causes of death were heart disease, cancer, stroke, chronic obstructive pulmonary diseases, pneumonia and influenza, and diabetes. The leading causes of death are the same across racial and ethnic groups, though the order of the causes differs slightly among them. For instance, diabetes is the fourth leading cause of death for Hispanics and the sixth leading cause of death for non-Hispanic whites and blacks.

Overall, the death rates for non-Hispanic blacks (5,674.8 per 100,000) were higher than for non-Hispanic whites (5,211.8 per 100,000). The most remarkable differences were the death rates for cancer and diabetes. Non-Hispanic blacks died at a higher rate from cancer (1,900.2 per 100,000) than non-Hispanic whites (1,136.4 per 100,000). Non-Hispanic blacks also had a higher death rate for diabetes, 237.0 per 100,000 as compared with 127.7 per 100,000 for non-Hispanic whites.

In the last two decades, from 1980–1998, the death rate for persons 65–74 declined 17%. For those 85 and older, the death rate declined 5%.

#### LEADING CAUSES OF DEATH AMONG PERSONS 65 YEARS OF AGE AND OVER



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, 1998.

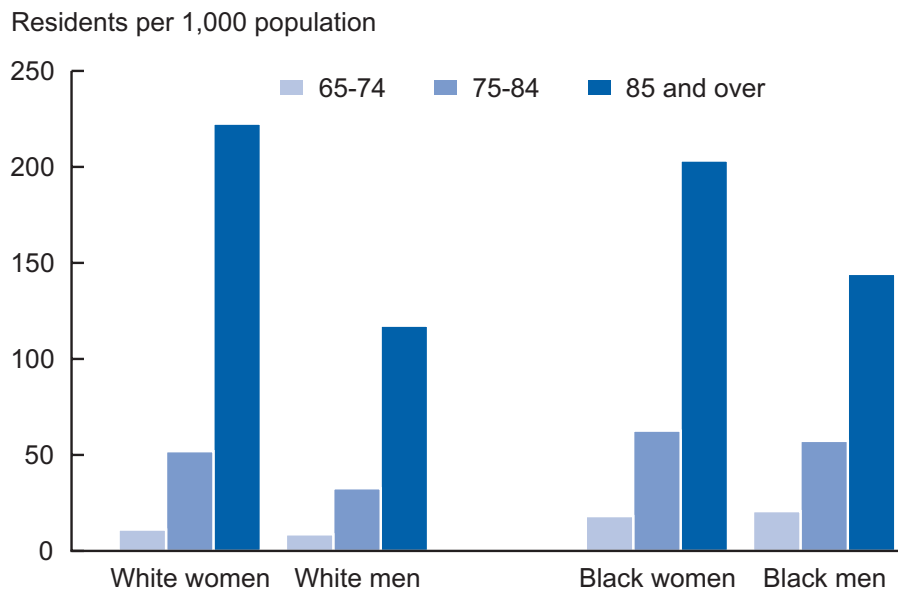
Note: COPD is chronic obstructive pulmonary diseases.

### Nursing Home Residence

In 1997, 1.5 million people ages 65 and older, about 4% of the older population, lived in a nursing home. As age increases, so does the likelihood of nursing home residency. For those ages 65 to 74, approximately 1% of the population (11 per 1,000 people) lived in nursing homes, compared to 5% of those 75–84 (46 per 1,000), and 19% of those aged 85 and over (192 per 1,000).

Women have an overall higher rate than men of nursing home residence; 55.1 per 1,000 women age 65 and over lived in a nursing home, compared to 26.7 men per 1,000. This sex difference holds true when comparing rates for black and whites; 56 per 1,000 white women and 55 per 1,000 black women over age 65 lived in nursing homes, as compared with 25 per 1,000 white men and 41 per 1,000 black men over age 65. By age 85 and older, 223 per 1,000 white and 203 per 1,000 black women live in nursing homes. Among men, 117 per 1,000 white and 144 per 1,000 black men lived in nursing homes.

#### NURSING HOME RESIDENTS



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Nursing Home Survey, 1997.

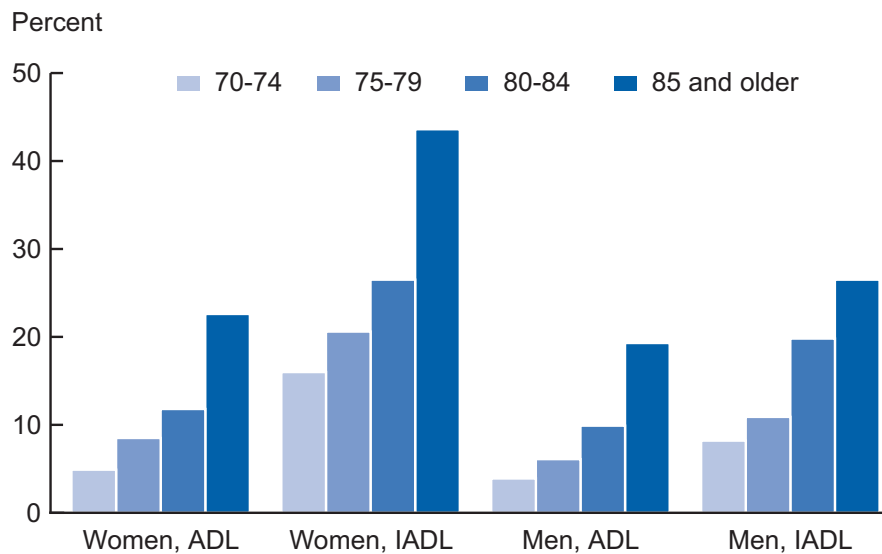
### Activity Limitation

The ability to function independently is crucial for older adults. Conditions that become more prevalent in older people can make it difficult, if not impossible, for seniors to get dressed, bathe, drive, or walk to the store without assistance, thereby compromising independence.

Two approaches are used to define levels of functional disability. The first is the ability to perform essential daily tasks such as eating or bathing, known as Activities of Daily Living (ADL). The second, Instrumental Activities of Daily Living (IADL), represents tasks that are more complex such as cooking or cleaning. Among noninstitutionalized individuals 70 and older, 8.7% were unable to perform at least one ADL. In the same population 19.1% were unable to perform at least one IADL. Older people also reported higher levels of disability than did younger persons. Among those 85 and older, 21.6% were unable to perform one ADL and 38.4% were unable to do at least one IADL.

Women had more difficulty than men performing ADLs or IADLs. Approximately 10% of women and 7.1% of men over 70 were unable to do one or more ADL. About 23% of women and 12.8% of men in this age group were unable to perform one or more IADL.

**PERCENTAGE OF ADULTS 70 AND OLDER  
UNABLE TO PERFORM AT LEAST ONE ADL OR IADL**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, 1994 National Health Interview Survey, Second Supplement on Aging.

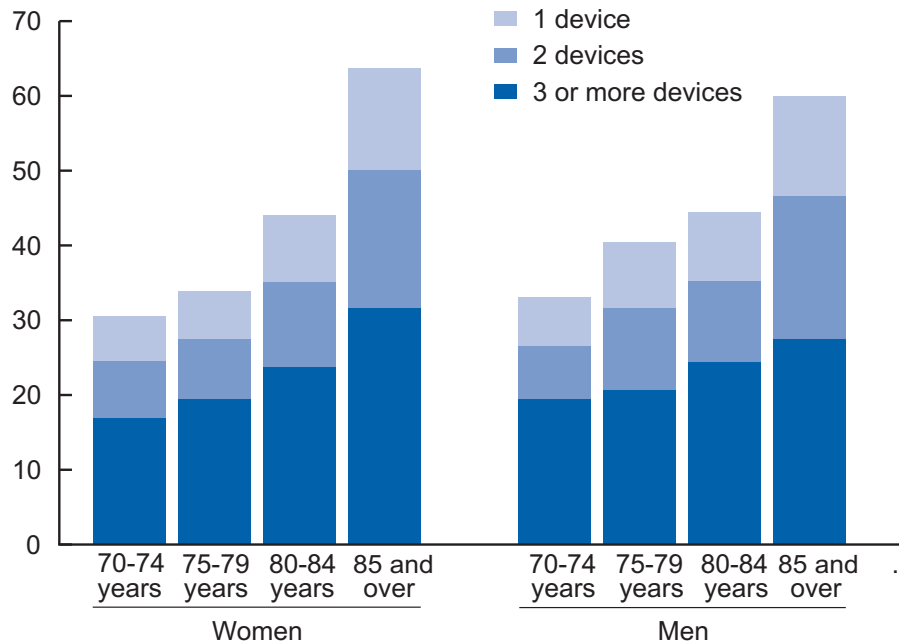
### Use of Assistive Devices

Assistive devices, such as hearing aids, canes, or walkers, enable older people to maintain their independence and their ability to perform daily tasks. In 1995, 39% of noninstitutionalized adults over age 70 used at least one assistive device. For those 85 and older, the rate was more than twice that for those aged 70–74. Use of three or more assistive devices also increased with age. Six percent of women and 6.5% of men ages 70–74 used three or more assistive devices, compared to 13% of women and 13.3% of men age 85 and older.

**Among adults age 70 and over:**

- Canes and other “mobility aids” were the most common type of assistive device, with 17% using them.
- 10% reported using a walker.
- 11% of adults used hearing aids.
- 8% of adults used respiratory devices.
- 7% of adults used diabetic equipment.

**ASSISTIVE DEVICES USED BY PERSONS 70 YEARS OF AGE AND OVER**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, 1994 National Health Interview Survey, Second Supplement on Aging.

## Visual and Hearing Impairments

In 1995, 18% of noninstitutionalized adults age 70 over were affected by visual impairments, defined as partial or full blindness or other problems seeing, and about one-third had hearing impairments. For both types of conditions, the prevalence increased with age. Thirty-one percent of those 85 and older had a visual impairment and 50% had hearing impairments.

Common causes for visual impairments include cataracts, glaucoma, and macular degeneration.

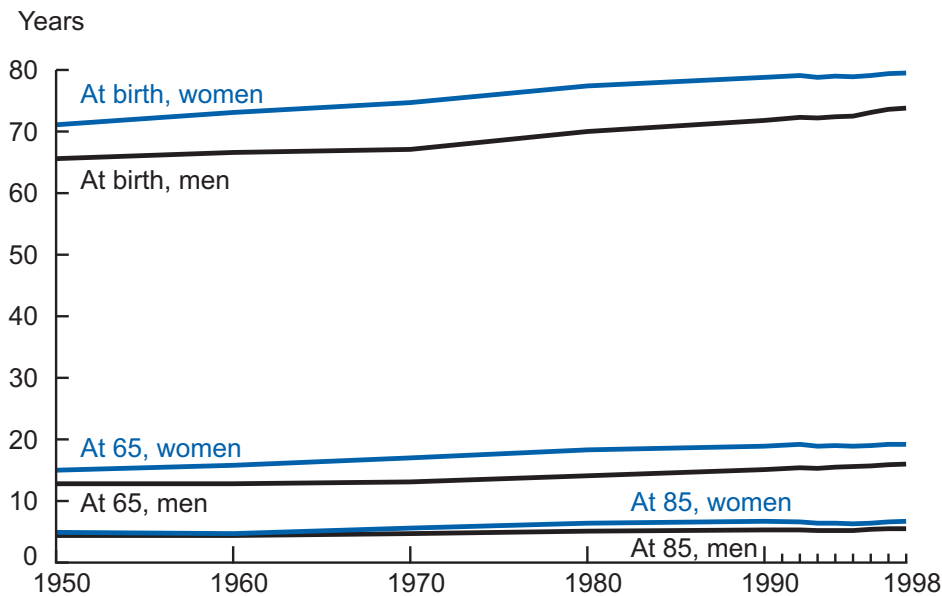


— SUCCESSES OF THE PAST CENTURY —

**Life Expectancy**

Americans can now expect to live much longer than did those in decades past. Since the beginning of the century, life expectancy at birth has increased dramatically, by about 60%, from 47.3 years in 1900 to 76.7 years in 1998. On average, men have a lower life expectancy than women. In 1998, life expectancy at birth was 79.5 years for women and 73.8 years for men. White women had the highest life expectancy at birth (80.0 years) in 1998, followed by black women (74.8 years), white men (74.5 years), and black men (67.6 years).

**LIFE EXPECTANCY AT BIRTH, AGE 65 AND AGE 85**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, 1998.

Life expectancy at age 65 has also increased, particularly in the last 50 years. In 1900, life expectancy at 65 was 11.9 years; in 1998, life expectancy was 17.8 years. Women’s life expectancy at 65 continued to surpass that of men; women could expect to live 19.2 more years in 1998, while men’s remaining life expectancy was 16 years.

At age 85, women have a life expectancy of 6.7 years and men have a life expectancy of 5.5 years.

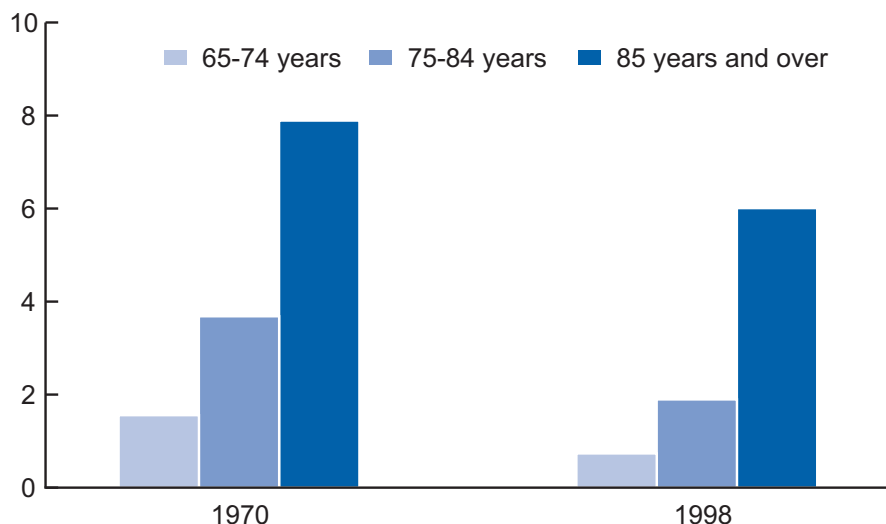
Life expectancy has increased as death rates have declined. In the last two decades, from 1980–1997, the death rate for persons 65–74 declined 16%. For those 85 and older, the death rate declined 4%.

## Decline in Heart Disease and Stroke

Heart disease is the leading cause of death and stroke is the third leading cause of death for adults over age 65, however the death rates have decreased significantly for all ages in the past few decades. This decrease has contributed to the overall decline in death rates.

### DEATH RATES FOR DISEASES OF THE HEART, ALL RACES

Deaths per 100,000 resident population

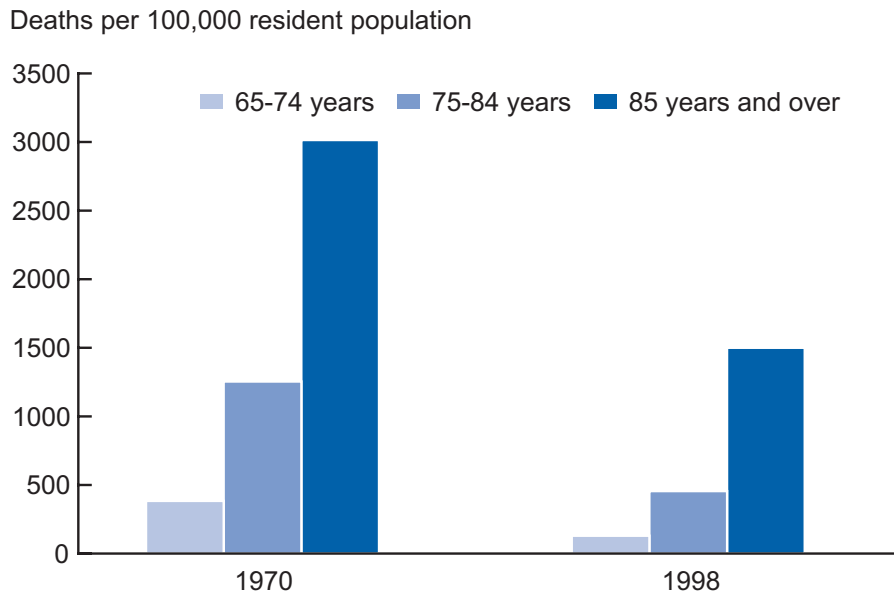


SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, Vital statistics of the United States, vol II, mortality, part A, for data years 1950-93. Public Health Service. Washington, U.S. Government Printing Office; for 1998, numerator data from National Vital Statistics System, annual mortality files; denominator data from national population estimates for race groups from table 1 and unpublished Hispanic population estimates prepared by the Housing and Household Economic Statistics Division, U.S. Bureau of the Census.

Since 1970 alone, the death rate due to heart disease for adults ages 65–74 declined from 1,558.2 per 100,000 to 735.5 per 100,000 in 1998. For those ages 75–84, the rate fell from 3,683.8 per 100,000 to 1,897.3 per 100,000 and for those ages 85 and older, the rate went from 7,891.3 per 100,000 to 6,009.6 per 100,000.

The death rate due to stroke has also declined since 1970 from 384.1 per 100,000 to 130.0 per 100,000 in 1998 for those ages 65–74. During the same time for those ages 75–84, the rate decreased from 1,254.2 per 100,000 to 455.4 per 100,000. Among those ages 85 and older, the rate declined from 3,014.3 per 100,000 to 1,500.0 per 100,000.

DEATH RATES FOR STROKE, ALL RACES



SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, Vital statistics of the United States, vol II, mortality, part A, for data years 1950-93. Public Health Service. Washington, U.S. Government Printing Office; for 1998, numerator data from National Vital Statistics System, annual mortality files; denominator data from national population estimates for race groups from table 1 and unpublished Hispanic population estimates prepared by the Housing and Household Economic Statistics Division, U.S. Bureau of the Census.

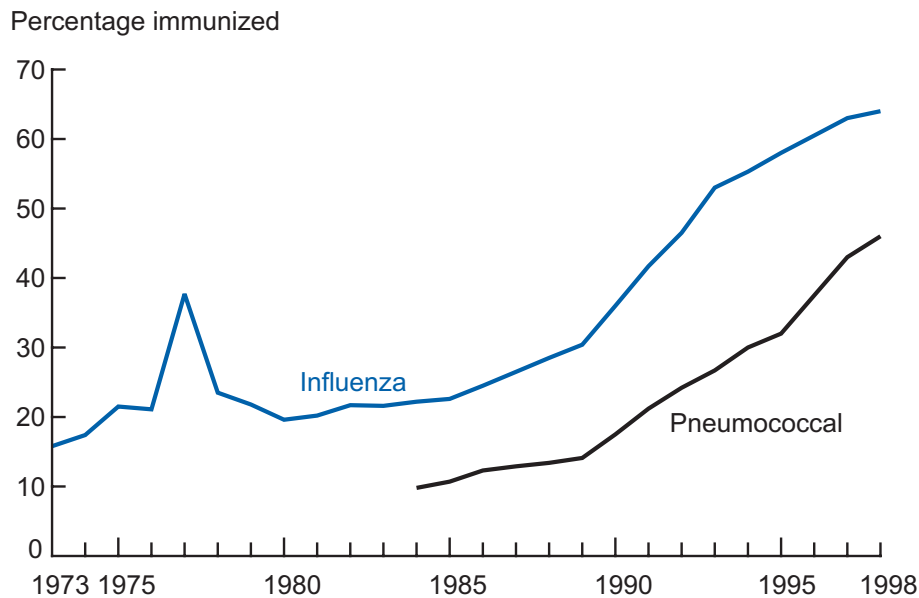
There are many possible reasons for this dramatic decrease. Rates of smoking among adults have decreased, thereby reducing a major risk factor for heart disease and stroke. Decreases in cholesterol and blood pressure, other risk factors for heart disease and stroke, also may attribute to the decline. Finally, advances in medicine have helped prevent many deaths due to these two major killers of Americans.

## Immunizations

Vaccinations are available to protect against two diseases that are often quite serious in older adults, influenza and pneumococcal disease. If utilized, these immunizations can prevent illness and possibly death due to these conditions among those age 65 and over. Within the past decade, an increasing number of adults age 65 and over have taken advantage of the health benefits of these vaccines. Among noninstitutionalized adults age 65 and over, 64% received an influenza vaccination in 1998, compared to 15.8% in 1973. Forty-six percent of adults age 65 and over in 1998 received a pneumococcal vaccination, an increase from 9.8% in 1984.

More work needs to be done to protect older Americans from these preventable illnesses, particularly among seniors who live in nursing homes; 59% of those residents had an influenza vaccination and 25% received a pneumococcal vaccination.

### INFLUENZA AND PNEUMOCOCCAL VACCINE COVERAGE NON-INSTITUTIONALIZED PERSONS 65 YEARS



SOURCE: Centers for Disease Control and Prevention, National Center for Prevention Services. United States Immunization Survey. 1973-1985. Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey. 1989-1998.

Note: Data for influenza vaccination is for the preceding year. Data for pneumococcal vaccination is for every having received vaccination.

— FUTURE CHALLENGES —

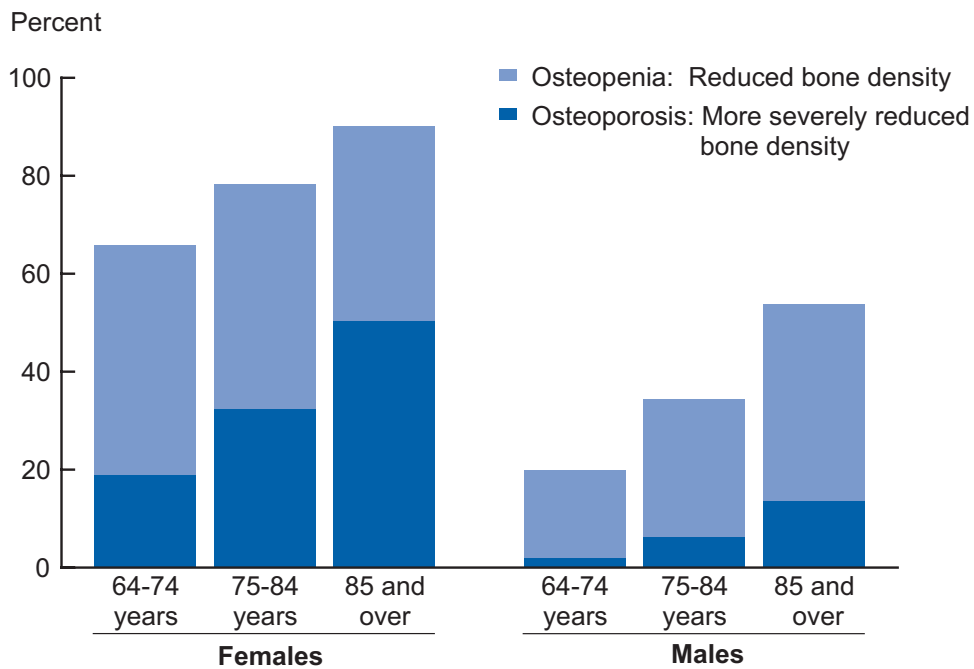
**Arthritis and Osteoporosis**

Arthritis, a condition of the joints, and osteoporosis, a severe form of decreased bone density, affects many older Americans. Arthritis is the most commonly reported chronic condition among older Americans; a majority of those over age 70 report being affected by it. In 1995, 63% of women reported having arthritis, compared to 50% of men.

As people age, the risk of osteoporosis and osteopenia, a less severe loss of bone density, increases. In 1988–1994, just over 50% of those age 65 and older had low bone density. Osteoporosis is more prevalent among those age 85 and older than among their younger counterparts. Women over 85 had osteoporosis at a rate 2.7 times as high as women ages 65–74 years old; likewise, men age 85 and older had osteoporosis at a rate 6.9 times as high as those ages 65–74.

Despite the increase in risk for men as they age, osteoporosis disproportionately affects more women than men. Among those age 85 and older, 90% of women and 54% of men had reduced hip bone density.

**PREVALENCE OF REDUCED HIP BONE DENSITY  
AMONG PERSONS 65 YEARS AND OVER BY AGE, SEX AND SEVERITY**



SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey, 1988-1994.

## Unintentional Injury from Falls

Falls are the leading cause of injury death among persons 65 years and older. In 1997, nearly 9,000 people age 65 and older died as a result of a fall. Sixty percent of fatal falls occur in the home, 30% in public places, and 10% in institutions. Falls are also a major cause of severe non-fatal injuries and a common cause of hospital admissions.

Hip fractures are the most serious fall-related injury. In 2000, the number of hip fractures is expected to reach 300,000, and by 2040, the number should reach 500,000. Women suffer disproportionately from hip fractures, partly as a result of higher rates of osteoporosis. In fact, women sustain 75–80% of all hip fractures. ***By age 90, one in three women will have sustained a hip fracture.***

## APPENDIX

**Infants and Children**

**Poverty** — Duncan, G and Brooks-Gunn, J. (2000). Family poverty, welfare reform, and child development. *Child Development*, Vol 71(1):1988-1996. Also see: Brooks-Gunn, J and Duncan, G. (1997). The effects of poverty on children and youth. *The Future of Children*, 7, 55-71; Children's Defense Fund. (1994). *Wasting America's future*. Boston: Beacon Books; Mayer, S. (1997). *What money can't buy: The effect of parental income on children's outcomes*. Cambridge, MA: Harvard University Press.

**Access to Care** — Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 1997.

**Child Mortality** — Child mortality rates correspond to *Healthy People, 2010* objective 16-2a (target for ages 1-4 is 18.6 per 100,000), 16-2b (target for ages 5-9 is 12.3 per 100,000), and 16-3a (target for ages 10-14 is 16.8 per 100,000).

**Infant Mortality** — Mathews TJ, Curtin S, MacDorman MF. Infant mortality statistics from the 1998 period: Linked birth/infant death data set. *Vital Statistics Data System*, Vol. 48, No. 12, 2000.

Infant mortality rate corresponds to *Healthy People, 2010* objective 16-1c (target is 4.5 per 1,000 live births).

**Prenatal Care** — Percent of women with prenatal care beginning in the first trimester of pregnancy corresponds to *Healthy People, 2010* objective 16-6a (target is 90%).

**Immunization** — Centers for Disease Control and Prevention, National Immunization Program and National Center for Health Statistics, 2000.

**Blood Lead Levels** — Blood lead levels correspond to *Healthy People, 2010* objective 8-11 (target is 0).

**Overweight Children** — Birch JL and Fisher, JO (1998). Development of eating behaviors among children and adolescents. *Pediatrics*; 101: 539-549.

Rate of overweight children, ages 6-11 corresponds to *Healthy People, 2010* objective 19-3a (target is 5%).

**Low Birthweight** — Mathews TJ, Curtin S, MacDorman MF. Infant mortality statistics from the 1998 period: Linked birth/infant death data set. *Vital Statistics Data System*, Vol. 48, No. 12, 2000.

The rate of low birthweight correspond to *Healthy People, 2010* objective 16-10a (target is 5%). The rate of very low birthweight corresponds to *Healthy People, 2010* objective 16-10b (target is .9%).

**Early Childhood Education** — Barnett, WS (1998). Long-term cognitive and academic effects of early childhood education on children in poverty. *Preventive Medicine*; 27(2): 204-7.

**Adolescents**

**Adolescent and Young Adult Mortality** — Mortality rate for ages 15-19 corresponds to *Healthy People, 2010* objective 16-3b (target is 39.8 per 100,000). Mortality rate for ages 20-24 corresponds to *Healthy People, 2010* objective 16-3c (target is 49.0 per 100,000).

**Recognition of Adolescent Health** — World Health Organization. *Programming for adolescent health and development*. Report of a WHO/UNFPA/UNICEF Study Group on Programming for Adolescent WHO Health. WHO Technical Report Series, 886. WHO: Geneva.

Elster A, Kuznets, N (1994). *Guidelines for Adolescent Preventive Services*. Williams and Wilkins: Baltimore.

**High School Completion Rate** — Department of Education. National Center for Education Statistics. Digest of Education Statistics, 1999-032: May, 1999.

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Rate for overweight adolescents 12-19 correspond to *Healthy People, 2010* objective 19-3b (target 5%).

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Smoking rate for adolescents in grades 9-12 corresponds to *Healthy People, 2010* objective 27-2b (target 16%).

**Violence** — Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. Division of Adolescent and School Health. Youth Risk Behavior Survey. *MMWR* 2000; 49(SS05):1-96.

**Suicide** — Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. Division of Adolescent and School Health. Youth Risk Behavior Survey. *MMWR* 2000; 49(SS05):1-96.

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Rates for sexually responsible behavior (abstinence and condom use) correspond to *Healthy People, 2010* objective 25-11 (target is 95%).

## Adults

**Adult Mortality** — Bias in death rates results from inconsistent race identification between the death certificate (source of numerator for death rates) and data from the Census Bureau (denominator); and from undercounts of some population groups in the census. The net effects of mis-classification and under coverage results in death rates estimated to be overstated for some population groups and understated for others, such as Hispanics. (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).

**Maternal Mortality** — Maternal mortality rate corresponds to *Healthy People, 2010* objective 16-4 (target is 3.3 per 100,000 live births).

**Mental Health - Depression** — National Institutes of Health. National Institute of Mental Health. *Depression*.

**Hypertension** — National Heart, Lung, and Blood Institute, National Institutes of Health. September 1993. Summarized in *JAMA* 269 (23): 3015-23. June 16, 1993)

Information on risk factors for high cholesterol from National Heart, Lung, and Blood Institute, National Institutes of Health.

**Smoking** — The definition of “current smoker” changed in 1993 for current smokers; for 1965 data, current smokers were defined as those who answered affirmatively to the questions “Have you ever smoked 100 cigarettes in your lifetime?” and “Do you smoke now?”

**Cigarette Smoking** — Smoking rate for adults 18 and over corresponds to *Healthy People, 2010* objective 27-1a (target is 12%).

**Cholesterol Levels** — Rates of high serum cholesterol correspond to *Healthy People, 2010* objective 12-14 (target is 17%).



**Diabetes** — Information on diabetes from: Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. Division of Diabetes Translation.

Note: Bias in death rates results from inconsistent race identification between the death certificate (source of numerator for death rates) and data from the Census Bureau (denominator); and from undercounts of some population groups in the census. The net effects of mis-classification and under coverage results in death rates estimated to be overstated for some population groups and understated for others, such as Hispanics. (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).

### **Seniors**

**Immunization** — Influenza vaccination rate corresponds to *Healthy People, 2010* objective 14-29a (target is 90%). Pneumococcal vaccination corresponds to *Healthy People, 2010* objective 14-29b (target is 90%).



# HEALTH CONCERNS OF RECENT INTEREST TO THE PUBLIC

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## *AGING-RELATED DISEASES AND CONDITIONS*

The population of the United States is rapidly aging. Between 2000 and 2030, the number of older Americans will more than double to 70 million, or one in every five Americans. Currently, almost one-third of total U.S. health care expenditures, or \$300 billion each year, is for older Americans. If current disease patterns continue, health care costs for older people will rise to roughly \$750 billion by 2030.

Chronic diseases exact a particularly heavy health and economic burden on older Americans. More than 65% of people age 65 or older have some form of cardiovascular disease, and half of all men and two-thirds of women older than age 70 have arthritis. One of every five older adults has diabetes, and is thus at risk for debilitating complications, including diabetes-related blindness, amputation, and kidney failure. Alzheimer's disease, urinary incontinence, osteoporosis, and depression also exact a heavy toll.

Although the risk of disease and disability clearly increases with advancing age, poor health is not an inevitable consequence of aging. Measures exist to prevent, reduce, or delay much of the disease, disability, and premature death among seniors.

### **Promotion of Healthy Lifestyles**

Older Americans who pursue healthy lifestyles—especially getting regular physical activity, avoiding tobacco use, and eating a healthy diet—significantly reduce their risk of chronic diseases and have half the rate of disability of those who do not.

### **Increased Use of Early Detection Practices**

Routine screening and appropriate followup among older adults can save lives, reduce illness and disability, and reduce health care costs. Among the diseases and conditions for which routine screening is recommended are: breast, cervical, and colorectal cancers; diabetes and its complications; depression and anxiety disorders; high blood pressure; and elevated cholesterol.

## *AGING-RELATED DISEASES AND CONDITIONS — CONTINUED*

### **Increased Use of Adult Immunization**

Pneumonia and influenza claim the lives of more than 30,000 older Americans each year. Immunization can reduce the incidence of these diseases by as much as 80%.

### **Reduced Injuries**

Falls, the most common cause of injuries among older Americans, account for 87% of all fractures and more than 7,000 deaths each year in this population. Increased physical activity, and simple, home-based prevention measures such as installing handrails and grab bars, improved lighting can significantly reduce risk of falls and associated fractures.

## ***AIDS IN AFRICA AND INDIA: THE LIFE INITIATIVE***

In response to the growing global AIDS pandemic, the U.S. is spending an additional \$100 million in support of sub-Saharan African countries and India to stem the spread of HIV and provide care for those affected by this devastating disease. This new program—called the ***LIFE (Leadership and Investment in Fighting the HIV/AIDS Epidemic) Initiative***—is conducted jointly by the U.S. Agency for International Development (USAID), DHHS, and other federal agencies with the ministries of health of the affected countries.

The investment—double the previous year's increase—will contribute to the broad targets set by UNAID: reducing the transmission of HIV by 25%, and ensuring access to basic care and support services for at least 50% of infected persons over the next three years.

The CDC Global AIDS Activity is focusing on four main program areas:

**Primary Prevention**—CDC is lending its expertise across a variety of primary prevention activities, including voluntary counseling and testing, social marketing, behavior change, mother to child transmission, STD management, and blood safety.

**Capacity and Infrastructure Development**—CDC will assist countries in the development and enhancement of surveillance systems, the use of data to inform prevention and treatment strategies, and the strengthening of management and training.

**Community and Home-based Care and Treatment**—CDC, in collaboration with HRSA, will support countries to strengthen and expand care, support, and treatment options for people suffering from HIV/AIDS and opportunistic infections. Strategies will build on the strengths of communities to provide options ranging from home based to clinical care and social support.

**Care for Children Affected by AIDS**—This effort is led by USAID, primarily through the use of Title II, Food for Peace programs. Not all program elements will be implemented in all countries, although there will be collaborative support from at least two federal agencies in each of the 15 target countries, as well as complementary regional activities in western and southern Africa.

For more information on the LIFE Initiative see: [www.info.usaid.gov](http://www.info.usaid.gov) and for more information about the International Partnership Against AIDS in Africa see [www.unaids.org/africapartnership](http://www.unaids.org/africapartnership)

## ***BREAST AND CERVICAL CANCER***

During the 1990's an estimated 2 million American women were diagnosed with breast or cervical cancers, and about one-half million women died from these diseases. Reducing the toll from breast and cervical cancers requires increased use of proven screening methods. These methods—mammography, examination of the breasts by a health care provider, and Pap smears—can detect cancer at an early, more treatable stage. In fact, cervical cancer screening with the Pap test detects not only cancer but also precancerous lesions. Detection and treatment of such lesions can actually prevent cervical cancer and thus prevent virtually all deaths from the disease.

### **Screening Methods**

Regular examination of the breasts by a health practitioner and regular breast self-exams are the breast cancer screening methods recommended for most women under 50 years old. For women 50 and older, mammography is the single most effective means of detecting breast cancer and can reduce mortality from this disease by up to 30 percent. A mammogram is a low dose x-ray exam that gives doctors a picture of the breast's internal structure. A mammogram can detect a lump in a breast up to 2 years before a woman can feel the lump herself.

The Papanicolaou test, or Pap smear, is the most effective method for finding precancerous changes or cancers on the cervix. To perform a Pap test, a health professional takes a special sample of loose cells from the cervix. Examination of this sample under a microscope can help determine if abnormal cells are present. The Pap test provides the means to prevent nearly all deaths from cervical cancer.

## ***CARDIOVASCULAR DISEASE***

Cardiovascular disease (CVD) is the Nation's leading killer for both men and women among all racial and ethnic groups. The term “cardiovascular disease” refers to a variety of diseases and conditions affecting the heart and blood vessels, principally high blood pressure, heart disease, and stroke.

One in four Americans have CVD, and more than 960,000 Americans die of CVD each year, accounting for 41.4% of all deaths. CVD events account for almost 6 million hospitalizations each year and cause disability for almost 10 million Americans aged 65 years and older. CVD costs the Nation \$287 billion each year, including health expenditures and lost productivity.

A limited number of health-related behaviors practiced by people every day contribute markedly to cardiovascular disease.

### **Tobacco Use**

Cigarette smoking is a major cause of heart disease among both men and women. Smokers have twice the risk of heart attack of nonsmokers.

### **Lack of Physical Activity**

People who are sedentary have twice the risk of heart disease than those who are physically active. Despite these risks, America remains a predominantly sedentary society: more than half of American adults do not practice the recommended level of physical activity, and more than one-fourth are completely sedentary.

### **Poor Nutrition**

Between 20% and 30% of the Nation's adults (some 58 million people) are obese and thus have a higher risk for heart disease, high blood pressure, high cholesterol, and other chronic diseases and conditions such as diabetes.

## **DIABETES**

Diabetes is a serious and common chronic disease affecting nearly 16 million Americans representing every racial and ethnic group. Diabetes causes many disabilities and contributes to almost 200,000 deaths a year. Americans with diabetes face shortened life-spans and each year roughly one-hundred thousand individuals suffer preventable acute and chronic complications such as kidney failure, blindness, and lower extremity amputations. Diabetes is a costly chronic disease: direct and indirect costs of diabetes total nearly \$100 billion a year, accounting for about 15% of all health care expenditures.

People with diabetes either have a shortage of insulin or a decreased ability of the body to use insulin, a hormone secreted by the pancreas. Insulin allows glucose (sugar) to enter cells and be converted to energy. In uncontrolled diabetes, glucose and fats remain in the blood and, over time, damage vital organs and contribute to heart disease, as well as nerve, foot, eye, and kidney damage, and problems with pregnancy.

Research shows that many complications of diabetes can be delayed or prevented.

### **Blindness**

Only 60% of people with diabetes are receiving annual dilated eye exams. With appropriate screening and care, up to 90% of diabetes-related blindness can be prevented. Early detection and proper treatment could prevent blindness in about 18,000 people a year, resulting in an annual savings to the federal budget of more than \$470 million.

### **Kidney disease**

By improving the control of blood glucose levels, diabetes-related kidney failure could be reduced by 50%. This would prevent roughly 16,500 cases and avoid about \$2.5 billion in Medicare costs each year.

### **Amputations**

About 86,000 people undergo diabetes-related lower-extremity amputations each year. Over half could be prevented with appropriate examination and patient education. These amputations cost more than \$860 million annually in hospitalization costs alone.



## DRUG RESISTANCE/ANTIMICROBIAL RESISTANCE

Antimicrobial resistance is a serious clinical and public health problem in the United States and globally. Drug resistance occurs when germs (microbes) develop ways of surviving the use of medicines that are supposed to kill them. The frequency of drug resistance is increasing in virtually all organisms that cause infections in hospitals, long-term care facilities, and communities. If a microbe is resistant to many drugs, it becomes difficult, or may become impossible, to treat the infection it causes. In some cases, this leads to serious illness or even death.

For example, each year in the United States, *Streptococcus pneumoniae* infections cause 3,000 cases of meningitis, 50,000 blood infections, 100,000-135,000 hospitalizations for pneumonia (“pneumococcal pneumonia”) and seven million middle ear infections. In some areas, 30% of infections with *S. pneumoniae* are not susceptible to penicillin. In the 1970s, virtually all were susceptible.

Strains of *Staphylococcus aureus* typically cause skin infections, but can invade the body to cause bloodstream, bone, heart, and lung infections. In the United States, over 200,000 infections with *S. aureus* are estimated to occur in hospitalized patients every year. *S. aureus* resistant to multiple antimicrobial drugs (methicillin-resistant *S. aureus* [MRSA]) has become a prevalent pathogen in the United States. A precise number is not known, but according to some estimates as many as 80,000 patients a year get an MRSA infection after they enter the hospital.

### Prevention

Using antimicrobial drugs appropriately will reduce the risk of spreading drug-resistant infections. Appropriate use includes:

- never taking an antimicrobial drug (designed for bacterial infections) for a viral infection such as cold, cough, or flu;
- taking medicine exactly as the doctor prescribes;
- taking medicine until the entire prescription is used, even if you are feeling better before all of the prescribed medicine is gone;
- never saving prescribed medication to treat yourself or others later.

In addition, to help avoid infections that may require a need for antimicrobial drugs:

- handle and prepare food safely;
- wash your hands often and thoroughly; and
- instruct your children in how to wash their hands thoroughly.

## ***FALLS AMONG OLDER ADULTS***

For millions of older Americans, falls present a serious health risk. In the United States, one of every three persons age 65 and older falls each year. Among older adults, falls are the leading cause of injuries and injury deaths. Fractures, especially hip fractures, are the most serious fall-related injury. Approximately 250,000 hip fractures occur each year. Half of all older people hospitalized for hip fracture cannot return home or live independently after their injury.

CDC researchers have noted (*MMWR Surveillance Summary, 12/99*) that hip fracture rates among older adults increased from 1988 to 1996. This trend may partially reflect a rapid increase in the proportion of adults age 85 and older in the U.S.; among these oldest-old, the rates of fall-related death and injury increase markedly. The number of people over age 65 is expected to increase from 31.0 million in 1990 to 68.1 million by 2040; and falls and fall-related injuries will become an increasingly important public health problem.

### **Prevention of falls**

Many falls and resulting injuries can be prevented. Strategies to prevent falls among older adults include:

- exercises to improve strength, balance, and coordination;
- reviews of medications that may affect balance;
- regular visits to the eye doctor; and
- home modifications that reduce fall hazards: installing grab bars, improving lighting, and removing items that may cause tripping.

## FOODBORNE ILLNESSES

Although the food supply in the United States is one of the safest in the world, CDC estimates that 5,000 Americans die each year from foodborne illnesses, 76 million people get sick, and more than 300,000 are hospitalized.

Consuming contaminated foods or beverages causes foodborne disease. More than 250 different foodborne diseases have been described. Most of these are infections caused by a variety of bacteria (such as *Salmonella* and *E. coli* O157:H7), viruses (such as calicivirus and hepatitis A), and parasites (such as *Cryptosporidium* and *Cyclospora*). Other foodborne diseases include poisonings caused by harmful toxins or chemicals.

### Prevention

A few simple precautions can reduce the risk of foodborne diseases:

- **Cook** foods to the proper temperatures. Use a thermometer to measure the internal temperature of meat to be sure that it is cooked sufficiently to kill bacteria. For example, ground beef should be cooked to an internal temperature of 160°F and poultry to 180°F. Eggs should be cooked until the yolk is firm.
- **Separate:** don't cross-contaminate one food with another. Avoid cross-contaminating foods by washing hands, utensils, and cutting boards after they have been in contact with raw meat or poultry and before they touch another food. Put cooked meat on a clean platter rather than back on one that held the raw meat.
- **Chill:** refrigerate foods promptly. Bacteria can grow quickly at room temperature, so refrigerate foods if they are not going to be eaten within 2 hours. Large volumes of food will cool more quickly if they are divided into several shallow containers for refrigeration.
- **Clean:** wash hands and surfaces often. Wash your hands with soap and water before preparing food, and avoid preparing food for others if you have a diarrheal illness. Rinse fresh fruits and vegetables in running tap water to remove visible dirt and grime. Because bacteria can grow well on the cut surface of fruits or vegetables, be careful not to contaminate these foods while slicing them on the cutting board.

If you think you or others became ill from eating the same food, CDC recommends that you report this outbreak to your local (city or county) health department so that public health officials can take steps to stop the foodborne illness outbreak and to prevent others from getting sick.

For more information about foodborne illness, visit CDC's food safety Web site at [www.cdc.gov/foodsafety](http://www.cdc.gov/foodsafety).

## **HEPATITIS A**

Hepatitis A, a viral infection of the liver, is caused by the hepatitis A virus (HAV). Infection with HAV can be asymptomatic, cause mild symptoms, or lead to acute hepatitis and jaundice. Chronic HAV infection does not occur. Hepatitis A continues to be one of the most frequently reported vaccine preventable diseases in the United States; an estimated 125,000 to 200,000 new infections occur each year. In the United States, hepatitis A can occur in situations ranging from isolated cases of disease to widespread epidemics. HAV is transmitted by the fecal-oral route, and infection usually results from contact with a household member or sex partner who is infected with HAV; young children may be especially important in facilitating transmission.

### **Vaccine**

A safe, effective vaccine for the prevention of hepatitis A became available in 1995. It is recommended for children ( $\geq 2$  years) living in states, counties, and communities with consistently elevated hepatitis A rates, children and adults traveling to or working in countries that have high or intermediate endemicity, men who have sex with men, illegal-drug users, persons who have chronic liver disease, and persons who have clotting-factor disorders.

### **Immune globulin**

Immune globulin, a preparation of antibodies, is available for short-term (3 to 6 months) protection before or after exposure to HAV.

## **HEPATITIS B**

Hepatitis B is a viral infection of the liver caused by the hepatitis B virus (HBV). HBV can cause acute and chronic (long-term) infection. In the United States, there are an estimated 200,000 new infections each year. Currently, an estimated 1.25 million Americans are chronically infected with HBV. Persons with chronic infection are at increased risk for chronic liver disease, cirrhosis, and liver cancer. HBV is transmitted by exposure to the blood of an infected person primarily by sex contact or sharing of injection drug equipment. HBV can also be transmitted from an infected mother to her infant at birth. HBV is not transmitted by food or beverages or by casual contact, such as with friends or coworkers.

## **HEPATITIS B — CONTINUED**

### **Vaccine**

A safe, effective vaccine for the prevention of HBV infection has been available since 1982. The vaccine is recommended for all infants and children up to 19 years of age, injection drug users, household contacts and sex partners of persons with chronic HBV infection, men who have sex with men, persons with multiple sex partners, clients and staff of institutions for the developmentally disabled, chronic hemodialysis patients, patients who receive clotting-factor concentrates, adoptees from countries with high rates of HBV infection, persons who live or work for more than 6 months in areas with high rates of HBV infection, and inmates of long-term correctional facilities.

### **Immune globulin**

Hepatitis B immune globulin (HBIG), a preparation of hepatitis B antibodies, is also available to prevent infection if given soon after exposure to HBV and is usually given along with hepatitis B vaccine. Antiviral therapy is available for the treatment of chronic hepatitis B

## **HEPATITIS C**

Hepatitis C is an infection of the liver caused by the hepatitis C virus (HCV). HCV can cause acute or chronic (long-term) infection. Approximately 75% to 85% of people with acute infection will develop chronic infection. Chronic liver disease occurs in as many as 70% of persons with chronic infection and may not become apparent for many years after infection, if ever. HCV-associated chronic liver disease is the most common indication for liver transplantation among adults, and an estimated 8,000 to 10,000 deaths occur each year because of HCV-associated chronic liver disease. In the United States, an estimated 3.9 million persons have been infected with HCV, making HCV infection the most common chronic bloodborne viral infection in the country. Many HCV-infected individuals are not aware of their infection and are not clinically ill.

HCV is transmitted by exposure to the blood of an infected person primarily by injection drug use and less commonly by sex contact. Before testing for hepatitis C became available, HCV transmission did occur from blood transfusions. Sensitive testing methods are now available and currently, the risk for HCV infection from blood transfusion is only 1 per 100,000 transfused units. HCV is not transmitted by food or beverages, or by casual contact, such as with coworkers or friends.

No vaccine is available to prevent hepatitis C; however, antiviral therapy is licensed for the treatment of individuals with chronic hepatitis C.

## IMMUNIZATION

During the 20<sup>th</sup> Century, vaccines were one of the most effective tools for preventing disease and death. Their usefulness continues into the 21<sup>st</sup> Century. At the beginning of this century, five vaccines had been developed and an additional 21 diseases have been added to the list of those that are preventable by vaccine.

At the end of the 20<sup>th</sup> Century, polio caused by wild virus had been eradicated from the Western Hemisphere; childhood vaccination levels in the U.S. were at an all-time high; and disease and death from diphtheria, pertussis, tetanus, measles, mumps, rubella and *Haemophilus influenzae* type b were at or near record lows.

In 1900, 21,064 cases of smallpox were reported in the U.S.; 894 of these persons died. The last case of smallpox in the United States was reported in 1949. The last case in the world was reported in 1977. The eradication of smallpox made it possible to stop efforts at prevention and treatment, including, in 1971, routine vaccination. One report, published in 1985, estimated that the U.S. recoups its investment in worldwide eradication of smallpox every 26 days.

In the 1920's, other diseases that are now vaccine-preventable exacted an enormous toll. Cases of measles, diphtheria, and pertussis exceeded half a million per year; deaths from these diseases totaled about 20,000 annually.

Immunizations are one of best ways that parents can protect their children against serious diseases. Immunization coverage among children in the United States is the highest ever recorded for most vaccines. We have attained our goal of having 90 percent or more of infants receiving the most critical doses of most recommended vaccines by age two. These very high immunization coverage levels translate into record or near record low levels of vaccine-preventable diseases. For most of the vaccine-preventable diseases, there has been a 95 percent or more reduction in morbidity

However, this very success means that parents may have less concern about the need for immunization compared to other parental priorities. Since they have never seen these diseases and the devastation they can cause, they may not fully understand the importance of or what it takes to get their children immunized.

Despite recent gains in childhood immunization coverage, more than 20% of our Nation's two year olds are still missing one or more recommended immunizations. Each day we must begin anew as 11,000 babies are born who will require 16–20 doses of vaccine before age two.

To fulfill the promise of vaccines in the future, the current vaccination delivery system must be strengthened and extended to new populations of adolescents and adults, international efforts to deliver existing and new vaccines must be enhanced, and the safety of vaccines must continue to be assured.

## ***INFLUENZA AND INFLUENZA VACCINE***

Influenza, commonly called "the flu," is caused by influenza viruses that infect the respiratory tract. Compared with most other viral respiratory infections, such as the common cold, influenza infection often causes a more severe illness. Typical clinical features of influenza include fever (usually 100F to 103F in adults and often even higher in children), extreme fatigue, headache, muscle aches, cough, sore throat, and runny or stuffy nose. Gastrointestinal symptoms (for example, nausea, vomiting, and diarrhea) are rarely prominent in adults (they are more common in children), and the term "stomach flu" is a misnomer that refers to gastrointestinal illnesses caused by microorganisms unrelated to influenza.

Although most people with influenza recover completely after 1 to 2 weeks, some people develop serious and potentially life-threatening medical complications. Such complications, including pneumonia and the worsening of chronic heart or lung conditions, lead to an average of about 20,000 deaths and over 110,000 hospitalizations each year in the United States. People over 50 and those with chronic health problems are at particular risk for developing serious complications from influenza infection.

Influenza typically occurs during seasonal winter epidemics, but large outbreaks and individual infections can occur year round. The emergence of novel influenza viruses can also cause worldwide outbreaks of disease known as pandemics. Pandemics are uncommon (three in the twentieth century), but these events are feared because they occur unpredictably and can be associated with substantially elevated rates of death and illnesses. The last pandemic took place in 1968-69 and another one is widely anticipated at some point in the future. CDC has estimated that the next influenza pandemic could lead to 89,000 to 207,000 deaths and 314,000 to 734,000 hospitalizations in the United States.

### **Influenza Vaccine**

Annual influenza vaccination of people at increased risk for complications from influenza is the most important step for preventing illness and death caused by this disease. The virus strains contained in influenza vaccine usually change each year because the influenza viruses in circulation usually change from year to year. The influenza vaccine must be administered annually and is specifically recommended for the following group:

- All people aged 50 years or older.
- People of any age with chronic diseases of the heart, lung, or kidneys, diabetes, immunosuppression, or severe forms of anemia.



### *INFLUENZA AND INFLUENZA VACCINE — CONTINUED*

- Residents of nursing homes and other chronic-care facilities housing patients of any age with chronic medical conditions.
- Children and teenagers who are receiving long-term aspirin therapy and who may therefore be at risk for developing Reye's syndrome after an influenza virus infection.
- Women who will be in the second or third trimester of pregnancy during the influenza season.

The influenza vaccine is also recommended for people, such as health care workers and household members, who can transmit influenza to people in high-risk groups.

Many people in high risk groups still do not receive the vaccine because of misconceptions about influenza and the vaccine. Some mistakenly perceive influenza as merely a nuisance, and some believe that the vaccine can cause the flu. The truth is that influenza vaccine cannot cause influenza, and most people who receive the vaccine either have no side effects or only mild soreness at the injection site that disappears within a day or two.



## *OBESITY*

A growing obesity epidemic is threatening the health of millions of Americans in the United States. The obesity epidemic spread rapidly during the 1990s across all states, regions, and demographic groups in the United States. Obesity has increased by over 50% among adults and 100% among children and adolescents in just the past 15 years. This epidemic portends greater disease, disability, and early death, and related rises in health care costs.

According to recently published CDC research (JAMA, 10/13/99), more than two-thirds of American adults are trying to lose weight or keep from gaining weight but many do not follow guidelines recommending a combination of fewer calories and more physical activity.

While the increase in the prevalence of overweight and obesity reflects some combination of decreased energy expenditure and increased energy consumption, the reasons for these changes are as yet unclear, and are likely complex. Reversing this trend will require continued promotion of the importance of a healthful diet and regular physical activity as well as greater understanding of the multiple individual, environmental, and societal factors that influence perceptions of hunger and satiety, food choices, and physical activity.

## IMPROVING ORAL HEALTH

Many American children and adults remain unaware of—or do not have access to—the highly effective, often cost-saving, measures that can prevent and control the most common oral diseases and conditions. For example, dental caries (decay) is one of the most common infectious diseases among U.S. children; it begins early: 17% of children aged 2–4 years have already had caries. Dental decay affects 52% of 8-year-old children and 78% of 17-year-olds. Among low-income children, almost half of tooth decay remains untreated, resulting in pain, dysfunction, underweight and poor appearance—problems that greatly reduce a child’s capacity to succeed.

Serious oral health problems also occur among adults. Each year about 30,000 Americans are diagnosed with oral and pharyngeal (throat) cancers and more than 8,000 people die from these diseases. Severe periodontitis (a destructive gum disease) is a significant infection, linked recently to serious medical problems, including diabetes complications, heart disease, respiratory disease and preterm labor. In addition, about a third of elderly adults no longer have their natural teeth, even though tooth loss is not an inevitable outcome of aging.

### Prevention Measures

Proven prevention measures, such as water fluoridation, dental sealants, and smoking prevention and cessation programs, can markedly reduce oral and dental diseases, yet they are often unavailable to those who need them most.

- **Water Fluoridation:** over the past 50 years, the damage caused by dental decay has been drastically reduced, primarily through the use of fluoride. The least expensive way to deliver the benefits of fluoride to all residents of a community is water fluoridation—that is, by adjusting the fluoride in the public water supply to the optimal level. Even though the *per capita* cost of water fluoridation over an entire lifetime can be less than the cost of one dental filling, more than 100 million Americans do not have access to adequately fluoridated water.
- **Dental Sealants:** a national study found that children with dental sealants had significantly less untreated dental decay than children without sealants. *Healthy People 2010: National Health Promotion and Disease Prevention Objectives* calls for 50% of children to have these protective barriers against dental decay placed on their permanent molars. However, less than 25% of American children have received them.

*IMPROVING ORAL HEALTH — CONTINUED*

- **Oral Cancer:** only about half of those diagnosed with oral or pharyngeal cancer survive more than 5 years; among African American men, only about a third survive. People who do survive are at increased risk of developing additional cancers and frequently bear the physical and psychological scars of an extremely disfiguring cancer. Tobacco use—especially when combined with heavy alcohol use—is the major risk factor for more than 75% of oral and pharyngeal cancers in the United States.

## *POISONINGS*

Millions of poisoning exposures occur each year in the United States, resulting in nearly 900,000 visits to emergency departments. About 90 percent of poisonings occur in the home, and common household items are often the cause. The poisons involved most often are cleaning products, pain relievers, cosmetics, personal care products, plants, and cough and cold medicines. Children 5 years and under account for more than half of poisonings in the home. Adolescents are also at risk for poisonings, both intentional and unintentional. About half of all poisonings among teens are classified as suicide attempts. Communities should be aware of teens at risk for substance abuse or suicide to ensure that they receive early intervention and counseling that could save their lives.

Poison control centers help millions of people each year, ensuring that poisonings are treated rapidly and correctly. Poison control centers managed more than 2 million poisoning exposures in 1998. About three-quarters of these cases were managed at home, over the telephone, with the help of specialists trained in poison information. Poison control centers are extremely cost effective. For every \$1 spent on poison control centers, an estimated \$7 is saved in medical care costs. By helping people manage emergencies at home, these centers prevent about 50,000 hospitalizations and 400,000 trips to doctors offices each year.

### **Prevention**

To prevent unintentional poisoning in the home:

- discard all nonessential drugs and household products according to the manufacturer's instructions;
- buy medicines and household products in child-resistant packaging and be sure that caps are always on tight;
- never replace child-safety caps with caps that are easier to open;
- crawl around your house to identify poisoning hazards from a child's point of view;
- post the telephone number for your poison control center near your phone, where all family members can find it quickly in an emergency.

## *SUICIDE*

More Americans die from suicide than from homicide. In 1997, 30,535 people committed suicide, and over half of these suicides were committed with a firearm.

Overall, suicide is the eighth leading cause of death, and it is the third leading cause of death for young people ages 15 to 24. Suicide rates increase with age and are highest among Americans age 65 and older.

Females are more likely to attempt suicide than are males. However, males are four times more likely to die from suicide than are females.

In 1997, white males accounted for 72 percent of all suicides. Together, white males and white females accounted for over 90 percent of all suicides. However, from 1979 to 1992, suicide rates for Native Americans (a category that includes American Indians and Alaska Natives) were about 1.5 times the national rates. There was a disproportionate number of suicides among young male Native Americans during this period, as males ages 15 to 24 accounted for 64 percent of all suicides among this group.

## ADOLESCENT TOBACCO USE

Every day more than 6,000 people under the age of 18 try their first cigarette. More than 3,000 of these young people will become daily smokers. One out of every eight middle school student and over a third of high school students reported using some form of tobacco in the past month. Young people vastly underestimate the addictiveness of nicotine. Of daily smokers who think that they will not smoke in five years, nearly 75 percent are still smoking five to six years later.

Among young people, the short-term health consequences of smoking include damage to the respiratory system, addiction to nicotine, and the associated risk of other drug use. Long-term health consequences of youth smoking are reinforced by the fact that most young people who smoke regularly continue to smoke throughout adulthood.

- Smoking hurts young people's physical fitness in terms of both performance and endurance—even among young people trained in competitive running.
- Smoking among youth can hinder the rate of lung growth and the level of maximum lung function.
- The resting heart rates of young adult smokers are two to three beats per minute faster than nonsmokers'.
- Among young people, regular smoking is responsible for cough and increased frequency and severity of respiratory illnesses.
- The younger people start smoking cigarettes, the more likely they are to become strongly addicted to nicotine.
- Smoking is associated with poor overall health and a variety of short-term adverse health effects in young people, and may also be a marker for underlying mental health problems, such as depression, among adolescents. High school seniors who are regular smokers and began smoking by grade nine are:
  - ✓ 2.4 times more likely than their nonsmoking peers to report poorer overall health;
  - ✓ 2.4 to 2.7 times more likely to report cough with phlegm or blood, shortness of breath when not exercising, and wheezing or gasping;
  - ✓ 3.0 times more likely to have seen a doctor or other health professional for an emotional or psychological complaint.

## WEST NILE ENCEPHALITIS

"Encephalitis" means inflammation of the brain. It can be caused by viral or bacterial infections, including viruses transmitted by mosquitoes. West Nile encephalitis is an infection of the brain caused by West Nile virus, a flavivirus commonly found in Africa, West Asia, and the Middle East. It is closely related to St. Louis encephalitis virus found in the United States. People get West Nile encephalitis by the bite of a mosquito (primarily the *Culex* species) that has been infected with West Nile virus. The mosquito picks up the virus by feeding on birds infected with the West Nile virus. Infected mosquitoes then transmit the West Nile virus to humans and animals when taking a bloodmeal.

West Nile virus was not previously documented in the Western Hemisphere before 1999. It is not known where the U.S. virus came from, nor how long it has been in the United States, although it is almost identical to a West Nile strain seen in the Middle East in 1998.

You cannot get West Nile encephalitis directly from another person. West Nile encephalitis is NOT transmitted from person-to-person; for example, you cannot get the virus that causes West Nile encephalitis from touching or kissing a person who has the disease, or from a health care worker who has treated someone with the disease. There is no evidence that a person can get the virus from handling live or dead infected birds. However, avoid bare-handed contact when handling dead animals, including dead birds. Because they may carry other diseases, notify animal control or local health departments about dead wildlife. If you must discard animal carcasses yourself, use gloves or double plastic bags to place the carcass in a garbage can.

Most persons infected with West Nile Virus do not develop severe illness. The symptoms of a mild infection of West Nile encephalitis include fever, headache, and body aches, sometimes with skin rash and swollen lymph glands. More severe infection is marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions, muscle weakness or paralysis, and, rarely, death.

There is no specific therapy or vaccine. Hospitalization and intensive supportive therapy are indicated in more severe cases. The elderly are at higher risk of having a more severe case of West Nile infection.

### Prevention

Personal prevention measures include:

- applying DEET-containing insect repellent sparingly to exposed skin;
- spraying clothing with repellents containing permethrin or DEET;

*WEST NILE ENCEPHALITIS — CONTINUED*

- wearing long-sleeved shirts and long pants whenever you are outdoors;
- staying indoors at dawn, dusk, and in the early evening; and
- draining standing water in your yard.



## CDC's PARTNERS IN PREVENTION

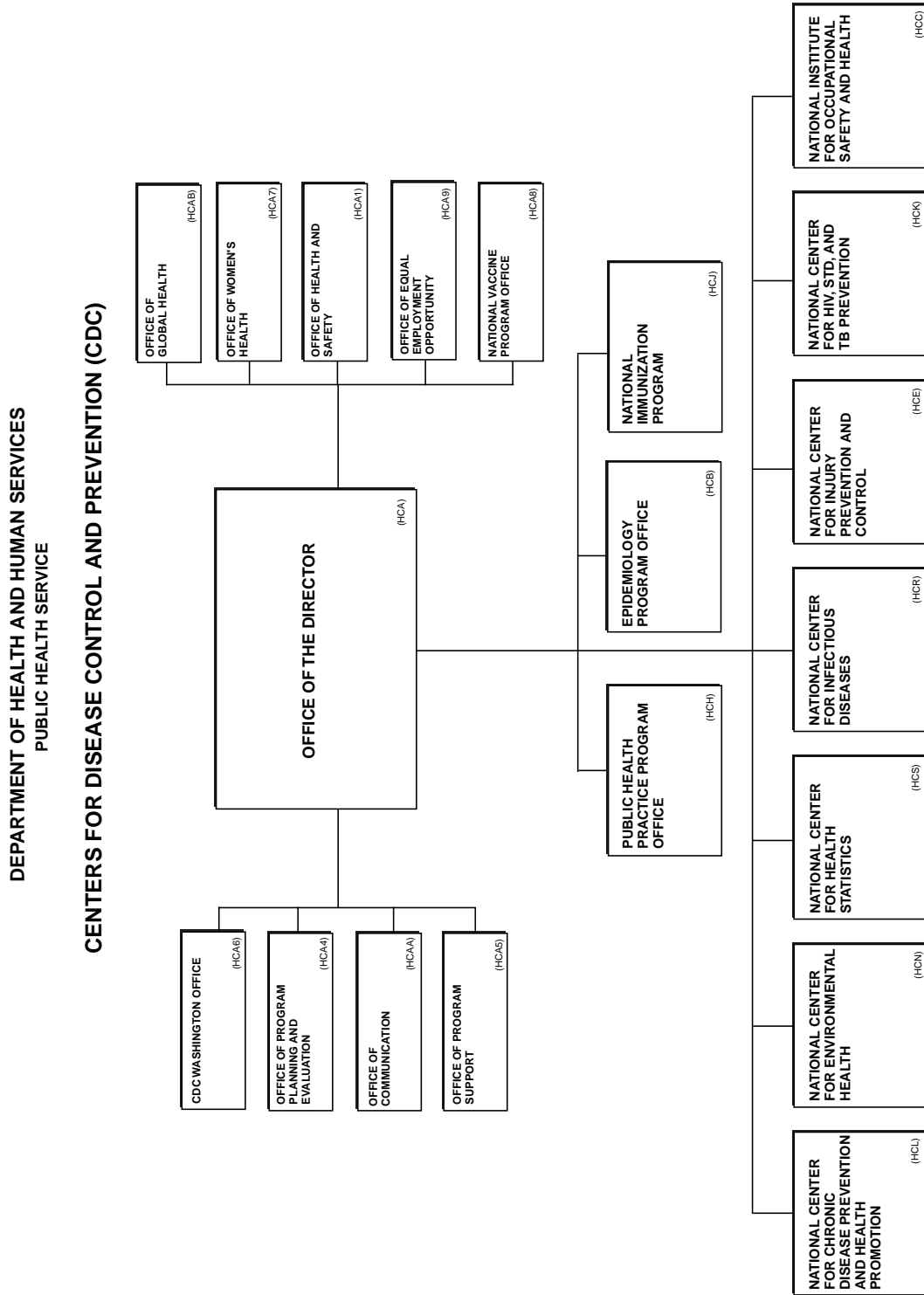
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CDC has developed and is sustaining many vital partnerships with public and private entities that improve service to the American people. Some of CDC's partners include:

- State and local public health agencies.
- Practicing health professionals, including physicians, dentists, nurses and veterinarians.
- Public health associations.
- Schools and universities.
- Professional, voluntary, and community organizations.
- Philanthropic foundations.
- School systems, churches, and other local institutions.
- Industry and labor.
- CDC Foundation and other foundations.
- International organizations, including the World Health Organization, Pan American Health Organization, and the World Bank.



# CDC ORGANIZATIONAL CHART





## CDC OFFICE OF THE DIRECTOR

The Office of the Director is composed of several organizations and activities responsible for managing and directing the Centers for Disease Control and Prevention. Several of these provide leadership for implementation of CDC's core program responsibilities related to disease prevention and control, epidemiology, medical and scientific activities, and global health. Descriptions of these organizations and activities follow below. Several other components of the Office of the Director provide overall leadership, coordination, and assessment of planning, administrative, and management activities. The activities of these components are not included in this Fact Book.

## *OFFICE OF EQUAL EMPLOYMENT OPPORTUNITY*

### *MISSION*

Promote diversity and equal employment opportunity

### *MAJOR ACTIVITIES*

- Ensure the availability of applicant pools that include highly qualified minorities, women, and persons with disabilities.
- Ensure that CDC employees and applicants are knowledgeable of their rights and responsibilities under civil rights and equal employment laws and regulations.
- Increase representation of minorities, women, and persons with disabilities at the GS-13 and higher levels.
- Develop and provide to all CDC employees a course on prevention of sexual harassment in the workplace.
- Train agency EEO Counselors that includes subject matter on mediation, conciliation, and negotiation.
- Ensure effective management involvement in agency equal employment programs and activities and, by maintaining accurate workforce and applicant flow data, establish accountability for accomplishment of program goals and objectives.

## *OFFICE OF THE DIRECTOR — CONTINUED*

### *OFFICE OF GLOBAL HEALTH*

#### *MISSION*

To improve health worldwide by providing leadership, coordination, and support for CDC's global health activities in collaboration with CDC's global health partners

#### *MAJOR ACTIVITIES*

- Development of cross-cutting global health programs and policies at CDC.
- Expansion of CDC's capacity to carry out global health activities through innovative public and private partnerships.
- Coordination of policy development and mobilization of resources in support of CDC global health programs.

*For more information visit our website at: <http://www.cdc.gov/ogh>*

*OFFICE OF THE DIRECTOR — CONTINUED*  
*OFFICE OF WOMEN'S HEALTH*

*MISSION*

To promote and improve the health, safety and quality of life of women.

*MAJOR ACTIVITIES*

- Advocacy for women's health.
- Support for prevention research and program development.
- Building partnerships and collaborations within CDC and with public and private organizations, academic institutions, federal, state and regional agencies, and others.
- Communication of information and research findings to raise public awareness and to improve programs and policies.

*For more information visit our website at:  
<http://www.cdc.gov/od/owh/whhome.htm>*

## *OFFICE OF THE DIRECTOR — CONTINUED*

### *ASSOCIATE DIRECTOR FOR SCIENCE*

#### *MISSION*

Promote scientific excellence and integrity, and the rapid dissemination of scientific innovations, technology, and information.

#### *MAJOR ACTIVITIES*

- Protection of human subjects in public health research.
- Transfer of technology and knowledge that improve health.
- Coordination of vaccine activities, including research, development, and safety and efficacy testing.
- Integration of health information and surveillance systems in public health.
- Integration of behavioral and social sciences research into public health research.

*For more information visit our website at: <http://www.cdc.gov/od/ads/index.htm>*



## ***OFFICE OF THE DIRECTOR — CONTINUED***

### ***ASSOCIATE DIRECTOR FOR MINORITY HEALTH***

#### ***MISSION***

To reduce the disproportionate burden of preventable disease, death, and injury among specific racial and ethnic populations in the United States, and, where appropriate, outside the United States.

#### ***MAJOR ACTIVITIES***

- Target health conditions disproportionately affecting minorities.
- Evaluate and disseminate national surveillance data on minority health conditions.
- Develop minority health education in historically black colleges and universities.
- Foster development of minority health research capabilities at colleges and universities.
- Collaborate with faith-based organizations to develop health promotion and disease prevention initiatives.

#### ***FOCUS ON THE YEARS 2000/2001***

- Advocate minority health improvement.
- Support prevention research and program development.
- Build public/private partnerships with academic institutions, governmental agencies, faith-based organizations, and others to eliminate racial/ethnic health disparities.
- Coordinate support of Executive Branch Minority Health Initiatives.
- Support institutions of higher learning to increase the competence and diversity of the public health workforce.
- Facilitate collection and use of improved race/ethnic-specific data.

*For more information visit our website at:*<http://www.cdc.gov/od/admh>

## EPIDEMIOLOGY PROGRAM OFFICE

### MISSION

Strengthen the public health system by coordinating public health surveillance at CDC and providing domestic and international support through scientific communications, statistical and epidemiologic consultation, and training of experts in surveillance, epidemiology, applied public health, and prevention effectiveness.

### MAJOR ACTIVITIES

#### Applied Public Health Training

- Prepare the public health leaders of tomorrow through training and capacity building in the following
  - ✓ Epidemic Intelligence Service (EIS) — [www.cdc.gov/epo/dapht/index.htm](http://www.cdc.gov/epo/dapht/index.htm)
  - ✓ Preventive Medicine Residency (PMR) — [www.cdc.gov/epo/dapht/pmr.htm](http://www.cdc.gov/epo/dapht/pmr.htm)
  - ✓ Public Health Prevention Service (PHPS) — [www.cdc.gov/epo/dapht/phps.htm](http://www.cdc.gov/epo/dapht/phps.htm)
  - ✓ Excellence in Curriculum Integration through Teaching Epidemiology (EXCITE) — [www.cdc.gov/excite/index.htm](http://www.cdc.gov/excite/index.htm)
  - ✓ Training and Development and Management Activity

#### International Health

- Collaborate with countries to promote healthy living.
  - ✓ Improve the Science of Public Health Practice.
  - ✓ Create and Explore Partnerships in Global Health and Participate in Health Care Delivery and Public Health Partnership.

#### Prevention Research and Analytic Methods

- Improve the health of the public by making, and assisting others in making, evidence based health and public health decisions.
- Catalyze scientific discourse and develop, implement, and evaluate new methodologies and their application to public health.
  - ✓ Train staff within CDC and partner organizations in best analytic methods and public health practices through programs like the Prevention Effectiveness Methods Course and the Steven M. Teutsch Prevention Effectiveness Fellowship Programs.

## ***EPIDEMIOLOGY PROGRAM OFFICE — CONTINUED***

- ✓ Inform staff within CDC and partner organizations about best practices based on research and scientific evidence by conducting scientific research, developing analytic methods, and producing evidence-based products.
- ✓ Administer grants, cooperative agreements, task orders, and contracts.
- ✓ Lead cross-cutting projects such as the development of Health Plan Employer Data and Information (HEDIS) measures with the Clinical Performance Measurement Working Group.

### **Public Health Communications**

- Develop new information systems and provide technical and training opportunities in health communications.
- Improve existing and develops new public health communications strategies through:
  - ✓ The Morbidity and Mortality Weekly Report (MMWR).
  - ✓ MMWR Recommendations and Reports.
  - ✓ MMWR Surveillance Summaries.
  - ✓ State Health Profiles.
  - ✓ Epidemic Information Exchange (Epi-X).

### **Public Health Surveillance and Informatics**

- Work within CDC and with CDC's partners to improve the efficiency of existing information systems, while developing new and innovative technologies and methodologies.
  - ✓ Develop and operate systems for surveillance and information exchange.
  - ✓ Create epidemiologic software.
  - ✓ Build public health informatics capacity through support, training, and consultation.
  - ✓ Coordinate CDC surveillance policy.
  - ✓ Evaluate data and systems to improve efficiency and data quality.

*For more information visit our website at: <http://www.cdc.gov/epo/index.htm>*

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## NATIONAL IMMUNIZATION PROGRAM

### *MISSION*

To prevent disease, disability, and death from vaccine-preventable diseases in children and adults.

### *MAJOR ACTIVITIES*

#### Childhood Immunization

Immunizations are one of the best ways that parents can protect their children against serious diseases. Immunization coverage among children in the United States is the highest ever recorded for most vaccines. These very high immunization coverage levels translate into record or near record low levels of vaccine-preventable diseases. For most of the vaccine-preventable diseases, there has been a 95 percent or more reduction in morbidity. However, 20% of our Nation's two year olds are still missing one or more recommended immunizations. Each day we must begin anew as 11,000 babies are born who will require 16 - 20 doses of vaccine before age two. CDC is committed to ensuring all children have a healthy start to life by preventing vaccine-preventable disease.

#### Vaccine Safety

While no vaccine is 100% safe, the serious adverse events that do occur as a result of vaccination are extremely rare. Immunizations are extremely safe thanks to advancements in medical research and ongoing review by doctors, researchers, and public health officials. NIP is committed to:

- Monitoring the serious adverse events believed to have occurred following immunization.
- Seeking to determine whether these events are caused by the vaccines or are coincidental occurrences of rare illnesses that would have happened anyway.
- Striving to inform parents and the public about the risks and benefits of vaccines so that they have the proper basis for making immunization decisions.
- Carefully evaluating allegations of harmful vaccine effects and adjusting our policies if allegations prove scientifically valid.

## *NATIONAL IMMUNIZATION PROGRAM — CONTINUED*

- As public health practitioners, advocating research that helps determine the true causes of the very real harms that have been suffered.

### **Adult Immunization**

Before recent improvements in vaccine coverage, at least 45,000 adults died each year of influenza, pneumococcal, and hepatitis B infections. Ensuring that adults are immunized against influenza, pneumococcal, and hepatitis B requires a concerted effort with CDC partners. These include the Health Care Financing Administration, the National Coalition of Adult Immunization (a group of more than 85 professional organizations, volunteer organizations, and vaccine companies), public health agencies at the state and local level, and volunteer organizations.

### **Immunization Registries**

NIP is committed to promoting the development and maintenance of state- and community-based computerized registries which capture immunization information on all children because State and community public health agencies and healthcare providers do not have a consistent method for assessing accurately the immunization status of their populations. Missed opportunities for immunization are common and may be increasing due to the growing complexity of the recommended immunization schedule. Healthcare providers frequently overestimate the proportion of their patients that is fully immunized; parents often don't know the immunization status of their children; and most providers don't operate systems that remind the parents when an immunization appointment is missed or due. Immunization Registries can help eliminate these problems and ensure that the Nation's children are vaccinated on time, every time.

### **Polio Eradication**

The United States will continue to face the threat of polio importation until worldwide eradication is achieved. More than \$230 million spent annually to vaccinate children in the U.S. can be saved with the eradication of polio. CDC's polio eradication activity is providing financial and technical assistance to combat polio worldwide. Currently, CDC collaborates with the World Health

## NATIONAL IMMUNIZATION PROGRAM — CONTINUED

Organization, Rotary International, UNICEF, the Task Force for Child Survival and Development, and other partners to implement polio eradication strategies in remaining polio-endemic countries.

### Measles Elimination

Reported measles cases were at record low levels in 1997-1999 with a total of 338 cases reported for these years, an incidence of less than 1 case per 1 million U.S. residents. The majority of the cases were imported from other countries or spread from imported cases. Measles vaccine coverage with one dose has been at least 90% since 1996 and all but two states have school entry requirements for a second dose of measles vaccine. In April 2000, a panel of measles experts consulted by CDC concluded that “Measles is not currently endemic in the United States.”

### Goals

- Eradicate, eliminate, or control vaccine-preventable diseases, disability, and death in the U.S. and globally.
- Raise and sustain vaccine coverage levels in all populations.
- Ensure vaccine safety.
- Establish effective partnerships.
- Conduct scientific research.
- Build and sustain systems which ensure optimal immunization coverage.

*For more information visit our website at: <http://www.cdc.gov/nip/>*

## PUBLIC HEALTH PRACTICE PROGRAM OFFICE

### *MISSION*

To ensure preparedness of the national and global public health system by strengthening the public health infrastructure.

### *MAJOR ACTIVITIES*

#### **Public Health Workforce Development**

- Develop the Life-Long Learning System for Public Health Practice to ensure a highly competent public health workforce through collaboration with local, state, national, and international partners.
- Lead development of standards for public health practice competencies, and develop certification models for competencies in bioterrorism preparedness.
- Deliver high-quality, accredited training and continuing education to develop the core competencies and advanced, technical skills of the Nation's 500,000 public health professionals and the global workforce.
- Through the Sustainable Management Development Program, strengthen the capacity of health agencies in developing countries to train front-line practitioners in effective public health management and intervention practices.

#### **Public Health Systems Development**

- Through the National Public Health Performance Standards Program, assess the preparedness of public health organizations critical to protecting the health of America's communities.
- Develop outcome-oriented standards for preparedness and performance of essential public health services.
- Through the Health Alert Network build advanced informatics and communications infrastructure in State and local public health organizations.
- Improve access to public health knowledge, information, communications, and learning resources for public health and medical practitioners, community-based organizations, policy makers, and the public.

## ***PUBLIC HEALTH PRACTICE PROGRAM OFFICE — CONTINUED***

- Through the CDC Public Health Law Program, improve the understanding and use of laws and policies as public health tools by practitioners, public policy makers, and the legal community.
- Develop, test, and deploy innovative information and knowledge systems, products, and tools for health professionals to monitor, detect, and respond to the full spectrum of infectious diseases and other health threats.

### **Laboratory Systems and Quality**

- Improve the quality of laboratory practice in public health and clinical settings by developing the integrated National System for Laboratory Testing, providing state-of-the-art training to laboratory professionals, and collaborating with U.S. and international partners.
- Improve the quality of human genetic testing through surveillance of practice, training programs, and standards development.

### **Prevention Research**

- Develop and implement a comprehensive research agenda aimed at enhancing workforce competencies, organizational preparedness, informatics, laboratory science and health systems.
- Stimulate public health systems research by CDC and the academic community and translate research findings into policies and practices that strengthen the health system.

## ***FOCUS ON THE YEARS 2000/2001***

### **Public Health Workforce Development**

#### ***Goal***

To prepare the national and global health workforce to prepare for, and respond to, public health threats.

#### ***Strategies***

- Establish a national system of academic, speciality, and local exemplar Centers for Public Health Preparedness.



## ***PUBLIC HEALTH PRACTICE PROGRAM OFFICE — CONTINUED***

- Develop a national implementation plan for public health workforce development in collaboration with partners.
- In conjunction with the Public Health Training Network, establish a “one-stop-shop” website providing comprehensive learner support services—course access and registration, the learning experience itself, certification, and evaluation—to health professionals throughout the country and the world.
- Through the National Laboratory Training Network, deliver classroom and distance-based workshops on high-priority topics, including bioterrorism-related testing procedures, bloodborne pathogens, foodborne illness, and blood lead testing.
- Expand participation in the Management for International Public Health course to additional developing countries and establish the International Senior Management Senior Fellows program to enable graduates to participate in career development at CDC.
- Establish a Sustainable Management Development Program in Nicaragua in collaboration with CARE, raising to more than 46 the number of countries with Management for International Public Health graduates.

## **Public Health Systems Development**

### ***Goal***

To improve the capacity of the Nation’s community and State public health agencies, as well as public health systems globally, to perform essential public health services.

### ***Strategies***

- Field test performance measurement instruments for local and state public health systems and finalize emergency preparedness performance measures. Convene a national conference to demonstrate the use of performance standards in strengthening the public health infrastructure.
- Provide consultation to the 40 metropolitan and State health departments now developing Health Alert Network capacity and extend resources and technical assistance to additional locations.
- Establish a secure CDC website with bioterrorism-related information and protocols accessible to authorized public health and emergency response officials nationally.

## ***PUBLIC HEALTH PRACTICE PROGRAM OFFICE — CONTINUED***

- Establish a new World Health Organization-designated Collaborating Center on Public Health Centers in CDC's Public Health Practice Program Office.

### **Laboratory Systems and Quality**

#### ***Goal***

To improve the quality of laboratory testing for public health purposes.

#### ***Strategies***

- Develop in conjunction with professional organizations and the public health and clinical laboratory community a conceptual framework for a new National System for Laboratory Testing of Public Health Importance.
- Improve the quality of laboratory testing in the field of genetics, HIV, TB, antimicrobial resistance, bioterrorism, and other priority areas.

### **Prevention Research**

#### ***Goal***

To develop the scientific knowledge base for prevention and the capacity of the research community to improve public health practice and health outcomes.

#### ***Strategies***

- Establish new and strengthened partnerships with national associations serving medical, public health, research, and teaching institutions, with emphasis on institutions that serve minority populations.
- Establish partnerships with research and academic institutions to generate new tools for public health practitioners.
- Develop the capacity of the CDC Prevention Research Program to support practice-oriented research on effective, community-based interventions to prevent disease and injury.

*For more information visit our website at: <http://www.phppo.cdc.gov/>*

## NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION

### *MISSION*

To prevent premature death and disability from chronic diseases and to promote healthy personal behaviors.

### *MAJOR ACTIVITIES*

#### **State-based surveillance systems**

Behavioral risk factor surveillance; youth risk behavior surveillance; school health policies and program surveillance; pregnancy and pediatric nutrition surveillance; chronic disease morbidity surveillance using state-level hospital discharge, morbidity, and cancer registry data; development of state-level health information retrieval systems.

#### **Prevention of tobacco use**

Surveillance of and epidemiologic studies on tobacco use and analysis of policy and programmatic interventions; building states' and organizations' capacity for sustaining broad-based tobacco control programs through financial and programmatic assistance; coordinating and evaluating State programmatic assistance; coordinating and evaluating state tobacco program media activities targeting young people, minorities, and the elderly; providing leadership in the development of an active and focused partnership of government, professional, and voluntary organizations to build cohesive and consistent tobacco control policies.

#### **Promotion of healthy dietary practices and physical activity**

Promote State-based programs to improve nutrition and physical activity as part of obesity prevention and provide technical assistance to states in evaluation, strategic planning, and environment/policy interventions; surveillance, epidemiology, international assistance, policy development, and consumer research; promote nutrition and physical activity to consumers at the worksite through managed care organizations; develop evidence-based environment and policy interventions.

## *NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION — CONTINUED*

### **Maternal and infant health**

Safe Motherhood, including Prenatal Smoking Cessation Program, Pregnancy Risk Assessment Monitoring System, and Maternal and Child Health Epidemiology Program; contraceptive safety and efficacy studies; teen pregnancy prevention programs; family planning/maternal and child health surveys; Sudden Infant Death Syndrome (SIDS) studies; study of HIV in women and infants; studies of maternal and infant morbidity and mortality; studies of etiologies for low birth weight and pre-term delivery; evaluation of nutritional supplementation programs; breast feeding promotion programs; prevention of pediatric anemia; pregnancy and pediatric nutrition surveillance systems; studies of international micronutrient deficiencies.

### **Women's reproductive health**

Analysis of the long-term health effects of tubal sterilization; study of the relationship between oral contraceptives use and risk of breast cancer; analysis of common gynecologic (non-pregnancy) conditions; support of HIV prevention services in family planning settings; analysis of etiology and clinical course of pelvic inflammatory disease in women with and without HIV infection; evaluation of the female condom; analysis of pregnancy weight gain recommendations; programs to improve iron status in pregnancy; surveys on reproductive health in the Americas, Eastern Europe, and Africa.

### **Cardiovascular disease prevention**

Analysis and publication of national surveillance data for coronary heart disease and stroke; demonstration of and technical assistance for community-based interventions; training state health departments and other organizations in community-based prevention strategies; supporting state and local education agencies to reduce risk factors among students; promoting community-based interventions designed to reduce racial and ethnic disparities in cardiovascular diseases and risk factors.

### **Breast and cervical cancer control**

State-based comprehensive breast and cervical cancer control programs; surveillance and epidemiology; national education efforts for health care providers and the public; quality assurance of mammography and Pap smear screening; partnership development.

## ***NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION — CONTINUED***

Through September 1999, more than two million screenings have been provided to low-income women, resulting in 7,394 women being diagnosed with breast cancer and 613 women being diagnosed with invasive cervical cancer.

### **Diabetes control and prevention**

Analysis and publication of national diabetes surveillance data; demonstration and training in community-based interventions; state-based diabetes control programs to lead both health systems and communities toward improved diabetes prevention and control in an evolving health system; coordination of public health efforts to translate the best results of diabetes research into widespread practice; development of media strategies and public information.

### **National program of cancer registries**

Funding for nationwide population-based cancer registries to monitor local trends in disease burden and to provide vital information for interventions and allocation of health care resources; monitoring quality assurance standards for completeness, timeliness, and quality of cancer registry data.

### **Oral health promotion**

Collection, analysis, and dissemination of oral disease surveillance data; promotion and implementation of proven prevention strategies; development and demonstration of community-based interventions; economic and evaluation research to target program resources efficiently; ensuring the safety of the dental care environment.

### **Adolescent and school health**

Building infrastructure for coordinated school health programs including chronic disease and HIV prevention programs for school- and college- aged youth; establishing partnerships between state and local health and education agencies and national non-governmental agencies; identifying and disseminating prevention programs with credible evidence of effectiveness; youth risk behavior surveillance system; school health policies and program surveillance; technical assistance to improve program evaluation; and collaborating with other Federal agencies and national organizations to implement the state-led National Initiative to Improve Adolescent Health by the Year 2010.

## ***NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION — CONTINUED***

### **Prevention Research Centers—translating research into practice**

Located at 23 U.S. academic centers, prevention research centers serve as a bridge between academia, clinicians, health maintenance organizations, and state and local health departments; conduct research to define effective prevention strategies; help state and local health departments plan and evaluate their prevention efforts.

### **Preventive Health and Health Services Block Grant**

Intervention programs to reduce incidence of chronic diseases; detection of hypertension and elevated cholesterol; education and risk reduction targeting smoking, exercise, and diet; training of emergency medical service technicians in support of EMS systems.

### **Colorectal cancer**

Increase public awareness of colorectal cancer; promote increased patient-provider communication about colorectal cancer screening options; increase national colorectal cancer screening rates; support research to determine clinical and consumer barriers to screening; and develop and maintain prevention partnerships around colorectal cancer.

### **Racial and Ethnic Approaches to Community Health 2010 (REACH 2010)**

Community-based demonstration projects aimed at eliminating health disparities relating to the “Healthy People 2010” focus areas of Maternal, Infant, and Child Health; Diabetes; Heart Disease and Stroke; HIV; Immunization and Infectious Disease; and Cancer, through addressing the health priority areas of infant mortality, diabetes, cardiovascular diseases, HIV infections/AIDS, deficits in breast and cervical screening and management, or deficits in child and/or immunization rates.

### **Promotion of healthy aging**

Epidemiologic research related to high-prevalence diseases and conditions among older Americans, e.g., osteoporosis, urinary incontinence, Alzheimer’s disease, depression; research on broader aging-related issues, such as long-term care; development, validation, and implementation of quality of life measurement.

## ***NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION — CONTINUED***

### **Improving the quality of life for persons affected by arthritis**

Analysis and publication of national arthritis surveillance data, including impact of arthritis on quality of life; risk factor identification and disability prevention research; building arthritis control capacity in state health departments and national organizations through financial and technical assistance and staff training; coordinated health communications to promote active self management of arthritis; a systems approach to quality improvement in arthritis clinical care.

## ***FOCUS ON THE YEARS 2000/2001***

### **Cardiovascular Disease (CVD) Prevention Program**

Among both men and women, and across all racial and ethnic groups, CVD is our Nation's leading killer. About 960,000 Americans die of CVD each year, accounting for more than 40% of all deaths.

#### ***Goal***

To reduce the burden of cardiovascular disease in the United States.

#### ***Strategies***

- Assist states in their efforts to implement CVD prevention and control programs.
- Establish a national campaign to promote healthy behavior choices.
- Enhance CDC's National Standards Laboratory to improve state laboratory capacity and to tailor screening for young people, elderly, and minority populations.
- Assist states to better measure the burden of CVD, to monitor progress in reducing risk behaviors, and to determine the economic cost of the disease.
- Support other public health programs that contribute to CVD prevention.
- Support university-based Prevention Research Centers to develop effective interventions.
- Eliminate or reduce racial ethnic disparities.

## *NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION — CONTINUED*

### **Prevent Obesity and Related Chronic Diseases**

#### *Goal*

To prevent and control obesity and related chronic diseases through nutrition and physical activity interventions.

Obesity has risen at an epidemic rate over the past 20 years. The prevalence of overweight adults in the United States increased by 50% between 1980 and 1994 with currently more than half of adults being overweight [body mass index (BMI) of 25 or more]. Nearly one-fourth of the adult population meets the criteria for obesity (BMI of 30 or more). The percentage of children and adolescents who are overweight has more than doubled since the early 1970s with about 13% of children and adolescents now seriously overweight. Obesity is occurring, with some variation, among all races and ethnic groups, all ages, and at all income and education levels.

#### *Strategies*

- Build state capacity to conduct nutrition and physical activity programs to prevent and control obesity and related chronic diseases.
- Vigorously pursue research, surveillance, and epidemiologic initiatives to better define the impact of the obesity epidemic, its determinants, and systems and population characteristics relative to the spread of the condition of overweight and obesity, particularly in high risk populations.
- Assist states to better measure the burden of physical inactivity, poor nutrition and obesity, to monitor progress in reducing risk behaviors, and to determine the economic cost of the disease.
- Support university-based Prevention Research Centers to develop effective interventions.

*For more information visit our website at:  
<http://www.cdc.gov/nccdphp/index.htm/>*



## NATIONAL CENTER FOR ENVIRONMENTAL HEALTH

### *MISSION*

To provide national leadership, through science and service, that promotes health and quality of life by preventing and controlling those diseases, birth defects, disabilities, or deaths that result from interactions between people and their environment.

### *MAJOR ACTIVITIES*

#### **Birth defects, child development, and disability and health**

Define and monitor public health problems relating to birth defects and developmental disabilities; conduct epidemiologic studies to identify the causes of birth defects and developmental disabilities; develop and test intervention programs to prevent fetal alcohol syndrome, neural tube defects, and other birth defects and developmental disabilities; assist state and local health departments and other partners in implementing and evaluating programs to prevent birth defects and developmental disabilities.

#### **Environmental hazards and health effects**

Investigate health effects of human exposure to environmental hazards and of disease outbreaks associated with nonbiologic contaminants in the environment, including those found in water, food, and drugs; assess the health effects of air pollution and radiation, including radon; support programs to prevent childhood lead poisoning; assist and collaborate with state and local health agencies on environmental public health issues, including epidemiologic responses to natural and man-made disasters; conduct research on emergency response and preparedness.

#### **Environmental health laboratory sciences**

Develop and apply laboratory measurements to assess human exposure to toxicants; study the health effects (e.g., cancer) from exposure to toxicants, such as lead, cadmium, mercury, dioxin, PCBs, pesticides, environmental tobacco smoke, benzene, and others—more than 200 toxicants in all; measure the U.S. population's exposure to toxicants and publish a National Exposure Report Card; develop a Rapid Toxic Screen to detect exposure to chemical terrorism agents; provide laboratory support during national and international environmental health emergencies to determine the cause of death or disease.

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## *NATIONAL CENTER FOR ENVIRONMENTAL HEALTH — CONTINUED*

### **Emergency and environmental health services**

Coordinate for CDC all requests for assistance in dealing with natural and technologic disasters and terrorism from federal, state, local, and international partners; provide technical assistance and scientific guidance in response to organizations working in complex emergencies in order to reduce mortality and morbidity among emergency-affected populations worldwide; implement the National Pharmaceutical Stockpile; ensure the health and safety of workers and the general population during the destruction of the nation's chemical weapons arsenals; deliver environmental health services through close collaboration with communities and state and local health departments; ensure the health and safety of passengers traveling on ships that call at U.S. ports.

### **Genetics and disease prevention**

Coordinate CDC's efforts to translate advances in human genetics research into public health research, policy, and program development and evaluation for the purpose of promoting health and preventing disease and disability; foster partnerships on genetics-related public health activities with other governmental and nongovernmental organizations; ensure that ethical, legal, and social issues are addressed in applying genetics to public health.

*For more information visit our website at:  
<http://www.cdc.gov/nech/ncehome.htm>*

## NATIONAL CENTER FOR HEALTH STATISTICS

### *MISSION*

To provide statistical information that will guide actions and policies to improve the health of the American people.

### *MAJOR ACTIVITIES*

#### **Advances in national data systems**

- **National Health and Nutrition Examination Survey**—NHANES' return to the field in 1999 marked the beginning of a new era with planned operation as a continuously operating survey, as opposed to the previous periodic cycles in the field. It also began operations with a new, automated, state-of-the-art communications infrastructure that collects and processes all NHANES data, nearly eliminating the need for paper forms and manual coding operations. NCHS successfully completed the first year of data collection for NHANES 1999+. Nearly 4,000 individuals were interviewed and examined in 12 Primary Sampling Units throughout the country.
- **National Health Interview Survey**—This household interview survey reports annually on health status, illness and disability, and health practices and attitudes. The survey has been redesigned and automated to improve the timeliness and policy relevance of data. Currently, data on mental health are being evaluated and a supplement on mental health is being developed. Plans are also underway for the 2000 NHIS cancer supplement that will provide data on risk factors and the use of cancer screening tests.
- **National Vital Statistics System**—The national system that reports on births and deaths has been streamlined and automated for quicker reporting from the states. Full-year preliminary data for 1998 (over 90% of records) are now available 30% earlier than in the past. Electronic standard certificates for birth and death, slated for implementation in 2003, will also provide quicker reporting.

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## NATIONAL CENTER FOR HEALTH STATISTICS — CONTINUED

- **National Health Care Surveys**—These surveys provide data on care provided in physicians' offices, hospital inpatient departments, nursing and personal care homes, hospital emergency and outpatient departments, and through home and hospice care services. NCHS is currently updating and evaluating these surveys based on broad input from experts.

### New forms of data release

- *Health, United States*, the annual report on the health status of the Nation, has its own home page on the NCHS web site at <http://www.cdc.gov/nchs/products>. *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*."
- Virtually all of NCHS publications are currently available electronically. There is also an easy-to-use subject index on the web site which allows users quicker access to data.
- Health E-Stats, a new series of Internet data releases on topics of current interest and importance, was recently launched. They can be found on the NCHS website at <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/hestats.htm>.
- All new major data files are now released on CD-ROM, including data from the health interview and health care surveys.

### NCHS DATA HIGHLIGHTS

- The number of births in the United States rose in 1998 for the first time since 1990, according to final Vital Statistics data.
- Age-adjusted mortality from HIV-related illness continued its decline, moving off the list of the 15 leading causes of death, falling 21% in 1998 to a rate of 4.6%, the lowest since 1987.

## *NATIONAL CENTER FOR HEALTH STATISTICS — CONTINUED*

- Hospital use for HIV patients has also declined, according to the National Hospital Discharge Survey. From 1995 to 1997, there were 71,000 fewer hospitalizations and the average length of hospital stay fell 1.2 days, from 9.3 days in 1995 to 8.1 days in 1997. This decline resulted in 878,000 fewer days of hospital care for HIV patients.
- After falling to an all-time low of 7.2 deaths per 1,000 live births in 1996, the national infant mortality rate remained steady in 1998, the first time in four decades that the rate has not declined.
- Four in ten U.S. adults report that they NEVER engage in any exercise, sports, or physically active hobbies in their leisure time, according to the 1997 National Health Interview Survey.
- Based on data from the National Health and Nutrition Examination Survey (NHANES), new pediatric growth charts were released in 2000. This new tool will be used by pediatricians, nurses, and nutritionists to monitor children's growth and will help identify weight problems early on in children.

## *FOCUS ON THE YEARS 2000/2001*

### **Addressing Contemporary Data Needs**

#### *Goal*

To refine national data systems to address pressing needs in public health and health research.

#### *Strategies*

- Adapt existing NCHS data systems and surveys so that they can increase the capacity to produce state and local health data; develop new approaches to collecting and analyzing small-area data.
- Modify collection and dissemination activities to meet the needs of a rapidly changing health care system.
- Enhance data availability for minority populations.

## *NATIONAL CENTER FOR HEALTH STATISTICS — CONTINUED*

- Address challenges and opportunities for developing national health data resources with the implementation of the Health Insurance Portability and Accountability Act, playing an active role in developing data standards and policies for confidentiality, privacy, and data access.
- Provide continued leadership for the HHS Survey Integration Initiative.

*For more information visit our website at: <http://www.cdc.gov/nchs/>*

## NATIONAL CENTER FOR HIV, STD, AND TB PREVENTION

### *MISSION*

To provide national leadership in preventing and controlling human immunodeficiency virus infection, sexually transmitted diseases, and tuberculosis by working with state, national, and international partners in effective multi-disciplinary programs of surveillance, research, prevention, and evaluation.

### *MAJOR ACTIVITIES*

#### **HIV/AIDS prevention**

Provide financial and technical assistance to state, local, and territorial health departments; and more than 200 HIV-prevention community planning groups comprised of national and regional minority organizations; community-based organizations; business, labor, and religious organizations; and training agencies. NCHSTP conducts epidemiologic, surveillance, behavioral, and operations research; assists in the transfer of research findings into HIV prevention programs; works to implement and evaluate guidelines for preventing mother-to-infant (perinatal) HIV transmission; published the *Compendium of HIV Prevention Programs with Proven Effectiveness*, and continues to implement and evaluate interventions for populations and persons at highest risk for infection.

#### **Sexually transmitted disease (STD) prevention**

Provide national leadership through research, policy development, and support of effective services to prevent STDs (including HIV infection) and their complications such as enhanced HIV transmission, infertility, adverse outcomes of pregnancy, and reproductive tract cancer; assist health departments, health-care providers, and non-governmental organizations and collaborated with other governmental entities to develop, synthesize, translate, and disseminate timely, science-based information; develop national goals and science-based policy; and, develop and support science-based programs that meet community needs.

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## *NATIONAL CENTER FOR HIV, STD, AND TB PREVENTION — CONTINUED*

### **Tuberculosis (TB) elimination**

Support state and local health department efforts in preventing and controlling TB by providing directly-observed therapy to ensure treatment completion by patients; provide follow-up to persons with TB, suspected of having TB, or exposed to TB; investigate and control outbreaks, including drug-resistant TB; strengthen laboratory activities; conduct active surveillance to monitor TB trends and analyze characteristics of the problem; conduct TB screening among persons at high risk and provide preventive therapy for persons found with infection; provide information and education to health care providers, persons at high risk, and the general population; conducted research to improve TB diagnostic and treatment tools; collaborated with international organizations and foreign countries to conduct research and reduce the importation of TB to the United States.

## *FOCUS ON THE YEARS 2000/2001*

### **SAFE: Sero-status Approach to Fighting the HIV/AIDS Epidemic**

#### ***Goal***

Increasing knowledge of sero-status among those who are HIV infected, but don't yet know it.

#### ***Strategies***

- Preventing HIV infection among high-risk individuals, and their partners.
- Increasing HIV prevention interventions for individuals living with HIV.
- Strengthening the HIV prevention-treatment interface.
- Build and sustain partnerships with organizations concerned with fighting the HIV/AIDS epidemic.



## ***NATIONAL CENTER FOR HIV, STD, AND TB PREVENTION — CONTINUED***

### **Syphilis Elimination Program**

#### ***Goal***

To eliminate syphilis in the United States by 2005.

#### ***Strategies***

- Target the 33 counties and cities with a heavy burden of syphilis or high potential for re-emergence of the disease.
- Enhance surveillance and expand clinical laboratory services.
- Enhance health communications/health promotion and strengthen community involvement and partnership.

### **TB Control Among the Foreign-Born**

#### ***Goal***

Reduce the number of foreign-born cases of TB reported in the United States.

#### ***Strategies***

- Improve recognition and management of TB among the foreign born.
- Extend efforts to improve the TB follow-up of at-risk immigrants and refugees soon after they arrive in the United States.
- Improve methods to forward case information rapidly to local health departments so that effective public health interventions can be put into place.

*For more information visit our website at:  
<http://www.cdc.gov/nchstp/od/nchstp.html>*

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## NATIONAL CENTER FOR INFECTIOUS DISEASES

### *MISSION*

To prevent illness, disability, and death caused by infectious diseases in the United States and around the world.

### *MAJOR ACTIVITIES*

#### **Emerging Infectious Disease Threats**

In the United States and internationally, infectious diseases threaten our health and result in major health care costs. As society and the environment change, infectious disease agents also change. Microorganisms adapt to the changing environment and are carried to every corner of the globe by a growing number of travelers. Several chronic diseases once attributed to genetics or environmental factors are now known to be caused or exacerbated by infectious agents. These include stomach ulcers and certain types of cancer and arthritis. Changes in the way we live, eat, and interact with others have made us more vulnerable to infectious diseases.

To address these threats, National Center for Infectious Diseases draws upon its workforce of diverse and multi-disciplinary teams of epidemiologists, microbiologists, behavioral scientists, statisticians, veterinarians, entomologists, health educators, information technology, informatics specialists, public health advisors, administrators, and many other types of public health professionals. In conjunction with CDC's partners, NCID helped to develop a strategic plan, *Preventing Emerging Infectious Diseases: A Strategy for the 21<sup>st</sup> Century*. This plan outlines improvements in the public health system that allow detection and prevention of emerging infections and ultimately save lives and reduce health care costs.

### *FOCUS ON THE YEARS 2000/2001*

- Determine the epidemiology and natural history of emerging infectious diseases, such as foodborne and waterborne diseases; childhood infections, including meningitis; rodent, tick and mosquito-borne diseases, such as hantavirus, pulmonary syndrome, and Lyme disease; and infections acquired in health-care settings.

## NATIONAL CENTER FOR INFECTIOUS DISEASES — CONTINUED

- Develop, implement, and evaluate behavioral and technical strategies to monitor, control, and prevent bacterial, viral, fungal, parasitic, and drug-resistant pathogens. These strategies include preparedness for pandemic influenza and for bioterrorism response; best use of safe and effective vaccines; and activities to ensure refugee and traveler health.
- Enhance communications and training for an array of professional and community partners in emerging and re-emerging infectious diseases.

### Goals

- **Surveillance and response**—Detect, investigate, and develop ways to stop the spread of new, reemerging, and drug-resistant infectious diseases.
- **Research**—Conduct and sponsor laboratory and epidemiologic research for prevention of emerging and reemerging infectious diseases.
- **Prevention and control**—Provide public health information about emerging infectious diseases and ensure implementation of prevention strategies.
- **Infrastructure**—Strengthen local, state, and federal public health departments to support surveillance and response activities, and implement prevention and control programs.

*For more information visit our website at: <http://www.cdc.gov/ncidod/>*

## NATIONAL CENTER FOR INJURY PREVENTION AND CONTROL

### *MISSION*

To provide leadership in preventing and controlling injuries outside the workplace (i.e., reducing the incidence, severity, and adverse outcomes of injury) through research, surveillance, implementation of programs, and communication.

### *MAJOR ACTIVITIES*

#### **Unintentional injury prevention**

Research into the causes of and risk factors for motor vehicle crashes, with special emphasis on older drivers and alcohol-related incidents; fire-related injuries; fall-related injuries and hip fractures among older adults; injuries involving children on playgrounds; injuries from dog bites; pedestrian injuries; and drownings; interventions to prevent these injuries and evaluation of these interventions; promotion of smoke alarm use; child occupant protection; and, bicycle safety.

#### **Violence prevention**

Surveillance of intimate partner violence and youth violence; research into the causes and consequences of, and risk and protective factors for, suicide, homicide, youth violence, family and intimate partner violence, sexual assault, dating violence, and firearm-related injuries; community demonstration projects to prevent youth violence and comprehensive community response programs to prevent intimate partner violence; evaluation of programs to prevent violence.

#### **Acute care and rehabilitation of injured persons; disabilities prevention**

Development of emergency department data systems and trauma registries; evaluation of clinical prevention services in the acute care setting; trauma care systems evaluation and effectiveness; trauma information and exchange program; improvement of poison control center services and systems; surveillance of traumatic brain and spinal cord injuries; development and evaluation of registries for traumatic brain injury; epidemiology of injury

## ***NATIONAL CENTER FOR INJURY PREVENTION AND CONTROL — CONTINUED***

outcomes; prevention of secondary conditions associated with injury, such as alcohol abuse; pressure ulcer prevention among persons with spinal cord injury.

### **Data to support injury control programs**

Establishment of a Web-based Injury Statistics Query and Reporting System (WISQARS™) to provide customized injury-related mortality data useful for research and for making informed public health decisions; national surveillance of traumatic brain and spinal cord injuries; Injury Control and Risk Factor Survey (ICARIS); Firearm Injury Surveillance Study; collection of data on injuries in special populations, including American Indians and Alaska Natives, women, and at-risk youth.

### **Assistance in injury research and interventions**

University-based Injury Control Research Centers; Injury Control Research Project Grants; support for research in injury biomechanics; small business innovation research grants, cooperative agreements, and grants awarded to state health departments for injury surveillance and for implementation and evaluation of interventions.

### **Leadership and coordination of national injury control efforts**

Assistance in development of, and lead agency for, year 2010 objectives for reducing unintentional injuries and violent and abusive behavior; staffing of Secretary's Advisory Committee on Injury Prevention and Control; interdepartmental coordination through participation of relevant HHS agencies and other U.S. departments on the Secretary's Advisory Committee; development and review of independent and joint grant programs; development of inventory of federal injury control research projects and injury prevention programs.

### **Collaboration with partners**

Development of an alliance of leading safety organizations called SafeUSA™, dedicated to eliminating unintentional and violent injury and death in America; establishment of a clearinghouse for safety-related information, including a

## *NATIONAL CENTER FOR INJURY PREVENTION AND CONTROL — CONTINUED*

web site ([www.cdc.gov/safeusa](http://www.cdc.gov/safeusa)) and hotline (888-252-7751 or TTY 800-243-7012); host of a national injury prevention and control conference to promote the exchange of research and program efforts.

### *FOCUS ON THE YEARS 2000/2001*

#### **Traumatic Brain Injury: The Invisible Epidemic**

##### *Goal*

To significantly reduce long-term disabilities, injuries, and related health care costs associated with traumatic brain injury.

##### *Strategies*

- Raise public and professional awareness and understanding of traumatic brain injury (TBI).
- Support a coordinated, national, science-based approach to prevent traumatic brain injury and mitigate its impact.
- Fund research on motor-vehicle crash prevention, child safety seat use, fall prevention, bicycle helmet use, parent education, child abuse, suicide, and youth violence.
- Establish and improve surveillance systems.
- Develop state-based, population-based follow-up registries of persons who have sustained TBI.
- Identify disability prevention opportunities.
- Determine the feasibility of using follow-up registries to link people to needed services.
- Increase the use of effective prevention strategies in all communities, particularly among the underserved.
- Support the development and evaluation of demonstration programs that apply research findings to prevent traumatic brain injury.
- Enhance existing programs for young people and communities, and tailor programs to specific populations.
- Include public and private organizations as partners in preventing traumatic brain injuries and lessening the negative impact.

*For more information visit our web site at [www.cdc.gov/ncipc/ncipchm.htm](http://www.cdc.gov/ncipc/ncipchm.htm)*

## NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

### *MISSION*

Safety and health at work for all people through research and prevention.

### *MAJOR ACTIVITIES*

NIOSH's program is focused on four strategic goals: 1) conducting a targeted program of research to reduce injuries, illnesses, and deaths among workers in high-priority areas and high-risk sectors, 2) developing a system for surveillance of major occupational injuries, illnesses, and exposures, 3) increasing occupational injury and illness prevention through workplace evaluations, interventions, and recommendations, and 4) providing workers, employers, the public, and the occupational safety and health community with information, training, and capacity to prevent work-related injuries and illnesses.

### Targeted research

- **Implementation of the National Occupational Research Agenda (NORA)**—Launched in 1996 with extensive input and outside review by more than 500 diverse organizations and individuals, NORA is a national framework of 21 priorities that drive occupational safety and health research in the U.S. NIOSH is currently working with more than 200 partners to strengthen scientific progress through NORA.
- **Intramural research**—NIOSH is recognized nationally and internationally as the premier Institute in occupational safety and health research; its staff of 1,400 is the largest devoted to occupational safety and health in the world. NIOSH has aligned its research programs with NORA and targets its research to address a broad range of serious workplace hazards. These efforts include continuing research and prevention to address hazards in traditional industries, as well as research and prevention to address new concerns that have emerged from major changes in the workplace over the past decade.

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## *NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) — CONTINUED*

- **Mine safety and health research**—NIOSH is the lead federal Institute for research and training in mine safety and health. NIOSH research uses the latest in technology to better understand the conditions and situations that place miners at risk of injury and illness, and to design effective, practical safeguards.
- **National agricultural safety and health research and dissemination program**—NIOSH has an extensive agricultural safety and health research program to address the high risks of injuries and illnesses experienced by agricultural workers and their families. NIOSH funds nine national university-based Agricultural Research Centers to serve distinct geographic regions across the United States. Through the Community Partners for Healthy Farming program, NIOSH funds activities in 12 states for monitoring and preventing agricultural injuries and illnesses. In addition, NIOSH works closely with the agricultural community to protect young people on farms from injury and death.
- **National construction safety and health research and dissemination**—NIOSH supports intramural and extramural research to prevent injury, illness, and death in construction. These efforts and interventions address a range of hazards, including traumatic injuries, silica exposure, lead exposure, dermatitis, and musculoskeletal disorders, and include university-based collaborating research programs in six states, spearheaded by the Center to Protect Workers' Rights, a nonprofit research center for the construction industry, which is partially funded by NIOSH.
- **Health care worker health and safety**—NIOSH also works with diverse partners to address major hazards in the health care industry. The number of health care workers is increasing, especially among lower-paid jobs such as nursing home attendants and home health aides, and in contrast to the work force as a whole, occupational injuries and illnesses in this industry are rising. NIOSH research findings have led to important recommendations for preventing latex allergy and needlestick injuries among health care employees.



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## *NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) — CONTINUED*

### Surveillance

- **National coal workers' x-ray surveillance program**—NIOSH examines coal miners' chest x-rays to detect early coal worker's pneumoconiosis (black lung) and other lung diseases so that effective interventions can be taken to protect miners' health.
- **National Traumatic Occupational Fatalities database (NTOF)**—NTOF is a national death certificate-based surveillance program for identifying fatal workplace injuries. Through NTOF, NIOSH identifies problem areas where injury prevention efforts are needed, and follows the progress made in reducing fatal job-related injuries.
- **Fatality Assessment and Control Evaluation program (FACE)**—NIOSH collaborates with state health departments in the investigation of work-related deaths in order to understand and address the factors that contribute to or cause such fatalities. Following such investigations, NIOSH disseminates recommendations to employers and workers.
- **Sentinel Event Notification System for Occupational Risks (SENSOR)**—Through cooperative agreements with state health departments, NIOSH supports surveillance for pesticide poisoning, asthma, silicosis, burns, dermatitis, youth injury, carpal tunnel syndrome, amputation, and noise-induced hearing loss. Data thus provided are a tool for identifying and preventing workplace health and safety hazards.
- **Adult Blood Lead Epidemiology and Surveillance (ABLES) program**—Operated by NIOSH and state partners, ABLES is a surveillance system for identifying cases of elevated blood-lead levels among U.S. adults.

### Workplace Evaluations and Interventions

- **Health hazard evaluations**—NIOSH responds to requests from workers, employers, and government agencies to evaluate occupational health concerns at specific work sites. NIOSH subsequently makes recommendations for preventing hazards at that specific work site and similar work sites.

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## *NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) — CONTINUED*

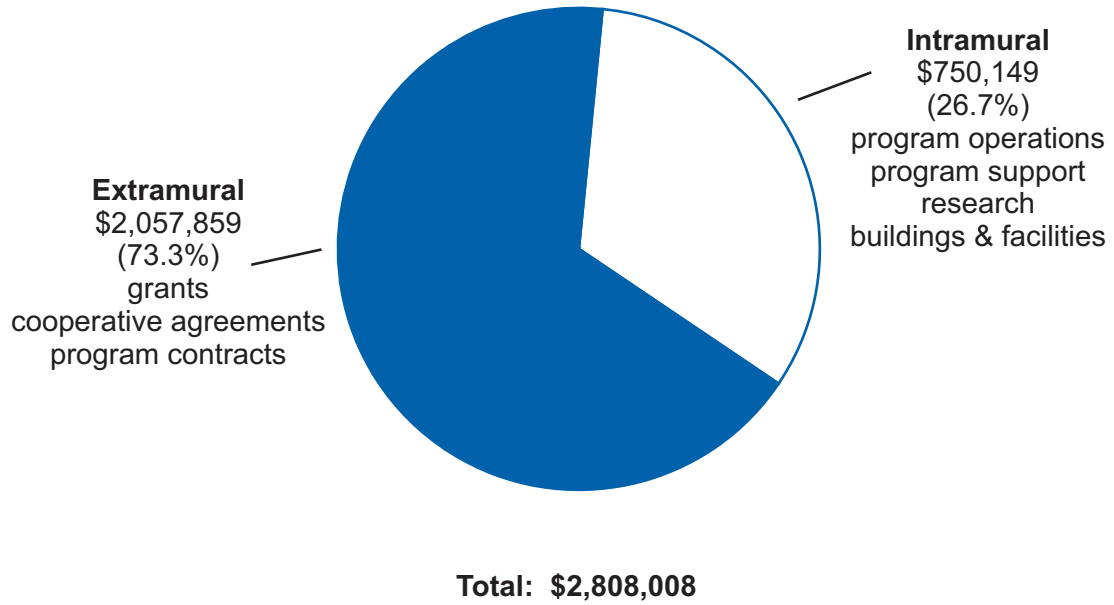
- **Control technology assistance**—NIOSH works with diverse partners to advance the development of hazard control technology, stressing practical, solutions-oriented efforts that will have broad impact. For example, NIOSH and partners from industry, labor, and government developed ground-breaking guidelines to reduce worker exposures from hot mix asphalt fumes in the asphalt paving industry.
- **Respirator certification**—NIOSH is the only U.S. agency responsible for ensuring that the more than 6 million workers who rely on respirators for protection have safe and effective devices. NIOSH sets performance and design requirements for respirators used by workers, evaluates the quality of respirators produced, and certifies that the equipment meets the requirements.

### **Providing Information, Training, and Capacity**

- **Support of professional training in occupational safety and health**—NIOSH-funded Education and Research Centers (ERCs) and training project grants at universities across the country meet regional and national needs for trained occupational safety and health professionals.
- **Publication of NIOSH research**—NIOSH disseminates its research findings and recommendations in peer-reviewed scientific journals, as well as in a diverse array of NIOSH Alerts, Current Intelligence Bulletins, Criteria Documents, and other NIOSH publications in paper and CD-ROM form. These publications, along with additional information on occupational safety and health, are available on NIOSH's web site, [www.cdc.gov/niosh](http://www.cdc.gov/niosh).
- **Toll-free information service (1-800-35-NIOSH)**—NIOSH provides toll-free information on occupational hazards and prevention measures to workers, employers, health and safety professionals, the scientific community, and the general public.

# CDC FY 2001 BUDGET\* (EXTRAMURAL/INTRAMURAL)

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\*FY 2001 President's Budget



## BRIEF HISTORY OF THE CDC

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- 1946** The "Communicable Disease Center," or CDC, opens in the old Office of Malaria Control in War Areas in downtown Atlanta. Part of the U.S. Public Health Service (PHS), the CDC has a mission to work with state and local health officials in the fight against malaria, still prevalent in several Southern states, typhus, and other communicable diseases.
- 1947** A token payment of \$10 is made for 15 acres on Clifton Road in Atlanta, the home of the CDC headquarters today.
- 1951** The Epidemic Intelligence Service (EIS) is established. EIS quickly becomes the nation's—and world's—response for a wide range of emergencies. Its young, energetic medical officers make house calls around the world.
- CDC broadens its focus to include polio and establishes closer working relationships with the states. National disease surveillance systems begin.
- 1955** The Polio Surveillance Unit is established. Ten years later, CDC assumes responsibility for the control of polio. (The disease almost disappears from the Western Hemisphere in 1991).
- 1961** CDC takes over publication of the Morbidity and Mortality Weekly Report (MMWR), which publishes important data on deaths and certain diseases from every state every week.
- 1966** CDC launches the Eradication Program to eradicate smallpox and control measles in 20 African countries. (Through CDC's efforts, smallpox, a disease that killed millions of people over the centuries, was eradicated from the world by the late 1970's).
- 1970** The Communicable Disease Center renamed the Center for Disease Control to reflect a broader mission in preventive health.
- 1973** The National Institute for Occupational Safety and Health (NIOSH), which protects Americans from on-the-job hazards, becomes part of CDC.

- 1976** CDC investigates an outbreak of illness in Philadelphia that will later be called Legionnaire's disease. The following year, CDC isolates the causative agent for this disease: *Legionella pneumophila*.
- 1977** The last case of endemic smallpox in the world is reported in Somalia.
- 1978** CDC opens an expanded, maximum-containment laboratory to handle viruses too dangerous to handle in an ordinary laboratory.
- 1979** The last case of wild polio virus in the United States is reported.
- 1980** The agency is renamed the Centers for Disease Control (CDC) to reflect a change in organizational structure.
- 1981** With the California Department of Health, CDC reports the first cases of an illness that later will be called acquired immunodeficiency syndrome (AIDS) and organizes a task force of personnel from each of its centers in response to evidence of an epidemic. AIDS research and prevention efforts continue today.
- 1983** CDC establishes a Violence Epidemiology Branch to apply public health prevention strategies to the problems of child abuse, homicide, and suicide.
- 1986** The Office of Smoking and Health, which targets the Nation's primary preventable health problem, becomes part of CDC.
- 1987** CDC reports a strong association between Reye's Syndrome and aspirin, noting that 90 percent of cases could be prevented by reducing aspirin treatment of children.
- 1988** CDC establishes the Center for Chronic Disease Prevention and Health Promotion to target chronic disease, such as heart disease, cancer, and diabetes.
- 1991** CDC begins development of a national strategic plan for the early detection and control of breast and cervical cancers among all American women.
- CDC conducts the first large scale health survey that employs computer-assisted interviewing.

**1992** CDC adds “Prevention” to its name to reflect a broader role and vision, but retains the initials, CDC.

**1993** CDC launches the National Childhood Immunization campaign.

In response to an outbreak of an unexplained pulmonary illness in the southwestern United States (an area shared by Arizona, New Mexico, Colorado and Utah known as "The Four Corners"), virologists pinpointed virus genes at the molecular level, and were able to link the pulmonary syndrome with a virus, in particular a previously unknown type of hantavirus. The new virus was called Sin Nombre virus (SNV)-and the new disease caused by the virus was named hantavirus pulmonary syndrome, or HPS.

**1995** CDC begins publishing the Emerging Infectious Diseases journal, a peer-reviewed publication established expressly to promote the recognition of new and reemerging infectious diseases around the world.

CDC staff go onsite in Zaire to investigate an outbreak of deadly Ebola virus.

CDC recommends AZT therapy for HIV-infected pregnant women to reduce transmission of the virus to their babies.

**1996** CDC celebrates 50 years of success as the Nation's Prevention Agency.

**1997** CDC participates in the Presidential Apology on the Tuskegee Study - a nationally televised White House event - to redress the wrongs of the past and help restore the confidence of Americans in their government.

CDC assists in the investigation of a new strain of flu in humans in Hong Kong; 18 cases and six deaths due to influenza A (H5N1) are reported.

CDC released the first annual report of pregnancy success rates for fertility clinics in the United States. The report was mandated by the Fertility Clinic Success Rate and Certification Act passed by Congress in 1992.

- 1998** The first Surgeon General's report to focus on tobacco use among minorities in the United States is released. "Tobacco Use Among U.S. Racial/Ethnic Minority Groups" provides a single, comprehensive source of data on of tobacco use and it's physical effects among African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics.
- 1999** For the first time, CDC names a campus and a building after a person. The Edward R. Roybal campus and the Edward R. Roybal Laboratory are named after Congressman Edward R. Roybal, a former public health worker.
- 2000** CDC participates with other federal agencies in the planning and conduct of a \$100 million *LIFE* initiative in support of sub-Saharan African countries and India to stem the spread of HIV and provide care for those affected by this devastating disease.