

Health United States 1989  
and  
Prevention  
Profile



U.S. DEPARTMENT OF HEALTH  
AND HUMAN SERVICES

Public Health Service

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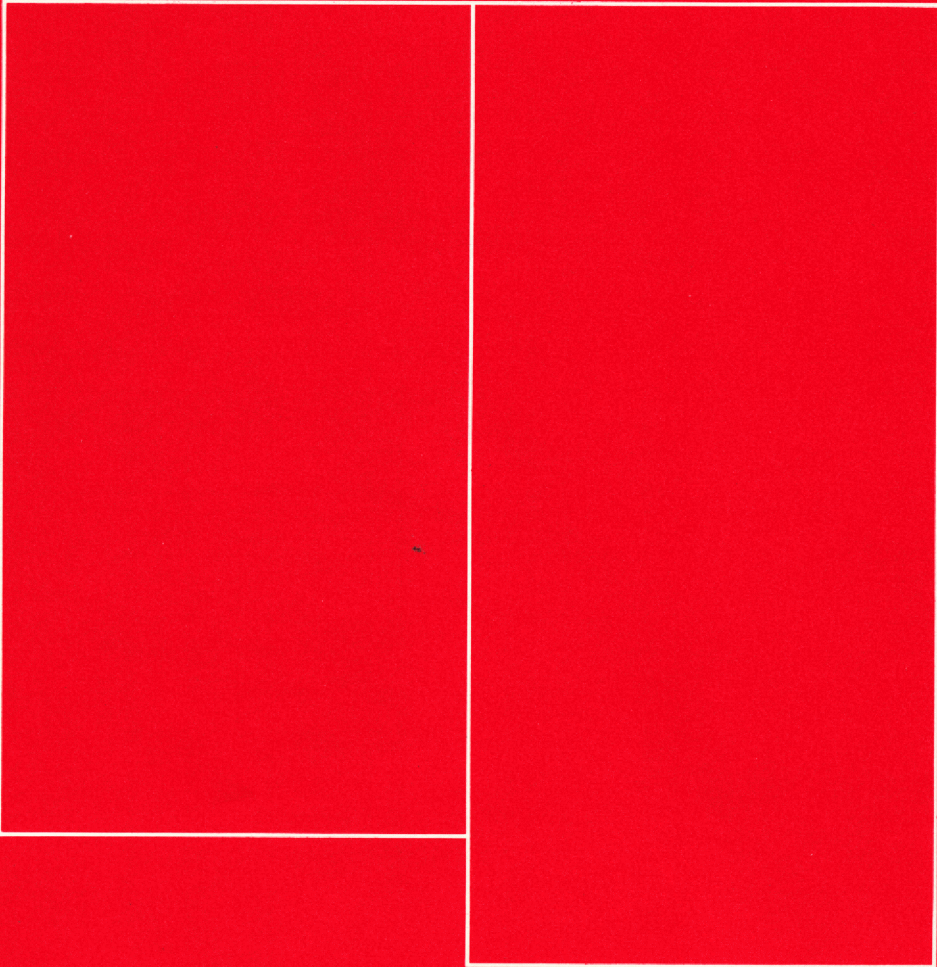
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# Health United States 1989

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National Center for Health Statistics

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## Preface

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*Health, United States, 1989* is the 14th annual report on the health status of the Nation submitted by the Secretary of Health and Human Services to the President and Congress of the United States in compliance with Section 308 of the Public Health Service Act. This volume also contains the fourth triennial *Prevention Profile*, submitted by the Secretary of the Department of Health and Human Services to the President and the Congress of the United States in compliance with the Health Services and Centers Amendments of 1978 (Public Law 95-626). These reports were compiled by the National Center for Health Statistics, Centers for Disease Control. The National Committee on Vital and Health Statistics served in a review capacity.

The 1989 *Prevention Profile* serves as an integral part of the Department's overall disease prevention and health promotion initiative by providing data to chart progress toward the five broad goals published in *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*. It also delineates all of the 1990 objectives contained in *Promoting Health/Preventing Disease: Objectives for the Nation* and presents data, where available, to measure and evaluate progress since the objectives were established.

*Health, United States, 1989* presents statistics concerning recent trends in the health care sector. The 131 detailed tables in this year's report are organized around four major subject areas—health status and determinants, utilization of health resources, health care resources, and health care expenditures. The detailed tables are designed to show continuing trends in health statistics. A major criterion used in selecting the detailed tables is the availability of comparable national data over a period of several years. Similar tables appear in each volume of *Health, United States*, to enhance the use of

this publication as a standard reference source. Data are reported for selected years to highlight major trends.

The limited availability of national data on Hispanics, American Indians, and Asian-Americans has precluded the inclusion of extensive health statistics for these groups. It should be noted, however, that the National Center for Health Statistics is now in the process of a major developmental effort to provide detailed data for these minority groups. These data will be incorporated into the chartbook for *Health, United States, 1990*, which will be devoted to minority health.

To most effectively use *Health, United States, 1989* the reader should become familiar with the Guide to Tables and the two appendixes. The Guide to Tables indexes the data presented in the tables and enables the reader to identify tables that cross-classify specific variables. Appendix I describes each data source used in this report and provides references for further information about the sources. Appendix II defines the terms used in the report. It also contains the standard populations used for age adjustment and *International Classification of Diseases* codes for cause of death and diagnostic and procedure categories.

## Acknowledgments

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knowledge, providing data from their surveys and programs; their cooperation and assistance is gratefully acknowledged.

Overall responsibility for planning and coordinating the content of this volume rested with the Office of Analysis and Epidemiology, National Center for Health Statistics, under the general direction of Jacob J. Feldman.

The *Prevention Profile* was prepared under the direction of Patricia M. Golden and Ronald W. Wilson. The graphic highlights were prepared by Patricia M. Golden. The remaining sections were prepared by Mark S. Eberhardt, Laura E. Montgomery, Anita Powell, Kathleen Turczyn, and Diane K. Wagener. Manuscript preparation was by Debbie Cousins.

*Health, United States* was prepared under the direction of Diane M. Makuc and Joel C. Kleinman. Detailed tables and highlights were prepared by Margaret A. Cooke, Virginia M. Freid, Ilene B. Gottfried, Mitchell B. Pierre, Jr., and Rebecca A. Placek with assistance from Rekha Garg, Bruce S. Jonas, Mavis B. Prather, Carol J. Schatz, Ildy I. Shannon, and Vivian Taube. Production planning and coordination were managed by Rebecca A. Placek with typing assistance from Carole J. Hunt.

Publications management and editorial review were provided by Rolfe W. Larson. Printing and production were managed by Linda L. Bean, assisted by Patricia L. Wilson, Annette F. Gaidurgis, and Jacqueline M. Davis. Graphics were supervised by Stephen L. Sloan. The designer was Patricia A. Vaughan.

The *Prevention Profile* would not have been possible without the assistance of staff members throughout the Public Health Service who are involved in the Department of Health and Human Services health promotion initiative. Publication of *Health, United States* would not have been possible without the contributions of numerous staff members throughout the National Center for Health Statistics and several other agencies. These people gave generously of their time and

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# Guide to Detailed Tables

[ Numbers refer to table numbers ]

Health status and determinants	Age	Sex	Race	Family income	Location of residence	Geographic area			Other variables
						Region	Division, State	Inter-national	
Population, resident . . . . .	1	1	1						
Fertility and natality									
Birth rates . . . . .	2		2,3						3
Completed fertility rate . . . . .	4		4						4
Lifetime births expected . . . . .	5		5						
Live births . . . . .	6,7		2,6,7						6,7
Low birth weight . . . . .			6-8				8		
Prenatal care . . . . .			6,7						
Abortion . . . . .	9		9						9-11
Contraception . . . . .	12		12,13						13
Mortality									
Life expectancy . . . . .	14,21	14,21	14						21
Infant . . . . .	15		15,16				16		20
Neonatal . . . . .	15		15,17				17		
Postneonatal . . . . .			15,18				18		
Fetal . . . . .	15		15,19				19		
Perinatal . . . . .			15						20
All causes . . . . .	22,36	22-24,36	22-24,36						
Years of potential life lost . . . . .		25	25						
Human immunodeficiency virus infection . . . . .		23-25	23-25						37
Heart disease . . . . .	26,38	23-26	23-26						37
Cerebrovascular disease . . . . .	27,38	23-25,27	23-25,27						37
Cancer . . . . .	28,38	23-25,28	23-25,28						37
Respiratory cancer . . . . .	29	23-25,29	23-25,29						37
Breast cancer . . . . .	30		23-25,30						37
Complications of pregnancy . . . . .	31		31						
Motor vehicle accident . . . . .	32	23-25,32	23-25,32						37
Homicide . . . . .	33	23-25,33	23-25,33						37
Suicide . . . . .	34	23-25,34	23-25,34						37
Occupational disease . . . . .	35								
Other causes of death . . . . .		23-25	23-25						37
Determinants and measures of health									
Health promotion goals . . . . .	39								
Childhood vaccination . . . . .			40		40				
Diseases, notifiable . . . . .									41
Acquired immunodeficiency syndrome (AIDS) . . . . .	42-45	42-45	42-45				46,47		44,45
Cancer incidence . . . . .		48	48						48
Cancer survival . . . . .		49	49						49
Limitation of activity . . . . .	50	50	50	50	50	50			
Disability days . . . . .	51								51
Self-assessment of health . . . . .	52	52	52	52	52	52			
Cigarette smoking . . . . .	53,55	53-55	53,54						54
Alcohol consumption . . . . .	55	55,56							
Marijuana use . . . . .	55	55							
Cocaine . . . . .	55	55							
Elevated blood pressure . . . . .	57	57	57						
Hypertension . . . . .	58	58	58						
Elevated serum cholesterol . . . . .	59	59	59						
Overweight . . . . .	60	60	60						
Air pollutants . . . . .									61
Occupational health and safety . . . . .									62,63

Utilization of health resources	Age	Sex	Race	Family income	Location of residence	Type of ownership/ organization	Geographic region	Other variables
Ambulatory care								
All physician contacts:								
Place . . . . .	64	64	64	64	64		64	
Interval since last contact . . . . .	65	65	65	65	65		65	
Physician's office visits:								
Physician's specialty . . . . .	66	66	66					
Visit characteristics . . . . .	67	67	67					67



<i>Utilization of health resources</i>	<i>Age</i>	<i>Sex</i>	<i>Race</i>	<i>Family income</i>	<i>Location of residence</i>	<i>Type of ownership/ organization</i>	<i>Geographic region</i>	<i>Other variables</i>
<b>Inpatient care</b>								
Dentist visits, interval since last visit . . .	68	68	68	68	68		68	
Outpatient visits in short-stay hospitals . . . . .						76		
<b>Short-stay hospitals:</b>								
Average length of stay . . . . .	69,70	69,70	69	69	69		69,70	
Diagnosis . . . . .	71,73	71,73						
Discharges . . . . .	69,70	69,70	69	69	69		69,70	
Diagnosis . . . . .	71-73	71-73						
Surgery . . . . .	74	74						
Diagnostic and other nonsurgical procedures . . . . .	75	75						
Days of care . . . . .	69,70	69,70	69	69	69		69,70	
Diagnosis . . . . .	71,72	71,72						
Nursing home residents . . . . .	77,78	77	77					78
<b>Mental health facilities:</b>								
Admissions . . . . .	81,82	81	81			79,81,82		79,82
Patient care episodes . . . . .						80		

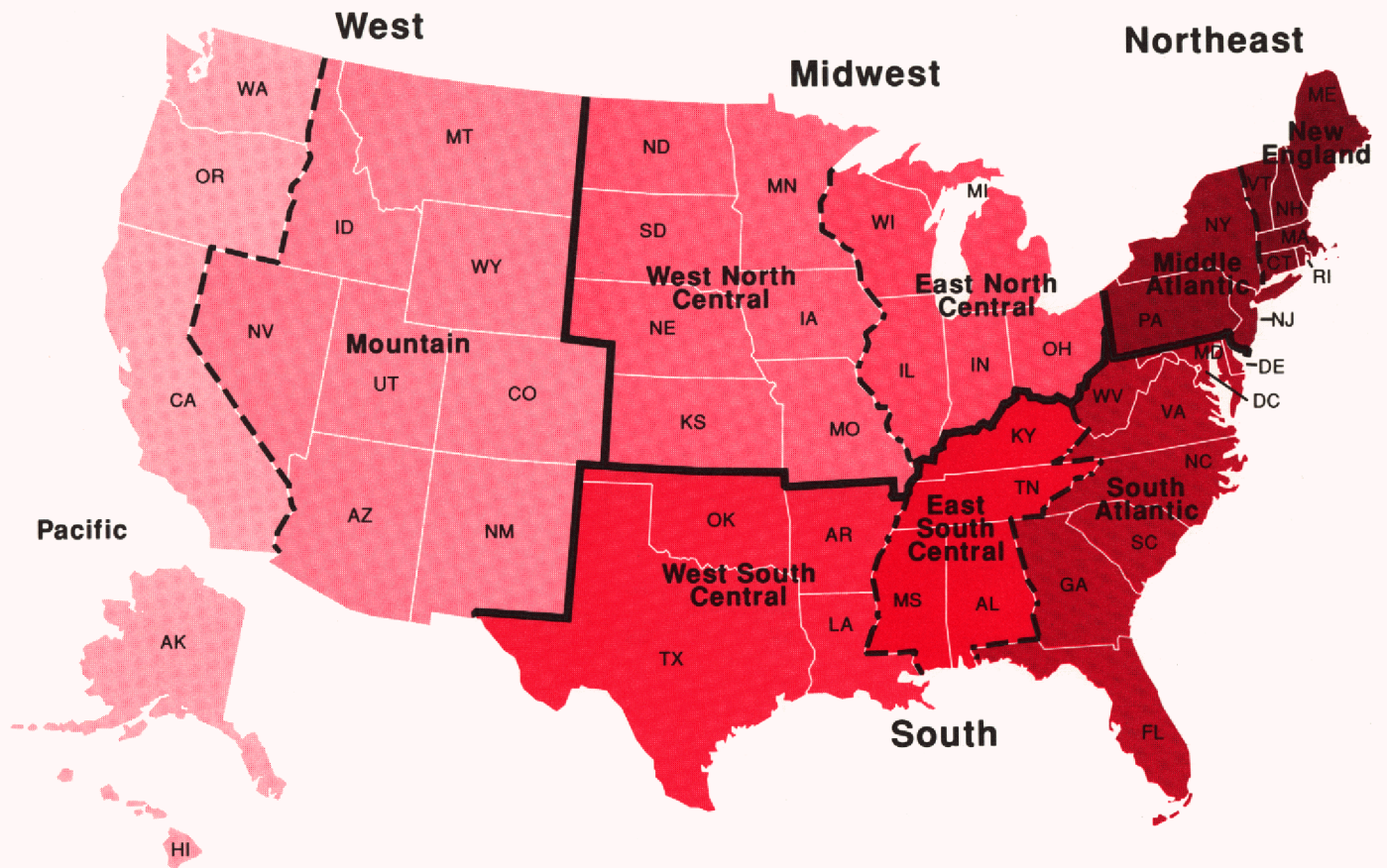
<i>Health care resources</i>	<i>Place of employment</i>	<i>Occupation</i>	<i>Activity/ specialty</i>	<i>Type of ownership/ organization</i>	<i>Minorities/ women</i>	<i>Geographic area</i>	
						<i>Region</i>	<i>Division, State</i>
<b>Personnel</b>							
Active health personnel . . . . .	83	87				87	
Physicians . . . . .			84-86			87	84
Hospital employees . . . . .		88					
Mental health personnel . . . . .		89	89				
<b>Health professions education:</b>							
Graduates . . . . .		90					
Schools . . . . .		90					
Student enrollment . . . . .		90,91			91,92		

<i>Health care resources—Continued</i>	<i>Specialty</i>	<i>Type of ownership/ organization</i>	<i>Beds</i>	<i>Employees</i>	<i>Occupancy</i>	<i>Geographic division, State</i>
<b>Facilities</b>						
Short-stay hospitals . . . . .		93	93		93	
Long-stay hospitals . . . . .	94	94	94		94	
Mental health facilities . . . . .		95	95			
Community hospitals . . . . .			96	98	97	96-98
Nursing homes . . . . .			99			99

<i>Health care expenditures</i>	<i>Age</i>	<i>Race</i>	<i>Sex</i>	<i>Type of expenditure</i>	<i>Source of funds or payment</i>	<i>Geographic area</i>		
						<i>Region</i>	<i>Division, State</i>	<i>Other variables</i>
National health expenditures . . . . .				102,103	109			100,101
Gross national product . . . . .								100,101
Personal health care . . . . .				102,103,111	110,111		118-120	104
Consumer Price Index . . . . .				105-107				
Hospital costs and expenses . . . . .							119	108
Nursing home charges . . . . .	113		113		112	113	120	112,113
Health research and development . . . . .					114			115
Human immunodeficiency virus (HIV) . . . . .								116
Public health . . . . .				117	117			
Health care coverage . . . . .	121,122	121,122	121,122			121,122		121,122
Health maintenance organizations . . . . .						123		123
Medicare . . . . .	125	125	125	124,126	126	125	126	125,126
Medicaid . . . . .				124,128				127
Veterans medical care . . . . .				129				
Mental health expenditures . . . . .							131	130

# Geographic Divisions of the United States

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# Highlights

## Detailed Tables

### Health Status and Determinants

■ The proportion of the U.S. population age 65 years and over increased by 17 percent between 1980 and 1987 compared with a 6-percent increase for the population under age 65. The fastest growing age group was 85 years and over, which increased by 28 percent. In 1987 the 30 million persons age 65 and over comprised 12 percent of the U.S. population (table 1).

■ In 1987 there were 3.8 million live births and 2.1 million deaths in the United States, an addition of 1.7 million persons to the U.S. population as a result of **natural increase**, the excess of births over deaths. Between 1985 and 1987 natural increase of the U.S. population has remained stable at 1.7 million each year (tables 2 and 24).

■ In 1987 the **fertility rate** was 65.7 live births per 1,000 women 15–44 years of age, essentially unchanged since 1975. However, during this period birth rates among women 30–39 years of age have increased by more than one-third, reflecting the continuing trend toward later childbearing (tables 2 and 3).

■ The proportion of mothers who began **prenatal care** in the first trimester of pregnancy has remained essentially unchanged between 1980 and 1987, after increasing from 68 to 76 percent between 1970 and 1980. Large racial disparities in the percent with early prenatal care continue with the percent receiving early care ranging from 60–61 percent for mothers of American Indian and black infants to 76–82 percent for mothers of Asian and Pacific Islander and white infants in 1987. Among Hispanic mothers the percent with early prenatal care ranged from 57–60 for Puerto Rican and Mexican mothers to 83 percent for Cuban mothers in 1987 (tables 6 and 7).

■ The proportion of live births to **unmarried mothers** has risen steadily

between 1970 and 1987. The proportion has increased from 6 to 17 percent among white (including Hispanic) infants, from 37 to 62 percent among black infants, from 8 to 12 percent among Asian infants, and from 20 to 45 percent among American Indian infants. Data for Hispanics, which have been available since 1980, also show large increases: from 21 to 29 percent among Mexicans, from 46 to 53 percent among Puerto Ricans, and from 10 to 16 percent among Cubans (tables 6 and 7).

■ During the 1980's the proportion of births to **teenage mothers** has decreased for all racial and ethnic groups. The highest proportions occurred among the black (23 percent in 1987), Puerto Rican (21 percent), American Indian (19 percent) and Mexican (17 percent) groups, whereas the lowest proportions occurred among Asians and Cubans (6 percent). Nine percent of non-Hispanic white births were to teenagers (tables 6 and 7).

■ The percent of live-born **infants weighing less than 2,500 grams** has been essentially unchanged since 1980 at 7 percent. However, there are large differences among ethnic and racial groups. Blacks had the highest rate (12.7 percent in 1987), followed by Puerto Ricans (9.3 percent), Asians (6.4 percent), and American Indians (6.2 percent). Cubans, Mexicans, and non-Hispanic whites have rates between 5.6 and 5.9 percent. Furthermore, the percent of live-born infants weighing less than 1,500 grams (those at greatest risk of death and disability) has increased over this period, with the greatest increase occurring among black infants (tables 6 and 7).

■ In 1988, 60 percent of women 15–44 years of age used some method of **contraception**, an 8-percent increase from 1982. Among formerly and currently married women using contraception in 1988, female sterilization was the most frequently used method, whereas most never married women used birth control pills (table 13).

■ In 1988 almost 40 percent of both white and black contracepting women used **sterilization** as their method. The percent who chose to be sterilized was substantially higher among black women (38 percent)

than white women (26 percent); whereas the percent who relied on male sterilization was much greater among white women (14 percent) than black women (1 percent) (table 13).

■ Between 1982 and 1988 the percent of contracepting women who chose **condoms** as their method increased from 2 to 6 percent among formerly married women and from 12 to 20 percent among those never married and remained at 14 percent among currently married women (table 13).

■ Between 1986 and 1987 overall **life expectancy** at birth increased from 74.8 to 75.0 years. Life expectancy for black males remained unchanged between 1986 and 1987 after declining slightly in each of the two previous years. Provisional data show that overall life expectancy was unchanged between 1987 and 1988, but life expectancy for black males declined to 65.1 years in 1988 (table 14).

■ In 1987 the **infant mortality rate** was 10.1 deaths per 1,000 live births. Between 1986 and 1987 the infant mortality rate declined by 3 percent for white infants to 8.6 deaths per 1,000 live births, while declining by less than 1 percent for black infants to 17.9 deaths per 1,000 live births. Furthermore, the fetal death rate declined by 1.5 percent for whites and increased by 2.4 percent for blacks, the first increase since the 1960's (table 15).

■ Of all **industrial countries**, Japan had the lowest infant mortality rate (5.2 deaths per 1,000 live births) and the second lowest perinatal mortality ratio (7.3 deaths per 1,000 live births) in 1986. The infant mortality rate for the United States in 1986 was twice the rate for Japan and the perinatal mortality ratio was one-third higher. Japan had the longest life expectancy of any industrial country (75.5 years for men and 81.6 years for women). In the United States life expectancy at birth was 4.2 years less for men and 3.3 years less for women. Life expectancy at 65 years was also longer in Japan with a difference of 1.4 years for both men and women (tables 20 and 21).

■ In 1987 heart disease and cancer were the first and second **leading causes of death** for both white and black men and women, accounting

for 58 percent of all deaths in the United States. Among both white and black women stroke was the third leading cause of death, whereas among both white and black men accidents ranked third among causes of death. Human immunodeficiency virus (HIV) infection ranked 9th among causes of death for black men, 11th for white men, 16th for black women, and 24th for white women (table 24).

■ **Years of potential life lost** per 1,000 population under 65 years of age, a measure of premature mortality, was twice as high for black males and females as for white males and females in 1987. Black persons have a higher rate of premature mortality than white persons for almost all major causes of death, but the differential was greatest for homicide (table 25).

■ The age-adjusted death rate for **heart disease**, the leading cause of death, declined by 33 percent from 1970 to 1987. The decline has been greatest among white males (35 percent), followed by white females (31 percent), black females (28 percent), and finally black males (24 percent) (table 26).

■ The age-adjusted death rate for **stroke** declined by 54 percent between 1970 and 1987. Declines have occurred at about the same rate for both sexes and both major race groups. However, in 1987 the age-adjusted death rate for stroke was almost twice as great among black as among white persons, and years of potential life lost per 1,000 population under 65 years of age for stroke was almost three times greater among black than white persons (tables 25 and 27).

■ In contrast to the declines in heart disease and stroke mortality, the age-adjusted death rate for **lung cancer**, the leading cause of cancer deaths among women, increased by 31 percent for white women and 25 percent for black women between 1980 and 1987. Furthermore, the age-adjusted death rate for breast cancer increased by 14 percent for black women while remaining essentially unchanged for white women during this period (tables 29 and 30).

■ **Homicide** is the second leading cause of death for persons 15–24

years of age. Between 1984 and 1987 the death rate for homicide increased by 39 percent for black males 15–24 years old to about the same level as in 1980. During the same period the death rate for homicide increased by 20 percent for black females to a level slightly lower than in 1980. The rate remained stable among white persons. In 1987 the homicide rate for black males in this age group (85.6 per 100,000 population) was more than seven times the rate for white males; the rate for black females (17.7) was more than four times that for white females (table 33).

■ Between 1986 and 1988 cases of early infectious **syphilis** (primary and secondary stages) reported by State health departments increased 44 percent to 40 thousand. During the same period **gonorrhea** cases declined by 20 percent to 720 thousand (table 41).

■ Between 1984 and 1988 the sex and race distribution of persons 13 years and over reported as **AIDS** cases shifted somewhat. The percent who are women increased from 6 to 10, and the percent who are black increased from 25 to 29; the percent Hispanic remained stable at 14. Among children under 13 years of age reported as AIDS cases as of September 30, 1989, 55 percent were black and 21 percent were Hispanic (table 42).

■ As of September 30, 1989, over 63,000 **deaths** occurred among **AIDS** cases. Among males 13 years of age and over, 26 percent of the nearly 57,000 deaths were black non-Hispanic and 13 percent were Hispanic males. Of the 5,500 deaths among females 13 and over, 55 percent were black non-Hispanic and 15 percent were Hispanic females. Among children under 13 years, 53 percent of the nearly 1,000 deaths were black non-Hispanic and 21 percent were Hispanic children (table 43).

■ Among adult and adolescent men, homosexual and bisexual activity as a **human immunodeficiency virus (HIV)** transmission category dropped from 70 to 66 percent between 1984 and 1988 whereas intravenous drug use rose from 15 to 19 percent. Among adult and adolescent women, intravenous drug use as an HIV transmission category dropped from

62 to 53 percent during this period, and HIV transmission through heterosexual contact rose from 17 to 26 percent (table 44).

■ Homosexual and bisexual activity as an **HIV** transmission category accounted for over 77 percent of the 36,000 **deaths** among white non-Hispanic **AIDS** cases 13 years of age and over compared to 38 percent of the 17,600 black non-Hispanic **AIDS** deaths and 53 percent of the Hispanic **AIDS** deaths. By contrast, 7 percent of the white non-Hispanic deaths, 37 percent of the black non-Hispanic deaths, and 24 percent of the Hispanic deaths were categorized in the intravenous drug use transmission category (table 45).

■ **Lung cancer** incidence rates continue to increase for women. During 1973–87 lung cancer incidence increased at an estimated rate of 5.4 percent per year for white women and for black women (table 48).

■ Declines in **cigarette smoking** have been much greater for persons with high educational attainment than for those with lower educational attainment. Between 1974 and 1987 age-adjusted prevalence of current smoking among men 25 years and over declined by 13 percent among those with less than 12 years of education while declining by 40 percent among college graduates. Smoking among women 25 years and over declined by only 2 percent among those with less than a high school education while decreasing by 38 percent among college graduates (table 54).

■ Between 1985 and 1988 the percent of young adults 18–25 years of age reporting **cocaine use** during the previous month dropped from 7.6 to 4.5 percent; youths 12–17 years of age reporting cocaine use decreased from 1.5 to 1.1 percent. Over the same period the annual number of **cocaine-related emergency room visits** increased fourfold for young adults and more than threefold for youths. Thus, despite decreases in prevalence of cocaine use, adverse health effects are increasing. Reasons include multiple drug use, more frequent use, cumulative effects of sustained use, larger dosages, and more dangerous routes of administration (table 55).

## Utilization of Health Resources

■ In 1988 the age-adjusted percent of persons who perceive their own **health** as fair or poor was almost twice as great among black persons as for white persons (16.4 versus 8.5 percent). However, the age-adjusted average annual number of physician contacts per person was 15 percent greater among white than black persons (5.5 versus 4.8 contacts per year) (tables 52 and 64).

■ Between 1983 and 1988 the average number of ambulatory **physician contacts** per person per year increased slightly from 5.1 to 5.3. Physician contacts increased by 15 percent among persons 65 years and older, from 7.6 to 8.7 contacts per year and remained fairly stable among younger persons (table 64).

■ In 1988 the age-adjusted **discharge rate** for non-Federal short-stay hospitals varied among the geographic regions, with the highest level found in the Northeast (127 per 1,000 population) and the lowest level in the West (104 per 1,000 population). The age-adjusted **average length of stay** in the Northeast (7.3 days) was at least a full day longer than in the other regions (6.2 days in Midwest, 6.1 days in South, 5.9 days in West) (table 70).

■ In 1988 there were 71,000 discharges from non-Federal short-stay hospitals with a diagnosis of **AIDS**. Men 20–49 years of age accounted for 58,000 (82 percent) of all AIDS discharges. A total of 983 thousand days of care were provided to AIDS patients in 1988. The average length of stay for AIDS patients was twice that for all discharges (13.8 days versus 6.5 days) (table 71).

■ In 1988 there were 31.1 million discharges from non-Federal short-stay hospitals. Among men, the most common first-listed **diagnoses** were diseases of the heart (2 million), malignant neoplasms (772 thousand), and fractures (506 thousand). For women, the most common first-listed diagnoses were delivery (3.8 million), diseases of the heart (1.7 million), and malignant neoplasms (898 thousand) (table 73).

■ The most frequently performed **inpatient operations** vary by the age and sex of the patient. In 1988 among males the most common operations were tonsillectomy for those under 15

years of age (69 thousand), reduction of fracture for men 15–44 years of age (178 thousand), cardiac catheterization for men 45–64 years of age (296 thousand), and prostatectomy (290 thousand) for men 65 years of age and over. In 1988 the most common operations among females were tonsillectomy for those under 15 years of age (66 thousand), procedures to assist delivery for women 15–44 years of age (3.1 million), hysterectomy for women 45–64 years of age (188 thousand), and cardiac catheterization (163 thousand) for women 65 years of age and over (table 74).

■ In 1988 the leading diagnostic and nonsurgical **inpatient procedures** performed for men in non-Federal short-stay hospitals were CAT scans (775 thousand) followed by angiocardiology (749 thousand) and diagnostic ultrasound (599 thousand). Among women, the same three procedures were in the top three but the ranking differed. Diagnostic ultrasound was most common (963 thousand) followed by CAT scans (838 thousand) and angiocardiology (439 thousand) (table 75).

■ Short-stay hospital admissions declined 10 percent between 1984 and 1987 from 37.1 million to 33.6 million. In contrast, the number of **outpatient visits** in short-stay hospitals increased 12 percent during this period from 268 million to 301 million (table 76).

■ Between 1983 and 1986 the admission rate to **mental health organizations** for inpatient and residential treatment increased 8 percent to 760 per 100,000 population. In 1986 almost half of inpatient and residential treatment admissions were to non-Federal general hospitals, 18 percent to State and county mental hospitals, and 13 percent to private psychiatric hospitals (table 79).

## Health Care Resources

■ Throughout the 1980's the **health service industry** has accounted for 7–8 percent of civilian employment. There were 8.8 million persons employed in the health service industry in 1988, about half of whom worked in hospitals, 17 percent in nursing and personal care facilities,

and 11 percent in physicians' offices (table 83).

■ Between 1980 and 1987 the number of active non-Federal office-based physicians increased by 24 percent to 338 thousand. However, trends over this period varied substantially according to **physician specialty**. Among surgical specialties increases varied from only 6 percent for general surgery to about 25 percent for obstetrics and gynecology and for orthopedic surgery and 44 percent for plastic surgery. The two largest medical specialties, internal medicine and pediatrics, increased by 37 percent and 34 percent, respectively; the medical specialties, pulmonary diseases and gastroenterology experienced the greatest increases (70 and 74 percent, respectively) (table 86).

■ Between 1980 and 1987 **active registered nurses** with baccalaureate degrees increased by 47 percent to 193 per 100,000 population and registered nurses with masters and doctorate degrees increased by 44 percent to 43 per 100,000 population. Nurses with associate degrees and diplomas increased by only 8 percent to 433 per 100,000 population (table 87).

■ Throughout the 1980's **nursing personnel** have comprised about 37 percent of full-time equivalent (FTE) employees in community hospitals. However, the type of nursing personnel has changed somewhat over this period. Between 1981 and 1987 registered nurse FTE's increased an average of 3 percent per year while licensed practical nurse FTE's fell 5 percent per year. Ancillary nursing personnel declined by 4 percent per year between 1981 and 1985 but stabilized between 1985 and 1987 (table 88).

■ In 1986 there were 347 thousand patient care full-time equivalent (FTE) staff in **mental health organizations**, two-thirds of whom were professional staff (college graduates). The proportion of patient care FTE's that were professionals varied by type of organization from 46 percent for State and county mental hospitals to 82 percent for non-Federal general hospitals (table 89).

■ Between 1987 and 1988 **first-year enrollment** in nursing schools rose 4 percent to 95 thousand, reversing

the 27-percent decline observed over the previous 3 years. However, first-year enrollment in dental schools continued to decline with a total decrease of 30 percent between 1980 and 1988 (table 90).

■ During the past decade, the proportion of **women enrolled** in schools for the health professions traditionally dominated by men has increased substantially. In 1987-88 among first-year enrollees, women comprised 32 percent of dental students, 37 percent of medical students, 57 percent of veterinary students, and 59 percent of pharmacy students (table 91).

■ Between academic years 1977-78 and 1987-88 **minority enrollment** in medical schools rose from 11 to 21 percent of total enrollment. The proportion of black students remained constant at 6 percent over this period; Asian students increased from 2 to 9 percent; and Hispanic students increased from 3 to 5 percent (table 92).

■ Between 1980 and 1987 the total number of short-stay **hospital beds** declined by 3 percent to about 1 million in 1987. During this period State and local hospital beds decreased by 14 percent to 182 thousand. Proprietary hospital beds increased by 23 percent between 1980 and 1986 and then decreased slightly to 106 thousand in 1987. Between 1980 and 1985, occupancy in short-stay hospitals decreased from 76 to 66 percent and has remained stable through 1987 (table 93).

■ Between 1970 and 1987 the number of **long-term tuberculosis hospitals** declined from 103 to 3 hospitals and tuberculosis beds decreased from 19,937 to 339 (table 94).

■ After declining by more than 50 percent between 1970 and 1982, inpatient and residential treatment beds in **mental health organizations** increased by 8 percent between 1982 and 1986 to 268 thousand. State and county mental hospitals continued to account for the largest percentage of beds in 1986 (44 percent), despite substantial declines throughout the period 1970-86 (table 95).

■ Between 1980 and 1987 the number of **full-time equivalent employees** (FTE's) per 100 average daily patients in community hospitals increased 3.8 percent per year. In

1987 there were 511 FTE's for every 100 patients in U.S. community hospitals overall, with the highest number of FTE's in Oregon (638), Massachusetts (625), and Utah (615) and the lowest in North Dakota (342), South Dakota (364), and Montana (366) (table 98).

■ The largest and most rapidly growing age group of nursing home residents is 85 years of age and over. Between 1977 and 1985 the number of nursing home residents per 1,000 population 85 years and over declined slightly, while the total number of nursing home residents in this age group increased by 33 percent, reflecting the rapid growth of this age group in the U.S. population. Although the number of **nursing home beds** grew substantially between 1976 and 1986, the rate of growth did not keep pace with that for the population 85 years and over (tables 77 and 99).

### Health Care Expenditures

■ In 1987 **national health care** expenditures in the United States totaled \$500 billion, an average of \$1,987 per person. Between 1980 and 1987 the percent of health care dollars accounted for by hospital care decreased slightly from 41 to 39 percent, and the percent accounted for by physician services increased concomitantly from 19 to 21 and expenditures for nursing home care remained at 8 percent of the total (tables 100 and 102).

■ U.S. health spending continues to account for a larger share of **gross domestic product** (GDP) than in other major industrialized countries and the gap continues to widen. In 1987 the United States devoted 11.2 percent of its GDP to health, a 3-percent increase over the previous year. During the same period there were declines or no change in the health share of GDP in Canada, France, and the United Kingdom and 1-percent increases in Japan and Germany. In 1987 the health share of GDP in these countries ranged from 6.1 to 8.6 percent (table 101).

■ During the 1980's annual increases in **national health care** expenditures for physician and dentist services were greater than for hospital and nursing home care. Between 1986 and 1987 expenditures

increased by 12 percent for physician services, 11 percent for dentist services, and 9 percent for hospital and nursing home care (table 103).

■ Between 1983 and 1987 the annual percent increase in **personal health care** expenditures rose from 8 to 10 percent. Over this period the percent of the increase attributable to prices dropped from 74 to 53, whereas the percent attributable to greater intensity of services rose from 14 to 38 percent (table 104).

■ In 1988 the rate of increase in the medical care component of the **Consumer Price Index** (CPI) was 6.5 percent compared with an overall inflation rate of 4.1 percent. The hospital and related services component increased by 9.3 percent compared with 6-7 percent in the previous two years. The lowest rates of increase in medical care prices were for nonprescription drugs and medical supplies (4.8 percent) and eye care (5.0 percent) (table 107).

■ Between 1986 and 1987 **hospital expenses** per inpatient day rose 7.6 percent to \$537, and expenses per inpatient stay increased 9.0 percent to \$3,849. Although the number of personnel per 100 patients has been rising each year from 272 in 1971 to 400 in 1987, employee costs as a percent of total costs have declined from 64 to 53 percent over this period (table 108).

■ After the advent of the Medicare and Medicaid programs in the mid-1960's, the percent of **personal health care expenditures funded publicly** increased from 22 percent in 1965 to 40 percent a decade later. Since then the public share has remained virtually constant (table 110).

■ In 1987 **government financing** accounted for 53 percent of hospital care expenditures, 49 percent of nursing home care expenditures, and 31 percent of physician services expenditures. Medicare contributed the largest share of government funds for hospital care and physician services, and Medicaid contributed almost all government funding for nursing home care (table 111).

■ Expenditures for **HIV-related activities** by the Federal Government increased from \$6 million in 1982 to \$1.5 billion in 1988. The National Institutes of Health accounted for 30 percent of these expenditures in

1988, the Health Care Financing Administration for 23 percent, and the Centers for Disease Control for 20 percent. Of the total in 1988, 40 percent was for research, 31 percent for medical care, 23 percent for education and prevention, and 6 percent for cash assistance (disability insurance and Supplemental Security Income) (table 116).

■ From 1976 to 1987 **public health expenditures** by State and territorial health agencies increased at an average annual rate of 11 percent. In 1987 one-fifth of these expenditures went to the supplemental food program for women, infants and children (WIC). Growth in the WIC program slowed to an average annual rate of 9 percent during the last 3 years compared with annual increases of 18 percent from 1980 to 1984 and 48 percent from 1976 to 1980 (table 117).

■ The number of **health maintenance organizations (HMO)** declined from 647 in late 1987 to 604 in early 1989. However, enrollment increased from 29 million to 32 million during this period. Growth in HMO enrollment has slowed since 1986 compared with a period of rapid growth from 1982 to 1985. In 1989, enrollment per 1,000 population continued to be highest in the West (226) and lowest in the South (71) (table 123).

■ In 1988 **Medicare** expenditures totaled \$53 billion under Hospital Insurance (HI) and \$35 billion under Supplementary Medical Insurance (SMI). Average annual increases in HI expenditures slowed from 16 percent between 1967 and 1985 to 3 percent between 1985 and 1988. Average annual increases in SMI expenditures decreased slightly from 18 to 14 percent over the same period. In 1988, inpatient hospital care accounted for 92 percent of HI expenditures and home health agency care for 4 percent. Physician care accounted for 69 percent of SMI expenditures (table 124).

■ In 1988 children and adults in families receiving Aid to Families with Dependent Children (AFDC) comprised more than two-thirds of **Medicaid** recipients but accounted for only 24 percent of expenditures. The aged, blind, and disabled accounted for less than 30 percent of recipients

and 73 percent of expenditures. Payments per recipient ranged from \$583 for children and \$1,069 for adults in AFDC families to more than \$5,000 per recipient among the aged, blind, and disabled (table 127).

■ In 1988 the average payment per **Medicaid** recipient for all services was \$2,126. However, average payment per recipient ranged from \$54 per child receiving early and periodic screening services to \$42,000 per recipient of intermediate care facility services for the mentally retarded. Intermediate care facility services for the mentally retarded were used by 0.6 percent of Medicaid recipients, but accounted for 12 percent of Medicaid expenditures. Skilled nursing facility services were used by 2.5 percent of Medicaid recipients but accounted for 13 percent of expenditures (table 128).

■ Expenditures by **mental health organizations** rose from \$9 billion in 1979 to \$18 billion in 1986. Per capita expenditures rose from \$40 to \$77 over the same period. State and county mental hospitals accounted for 34 percent of expenditures in 1986, a decrease from 43 percent in 1979, whereas private psychiatric hospitals increased their share of the mental health dollar from 9 percent in 1979 to 14 percent in 1986 (table 130).

# Prevention Profile



# Introduction

## Background

In the second half of the 1970's, the concept of health promotion and disease prevention gained increased emphasis. In large measure, the basis for that activity was the recognition that many major health problems still confronting Americans are rooted in lifestyle or environmental factors that are amenable to change. This recognition provided the theme of *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*, published in 1979.<sup>1</sup> This report stressed how important health promotion and disease prevention could be in reducing unnecessary death and disability in the United States and also described a number of important measures that appear to hold the key to further improvements in health status. Additionally, *Healthy People* delineated a set of broad national goals for improving the health of the American people during the decade of the 1980's. The goals, one for each of the five major stages of life, are

- To continue to improve infant health, and, by 1990, to reduce infant mortality by at least 35 percent, to fewer than 9 deaths per 1,000 live births.
- To improve child health, foster optimal childhood development, and, by 1990, reduce deaths among children ages 1 to 14 years by at least 20 percent, to fewer than 34 per 100,000.
- To improve the health and health habits of adolescents and young adults, and, by 1990, to reduce deaths among people ages 15 to 24 by at least 20 percent, to fewer than 93 per 100,000.
- To improve the health of adults, and, by 1990, to reduce deaths among

people ages 25 to 64 by at least 25 percent, to fewer than 400 per 100,000.

■ To improve the health and quality of life for older adults, and, by 1990, to reduce the average annual number of days of restricted activity due to acute and chronic conditions by 20 percent, to fewer than 30 days per year for people aged 65 and older.

This 1989 *Prevention Profile*, fourth in a series of profiles, was prepared in response to legislation enacted in 1978 (Public Law 95-626) that called for the triennial preparation of a national disease prevention data profile. The first profile appeared with *Health, United States, 1980*; the second with *Health, United States, 1983*; and the third with *Health, United States, 1986*. The second, third, and fourth profiles provide both baseline data and data for subsequent time periods for a substantial number of the 1990 objectives in *Promoting Health/Preventing Disease: Objectives for the Nation*.<sup>2</sup> Thus, the 1989 *Prevention Profile*, as did its two predecessor reports, enables the measurement and documentation of the cumulative effects of strategies to alleviate or avoid problems that must be faced in moving toward the five health promotion and disease prevention goals published in *Healthy People*.

*Promoting Health/Preventing Disease: Objectives for the Nation* identified 15 broad areas to be given priority attention because they represent areas in which health promotion and disease prevention measures might be expected to achieve further gains through a wide range of public, private, and individual health promotion and disease prevention strategies. These 15 areas and lead Public Health Service agencies are

- A. High blood pressure control: National Institutes of Health
- B. Family planning: Office of Population Affairs
- C. Pregnancy and infant health:

- Health Resources and Services Administration
- D. Immunization: Centers for Disease Control
- E. Sexually transmitted diseases: Centers for Disease Control
- F. Toxic agent and radiation control: Senior Advisor for Environmental Health
- G. Occupational safety and health: Centers for Disease Control
- H. Injury prevention: Centers for Disease Control
- I. Fluoridation and dental health: Centers for Disease Control
- J. Surveillance and control of infectious diseases: Centers for Disease Control
- K. Smoking and health: Office on Smoking and Health
- L. Alcohol and drug misuse: Alcohol, Drug Abuse, and Mental Health Administration
- M. Improved nutrition: Food and Drug Administration
- N. Physical fitness and exercise: President's Council on Physical Fitness and Sports
- O. Control of stress and violent behavior: Alcohol, Drug Abuse, and Mental Health Administration

Within each of these 15 areas a set of specific and measurable objectives for 1990 was identified, which, when taken together and attained, should permit the realization of the national goals set forth in *Healthy People*.

To attain the 1990 objectives, aggressive involvement and efforts on the part of the Public Health Service, other parts of the Department of Health and Human Services, other departments in the Federal Government, State and local governments, and the private sector were expected. In a special supplement to *Public Health Reports*,<sup>3</sup> the Public Health Service has described a series of implementation plans that embody the steps to be taken by agencies of the Federal Government in pursuit of the 1990 objectives. Throughout 1985, the Public Health Service conducted an

<sup>1</sup>U.S. Department of Health, Education, and Welfare. *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*. DHEW Pub. No. (PHS) 79-55071. Public Health Service. Washington, D.C.: U.S. Government Printing Office. 1979.

<sup>2</sup>U.S. Department of Health and Human Services. *Promoting Health/Preventing Disease: Objectives for the Nation*. Washington, D.C.: U.S. Government Printing Office. Fall 1980; reprinted Fall 1984.

<sup>3</sup>U.S. Department of Health and Human Services. *Promoting health/preventing disease: Public Health Service implementation plans for attaining the objectives for the Nation*. *Public Health Rep.* 98(5) Supp., Sept.-Oct. 1983.

indepth review of the progress achieved midway toward the 1990 objectives. The results of this review were published in *The 1990 Health Objectives for the Nation: A Midcourse Review*.<sup>4</sup>

Additionally, a continuing review of the activities of the Department of Health and Human Services in health promotion and disease prevention is published periodically in the Public Health Service series *Prevention*. (See, for example, *Prevention '86/87*.)<sup>5</sup> Additional data related to the objectives can be found in other publications—for example, data from the 1985 National Health Interview Survey (NHIS).<sup>6</sup> A number of research reports prepared by the staffs of agencies designated as having lead responsibility for particular 1990 objectives appear in the November–December 1986 and the January–February 1987 issues of *Public Health Reports*.

Estimates shown in the publications referenced above as well as others may differ slightly from those shown in *Prevention Profile*. Minor differences in estimates for similar variables can result from differences in the conceptualization and tabulation of variables that are based on a combination of several questions, from differences in computation and rounding techniques, or from computations based on different universes (as in data on smoking for persons 18 years of age and over and for persons 20 years of age and over).

## Organization and Scope of This Profile

Since the inception of the health promotion initiative, varying degrees

of progress have been achieved for some objectives with other objectives still presenting considerable challenges. The figures and accompanying text on the following pages highlight (1) progress toward the five goals set down in *Healthy People* for each of five major life stages (see also detailed table 39), and (2) trends and other measures that most directly affect the realization of these goals. Some data presented in the graphic highlights are referenced elsewhere in the profile.

Following the figures is a presentation on the general focus of each of the 15 subject areas identified in *Objectives for the Nation*. Within each of these 15 areas is presented what can be considered the heart of the prevention profile, that is, a statement of each objective followed either by tables displaying data for the baseline and subsequent years where tracking data are available or by notes providing additional data or information where trend data are not available. Sources for tracking data appear with the tables and notes.

The data in this profile can readily be seen as important tools for those who measure progress and adjust the courses of activities directed at attaining the objectives. The data are not without limitations, however, and these must be borne in mind as the profile is studied.

■ Baseline data for some of the objectives as they appear in *Prevention Profile* have been modified from those in *Objectives for the Nation*. In some instances, population figures from the 1980 decennial census have been used to recompute rates that had been computed from earlier population estimates.

■ More appropriate data sources have been found for some areas, and in others the earlier baseline data have been deleted pending recommendations for modifications.

■ The profile includes objectives for which no data, baseline or otherwise, are available. The nature of the problem and possible approaches have been discussed at some length.<sup>7</sup>

■ The data used for tracking the objectives are essentially national in nature and may mask regional differences.

■ In some cases the objectives were specified using age or other classifications different from those commonly used in collecting and displaying certain types of data.

■ Because of limitations imposed by the periodicity cycles within which different data are collected, the year for which the most current data are available may vary from objective to objective.

<sup>4</sup>Office of Disease Prevention and Health Promotion. *The 1990 Health Objectives for the Nation: A Midcourse Review*. Public Health Service. Nov. 1986.

<sup>5</sup>U.S. Department of Health and Human Services. *Prevention '86/87: Federal Programs and Progress*. Public Health Service. Washington, D.C.: U.S. Government Printing Office. 1987.

<sup>6</sup>National Center for Health Statistics, O. T. Thornberry, R. W. Wilson, and P. M. Golden: Health promotion data for the 1990 objectives: Estimates from the National Health Interview Survey of Health Promotion and Disease Prevention, United States, 1985. *Advance Data From Vital and Health Statistics*. No. 126. DHHS Pub. No. (PHS) 86-1250. Public Health Service. Hyattsville, Md., Sept. 19, 1986.

<sup>7</sup>Green, L. W., Wilson, R. W., and Bauer, K. G.: Data requirements to measure progress on the objectives for the Nation in health promotion and disease prevention. *Am. J. Public Health* 73(1):18-24, Jan. 1983.

# Infants

(Under 1 year of age)

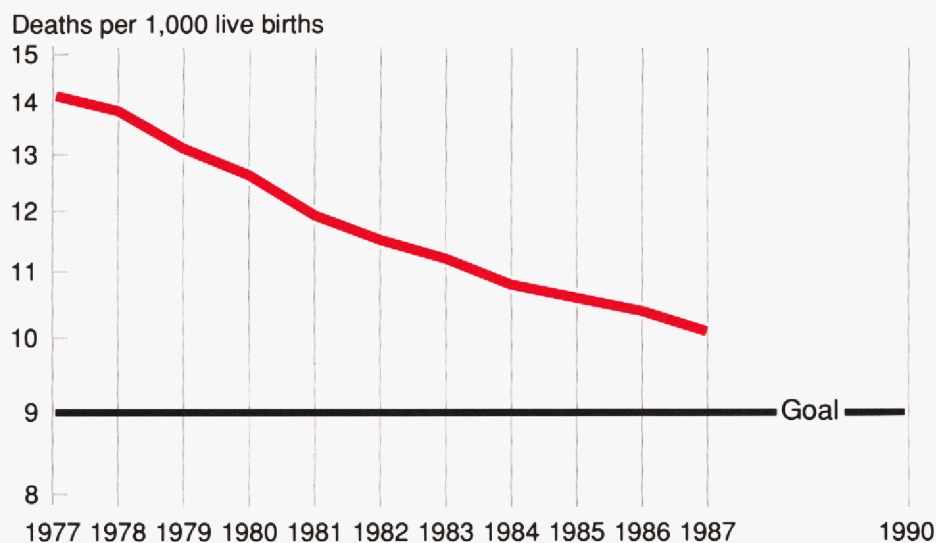
In the United States the first year of life is the most hazardous until age 65. In 1987, 38,408 babies died before reaching their first birthday. Almost two-thirds (64.1 percent) of these babies died before their second month of life. Currently the U.S. infant mortality rate ranks 22d in the world.

In 1987 the infant mortality rate in the United States was 10.1 infant deaths per 1,000 live births (detailed tables 15 and 39). Although the 1987 rate was the lowest rate ever recorded for the United States, it was still 12 percent above the 1990 goal of 9.0 deaths per 1,000 live births (figure 1).

The overall infant mortality rate masks the significant discrepancy between mortality of white infants and that of black infants (figure 2 and detailed table 15). In 1978 the white infant mortality rate was 12.0 per 1,000 live births; in 1987 the rate was 8.6. The comparable rates for black infants were 23.1 and 17.9. From 1978 to 1987 the ratio of black-to-white infant mortality rates actually increased somewhat, reflecting a higher average annual percent decline for white infants (3.6 percent) than for black infants (2.8 percent). Overall, the infant mortality rates for white and for black infants declined 28 percent and 23 percent, respectively, between 1978 and 1987.

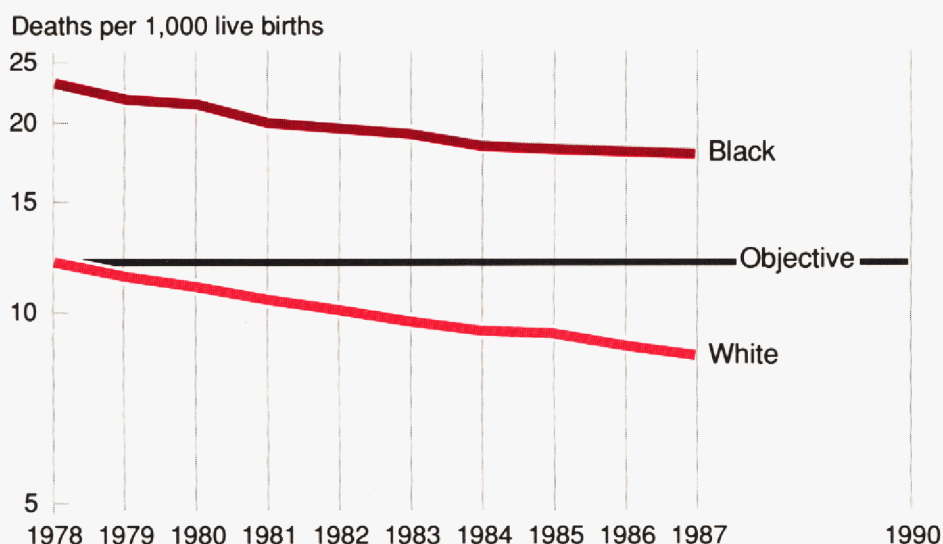
The five leading causes of infant death in 1987 were (1) congenital anomalies, (2) sudden infant death syndrome, (3) disorders relating to short gestation and unspecified low birth weight, (4) respiratory distress syndrome, and (5) newborn affected by maternal complications of pregnancy (figure 3). The first four accounted for more than half of infant deaths in 1987. For all five leading causes, except congenital anomalies, the risk was substantially higher for black infants than for white infants. The largest discrepancy between the races in 1987 was for "disorders relating to short gestation and unspecified low birth weight"—the black-to-white ratio of the infant mortality rate for this cause was 3.4.

**Figure 1. Infant mortality rate: United States, 1977–87 and 1990 goal**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

**Figure 2. Infant mortality rate, by race: United States, 1978–87 and 1990 objective**



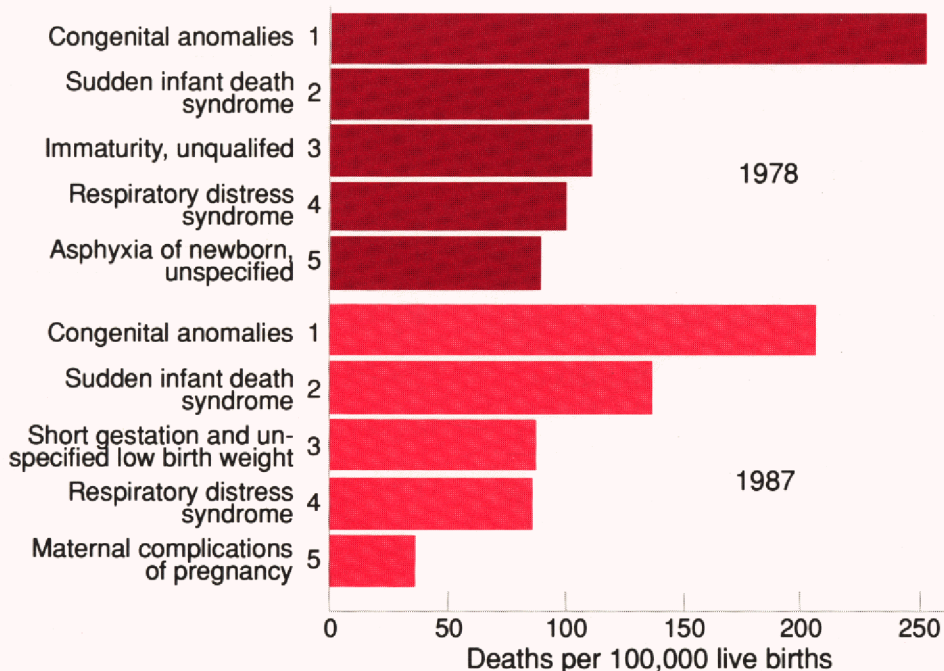
Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

Low-birth-weight infants, those weighing less than 2,500 grams (5 pounds 8 ounces), are at greater risk not only of dying during the first year of life but also of developing long-term disabilities. Of all infants who die, about 60 percent are of low birth weight; of these, about 40 percent are of very low birth weight (weighing less than 1,500 grams at birth). In 1987, 5.7 percent of white babies (live births), 12.7 percent of black babies, 6.2 percent of American Indian babies, and 6.2 percent of Hispanic babies were of low birth weight (figure 4). These percents are essentially the same as in 1978. Thus the percent of low-birth-weight black babies was 41 percent higher than the 1990 objective of 9.0 percent. Additional information on birth weight is in detailed tables 6–8.

The marked gap in the infant mortality rate between white and black infants mirrors the more-than-twofold difference in the proportion of low-birth-weight babies in the two groups (5.7 percent compared with 12.7 percent in 1987) and the threefold difference in the proportion of very low birth weight between white (0.9 percent) and black infants (2.7 percent). Some of the factors associated with low birth weight and other major causes of infant death and disability are lack of prenatal care by expectant mothers, maternal smoking, alcohol and drug use, age, and socioeconomic background of the mother.

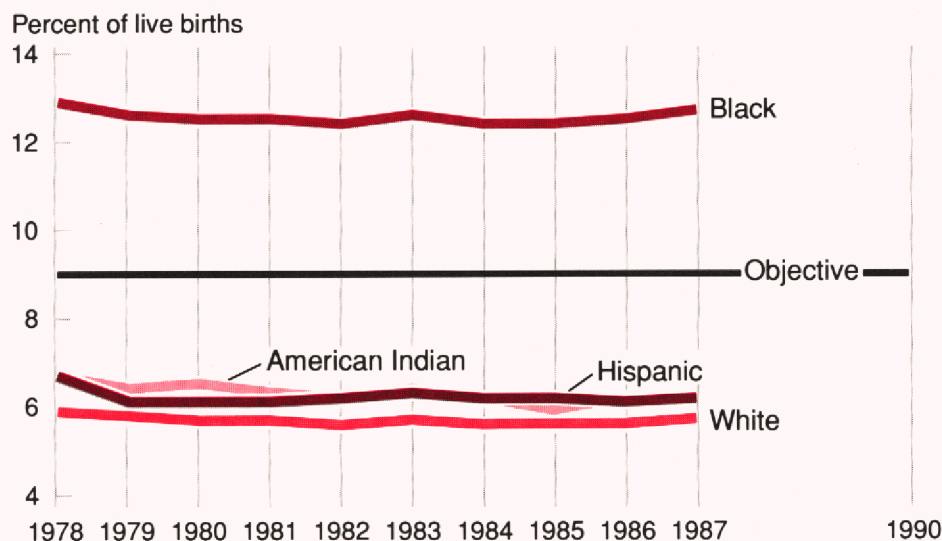
Early prenatal care (during the first trimester of pregnancy) has been demonstrated to reduce the risk of having a low-birth-weight infant. In 1978, 21.8 percent of white women received no prenatal care during the first trimester compared with 39.8 percent of black women (figure 5). In 1987 the percentages were about the same—20.6 percent for white women and 38.9 percent for black women. Thus, in 1987 the percent of white women receiving no prenatal care during the first trimester was more than twice the 1990 objective of 10.0 percent, and the comparable percentage for black women was almost four times higher than the 1990 objective. The percent of American Indian and Hispanic women receiving no prenatal care during the first trimester has declined

**Figure 3. Leading causes of death for infants: United States, 1978 and 1987**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

**Figure 4. Infants weighing less than 2,500 grams at birth, by race and Hispanic origin: United States, 1978–87 and 1990 objective**

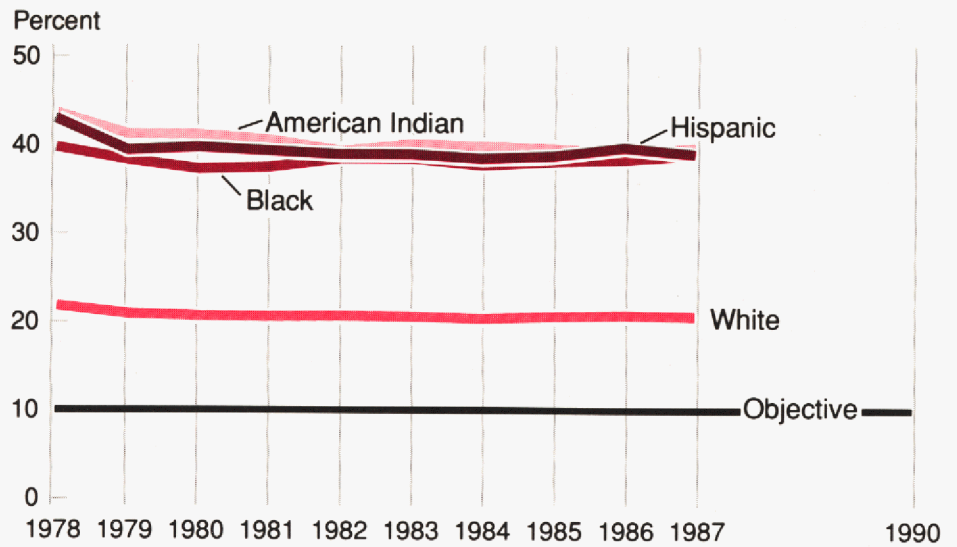


Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

slightly. The percent for American Indian women was 43.7 in 1978 and 39.8 in 1987; for Hispanic women, the percents were 43.0 and 39.0, respectively. Still, in 1987 the proportions of American Indian women and Hispanic women receiving no prenatal care during the first trimester were both almost four times the 1990 objective.

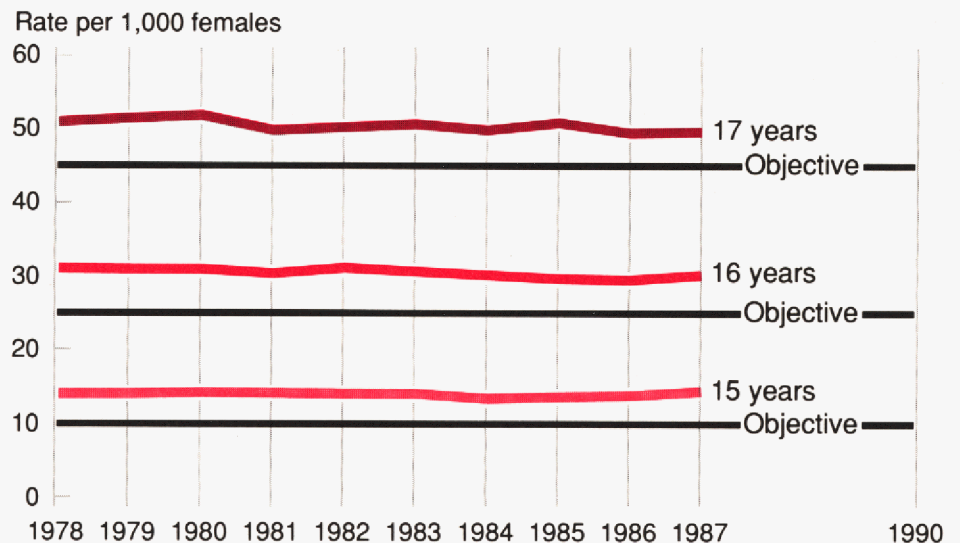
Teenage mothers are at particular risk of having low-birth-weight babies. Between 1978 and 1984 the birth rates among teenage mothers declined slightly (figure 6). In 1978 the birth rate for 15-year-old females was 14.0 per 1,000 in this age group and 13.4 in 1984. In 1978 the birth rate for 16-year-old females was 31.0, and for 17-year-olds it was 51.0. In 1984 the rates were 30.1 and 49.8, respectively. From 1984-87, the birth rate for 15-year-olds rose to 14.7, its highest point during the 10-year span of 1978-87. The birth rate for 16-year-olds declined in 1985 and 1986, but in 1987 the rate was back up to the 1984 level of 30.1. The birth rate for 17-year-olds rose to 50.8 in 1985 but was down somewhat to 49.6 in 1987.

**Figure 5. Mothers with no prenatal care during the first trimester, by race and Hispanic origin: United States, 1978-87 and 1990 objectives**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

**Figure 6. Birth rates for girls 15-17 years of age: United States, 1978-87 and 1990 objectives**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

# Children

## (1-14 years of age)

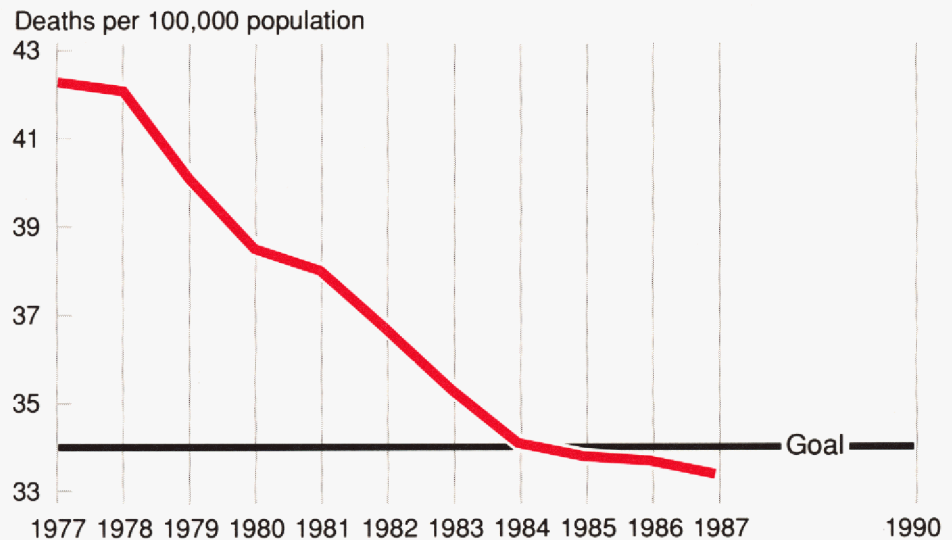
Since 1977 the death rate for children 1-14 years of age has dropped from 42.3 per 100,000 population in this age group to 33.3 in 1987—somewhat below the 1990 goal of 34 (figure 7). When death rates for these children are computed for age groups 1-4, 5-9, and 10-14 years, the various causes of death have shown great variation in their ranking and toll by race, sex, and age groups. However, during these years, the most lives claimed for the overall age group of 1-14 years have consistently been in the cause-of-death category “accidents and adverse effects,” which includes principally deaths from motor vehicle accidents, drowning, fire and flames, and suffocation.

Within the category “accidents and adverse effects,” 47.1 percent of the deaths of children aged 1-14 years were due to motor vehicle accidents in 1978, compared with 45.9 percent in 1987. Among children 1-4 years, 33.0 percent of the deaths were due to motor vehicle accidents in 1987 compared with 57.1 percent for children aged 5-14 years.

In 1978 the motor vehicle death rate for children aged 1-14 years was 9.0 per 100,000 children in this age group (figure 8). By 1984 this rate had fallen to 6.6; in 1985 the rate increased slightly to 6.8, where it has since remained. The 1987 motor vehicle death rate for children aged 1-14 years was 24 percent above the 1990 objective of 5.5 deaths per 100,000 children.

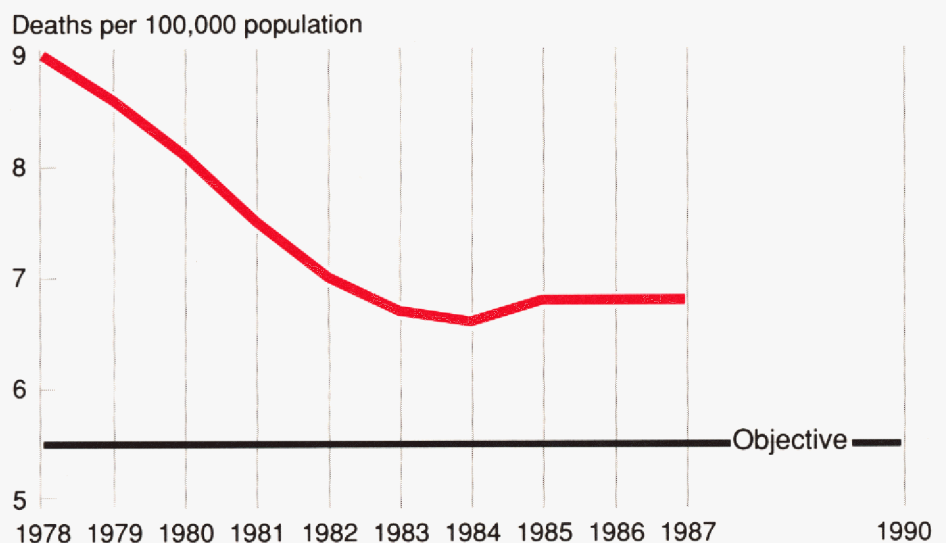
For the most part, however, death rates tell less about the health of children than about the health of older people. Other measures such as dental health, impairments (particularly in vision and hearing), and injuries, as well as acute and chronic conditions, provide a fuller picture of the health of this young population. As a group, children of all ages have few chronic conditions, although they suffer a wide range of such conditions. Most of the illnesses suffered by children are episodic and short term. Yet these illnesses require

**Figure 7. Death rates for children 1-14 years of age: United States, 1977-87 and 1990 goal**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

**Figure 8. Death rates for motor vehicle accidents among children under 15 years of age: United States, 1978-87 and 1990 objectives**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

medical attention and cause children to restrict their activities, spend time in bed, and lose time from school.

From 1978 to 1987 school-loss days have consistently decreased, reflecting a decrease in illness (figure 9). Since 1977 acute respiratory diseases have consistently been the main reason for absence from school because of illness. In 1987, 182 schooldays per 100 children were lost due to respiratory diseases. (This rate is lower than in other years, probably because there was no major influenza outbreak in 1987.)

As would be expected, rates of school-loss days for infectious and parasitic diseases have been affected by the availability and widespread use of immunizing agents for "childhood" diseases. Of the seven major childhood infectious diseases—measles, mumps, rubella, polio, diphtheria, pertussis, and tetanus—considerable progress has been made in reducing the annual incidence of all but three: measles, mumps, and pertussis (figure 10).

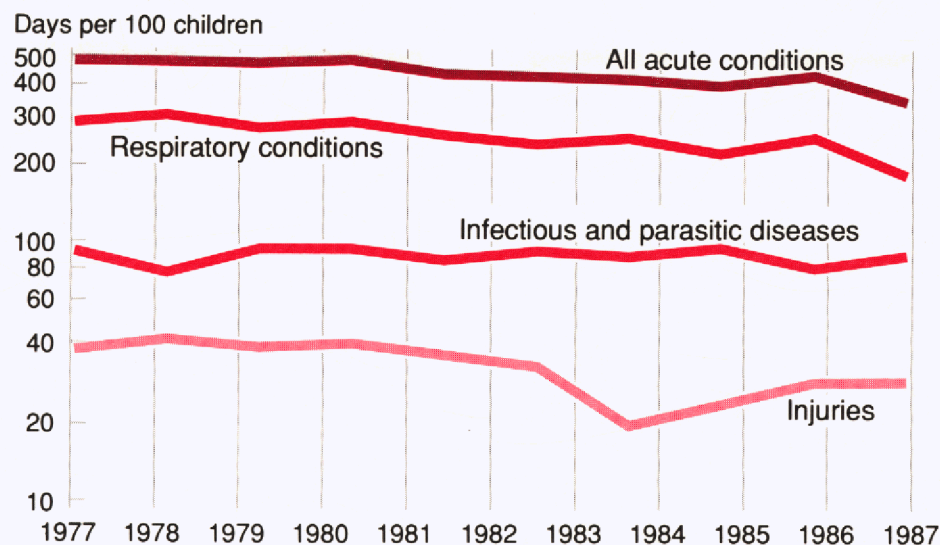
Between 1979 and 1988 the number of reported measles cases has fluctuated, ranging from a high of 13,597 cases in 1979 to a low of 1,497 cases in 1983. In 1988, 3,396 cases were reported—more than twice the 1983 low and nearly seven times the 1990 objective of less than 500 cases per year. Outbreaks have occurred among both preschool-aged children, many of whom were unvaccinated, and high school- and college-aged children, many of whom had been vaccinated. It has become apparent from recent outbreaks that persons who had received measles vaccine at age 12–14 months are at higher risk for measles than those vaccinated at age 15 months and over.

From 1979 to 1985 morbidity from mumps declined from 14,225 to 2,982. In 1986, however, there were 7,790 cases of mumps, an increase of 161 percent. The 12,848 cases reported in 1987 were the highest number reported since 1979.

Although the 4,866 cases reported in 1988 represent a 62-percent decrease from 1987, the incidence of mumps in 1988 stood almost five times the 1990 objective of less than 1,000 cases per year.

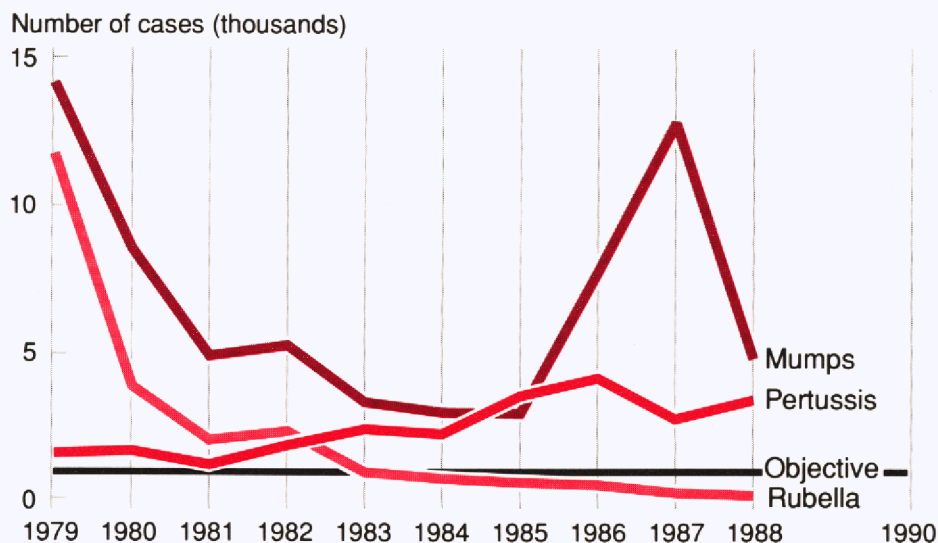
Improved surveillance indicates that pertussis occurs in adolescents and adults as well as in infants and

**Figure 9. School-loss days from selected causes among children 5–17 years of age: United States, 1977–87**



Source: National Center for Health Statistics, Division of Health Interview Statistics, National Health Interview Survey.

**Figure 10. Reported cases of selected diseases: United States, 1979–88 and 1990 objectives**



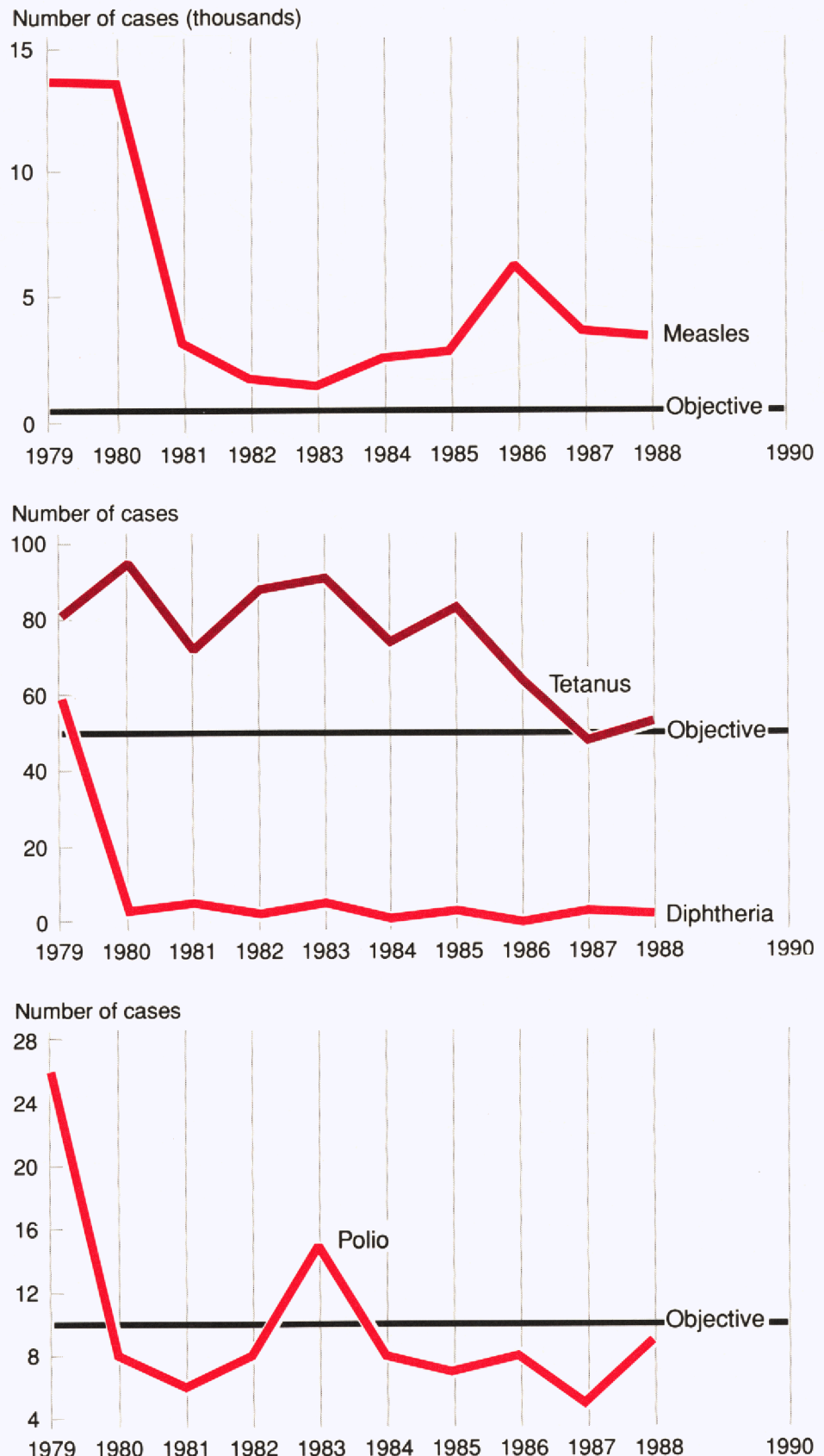
young children, although the illness becomes milder as age increases. Increases in reported cases since 1984 may be due to improved diagnosis and surveillance, as diphtheria-tetanus-pertussis vaccine coverage in children does not appear to have declined. In 1979, 1,623 pertussis cases were reported. The trend was then somewhat erratic but decidedly upward, to the 1986 peak of 4,195 cases. After a drop to 2,823 cases in 1987, the annual incidence of pertussis rose to 3,450 cases in 1988—more than three times the 1990 objective of less than 1,000 cases per year.

In recent years the apparent increase in asthma among children has raised considerable concern. According to the American Asthma Report, nearly half (46 percent) of the surveyed pediatricians are treating more asthmatic children today than they were just 5 or 10 years ago. Allergists, pulmonologists, family physicians, and general practitioners also report treating more asthma patients currently than they did earlier in this decade. School nurses as well report an increase in the number of asthmatic children seen in recent years. Asthma appears to be more prevalent among urban children, but the causes are not documented. Air pollution and other environmental conditions may be possible factors.

In 1979 the hospital discharge rate for asthma-related causes among children aged 1–14 years was 19.8 per 10,000 population in this age group (figure 11). This rate jumped to 24.3 in 1980. By 1982 the rate had reached 29.3; since then it has fluctuated. In 1987 the rate was 28.4. In addition to, or instead of, an increase in the severity of asthma among children, other factors may be working individually or collectively to produce changes in these hospital discharge rates. The increased use of hospitals in the management of asthma and the increased availability of hospital care to previously underserved segments of the population are examples of such factors.

Recently attention has been given to the increase in acquired immunodeficiency syndrome (AIDS) cases among children, especially children under 5 years of age

**Figure 10. Reported cases of selected diseases: United States, 1979–88 and 1990 objectives—Con.**



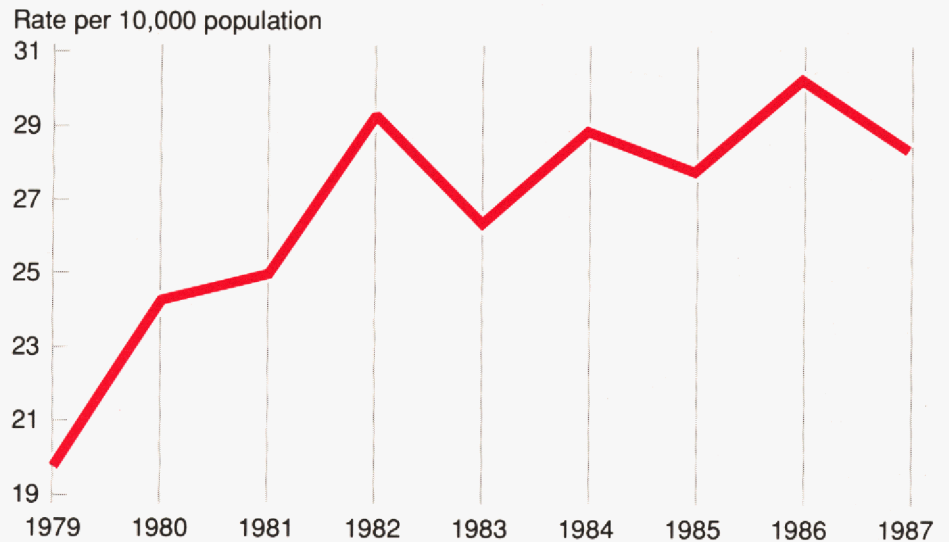
Source: Centers for Disease Control, Center for Prevention Services.



(figure 12). In 1988, 463 cases of AIDS were reported among these children.

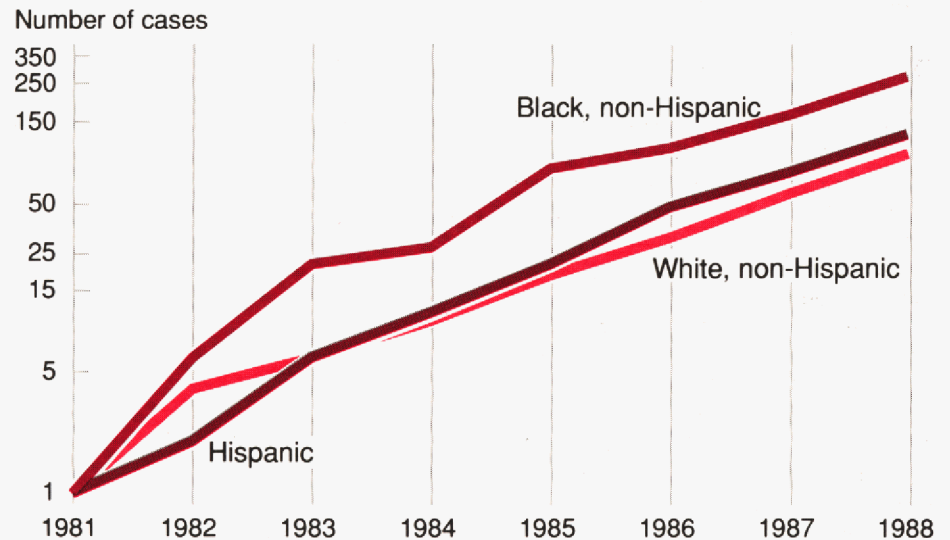
Since 1981, the first year for which cases with AIDS were identified, there have been 1,527 cases among children under age 5 (as of September 1989). The preponderance of the cases has been among black children. As of September 1989 there have been 867 cases, or 57 percent of the total, among black children under age 5. Comparable numbers for Hispanic children were 385 cases, or 25 percent; and for white children, 269 cases, or 18 percent. (For related information see detailed tables 42 and 43.)

**Figure 11. Hospital discharge rate for asthma-related causes among children under 15 years of age: United States, 1979-87**



Source: National Center for Health Statistics, Division of Health Care Statistics, National Hospital Discharge Survey.

**Figure 12. New pediatric AIDS cases among children under 5 years of age, by race and Hispanic origin: United States, 1981-88**



Source: Centers for Disease Control, Center for Infectious Diseases, AIDS Program.

# Adolescents and Young Adults

(15–24 years of age)

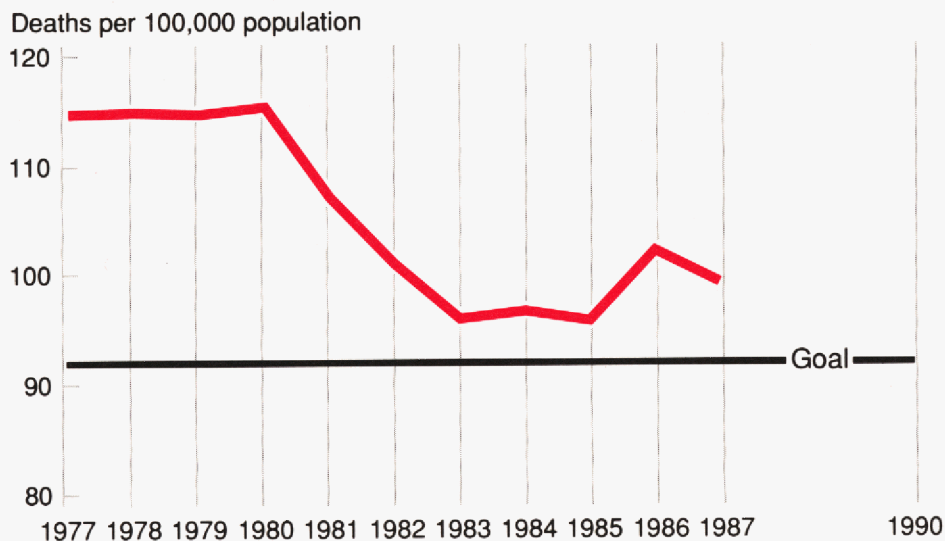
Between 1977 and 1986 the death rate for young adults 15–24 years of age declined toward the 1990 goal of 93.0 deaths per 100,000 population in this age group (figure 13 and detailed table 39). In 1977 the death rate for young adults aged 15–24 years was 114.8 per 100,000 population—23 percent above the 1990 goal. There was a marked decline in the death rate for young adults between 1981 and 1983, most of which can perhaps be attributed to the decline in homicide for these years. In 1985 the death rate was 95.9 per 100,000 population—3 percent above the 1990 goal. In 1986 the death rate for young adults jumped to 102.3. In 1987 the rate of 99.4 stood 7 percent above the 1990 goal.

Since 1978 the leading cause of death for persons 15–24 years of age has been “accidents and adverse effects,” accounting for over half the deaths of these adolescents and young adults. During this period, the most lives claimed in this category were, by far, from motor vehicle injuries.

Another major cause of death in this age group is from “other violent causes,” mainly suicides and homicides. In 1978 the rate of suicide among persons 15–24 years of age was 12.1 per 100,000 population (figure 14). Between 1978 and 1982 the rate remained virtually unchanged. The small drop to 11.9 in 1983 was followed by higher rates in each of the four subsequent years. Although lower than the 10-year high of 13.1 in 1986, the 1987 suicide rate for persons 15–24 years of age (12.9) stood 17 percent above the 1990 objective of 10.9. For related information see detailed table 34.

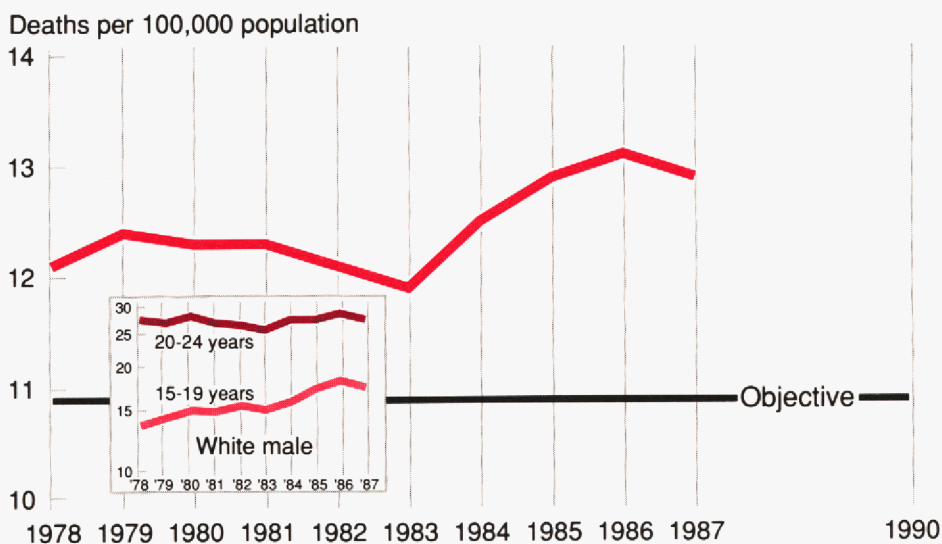
Since 1978 suicide has been the second leading cause of death among white males 15–24 years of age, but white males 20–24 years have had much higher suicide rates than white males 15–19 years (figure 14). The gap in the rates of the two age groups has narrowed since 1978. Among white males 20–24 years the rates were decreasing, although slightly, until reaching a 10-year low of 25.5

**Figure 13. Death rates for persons 15–24 years of age: United States, 1977–87 and 1990 goal**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

**Figure 14. Death rates for suicide among persons 15–24 years of age: United States, 1978–87 and 1990 objective**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

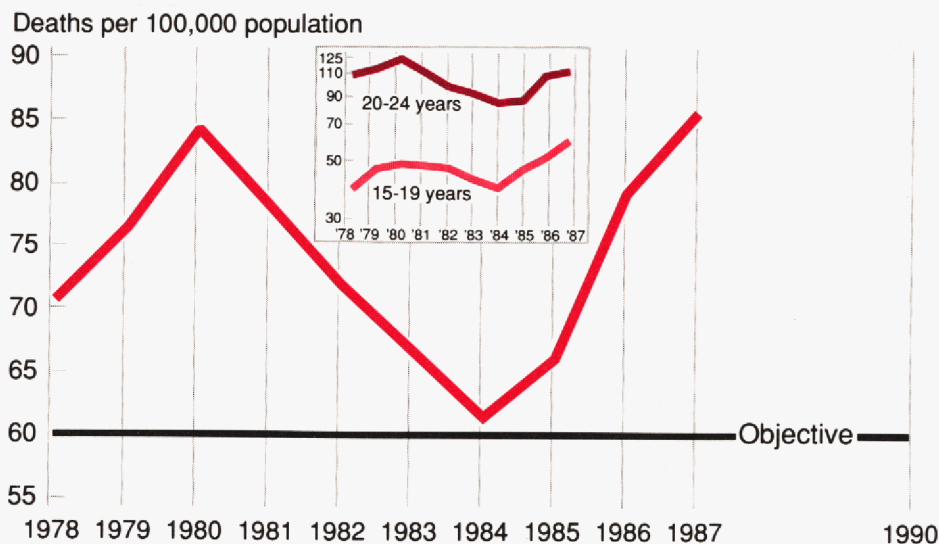
per 100,000 population in 1983. In each year since 1983, the death rate for suicide for white males 20–24 years has been about 2 deaths per 100,000 population higher than the 1983 low. The 1987 rate of 27.5, however, was almost the same as the 1978 rate of 27.4. In contrast, the death rate for suicide among white males 15–19 years of age has been increasing since 1978, when the rate was 13.6. During this 10-year period the largest single-year increase was 1984–85 when the rate rose from 15.8 to 17.3. In 1987 the suicide rate for white males 15–19 years was 17.6.

From 1978 to 1987 homicide was the leading cause of death for black males 15–24 years of age. In 1978 the homicide rate for black males 15–24 years was 70.7 per 100,000 population (figure 15). By 1980 this rate had increased to 84.3. After the 1984 low of 61.5, death rates for homicide among black males 15–24 years of age increased each subsequent year. In 1987 the rate was 85.6—43 percent above the 1990 objective of 60.0 per 100,000 for black males 15–24 years old (detailed table 33).

As in the case of the suicide rate among white males 15–24 years of age, the homicide rate for younger (15–19 years) black males and the rate for older (20–24 years) black males exhibit appreciable differences in magnitude (figure 15). Since 1978 the death rates for homicide among black males 20–24 years have been roughly double those of black males 15–19 years. In 1978 the homicide rate for black males 15–19 years was 38.9 per 100,000 population. Since then this rate has risen, fallen, and risen again. Between 1984 and 1987 the homicide rate for these black men rose more than 50 percent—from 39.3 to 60.0. The homicide rate among black men 20–24 years also rose, fell, and rose again during the decade. Between 1984 and 1987 the rate increased 33 percent—from 84.5 to 112.6. However, the 1987 rate of 112.6 was not nearly as high as the 10-year peak of 124.9, which occurred in 1980, and was essentially the same as the 1978 rate of 108.5.

Many of the violent deaths among persons 15–24 years of age can be attributed to the abuse of alcohol and drugs. However, studies by the National Institute on Drug Abuse suggest some decline in the use of

**Figure 15. Death rates for homicide among black males 15–24 years of age: United States, 1978–87 and 1990 objective**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

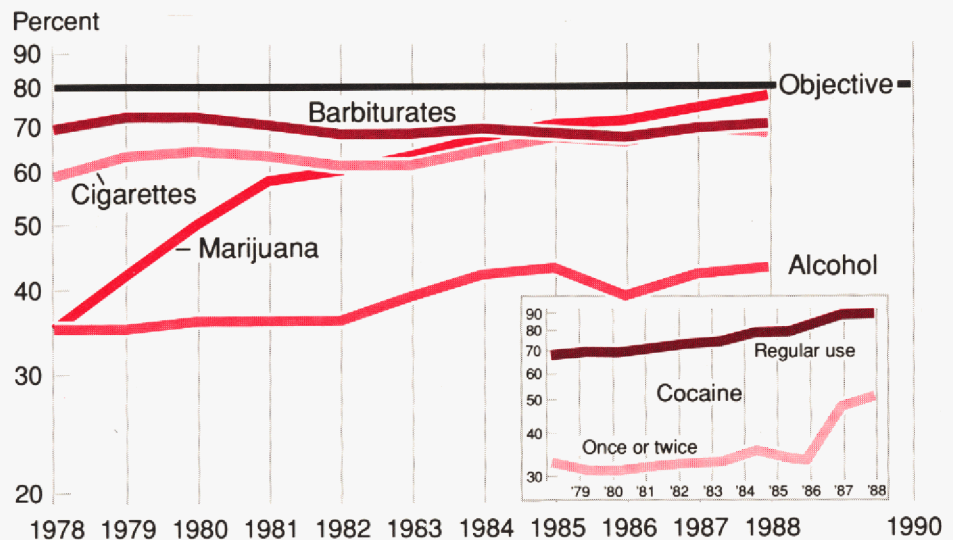
these substances by young people, especially among high school seniors.

Consistent with some of the trends seen in the use of drugs, the proportion of the high school senior class that has been concerned about the harmful health effects of some of these substances has been increasing since 1978 (figure 16). Since 1978 high school seniors have shown a significant increase in their concern about regular use of marijuana. The proportion of these students who perceive a great risk more than doubled, from 35 percent in 1978 to 77 percent in 1988. In 1978 about one-third (35 percent) of high school seniors considered consuming five or more drinks once or twice each weekend to be a great risk to their health. By 1988 this proportion was 43 percent. In 1978, 59 percent of high school seniors perceived pack-a-day smoking to be a great risk compared with 68 percent in 1988. On the other hand, perception of great risk in the regular use of barbiturates has shown very little change. In 1978, 69 percent of high school seniors perceived the regular use of barbiturates to be a great risk to their health compared with 70 percent in 1988.

High school seniors showed an impressive increase in awareness of the risk involved in the regular use of cocaine—from 68 percent in 1978 to 89 percent in 1988 (figure 16). Occasional use (once or twice) of cocaine was considered as a great risk by only about half (51 percent) of the high school seniors in 1988. However, this is a notable improvement over the 33 percent reported in 1978.

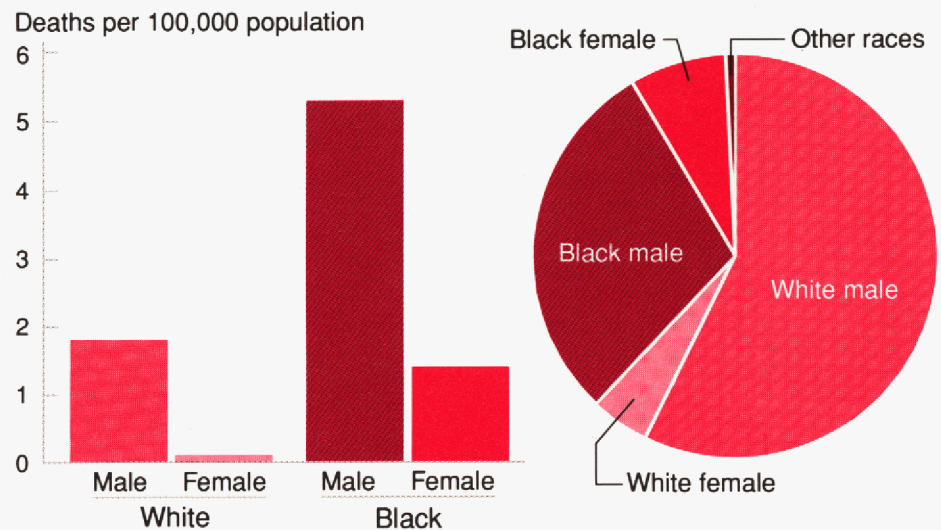
In addition to deaths from motor vehicle accidents, suicides, and homicides, deaths from acquired immunodeficiency syndrome (AIDS) have become a major cause of death among adolescents and young adults. In 1987 (the first year in which a unique category for classifying and coding human immunodeficiency virus (HIV) infection was used in the United States) this cause ranked 7th for persons 15–24 years of age. The death rate was 1.3 per 100,000 population. Although white persons 15–24 years of age had the higher percentage of cases, the toll of this disease was disproportionately higher among black males in the age group. Among black males aged 15–24 years, the 1987 death rate from AIDS was

**Figure 16. High school seniors perceiving great risk in using cigarettes, alcohol, and selected drugs: United States, 1978–88 and 1990 objectives**



Source: National Institute on Drug Abuse.

**Figure 17. Death rates for human immunodeficiency virus infection among persons 15–24 years of age, by race and sex: United States, 1987**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

5.3; the comparable rate for white males was 1.8. The rate for black females aged 15–24 years was 1.4 compared with 0.1 for white females (figure 17). (For related information see detailed tables 42 and 43.)

# Adults

(25–64 years of age)

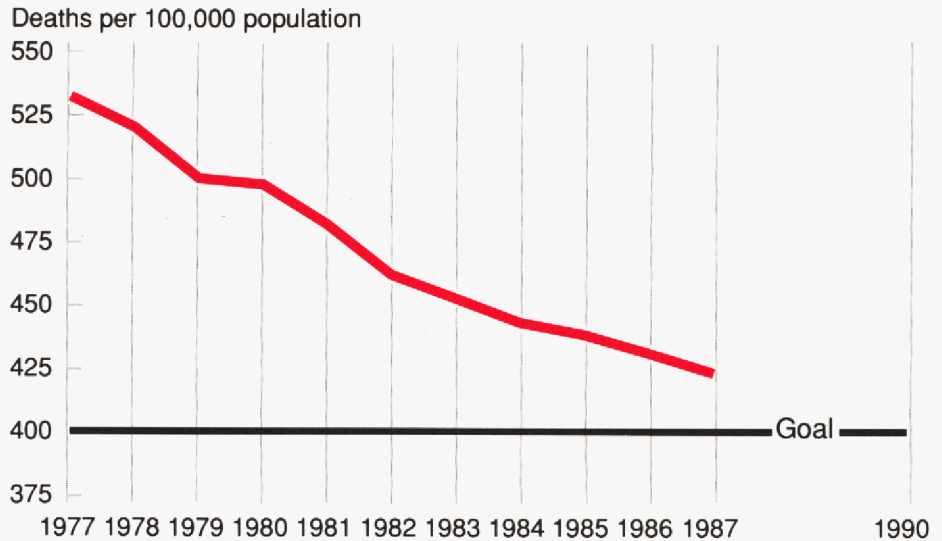
The death rate for adults 25–64 years of age dropped from 532.9 per 100,000 population in this age group in 1977 to 423.4 in 1987 (figure 18 and detailed tables 22 and 39). This decline represented decided progress toward the 1990 goal of 400 deaths per 100,000 population in this age group. In 1977 the death rate for adults aged 25–64 years was 33 percent above the 1990 goal; in 1987 it was 6 percent above the 1990 goal.

In 1978 the leading cause of death for adults 25–64 years of age was diseases of the heart. However, since 1983 cancer has ranked number one for this age group. This shift represents not so much a change in the death rates for cancer, but more notably a decline in the death rates for heart disease among persons 55–64 years of age.

In 1978 the death rate for heart disease for persons aged 55–64 years was 530.8 per 100,000 population (figure 19). This rate fell steadily to 408.8 in 1987. In contrast, the death rate for cancer among persons 55–64 years of age was slightly higher in 1987 than in 1978. In 1978 the death rate for cancer among persons 55–64 years of age was 440.5; although the rate was down to 434.8 in 1981, it had risen to 448.4 by 1984. Little decrease has since occurred, and in 1987 the rate was 447.0 (detailed table 28). Throughout the period 1978–87, stroke was the third leading cause of death among this age group, with the death rate charting a decline from 79.5 to 52.2 (detailed table 27).

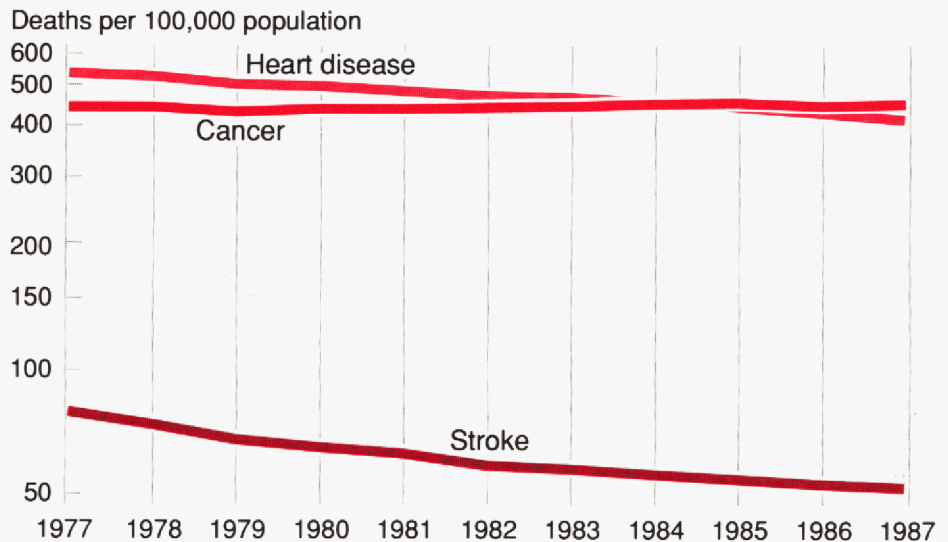
Lung cancer is the most common cancer in this country and the leading cause of cancer deaths. It accounts for one-third of all cancer deaths in white males, and its incidence among black and white females is increasing faster than that of any other major type of cancer. These increases are primarily due to the aging of the relevant cohorts of persons, particularly women, with higher proportions of smokers. About 30 percent of all cancer deaths are attributed to smoking. The American Cancer Society estimates that

**Figure 18. Death rates for persons 25–64 years of age: United States, 1977–87 and 1990 goal**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

**Figure 19. Death rates for heart disease, cancer, and stroke among persons 55–64 years of age: United States, 1977–87**



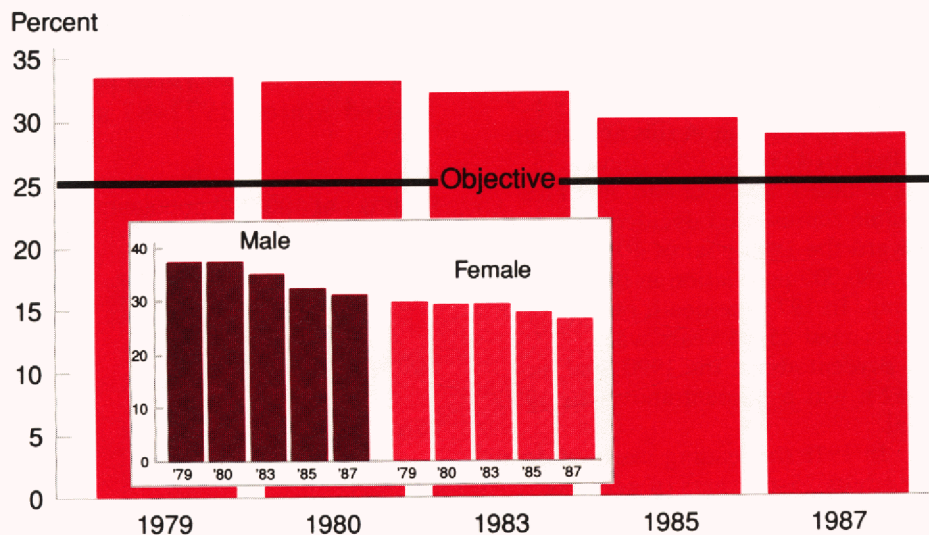
Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

smoking is responsible for more than 80 percent of all lung cancer deaths.

Encouragingly, however, the downward trend in the proportion of cigarette smokers since the first Surgeon General's Report on Smoking and Health (1964) has continued since 1979. In 1979, 33.5 percent of the population 18 years of age and over smoked; in 1985, 30.1 percent smoked; and in 1987, 28.8 percent smoked (figure 20 and detailed table 53). In 1979 the percent of smokers in the population age 18 years old and over was 35 percent above the 1990 objective of 24.9; in 1987 the proportion was 16 percent above the objective. The decline in the proportion of smokers between 1979 and 1987 has not been as substantial for women as for men, however (figure 20). Therefore, during these years the convergence of the proportions of smokers for males and females also continued. In 1979, 37.5 percent of males and 29.9 percent of females were smokers compared with 31.2 and 26.5 percent, respectively, in 1987.

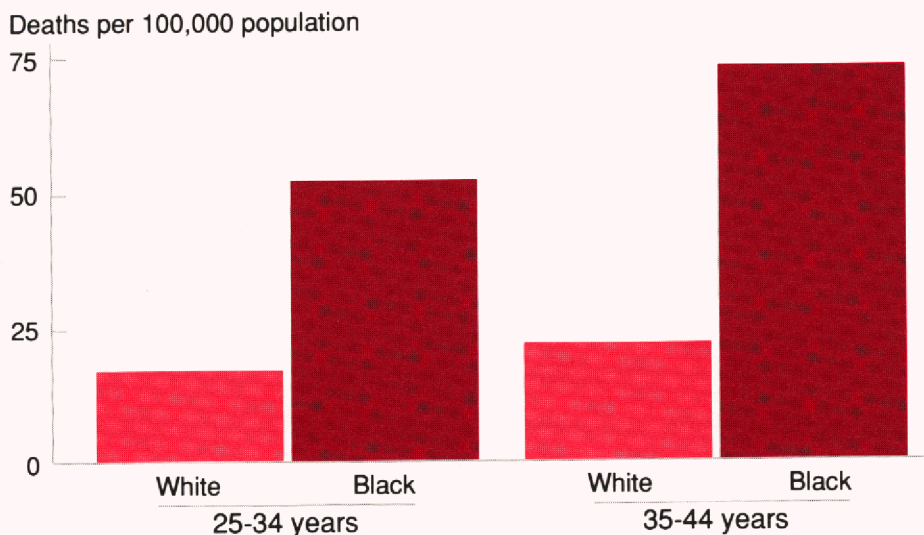
Acquired immunodeficiency syndrome (AIDS) has increased dramatically among younger (25-44 years) adults. In 1987 (the first year in which a unique category for classifying and coding human immunodeficiency virus (HIV) infection was used in the United States) this cause ranked sixth for persons 25-44 years of age. According to the National Center for Health Statistics, Division of Vital Statistics, of the total 13,468 deaths (among persons of all ages) in this category, fully two-thirds (8,867) were among males aged 25-44 years—one-third among males aged 25-34 years and one-third among males 35-44 years. However, death rates reveal a very disproportionate toll among black males compared with white males. In 1987 the death rate for black males aged 25-34 years was 52.0 per 100,000 persons in this age group compared with 16.8 for white males of the same ages (figure 21). In the age group 35-44 years, the death rate for black males was 72.9 compared with 21.7 for white males. (For related information see detailed tables 23-25.)

**Figure 20. Current cigarette smokers among persons 18 years of age and over: United States, selected years 1979-87 and 1990 objective**



Source: National Center for Health Statistics, Division of Health Interview Statistics, National Health Interview Survey.

**Figure 21. Death rates for human immunodeficiency virus infection among males 25-34 and 35-44 years of age, by race: United States, 1987**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

# Elderly

(65 years of age and over)

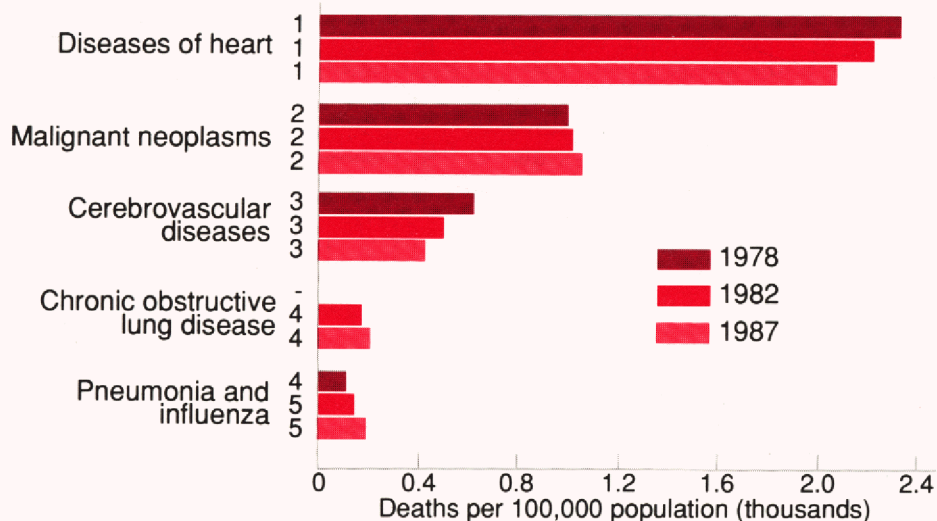
Between 1978 and 1987 the rankings of the five leading causes of death among persons 65 years of age and over shifted very little. However, the magnitude of their toll in this population has changed significantly (figure 22). Although heart disease remained the predominant cause of death, the death rates for heart disease fell 11 percent during this period. Cancer remained the second leading cause of death from 1978 through 1987, but the death rates for cancer increased 6 percent during the period. Of the three leading causes of death as of 1987, the rates for the third, stroke, showed the greatest change between 1978 and 1987. The death rates for stroke declined from 662.0 per 100,000 population in this age group in 1978 to 435.0 in 1987—a 34-percent decrease. Chronic obstructive lung disease, which was not added to the cause-of-death list until 1979, ranked fourth in 1987. In 1978 pneumonia and influenza was the fourth leading cause of death among persons aged 65 years and over; in 1987 this cause ranked fifth.

In 1978 arteriosclerosis ranked as the fifth leading cause of death for persons aged 65 years and over. In that year the rate for arteriosclerosis was 115.0 per 100,000 population. A little over 2 percent (2.2) of the deaths of these older persons were attributable to this cause. In 1987 arteriosclerosis ranked as the eighth leading cause of death for this age group.

The proportion of the population aged 65 years and over is increasing rapidly. Moreover, persons reaching age 65 can look forward to a greater number of years of life. In 1978 life expectancy at age 65 was 16.3. By 1987 life expectancy at age 65 had increased to 16.9 for a total of 81.9 years. In other words, people who attained age 65 in 1987 could expect to live, on average, about another 17 years (16.9). Life expectancy at age 65 varies, however, by race and by sex (figure 23 and detailed table 14).

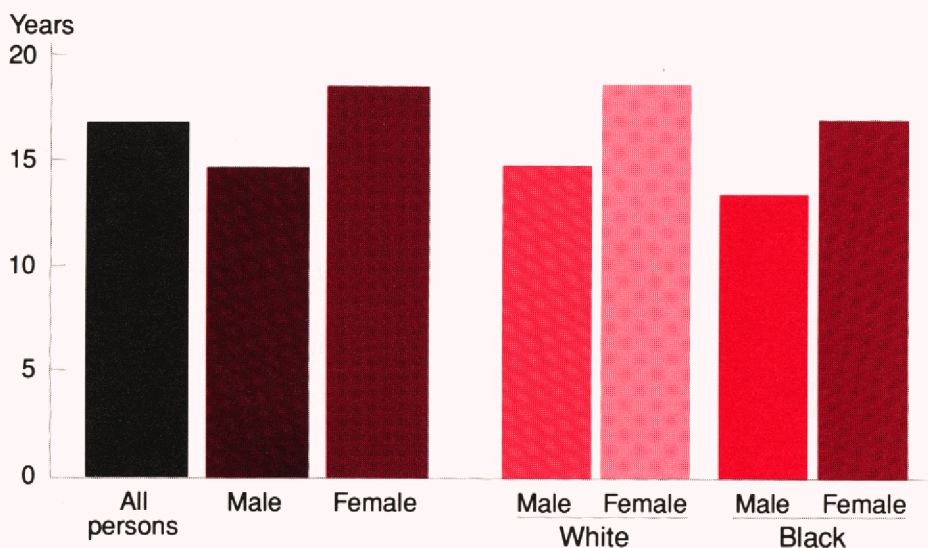
As life expectancy has continued to increase, so has the emphasis on

**Figure 22. The 5 leading causes of death among persons 65 years of age and over: United States, 1978, 1982, and 1987**



Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

**Figure 23. Life expectancy at age 65, by race and sex: United States, 1987**

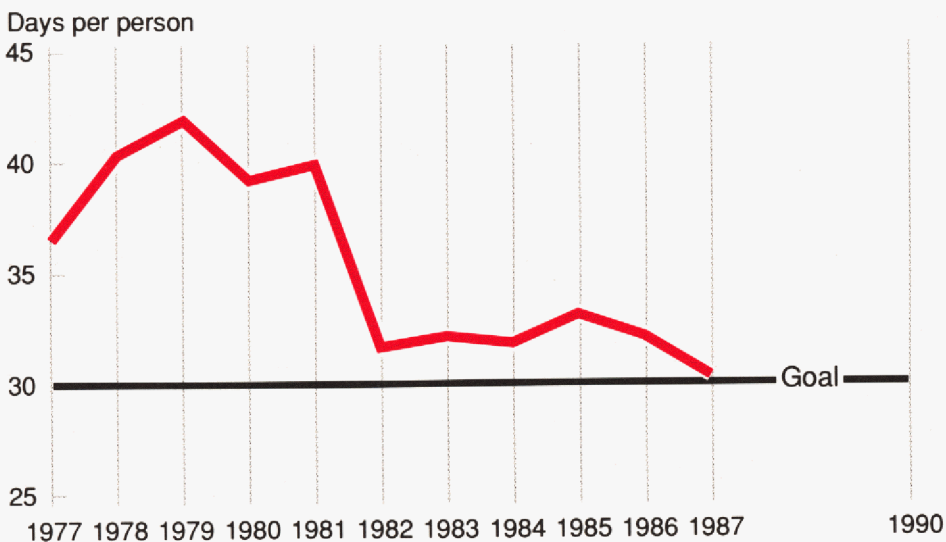


Source: National Center for Health Statistics, Division of Vital Statistics, National Vital Statistics System.

improving the quality of life of persons who live to age 65 and well beyond. Major objectives are to make the remaining years of life as healthy, active, and enjoyable as possible and to reduce the prevalence of such chronic problems as diabetes, respiratory conditions, and injuries through diet, exercise, modifications in lifestyle and behaviors (for example, smoking and alcohol consumption), and the adoption and practice of safety measures, especially in and about the home.

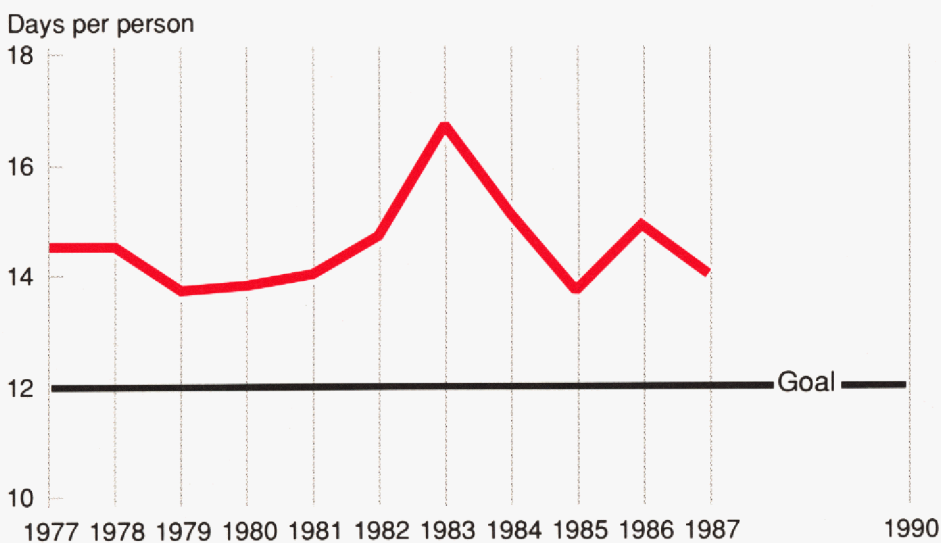
Restricted-activity days and bed-disability days are two measures that have been used to measure how healthy and active these older people are. In 1977 adults 65 years of age and over had 36.5 days per person in which they were unable to engage in what they considered their usual activity (figure 24). After reaching a high of 41.9 days in 1979, the rate decreased to 30.3 in 1987. Although this is very close to the 1990 goal of 30.0, the interpretation and implications of the concept of restricted-activity days make this measure less than an ideal indicator of the health status of older people. Currently, the number of bed-disability days is thought to be a better indicator. In 1977 adults aged 65 years and over had 14.5 bed-disability days; in 1983 this measure reached an 11-year high of 16.7 bed-disability days (figure 25). Since 1983 the number of bed-disability days has fallen. In 1987 adults aged 65 years and over had 14.0 bed-disability days. This rate was 17 percent above the 1990 goal of 12.0.

**Figure 24. Restricted-activity days for persons 65 years of age and over: United States, 1977-87 and 1990 goal**



Source: National Center for Health Statistics, Division of Health Interview Statistics, National Health Interview Survey.

**Figure 25. Bed-disability days for persons 65 years of age and over: United States, 1977-87 and 1990 goal**



Source: National Center for Health Statistics, Division of Health Interview Statistics, National Health Interview Survey.



# High Blood Pressure Control

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Control of high blood pressure continues to be one of the most effective prevention efforts to reduce death rate from heart disease and stroke. Since 1978 the death rate from heart disease has fallen 17 percent, and the death rate from stroke has fallen approximately 30 percent. In 1987 the age-adjusted death rates per 100,000 resident population were 170 for heart disease and 30 for stroke. Achievements in control of high blood pressure, including a high level of public awareness of its dangers and possibilities for its control, have contributed to these declining death rates, although the decline in cardiovascular mortality began in 1968 before State hypertension control programs were functional.

In 1985 an estimated 91 percent of the adult population (18 years of age and over) knew that high blood pressure was related to coronary heart disease, and 77 percent related it to stroke. Three-quarters (73 percent) of adults had had their blood pressure taken by health professionals within the past year. Women were more likely than men to have had their blood pressure taken, as were persons aged 65 years and over compared with persons in other age groups.

Government and private organizations have helped to improve knowledge about hypertension control. For example, data about consumer knowledge collected between 1973 and 1988 indicate significant increases in public awareness of the relationship between sodium and hypertension and in consumer avoidance of salt or sodium. Also, the availability of national data to explore the incidence of hypertension and associated health effects may prove to be a valuable surveillance tool for measuring the impact of hypertension control efforts.

Despite the improvements in hypertension control, more than 900,000 people died of heart disease or stroke in 1987, representing nearly half of all deaths in the United States. In 1988 only 20 percent of consumers reported regular purchases of low sodium products, even though nearly 90 percent had seen the products. Approximately \$22 million spent in 1987 by chronic disease programs of State health agencies for hypertension control programs (Public Health Foundation), which represents less than \$1 per person with hypertension in the United States.

Additional information regarding high blood pressure and related health outcomes is available in the detailed tables. Tables 57 and 58 provide data on prevalence of elevated blood pressure and hypertension in the United States. Tables 72 and 73 contain information on hospitalizations due to hypertension-related diseases; and tables 23-27 and 37 present mortality data and estimates of years of potential life lost due to hypertension-related diseases.

## Improved Health Status

**A.a.** By 1990, at least 60 percent of the estimated population having definite high blood pressure should have attained successful long-term blood pressure control, that is, a blood pressure at or below 140/90 mmHg for 2 years or more.<sup>1</sup> (Based on 1979 data, high blood pressure control rates vary among communities and States, with a general range from 25 to 60 percent.)

*The 1976-80 National Health and Nutrition Examination Survey found that 11 percent of people with a blood pressure equal to or greater than 140/90 mmHg had their high blood pressure under control. Approximately one-third of people with a blood pressure equal to or greater than 160/95 mmHg had their high blood pressure under control.*

<sup>1</sup>At the time this objective was written, high blood pressure was defined as a measurement of 160/95 mmHg or higher. The results of the Hypertension Detection and Follow-up Program, released since this objective was written, demonstrated the value of treating mild hypertension, as did a number of subsequent clinical trials. As a result, the definition of high blood pressure was changed to a measurement of 140/90 mmHg or higher. It also should be noted that the term "definite" high blood pressure is no longer used.

## Reduced Risk Factors

**A.b.** By 1990, the average daily sodium ingestion (as measured by excretion) for adults should be reduced at least to the 3–6-gram range.<sup>2,3</sup> (Baseline data unavailable.)

<sup>2</sup>Same objective in Improved Nutrition.

<sup>3</sup>3–6 grams of salt correspond roughly to 1.2–2.4 grams of sodium.

**A.c.** By 1990, the prevalence of significant overweight (120 percent of “desired” weight) among the U.S. adult population should be decreased to 10 percent of men and 17 percent of women, without nutritional impairment.<sup>4,5</sup> (In 1971–74, 23.7 percent of men and 26.0 percent of women 20–74 years of age were overweight.)

<sup>4</sup>Same objective in Improved Nutrition.

<sup>5</sup>Overweight is defined for men as body mass index (BMI) greater than or equal to 27.8 kilograms/meter<sup>2</sup> and for women, as 27.3 kilograms/meter<sup>2</sup>. These cut points were used because they represent the sex-specific 85th percentiles for persons 20–29 years of age in the 1976–80 National Health and Nutrition Examination Survey. The language for this objective in terms of BMI would be: By 1990, the prevalence of overweight (BMI of 27.8 or higher for men and 27.3 or higher for women) among the U.S. adult population should be reduced, without impairment of nutritional status, to approximately 18 percent of men and 21 percent of women.

*Data from the first 4 years of the revised FDA Total Diet Study (1982–86) indicate that average sodium intakes for adults, excluding salt added at the table, were within the Established Safe and Adequate Daily Dietary Intake range of 1,100–3,300 milligrams established by the National Academy of Sciences in 1980.*

Race or ethnicity	Percent of overweight persons 20–74 years <sup>a</sup>	
	Male	Female
Total	24.4	26.7
Non-Hispanic white	24.2	23.9
Non-Hispanic black	26.0	44.4
Mexican-American	30.9	41.6
Cuban	27.6	31.6
Puerto Rican	25.6	40.2

<sup>a</sup>Data are age adjusted; total and non-Hispanic data cover 1976–80; Hispanic data cover 1982–84.

Source: Data from National Center for Health Statistics, Division of Health Examination Statistics.

## Increased Public and Professional Awareness

**A.d.** By 1990, at least 50 percent of adults should be able to state the principal risk factors for coronary heart disease and stroke, that is, high blood pressure, cigarette smoking, elevated blood cholesterol levels, and diabetes. (Data from the survey The Public and High Blood Pressure, conducted in 1979, show that 24 percent of the public knew that high blood pressure is a likely cause of heart trouble, 32 percent reported that cigarette smoking is a cause, and 11 percent cited cholesterol and fatty foods as a cause of heart trouble.)

*The 1985 National Health Interview Survey estimated that 91 percent of the public thought that high blood pressure was related to coronary heart disease. Ninety percent reported that cigarette smoking was a cause, 86 percent cited cholesterol as a cause, and 61 percent noted diabetes as a cause of heart trouble.*

**A.e.** By 1990, at least 90 percent of adults should be able to state whether their current blood pressure is normal (below 140/90 mmHg) or elevated, based on a reading taken at the most recent visit to a medical or dental professional or other trained reader. (Of persons 17 years of age and over interviewed in 1974, 47 percent reported that their blood pressure was normal, high, low, or other based on a reading taken within the past year; 21 percent had not been told; and 32 percent had not had their blood pressure taken.)

*The 1985 National Health Interview Survey estimated that 73 percent of the population had had their blood pressure taken by a physician within the past year, and 87 percent had had their blood pressure measured within the past 24 months. Of those whose blood pressure was taken within the past 24 months, 68 percent (or approximately 61 percent of the total population) were given the numbers measuring systolic and diastolic pressure.*

## Improved Services and Protection

**A.f.** By 1990, no geopolitical area of the United States should be without an effective public program to identify persons with high blood pressure and to follow up on their treatment. (Baseline data unavailable.)

*As of 1985, all State health departments had coordinated hypertension control programs.*

**A.g.** By 1985, at least 50 percent of processed food sold in grocery stores should be labeled to inform the consumer of sodium and caloric content, employing understandable, standardized, quantitative terms. (In 1979, labeling for sodium was rare; the extent of calorie labeling was about 50 percent in the marketplace.)

*Based on sales dollars, it is estimated that in 1983, 30 percent of processed food sold in grocery stores had sodium labeling. This increased to 60 percent in 1986 and 65 percent in 1988, according to the Food and Drug Administration’s Food Label and Package Survey.*

## Improved Surveillance and Evaluation Systems

**A.h.** By 1985, a system should be developed to determine the incidence of high blood pressure, coronary heart disease, congestive heart failure, and hemorrhagic and occlusive strokes. After demonstrated feasibility, by 1990, ongoing sets of these data should be developed.

**A.i.** By 1985, a methodology should be developed to assess categories of high blood pressure control, and a national baseline study of this status should be completed. Five categories are suggested: (1) Unaware; (2) aware, not under care; (3) aware, under care, not controlled; (4) aware, under care, controlled; and (5) aware, monitored without therapy.

*Data from the National Health and Nutrition Examination Survey, Cycle I Followup Study, are being evaluated for surveillance purposes to estimate the incidence of hypertension and associated health effects.*

*The methodology is being developed and data are being collected in the National Health and Nutrition Examination Survey, Cycle III (1988-93), using the five suggested categories.*

## Family Planning

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One aim of the 1990 family-planning objectives is to promote both maternal and infant health. Pregnancies among teenagers, among unmarried women, among older women, and among high-parity women are all associated with higher-than-average rates of maternal and/or infant morbidity and mortality. Another aim of the 1990 family-planning objectives is to promote the emotional and social health of individuals and the family by emphasizing the prevention of unintended fertility. Aside from the high risks of morbidity and mortality, unintended pregnancies can impose psychological and social costs that often continue throughout the lifetimes of both the mother and the child. One group of objectives addresses reducing unintended pregnancies among teenagers and unmarried women. It is assumed that reductions in the overall number or rate of births for these persons will achieve these objectives because the majority of these births, especially to the younger mothers, are more likely to be unintended pregnancies.

Since 1978 the birth rates among both youngsters and older teens have not been encouraging. Although the data show a decline in the number of births to girls in the 10–14-year age group from 1978 through 1981, the decline corresponds primarily to the decreasing number of girls in this age group. The number of births to mothers 10–14 years of age was almost the same in 1987 as in 1978. The birth rate for girls 10–14 years of age was 1.2 per 1,000 in 1978 and 1.3 in 1987. The birth rate for 15-year-olds was 14.0 per 1,000 girls in 1978 and 14.7 in 1987. In 1978 the birth rate for 16-year-old girls was 31.0 and 51.0 for 17-year-olds; in 1987 the rates were 30.1 and 49.6, respectively.

Since 1978 the birth rate for unmarried women 15–44 years has risen. In 1978 there were 25.7 births compared with a rate of 36.1 in 1987 per 1,000 unmarried women 15–44 years of age. Some of this increase in the rates for these unmarried women may be explained by a changing social environment in which more women are opting for single parenthood, and social attitudes have become more accepting of these choices. However, about 67 percent of births in 1982 to never-married women 15–44 years of age were unintended, either unwanted at conception or mistimed, and 69 percent in 1988. Among ever-married women aged 15–44 about 38 percent of births were unintended in 1982, compared with 37 percent in 1988.

The disparity between women of different economic levels in their ability to avoid unintended births decreased slightly from 1976 to 1982 as the proportion of unintended births also decreased. Among the poorest women unintended births decreased from 52.5 percent in 1976 to 43.4 percent in 1982, while unintended births for women with incomes at 150 percent of poverty or more decreased only slightly, from 29.6 percent in 1976 to 26.5 percent in 1982. The highest proportion of unintended births for this time period—46.4 percent—occurred among women with family incomes of 100–149 percent of poverty. Between 1982 and 1988, however, the data show a 27-percent increase in unintended births among women below poverty level to 55.2 percent in 1988. The disparity between the poorest and wealthiest women also increased from 1982 to 1988.

The 1990 family-planning objectives also give priority to improving the health status of Americans by encouraging the availability of family-planning information, including that related to the relative safety and effectiveness of various contraceptive methods, and by encouraging the reduction of specific risk factors, such as the content of estrogen in oral contraceptives. Research suggests that an estrogen content greater than 50 micrograms is

related to various health problems. In 1978, 24 percent of the oral contraceptives sold contained more than 50 micrograms of estrogen; in 1987 the percent was 2.7 of all prescriptions—well below the 1990 objective of 15 percent of sales containing this level of estrogen.

Detailed tables 2-7, 9-13, and 72-74 provide additional data related to family planning.

## Reduced Risk Factors

**B.a.** By 1990, there should be virtually no unintended births to girls 14 years of age and under. Fulfilling this objective would probably reduce births to this age group to near zero. (In 1978, there were 10,772 births in this age group.)

<i>Year</i>	<i>Births</i>
1978	10,772
1979	10,699
1980	10,169
1981	9,632
1982	9,773
1983	9,752
1984	9,965
1985	10,220
1986	10,176
1987	10,311
1990	0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**B.b.** By 1990, the birth rate<sup>1</sup> for girls 15 years of age should be reduced to 10 per 1,000. (In 1978, there were 14.0 births per 1,000 for this age group.)

<i>Year</i>	<i>Birth rate</i>
1978	14.0
1979	14.0
1980	14.2
1981	14.1
1982	14.0
1983	14.0
1984	13.4
1985	13.6
1986	13.8
1987	14.7
1990	10.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**B.c.** By 1990, the birth rate<sup>2</sup> for girls 16 years of age should be reduced to 25 per 1,000. (In 1978, there were 31.0 births per 1,000 for this age group.)

<i>Year</i>	<i>Birth rate</i>
1978	31.0
1979	30.9
1980	30.9
1981	30.4
1982	31.1
1983	30.6
1984	30.1
1985	29.7
1986	29.5
1987	30.1
1990	25.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**B.d.** By 1990, the birth rate<sup>3</sup> for girls 17 years of age should be reduced to 45 per 1,000. (In 1978, there were 51.0 births per 1,000 for this age group.)

<i>Year</i>	<i>Birth rate</i>
1978	51.0
1979	51.4
1980	51.8
1981	49.8
1982	50.2
1983	50.6
1984	49.8
1985	50.8
1986	49.4
1987	49.6
1990	45.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

<sup>1</sup>The birth rate is the number of children born alive to women in an age group expressed as a rate per 1,000 women in the age group.

<sup>2</sup>The birth rate is the number of children born alive to women in an age group expressed as a rate per 1,000 women in the age group.

<sup>3</sup>The birth rate is the number of children born alive to women in an age group expressed as a rate per 1,000 women in the age group.

**B.e.** By 1990, reductions in unintended births among single American women (15–44 years of age) should reduce the birth rate<sup>4</sup> in this group to 18 per 1,000. (In 1978, there were 25.7 births per 1,000 unmarried women<sup>5</sup> 15–44 years of age.)

<sup>4</sup>The birth rate is the number of children born alive to women in an age group expressed as a rate per 1,000 women in the age group.

<sup>5</sup>Women unmarried at the birth of the child include the categories single, widowed, and divorced.

**B.f.** By 1990, the availability of family-planning information and methods (education, counseling, and medical services) to all women and men should have sufficiently increased to reduce by 50 percent the disparity between Americans of different economic levels in their ability to avoid unplanned births. (In 1976, 52 percent of births that occurred during the previous 5 years reported by ever-married women with family incomes below the poverty level were unintended compared with 29.2 percent for women with family incomes of 150 percent of poverty level or higher.)

### Increased Public and Professional Awareness

**B.g.** By 1990, at least 75 percent of men and women over 14 years of age should be able to describe accurately the various contraceptive methods, including the relative safety and effectiveness of one method versus the others. (Baseline data unavailable.)

### Improved Services and Protection

**B.h.** By 1985, sales of oral contraceptives containing more than 50 micrograms of estrogen should have been reduced to 15 percent of total sales. (In 1978, 23.9 percent of tablets dispensed contained this level.)

**B.i.** By 1985, 100 percent of federally funded family-planning programs should have an established routine for providing an initial infertility assessment, either directly or through referral. (Baseline data unavailable.)

Year	Birth rate
1978	25.7
1979	27.2
1980 <sup>a</sup>	28.4
1980	29.4
1981	29.6
1982	30.0
1983	30.4
1984	31.0
1985	32.8
1986	34.3
1987	36.1
1990	18.0

<sup>a</sup>The method of deriving data by marital status of the mother was changed in 1980. The rate of 28.4 represents the rate that would be obtained using the same methodology as 1978 and 1979.

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

Poverty status	Percent of unintended births to ever-married women		
	1976	1982	1988
Below poverty level	52.5	43.4	55.2
100–149 percent of poverty	41.4	46.4	46.4
150 percent of poverty or more	29.6	26.5	29.7

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

Year	Percent of tablets dispensed	Percent of prescriptions filled
1978	23.9	---
1979	20.6	---
1980	17.1	---
1981	13.6	---
1982	10.6	---
1983	---	8.8
1984	---	7.1
1985	---	5.5
1986	---	3.8
1987	---	2.7
1990	---	15.0

Source: Data from Food and Drug Administration. Based on data from the National Prescription Audit, IMS America, Ambler, Pa.

*Federally funded programs authorized by Title X of the Public Health Service Act are required to make basic infertility services available to clients desiring such services. (Office of Assistant Secretary for Health, Office of Population Affairs.)*

# Pregnancy and Infant Health

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Birth defects and problems related to prematurity can increase a newborn's risk of illness and death and can lead to lifelong disabling conditions. Therefore, reaching more women with appropriate and timely prenatal care and educating both men and women about the important relationship to successful pregnancy outcomes of healthful lifestyles, including appropriate nutrition and abstinence from smoking, drugs, and alcohol, has become a priority public health concern at the Federal level and in States across the Nation. In 1987 among women of all ages, 24.0 percent received no prenatal care in the first trimester of pregnancy compared with 25.1 percent in 1978. The percentage of black women with no prenatal care during the first trimester showed little change from 39.8 percent in 1978 to 38.9 percent in 1987. During the same time period, the percent of American Indian women with no prenatal care decreased slightly to 39.8 in 1987. Teenagers have particularly low rates of early prenatal care. Of mothers under 18 years of age in 1978, 52.3 percent received no prenatal care in the first trimester; for black women under age 18 years this percentage was 56.2. In 1987 the rate was almost the same; 52.0 percent of mothers under 18 years of age received no prenatal care in the first trimester of their pregnancy, and 56.7 percent of black mothers under 18 received no early prenatal care. Among those under 15 years of age in 1987, 6.6 percent of white and 6.4 percent of black mothers received no prenatal care at all, compared with 6.8 percent of white and 5.5 percent of black teenagers in 1984.

Prenatal care during the first trimester of pregnancy has been demonstrated to reduce the risk of having a low-birth-weight infant (weighing less than 2,500 grams, or 5 pounds, 8 ounces). After declining from 7.1 in 1978 to 6.7 in 1984, the proportion of low-birth-weight babies rose slightly to 6.8 in 1985 where it remained in 1986. In 1987, 6.9 percent of all live births were of low birth weight. The marked gap in the infant mortality rate between white and black infants mirrors the more-than-twofold difference in the proportion of low-birth-weight babies between the two groups (5.7 percent compared with 12.7 in 1987) and the threefold difference in the proportion of very low birth weight (those weighing less than 1,500 grams, or 3 pounds, 5 ounces), of white (0.9 percent) and black (2.8 percent) infants.

Like prenatal care, the role of appropriate nutrition for positive pregnancy outcomes continues to be a topic of public health concern. A Centers for Disease Control (CDC) study from 1968-80 of 347 babies with neural tube birth defects and 2,829 case-control babies without birth defects found that for mothers who used multivitamins 3 months before conception through the first 3 months of pregnancy, there was an overall apparent protective effect with a crude estimated relative risk of 0.40 (95-percent confidence interval, 0.25 to 0.63). In other words, the mothers who took vitamins had less than half the risk (40 percent) of having a baby with neural tube defects.

The National Institute on Alcohol Abuse and Alcoholism in 1987 estimated the incidence of infants born with fetal alcohol syndrome to be 1-3 per 1,000 live births. Based on this estimate, the number of fetal alcohol syndrome births in this country each year would be 3,600 to 10,000.

The 1985 National Health Interview Survey provides data on the perceptions of risks from alcohol and smoking during pregnancy, as well as drinking and smoking levels. Of women ages 18-29 years, 21 percent said they were moderate or heavy drinkers compared with 17 percent of women ages 30-44 years. (Moderate is

4–13 drinks per week; heavy is 2 or more drinks per day.) Only 55 percent of men and women 18–44 years of age had ever heard of fetal alcohol syndrome, and less than one-fourth of those who had heard of it correctly identified the syndrome as a set of birth defects when offered three definitions. Those at high risk for adverse pregnancy outcomes, persons at the lower socioeconomic levels, and members of racial and ethnic minorities were also relatively less aware of the dangers of alcohol and smoking for pregnant women.

Pursuant to the 1990 Objectives and Public Law 99–457, which came into effect in 1987 to identify and track infants at risk of handicapping conditions, three-fourths of the States now have a system for surveillance of infants considered to be at risk (Child Find).

Additional data related to pregnancy and infant health are presented in detailed tables 2–21, 31, 39, 41, 64, 66, 72–75, 86, 127, and 128.

## Improved Health Status

**C.a.** By 1990, the infant mortality rate<sup>1</sup> should be reduced to no more than 9 deaths per 1,000 live births. (In 1978, the infant mortality rate was 13.8 per 1,000 live births.)

<sup>1</sup>The infant mortality rate is the number of deaths of infants under 1 year of age expressed as a rate per 1,000 live births.

**C.b.** By 1990, no county and no racial or ethnic group of the population (for example, black people, American Indians, people of Hispanic origin) should have an infant mortality rate in excess of 12 deaths per 1,000 live births. (In 1978, the infant mortality rate for white people was 12.0 per 1,000 live births; for black people, 23.1 per 1,000 live births; for American Indians, 13.7 per 1,000 live births; and the rate for people of Hispanic origin was not available separately.)

Year	Infant mortality rate
1978	13.8
1979	13.1
1980	12.6
1981	11.9
1982	11.5
1983	11.2
1984	10.8
1985	10.6
1986	10.4
1987	10.1
1990	9.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

Year	Infant mortality rate			
	White	Black	American Indian <sup>a</sup>	Hispanic <sup>a,b,c</sup>
1978	12.0	23.1	---	---
1979	11.4	21.8	---	---
1980	11.0	21.4	---	---
1981	10.5	20.0	---	---
1982	10.1	19.6	---	---
1983	9.7	19.2	14.4	9.5
1984	9.4	18.4	12.5	9.3
1985	9.3	18.2	---	---
1986	8.9	18.0	---	---
1987	8.6	17.9	---	---
1990	12.0	12.0	12.0	12.0

<sup>a</sup>Previously published infant mortality rates were too low due to inconsistencies between birth and death certificates in classifying race and origin.

<sup>b</sup>Although 1983 and 1984 birth cohort studies indicate this objective was achieved by the overall Hispanic population, the rate for resident Puerto Ricans was 12.9 in both years.

<sup>c</sup>23 reporting States and the District of Columbia.

Source: Data from National Center for Health Statistics, Division of Vital Statistics.



**C.c.** By 1990, the neonatal mortality rate<sup>2</sup> should be reduced to no more than 6.5 deaths per 1,000 live births. (In 1978, the neonatal mortality rate was 9.5 per 1,000 live births.)

<sup>2</sup>The neonatal mortality rate is the number of deaths of infants under 28 days of age expressed as a rate per 1,000 live births.

Year	Neonatal mortality rate
1978	9.5
1979	8.9
1980	8.5
1981	8.0
1982	7.7
1983	7.3
1984	7.0
1985	7.0
1986	6.7
1987	6.5
1990	6.5

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**C.d.** By 1990, the perinatal mortality rate<sup>3</sup> should be reduced to no more than 5.5 per 1,000. (In 1977, the perinatal mortality rate was 15.4 per 1,000.)

<sup>3</sup>The perinatal mortality rate is the number of fetal deaths at 28 weeks' gestation or more (late fetal deaths) plus the number of infant deaths at under 7 days old expressed as a rate per 1,000 live births plus late fetal deaths.

Year	Perinatal mortality rate
1977	15.4
1978	14.6
1979	13.8
1980	13.2
1981	12.6
1982	12.3
1983	11.5
1984	11.0
1985	10.7
1986	10.3
1987	10.0
1990	5.5

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**C.e.** By 1990, the maternal mortality rate<sup>4</sup> should not exceed 5 per 100,000 live births for any county or for any racial or ethnic group (for example, black people, American Indians, people of Hispanic origin). (In 1978, the overall rate was 9.6, the rate for white people was 6.4, the rate for black people was 25.0, the rate for American Indians was 12.1,<sup>5</sup> and the rate for people of Hispanic origin was not available separately.)

<sup>4</sup>The maternal mortality rate is the number of deaths to women from complications of pregnancy, childbirth, and the puerperium expressed as a rate per 100,000 live births.

<sup>5</sup>This rate and other previously published rates for American Indian women are not accurate due to inconsistencies between birth and death certificates in classifying race and origin. Additionally, rates were based on very small frequencies.

Year	Maternal mortality rate			
	Total	White	Black	Hispanic <sup>a</sup>
1978	9.6	6.4	25.0	---
1979	9.6	6.4	25.1	---
1980	9.2	6.7	21.5	---
1981	8.5	6.3	20.4	---
1982	7.9	5.8	18.2	---
1983	8.0	5.9	18.3	---
1984	7.8	5.4	19.7	---
1985	7.8	5.2	20.4	8.8
1986	7.2	4.9	18.8	8.9
1987	6.6	5.1	14.2	8.0
1990	5.0	5.0	5.0	5.0

<sup>a</sup>18 reporting States and the District of Columbia.

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**C.f.** By 1990, the incidence of the two major forms of neural tube defects, anencephaly and spina bifida without anencephaly, should be reduced to 0.60 per 1,000 live births. (In 1979, the rate was 0.90 per 1,000.) (Baseline and objective revised from those originally published.)

Year	Incidence rate of major neural tube defects		
	Total	Anencephaly	Spina bifida without anencephaly
1979	0.90	---	---
1980	0.85	0.33	0.52
1981	0.86	0.35	0.51
1982	0.81	0.33	0.48
1983	0.77	0.30	0.47
1984	0.76	0.26	0.50
1985	0.72	0.27	0.45
1986	0.71	0.26	0.45
1987	0.63	0.20	0.43
1990	0.60	...	...

Source: Data from Center for Environmental Health and Injury Control, Division of Birth Defects and Developmental Disabilities.

**C.g.** By 1990, Rhesus hemolytic disease of the newborn should be reduced to below a rate of 1.3 per 1,000 live births. (In 1977, the rate was 1.8 per 1,000.)

Year	Rate
1980	1.8
1981	1.4
1982	1.5
1983	1.6
1984	1.8
1985	1.6
1986	1.4
1987	1.4
1990	1.3

Source: Data from Center for Environmental Health and Injury Control, Division of Birth Defects and Developmental Disabilities.

**C.h.** By 1990, the incidence of infants born with fetal alcohol syndrome should be reduced by 25 percent.<sup>6</sup> (In 1977, the rate was 1 per 2,000 births, or approximately 1,650 cases.)

*In 1987, the National Institute on Alcohol Abuse and Alcoholism estimated the incidence of infants born with fetal alcohol syndrome to be 1–3 per 1,000 live births, or 3,600–10,000 cases each year. There is also evidence that certain subgroups in the population have a much higher incidence.*

<sup>6</sup>Same objective in Alcohol and Drug Misuse.

## Reduced Risk Factors

**C.i.** By 1990, low-birth-weight babies (weighing less than 2,500 grams) should constitute no more than 5 percent of all live births. (In 1978, the proportion was 7.1 percent of all births.)

Year	Percent low birth weight
1978 <sup>a</sup>	7.1
1979	6.9
1980	6.8
1981	6.8
1982	6.8
1983	6.8
1984	6.7
1985	6.8
1986	6.8
1987	6.9
1990	5.0

<sup>a</sup>Includes babies weighing 2,500 grams.

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**C.j.** By 1990, no county and no racial or ethnic group of the population (for example, black people, American Indians, people of Hispanic origin) should have a rate of low-birth-weight infants (weighing less than 2,500 grams) that exceeds 9 percent of all live births. (In 1978, the rate for white people was 5.9 percent; for black people, 12.9 percent; for American Indians, 6.7 percent; and for people of Hispanic origin, 6.7 percent.<sup>7</sup>)

Year	Percent low birth weight			
	White	Black	American Indian	Hispanic
1978 <sup>a</sup>	5.9	12.9	6.7	6.7
1979	5.8	12.6	6.4	6.1
1980	5.7	12.5	6.5	6.1
1981	5.7	12.5	6.3	6.1
1982	5.6	12.4	6.2	6.2
1983	5.7	12.6	6.4	6.3
1984	5.6	12.4	6.2	6.2
1985	5.6	12.4	5.9	6.2
1986	5.6	12.5	6.2	6.1
1987	5.7	12.7	6.2	6.2
1990	9.0	9.0	9.0	9.0

<sup>a</sup>Includes babies weighing 2,500 grams.

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

<sup>7</sup>Data for people of Hispanic origin available only for States with an Hispanic origin item on their birth certificates. In 1978, there were 17 States; in 1979, 19 States; in 1980, 22 States; in 1982, 23 States; and in 1983–87, 23 States and the District of Columbia.

**C.k.** By 1990, the majority of infants should leave hospitals in car safety carriers. (Baseline data unavailable.)

*In 1985, 61 percent of children under 5 years of age had been brought home from the hospital in car safety seats after birth. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## Increased Public and Professional Awareness

**C.i.** By 1990, 85 percent of women of childbearing age should be able to choose foods wisely (state special nutritional needs of pregnancy) and understand the hazards of smoking, alcohol, pharmaceutical products, and other drugs during pregnancy and lactation. (Baseline data unavailable.)

*In 1985, the proportion of women 18–44 years of age who knew that heavy drinking during pregnancy increases the chance of birth defects was 54 percent; of low birth weight, 52 percent; of mental retardation of the newborn, 52 percent; of miscarriage, 51 percent. The proportion of women aware that smoking during pregnancy increases the chance of low birth weight was 52 percent; of stillbirth, 30 percent; of premature birth, 38 percent; of miscarriage, 36 percent. Only 62 percent of women 18–44 years of age had ever heard of fetal alcohol syndrome. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## Improved Services and Protection

**C.m.** By 1990, virtually all women and infants should be served at levels appropriate to their need by a regionalized system of primary, secondary, and tertiary care for prenatal, maternal, and perinatal health services.

**C.n.** By 1990, the proportion of women in any county or racial or ethnic group (for example, white people, black people, American Indians, people of Hispanic origin) who obtain no prenatal care during the first trimester of pregnancy should not exceed 10 percent. (In 1978, 21.8 percent of white mothers, 39.8 percent of black mothers, 43.7 percent of American Indian mothers, and 43.0 percent of Hispanic mothers<sup>8</sup> received no prenatal care during the first trimester.)

<sup>8</sup>Data for people of Hispanic origin available only for States with an Hispanic-origin item on their birth certificates. In 1978, there were 17 States; in 1979, 19 States; in 1980, 22 States; in 1982, 23 States; and in 1983–87, 23 States and the District of Columbia.

Year	Percent with no prenatal care during 1st trimester			
	White	Black	American Indian	Hispanic
1978	21.8	39.8	43.7	43.0
1979	20.9	38.4	41.3	39.5
1980	20.7	37.3	41.3	39.8
1981	20.6	37.6	40.7	39.4
1982	20.7	38.5	39.5	39.0
1983	20.6	38.5	40.3	39.0
1984	20.4	37.8	40.0	38.5
1985	20.6	38.2	39.7	38.8
1986	20.8	38.4	39.3	39.7
1987	20.6	38.9	39.8	39.0
1990	10.0	10.0	10.0	10.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**C.o.** By 1990, virtually all pregnant women at high risk of having a fetus with a condition diagnosable *in utero* should have access to counseling and information on amniocentesis and prenatal diagnosis, as well as therapy as indicated. (In 1978, about 10 percent of women 35 years of age and over received amniocentesis. Baseline data are unavailable for other high-risk groups.)

Year	Percent of women 35 years and over who had amniocentesis		
	All races	White	Black
1980	29.0	30.0	16.7

Source: National Center for Health Statistics, Division of Vital Statistics.

**C.p.** By 1990, virtually all women who give birth should have appropriately attended safe delivery provided in ways acceptable to them and their families. (In 1977, less than 0.2 percent of all births were out of hospital and unattended by a physician or midwife.)

Year	Percent of births out-of-hospital and unattended
1977	0.2
1978	0.3
1979	0.3
1980	0.3
1981	0.3
1982	0.3
1983	0.3
1984	0.3
1985	0.3
1986	0.3
1987	0.3
1990	0.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**C.q.** By 1990, virtually all newborns should be provided neonatal screening for metabolic disorders for which effective and efficient tests and treatments are available (for example, phenylketonuria (PKU) and congenital hypothyroidism). (In 1978, about 75 percent of newborns were screened for PKU; about 3 percent were screened for hypothyroidism in the early 1970's.)

**C.r.** By 1990, virtually all infants should be able to participate in primary health care that includes well-child care; growth development assessment; immunization; screening, diagnosis, and treatment for conditions requiring special services; appropriate counseling regarding nutrition, automobile safety, and prevention of other accidents such as poisonings. (Baseline data unavailable.)

### **Improved Surveillance and Evaluation Systems**

**C.s.** By 1990, a system should be in place for comprehensive and longitudinal assessment of the impact of a range of prenatal factors (for example, maternal exposure to radiation, ultrasound, dramatic temperature change, toxic agents, smoking, use of alcohol or drugs, exercise, or stress) on infant and child physical and psychological development. (Baseline data unavailable.)

*Pursuant to the 1990 Objectives and Public Law 99-457, which came into effect in 1987 to identify and track infants at risk of handicapping conditions, three-fourths of the States now have a system for surveillance of infants considered to be at risk. (Health Resources and Services Administration, Office of Maternal and Child Health.)*

# Immunization

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The introduction and widespread use of vaccines have resulted in dramatic declines in the incidence of the seven major childhood infectious diseases—measles, mumps, rubella, polio, diphtheria, pertussis, and tetanus. Of these diseases, immunization levels have reached the 1990 objectives for the Nation among children entering kindergarten or first grade, and considerable progress has been made in reducing the annual incidence of all but three infectious diseases: measles, mumps, and pertussis.

Between 1979 and 1988 the number of reported measles cases has fluctuated, ranging from a high of 13,597 cases in 1979 to a low of 1,497 cases in 1983. In 1988, 3,396 cases were reported, more than doubling the 1983 low. Outbreaks have occurred among both preschool-aged children, many of whom were unvaccinated, and high school- and college-aged persons, many of whom had been vaccinated. It has become apparent from recent outbreaks that persons who had received measles vaccine at age 12–14 months are at higher risk for measles than those vaccinated at age 15 months and over.

From 1979 to 1985 the reported cases of mumps declined from 14,225 to 2,982. In 1986, however, there were 7,790 cases of mumps, an increase of 161 percent over the 1985 low. The 12,848 cases reported in 1987 were the highest number reported since 1979. These increases largely reflected outbreaks in high schools and colleges and probably resulted from the absence or lack of enforcement of school immunization requirements in some States. Two States with the highest mumps incidence rates in 1986 and 1987 began enforcing school laws requiring mumps vaccination in September 1987 and September 1988. The 4,866 cases in 1988 represent a 62-percent decrease from 1987.

Pertussis occurs in adolescents and adults as well as in infants and young children, although the illness becomes milder as age increases. In 1979, 1,623 pertussis cases were reported and in 1988, 3,450 cases. The annual incidence has been higher than baseline in all years except 1981, peaking in 1986 with 4,195 cases. Increases in reported cases since 1984 may be due to improved diagnosis and surveillance, as diphtheria-tetanus-pertussis vaccine coverage in children does not appear to have declined.

Despite past successes, the potential still exists for childhood infectious diseases to touch substantial portions of the U.S. population; with the exception of smallpox, the causal agents for the major diseases of childhood have yet to be eliminated. To maintain and extend past successes, ongoing education and motivation of the general public and health care providers to continue routine immunizations is essential. It is equally necessary to maintain programs to reach large numbers in high-risk subpopulations when new vaccines are developed. Recently licensed vaccines include two *Haemophilus influenzae* type b vaccines: HbPV (polysaccharide), licensed in 1985, and HbCV (conjugate), licensed in 1987. HbCV is recommended for all children at 18 months of age and likely will have replaced most use of HbPV in 1988.

Detailed tables 40 and 41 provide further information on immunization.

## Improved Health Status

**D.a.** By 1990, reported measles incidence should be reduced to less than 500 cases per year—all imported or within two generations of importation. (In 1979, 13,597 measles cases were reported.)

<i>Year</i>	<i>Cases of measles</i>
1979	13,597
1980	13,506
1981	3,124
1982	1,714
1983	1,497
1984	2,587
1985	2,822
1986	6,282
1987	3,655
1988	3,396
1990	500

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.b.** By 1990, reported mumps incidence should be reduced to less than 1,000 cases per year. (In 1979, 14,225 mumps cases were reported.)

<i>Year</i>	<i>Cases of mumps</i>
1979	14,225
1980	8,576
1981	4,941
1982	5,270
1983	3,355
1984	3,021
1985	2,982
1986	7,790
1987	12,848
1988	4,866
1990	1,000

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.c.** By 1990, reported rubella incidence should be reduced to less than 1,000 cases per year. (In 1979, 11,795 rubella cases were reported.)

<i>Year</i>	<i>Cases of rubella</i>
1979	11,795
1980	3,904
1981	2,077
1982	2,325
1983	970
1984	752
1985	630
1986	551
1987	306
1988	225
1990	1,000

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.d.** By 1990, reported congenital rubella syndrome incidence should be reduced to less than 10 cases per year. (In 1979, 62 new cases of congenital rubella syndrome were reported.)

<i>Year</i>	<i>New cases of congenital rubella syndrome</i>
1979	62
1980	50
1981	19
1982	7
1983	22
1984	5
1985	0
1986	14
1987	5
1988	6
1990	10

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.e.** By 1990, reported diphtheria incidence should be reduced to less than 50 cases per year. (In 1979, 59 diphtheria cases were reported.)<sup>1</sup>

<sup>1</sup>The Conference of State and Territorial Epidemiologists and the Centers for Disease Control changed the diphtheria disease reporting definition in 1979, and since that time only noncutaneous diphtheria has been reported.

<i>Year</i>	<i>Cases of diphtheria</i>
1979	59
1980	3
1981	5
1982	2
1983	5
1984	1
1985	3
1986	0
1987	3
1988	2
1990	50

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.f.** By 1990, reported pertussis incidence should be reduced to less than 1,000 cases per year. (In 1979, 1,623 pertussis cases were reported.)

<i>Year</i>	<i>Cases of pertussis</i>
1979	1,623
1980	1,730
1981	1,248
1982	1,895
1983	2,463
1984	2,276
1985	3,589
1986	4,195
1987	2,823
1988	3,450
1990	1,000

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.g.** By 1990, reported tetanus incidence should be reduced to less than 50 cases per year. (In 1979, 81 tetanus cases were reported.)

<i>Year</i>	<i>Cases of tetanus</i>
1979	81
1980	95
1981	72
1982	88
1983	91
1984	74
1985	83
1986	64
1987	48
1988	53
1990	50

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.h.** By 1990, reported polio incidence should be less than 10 cases per year. (In 1979, 26 paralytic polio cases were reported.)

<i>Year</i>	<i>Cases of paralytic polio</i>
1979	26
1980	8
1981	6
1982	8
1983	15
1984	8
1985	7
1986	10
1987	6
1988	9
1990	10

Source: Data from Centers for Disease Control, Center for Prevention Services.

## Increased Public and Professional Awareness

**D.i.** By 1990, all mothers of newborns should receive instruction prior to leaving the hospital or after home births on immunization schedules for their babies. (Of 52 reporting areas in fiscal year 1981, 14 had projects with education programs in which mothers receive such instruction. These projects cover mothers receiving services from public programs.)

<i>Fiscal year</i>	<i>Federally funded projects</i>
1981	14
1982	35
1983	43
1984	44
1985	46
1986	51
1987	51
1990	52

Source: Data from Centers for Disease Control, Center for Prevention Services.

## Improved Services and Protection

**D.j.** By 1990, at least 90 percent of all children should have completed their basic immunization series by age 2—measles, mumps, rubella, polio, diphtheria, tetanus, and pertussis. (In 1979 over 50 percent of children 2 years of age had received vaccinations for each of the diseases.<sup>2</sup>)

<sup>2</sup>Data for each disease are collected independently.

<i>Year</i>	<i>Percent vaccinated<sup>a</sup></i>				
	<i>Measles</i>	<i>Rubella</i>	<i>Mumps</i>	<i>Polio<sup>b</sup></i>	<i>DTP<sup>b</sup></i>
1979	80.8	80.0	70.1	76.3	82.1
1980	83.0	83.2	80.2	80.7	87.0
1981	81.5	83.9	79.1	80.9	87.6
1982	84.3	81.1	79.0	78.6	88.4
1983	83.9	81.9	78.1	78.6	88.4
1984	81.7	76.7	78.4	74.2	85.8
1985	81.7	77.3	78.9	76.7	85.8
1990	90.0	90.0	90.0	90.0	90.0

<sup>a</sup>Based on a subsample of respondents in the U.S. Immunization Survey of 1979–1985. The subsample includes only respondents stating that they used immunization records as a reference. The subsample size is approximately one-third of the total sample size.

<sup>b</sup>3 or more vaccinations.

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.k.** By 1990, at least 95 percent of children attending licensed day care facilities and kindergarten through 12th grade should be fully immunized. (Based on data collected during the 1978–79 school year, the immunization level for measles, rubella, polio, and DTP was about 90 percent for first school entrants and lower overall.<sup>3</sup>)

<sup>3</sup>Data for each disease are collected independently; however, because of current school laws the percents probably reflect the general level of fully immunized students at the kindergarten and first grade levels.

<i>School year</i>	<i>Percent of new entrants vaccinated<sup>a</sup></i>				
	<i>Measles</i>	<i>Rubella</i>	<i>Mumps</i>	<i>Polio</i>	<i>DTP</i>
1978–79	93	91	83	92	92
1979–80	94	93	86	93	94
1980–81	96	96	92	95	96
1981–82	97	97	95	96	96
1982–83	97	97	96	97	96
1983–84	98	98	97	97	97
1984–85	98	98	97	97	97
1985–86	97	97	96	96	96
1986–87	97	97	97	97	97
1987–88	98	98	98	97	97
1988–89	98	98	98	97	97
1990–91	95	95	95	95	95

<sup>a</sup>Kindergarten or first grade.

Source: Data from Centers for Disease Control, Center for Prevention Services.

**D.l.** By 1990, at least 60 percent of people in high-risk populations<sup>4</sup> as defined by the Immunization Practices Advisory Committee of the Public Health Service should be receiving annual immunization against influenza. (In 1979, about 18 percent of people in high-risk populations were immunized.)

<sup>4</sup>The high-risk population includes older persons, particularly those 65 years of age and over, and others, including children, with certain predisposing chronic conditions.

<i>Year</i>	<i>Percent of high-risk population immunized</i>
1979	19
1980	17
1981	17
1982	18
1983	17
1984	17
1985	18
1990	60

Source: Data from Centers for Disease Control, Center for Prevention Services.



**D.m.** By 1990, at least 60 percent of high-risk populations<sup>5</sup> as defined by the Immunization Practices Advisory Committee of the Public Health Service should have received vaccination against pneumococcal pneumonia. (Baseline data unavailable.)

*An estimated 10.3 percent of the high-risk population had ever received pneumococcal polysaccharide vaccine by 1985. (Centers for Disease Control, Center for Prevention Services.)*

<sup>5</sup>The high-risk population includes children under 2 years of age with splenic dysfunction or anatomic asplenia and adults and children over 2 years of age with certain predisposing chronic conditions.

**D.n.** By 1990, at least 50 percent of people in populations designated as targets by the Immunization Practices Advisory Committee of the Public Health Service should be immunized within 5 years of licensure of new vaccines for routine clinical use.<sup>6,7</sup>

*Data indicate that coverage for high-risk groups varies from 2–50 percent. (Centers for Disease Control.)*

<sup>6</sup>Vaccines may be developed for people at risk of getting hepatitis A; otitis media (*S. pneumoniae* and *H. influenzae*); selected respiratory and enteric viruses; meningitis (group B *N. meningitidis*, *S. pneumoniae*, *H. influenzae*).

<sup>7</sup>Same objective in Surveillance and Control of Infectious Diseases.

**D.o.** By 1985, the Nation should have a plan in place to mount mass immunization programs in the face of possible epidemics of influenza or other epidemic diseases for which vaccines may exist.

*A plan for controlling influenza pandemics has been developed as has a Mass Immunization Guide. (Centers for Disease Control.)*

**D.p.** By 1990, no comprehensive health insurance policies should exclude immunizations. (Baseline data unavailable.)

## **Improved Surveillance and Evaluation Systems**

**D.q.** By 1990, at least 95 percent of all children 18 years of age and under should have up-to-date official immunization records in a uniform format using common guidelines for completion of immunization. (Baseline data unavailable.)

*Standardized immunization records are now available in all States. The definition of “complete series” may vary due to varying school immunization requirements. (Centers for Disease Control.)*

**D.r.** By 1990, surveillance systems should be sufficiently improved so that (1) at least 90 percent of those hospitalized and 50 percent of those not hospitalized with vaccine-preventable diseases of childhood are reported, and (2) uniform case definitions are used nationwide. (Baseline data unavailable.)

*Uniform case definitions exist for measles, mumps, rubella, congenital rubella syndrome, poliomyelitis, diphtheria, tetanus, pertussis, and Haemophilus influenzae type b. (Centers for Disease Control.)*

# Sexually Transmitted Diseases

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Gonorrhea, nongonococcal urethritis, genital herpes, and syphilis are among the most common sexually transmitted diseases (STD). In addition to the tremendous number of syphilis and gonorrhea cases, millions of cases of nongonococcal urethritis (of which about 40 percent are caused by *Chlamydia trachomatis*) and thousands of cases of genital herpes occur each year. The most serious complications caused by these sexually transmitted agents are pelvic inflammatory disease, sterility, infant pneumonia, infant death, birth defects, and mental retardation.

Although the STD problem in the United States has been expanding in both scope and complexity, incidence of the traditional STD, syphilis and gonorrhea, remains high. Gonorrhea control efforts began in 1972, and since 1978 the case rate of reported gonorrhea has had a substantial decrease of 33 percent (from 459.7 to 305.5 per 100,000 population). However, underlying these positive statistics are some disturbing trends. For example, the disease itself is changing, which has complicated control efforts. There has been a sustained decrease in cases caused by penicillin-sensitive organisms and a continued increase in the number and variety of antibiotic-resistant strains. In response to these changes, on the advice of an expert committee in fiscal year 1989, the Centers for Disease Control, Division of STD/HIV Prevention, discontinued penicillin as the recommended drug of choice. Additionally, reported gonorrhea has increased in fiscal year 1989 for the first time in several years, suggesting that gonorrhea control programs are not yet reaching some of the key risk groups, including heterosexuals in minority communities.

Measures of gonococcal pelvic inflammatory disease (GPID), as in the initially proposed objective, show a drop in estimated incidence from 133.8 cases per 100,000 females in 1978 to 82.9 in 1988. GPID, however, is only one cause of PID. Chlamydia is estimated to account for one-fourth to one-half of the 1 million annual cases of PID. Furthermore, it is becoming apparent that the initial measure of GPID was an underestimate. Data from sources of ambulatory and hospitalized PID provide an estimated total PID rate of 596 cases per 100,000 females in 1988, a drop from the 757 cases per 100,000 females estimated in 1984.

Reported cases of all stages of syphilis declined from an all-time high of 575,000 cases in 1943 to fewer than 68,000 cases in 1985. In more recent years, however, infectious (primary and secondary) syphilis has again increased dramatically. Between 1986 and 1988 the number of reported cases of primary and secondary syphilis rose 46 percent, to almost 40,600, representing a 44-percent increase in the rate of cases per 100,000 population per year. Most of the recent increase in primary-secondary syphilis has occurred in low-income, inner-city, minority, heterosexual populations. An important contributor to this rise has been the exchange of sexual services for drugs, especially crack cocaine. There is also an important, though yet unclearly defined, relationship between infectious syphilis and human immunodeficiency virus (HIV) infections. Rises in heterosexual adult syphilis portend similar trends in congenital syphilis. And indeed, except for the lower rate in 1980, there has been a continual increase in congenital syphilis, from 3.5 cases per 100,000 live births in 1979 to 16.9 cases per 100,000 in 1988.

In August 1989 a national STD surveillance conference was conducted to redefine and solidify systems from each State for collecting and monitoring reported cases of genital herpes,

chlamydia, nongonococcal urethritis, and other sexually transmitted diseases. As States implement their reporting laws and regulations, as public and professional knowledge and awareness increase, and as more affected people are encouraged to seek treatment, the rates of certain reported STD will appear to be increasing.

Since the development of the 1990 objectives, the scope and the complexity of the sexually transmitted disease problem in the United States have expanded to reflect an increased appreciation for both the range of agents transmitted through sexual contact and the relationship of STD to reproductive outcomes, genital neoplasias, and immune deficiencies. Genital herpes still accounts for sizable morbidity, with at least 10 times more cases of genital ulcer disease than syphilis. Genital human papilloma virus (HPV) infections, with the main complication of cervical neoplasia, appear to be about three times the magnitude of genital herpes. The human immunodeficiency virus infection, unknown when the 1990 objectives were formulated, has emerged as a major sexually transmitted disease. In 1988 the total number of HIV-infected persons in the United States was estimated at 1 million to 1.5 million; most will become symptomatic and/or develop acquired immunodeficiency syndrome (AIDS), its fatal sequelae.

Detailed table 41 contains further information on several sexually transmitted diseases. Tables 23–25 and 37 have information on human immunodeficiency virus infection, and tables 42–47 address acquired immunodeficiency syndrome.

## Improved Health Status

**E.a.** By 1990, reported gonorrhea incidence should be reduced to a rate of 280 cases per 100,000 population. (In 1979, the reported incidence was 459 cases per 100,000 population.)

<i>Year</i>	<i>Reported incidence of gonorrhea</i>
1978	459.7
1979	450.3
1980	445.0
1981	435.2
1982	417.9
1983	387.6
1984	374.8
1985	384.3
1986	376.4
1987	323.1
1988	305.5
1990	280.0

Source: Data from Centers for Disease Control, Center for Prevention Services.

**E.b.** By 1990, reported incidence of gonococcal pelvic inflammatory disease should be reduced to a rate of 60 cases per 100,000 females. (In 1978, the estimated incidence was 133.8 cases per 100,000 females.)

<i>Year</i>	<i>Estimated incidence of pelvic inflammatory disease</i>	
	<i>Total<sup>a</sup></i>	<i>Gonococcal</i>
1978	133.8	---
1979	131.7	---
1980	127.1	---
1981	123.1	---
1982	116.0	---
1983	106.0	---
1984	99.0	757.0
1985	97.0	691.6
1986	106.3	624.8
1987	91.1	628.2
1988	82.9	595.7
1990	60.0	...

<sup>a</sup>Total pelvic inflammatory disease (PID) is also shown, because another major cause of PID is chlamydia, estimated to account for one-quarter to one-half of all cases. Additionally, current data indicate that the initial measure of gonococcal pelvic inflammatory disease was underestimated.

Source: Data from Centers for Disease Control, Center for Prevention Services.

**E.c.** By 1990, reported incidence of primary and secondary syphilis should be reduced to a rate of 7 cases per 100,000 population per year, with a reduction in congenital syphilis to 1.5 cases per 100,000 live births. (In 1979, the reported incidence of primary and secondary syphilis was 11 cases per 100,000 population and of congenital syphilis, 3.5 cases per 100,000 live births.)

Year	Reported incidence of—	
	Primary and secondary syphilis	Congenital syphilis
1979	11.2	3.5
1980	12.1	3.0
1981	13.7	4.4
1982	14.6	4.3
1983	14.1	4.4
1984	12.2	6.8
1985	11.5	7.1
1986	11.7	9.6
1987	14.5	11.7
1988	16.8	16.9
1990	7.0	1.5

Source: Data from Centers for Disease Control, Center for Prevention Services.

**E.d.** By 1990, the incidence of serious neonatal infection from sexually transmitted agents, especially herpes and chlamydia, should be reduced to a rate of 8.5 cases of neonatal disseminated herpes per 100,000 children under 1 year of age and a rate of 360 cases of chlamydial pneumonia per 100,000 children under 1 year of age. (In 1979, about 16.8 cases of neonatal disseminated herpes per 100,000 children under 1 year of age and about 720 cases of chlamydial pneumonia per 100,000 children under 1 year of age were estimated to have occurred.)

**E.e.** By 1990, the incidence of nongonococcal urethritis and chlamydial infections should be reduced to a rate of 770 cases per 100,000 population. (In 1979, the case rate was estimated to be 1,140 per 100,000 population.)

## Reduced Risk Factors

**E.f.** By 1990, the proportion of sexually active men and women protected by properly used condoms should increase to 25 percent of those at high risk of acquiring sexually transmitted diseases. (In 1979, the estimated proportion was less than 10 percent.)

## Increased Public and Professional Awareness

**E.g.** By 1990, every junior and senior high school student in the United States should receive accurate, timely education about sexually transmitted diseases. (Currently, 70 percent of school systems provide some information about sexually transmitted diseases, but the quality and timing of the communication varies greatly.)

*Due to the concern about AIDS and HIV, expanded sex education curricula have been developed, introduced, evaluated, and "mainstreamed" in many American communities. A recent survey of high school administrators found 95 percent offered at least one class on STD as part of their standard curricula. However, in a 1988 survey of teenagers, only 77 percent reported having received STD education by age 18. In addition, awareness by students of STD symptoms, signs, and approaches to prevention is relatively low, especially compared with their knowledge of AIDS and HIV. (Centers for Disease Control, Center for Prevention Services.)*

**E.h.** By 1985, at least 95 percent of health care providers seeing suspected cases of sexually transmitted diseases should be capable of diagnosing and treating all currently recognized sexually transmitted diseases, including: genital herpes diagnosis by culture, therapy (if available), and patient education; hepatitis B diagnosis among homosexual men, prevention through a vaccine, and patient education; and nongonococcal urethritis diagnosis, therapy, and patient education. (Baseline data unavailable.)

*Improvements in training clinicians during the 1980's include the development of STD curricula in medical schools and of instructional packages and the establishment of both STD Research Training Centers and STD Prevention/Training Centers. (Centers for Disease Control, Center for Prevention Services.)*

## Improved Services and Protection

**E.i.** By 1990, at least 50 percent of major industries and governmental agencies offering screening and health promotion programs at the worksite should be providing sexually transmitted disease services (education and appropriate testing) within those programs. (Baseline data unavailable.)

## Improved Surveillance and Evaluation Systems

**E.j.** By 1985, data should be available in adequate detail (but in statistical aggregates to preserve confidentiality) to determine the occurrence of nongonococcal urethritis, genital herpes, and other sexually transmitted diseases in each local area and to recommend approaches for preventing sexually transmitted diseases and their complications.

**E.k.** By 1990, surveillance systems should be sufficiently improved so that at least 25 percent of sexually transmitted diseases diagnosed in medical facilities are reported and uniform definitions are used nationwide. (Baseline data unavailable.)

*In August 1989, a national STD conference was conducted to redefine and solidify surveillance systems for collecting and monitoring reported cases of a variety of STD by each State.*

*Centers for Disease Control data indicate that at least 25 percent of treated STD is being reported.*

# Toxic Agent and Radiation Control

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The history of environmental public health is filled with achievements in disease prevention. State and local efforts to assure safe supplies of food and water, to manage sewage and municipal wastes, and to control or eliminate vector-borne illnesses have been highly successful in the United States. However, in recent years the control of toxic agents in the environment has become a major public health priority. Reports on environmental hazards have alerted the public to the existence of various environmental health hazards.

Though advances have occurred since the 1990 objectives were developed in the late 1970's, much remains to be learned and done about toxic agent control. For example, lead in the paint, dust, and soil of urban areas still represents significant environmental hazards to persons, especially children residing in inner-city areas. In 1988 the Agency for Toxic Substances and Disease Registry published a report on "The Nature and Extent of Lead Poisoning in Children: A Report to Congress" citing that 17 percent of children living in metropolitan areas are exposed to enough lead to place them at risk of adverse health effects. The report concluded that exposure to lead in the environment is the cause of one of the most prevalent childhood diseases, lead poisoning, affecting more than an estimated 3 million children.

Although decreased levels of lead in gasoline, air, food, and industrial sources are likely to result in lower mean blood lead levels, the home environment represents the major remaining source of lead in the United States. Moreover, new environmental hazards are being identified. For example, radon gas and its association with lung cancer has recently become a major area of concern.

Many of the health consequences of toxic agent exposure can be greatly reduced through the combined efforts of Federal, State, and local governments; voluntary organizations; business and industry; and health professionals. The Federal Government's leadership in this area is apparent in a number of efforts. The Department of Transportation has established programs to regulate the transport of hazardous materials. Significant progress has been made to establish birth defect surveillance systems in a majority of the States so data can be available to assess progress toward preventing birth defects or miscarriages resulting from exposure to toxic substances. In 1986 the Third Task Force for Research Planning in Environmental Health Sciences identified several topic areas in which progress in disease prevention can be expected based on currently funded research projects.

Additional information on air pollution can be found in detailed table 61.

## Improved Health Status

**F.a.** By 1990, 80 percent of communities should experience a prevalence rate of lead toxicity of less than 500 per 100,000 among children 1-5 years of age. (In 1976-80, the estimated prevalence of lead toxicity among children 6 months-5 years of age was 4,000 per 100,000 nationally.)

*The 1976-80 data from the National Health And Nutrition Examination Survey, Cycle II, showed 8.4 million children with blood lead levels greater than 15 micrograms per deciliter and 1.5 million children with levels greater than 25 micrograms per deciliter. The Agency for Toxic Substances and Disease Registry's report "The Nature and Extent of Lead Poisoning in Children" used these data to project the 1984 prevalence of more than 3 million and 200,000, respectively.*

**F.b.** By 1990, significant progress should have been made toward preventing birth defects or miscarriages resulting from exposure to toxic substances through environmental interventions based on current information and expansion of the knowledge base related to hazardous substances and their effects on reproduction. (Baseline data unavailable.)

## **Reduced Risk Factors**

**F.c.** By 1990, virtually all communities should experience no more than 1 day per year when air quality exceeds ambient air quality standards for sulfur dioxide, nitrous dioxide, carbon monoxide, lead, hydrocarbons, and particulate matter. (In 1979, the level was estimated at about 50 percent.)

**F.d.** By 1990, at least 95 percent of the population should be served by community water systems that meet Federal and State standards for safe drinking water. (In 1979, the level was 85–90 percent for the National Interim Primary Drinking Water Standards.)

**F.e.** By 1990, there should be virtually no preventable contamination of ground water, surface water, or the soil from industrial toxins associated with wastewater management systems established after 1980. (Baseline data unavailable.)

**F.f.** By 1990, there should be no pesticides, herbicides, fungicides, or rodenticides available for sale that are known to be carcinogenic, teratogenic, or mutagenic in humans, unless determined to be vital to the national interest under certain conditions. (Baseline data unavailable.)

**F.g.** By 1990, inhalation of fumes from toxic materials during transport should be eliminated. (Baseline data unavailable.)

**F.h.** By 1990, the number of medically unnecessary diagnostic x-ray examinations should be reduced by some 50 million examinations annually. (In 1980, the number of diagnostic x-ray examinations performed in the United States was 260 million, of which 80 million were estimated to be medically unnecessary.)

## **Increased Public and Professional Awareness**

**F.i.** By 1990, at least 75 percent of all city council members in urban communities should be able to report accurately whether the quality of their air and water has improved or worsened over the decade and to identify the principal substances of concern. (Baseline data unavailable.)

**F.j.** By 1990, at least half of all adults should be able to accurately report an accessible source of information on toxic substances to which they may be exposed, including information on interactions with other factors such as smoking and medications. (Baseline data unavailable.)

**F.k.** By 1990, at least half of all people 15 years of age and over should be able to identify the major categories of environmental threats to health and note some of the health consequences of those threats. (Baseline data unavailable.)

**F.l.** By 1990, at least 70 percent of all primary care physicians should be able to identify the principal health consequences of exposure to each of the major categories of environmental threats to health. (Baseline data unavailable.)

### **Improved Services and Protection**

**F.m.** By 1990, at least 90 percent of all children 1–5 years of age identified with lead toxicity should have been brought under medical and environmental management. (Baseline data unavailable.)

**F.n.** By 1990, the Toxic Substances Control Act and the Resource Conservation and Recovery Act should be fully implemented to protect the U.S. population against hazards resulting from production, use, and disposal of toxic chemicals. (Baseline data unavailable.)

**F.o.** By 1990, individuals purchasing a potentially toxic product sold commercially or used industrially should be protected by clear labeling as to content, direction for proper use and disposal, and factors that may make that individual especially susceptible (health status, age, sex, medications, genetic traits). (Baseline data unavailable.)

**F.p.** By 1990, every individual should have access to an acute care facility with the capability to provide or make appropriate referrals for screening, diagnosis, and treatment of suspected exposure to toxic agents. (Baseline data unavailable.)

**F.q.** By 1990, every individual residing in an area of a population density greater than 20 per square mile, or in an area of particularly high risk, should be protected by an early warning system designed to detect the most serious environmental hazards posing imminent threats to health. (Baseline data unavailable.)

**F.r.** By 1990, every populated area of the country should be able to be reached within 6 hours by an emergency response team in the event of exposure to an environmental hazard posing acute threats to health from a toxic agent, chemical, and/or radiation. (Baseline data unavailable.)

### **Improved Surveillance and Evaluation Systems**

**F.s.** By 1990, a broad scale surveillance and monitoring system should have been planned to discern and measure known environmental hazards of a continuing nature as well as those resulting from isolated incidents. Such activities should be continuously carried out at both Federal and State levels.

**F.t.** By 1990, a central clearinghouse for observations of agent-disease relationships and host susceptibility factors should be fully operational, as well as a national environmental data registry to collect and catalog information on concentrations of hazardous agents in air, food, and water.



# Occupational Safety and Health

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In 1985 over one-third of the employed population reported exposure on their jobs to substances or conditions that pose risks to health, and 41 percent reported exposure to risks of accidents or injuries on their jobs. Work conditions can generate serious threats to health through daily exposure to risks such as toxic chemicals, asbestos, coal dust, cotton fiber, ionizing radiation, physical hazards, and excessive noise. Exposure to these toxic chemicals or physical hazards can lead to a broad range of health problems including asbestosis, byssinosis, silicosis, musculoskeletal conditions, various cancers, amputations, loss of eyes, lacerations, and noise-induced loss of hearing. Lifestyle behaviors and other factors—such as alcohol consumption and smoking—can interact with factors in the work environment to increase risks of occupational illness and injuries.

In recent years, the role of employers in providing health information to employees or providing opportunities for health promotion activities has increased. By 1985 nearly 66 percent of worksites with more than 50 employees had at least one health promotion program. These programs included smoking control, health risk assessment, back care, stress management, exercise and fitness, and off-the-job accident prevention.

The number of work-related deaths has decreased during the past decade, surpassing the 1990 objective. In 1987 there were 3,400 work-related deaths for firms or employers with 11 or more employees compared with 4,590 in 1978.

During the 1978–87 period, the rate of work-related disabling injuries per 100 workers first declined from 9.2 in 1978 to 7.5 in 1983 and then increased to 8.0 in 1987. The rate of work-related injuries per 100 workers has been below the 1990 objective of 8.3 since 1981. However, there has not been further improvement in these rates; indeed the rates have increased. The rate of lost workdays from injuries per 100 workers declined from a previous high of 66.2 in 1979 to 57.2 in 1983 and then increased to 67.3 in 1987. Although the work-related injury rate has decreased below the 1990 objective, the rate of lost workdays from injuries per 100 workers was actually higher in 1987 than at any other time during the previous decade.

The number of compensable occupational dermatitis cases also has first decreased (from a high of 67,900 in 1979 to 39,500 in 1983) and then increased (to 54,200 in 1987). The number remains below the 1990 objective of 60,000.

Additional information on occupational safety and health can be found in detailed tables 35, 62, and 63.

## Improved Health Status

**G.a.** By 1990, workplace accident deaths for firms or employers with 11 or more employees should be reduced to less than 3,750 per year. (In 1978, there were 4,590 work-related deaths for firms or employers with 11 or more employees.)

<i>Year</i>	<i>Work-related deaths</i>
1978	4,590
1979	4,950
1980	4,400
1981	4,370
1982	4,090
1983	3,100
1984	3,740
1985	3,750
1986	3,610
1987	3,400
1990	3,750

Source: Data from Bureau of Labor Statistics.

**G.b.** By 1990, the rate of work-related injuries should be reduced to 8.3 cases per 100 full-time workers. (In 1978, there were 9.2 cases per 100 workers.)

<i>Year</i>	<i>Work-related injuries rate</i>
1978	9.2
1979	9.2
1980	8.5
1981	8.1
1982	7.6
1983	7.5
1984	7.8
1985	7.7
1986	7.7
1987	8.0
1990	8.3

Source: Data from Bureau of Labor Statistics.

**G.c.** By 1990, lost workdays from injuries should be reduced to 55 per 100 workers annually. (In 1978, 62.1 days per 100 workers were lost.)

<i>Year</i>	<i>Lost workdays rate</i>
1978	62.1
1979	66.2
1980	63.7
1981	60.4
1982	57.5
1983	57.2
1984	61.8
1985	63.3
1986	63.9
1987	67.3
1990	55.0

Source: Data from Bureau of Labor Statistics.

**G.d.** By 1990, the incidence of compensable occupational dermatitis should be reduced to about 60,000 cases. (In 1978, there were approximately 65,900 cases of occupation-related skin diseases or disorders.<sup>1</sup>)

<sup>1</sup>Data include all cases of occupation-related skin diseases or disorders, regardless of whether compensation was involved.

<i>Year</i>	<i>Cases of occupation-related skin disease or disorders</i>
1978	65,900
1979	67,900
1980	56,200
1981	51,200
1982	41,900
1983	39,500
1984	42,500
1985	41,800
1986	41,900
1987	54,200
1990	60,000

Source: Data from Bureau of Labor Statistics.

**G.e.** By 1990, among workers newly exposed after 1985, there should be virtually no new cases of four preventable occupational diseases—*asbestosis*, *byssinosis*, *silicosis*, and *coal workers' pneumoconiosis*. (In 1979, there were an estimated 5,000 cases of *asbestosis*; in 1977, an estimated 84,000 cases of *byssinosis* were expected in active workers; in 1979, an estimated 60,000 cases of

silicosis were expected among active workers in mining, foundries, stone, clay and glass products, and abrasive blasting; in 1974, there were an estimated 19,400 cases of coal workers' pneumoconiosis. (Baseline data on incidence unavailable.)

**G.f.** By 1990, the prevalence of occupational noise-induced hearing loss should be reduced to 415,000 cases. (In 1975, there were an estimated 462,000 cases of work-related hearing loss.)

**G.g.** By 1990, occupational heavy metal poisoning (lead, arsenic, zinc) should be virtually eliminated. (Baseline data unavailable.)

### **Reduced Risk Factors**

**G.h.** By 1985, 50 percent of all firms with more than 500 employees should have an approved plan of hazard control for all new processes, new equipment, and new installations. (Baseline data unavailable.)

**G.i.** By 1990, all firms with more than 500 employees should have an approved plan of hazard control for all new processes, new equipment, and new installations. (Baseline data unavailable.)

### **Increased Public and Professional Awareness**

**G.j.** By 1990, at least 25 percent of workers should be able, prior to employment, to state the nature of their occupational health and safety risks and their potential consequences, as well as be informed of changes in these risks while employed. (In 1979, an estimated 5 percent of workers were fully informed.)

*In 1985, 40 percent of currently employed workers perceived exposure to risk of injuries, 35 percent perceived exposure to health-endangering work conditions, and 34 percent perceived exposure to health-endangering substances. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**G.k.** By 1985, workers should be routinely informed of lifestyle behaviors and health factors that interact with factors in the work environment to increase risks of occupational illness and injuries. (Baseline data unavailable.)

**G.l.** By 1985, all workers should receive routine notification in a timely manner of all health examinations or personal exposure measurements taken on work environments directly related to them. (Baseline data unavailable.)

**G.m.** By 1990, all managers of industrial firms should be fully informed about the importance of and methods for controlling human exposure to the important toxic agents in their work environments. (Baseline data unavailable.)

**G.n.** By 1990, at least 70 percent of primary health care providers should routinely elicit occupational health exposures as part of patient history and should know how to interpret the information for patients in an understandable manner. (Baseline data unavailable.)

**G.o.** By 1990, at least 70 percent of all graduate engineers should be skilled in the design of plants and processes that incorporate occupational safety and health control technologies. (Baseline data unavailable.)

### **Improved Services and Protection**

**G.p.** By 1990, generic standards and other forms of technology transfer should be established, where possible, for standardized

employer attention to such major common problems as chronic lung hazards, neurological hazards, carcinogenic hazards, mutagenic hazards, teratogenic hazards, and medical monitoring requirements.

**G.q.** By 1990, the number of health hazard evaluations being performed annually should increase tenfold; the number of industrywide studies being performed annually should increase threefold. (In 1979, the National Institute for Occupational Safety and Health performed approximately 152 general industry health hazard evaluations.)

Year	Health hazard evaluations	
	Total <sup>a</sup>	Mining
1979	152	8
1980	277	15
1981	390	28
1982	464	32
1983	460	29
1984	509	20
1985	536	17
1986	544	12
1987	436	5
1990	1,500	80

<sup>a</sup>Excludes mining.

Source: Data from National Institute for Occupational Safety and Health.

### Improved Surveillance and Evaluation Systems

**G.r.** By 1985, an ongoing occupational health hazard-illness-injury coding scheme, survey, and surveillance capability should be developed, including identification of workplace hazards and related health effects, including cancer, coronary heart disease, and reproductive effects. This system should include adequate measurements of the severity of work-related disabling injuries.

**G.s.** By 1985, at least one question about lifetime work history and known exposures to hazardous substances should be added to all appropriate existing health data reporting systems, for example, cancer registries, hospital discharge abstracts, and death certificates.<sup>2</sup>

<sup>2</sup>Usual occupation has been on the Standard Death Certificate since 1939, but this information is currently not coded by all States.

**G.t.** By 1985, a program should be developed to: (1) follow up individual findings from health hazard and health evaluation, reports from unions and management, and other existing surveillance sources of clinical and epidemiological data; and (2) use the findings to determine the etiology, natural history, and mechanisms of suspected occupational disease and injury.

*In 1987 and 1988, the National Institute for Occupational Safety and Health evaluated and published strategies for surveillance and prevention of 10 leading work-related diseases and injuries.*

# Injury Prevention

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Injuries cause enormous losses in human life. In 1986 the category "accidents and adverse effects" ranked first as the cause of death for every age group from 1 year to 45 years of age in the United States. In addition to death and disability, injuries cause substantial economic losses. The 1990 injury prevention objectives give priority to reducing deaths from motor vehicles and home injuries, especially among children, and deaths from falls, residential fires, and drownings.

The 1987 total motor vehicle death rate of 19.8 per 100,000 conceals huge differences in the rates by age, sex, and race. Motor vehicle deaths account for 25 percent of all deaths for white persons ages 15-39 and more than 36 percent of all deaths for white persons 15-29 years of age. The mortality rate from motor vehicle injuries to young white people 15-24 years of age increased from 38.1 in 1983 to 40.7 in 1987; for males in this age-race group the rate in 1987 was 59.2. Motor vehicle deaths are the second leading cause of death for black males ages 15-44, exceeded only by homicide and legal intervention. The motor vehicle death rate for black males 15-24 years of age increased from 28.3 in 1983 to 36.2 in 1987. The rate of motor vehicle deaths for children under 15 years of age went down steadily from the 1978 rate until 1985 and has not changed significantly since then; the 1987 rate was 6.8 deaths per 100,000 children.

The National Highway Traffic Safety Administration estimates that in 1988 less than 5 percent of automobiles had automatic restraint protection. In 1988, 75 percent of infants were apparently correctly restrained; that is, the safety seat was installed facing the rear of the car, the car belt was fastened across the seat, and the harness was in use.

Mandatory seatbelt laws are in force in 16 States; all 50 States and the District of Columbia now require child safety seat use. Yet in 1985 only about one-third of adults 18 years of age and over wore seatbelts most of the time when they were in automobiles. Moreover, more than half of the adults with children under 5 years of age had not been advised by health professionals about the importance of using child safety seats.

Between 1978 and 1985 the rate of deaths resulting from home injuries among children under 15 years decreased from 6.0 to 4.8, below the 1990 objective of 5.0; the 1987 rate was 5.0. Similarly, the 1990 objective of reducing residential fire deaths to no more than 4,500 was exceeded in 1987 when the number of such deaths was 4,274. As of 1977, 18 States had passed residential smoke detector legislation primarily aimed at new construction and multifamily dwellings. By 1983 the number of States requiring smoke detectors had grown to 29; of these, 22 required existing housing to be retrofitted with smoke detectors. Yet in 1985 only about 60 percent of the population was protected by working smoke detector systems.

The Office of Emergency Preparedness, Department of Health and Human Services, reports that there are at least 408 trauma centers representing all 50 States; there are 179 burn centers in 38 States and 53 spinal cord injury centers in 23 States. By 1987, according to the Injury Prevention Research Center at the Harvard University School of Public Health, 22 States had developed an injury-reporting surveillance system.

In 1988 there were 36 regional poison control centers certified by the American Association of Poison Control Centers, compared with fewer than 10 in 1980. The American Association of Poison

Control Centers estimates that about 59 percent of the population has access to a certified poison control center.

Additional data related to injuries are presented in detailed tables 14, 23–25, 32, 37, 39, 55, 56, and 72–74.

## Improved Health Status

**H.a.** By 1990, the motor vehicle death rate should be reduced to no greater than 18 per 100,000 population. (In 1978, it was 23.6 per 100,000 population.)

<i>Year</i>	<i>Death rate</i>
1978	23.6
1979	23.8
1980	23.5
1981	22.4
1982	19.8
1983	19.0
1984	19.6
1985	19.2
1986	19.9
1987	19.8
1990	18.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**H.b.** By 1990, the motor vehicle death rate for children under 15 years of age should be reduced to no greater than 5.5 per 100,000 children. (In 1978, it was 9.0 per 100,000.)

<i>Year</i>	<i>Death rate</i>
1978	9.0
1979	8.6
1980	8.1
1981	7.5
1982	7.0
1983	6.7
1984	6.6
1985	6.8
1986	6.8
1987	6.8
1990	5.5

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**H.c.** By 1990, the home accident death rate for children under 15 years of age should be no greater than 5.0 per 100,000 children. (In 1978, it was 6.0 per 100,000.)

<i>Year</i>	<i>Death rate</i>
1978	6.0
1979	5.7
1980	5.7
1981	---
1982	---
1983	5.0
1984	4.9
1985	4.8
1986	5.0
1987	5.0
1990	5.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**H.d.** By 1990, the death rate from falls should be reduced to no more than 2 per 100,000 population. (In 1978, it was 6.2 per 100,000 population.)

<i>Year</i>	<i>Death rate</i>
1978	6.2
1979	5.9
1980	5.9
1981	5.5
1982	5.2
1983	5.1
1984	5.0
1985	5.0
1986	4.7
1987	4.8
1990	2.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**H.e.** By 1990, the death rate from drowning should be reduced to no more than 1.5 per 100,000 population. (In 1978, it was 2.6 per 100,000 population.)

<i>Year</i>	<i>Death rate</i>
1978	2.6
1979	2.5
1980	2.7
1981	2.3
1982	2.3
1983	2.2
1984	1.9
1985	1.8
1986	2.0
1987	1.8
1990	1.5

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**H.f.** By 1990, the number of tapwater scald injuries requiring hospital care should be reduced to no more than 2,000 per year. (Baseline data unavailable.)

**H.g.** By 1990, residential fire deaths should be reduced to no more than 4,500 per year. (In 1978, there were 5,401 deaths.)

<i>Year</i>	<i>Residential fire deaths</i>
1978	5,401
1979	5,299
1980	5,083
1981	---
1982	---
1983	4,512
1984	4,466
1985	4,385
1986	4,364
1987	4,274
1990	4,500

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**H.h.** By 1990, the number of accidental deaths from firearms should be held to no more than 1,700. (In 1978, there were 1,806.)

<i>Year</i>	<i>Unintentional deaths from firearms<sup>a</sup></i>
1978	1,806
1979	2,004
1980	1,955
1981	1,871
1982	1,756
1983	1,695
1984	1,668
1985	1,649
1986	1,452
1987	1,440
1990	1,700

<sup>a</sup>Excludes deaths with intention unknown.

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

## Reduced Risk Factors

**H.i.** By 1990, the proportion of automobiles containing automatic restraint protection should be greater than 75 percent. (In 1979, the proportion was 1 percent.)

*The National Highway Traffic Safety Administration estimates that in 1988 less than 5 percent of automobiles had automatic restraint protection. There are no data available.*

**H.j.** By 1990, all birthing centers, physicians, and hospitals should ensure that at least 50 percent of newborns return home in certified child passenger carriers. (Baseline data unavailable.)

*No data on newborns are available. In 1988, 75 percent of infants were apparently correctly restrained; that is, the safety seat was installed facing the rear of the car, the car belt was fastened across the seat, and the harness was in use. (National Highway Traffic Safety Administration.)*

**H.k.** By 1990, at least 75 percent of residential units should have a properly placed and functioning smoke detector. (In 1979, there were approximately 30 million systems.)

*In 1985, 60 percent of persons 18 years of age and over reported at least one working smoke detector in their homes. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## Increased Public and Professional Awareness

**H.l.** By 1990, the proportion of parents of children under 10 years of age who can identify appropriate measures to address the three major risks for serious injury to their children (motor vehicle accidents, burns, poisonings) should be greater than 80 percent. (Baseline data unavailable.)

*In 1985, 62 percent of children under 10 years of age were living in households having the telephone number of a poison control center; 27 percent were in households having ipecac syrup. Of children under 5 years, 82 percent wore seatbelts all or most of the time when riding in cars; 61 percent had been brought home from the hospital in carseats after birth. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**H.m.** By 1990, virtually all primary health care providers should advise patients about the importance of safety belts and should include instruction about use of child restraints to prevent injuries from motor vehicle accidents as part of their routine interaction with parents. (Baseline data unavailable.)

*In 1985, 45 percent of families with children under 5 years of age were advised by health professionals of the importance of using seatbelts. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## Improved Services and Protection

**H.n.** By 1990, at least 75 percent of communities with a population over 10,000 should have the capability for ambulance response and transport within 20 minutes of a call. (Baseline data unavailable.)

*The only available data are for 17 States reporting through the Fatal Accident Reporting System. In 1987 the average response time for urban accidents was 5.82 minutes and for rural accidents, 11.59 minutes. (National Highway Traffic Safety Administration.)*

**H.o.** By 1990, virtually all injured persons in need should have access to regionalized systems of trauma centers, burn centers, and spinal cord injury centers. (Baseline data unavailable.)

*The Office of Emergency Preparedness, Department of Health and Human Services, reports that there are at least 408 trauma centers representing all 50 States; there are 179 burn centers in 38 States and 53 spinal cord injury centers in 23 States.*



**H.p.** By 1990, at least 90 percent of the population should be living in areas with access to regionalized or metropolitan area poison control centers<sup>1</sup> that provide information on the clinical management of toxic substance exposures in the home or work environment. (In 1979, about 30 percent of the population lived in such areas.)

<sup>1</sup>Data limited to poison control centers certified by the American Association of Poison Control Centers.

*In 1988 there were 36 regional poison control centers certified by the American Association of Poison Control Centers, compared with fewer than 10 in 1980.*

<i>Year</i>	<i>Percent of population</i>
1979	30
1982	40
1984	55
1988	59
1990	90

Source: Data from American Association of Poison Control Centers, National Data Collection System.

## Improved Surveillance and Evaluation Systems

**H.q.** By 1990, at least 75 percent of the States should have developed a detailed plan for the uniform reporting of injuries. (In 1981, there were seven States with detailed plans for the uniform reporting of injuries.)

*In 1987, 22 States had developed not only detailed plans for the uniform reporting of injuries, but also injury-reporting surveillance systems.*

<i>Year</i>	<i>States</i>
1981	7
1982	9
1987	22
1990	38

Source: Data from Harvard University School of Public Health, Injury Prevention Research Center.

## Fluoridation and Dental Health

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Dental diseases are one of the Nation's most prevalent health problems. Two of the most common oral diseases are dental caries (tooth decay) and periodontal diseases (diseases of the gums and other tissues supporting the teeth). Although rates of caries among school-aged children have continued to decline on the average over the past decade, dental caries remain a significant health problem. Dental caries are a chronic disease that begins in early childhood with the eruption of primary teeth and continues throughout adult life. Preliminary data from the 1986-87 National Dental Caries Prevalence Survey indicate that approximately 50 percent of children aged 6-8 years have experienced decay in their primary or permanent teeth. By age 15, about 78 percent have experienced caries in their permanent teeth. Dental caries and their sequelae continue to accumulate on an age-dependent basis, with 12-year-olds having 2.7 surfaces affected, and 17-year-olds having 8 surfaces affected. Data for 1985-86 from the National Survey on Oral Health in U.S. Employed Adults and Seniors indicate that persons aged 25-29 years have 17.5 surfaces affected, and persons aged 40-44 years have over 30 surfaces affected.

Factors contributing to dental health improvement, especially among children, include the use of fluorides, the availability of preventive measures such as dental sealants and various health promotion and health education efforts. In 1986 about 65 percent of U.S. adults knew the purpose of fluoridation was to improve dental health, and about 90 percent of children 2-16 years of age reported using toothpaste containing fluoride. Reported use of fluoride supplements was highest among children aged 2-8 years (about 13 percent) and lowest among adolescents aged 12-16 years (about 1 percent). Fluoride supplements should be maintained through adolescence; therefore, these data indicate poor compliance with recommended regimens. About 13 percent of all children reported using a fluoride mouthrinse at home and 10.5 percent reported using one at school. Despite the proven efficacy of optimally fluoridated water in increasing resistance to tooth decay at a very modest cost, in 1985 only about 55 percent of all Americans had access to fluoridated water systems in their communities. (Approximately 87 percent of Americans are served by community water systems, of which about 62 percent are fluoridated.)

About 80 percent of dental caries in children is found on the pit and fissure surfaces of the teeth. Use of dental sealants, which are plastic coatings painted on the teeth to prevent decay, is slowly increasing. The 1986 National Health Interview Survey showed that use differed by income and race. Only about 2.2 percent of children in families with annual incomes below \$10,000 reported having dental sealants applied, compared with about 12.2 percent of children in families with annual incomes of \$35,000 and above. Among white children, about 7.5 percent had sealants, compared with only 2.1 percent of black children. Overall, the survey showed that about 6.7 percent of children aged 2-16 years have had dental sealants applied. Among children aged 5-17 years, a 1986-87 survey by the National Institute of Dental Research found that 7.6 percent of school children examined had sealants. In 1988, according to the American Dental Association, 21 States and the District of Columbia covered sealant usage through Medicaid.

Periodontal diseases affect both children and adults. In general, severity increases with age. Since the formulation of the 1990 objectives for fluoridation and dental health, the methods of

conceptualizing and measuring gingivitis and other periodontal conditions have evolved from mere observation. The prevalence of gingivitis is now most often measured by gentle probing of the gums to assess presence of bleeding. Other indicators of periodontal diseases include periodontal attachment loss, pocket depth, and gingival recession. Calculus and plaque are predisposing risk factors that may also be measured. Although changes in the methods for measuring periodontal diseases have resulted in detecting more cases, thus increasing estimates of prevalence, the periodontal health of Americans, both children and adults, is improving. Prevalence of gingival bleeding was estimated to be about 58.8 percent among children 14–17 years of age in 1986–87. Among males, it was 61.5 percent, and among females, 56.0 percent. Among white children, the prevalence was 55.1 percent and among nonwhite children, 72.1 percent. In 1985–86 the estimated prevalence of overall gingival bleeding was 43.6 percent among adults.

Periodontal attachment loss is generally taken as an indicator of previous periodontal destruction. In 1986–87 among adults ages 18–64 years, 80 percent of employed males and 73 percent of employed females had at least one site where the loss of periodontal attachment was 2 millimeters or greater. Among the senior population (age 65 years and over), 34 percent had at least one site with attachment loss of 6 millimeters or greater.

Detailed table 68 contains information on dental visits from the National Health Interview Survey. Data on dental professional education are shown in tables 90 and 91.

## Improved Health Status

**I.a.** By 1990, the proportion of 9-year-old children who have experienced dental caries in their permanent teeth should decrease to 60 percent. (In 1971–74, 71 percent of 9-year-old children had at least one filled, missing due to caries, or untreated decayed tooth.)<sup>1</sup>

<sup>1</sup>In 9-year-olds, the permanent first molars are generally the only permanent teeth at significant risk of decay.

**I.b.** By 1990, the prevalence of gingivitis in children 6–17 years of age should decrease to 18 percent. (In 1971–74, prevalence was about 23 percent.)

**I.c.** By 1990, in adults the prevalence of gingivitis and destructive periodontal disease should decrease to 20 percent and 21 percent, respectively. (In 1971–74, for adults 18–74 years of age, 25 percent had gingivitis and 23 percent had destructive periodontal disease.)

Year	Years of age		
	9	12	17
1979–80	49.4	73.1	89.3
1986–87	34.5	58.3	84.4

Source: Data from Centers for Disease Control, Center for Preventive Services.

*National data are insufficient to assess progress on this objective as written. (Baseline data were determined by observation only.) A 1986–87 national survey of the oral health of school children 14–17 years of age determined the presence or absence of gingival bleeding on gentle probing of gums. Prevalence of gingival bleeding was estimated to be about 58.8 percent. (National Institute of Dental Research.)*

*Since the formulation of the 1990 objectives for fluoridation and dental health, the methods of measuring and evaluating gingivitis and destructive periodontal disease have become more precise. In 1985–86, the estimated prevalence of overall gingival bleeding was 43.6 percent among adults. Prevalence of periodontal pockets measuring greater than 4 millimeters was about 14.3 percent; prevalence of pockets greater than 6 millimeters was about 1.7 percent; and about 76.7 percent of the sample had at least one site where loss of attachment was 2 millimeters or greater. (National Institute of Dental Research.)*

## Reduced Risk Factors

**I.d.** By 1990, no public elementary or secondary school (and no medical facility) should offer highly cariogenic foods or snacks in vending machines or in school breakfast or lunch programs.

**I.e.** By 1990, virtually all students in secondary schools and colleges who participate in organized contact sports should routinely wear proper mouth guards. (Baseline data unavailable.)

*Mandatory football and ice hockey mouthguard rules exist through the National High School Federation, National Collegiate Athletic Association (which also requires them for men's lacrosse), and the Amateur Hockey Association of the United States. Mouthguards are also required in organized amateur boxing. In 1986–87, the proportion of cranial/ facial injuries relative to all bodily injuries sustained from seven reported sports was 5.5–16.5 percent. (Centers for Disease Control, Center for Preventive Services.)*

## Increased Public and Professional Awareness

**I.f.** By 1990, at least 95 percent of school children and their parents should be able to identify the principal risk factors related to dental diseases and be aware of the importance of fluoridation and other measures in controlling these diseases. (Baseline data unavailable.)

*In 1986, 65 percent of adults were correctly aware of the purpose of fluoridation. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**I.g.** By 1990, at least 75 percent of adults should be aware of the necessity for both thorough personal oral hygiene and regular professional care in the prevention and control of periodontal disease. (In 1972, only 52 percent knew of the need for personal oral hygiene, and only 28 percent were aware of the need for dental checkups.)

*In 1985, 88 percent of the population 18 years of age and over thought that regular brushing and flossing of teeth was “definitely” important to preventing gum disease, and 82 percent thought that seeing a dentist regularly was definitely important. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## Improved Services and Protection

**I.h.** By 1990, at least 95 percent of the population on community water systems should be receiving the benefits of optimally fluoridated water. (In 1975, the proportion of the population on community water systems who were receiving fluoridated water was 60 percent.)

Year	Percent on fluoridated community water systems
1975	60.0
1980	59.3
1984	61.4
1985	61.9
1990	95.0

Source: Data from Centers for Disease Control, Center for Prevention Services.

**I.i.** By 1990, at least 50 percent of school children living in fluoride-deficient areas that do not have community water systems should be served by an optimally fluoridated school water supply. (In 1977, it was about 6 percent.)

*Over the past several years, the number of schools with fluoridated water systems has declined, mainly due to their incorporation into public water systems. (National Institute of Dental Research.)*

**I.j.** By 1990, at least 65 percent of school children should be proficient in personal oral hygiene practices and should receive other needed preventive dental services in addition to fluoridation. (Baseline data unavailable.)

*Two-thirds of school-age children brush their teeth twice a day; an additional 26 percent brush once a day. In 1986, 9 of 10 children aged 2–16 years used fluoride toothpaste. About 8 percent used fluoride supplements (about 13 percent among children aged 2–8). About 13 percent reported using a fluoride mouthrinse at home and about 10 percent reported using one at school. (National Center for Health Statistics, Division of Health Interview Statistics.) Of school children examined in 1986–87, 7.6 percent had had sealants applied. (National Institute of Dental Research.)*

## Improved Surveillance and Evaluation Systems

I.k. By 1990, a comprehensive and integrated system should be in place for periodic determination of the oral health status, dental treatment needs, and utilization of dental services (including reasons for and costs of dental visits) of the U.S. population.

I.l. By 1985, systems should be in place for determining coverage of all major dental public health preventive measures and activities to reduce consumption of highly cariogenic foods.

*Numerous oral health surveys conducted by Federal, State, and private agencies and organizations monitor oral health status, treatment needs, care utilization, and costs. Continuing efforts at the Federal level are needed to coordinate information from these surveys.*

*Specific national reporting systems and surveys provide public health programs with an indication of the extent of preventive dental activities. The focus on reduction of cariogenic foods has been deemphasized because of the complexity of issues involved and the difficulty in quantifying the cariogenicity of foods.*

# Surveillance and Control of Infectious Diseases

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Among the infectious diseases that historically have been principal causes of death in this country, only pneumonia and influenza remain, but millions of illnesses from infectious diseases occur each year. When measured by increased social costs, decreased work productivity, and increased health care costs, infectious diseases have a significant impact on the population. Infectious diseases continue to be more prevalent in poverty areas and in areas with high immigration rates.

In more recent years, new demands for disease control have been created with the advent of such diseases as legionellosis and acquired immunodeficiency syndrome (AIDS). Between July 1, 1981, and September 30, 1989, physicians and health departments in the United States notified the Centers for Disease Control of 106,270 patients with AIDS. Because of the lengthy interval between infection and onset of AIDS, it has been estimated that between 1.0 and 1.5 million persons are already infected with the human immunodeficiency virus (HIV).

Other infectious diseases still pose major challenges. An estimated 400,000 cases of pneumococcal pneumonia occur in the United States each year. Despite availability of theoretically effective antimicrobial therapy, the case fatality rate for pneumococcal pneumonia is still 25–35 percent among persons with underlying medical conditions, such as the elderly and persons with chronic heart disease, liver disease, lung disease, and cancer. Available data suggest that pneumococcal vaccine, first licensed in 1978, has been delivered to less than 10 percent of the population at increased risk for complications of pneumococcal pneumonia.

In 1978 the estimated incidence of hepatitis B was 41 cases per 100,000 population; in 1987 the estimated incidence was 64 cases per 100,000 population. A large proportion of those at highest risk has not received vaccine.

The downward trend in tuberculosis incidence during the last decade has essentially halted since 1984. Of the 22,517 tuberculosis cases reported in 1987, more than 40 percent occurred in people 55 years of age and older, about 31 percent were in people under age 35, and less than 8 percent were in people under 20 years of age. However, tuberculosis has increased among young adults in the last few years, especially among racial and ethnic minorities. Available data support the hypothesis that AIDS and the spread of HIV infection are involved in the current change in tuberculosis trends. There are over 1,700 recorded deaths each year, and an estimated 10 million persons are asymptotically infected with the tubercle bacillus.

Additional data on topics relevant to this section on infectious diseases are presented in detailed tables 23–25, 37, 41–47, 51, 61, 72, 73, 94, and 116.

## Improved Health Status

**J.a.** By 1990, the annual estimated incidence of hepatitis B should be reduced to 20 per 100,000 population. (In 1978, the estimated incidence was 41 cases per 100,000 population.)

*Hepatitis B vaccine was licensed in 1982.*

<i>Year</i>	<i>Estimated incidence of hepatitis B</i>
1978	41
1979	42
1980	50
1981	55
1982	57
1983	63
1984	67
1985	69
1986	67
1987	64
1990	20

Source: Data from Centers for Disease Control, Center for Infectious Diseases.

**J.b.** By 1990, the annual reported incidence of tuberculosis should be reduced to 8 per 100,000 population. (In 1978, the reported incidence was 13.1 cases per 100,000 population.)

*In 1987 more than 40 percent of reported tuberculosis cases occurred in people 55 years of age and older; about 31 percent of total cases were in people under age 35, and less than 8 percent occurred in people under 20 years of age.*

<i>Year</i>	<i>Reported incidence of tuberculosis</i>
1978	13.1
1979	12.6
1980	12.3
1981	11.9
1982	11.0
1983	10.2
1984	9.4
1985	9.3
1986	9.4
1987	9.3
1990	8.0

Source: Data from Centers for Disease Control, Center for Prevention Services.

**J.c.** By 1990, the annual estimated incidence of pneumococcal pneumonia should be reduced to 115 per 100,000 population, and the estimated incidence of pneumococcal bacteremia should be reduced to 7 per 100,000. (In 1979, the incidence of pneumococcal bacteremia was estimated to be 9 cases per 100,000 population.)<sup>1</sup>

<sup>1</sup>The incidence of pneumococcal bacteremia is used as an indicator of the incidence of pneumococcal pneumonia. Therefore, the objective and baseline have been revised from those previously published.

<i>Year</i>	<i>Estimated incidence of pneumococcal bacteremia</i>
1979	9
1980	9
1981	9
1982	9
1983	9
1984	9
1985	9
1986	9
1987	9
1990	7

Source: Data from Centers for Disease Control, Center for Infectious Diseases.

**J.d.** By 1990, the annual reported incidence of bacterial meningitis should be reduced to 2 per 100,000 population.<sup>2</sup> (In 1979, the reported incidence was 3 cases per 100,000 population.)

<sup>2</sup>Objective and baseline revised from those previously published. The 1990 goal will not be achieved because licensure of a vaccine to prevent *Haemophilus influenzae* type b disease in infants has not been obtained.

Year	Reported incidence of bacterial meningitis
1979	3.0
1980	3.0
1981	3.0
1982	3.0
1983	3.0
1984	3.9
1985	3.0
1986	3.0
1987	3.0
1990	2.0

Source: Data from Centers for Disease Control, Center for Infectious Diseases.

**J.e.** By 1990, the incidence of nosocomial infection in acute care hospitals should be reduced by 20 percent of what otherwise would pertain in the absence of hospital control programs. (In 1976, an estimated 6 percent of hospital infections were prevented.)

*No data exist since 1983 for the objective as written. In 1987, 90 hospitals submitted data to the Centers for Disease Control through a surveillance component system. Each component is a self-contained surveillance protocol that focuses on a particular group of patients. These components now allow collection of data on both infected and uninfected patients.*

Year	Percent reduction
1976	6
1983	9
1990	20

Source: Data from Centers for Disease Control, Center for Infectious Diseases.

**J.f.** By 1990, the annual estimated incidence of legionellosis should be reduced to 17 per 100,000 population. (In 1980, it was estimated to be 20 per 100,000 population.)<sup>3</sup>

<sup>3</sup>Objective added since publication of *Objectives for the Nation*. Although data on the estimated incidence of legionellosis were previously published, data are no longer being provided because of the gross underreporting of the disease.

## Improved Services and Protection

**J.g.** By 1990, 95 percent of licensed patient care facilities should be applying the recommended practices for controlling nosocomial infections. (Baseline data unavailable.)

**J.h.** By 1990, surveillance and control systems should be capable of responding to and containing: (1) newly recognized diseases and unexpected epidemics of public health significance; and (2) infections introduced from foreign countries.



**J.i.** By 1990, at least 50 percent of people in populations designated as targets by the Immunization Practices Advisory Committee of the Public Health Service should be immunized within 5 years of licensure of new vaccines for routine clinical use.<sup>4</sup>

<sup>4</sup>Same objective in Immunization.

*Recently licensed vaccines include hepatitis B vaccine (licensed in 1982), Haemophilus influenzae type b polysaccharide vaccine (HbPV, licensed in 1985), and Haemophilus influenzae type b conjugate vaccine (HbCV, licensed in 1987). Hepatitis B vaccine is recommended for persons who are at risk of contact with blood or blood products (primarily health-care workers), homosexual men, household contacts of carriers of hepatitis B surface antigen, and users of illicit injectable drugs. As the data suggest that coverage for high-risk groups varies from 2 percent to 50 percent, this objective may be met in some target groups. HbCV is recommended for all children at 18 months of age and likely will have replaced most use of HbPV in 1988. Evaluating progress toward the objective for HbCV is not possible because of a lack of national data concerning coverage with this vaccine. Coverage in four sentinel areas in 1989 was approximately 35 percent. (Centers for Disease Control, Center for Prevention Services.)*

### **Improved Surveillance and Evaluation Systems**

**J.j.** By 1990, data-reporting systems in all States should be able to monitor trends of common infectious agents not now subject to traditional public health surveillance (respiratory illnesses, gastrointestinal illnesses, otitis media).

**J.k.** By 1990, the extent of epidemics of respiratory and enteric viral illnesses should be determined within 2 weeks after they appear, through communitywide sentinel surveillance systems.

**J.l.** By 1990, all State health departments and appropriate Federal health agencies should have a computer-based telecommunications capacity for routine collection, analysis, and dissemination of surveillance data; rapid communication of messages; and epidemic aid investigations. (As of June 1983, three demonstration systems had been established.)

*The National Electronic Telecommunications System for Surveillance links 46 States, New York City, and the District of Columbia with the Centers for Disease Control. Before the end of 1989, 49 States will be connected to this system. (Centers for Disease Control, Epidemiology Program Office.)*

**J.m.** By 1990, laboratories throughout the country should be linked for monitoring infectious agents and antibiotic resistance patterns and for disseminating information.

# Smoking and Health

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Cigarette smoking, the single most preventable cause of death in our society, continues to decline although it is still responsible for approximately 390,000 deaths each year in the United States. In 1979, 33.5 percent of the population 18 years of age and over were smokers; in 1987, the proportion had dropped to 28.8 percent. Among men, 31.2 percent, and among women, 26.5 percent, were smokers in 1987. The highest proportion of smokers was among black males; about two of every five (39 percent) black men smoked in 1987.

This declining trend is also reflected among adolescents. Awareness of the great risk associated with cigarette smoking has increased among high school seniors from 63 percent in 1979 to 68 percent in 1987. (Between 1975 and 1979 awareness had increased at a much faster rate, from 51.3 percent to 63.0.) As awareness of the risks of smoking has increased, daily smoking behavior has declined overall and in all major demographic subcategories of high school seniors during these years. Among all seniors, 25 percent smoked cigarettes daily in 1979. This proportion declined to 19 percent in 1987. Whereas 22 percent of males smoked cigarettes daily in 1979, 16 percent reported smoking daily in 1987; comparable figures for females were 28 and 20 percent. The prevalence of daily smoking has been consistently higher in females than in males during this time period (the median difference is 4 percentage points). The proportion of white seniors who smoked daily decreased from 26 to 20 percent, while there was a dramatic decline in the proportion of black seniors who smoked daily from 19 percent in 1979 to 8 percent in 1987.

A national health survey of 8th and 10th grade students conducted in the fall of 1987 found that 16 percent of 8th graders and 26 percent of 10th graders reported having smoked a cigarette within the past month, with nearly equal numbers of boys and girls. Use of chewing tobacco or snuff during the past month was reported by 12 percent of boys and 1 percent of girls. The use of smokeless tobacco, particularly among young males, is increasing.

In 1985 about 21 percent of the U.S. workforce was offered some kind of smoking cessation program. By the end of 1987, 42 States and the District of Columbia had laws restricting smoking in public places. Thirty-one States had laws to restrict smoking in public workplaces and 13 had laws to restrict smoking in private workplaces.

Disclosure of major injurious tobacco smoke constituents (tar, nicotine, and carbon monoxide) to consumers, for cigarettes yielding 8 milligrams or less of tar, is often made voluntarily by the industry. In the past 7 years, however, the sales-weighted average tar and nicotine yield of U.S. cigarettes has leveled at slightly above 13 milligrams. Since 1984, rotating health warning labels have been required on cigarette packages and in cigarette advertising.

In 1987, about 9 of 10 life insurance companies offered health behavior-related discounts on individual policies; about 1 of 7 offered them on group policies. Smoker-nonsmoker premium differentials were far less commonly offered by health than by life insurers. Only about one in seven commercial health carriers and Blue Cross/Blue Shield plans offered nonsmoking discounts on individual policies (20 percent of the health insurance market), and far fewer carriers offered discounts on group policies where certain percentages of the groups are nonsmokers. Only one federally qualified health maintenance organization offered a nonsmoker discount.

Additional information on smoking prevalence can be found in detailed tables 53–55. Information on diseases that are related to smoking can be found in tables 23–29, 37, 38, 48, and 49.

## Reduced Risk Factors

**K.a.** By 1990, the proportion of adults who smoke should be reduced to below 25 percent. (In 1979, 34 percent of the population 18 years of age and over smoked.)

**K.b.** By 1990, the proportion of women who smoke during pregnancy should be no greater than one-half the proportion of all women who smoke. (Baseline data unavailable.)

**K.c.** By 1990, the proportion of children and youth 12–18 years of age who smoke should be reduced to below 6 percent. (In 1979, 11.7 percent smoked.)

**K.d.** By 1990, the sales-weighted average tar yield of cigarettes should be reduced to below 10 milligrams. The other components of cigarette smoke known to cause disease should also be reduced proportionately. (In 1978, the sales-weighted average yield was 16.1 milligrams.)

Year	Percent smokers
1979	33.5
1980	33.2
1983	32.1
1985	30.1
1987	<sup>a</sup> 28.8
1990	25.0

<sup>a</sup>True prevalence of current smokers may be slightly underestimated due to a change in the 1987 questionnaire design.

Source: Data from National Center for Health Statistics, Division of Health Interview Statistics.

*In 1985, approximately 31 percent of women aged 18–44 years smoked cigarettes. Of women who had given birth in the preceding 5 years, 32 percent reported smoking in the 12 months preceding the birth, 21 percent of whom reportedly quit after learning they were pregnant. This indirect evidence seems to indicate that the smoking prevalence among pregnant women was much more than half the prevalence among nonpregnant women in the early 1980's. (National Center for Health Statistics, Division of Health Interview Statistics.)*

Year	Percent smokers aged—			
	12–17 years	12–13 years	14–15 years	16–17 years
1982	15	<sup>a</sup> 3	10	30
1985	15	6	14	25
1988	12	3	11	20

<sup>a</sup>Relative standard error greater than 30 percent.

Source: Data from Alcohol, Drug Abuse, and Mental Health Administration.

Year	Milligrams of tar
1978	16.1
1979	15.1
1980	14.1
1981	13.2
1982	13.5
1983	13.4
1984	13.0
1985	13.2
1986	13.4
1987	13.3
1990	10.0

Source: Data from Federal Trade Commission and the Office of Smoking and Health.

## Increased Public and Professional Awareness

**K.e.** By 1990, the proportion of the adult population aware that smoking is one of the major risk factors for heart disease should be increased to at least 85 percent. (In 1975, the proportion was 53 percent.)

Year	Percent aware of risk factors
1975	53
1977	68
1981	74
1985	90
1990	85

Source: Data from Federal Trade Commission; 1985 data from National Center for Health Statistics, Division of Health Interview Statistics.

**K.f.** By 1990, at least 90 percent of the adult population should be aware that smoking is a major cause of lung cancer, as well as multiple other cancers including laryngeal, esophageal, and bladder cancer. (Baseline data unavailable.)

*In 1985 the percent of the population 18 years of age and over that knew of the relationship of smoking to lung cancer was 95 percent; to cancer of the larynx, 88 percent; to cancer of the esophagus, 80 percent; and to bladder cancer, 36 percent. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**K.g.** By 1990, at least 85 percent of the adult population should be aware of the special risk of developing and worsening chronic obstructive lung disease, including bronchitis and emphysema, among smokers. (Baseline data unavailable.)

*In 1985 the percent of the population 18 years of age and over who knew that cigarette smoking increases a person's chance of getting emphysema was 91 percent; and for chronic bronchitis, it was 86 percent. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**K.h.** By 1990, at least 85 percent of women should be aware of the special health risks for women who smoke, including the effect on outcomes of pregnancy and the excess risk of cardiovascular disease with oral contraceptive use. (Baseline data unavailable.)

*In 1985 the proportion who knew that smoking during pregnancy increases the chance of miscarriage was 74 percent; of low birth weight, 80 percent; of stillbirth, 66 percent; of premature birth, 70 percent. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**K.i.** By 1990, at least 65 percent of children 12 years of age should be able to identify smoking cigarettes with increased risk of serious disease of the heart and lungs. (Baseline data unavailable.)

## Improved Services and Protection

**K.j.** By 1990, at least 35 percent of all workers should be offered smoking cessation programs sponsored or supported by employers-employees, either at the worksite or in the community. (In 1979, 15 percent of U.S. business firms had programs to encourage or assist their employees to stop smoking.)

*In 1985, approximately 36 percent of worksites with 50 or more employees (approximately 58 percent of the U.S. workforce) offered some kind of smoking cessation program. (Office of Disease Prevention and Health Promotion.)*

**K.k.** By 1985, tar, nicotine, and carbon monoxide yields should be prominently displayed on each cigarette package and on promotional material. (Tar and nicotine yields appear in advertising as a result of a voluntary agreement between the Federal Trade Commission and the cigarette manufacturing industry; tar, nicotine, and carbon monoxide levels are currently not required on packaging.)

*Disclosure of tar and nicotine content on cigarette packages is often made voluntarily for cigarettes yielding 8 milligrams or less of tar, but rarely for higher tar brands. The level of carbon monoxide is not disclosed on packages nor in advertisements. (Office on Smoking and Health.)*

**K.l.** By 1985, the present cigarette warning should be strengthened to increase its visibility and impact and to give the consumer additional needed information on the specific multiple health risks of smoking. Special consideration should be given to rotational warnings and to identification of especially vulnerable groups.

*The Comprehensive Smoking Education Act of 1984 requires that the single health warning be replaced with four rotating labels on cigarette packages and in cigarette advertising. The rotating warnings do not provide consolidated information regarding the major health effects of smoking, nor is basic information provided on the health effects of exposure to tobacco smoke.*

**K.m.** By 1990, laws should exist in all 50 States and all jurisdictions prohibiting smoking in enclosed public places and establishing separate smoking areas at work and in dining establishments. (In 1978, 31 States had some form of smoking restriction laws.)

*By the end of 1987, 42 States and the District of Columbia had laws restricting smoking. (Centers for Disease Control.)*

**K.n.** By 1990, major health and life insurers should offer differential insurance premiums to smokers and nonsmokers. (In 1979 approximately 30 major companies were offering differential premiums.)

*In 1987, smoker-nonsmoker premium differentials were offered by about 9 in 10 life insurance companies for individual policies and about 1 in 7 for group policies. Only about one in seven health insurers offered nonsmoker discounts on individual policies; only a few commercial health insurance carriers offered discounts on group policies. (American Council of Life Insurance and the National Association of Insurance Commissioners.)*

## **Improved Surveillance and Evaluation Systems**

**K.o.** By 1985, insurance companies should have collected, reviewed, and made public their actuarial experience on the differential life experience and hospital utilization by specific cause and sex of smokers and nonsmokers.

*In 1983, a Society of Actuaries task force examined the smoking-related mortality data of life insurance companies. In 1987, the National Association of Insurance Commissioners compiled smoking-related health insurance claims data.*

**K.p.** By 1990, continuing epidemiologic research should have delineated the unanswered research questions regarding low-yield cigarettes, and preliminary partial answers to these questions should have been generated by research efforts.

**K.q.** By 1990, in addition to biomedical hazard surveillance, continuing examination of the changing tobacco product and the sociologic phenomena resulting from those changes should have been accomplished.

## Alcohol and Drug Misuse

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Alcohol and drugs are implicated in an array of health and social problems. They play causal or contributing roles in deaths due to accidents, homicides, and suicides as well as in diseases such as cirrhosis and cancer. They pose particular risks among adolescents, young adults, pregnant women, and the elderly.

About 53.4 percent of people 12 years of age and over reported alcohol use during the past month in 1988. Among white people, 55.1 percent reported use; among black people, 44.3 percent; and among Hispanics, 49.2 percent. Use is most prevalent in age groups 18–25 and 26–34 years, with 65.3 percent and 64.2 percent reporting using alcohol within the past month, respectively. Among adolescents aged 12–17, 25.2 percent reported alcohol use in the past month, 26.8 percent of males and 23.5 percent of females.

Alcohol consumption rates are slowly declining. After the 1978 baseline per capita consumption of 2.71 gallons of absolute alcohol (persons 14 years of age and over), the consumption rate rose to an all-time high of 2.76 in 1980 and 1981. Since 1981 it has declined steadily to an estimated 2.54 gallons consumed per capita in 1987.

The overall decline in alcohol use correlates with lowered cirrhosis mortality rates and reductions in alcohol-related motor vehicle accidents. Overall, deaths from cirrhosis have dropped by about one-fifth in the past 9 years, from 13.5 per 100,000 population in 1978 to 10.8 in 1987. Cirrhosis mortality rates for black Americans are substantially above those for the white population, however, suggesting that prevention efforts might target this group. In 1987 cirrhosis mortality rates were 13.2 per 100,000 among black people and 18.3 among black males.

Alcohol-related motor vehicle accident deaths have been declining since 1980. Since 1982, when 57.3 percent of all traffic fatalities were alcohol related, alcohol-related fatalities as a proportion of all traffic fatalities have declined to 49.6 percent in 1988.

The 1990 objectives for alcohol and drug misuse place particular emphasis on the use of drugs by adolescents and young adults. Awareness of “great risk” associated with alcohol and illicit drug use on a regular basis has generally increased among high school seniors in the past 9 years. Since 1979, awareness of great risk associated with marijuana use has increased substantially, from 42 to 77 percent; with alcohol use, 35 to 43 percent; and with cocaine use, from 70 to 89 percent. The trend in perceived risk associated with barbiturate use has remained essentially unchanged, with about 70 percent of high school seniors perceiving great risk each year.

Corresponding to the heightened awareness of the risks associated with alcohol and drug misuse, trends in the use of alcohol, marijuana, cocaine, and other illicit drugs are generally declining among adolescents and young adults. Whether the measure is daily drinking in the past 30 days, or five or more drinks at one time in the last 2 weeks, among high school seniors the general trend of alcohol use has been declining since the late 1970’s and early 1980’s.

About 6.9 percent of the high school senior class of 1979 reported drinking alcohol daily. In that same class, 41.2 percent had five or more drinks at one time in the past 2 weeks. Among the class of 1988, about 4.2 percent reported drinking alcohol daily—a 39-percent decrease in 9 years; and about 34.7 percent reported having five or more drinks at one time in the past 2 weeks—a 16-percent decrease.

Use of illicit drugs continues to be a major public health problem, although progress has been made in reducing marijuana use. The percent of young adults 18–25 years of age reporting frequent use of marijuana has dropped from 19 percent in 1977 to 7 percent in 1988. The proportion of 12–17-year-olds reporting frequent use of marijuana has dropped from 9 percent in 1977 to 2 percent in 1988.

Results of a national survey on drug use among the high school senior class of 1988 show a significant decrease in cocaine use for the second year in a row. In 1987 about 4.3 percent and in 1988, about 3.4 percent reported using cocaine in the past 30 days, compared with about 6.7 percent in 1985 and 6.2 percent in 1986. These data were collected before the recent apparent increase in crack cocaine usage.

A national health survey of 8th and 10th grade students conducted in the fall of 1987 found that 28 percent of 8th graders and 38 percent of 10th graders reported having had five or more drinks on at least one occasion during the past 2 weeks. Six percent of 8th grade students and 15 percent of 10th grade students reported having used marijuana during the past month. Five percent of 8th graders and 9 percent of 10th graders reported having tried cocaine; 2 percent of 8th and 3 percent of 10th grade students reported using it during the past month. About one-third of those who have tried cocaine reported having tried the crack form.

Additional and related information on alcohol and drug misuse can be found in detailed tables 23–25, 37, 48, 49, 55, and 56.

## Improved Health Status

**L.a.** By 1990, the alcohol-related death rate from motor vehicle accidents should be reduced to less than 9.5 per 100,000 population per year. (In 1977, there were 11.5 deaths per 100,000 population.)

Year	Death rate	Percent of fatalities alcohol related <sup>a</sup>
1977	11.5	---
1978	11.5	---
1979	11.5	---
1980	11.5	---
1981	10.5	---
1982	10.8	57.3
1983	10.1	55.5
1984	10.0	53.7
1985	9.4	51.0
1986	10.0	52.2
1987	9.7	50.9
1988	9.5	49.6
1990	9.5	...

<sup>a</sup>Since 1984, the Fatal Accident Reporting System of the National Highway Traffic Safety Administration has used an additional methodology to track alcohol-related traffic fatalities. Data for 1982 and 1983 were calculated for comparison purposes.

Source: Data from National Highway Traffic Safety Administration.

*In 1983, there were an estimated 4.3 fatalities indirectly attributable to alcohol use per 100,000 population.*

**L.b.** By 1990, deaths from accidents other than motor vehicle (for example, falls, fires, drownings, skimobile, and aircraft accidents) indirectly attributable to alcohol use should be reduced to 5 per 100,000 population per year. (In 1975, there were 7 per 100,000 population.)

**L.c.** By 1990, the cirrhosis<sup>1</sup> death rate should be reduced to 12 per 100,000 population per year. (In 1978, the rate was 13.5 per 100,000 population.)

<sup>1</sup>Effective in 1979, the cause-of-death category is "chronic liver disease and cirrhosis."

Year	Chronic liver disease and cirrhosis death rate
1978	13.5
1979	13.2
1980	13.5
1981	12.8
1982	11.9
1983	11.7
1984	11.6
1985	11.2
1986	10.9
1987	10.8
1990	12.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**L.d.** By 1990, the incidence of infants born with fetal alcohol syndrome should be reduced by 25 percent.<sup>2</sup> (In 1977, the rate was 1 per 2,000 births, or approximately 1,650 cases.)

<sup>2</sup>Same objective in Pregnancy and Infant Health.

*In 1987 the National Institute on Alcohol Abuse and Alcoholism estimated the incidence of infants born with fetal alcohol syndrome to be 1–3 per 1,000 live births, or 3,600–10,000 cases each year. There is also evidence that certain subgroups in the population have a much higher incidence.*

**L.e.** By 1990, drug-related deaths should be reduced to 2 per 100,000 population per year. (In 1978, the rate was 2.7 per 100,000 population.)<sup>3</sup>

<sup>3</sup>Drug-related mortality excludes deaths from alcohol. The definition, however, is affected by a revision in the *International Classification of Diseases*. The 1978 data are defined by categories in the Eighth Revision, Adapted for Use in the United States. The 1979 data are defined by categories in the Ninth Revision. The change in the death rate for these causes between 1978 and 1979 reflects, to a degree, the change in the classification of diseases between these two years. The baseline has also been revised to take into account calculation results from the 1980 census.

Year	Death rate
1978	2.7
1979	3.2
1980	3.0
1981	3.1
1982	3.2
1983	3.2
1984	3.3
1985	3.6
1986	4.1
1987	4.0
1990	2.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**L.f.** By 1990, adverse reactions from medical drug use sufficiently severe to require hospital admission should be reduced to 25 percent fewer admissions per year. (In 1979, estimates ranged from 105,000 to 350,000 admissions per year.)

## Reduced Risk Factors

**L.g.** By 1990, per capita consumption of alcohol should not exceed current levels. (In 1978, about 2.71 gallons of absolute alcohol per capita were consumed by persons 14 years of age and over.)

Year	Per capita consumption in gallons
1978	2.71
1979	2.75
1980	2.76
1981	2.76
1982	2.72
1983	2.69
1984	2.65
1985	2.62
1986	2.58
1987	2.54
1990	2.71

Source: Data from National Institute on Alcohol Abuse and Alcoholism.



**L.h.** By 1990, the proportion of adolescents 12–17 years of age who abstain from using alcohol or other drugs<sup>4</sup> should not fall below 1977 levels. (In 1977, the proportion of abstainers was 69 percent for alcohol; for other drugs, the proportion ranged from 83 percent for marijuana to 99.9 percent for heroin.)

<sup>4</sup>A person is considered as not using alcohol or other drugs if he or she has never used the substance or if the last use of the substance was more than 1 month prior to the survey in which the data were collected.

**L.i.** By 1990, the proportion of adolescents 14–17 years of age who report acute drinking-related problems<sup>5</sup> during the past year should be reduced to below 17 percent. (In 1978, the estimate was 19 percent based on 1974 survey data.)

<sup>5</sup>Acute drinking-related problems have been defined as problems such as episodes of drunkenness, driving while intoxicated, or drinking-related problems with school authorities.

**L.j.** By 1990, the proportion of problem drinkers among all adults 18 years of age and over should be reduced to 8 percent. (In 1979, it was about 10 percent.)

**L.k.** By 1990, the proportion of young adults 18–25 years of age reporting frequent use<sup>6</sup> of drugs other than alcohol should not exceed 1977 levels. (In 1977, it was less than 1 percent for drugs other than marijuana and 19 percent for marijuana.)

<sup>6</sup>Frequent use of other drugs means the nonmedical use of any specific drug on 5 days or more during the previous month.

**L.l.** By 1990, the proportion of adolescents 12–17 years of age reporting frequent use<sup>7</sup> of drugs other than alcohol should not exceed 1977 levels. (In 1977, the percentages were less than 1 percent for drugs other than marijuana and 9 percent for marijuana.)

<sup>7</sup>Frequent use of other drugs means the nonmedical use of any specific drug on 5 days or more during the previous month.

## Increased Public and Professional Awareness

**L.m.** By 1990, the proportion of women of childbearing age aware of risks associated with pregnancy and drinking, in particular, the fetal alcohol syndrome, should be greater than 90 percent. (In 1979, it was 73 percent.)

Year	Percent of abstainers in past month		
	Alcohol	Marijuana	Cocaine
1977 <sup>a</sup>	69	83	99.2
1979	63	83	98.6
1982	74	89	98.4
1985	69	88	98.5
1988	75	94	98.9
1990	69	83	99.2

<sup>a</sup>In 1979, the design of the questionnaire was changed. Consequently, 1977 data are not comparable to those of later years.

Source: Data from National Institute on Drug Abuse.

*The proportion of problem drinkers remains at about 10 percent. (National Institute on Alcohol Abuse and Alcoholism.)*

Year	Percent reporting frequent use	
	Marijuana	Other drugs
1977	19	0.8
1979	22	2.4
1982	16	2.3
1985	11	1.8
1988	7	1.3
1990	19	0.8

Source: Data from National Institute on Drug Abuse.

Year	Percent reporting frequent use	
	Marijuana	Other drugs
1977	9	( <sup>a</sup> )
1979	8	( <sup>a</sup> )
1982	6	0.9
1985	5	1.2
1988	2	0.8
1990	9	( <sup>a</sup> )

<sup>a</sup>Quantity more than zero but less than 0.5.

Source: Data from National Institute on Drug Abuse.

*In 1985 the proportion aware that heavy drinking during pregnancy increases the chance of miscarriage was 87 percent; of low birth weight, 88 percent; of mental retardation of the newborn, 87 percent; of birth defects, 88 percent; and 62 percent had heard of fetal alcohol syndrome. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**L.n.** By 1990, the proportion of adults who are aware of the added risk of head and neck cancers for people with excessive alcohol consumption should exceed 75 percent. (Baseline data unavailable.)

*In 1985, 40 percent of adults were aware of the added risk of throat cancer, and 32 percent were aware of the added risk of cancer of the mouth. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**L.o.** By 1990, 80 percent of high school seniors should state that they perceive great risk associated with frequent regular cigarette smoking, marijuana use, barbiturate use, or alcohol intoxication. (In 1979, 63 percent of high school seniors perceived great risk from one or two packs of cigarettes smoked daily, 42 percent from regular marijuana use, 72 percent from regular barbiturate use, and only 35 percent from having five or more drinks per occasion once or twice each weekend.)

Year	Percent perceiving great risk with frequent use			
	Cigarettes	Marijuana	Barbiturates	Alcohol <sup>a</sup>
1979	63	42	72	35
1980	64	50	72	36
1981	63	58	70	36
1982	61	60	68	36
1983	61	63	68	39
1984	64	67	69	42
1985	67	70	68	43
1986	66	71	67	39
1987	69	74	69	42
1988	68	77	70	43
1990	80	80	80	80

<sup>a</sup>5 or more drinks once or twice each weekend.

Source: Data from National Institute on Drug Abuse.

**L.p.** By 1990, pharmacists filling prescriptions should routinely counsel patients on the proper use of drugs designated as high priority by the Food and Drug Administration, with particular attention to prescriptions for pediatric and geriatric patients and to the problems of drinking alcoholic beverages while taking certain prescription drugs. (Baseline data unavailable.)

### Improved Services and Protection

**L.q.** By 1990, the proportion of major firms that provide a substance abuse prevention and referral program should be greater than 70 percent. (In 1976, 50 percent of a sample of the Fortune 500 firms offered some type of employee assistance program.)

Year	Percent of firms
1976	50
1979	57
1988	70
1990	70

Source: Data from National Institute on Alcohol Abuse and Alcoholism, and from Association of Labor Management Consultants and Administrators.

**L.r.** By 1990, standard medical and pharmaceutical practice should include drug profiles on 90 percent of adults covered under the Medicare program and on 75 percent of other patients with acute and chronic illnesses being cared for in all private and organized medical settings. (Baseline data unavailable.)

### Improved Surveillance and Evaluation Systems

**L.s.** By 1990, a comprehensive data capability should be established to monitor and evaluate the status and impact of misuse of alcohol and drugs on health status, motor vehicle accidents, accidental injuries in addition to those from motor vehicles, interpersonal aggression and violence, sexual assault, vandalism and property damage, pregnancy outcomes, and emotional and physical development of infants and children.

*The National Institute on Alcohol Abuse and Alcoholism's Alcohol Epidemiologic Data System (AEDS) now contains 11 national survey data sets.*

# Improved Nutrition

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Although linkages between certain nutrient deficiencies and health status have long been recognized, in recent years diet has become associated with a number of chronic diseases, such as cardiovascular disease, cancer, and diabetes. As a result, issues relating to quantities and kinds of foods and modification of the human diet have assumed a prominent focus in disease prevention and health promotion.

Knowledge about the nutritional risk factors associated with the major chronic diseases is a primary step in the improvement of American dietary practices. Data from the 1988 FDA (Food and Drug Administration) Health and Diet Survey indicate that more than 7 in 10 persons 12 years of age and over were aware of the relationship between fat and heart disease and between cholesterol and heart disease. About 6 in 10 were aware of the relationship between sodium and hypertension, but only 1 in 4 were aware of the relationship between fiber and cancer.

Basic knowledge about foods that are the major sources of fat (especially saturated fat), cholesterol, calories, calcium, sodium, and fiber is essential in the selection of foods and diets that may reduce health risks. Less than half of the people surveyed in 1988 could name specific foods as good sources of fiber. However, about 62 percent of the adults surveyed correctly identified the most likely food sources of saturated fats as animal products (meat and dairy), and about 55 percent correctly identified vegetables and vegetable oils as the most likely sources of polyunsaturated fats.

In 1988, 61.0 percent of sales dollars for FDA-regulated, packaged, processed foods contained useful calorie and nutrient information to enable consumers to select diets that promote and protect good health. This represents a 31-percent increase since 1978 when the percent was about 41.9. Sodium labeling has increased almost ninefold: In 1988 sodium content was displayed on 65.0 percent of FDA-regulated, packaged, processed foods; in 1978, only 7.5 percent contained sodium labeling. Although the food industry, on the whole, has not reduced the sodium content of established product lines, in 1982 the industry's rate of introduction of new lowered sodium products had accelerated from four products per year to nine per month. Between early 1981 and mid-1986 a total of 186 new lowered sodium product lines (consisting of 238 items) appeared in supermarkets in 30 different product groups. Seven food groups accounted for more than half of the new products: chip snacks/crackers/pretzels; salt/seasonings/spices; soups; nuts and sweet snacks; condiments; salad dressings/mayonnaise; and soft drinks.

The progress made to date in achieving the objectives included in this priority area reflects both the degree to which national concern about nutrition has begun to have some effect on actual behavior and the relative recency of emphasis and research in the field. In June 1988 the governmentwide Interagency Committee on Nutrition Monitoring (ICNM) was formally established. This committee has responsibility for the activities of the National Nutrition Monitoring System (NNMS), a complex of activities that provide regular information about the contribution of diet and nutritional status to the health of the American people.

## Improved Health Status

**M.a.** By 1990, the proportion of pregnant women with iron deficiency anemia (as estimated by hemoglobin concentrations early

in pregnancy) should be reduced to 3.5 percent. (In 1971–74, the proportion of pregnant women with low hemoglobin levels was 31.9; the proportion with low hemoglobin levels and low transferrin saturation was 6.5.)

**M.b.** By 1990, growth retardation of infants and children caused by inadequate diets should have been eliminated in the United States as a public health problem. (In 1972–73, an estimated 10–15 percent of infants and children among migratory workers and certain poor rural populations suffered growth retardation from dietary inadequacies.)

## Reduced Risk Factors

**M.c.** By 1990, the prevalence of significant overweight (120 percent of “desired” weight) among the U.S. adult population should be decreased to 10 percent of men and 17 percent of women, without nutritional impairment.<sup>1,2</sup> (In 1971–74, 23.7 percent of men and 26.0 percent of women 20–74 years of age were overweight.)

<sup>1</sup>Same objective in High Blood Pressure Control.

<sup>2</sup>Overweight is defined for men as body mass index (BMI) greater than or equal to 27.8 kilograms/meter<sup>2</sup> and for women as 27.3 kilograms/meter<sup>2</sup>. These cut points were used because they represent the sex-specific 85th percentiles for persons 20–29 years of age in the 1976–80 National Health and Nutrition Examination Survey. The language for this objective in terms of BMI would be: By 1990, the prevalence of overweight (BMI of 27.8 or higher for men and 27.3 or higher for women) among the U.S. adult population should be reduced, without impairment of nutritional status, to approximately 18 percent of men and 21 percent of women.

**M.d.** By 1990, 50 percent of the overweight population should have adopted weight loss regimens, combining an appropriate balance of diet and physical activity. (Baseline data unavailable.)

**M.e.** By 1990, the mean serum cholesterol level in the adult population 18–74 years of age should be at or below 200 milligrams per deciliter. (In 1971–74, for adults 20–74 years of age, the mean serum cholesterol level was 214 milligrams/deciliter for men and 217 milligrams/deciliter for women.)<sup>3</sup>

<sup>3</sup>All values referenced to Abell-Kendall method. Abell, L. L., et al.: A simplified method for the estimation of total cholesterol in serum and demonstration of its specificity. *J. Biol. Chem.* 195:357–66, 1952.

**M.f.** By 1990, the mean serum cholesterol level in children 1–14 years of age should be at or below 150 milligrams/deciliter. (In 1971–74, for children 1–17 years of age, the mean serum cholesterol level was 176 milligrams/deciliter.)

**M.g.** By 1990, the average daily sodium ingestion (as measured by excretion) for adults should be reduced at least to the 3–6-gram range.<sup>4,5</sup> (Baseline data unavailable.)

<sup>4</sup>Same objective in High Blood Pressure Control.

<sup>5</sup>3–6 grams of salt correspond roughly to 1.2–2.4 grams of sodium.

Race or ethnicity	Percent of overweight persons 20–74 years <sup>a</sup>	
	Male	Female
Total	24.4	26.7
Non-Hispanic white	24.2	23.9
Non-Hispanic black	26.0	44.4
Mexican-American	30.9	41.6
Cuban	27.6	31.6
Puerto Rican	25.6	40.2

<sup>a</sup>Data are age adjusted. Total and non-Hispanic data cover 1976–80; Hispanic data cover 1982–84.

Source: Data from National Center for Health Statistics, Division of Health Examination Statistics.

*In 1985, 27 percent of women 18 years of age and over who were overweight and 21 percent of men who were overweight were both dieting and exercising to lose weight. (Based on body mass index calculated from self-reported height and weight in the 1985 National Health Interview Survey.)*

Race or ethnicity	Mean serum cholesterol level for adults 20–74 years <sup>a</sup>	
	Male	Female
Total	211	214
Non-Hispanic white	211	214
Non-Hispanic black	208	213
Mexican-American	207	207
Cuban	204	199
Puerto Rican	203	209

<sup>a</sup>Data are age adjusted. Total and Non-Hispanic data cover 1976–80; Hispanic data cover 1982–84.

Source: Data from National Center for Health Statistics, Division of Health Examination Statistics.

*Data from the first 4 years of the revised FDA Total Diet Study (1982–86) indicate that average sodium intakes for adults, excluding salt added at the table, were within the Established Safe and Adequate Daily Dietary Intake range of 1,100–3,300 milligrams established by the National Academy of Sciences in 1980.*

**M.h.** By 1990, the proportion of women who breast feed their babies should be increased to 75 percent at hospital discharge and to 35 percent at 6 months of age. (In 1978, the proportion of infants breast fed<sup>6</sup> at 1 week was 45.1; the proportion of infants breast fed at 6 months was 18.9.)

<sup>6</sup>Data include infants who may receive formulas in addition to breast feeding. Excludes unwed mothers.

Year	Percent of infants	
	1 week	6 months
1978	45.1	18.9
1979	49.7	21.3
1980	54.0	23.2
1981	56.4	25.1
1982	60.5	27.1
1983	57.0	23.3
1984	58.0	23.8
1985	56.4	22.1
1986	55.4	21.6
1987	54.1	20.2
1988	52.7	19.5
1990	75.0	35.0

Source: Data from Foss Laboratories, National Mothers' Surveys. (Copyright; used with permission.)

## Increased Public and Professional Awareness

**M.i.** By 1990, the proportion of the population able to identify the principal dietary factors known or strongly suspected to be related to disease should exceed 75 percent for each of the following diseases: heart disease, high blood pressure, dental caries, and cancer. (Baseline data largely unavailable. About 12 percent of adults are aware of the relationship between high blood pressure and sodium intake.)

*In 1988, 74 percent of the population 12 years of age and older were aware of the relationship between fat and heart disease; 70 percent were aware of the relationship between cholesterol and heart disease; 64 percent, the relationship between sodium and hypertension; and 25 percent, the relationship between fiber and cancer. In 1985, 88 percent identified avoiding between-meal sweets as being important to preventing tooth decay. (Food and Drug Administration; National Center for Health Statistics, Division of Health Interview Statistics.)*

**M.j.** By 1990, 70 percent of adults should be able to identify the major foods that are: low in fat content, low in sodium content, high in calories, good sources of fiber. (Baseline data unavailable.)

*In 1988, less than half of the population 12 years of age and older correctly mentioned specific foods as good sources of fiber. (Food and Drug Administration, Health and Diet Survey.)*

**M.k.** By 1990, 90 percent of adults should understand that to lose weight people must either consume foods that contain fewer calories or increase physical activity or both. (Baseline data unavailable.)

*In 1985, 73 percent of the population 18 years of age and over cited either "eating fewer calories" or "increasing physical activity" as one of the two best ways to lose weight; 55 percent cited both. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## Improved Services and Protection

**M.l.** By 1990, the labels of all packaged foods should contain useful calorie and nutrient information to enable consumers to select diets that promote and protect good health. Similar information should be displayed where nonpackaged foods are obtained or purchased. (In 1978, 7.5 percent of the national sales from FDA regulated foods bore sodium labeling.)

Year	Percent of sales dollars for products <sup>a</sup> with—	
	Sodium labeling	Nutrition labeling
1978	7.5	41.9
1980	13.9	44.3
1982	18.9	54.5
1983	30.1	55.2
1984	40.0	55.0
1986	59.0	55.0
1988	65.0	61.0
1990	100.0	100.0

<sup>a</sup>Based on national sales volume of brands in a sample of approximately 1,700 packaged-processed foods regulated by the Food and Drug Administration and sold in grocery stores in the United States. Excludes fresh and processed meat, bread, fluid milk, ice cream, chip-type snacks, cookies, and carbonated soft drinks.

Source: Data from Food and Drug Administration, Division of Consumer Studies.

**M.m.** By 1990, sodium levels in processed food should be reduced by 20 percent from present levels. (Baseline data unavailable.)

*Among established food product lines declaring sodium content, there has been no reduction of sodium after the 1981 implementation of FDA's voluntary sodium initiative. However, there is a much greater availability of sodium-reduced foods since 1981, reducing the overall average value of sodium content among all sodium-labeled products by 20 percent. (Food and Drug Administration's Food Label and Package Survey.)*

**M.n.** By 1985, the proportion of employee and school cafeteria managers who are aware of and actively promoting U.S. Department of Agriculture and Department of Health and Human Services dietary guidelines should be greater than 50 percent. (Baseline data unavailable.)

**M.o.** By 1990, all States should include nutrition education as part of required comprehensive school health education at elementary and secondary levels. (In 1979, only 10 States mandated nutrition as a core content area in school health education.)

*In 1989, 19 States mandated nutrition as a core content area in school health education. (American School Health Association.)*

**M.p.** By 1990, virtually all routine health contacts with health professionals should include some element of nutrition education and nutrition counseling. (Baseline data unavailable.)

*In 1985, 10 percent of the population 18 years of age and over indicated that proper nutrition is often discussed when visiting a doctor for routine care; 16 percent indicated that proper nutrition is sometimes discussed. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## **Improved Surveillance and Evaluation Systems**

**M.q.** Before 1990, a comprehensive national nutrition status monitoring system should have the capability for detecting nutritional problems in special population groups, as well as for obtaining baseline data for decisions on national nutrition policies.

*In 1988, a governmentwide Interagency Committee on Nutrition Monitoring (ICNM), co-chaired by the Assistant Secretary for Health, U.S. Department of Health and Human Services, and the Assistant Secretary for Food and Consumer Services, U.S. Department of Agriculture, was established with oversight responsibility for implementation of the National Nutrition Monitoring System activities.*

# Physical Fitness and Exercise

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For the purposes of the 1990 objectives, “appropriate regular physical activity” refers to exercise involving large muscle groups in dynamic movement for periods of 20 minutes or longer, 3 or more days per week, and performed at an intensity requiring 60 percent or greater of an individual’s cardiorespiratory capacity. Such activity can benefit a person’s health in a number of ways, including reduced risk of coronary heart disease, improved ability to maintain desired weight, reduced symptoms associated with temporary anxiety states, and relief from the feelings and other symptoms associated with mild-to-moderate depression. In addition, people who engage in regular physical activity report that they feel better generally and have more energy.

Although the relationship between physical activity and health is better understood today than in 1979, the scarcity of relevant and comparable national surveillance and evaluation systems precludes documenting the progress that has been made in the years since the objectives were developed. However, the 1990 Health Promotion Supplement of the National Health Interview Survey will provide an update of the 1985 data on exercise and physical activity from which progress toward the 1990 adult fitness objectives can be assessed.

In 1985 less than one-half of the adult population exercised on a regular basis, and only one-quarter had done so for 5 or more years. A higher percent of adults under 65 years of age than older adults engaged in regular exercise. Over four-fifths of adults considered themselves as active or more active than other persons of the same age, but the majority did not know the specific exercise requirements to strengthen the heart and lungs (frequency and duration of exercise; heart and breathing rate during exercise). In 1985, 39.3 percent knew the appropriate number of days per week; 22.7 percent knew the number of minutes per occasion; 33.8 percent knew the intensity; but only 5.1 percent knew all three: duration, frequency, and intensity.

## Reduced Risk Factors

**N.a.** By 1990, the proportion of children and adolescents 10–17 years of age participating regularly in appropriate physical activities, particularly cardiorespiratory fitness programs that can be carried into adulthood, should be greater than 90 percent. (Baseline data unavailable.)

**N.b.** By 1990, the proportion of children and adolescents 10–17 years of age participating in daily school physical education programs should be greater than 60 percent. (In 1974–75, the proportion was 33 percent.)

**N.c.** By 1990, the proportion of adults 18–64 years of age participating regularly in vigorous physical exercise should be greater than 60 percent. (In 1978, the proportion who regularly exercise was estimated at more than 35 percent.)

**N.d.** By 1990, 50 percent of adults 65 years of age and over should be engaging in appropriate physical activity, for example, regular walking, swimming, or other aerobic activity. (In 1975, about 36 percent took regular walks.)

*In 1984, the percent of children in grades 5 through 12 participating in daily school physical education programs was estimated to be 36 percent. (National Children and Youth Fitness Study Office of Disease Prevention and Health Promotion.)*

*In 1985, an estimated 42 percent regularly exercised. (National Center for Health Statistics, Division of Health Interview Statistics.)*

*In 1985, 29 percent exercised or played sports regularly. (National Center for Health Statistics, Division of Health Interview Statistics.)*

## **Increased Public and Professional Awareness**

**N.e.** By 1990, the proportion of adults who can accurately identify the variety and duration of exercise thought to promote cardiovascular fitness most effectively should be greater than 70 percent. (Baseline data unavailable.)

*In 1985, 5.1 percent of the population knew the duration, frequency, and intensity of exercise needed to promote cardiovascular fitness most effectively. (National Center for Health Statistics, Division of Health Interview Statistics.)*

**N.f.** By 1990, the proportion of primary care physicians who include a careful exercise history as part of their initial examination of new patients should be greater than 50 percent. (Baseline data unavailable.)

## **Improved Services and Protection**

**N.g.** By 1990, the proportion of employees of companies and institutions with more than 500 employees and offering employer-sponsored fitness programs should be greater than 25 percent. (In 1979, about 2.5 percent of companies had formally organized fitness programs.)

*In 1985, 32.4 percent of worksites with 250–749 employees and 53.7 percent of worksites with 750 or more employees offered exercise or fitness activities. (Office of Disease Prevention and Health Promotion.)*

## **Improved Surveillance and Evaluation Systems**

**N.h.** By 1990, a methodology for systematically assessing the physical fitness of children should be established, with at least 70 percent of children and adolescents 10–17 years of age participating in such an assessment.

**N.i.** By 1990, data should be available with which to evaluate the short- and long-term health effects of participation in programs of appropriate physical activity.

**N.j.** By 1990, data should be available to evaluate the effects of participation in programs of physical fitness on job performance and health care costs.

**N.k.** By 1990, data should be available for regular monitoring of national trends and patterns of participation in physical activity, including participation in public recreation programs in community facilities.



# Control of Stress and Violent Behavior

The 1990 objectives for controlling violent behavior focus especially on improving the health status of the American public by preventing homicides, suicides, and injuries. In 1986 homicide was the leading cause of death both for young black males ages 15–24, and also for all black males 15–44 years of age. The homicide rate for black males ages 15–24 was significantly higher in 1986 and 1987, 79.2 and 85.6, than the 1978 rate of 70.7. In 1986 two out of three homicides in the 15–19-year age group were gun related. Suicide was the second leading cause of death in 1986 among young white people 15–24 years of age, as well as among white people 25–39 years of age. Moreover, the age-adjusted suicide rate for white males was 3.8 times that for white females.

The Study of National Incidence and Prevalence of Child Abuse and Neglect, conducted in 1980 and again in 1986, surveyed representative samples of child protective services agencies; professionals located in schools, hospitals, juvenile courts, and other settings; and the general public. Data from this study show an incidence rate of child injury or impairment per 1,000 children (from birth to 18 years of age) of 9.8 in 1980 and 16.3 in 1986. Improved reporting practices and systems may be responsible for some of the measured increase.

The objectives for stress focus on improving health services and increasing public and professional awareness, as well as investigating the psychological, environmental, and biological interactions that link stress to health disorders. In recent years, considerable public and professional interest has focused on the relationship between stress and physical and mental health. Unless suitably managed, stress may contribute to physiological and psychological dysfunctions such as depression, fatigue, obesity, coronary heart disease, suicide, or violence. Child abuse, spouse abuse, and other forms of family violence, which pose difficult problems of measurement, continue to threaten the physical and mental health of many thousands of Americans.

In 1985 one-half of adults 18 years of age and over reported experiencing at least moderate amounts of stress during the 2 weeks preceding being interviewed in the National Health Interview Survey. In addition, almost one-half of adults felt that stress had had some effect on their health in the past year; 16 percent of the females and 9 percent of the males felt that stress had had considerable effect on their health.

Additional data relevant to this section appear in detailed tables 23–25, 33, 34, 37, 39, 79–82, 130, and 131.

## Improved Health Status

**O.a.** By 1990, the death rate from homicide among black males 15–24 years of age should be reduced to below 60 per 100,000. (In 1978, the homicide rate for this group was 70.7 per 100,000.)

<i>Year</i>	<i>Homicide rate</i>
1978	70.7
1979	76.5
1980	84.3
1981	78.2
1982	72.0
1983	66.8
1984	61.5
1985	66.1
1986	79.2
1987	85.6
1990	60.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

**O.b.** By 1990, injuries and deaths to children inflicted by abusing parents should be reduced by at least 25 percent. (Baseline data unavailable.)

*The incidence rate of child injury or impairment for children from birth to 18 years of age was estimated at 9.8 per 1,000 in 1980 and 16.3 in 1986. (The study of National Incidence and Prevalence of Child Abuse and Neglect.)*

**O.c.** By 1990, the rate of suicide among people 15–24 years of age should be below 11 per 100,000. (In 1978, the suicide rate for this age group was 12.1 per 100,000.)

Year	Suicide rate
1978	12.1
1979	12.4
1980	12.3
1981	12.3
1982	12.1
1983	11.9
1984	12.5
1985	12.9
1986	13.1
1987	12.9
1990	11.0

Source: Data from National Center for Health Statistics, Division of Vital Statistics.

### Reduced Risk Factors

**O.d.** By 1990, the number of handguns in private ownership should decline by 25 percent. (In 1978, the total number of handguns in private ownership was estimated to be 30 million to 40 million.)

*There is no central source for compiling data on private ownership of handguns. Several surveys suggest that there is some type of gun in about 50 percent of households in the United States; this is a consistent figure across the surveys. The percent of handguns is estimated to be slightly less. (Centers for Disease Control, Center for Environmental Health and Injury Control.)*

### Increased Public and Professional Awareness

**O.e.** By 1990, the proportion of the population 15 years of age and over that can identify an appropriate community agency to assist in coping with a stressful situation should be greater than 50 percent. (Baseline data unavailable.)

**O.f.** By 1990, the proportion of young people 15–24 years of age who can identify an accessible suicide prevention “hotline” should be greater than 60 percent. (Baseline data unavailable.)

**O.g.** By 1990, the proportion of the primary care physicians who take a careful history related to personal stress and psychological coping skills should be greater than 60 percent. (Baseline data unavailable.)

### Improved Services and Protection

**O.h.** By 1990, to reduce the gap in mental health services, the number of persons reached by mutual support or self-help groups should double from 1978 baseline figures. (In 1978, estimates ranged from 2.5 million to 5 million, depending on the definition of such groups.)

**O.i.** By 1990, stress identification and control should become integral components of the continuum of health services offered by organized health programs (Baseline data unavailable.)

**O.j.** By 1990, of the 500 largest U.S. firms, the proportion offering work-based stress reduction programs should be greater than 30 percent. (Baseline data unavailable.)

*In 1985, 60.8 percent of worksites with 750 or more employees offered stress management activities to their employees. (Office of Disease Prevention and Health Promotion.)*

## Improved Surveillance and Evaluation Systems

**O.k.** By 1985, surveys should show what percentage of the U.S. population perceives stress as adversely affecting their health, and what proportion of these are trying to use appropriate stress-control techniques.

*In 1985, 44 percent of the population 18 years of age and over indicated that stress had some effect on their health; 11 percent had sought help from family, friends, professionals, or self-help groups. (National Center for Health Statistics, National Health Interview Survey.)*

**O.l.** By 1985, a methodology should have been developed to rate the environmental stress loads of major categories of occupations.

**O.m.** By 1990, the existing knowledge base through scientific inquiry about stress effects and stress management should be greatly enlarged.

**O.n.** By 1990, the reliability of data on the incidence and prevalence of child abuse and other forms of family violence should be greatly increased.

*The Study of National Incidence and Prevalence of Child Abuse and Neglect, conducted in 1980 and again in 1986, surveyed representative samples of child protective services agencies; professionals located in schools, hospitals, juvenile courts, and other settings; and the general public. (National Center on Child Abuse and Neglect, Administration for Children, Youth and Families.)*

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<b>Symbols</b>	
- - -	Data not available
. . .	Category not applicable
-	Quantity zero
0.0	Quantity more than zero but less than 0.05
*	Figure does not meet standard of reliability or precision

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**Table 1. Resident population, according to age, sex, and race: United States, selected years 1950-87**

[Data are based on decennial census updated by data from multiple sources]

Sex, race, and year	Number in thousands											
	Total resident population	Under 1 year	1-4 years	5-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85 years and over
<b>All races</b>												
1950.....	150,697	3,147	13,017	24,319	22,098	23,759	21,450	17,343	13,370	8,340	3,278	577
1960.....	179,323	4,112	16,209	35,465	24,020	22,818	24,081	20,485	15,572	10,997	4,633	929
1970.....	203,212	3,485	13,669	40,746	35,441	24,907	23,088	23,220	18,590	12,435	6,119	1,511
1980.....	226,546	3,534	12,815	34,942	42,487	37,082	25,635	22,800	21,703	15,581	7,729	2,240
1986.....	241,096	3,768	14,384	33,860	39,021	42,779	33,070	22,815	22,232	17,332	9,060	2,776
1987.....	243,400	3,771	14,481	34,146	38,252	43,315	34,305	23,276	22,019	17,668	9,301	2,867
<b>White male</b>												
1950.....	67,129	1,400	5,845	10,860	9,689	10,430	9,529	7,836	6,180	3,736	1,406	218
1960.....	78,367	1,784	7,065	15,659	10,483	9,940	10,564	9,114	6,850	4,702	1,875	331
1970.....	86,721	1,501	5,873	17,667	15,232	10,775	9,979	10,090	7,958	4,916	2,243	487
1980.....	94,976	1,487	5,402	14,773	18,123	15,940	11,010	9,774	9,151	6,096	2,600	621
1986.....	99,810	1,565	5,973	14,020	16,289	18,193	14,172	9,663	9,290	6,876	3,062	706
1987.....	100,589	1,567	6,000	14,108	15,902	18,384	14,690	9,851	9,180	7,028	3,154	723
<b>Black male</b>												
1950.....	7,300	---	---	1,442	1,162	1,105	1,003	772	460	299	---	---
1960.....	9,114	281	1,082	2,185	1,305	1,120	1,086	891	617	382	137	29
1970.....	10,748	245	975	2,784	2,041	1,226	1,084	979	739	461	169	46
1980.....	12,585	269	967	2,614	2,807	1,967	1,235	1,024	854	567	228	53
1986.....	13,892	289	1,091	2,667	2,759	2,488	1,593	1,092	951	633	262	67
1987.....	14,103	289	1,104	2,697	2,740	2,549	1,663	1,117	961	647	268	69
<b>White female</b>												
1950.....	67,813	1,341	5,599	10,431	9,821	10,851	9,719	7,868	6,168	4,031	1,669	314
1960.....	80,465	1,714	6,795	15,068	10,596	10,204	11,000	9,364	7,327	5,428	2,441	527
1970.....	91,028	1,434	5,615	16,912	15,420	11,004	10,349	10,756	8,853	6,366	3,429	890
1980.....	99,835	1,412	5,127	14,057	17,653	15,896	11,232	10,285	10,325	7,951	4,457	1,440
1986.....	104,501	1,486	5,674	13,295	15,861	17,852	14,297	10,039	10,351	8,657	5,166	1,825
1987.....	105,231	1,487	5,700	13,377	15,479	18,024	14,783	10,217	10,202	8,788	5,284	1,887
<b>Black female</b>												
1950.....	7,745	---	---	1,446	1,300	1,260	1,112	796	443	322	---	---
1960.....	9,758	283	1,085	2,191	1,404	1,300	1,229	974	663	430	160	38
1970.....	11,832	243	970	2,773	2,196	1,456	1,309	1,134	868	582	230	71
1980.....	14,046	266	951	2,578	2,937	2,267	1,488	1,258	1,059	776	360	106
1986.....	15,413	283	1,058	2,596	2,837	2,797	1,906	1,347	1,155	858	430	145
1987.....	15,633	283	1,069	2,620	2,812	2,855	1,990	1,375	1,164	871	442	152

NOTE: Population figures are census counts as of April 1 for 1950, 1960, 1970, and 1980 and estimates as of July 1 for 1986 and 1987.

SOURCES: U.S. Bureau of the Census: 1950 Nonwhite Population by Race. Special Report P-E, No. 3B, Washington. U.S. Government Printing Office, 1951; Population estimates and projections. Current Population Reports. Series P-25, Nos. 499 and 1022. Washington. U.S. Government Printing Office, May 1973 and Mar. 1988; U.S. Bureau of the Census, U.S. Census of Population: 1960, Number of Inhabitants, PC(1)-A1, United States Summary, 1964. U.S. Bureau of the Census, U.S. Census of Population: 1970, Number of Inhabitants, Final Report PC(1)-A1, United States Summary, 1971; Unpublished data from the U.S. Bureau of the Census.

**Table 2. Live births, crude birth rates, and birth rates by age of mother, according to race of child: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

Race of child and year	Live births	Crude birth rate <sup>1</sup>	Age								
			10–14 years	15–17 years	18–19 years	20–24 years	25–29 years	30–34 years	35–39 years	40–44 years	45–49 years
All races			Live births per 1,000 women								
1950.....	3,632,000	24.1	1.0	40.7	132.7	196.6	166.1	103.7	52.9	15.1	1.2
1955.....	4,097,000	25.0	0.9	44.5	157.9	241.6	190.2	116.0	58.6	16.1	1.0
1960.....	4,257,850	23.7	0.8	43.9	166.7	258.1	197.4	112.7	56.2	15.5	0.9
1965.....	3,760,358	19.4	0.8	36.6	124.5	195.3	161.6	94.4	46.2	12.8	0.8
1970.....	3,731,386	18.4	1.2	38.8	114.7	167.8	145.1	73.3	31.7	8.1	0.5
1975.....	3,144,198	14.6	1.3	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3
1980.....	3,612,258	15.9	1.1	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2
1981.....	3,629,238	15.8	1.1	32.1	81.7	111.8	112.0	61.4	20.0	3.8	0.2
1982.....	3,680,537	15.9	1.1	32.4	80.7	111.3	111.0	64.2	21.1	3.9	0.2
1983.....	3,638,933	15.5	1.1	32.0	78.1	108.3	108.7	64.6	22.1	3.8	0.2
1984.....	3,669,141	15.5	1.2	31.1	78.3	107.3	108.3	66.5	22.8	3.9	0.2
1985.....	3,760,561	15.8	1.2	31.1	80.8	108.9	110.5	68.5	23.9	4.0	0.2
1986.....	3,756,547	15.6	1.3	30.6	81.0	108.2	109.2	69.3	24.3	4.1	0.2
1987.....	3,809,394	15.7	1.3	31.8	80.2	108.9	110.8	71.3	26.2	4.4	0.2
White											
1950.....	3,108,000	23.0	0.4	31.3	120.5	190.4	165.1	102.6	51.4	14.5	1.0
1955.....	3,485,000	23.8	0.3	35.4	145.7	235.8	186.6	114.0	56.7	15.4	0.9
1960.....	3,600,744	22.7	0.4	35.5	154.6	252.8	194.9	109.6	54.0	14.7	0.8
1965.....	3,123,860	18.3	0.3	27.8	111.9	189.0	158.4	91.6	44.0	12.0	0.7
1970.....	3,091,264	17.4	0.5	29.2	101.5	163.4	145.9	71.9	30.0	7.5	0.4
1975.....	2,551,996	13.6	0.6	28.0	74.0	108.2	108.1	51.3	18.2	4.2	0.2
1980.....	2,898,732	14.9	0.6	25.2	72.1	109.5	112.4	60.4	18.5	3.4	0.2
1981.....	2,908,669	14.8	0.5	25.1	71.9	106.3	111.3	60.2	18.7	3.4	0.2
1982.....	2,942,054	14.9	0.6	25.2	70.8	105.9	110.3	63.3	20.0	3.5	0.2
1983.....	2,904,250	14.6	0.6	24.8	68.3	102.6	108.0	64.0	21.0	3.5	0.2
1984.....	2,923,502	14.5	0.6	23.9	68.1	101.4	107.7	66.1	21.7	3.5	0.2
1985.....	2,991,373	14.8	0.6	24.0	70.1	102.8	110.0	68.1	22.7	3.6	0.2
1986.....	2,970,439	14.5	0.6	23.4	69.8	101.5	108.3	68.9	23.3	3.7	0.2
1987.....	2,992,488	14.5	0.6	24.1	68.6	101.1	109.5	70.8	25.2	4.0	0.2
Black											
1960.....	602,264	31.9	4.3	---	---	295.4	218.6	137.1	73.9	21.9	1.1
1965.....	581,126	27.7	4.3	99.3	227.6	243.1	180.4	111.3	61.9	18.7	1.4
1970.....	572,362	25.3	5.2	101.4	204.9	202.7	136.3	79.6	41.9	12.5	1.0
1975.....	511,581	20.7	5.1	85.6	152.4	142.8	102.2	53.1	25.6	7.5	0.5
1980.....	589,616	22.1	4.3	73.6	138.8	146.3	109.1	62.9	24.5	5.8	0.3
1981.....	587,797	21.6	4.1	70.6	135.9	141.2	108.3	60.4	24.2	5.6	0.3
1982.....	592,641	21.4	4.1	71.2	133.3	139.1	106.9	60.4	24.4	5.4	0.4
1983.....	586,027	20.9	4.1	70.1	130.4	137.7	103.4	59.2	24.7	5.2	0.3
1984.....	592,745	20.8	4.3	69.7	132.0	137.9	103.2	59.5	24.8	5.1	0.2
1985.....	608,193	21.1	4.5	69.8	137.1	140.8	105.1	60.7	25.5	4.9	0.3
1986.....	621,221	21.2	4.6	70.0	141.0	143.7	105.9	62.2	25.5	5.1	0.3
1987.....	641,567	21.6	4.7	72.9	142.2	149.5	109.0	63.5	26.3	5.3	0.2

<sup>1</sup>Live births per 1,000 population.

NOTE: Data are based on births adjusted for underregistration for 1950 and 1955 and on registered births for all other years. Beginning in 1970, births to nonresidents of the United States are excluded.

SOURCE: National Center for Health Statistics: Vital Statistics of the United States, 1987, Vol. I, Natality. Public Health Service, Washington, U.S. Government Printing Office, 1989.

**Table 3. Fertility rates, according to live-birth order and race of child: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

Race of child and year	Total	Live-birth order				
		1	2	3	4	5 or higher
All races						
Live births per 1,000 women 15–44 years of age						
1950.....	106.2	33.3	32.1	18.4	9.2	13.2
1955.....	118.3	32.8	31.8	23.1	13.3	17.3
1960.....	118.0	31.1	29.2	22.8	14.6	20.3
1965.....	96.6	29.8	23.4	16.6	10.7	16.1
1970.....	87.9	34.2	24.2	13.6	7.2	8.7
1975.....	66.0	28.1	20.9	9.4	3.9	3.7
1980.....	68.4	29.5	21.8	10.3	3.9	2.9
1981.....	67.4	29.0	21.6	10.2	3.8	2.8
1982.....	67.3	28.6	22.0	10.2	3.8	2.6
1983.....	65.8	27.8	21.5	10.1	3.7	2.6
1984.....	65.4	27.4	21.7	10.1	3.7	2.6
1985.....	66.2	27.6	22.0	10.4	3.8	2.5
1986.....	65.4	27.2	21.6	10.3	3.8	2.5
1987.....	65.7	27.2	21.6	10.5	3.9	2.5
White						
1950.....	102.3	33.3	32.3	17.9	8.4	10.4
1955.....	113.7	32.6	32.0	22.9	12.6	13.6
1960.....	113.2	30.8	29.2	22.7	14.1	16.4
1965.....	91.4	28.9	23.0	16.2	10.2	13.1
1970.....	84.1	32.9	23.7	13.3	6.8	7.4
1975.....	62.5	26.7	20.3	8.8	3.5	3.1
1980.....	64.7	28.4	21.0	9.5	3.4	2.4
1981.....	63.9	28.1	20.9	9.4	3.3	2.3
1982.....	63.9	27.7	21.3	9.5	3.3	2.2
1983.....	62.4	26.8	20.9	9.4	3.3	2.1
1984.....	62.2	26.4	21.1	9.4	3.2	2.0
1985.....	63.0	26.5	21.4	9.7	3.3	2.0
1986.....	61.9	26.0	20.9	9.6	3.3	1.9
1987.....	62.0	25.9	20.9	9.8	3.4	1.9
Black						
1960.....	153.5	33.6	29.3	24.0	18.6	48.0
1965.....	133.9	35.7	26.2	19.4	14.6	38.0
1970.....	115.4	43.3	27.1	16.1	10.0	18.9
1975.....	87.9	36.9	24.2	12.6	6.3	8.0
1980.....	88.1	35.2	25.7	14.5	6.7	6.0
1981.....	85.4	33.8	25.2	14.3	6.6	5.7
1982.....	84.1	33.0	24.9	14.2	6.5	5.4
1983.....	81.7	32.3	24.1	13.7	6.3	5.2
1984.....	81.4	32.2	24.1	13.7	6.3	5.1
1985.....	82.2	32.4	24.5	13.9	6.3	5.1
1986.....	82.4	32.5	24.5	14.1	6.3	4.9
1987.....	83.8	32.8	24.9	14.5	6.5	5.0

NOTE: Data are based on births adjusted for underregistration for 1950 and 1955 and on registered births for all other years. Beginning in 1970, births to nonresidents of the United States are excluded. Figures for live-birth order not stated are distributed.

SOURCE: National Center for Health Statistics: Vital Statistics of the United States, 1987, Vol. I, Natality. Public Health Service. Washington. U.S. Government Printing Office, 1989.



**Table 5. Lifetime births expected by currently married women and percent of expected births already born, according to age and race: United States, selected years 1967–88**

[Data are based on reporting of birth expectations by currently married women of the civilian noninstitutionalized population]

<i>Race and year</i>	<i>All ages 18–34 years</i>	<i>18–19 years</i>	<i>20–21 years</i>	<i>22–24 years</i>	<i>25–29 years</i>	<i>30–34 years</i>
All races						
Expected births per currently married woman						
1967 . . . . .	3.1	2.7	2.9	2.9	3.0	3.3
1971 . . . . .	2.6	2.3	2.4	2.4	2.6	3.0
1975 . . . . .	2.3	2.2	2.2	2.2	2.3	2.6
1980 . . . . .	2.2	2.1	2.2	2.1	2.2	2.2
1985 . . . . .	2.2	2.1	2.2	2.2	2.2	2.2
1986 . . . . .	2.3	2.2	2.2	2.3	2.3	2.2
1987 . . . . .	2.2	2.1	2.2	2.2	2.2	2.2
1988 . . . . .	2.2	2.1	2.2	2.2	2.3	2.2
White						
1967 . . . . .	3.0	2.7	3.0	2.8	3.0	3.2
1971 . . . . .	2.6	2.3	2.4	2.4	2.6	2.9
1975 . . . . .	2.3	2.2	2.1	2.1	2.2	2.6
1980 . . . . .	2.2	2.1	2.2	2.1	2.1	2.2
1985 . . . . .	2.2	2.0	2.2	2.2	2.2	2.1
1986 . . . . .	2.2	2.1	2.2	2.3	2.2	2.2
1987 . . . . .	2.2	2.0	2.2	2.2	2.2	2.2
1988 . . . . .	2.2	2.1	2.2	2.2	2.3	2.2
Black						
1967 . . . . .	3.5	*	2.5	3.0	3.4	4.3
1971 . . . . .	3.1	*	2.4	2.8	3.1	3.7
1975 . . . . .	2.8	*	2.6	2.5	2.6	3.2
1980 . . . . .	2.4	*	2.2	2.1	2.4	2.5
1985 . . . . .	2.4	*	*	2.3	2.3	2.5
1986 . . . . .	2.4	*	*	2.4	2.3	2.6
1987 . . . . .	2.3	*	*	2.2	2.3	2.3
1988 . . . . .	2.3	*	*	2.2	2.3	2.3
All races						
Percent of expected births already born						
1967 . . . . .	70.2	26.9	33.2	47.8	76.1	92.7
1971 . . . . .	69.4	25.3	32.5	46.7	74.4	93.7
1975 . . . . .	68.8	27.5	30.7	43.9	70.9	93.0
1980 . . . . .	67.0	29.5	32.9	44.9	64.7	89.7
1985 . . . . .	64.2	27.0	30.9	41.8	60.2	84.4
1986 . . . . .	64.7	29.0	30.4	41.8	59.5	84.8
1987 . . . . .	66.5	27.8	36.4	43.0	62.0	83.8
1988 . . . . .	65.3	25.0	33.4	40.9	58.9	83.6
White						
1967 . . . . .	68.9	24.2	30.1	46.2	75.1	92.9
1971 . . . . .	68.9	23.7	31.4	45.3	74.1	93.8
1975 . . . . .	68.2	24.9	29.4	42.3	70.5	93.2
1980 . . . . .	66.3	28.6	31.8	43.5	64.0	90.0
1985 . . . . .	63.3	25.7	30.6	40.4	59.4	84.1
1986 . . . . .	63.8	28.6	28.7	40.5	58.6	84.8
1987 . . . . .	65.6	27.0	36.0	42.0	60.9	83.6
1988 . . . . .	64.4	24.0	32.6	38.9	58.2	83.2
Black						
1967 . . . . .	82.8	*	65.7	67.9	87.9	92.3
1971 . . . . .	74.8	*	43.0	57.5	81.0	93.4
1975 . . . . .	76.4	*	43.3	61.0	78.2	91.8
1980 . . . . .	74.7	*	46.1	58.9	73.8	90.9
1985 . . . . .	77.1	*	*	62.3	72.8	91.4
1986 . . . . .	75.7	*	*	59.7	70.2	90.0
1987 . . . . .	77.8	*	*	55.4	76.6	89.7
1988 . . . . .	75.5	*	*	61.4	70.1	89.9

SOURCE: U.S. Bureau of the Census: Population characteristics. Current Population Reports. Series P-20, Nos. 301, 375, 406, 421, 427, and 436. Washington, U.S. Government Printing Office, Nov. 1976, Oct. 1982, June 1986, Dec. 1987, May 1988, and May 1989.

**Table 6. Characteristics of live births, according to Hispanic origin of mother and race of child: Selected States, 1980–87**

[Data are based on the National Vital Statistics System]

<i>Ethnicity of mother, race of child, and characteristic</i>	1980	1981	1982	1983	1984	1985	1986	1987
Birth weight less than 2,500 grams				Percent of live births				
All origins <sup>1</sup> . . . . .	6.9	6.8	6.8	6.9	6.8	6.8	6.9	7.0
Hispanic . . . . .	6.1	6.1	6.2	6.3	6.2	6.2	6.1	6.2
Mexican . . . . .	5.6	5.6	5.7	5.8	5.7	5.8	5.6	5.7
Puerto Rican . . . . .	8.9	9.0	9.1	8.9	8.9	8.7	9.2	9.3
Cuban . . . . .	5.6	5.8	5.8	5.6	5.9	6.0	5.5	5.9
Non-Hispanic white . . . . .	5.7	5.6	5.6	5.6	5.5	5.6	5.6	5.6
Non-Hispanic black . . . . .	12.5	12.6	12.4	12.6	12.4	12.4	12.7	12.9
Age of mother less than 20 years								
All origins <sup>1</sup> . . . . .	15.6	14.8	14.4	13.8	13.2	12.8	12.7	12.5
Hispanic . . . . .	19.0	18.5	18.3	17.7	17.0	16.5	16.4	16.3
Mexican . . . . .	19.8	19.4	19.1	18.4	18.0	17.5	17.4	17.3
Puerto Rican . . . . .	23.3	23.1	23.0	22.4	21.3	20.9	20.9	20.5
Cuban . . . . .	13.0	12.8	11.4	9.4	8.2	7.1	6.8	6.2
Non-Hispanic white . . . . .	12.5	11.8	11.3	10.7	10.0	9.7	9.5	9.3
Non-Hispanic black . . . . .	26.9	25.5	24.9	24.3	23.8	23.1	22.8	22.5
Unmarried mothers								
All origins <sup>1</sup> . . . . .	19.3	19.7	20.3	21.3	21.9	22.9	24.3	25.3
Hispanic . . . . .	23.8	24.5	25.6	27.5	28.3	29.5	31.6	32.6
Mexican . . . . .	20.5	20.7	21.9	23.7	24.2	25.7	27.9	28.9
Puerto Rican . . . . .	46.3	48.0	49.0	49.5	50.8	51.1	52.6	53.0
Cuban . . . . .	10.0	14.3	15.9	16.2	16.2	16.1	15.8	16.1
Non-Hispanic white . . . . .	9.3	9.8	10.2	10.7	11.3	12.1	13.2	13.9
Non-Hispanic black . . . . .	56.5	57.1	58.0	59.5	60.5	61.0	62.2	63.1
Prenatal care began during 1st trimester								
All origins <sup>1</sup> . . . . .	74.7	74.8	74.5	74.6	74.9	74.5	74.3	74.4
Hispanic . . . . .	60.2	60.6	61.0	61.0	61.5	61.2	60.3	61.0
Mexican . . . . .	59.6	60.1	60.7	60.2	60.4	60.0	58.9	60.0
Puerto Rican . . . . .	55.1	54.2	54.5	55.1	57.4	58.3	57.2	57.4
Cuban . . . . .	82.7	80.1	79.3	81.2	82.2	82.5	81.8	83.1
Non-Hispanic white . . . . .	81.3	81.4	81.2	81.5	81.7	81.5	81.6	81.9
Non-Hispanic black . . . . .	61.1	61.1	60.1	60.3	61.0	60.5	60.6	60.4

<sup>1</sup>Includes origin not stated.

NOTES: Data available only for States with an Hispanic-origin item on their birth certificates. In 1980, there were 22 States; in 1982, 23 States; and since 1983, 23 States and the District of Columbia. About 90 percent of the total U.S. Hispanic population resided in these States in 1986.

SOURCES: National Center for Health Statistics: Births of Hispanic parentage, 1980. Monthly Vital Statistics Report. Vol. 32, No. 6 Supp. DHHS Pub. No. (PHS) 83-1120. Sept. 1983; Births of Hispanic parentage, 1981. Monthly Vital Statistics Report. Vol. 33, No. 8 Supp. DHHS Pub. No. (PHS) 85-1120. Dec. 1984; Births of Hispanic parentage, 1982. Monthly Vital Statistics Report. Vol. 34, No. 4 Supp. DHHS Pub. No. (PHS) 85-1120. July 23, 1985; Births of Hispanic Parentage, 1983 and 1984. Monthly Vital Statistics Report. Vol. 36, No. 4 Supp. (2). DHHS Pub. No. (PHS) 87-1120. July 24, 1987; Births of Hispanic Parentage, 1985. Monthly Vital Statistics Report. Vol. 36, No. 11 Supp. DHHS Pub. No. (PHS) 88-1120. Feb. 26, 1988; Advance report of final natality statistics, 1986. Monthly Vital Statistics Report. Vol. 37, No. 3 Supp. DHHS Pub. No. (PHS) 88-1120. July 12, 1988; and Advance report of final natality statistics, 1987. Monthly Vital Statistics Report. Vol. 38, No. 3 Supp. DHHS Pub. No. (PHS) 89-1120. June 29, 1989.

**Table 7 (page 1 of 2). Live births, according to race of child and selected characteristics: United States, selected years 1970–87**

[Data are based on the National Vital Statistics System]

<i>Race of child and characteristic</i>	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
All races										
Percent of live births										
Birth weight: <sup>1</sup>										
Less than 2,500 grams . . . . .	7.94	7.39	6.84	6.81	6.75	6.82	6.72	6.75	6.81	6.90
Less than 1,500 grams . . . . .	1.17	1.16	1.15	1.16	1.18	1.19	1.19	1.21	1.21	1.24
Age of mother:										
Less than 18 years . . . . .	6.3	7.6	5.8	5.4	5.2	5.0	4.8	4.7	4.8	4.8
18–19 years . . . . .	11.3	11.3	9.8	9.4	9.0	8.7	8.3	8.0	7.8	7.6
Unmarried mothers . . . . .	10.7	14.3	18.4	18.9	19.4	20.3	21.0	22.0	23.4	24.5
Education of mother:										
Less than 12 years . . . . .	30.8	28.6	23.7	22.9	22.3	21.7	20.9	20.6	20.4	20.2
16 years or more . . . . .	8.6	11.4	14.0	14.8	15.3	15.9	16.4	16.7	17.1	17.6
Prenatal care began:										
1st trimester . . . . .	68.0	72.4	76.3	76.3	76.1	76.2	76.5	76.2	75.9	76.0
3d trimester or no prenatal care . . . . .	7.9	6.0	5.1	5.2	5.5	5.6	5.6	5.7	6.0	6.1
White										
Birth weight: <sup>1</sup>										
Less than 2,500 grams . . . . .	6.84	6.26	5.70	5.67	5.63	5.67	5.59	5.64	5.64	5.68
Less than 1,500 grams . . . . .	0.95	0.92	0.90	0.90	0.92	0.93	0.92	0.94	0.93	0.94
Age of mother:										
Less than 18 years . . . . .	4.8	6.0	4.5	4.3	4.1	3.9	3.7	3.7	3.7	3.7
18–19 years . . . . .	10.4	10.3	9.0	8.6	8.2	7.9	7.4	7.1	6.9	6.8
Unmarried mothers . . . . .	5.7	7.3	11.0	11.6	12.1	12.8	13.4	14.5	15.7	16.7
Education of mother:										
Less than 12 years . . . . .	27.0	25.0	20.7	19.9	19.3	18.7	18.0	17.8	17.6	17.3
16 years or more . . . . .	9.5	12.7	15.6	16.4	17.0	17.7	18.4	18.7	19.2	19.9
Prenatal care began:										
1st trimester . . . . .	72.4	75.9	79.3	79.4	79.3	79.4	79.6	79.4	79.2	79.4
3d trimester or no prenatal care . . . . .	6.2	5.0	4.3	4.3	4.5	4.6	4.7	4.7	5.0	5.0
Black										
Birth weight: <sup>1</sup>										
Less than 2,500 grams . . . . .	13.86	13.09	12.49	12.53	12.40	12.59	12.36	12.42	12.53	12.71
Less than 1,500 grams . . . . .	2.40	2.37	2.44	2.47	2.51	2.55	2.56	2.65	2.66	2.73
Age of mother:										
Less than 18 years . . . . .	14.7	16.1	12.2	11.4	11.1	10.9	10.6	10.3	10.4	10.5
18–19 years . . . . .	16.6	16.8	14.3	13.9	13.5	13.4	13.1	12.7	12.4	12.1
Unmarried mothers . . . . .	37.4	49.0	55.2	56.0	56.7	58.2	59.2	60.1	61.2	62.2
Education of mother:										
Less than 12 years . . . . .	51.0	45.1	36.2	35.4	34.8	34.2	33.1	32.3	31.7	31.3
16 years or more . . . . .	2.8	4.4	6.3	6.6	6.8	6.8	7.0	7.1	7.3	7.3
Prenatal care began:										
1st trimester . . . . .	44.4	55.8	62.7	62.4	61.5	61.5	62.2	61.8	61.6	61.1
3d trimester or no prenatal care . . . . .	16.6	10.5	8.8	9.1	9.6	9.7	9.6	10.0	10.6	11.1
Asian and Pacific Islander <sup>2</sup>										
Birth weight: <sup>1</sup>										
Less than 2,500 grams . . . . .	8.43	7.04	6.55	6.61	6.63	6.51	6.53	6.11	6.38	6.37
Less than 1,500 grams . . . . .	1.12	0.80	0.91	0.91	0.87	0.87	0.91	0.84	0.87	0.85
Age of mother:										
Less than 18 years . . . . .	3.3	2.7	1.7	1.8	1.8	1.7	1.8	1.8	1.9	1.9
18–19 years . . . . .	7.1	5.8	4.3	4.4	4.4	3.9	3.8	3.7	3.7	3.6
Unmarried mothers . . . . .	7.8	8.5	7.8	7.5	8.4	9.0	9.6	10.1	10.6	11.5
Education of mother:										
Less than 12 years . . . . .	21.7	18.5	20.0	21.9	22.2	20.7	19.3	18.5	17.3	17.3
16 years or more . . . . .	20.0	27.5	30.2	29.0	28.9	29.7	30.2	30.1	31.1	31.6
Prenatal care began:										
1st trimester . . . . .	67.8	73.9	74.7	74.4	74.4	74.9	75.6	75.0	75.6	75.7
3d trimester or no prenatal care . . . . .	6.8	4.5	6.1	6.2	6.2	6.1	6.0	6.1	5.9	6.0

See footnotes at end of table.

**Table 7 (page 2 of 2). Live births, according to race of child and selected characteristics: United States, selected years 1970–87**

[Data are based on the National Vital Statistics System]

<i>Race of child and characteristic</i>	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
American Indian <sup>3</sup>										
	Percent of live births									
Birth weight: <sup>1</sup>										
Less than 2,500 grams . . . . .	7.99	6.61	6.47	6.27	6.17	6.43	6.16	5.88	6.16	6.24
Less than 1,500 grams . . . . .	0.98	1.04	0.96	0.90	1.04	1.06	1.03	0.98	1.01	1.08
Age of mother:										
Less than 18 years . . . . .	7.5	11.0	8.8	8.5	8.0	7.9	7.4	7.1	7.4	7.4
18–19 years . . . . .	13.3	15.8	14.3	14.0	13.5	12.9	12.6	12.0	11.8	11.5
Unmarried mothers . . . . .	19.8	27.9	33.5	35.2	36.3	38.7	39.8	40.7	42.3	44.9
Education of mother:										
Less than 12 years . . . . .	57.6	50.6	41.8	40.7	39.5	38.8	38.0	36.9	36.8	36.6
16 years or more . . . . .	3.0	2.8	4.2	4.4	4.5	4.3	4.5	4.6	4.6	4.5
Prenatal care began:										
1st trimester . . . . .	41.7	49.3	58.7	59.3	60.5	59.7	60.0	60.3	60.7	60.2
3d trimester or no prenatal care . . . . .	25.6	19.5	13.3	12.9	12.4	12.7	12.4	11.5	11.6	11.7

<sup>1</sup>Before 1979, data are for infants weighing 2,500 grams or less at birth.

<sup>2</sup>Includes Chinese, Japanese, Filipino, Hawaiian (includes part Hawaiian), Guamanian (1970 and 1975), and other Asian or Pacific Islander (starting in 1980).

<sup>3</sup>Includes Aleut and Eskimo.

NOTE: Data on education of mother are not available from California, Texas, and Washington. Other States do not have data on marital status, education, and/or month prenatal care began for certain years before 1980.

SOURCE: National Center for Health Statistics: Vital Statistics of the United States, Vol. 1, Natality, for data years 1970–87. Public Health Service. Washington. U.S. Government Printing Office. Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics.



**Table 8 (page 1 of 2). Infants weighing less than 2,500 grams at birth, according to race of child, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

Geographic division and State	All races			White			Black		
	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87
Infants weighing less than 2,500 grams at birth per 100 total live births									
United States . . . . .	7.2	6.8	6.8	6.1	5.7	5.7	12.9	12.5	12.6
New England . . . . .	6.6	6.1	5.9	6.2	5.6	5.4	12.3	11.8	11.8
Maine . . . . .	5.7	5.6	5.2	5.7	5.6	5.2	*	*	*
New Hampshire . . . . .	6.2	5.2	5.0	6.2	5.2	5.0	*	*	*
Vermont . . . . .	6.5	6.0	5.5	6.5	6.0	5.4	*	*	*
Massachusetts . . . . .	6.5	6.0	5.8	6.2	5.6	5.3	11.1	10.9	10.9
Rhode Island . . . . .	6.8	6.1	6.3	6.4	5.6	5.8	*13.2	*11.7	*11.5
Connecticut . . . . .	7.0	6.8	6.6	6.1	5.9	5.7	13.5	13.1	13.1
Middle Atlantic . . . . .	7.6	7.0	7.1	6.4	5.8	5.7	13.3	12.6	12.8
New York . . . . .	7.9	7.3	7.3	6.6	6.0	5.8	13.1	12.3	12.5
New Jersey . . . . .	7.6	7.1	6.9	6.2	5.6	5.4	13.6	13.0	12.6
Pennsylvania . . . . .	7.2	6.5	6.8	6.2	5.5	5.6	13.8	13.2	13.8
East North Central . . . . .	7.0	6.7	6.7	5.9	5.5	5.5	13.4	13.2	13.2
Ohio . . . . .	7.0	6.7	6.6	6.1	5.7	5.7	13.2	12.8	12.0
Indiana . . . . .	6.5	6.3	6.4	5.8	5.6	5.8	11.9	12.0	11.8
Illinois . . . . .	7.6	7.3	7.3	5.9	5.5	5.5	13.8	13.8	13.9
Michigan . . . . .	7.4	6.9	6.9	6.1	5.6	5.5	13.7	13.3	13.9
Wisconsin . . . . .	5.8	5.2	5.4	5.3	4.7	4.7	12.6	12.5	12.4
West North Central . . . . .	6.1	5.7	5.8	5.6	5.1	5.2	13.2	12.3	12.4
Minnesota . . . . .	5.4	5.1	5.0	5.2	4.9	4.7	*12.0	*11.4	12.1
Iowa . . . . .	5.6	4.9	5.2	5.5	4.8	5.0	*10.8	*11.1	*11.0
Missouri . . . . .	7.1	6.7	6.8	5.9	5.6	5.7	13.6	12.7	12.8
North Dakota . . . . .	5.2	4.7	4.9	5.0	4.6	4.8	*	*	*
South Dakota . . . . .	5.5	5.2	5.3	5.3	4.8	5.0	*	*	*
Nebraska . . . . .	5.8	5.5	5.4	5.5	5.1	5.0	*11.9	*12.7	*11.9
Kansas . . . . .	6.5	6.1	6.2	5.9	5.5	5.6	13.4	12.0	12.2
South Atlantic . . . . .	8.2	7.9	7.8	6.3	6.0	5.9	12.9	12.5	12.5
Delaware . . . . .	7.9	7.6	7.1	6.2	5.5	5.5	13.8	14.4	12.4
Maryland . . . . .	7.9	7.8	7.7	5.9	5.7	5.5	13.1	12.4	12.7
District of Columbia . . . . .	12.6	13.1	13.0	*6.6	*5.9	5.1	13.8	14.7	15.2
Virginia . . . . .	7.5	7.3	7.0	6.1	5.7	5.5	12.4	12.2	11.4
West Virginia . . . . .	7.1	6.8	7.0	7.0	6.6	6.8	*10.8	*11.4	*11.5
North Carolina . . . . .	8.3	7.9	7.9	6.3	6.0	6.0	12.9	12.3	12.4
South Carolina . . . . .	9.0	8.8	8.6	6.3	6.1	6.0	13.0	12.8	12.6
Georgia . . . . .	8.7	8.5	8.1	6.4	6.2	6.1	12.8	12.7	12.0
Florida . . . . .	7.9	7.5	7.6	6.3	5.9	6.0	12.7	12.0	12.7
East South Central . . . . .	8.0	7.8	7.9	6.4	6.2	6.3	12.3	12.2	12.3
Kentucky . . . . .	7.1	6.9	7.0	6.6	6.4	6.5	12.6	11.6	12.0
Tennessee . . . . .	7.9	8.0	8.0	6.5	6.4	6.5	12.9	13.5	13.0
Alabama . . . . .	8.2	7.9	8.0	6.2	5.7	6.0	11.9	11.9	12.0
Mississippi . . . . .	9.1	8.7	8.8	6.3	5.8	6.1	12.3	11.9	12.0
West South Central . . . . .	7.8	7.2	7.2	6.5	6.0	6.0	13.2	12.6	12.4
Arkansas . . . . .	8.0	7.5	7.8	6.4	5.9	6.4	12.7	12.4	12.2
Louisiana . . . . .	8.9	8.5	8.7	6.3	5.9	5.9	12.8	12.8	12.9
Oklahoma . . . . .	7.4	6.7	6.5	6.8	6.2	6.0	13.3	12.1	11.5
Texas . . . . .	7.5	6.9	6.9	6.5	6.0	6.0	13.5	12.5	12.3
Mountain . . . . .	7.1	6.5	6.6	6.9	6.3	6.4	13.3	11.6	12.5
Montana . . . . .	6.7	5.6	5.7	6.5	5.5	5.7	*	*	*
Idaho . . . . .	5.7	5.3	5.4	5.7	5.2	5.4	*	*	*
Wyoming . . . . .	8.7	7.0	7.2	8.5	7.0	7.1	*	*	*
Colorado . . . . .	8.7	8.0	7.8	8.4	7.7	7.4	14.6	13.0	13.9
New Mexico . . . . .	8.4	7.6	7.1	8.5	7.6	7.2	*12.5	*10.5	*10.6
Arizona . . . . .	6.4	6.1	6.3	6.2	5.8	6.1	*11.7	10.5	11.8
Utah . . . . .	5.4	5.4	5.6	5.3	5.3	5.5	*	*	*
Nevada . . . . .	7.5	6.7	7.1	6.7	6.1	6.2	*13.8	*11.9	*13.0

See notes at end of table.

**Table 8 (page 2 of 2). Infants weighing less than 2,500 grams at birth, according to race of child, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

<i>Geographic division and State</i>	<i>All races</i>			<i>White</i>			<i>Black</i>		
	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>
Infants weighing less than 2,500 grams at birth per 100 total live births									
Pacific . . . . .	6.0	5.8	5.9	5.4	5.1	5.2	11.4	11.1	11.9
Washington . . . . .	5.6	5.1	5.3	5.3	4.8	4.9	9.8	10.2	10.5
Oregon . . . . .	5.4	4.9	5.2	5.2	4.7	5.0	*11.5	*10.4	*11.4
California . . . . .	6.1	5.9	6.0	5.5	5.2	5.2	11.6	11.2	12.1
Alaska . . . . .	5.4	5.1	4.8	5.0	4.6	4.3	*	*7.5	*9.3
Hawaii . . . . .	7.5	7.1	6.8	5.9	6.0	5.3	*8.9	*9.5	*8.6

\*Data for States with fewer than 5,000 live births for the 3-year period are considered unreliable. Data for States with fewer than 1,000 live births are considered highly unreliable and are not shown.

SOURCE: National Center for Health Statistics: Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics.

**Table 9. Legal abortion ratios, according to selected patient characteristics: United States, selected years 1973–87**

[Data are based on reporting by State health departments and by facilities]

<i>Characteristic</i>	<i>1973</i>	<i>1975</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986<sup>1</sup></i>	<i>1987<sup>1</sup></i>
	Abortions per 100 live births									
Total . . . . .	19.6	27.2	35.9	35.8	35.4	34.9	36.4	35.4	35.4	35.6
Age										
Under 15 years . . . . .	74.3	101.5	122.7	126.4	120.0	133.6	145.8	141.2	130.5	131.3
15-19 years . . . . .	31.7	46.4	66.4	66.8	66.5	67.3	71.4	71.7	70.2	72.6
20-24 years . . . . .	17.9	25.0	37.5	37.9	38.0	38.1	41.2	40.4	41.0	42.0
25-29 years . . . . .	12.3	16.6	23.0	23.2	23.5	23.0	23.9	23.2	24.0	23.9
30-34 years . . . . .	16.5	22.1	23.3	23.7	23.0	22.0	22.3	21.4	21.5	21.4
35-39 years . . . . .	26.7	37.5	40.3	40.3	37.1	35.4	35.2	33.4	33.4	31.7
40 years and over . . . . .	40.2	59.9	78.3	77.6	75.0	69.1	66.7	63.8	59.8	56.2
Race										
White . . . . .	17.5	22.7	31.3	31.2	30.4	29.5	30.8	29.6	30.0	30.0
All other . . . . .	28.9	46.5	54.7	54.4	55.6	56.0	58.2	57.6	55.8	55.7
Marital status										
Married . . . . .	6.2	8.3	10.2	9.8	9.7	9.3	9.6	8.7	10.8	12.8
Unmarried . . . . .	109.8	141.1	149.9	147.5	142.2	135.2	137.1	129.5	115.7	105.6
Number of previous live births <sup>2</sup>										
0 . . . . .	23.0	30.2	48.6	48.6	48.2	46.9	49.3	47.7	47.1	46.3
1 . . . . .	12.1	17.3	21.9	21.9	22.0	22.1	23.0	22.8	23.8	24.7
2 . . . . .	19.6	29.7	32.8	32.6	32.4	32.5	34.0	33.0	33.5	34.5
3 . . . . .	25.8	39.8	33.5	33.5	32.2	31.9	32.8	32.1	32.4	33.2
4 or more . . . . .	26.4	40.8	27.3	26.6	25.4	24.8	24.9	23.7	24.2	24.2

<sup>1</sup>Preliminary data.

<sup>2</sup>For 1973–75, data indicate number of living children.

SOURCES: Centers for Disease Control: Abortion Surveillance, 1973–75. Public Health Service, DHHS, Atlanta, Ga., May 1977–Nov. 1980; Abortion Surveillance, 1980. Public Health Service, DHHS, Atlanta, Ga., May 1983; CDC Surveillance Summaries. Abortion Surveillance, United States, 1984–85. Vol. 38, No. SS-2. Public Health Service, DHHS, Atlanta, Ga., Sept. 1989; and Abortion Surveillance: Preliminary Analysis, United States, 1986 and 1987. Vol. 38, No. 38. Public Health Service, DHHS, Atlanta, Ga., Sept. 1989.

**Table 10. Legal abortions, according to selected characteristics: United States, selected years 1973–87**

[Data are based on reporting by State health departments and by facilities]

<i>Characteristic</i>	1973	1975	1980	1981	1982	1983	1984	1985	1986 <sup>1</sup>	1987 <sup>1</sup>
Number of legal abortions reported in thousands										
Centers for Disease Control . . . . .	616	855	1,298	1,301	1,304	1,269	1,334	1,329	1,328	1,354
Alan Guttmacher Institute . . . . .	745	1,034	1,554	1,577	1,574	1,575	1,577	1,589	---	---
Percent distribution										
Total. . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Period of gestation										
Under 9 weeks . . . . .	36.1	44.6	51.7	51.2	50.6	49.7	50.5	50.3	51.0	50.4
9–10 weeks. . . . .	29.4	28.4	26.2	26.8	26.7	26.8	26.4	26.6	25.8	26.0
11–12 weeks. . . . .	17.9	14.9	12.2	12.1	12.4	12.8	12.6	12.5	12.2	12.4
13–15 weeks. . . . .	6.9	5.0	5.2	5.2	5.3	5.8	5.8	5.9	6.1	6.2
16–20 weeks. . . . .	8.0	6.1	3.9	3.7	3.9	3.9	3.9	3.9	4.1	4.2
21 weeks and over . . . . .	1.7	1.0	0.9	1.0	1.1	1.0	0.8	0.8	0.8	0.8
Type of procedure										
Curettage . . . . .	88.4	90.9	95.5	96.1	96.4	96.8	96.8	97.5	97.0	97.2
Intrauterine instillation. . . . .	10.4	6.2	3.1	2.8	2.5	2.1	1.9	1.7	1.4	1.3
Hysterotomy or hysterectomy . . . . .	0.7	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Other . . . . .	0.6	2.4	1.3	1.0	1.0	1.1	1.3	0.8	1.6	1.5
Location of facility										
In State of residence . . . . .	74.8	89.2	92.6	92.5	92.9	93.3	92.0	92.4	92.3	91.5
Out of State of residence . . . . .	25.2	10.8	7.4	7.5	7.1	6.7	8.0	7.6	7.7	8.5
Previous induced abortions										
0 . . . . .	---	81.9	67.6	65.3	63.7	62.4	60.5	60.1	59.3	58.5
1 . . . . .	---	14.9	23.5	24.3	24.9	25.0	25.7	25.7	26.3	26.5
2 . . . . .	---	2.5	6.6	7.5	8.2	9.0	9.4	9.8	9.6	10.3
3 or more . . . . .	---	0.7	2.3	2.9	3.2	3.7	4.3	4.4	4.8	4.7

<sup>1</sup>Preliminary data.

NOTE: For a discussion of the differences in reported legal abortions between the Centers for Disease Control and the Alan Guttmacher Institute, see Appendix I. Percent distributions exclude cases for which selected characteristic was unknown and are based on abortions reported to the Centers for Disease Control.

SOURCES: Centers for Disease Control: Abortion Surveillance, 1980. Public Health Service, DHHS, Atlanta, Ga., May 1983; CDC Surveillance Summaries. Abortion Surveillance, United States, 1984–1985. Vol. 38, No. SS-2. Public Health Service, DHHS, Atlanta, Ga., Sept. 1989; and Abortion Surveillance: Preliminary Analysis, United States, 1986 and 1987. Vol. 38, No. 38. Public Health Service, DHHS, Atlanta, Ga., Sept. 1989; Sullivan, E., Tietze, C., and Dryfoos, J.: Legal abortions in the United States, 1975–1976. Fam. Plann. Perspect. 9(3):116–129, May–June 1977; Henshaw, S., Forrest, J. D., and Blaine, E.: Abortion services in the United States, 1981 and 1982. Fam. Plann. Perspect. 16(3), May–June 1984; Henshaw, S., Forrest, J. D., and Van Vost, J.: Abortion services in the United States, 1984 and 1985. Fam. Plann. Perspect. 19(2), Mar.–Apr. 1987.

**Table 11. Legal abortions, abortion-related deaths, and abortion-related death rates, according to period of gestation: United States, 1974–76, 1977–79, 1980–82, and 1983–85**

[Data are based primarily on reporting by State health departments and by facilities]

<i>Period of gestation and year</i>	<i>Number of legal abortions reported</i>	<i>Abortion-related deaths<sup>1</sup></i>	
		<i>Number</i>	<i>Rate per 100,000 abortions</i>
Total			
1974–76 .....	2,606,596	66	2.5
1977–79 .....	3,489,127	44	1.3
1980–82 .....	3,902,346	<sup>2</sup> 27	0.7
1983–85 .....	3,931,078	<sup>3</sup> 27	0.7
Under 9 weeks			
1974–76 .....	1,171,478	8	*0.7
1977–79 .....	1,808,655	10	*0.6
1980–82 .....	1,996,573	6	*0.3
1983–85 .....	1,968,827	2	*
9–10 weeks			
1974–76 .....	738,615	10	*1.4
1977–79 .....	942,467	9	*1.0
1980–82 .....	1,036,542	5	*0.5
1983–85 .....	1,046,140	5	*0.5
11–12 weeks			
1974–76 .....	387,208	10	*2.6
1977–79 .....	439,754	7	*1.6
1980–82 .....	477,875	3	*
1983–85 .....	497,902	3	*
13 weeks and over			
1974–76 .....	309,295	38	12.3
1977–79 .....	298,251	18	6.0
1980–82 .....	391,356	11	2.8
1983–85 .....	418,209	15	3.6

<sup>1</sup>1983 data are provisional.

<sup>2</sup>1982 data include 2 deaths with weeks of gestation unknown.

<sup>3</sup>1984 data include 2 deaths with weeks of gestation unknown.

\*Estimates with relative standard errors greater than 30 percent are considered unreliable. Estimates with relative standard errors greater than 50 percent are considered highly unreliable and are not shown.

SOURCE: Centers for Disease Control: Abortion Surveillance, 1978. Public Health Service, DHHS, Atlanta, Ga., Nov. 1980; Unpublished data.

**Table 12. Methods of contraception for ever-married women 15–44 years of age, according to race and age: United States, 1973, 1982, and 1988**

[Data are based on household interviews of samples of women in the childbearing ages]

Method of contraception and age	All races			White			Black		
	1973	1982 <sup>1</sup>	1988 <sup>2</sup>	1973	1982 <sup>1</sup>	1988 <sup>2</sup>	1973	1982 <sup>1</sup>	1988 <sup>2</sup>
Number of ever-married women in thousands									
15–44 years	30,247	34,935	36,842	26,795	30,419	31,465	3,109	3,440	3,614
15–24 years	6,593	5,550	3,971	5,855	4,975	3,495	692	427	343
25–34 years	12,731	15,996	16,889	11,356	31,819	14,371	1,226	1,628	1,666
35–44 years	10,922	13,439	15,982	9,584	11,626	13,599	1,191	1,358	1,606
Percent of ever-married women using contraception									
15–44 years	66.4	66.9	70.8	67.8	68.0	71.8	55.8	60.4	63.9
15–24 years	66.9	65.4	69.6	67.1	66.8	68.8	65.2	53.3	69.0
25–34 years	70.4	70.0	70.6	71.6	70.7	71.3	59.2	67.7	66.1
35–44 years	61.5	63.9	71.4	63.6	65.3	73.1	46.8	54.0	60.5
Percent of ever-married contracepting women									
Female sterilization									
15–44 years	13.6	28.9	34.7	12.5	27.2	32.9	25.4	42.8	54.5
15–24 years	4.3	*6.1	8.4	4.1	*5.7	8.2	6.8	*13.0	*11.0
25–34 years	12.1	24.5	27.6	11.4	22.7	26.2	20.3	37.7	46.9
35–44 years	21.7	44.0	48.5	19.2	42.4	45.9	47.2	59.5	73.6
Male sterilization <sup>3</sup>									
15–44 years	10.4	13.6	15.0	11.2	14.7	16.8	*1.2	*2.2	1.3
15–24 years	2.1	*4.1	*2.8	2.3	*4.4	*3.2	*0.1	*0.5	*–
25–34 years	10.3	11.5	11.8	11.0	12.6	13.1	*2.0	*1.7	*1.6
35–44 years	15.8	20.2	21.3	17.2	21.8	23.9	*1.1	*3.6	*1.4
Birth control pill									
15–44 years	36.6	20.7	21.2	36.1	20.6	21.1	41.8	23.1	22.7
15–24 years	65.3	56.2	61.4	64.4	56.0	59.8	72.4	56.8	74.9
25–34 years	36.2	22.8	28.6	35.8	22.1	28.7	41.6	28.8	29.3
35–44 years	18.3	*3.2	3.8	18.2	*3.2	4.0	17.2	*4.3	*2.4
Intrauterine device									
15–44 years	10.2	7.6	2.2	9.8	7.5	2.1	13.8	10.0	3.4
15–24 years	10.8	*3.5	*0.4	10.7	*3.3	*0.5	12.6	*8.2	*–
25–34 years	13.2	9.6	2.1	12.7	9.4	1.8	18.8	14.1	3.8
35–44 years	5.6	6.8	2.8	5.4	7.0	2.7	8.4	*4.5	3.9
Diaphragm									
15–44 years	3.4	6.5	6.0	3.6	6.8	6.2	1.8	4.2	2.3
15–24 years	*1.5	*7.0	3.1	*1.6	*7.2	*3.5	*0.3	*4.5	*1.3
25–34 years	3.1	8.5	6.7	3.2	9.1	7.1	*2.2	3.1	*1.6
35–44 years	5.0	*3.8	5.9	5.3	*3.7	6.0	*2.5	*5.7	3.4
Condom									
15–44 years	12.6	12.1	12.9	13.4	12.6	13.1	4.1	5.0	7.7
15–24 years	7.7	12.7	16.3	8.3	12.9	17.7	*1.8	*6.3	*7.6
25–34 years	12.4	12.4	13.9	13.1	13.0	14.0	3.8	5.0	9.6
35–44 years	16.1	11.4	11.0	17.2	12.0	11.0	6.4	*4.5	5.7

<sup>1</sup>Estimates have been revised and differ from those previously published.

<sup>2</sup>Preliminary estimates.

<sup>3</sup>Refers only to currently married couples in 1973.

\*Relative standard error greater than 30 percent.

SOURCE: Division of Vital Statistics, National Center for Health Statistics: Data from the National Survey of Family Growth.

**Table 13. Methods of contraception for women 15–44 years of age, according to race and marital status: United States, 1982 and 1988**

[Data are based on household interviews of samples of women in the childbearing ages]

<i>Marital status and method of contraception</i>	<i>All races</i>		<i>White</i>		<i>Black</i>	
	<i>1982</i> <sup>1</sup>	<i>1988</i> <sup>2</sup>	<i>1982</i> <sup>1</sup>	<i>1988</i> <sup>2</sup>	<i>1982</i> <sup>1</sup>	<i>1988</i> <sup>2</sup>
Marital status						
	Number of women in thousands					
All marital statuses . . . . .	54,099	57,900	45,367	47,077	6,985	7,679
Currently married . . . . .	28,231	29,147	25,195	25,426	2,130	2,197
Widowed, separated, or divorced . . . . .	6,704	7,695	5,224	6,038	1,310	1,417
Never married . . . . .	19,164	21,058	14,948	15,612	3,545	4,065
All methods						
	Percent of women using contraception					
All marital statuses . . . . .	55.7	60.3	56.7	61.8	52.0	56.7
Currently married . . . . .	69.7	74.3	70.4	75.3	63.3	67.0
Widowed, separated, or divorced . . . . .	55.5	57.6	56.3	57.4	55.7	59.0
Never married . . . . .	35.3	41.9	33.6	41.5	43.8	50.4
Female sterilization						
	Percent of contracepting women					
All marital statuses . . . . .	23.2	27.5	22.1	26.1	30.0	38.1
Currently married . . . . .	26.9	31.4	25.8	30.2	37.0	48.3
Widowed, separated, or divorced . . . . .	39.2	50.7	35.2	47.9	53.5	65.4
Never married . . . . .	3.7	6.4	*1.0	2.4	12.8	19.6
Male sterilization						
All marital statuses . . . . .	10.9	11.7	12.2	13.6	1.4	0.9
Currently married . . . . .	15.5	17.3	16.4	19.1	3.4	2.0
Widowed, separated, or divorced . . . . .	3.4	3.6	4.3	4.3	*—	*0.1
Never married . . . . .	1.8	1.8	2.3	2.3	*0.4	*0.3
Birth control pill						
All marital statuses . . . . .	28.0	30.7	26.7	29.8	38.0	38.0
Currently married . . . . .	19.3	20.4	19.0	20.0	24.5	26.0
Widowed, separated, or divorced . . . . .	28.4	25.3	30.4	27.4	20.4	16.8
Never married . . . . .	53.0	59.0	51.6	60.2	58.1	55.3
Intrauterine device						
All marital statuses . . . . .	7.1	2.0	6.9	1.8	9.1	3.1
Currently married . . . . .	6.9	2.0	6.8	1.8	9.3	2.3
Widowed, separated, or divorced . . . . .	11.5	3.6	11.8	3.3	11.4	5.4
Never married . . . . .	5.4	1.3	4.3	*0.9	7.9	2.7
Diaphragm						
All marital statuses . . . . .	8.1	5.7	8.8	6.2	3.5	1.9
Currently married . . . . .	6.5	6.2	6.7	6.4	5.1	2.4
Widowed, separated, or divorced . . . . .	6.7	5.3	7.8	5.6	*2.5	*2.1
Never married . . . . .	13.4	4.9	16.8	6.1	2.6	1.5
Condom						
All marital statuses . . . . .	12.0	14.6	12.7	14.9	6.2	10.3
Currently married . . . . .	14.1	14.3	14.5	14.3	6.8	9.8
Widowed, separated, or divorced . . . . .	*1.5	5.9	*1.5	6.3	*1.6	4.1
Never married . . . . .	11.6	19.6	12.8	21.4	7.9	13.2

<sup>1</sup>Estimates have been revised and differ from those previously published.

<sup>2</sup>Preliminary estimates.

\*Relative standard error greater than 30 percent.

SOURCE: Division of Vital Statistics, National Center for Health Statistics: Data from the National Survey of Family Growth.

**Table 14. Life expectancy at birth and at 65 years of age, according to race and sex: United States, selected years 1900–1988**

[Data are based on the National Vital Statistics System]

Specified age and year	All races			White			Black		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Remaining life expectancy in years									
At birth									
1900 <sup>1,2</sup>	47.3	46.3	48.3	47.6	46.6	48.7	<sup>3</sup> 33.0	<sup>3</sup> 32.5	<sup>3</sup> 33.5
1950 <sup>2</sup>	68.2	65.6	71.1	69.1	66.5	72.2	60.7	58.9	62.7
1960 <sup>2</sup>	69.7	66.6	73.1	70.6	67.4	74.1	63.2	60.7	65.9
1970	70.9	67.1	74.8	71.7	68.0	75.6	64.1	60.0	68.3
1975	72.6	68.8	76.6	73.4	69.5	77.3	66.8	62.4	71.3
1980	73.7	70.0	77.4	74.4	70.7	78.1	68.1	63.8	72.5
1981	74.2	70.4	77.8	74.8	71.1	78.4	68.9	64.5	73.2
1982	74.5	70.9	78.1	75.1	71.5	78.7	69.4	65.1	73.7
1983	74.6	71.0	78.1	75.2	71.7	78.7	69.6	65.4	73.6
1984	74.7	71.2	78.2	75.3	71.8	78.7	69.7	65.6	73.7
1985	74.7	71.2	78.2	75.3	71.9	78.7	69.5	65.3	73.5
1986	74.8	71.3	78.3	75.4	72.0	78.8	69.4	65.2	73.5
1987	75.0	71.5	78.4	75.6	72.2	78.9	69.4	65.2	73.6
Provisional data:									
1985 <sup>2</sup>	74.7	71.2	78.2	75.3	71.8	78.7	69.5	65.3	73.7
1986 <sup>2</sup>	74.9	71.3	78.3	75.4	72.0	78.9	69.6	65.5	73.6
1987 <sup>2</sup>	74.9	71.5	78.3	75.5	72.1	78.8	69.7	65.4	73.8
1988 <sup>2</sup>	74.9	71.4	78.3	75.5	72.1	78.9	69.5	65.1	73.8
At 65 years									
1900–1902 <sup>1,2</sup>	11.9	11.5	12.2	---	11.5	12.2	---	10.4	11.4
1950 <sup>2</sup>	13.9	12.8	15.0	---	12.8	15.1	13.9	12.9	14.9
1960 <sup>2</sup>	14.3	12.8	15.8	14.4	12.9	15.9	13.9	12.7	15.1
1970	15.2	13.1	17.0	15.2	13.1	17.1	14.2	12.5	15.7
1975	16.1	13.8	18.1	16.1	13.8	18.2	15.0	13.1	16.7
1980	16.4	14.1	18.3	16.5	14.2	18.4	15.1	13.0	16.8
1981	16.7	14.3	18.6	16.7	14.4	18.7	15.5	13.4	17.3
1982	16.8	14.5	18.7	16.9	14.5	18.8	15.7	13.5	17.5
1983	16.7	14.5	18.6	16.8	14.5	18.7	15.5	13.4	17.3
1984	16.8	14.6	18.6	16.9	14.6	18.7	15.5	13.5	17.2
1985	16.7	14.6	18.6	16.8	14.6	18.7	15.3	13.3	17.0
1986	16.8	14.7	18.6	16.9	14.8	18.7	15.4	13.4	17.0
1987	16.9	14.8	18.7	17.0	14.9	18.8	15.4	13.5	17.1
Provisional data:									
1985 <sup>2</sup>	16.8	14.6	18.6	16.8	14.6	18.7	15.5	13.3	17.2
1986 <sup>2</sup>	16.9	14.8	18.6	17.0	14.8	18.8	15.5	13.6	16.9
1987 <sup>2</sup>	16.9	14.8	18.6	17.0	14.9	18.7	15.6	13.6	17.2
1988 <sup>2</sup>	16.9	14.8	18.6	17.0	14.9	18.7	15.5	13.6	17.1

<sup>1</sup>Death registration area only. The death registration area increased from 10 States and the District of Columbia in 1900 to the coterminous United States in 1933.

<sup>2</sup>Includes deaths of nonresidents of the United States.

<sup>3</sup>Figure is for the all other population.

SOURCES: National Center for Health Statistics: Vital Statistics Rates in the United States, 1940–1960, by R. D. Grove and A. M. Hetzel. DHEW Pub. No. (PHS) 1677. Public Health Service, Washington. U.S. Government Printing Office, 1968; Vital Statistics of the United States, 1970, Vol. II, Mortality, Part A. DHEW Pub. No. (HRA) 75-1101. Health Resources Administration, Washington. U.S. Government Printing Office, 1974; Annual summary of births, marriages, divorces, and deaths, United States, 1985. Monthly Vital Statistics Report. Vol. 34, No. 13. DHHS Pub. No. (PHS) 86-1120. Sept. 19, 1986; Annual summary of births, marriages, divorces, and deaths, United States, 1986. Monthly Vital Statistics Report. Vol. 35, No. 13. DHHS Pub. No. (PHS) 87-1120. Aug. 24, 1987; Annual summary of births, marriages, divorces, and deaths, United States, 1987. Monthly Vital Statistics Report. Vol. 36, No. 13. DHHS Pub. No. (PHS) 88-1120. July 29, 1988; Annual summary of births, marriages, divorces, and deaths, United States, 1988. Monthly Vital Statistics Report. Vol. 37, No. 13. DHHS Pub. No. (PHS) 89-1120. July 26, 1989. Public Health Service, Hyattsville, Md.; Unpublished data from the Division of Vital Statistics; Data computed by the Office of Research and Methodology from data compiled by the Division of Vital Statistics.



**Table 15. Infant mortality rates, fetal death rates, and perinatal mortality rates, according to race: United States, selected years 1950–88**

[Data are based on the National Vital Statistics System]

Race and year	Infant mortality rate <sup>1</sup>						Perinatal mortality rate <sup>4</sup>
	Total	Neonatal		Postneonatal	Fetal death rate <sup>2</sup>	Late fetal death rate <sup>3</sup>	
		Under 28 days	Under 7 days				
All races							
Deaths per 1,000 live births							
1950 <sup>5</sup>	29.2	20.5	17.8	8.7	18.4	14.9	32.5
1960 <sup>5</sup>	26.0	18.7	16.7	7.3	15.8	12.1	28.6
1970	20.0	15.1	13.6	4.9	14.0	9.5	23.0
1975	16.1	11.6	10.0	4.5	10.6	7.8	17.7
1980	12.6	8.5	7.1	4.1	9.1	6.2	13.2
1981	11.9	8.0	6.7	3.9	8.9	5.9	12.6
1982	11.5	7.7	6.4	3.8	8.8	5.9	12.3
1983	11.2	7.3	6.1	3.9	8.4	5.4	11.5
1984	10.8	7.0	5.9	3.8	8.1	5.2	11.0
1985	10.6	7.0	5.8	3.7	7.8	4.9	10.7
1986	10.4	6.7	5.6	3.6	7.7	4.7	10.3
1987	10.1	6.5	5.4	3.6	7.6	4.6	10.0
Provisional data:							
1985 <sup>5</sup>	10.6	6.9	---	3.6	---	---	---
1986 <sup>5</sup>	10.4	6.7	---	3.7	---	---	---
1987 <sup>5</sup>	10.0	6.5	---	3.4	---	---	---
1988 <sup>5</sup>	9.9	6.4	---	3.5	---	---	---
White							
1950 <sup>5</sup>	26.8	19.4	17.1	7.4	16.6	13.3	30.1
1960 <sup>5</sup>	22.9	17.2	15.6	5.7	13.9	10.8	26.2
1970	17.8	13.8	12.5	4.0	12.3	8.6	21.1
1975	14.2	10.4	9.0	3.8	9.4	7.1	16.0
1980	11.0	7.5	6.2	3.5	8.1	5.7	11.9
1981	10.5	7.1	5.9	3.4	8.0	5.5	11.3
1982	10.1	6.8	5.6	3.3	7.9	5.4	11.0
1983	9.7	6.4	5.4	3.3	7.4	5.0	10.3
1984	9.4	6.2	5.1	3.3	7.3	4.8	9.9
1985	9.3	6.1	5.0	3.2	7.0	4.5	9.6
1986	8.9	5.8	4.8	3.1	6.7	4.3	9.1
1987	8.6	5.5	4.5	3.1	6.6	4.2	8.7
Black							
1950 <sup>5</sup>	43.9	27.8	23.0	16.1	32.1	---	---
1960 <sup>5</sup>	44.3	27.8	23.7	16.5	---	---	---
1970	32.6	22.8	20.3	9.9	23.2	---	---
1975	26.2	18.3	15.7	7.9	16.8	11.4	26.9
1980	21.4	14.1	11.9	7.3	14.4	8.9	20.7
1981	20.0	13.4	11.4	6.6	13.8	8.2	19.4
1982	19.6	13.1	11.1	6.6	13.8	8.1	19.1
1983	19.2	12.4	10.6	6.8	13.5	7.7	18.2
1984	18.4	11.8	10.2	6.5	12.7	7.3	17.4
1985	18.2	12.1	10.3	6.1	12.6	7.1	17.4
1986	18.0	11.7	10.1	6.3	12.5	7.0	17.0
1987	17.9	11.7	10.0	6.1	12.8	7.0	16.9

<sup>1</sup>Infant mortality rate is number of deaths of infants under 1 year per 1,000 live births. Neonatal deaths occur within 28 days of birth; postneonatal deaths occur 28–365 days after birth. Deaths within 7 days are early neonatal deaths.

<sup>2</sup>Number of deaths of fetuses of 20 weeks or more gestation per 1,000 live births plus fetal deaths.

<sup>3</sup>Number of fetal deaths of 28 weeks or more gestation per 1,000 live births plus late fetal deaths.

<sup>4</sup>Number of late fetal deaths plus infant deaths within 7 days of birth per 1,000 live births plus late fetal deaths.

<sup>5</sup>Includes births and deaths of nonresidents of the United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Annual summary of births, marriages, divorces, and deaths, United States, 1985. Monthly Vital Statistics Report. Vol. 34, No. 13. DHHS Pub. No. (PHS) 86-1120. Sept. 19, 1986; Annual summary of births, marriages, divorces, and deaths, United States, 1988. Monthly Vital Statistics Report. Vol. 37, No. 13. DHHS Pub. No. (PHS) 89-1120. July 26, 1989. Public Health Service. Hyattsville, Md.; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics.

**Table 16 (page 1 of 2). Infant mortality rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

Geographic division and State	All races			White			Black		
	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87
	Infant deaths per 1,000 live births								
United States . . . . .	15.1	12.0	10.4	13.3	10.5	9.0	25.1	20.3	18.0
New England . . . . .	12.8	10.4	8.6	12.2	9.9	8.0	23.6	18.7	18.1
Maine . . . . .	11.2	9.7	8.7	11.3	9.8	8.8	*	*	*
New Hampshire . . . . .	11.6	10.2	8.7	11.7	10.2	8.7	*	*	*
Vermont . . . . .	11.9	9.2	9.0	12.0	9.3	8.9	*	*	*
Massachusetts . . . . .	12.5	10.1	8.3	12.1	9.7	7.5	19.9	17.1	17.6
Rhode Island . . . . .	13.7	10.9	8.7	13.0	10.6	8.4	*27.0	*17.7	*13.0
Connecticut . . . . .	14.4	11.5	9.2	12.7	10.2	7.9	27.4	20.9	19.6
Middle Atlantic . . . . .	15.3	12.2	10.5	13.2	10.6	8.8	25.1	20.0	18.0
New York . . . . .	15.5	12.4	10.7	13.2	10.7	9.2	24.8	19.3	16.7
New Jersey . . . . .	14.7	11.7	9.9	12.4	9.7	8.0	24.9	20.2	18.4
Pennsylvania . . . . .	15.3	12.2	10.5	13.7	10.9	8.8	26.1	21.6	20.8
East North Central . . . . .	15.2	12.5	10.8	13.3	10.6	9.0	26.5	23.5	20.1
Ohio . . . . .	14.9	12.2	10.1	13.6	10.8	9.0	24.0	21.5	16.5
Indiana . . . . .	14.5	11.7	10.8	13.5	10.6	9.7	23.7	21.1	20.1
Illinois . . . . .	17.0	14.1	11.8	13.7	11.2	9.3	29.8	25.1	21.4
Michigan . . . . .	15.2	12.7	11.2	13.2	10.4	8.9	25.3	24.5	22.2
Wisconsin . . . . .	12.5	10.0	9.0	12.0	9.4	8.3	21.1	18.7	17.1
West North Central . . . . .	14.0	11.0	9.5	13.1	10.2	8.8	25.5	20.2	17.0
Minnesota . . . . .	12.8	9.9	8.9	12.5	9.6	8.6	*23.9	*21.3	16.5
Iowa . . . . .	13.4	10.7	9.0	13.1	10.4	8.9	*28.1	*22.5	*14.9
Missouri . . . . .	15.3	12.3	10.4	13.4	11.0	9.1	25.9	20.0	17.7
North Dakota . . . . .	14.1	11.3	8.6	13.4	10.8	8.3	*	*	*
South Dakota . . . . .	16.5	10.9	11.0	14.5	9.2	9.1	*	*	*
Nebraska . . . . .	13.6	10.5	9.4	13.2	9.9	8.8	*25.2	*20.2	*18.0
Kansas . . . . .	13.8	10.7	9.2	13.1	10.0	8.7	24.1	19.7	16.3
South Atlantic . . . . .	16.9	13.8	11.8	13.6	10.9	9.2	25.2	20.9	18.5
Delaware . . . . .	13.6	13.8	12.7	11.7	10.4	10.2	20.7	25.4	21.0
Maryland . . . . .	16.2	12.8	11.7	13.5	10.3	9.1	23.7	19.3	18.1
District of Columbia . . . . .	27.2	23.8	20.4	*15.4	*13.9	11.6	29.6	25.8	23.5
Virginia . . . . .	16.5	13.0	10.9	13.8	11.1	8.8	25.9	19.6	18.0
West Virginia . . . . .	16.6	12.1	10.3	16.2	11.8	9.8	*25.9	*20.0	*21.3
North Carolina . . . . .	17.3	13.8	11.7	13.9	11.2	9.4	25.4	19.9	17.8
South Carolina . . . . .	18.8	16.0	13.4	14.2	11.7	9.8	26.2	22.4	19.2
Georgia . . . . .	16.5	13.6	12.6	13.1	10.2	9.7	23.0	19.7	18.3
Florida . . . . .	16.1	13.6	10.9	12.8	10.8	8.7	25.7	21.9	18.3
East South Central . . . . .	17.3	13.6	11.8	14.1	11.0	9.4	26.1	20.5	18.3
Kentucky . . . . .	14.9	12.3	10.3	14.3	11.7	9.8	21.4	19.2	15.3
Tennessee . . . . .	15.9	12.7	11.4	13.7	10.7	8.9	24.1	19.9	19.5
Alabama . . . . .	18.7	14.0	12.7	14.3	10.7	9.6	26.9	20.1	18.7
Mississippi . . . . .	20.6	16.0	13.3	14.1	10.7	9.4	27.9	21.7	17.8
West South Central . . . . .	16.2	12.0	10.1	14.1	10.6	8.8	25.1	18.7	16.2
Arkansas . . . . .	16.3	11.6	10.8	13.8	9.4	9.5	24.1	18.4	15.0
Louisiana . . . . .	18.0	13.7	11.9	13.2	10.0	8.4	25.6	19.9	17.3
Oklahoma . . . . .	15.5	12.3	10.3	14.7	12.0	10.2	24.7	19.0	16.6
Texas . . . . .	15.7	11.5	9.5	14.2	10.6	8.6	25.1	17.7	15.5
Mountain . . . . .	13.7	10.5	9.5	13.2	10.2	9.3	21.1	16.7	15.1
Montana . . . . .	15.2	11.1	10.0	15.2	10.7	9.3	*	*	*
Idaho . . . . .	12.5	10.0	10.7	12.5	10.1	10.7	*	*	*
Wyoming . . . . .	15.8	10.1	10.8	15.8	10.0	10.8	*	*	*
Colorado . . . . .	13.1	9.7	9.3	12.8	9.6	9.0	20.6	14.2	16.5
New Mexico . . . . .	15.4	10.9	9.4	14.7	10.7	9.2	*27.9	*16.9	*17.3
Arizona . . . . .	14.5	11.1	9.5	13.4	10.6	9.1	*19.7	16.2	14.3
Utah . . . . .	11.6	10.4	9.0	11.3	10.4	9.1	*	*	*
Nevada . . . . .	15.1	10.7	9.1	14.6	10.0	8.8	*21.3	*20.6	*15.3

See notes at end of table.

**Table 16 (page 2 of 2). Infant mortality rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

<i>Geographic division and State</i>	<i>All races</i>			<i>White</i>			<i>Black</i>		
	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>
Infant deaths per 1,000 live births									
Pacific . . . . .	12.8	10.5	9.3	12.4	10.2	9.0	20.6	16.4	16.0
Washington . . . . .	14.1	11.0	10.1	13.9	10.7	10.0	19.2	16.3	13.8
Oregon . . . . .	13.2	11.2	9.9	13.1	11.1	9.9	*21.0	*16.2	*18.0
California . . . . .	12.6	10.4	9.2	12.0	10.1	8.8	20.7	16.4	16.2
Alaska . . . . .	15.3	12.0	10.7	13.1	10.0	9.4	*	*20.5	*13.3
Hawaii . . . . .	11.7	9.6	9.0	11.9	10.0	8.1	*13.7	*12.4	*15.5

\*Data for States with fewer than 5,000 live births for the 3-year period are considered unreliable. Data for States with fewer than 1,000 live births are considered highly unreliable and are not shown.

SOURCE: National Center for Health Statistics: Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics.

**Table 17 (page 1 of 2). Neonatal mortality rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

Geographic division and State	All races			White			Black		
	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87
Neonatal deaths per 1,000 live births									
United States . . . . .	10.8	8.1	6.7	9.6	7.1	5.8	17.4	13.5	11.8
New England . . . . .	9.6	7.6	6.1	9.2	7.2	5.6	17.5	13.8	13.3
Maine . . . . .	7.6	6.3	5.7	7.6	6.4	5.8	*	*	*
New Hampshire . . . . .	9.0	7.5	5.9	9.0	7.5	5.9	*	*	*
Vermont . . . . .	8.7	5.4	6.0	8.7	5.5	6.0	*	*	*
Massachusetts . . . . .	9.4	7.4	5.8	9.1	7.1	5.3	14.1	12.2	12.5
Rhode Island . . . . .	9.8	8.6	6.2	9.3	8.5	5.9	*19.5	*10.5	*10.3
Connecticut . . . . .	11.3	8.7	6.9	10.1	7.7	5.8	21.3	16.3	15.1
Middle Atlantic . . . . .	11.4	8.6	7.2	10.0	7.6	6.2	18.1	13.2	11.8
New York . . . . .	11.4	8.6	7.3	9.8	7.6	6.5	17.9	12.9	10.9
New Jersey . . . . .	11.0	8.0	6.7	9.5	7.0	5.6	17.1	12.5	11.8
Pennsylvania . . . . .	11.7	8.8	7.2	10.5	8.0	6.1	19.3	14.8	14.0
East North Central . . . . .	10.9	8.6	7.1	9.7	7.4	5.9	18.3	15.7	13.4
Ohio . . . . .	10.9	8.4	6.4	10.1	7.5	5.8	17.2	14.4	10.4
Indiana . . . . .	10.2	7.9	7.1	9.5	7.2	6.3	16.9	13.6	13.9
Illinois . . . . .	12.2	9.7	8.0	10.1	8.0	6.4	20.3	16.3	13.9
Michigan . . . . .	10.8	8.9	7.6	9.5	7.2	5.9	17.4	17.7	16.1
Wisconsin . . . . .	8.7	6.6	5.5	8.5	6.3	5.0	13.1	11.2	11.1
West North Central . . . . .	10.3	7.1	5.8	9.8	6.7	5.5	17.9	12.8	10.3
Minnesota . . . . .	9.3	6.2	5.4	9.2	6.1	5.3	*15.6	*13.9	9.8
Iowa . . . . .	10.3	6.9	5.7	10.2	6.8	5.6	*21.4	*13.7	*8.5
Missouri . . . . .	11.0	8.1	6.5	9.8	7.4	5.8	17.9	12.5	10.7
North Dakota . . . . .	10.5	7.2	4.8	10.2	7.1	4.7	*	*	*
South Dakota . . . . .	11.6	6.8	5.8	11.0	6.2	5.4	*	*	*
Nebraska . . . . .	9.8	6.8	5.9	9.6	6.5	5.5	*15.9	*12.9	*10.4
Kansas . . . . .	10.4	7.3	5.6	9.9	6.8	5.3	18.1	13.3	10.0
South Atlantic . . . . .	12.0	9.5	7.9	10.0	7.5	6.1	17.3	14.3	12.6
Delaware . . . . .	9.8	10.1	9.2	8.6	7.5	7.6	14.2	18.9	14.7
Maryland . . . . .	12.3	9.2	8.1	10.3	7.4	6.1	17.7	13.9	13.0
District of Columbia . . . . .	21.4	17.8	15.5	*12.3	*10.7	8.4	23.3	19.2	17.9
Virginia . . . . .	12.1	9.4	7.4	10.1	7.9	5.9	19.1	14.6	12.6
West Virginia . . . . .	11.8	8.0	6.9	11.6	7.8	6.6	*19.6	*13.7	*14.6
North Carolina . . . . .	12.4	9.4	7.8	10.5	7.6	6.2	17.2	14.0	12.2
South Carolina . . . . .	13.1	10.8	9.1	10.3	7.9	6.6	17.4	15.2	13.1
Georgia . . . . .	11.0	8.9	8.5	9.2	6.8	6.7	14.5	12.5	12.1
Florida . . . . .	11.3	9.2	7.1	9.3	7.5	5.7	17.1	14.4	11.7
East South Central . . . . .	12.2	9.0	7.7	10.2	7.4	6.1	17.6	13.5	12.0
Kentucky . . . . .	10.6	8.0	6.6	10.2	7.6	6.3	14.7	12.8	10.3
Tennessee . . . . .	11.4	8.7	7.4	9.8	7.2	5.7	17.2	13.8	13.1
Alabama . . . . .	12.9	9.2	8.5	10.4	7.3	6.6	17.7	12.7	12.2
Mississippi . . . . .	14.3	10.6	8.3	10.5	7.2	5.9	18.5	14.2	11.3
West South Central . . . . .	11.5	7.8	6.3	10.1	6.9	5.6	17.6	12.0	10.1
Arkansas . . . . .	11.2	6.8	6.2	9.9	5.8	5.7	15.0	10.0	8.2
Louisiana . . . . .	13.3	9.2	7.7	9.9	6.9	5.7	18.7	13.2	11.1
Oklahoma . . . . .	10.5	7.6	6.2	10.0	7.4	6.1	17.2	11.8	10.5
Texas . . . . .	11.2	7.6	6.0	10.1	7.0	5.4	17.5	11.6	9.6
Mountain . . . . .	9.1	6.6	5.5	9.0	6.6	5.4	15.0	11.0	9.6
Montana . . . . .	10.4	6.8	5.1	10.7	6.9	4.8	*	*	*
Idaho . . . . .	8.1	5.9	6.4	8.1	6.0	6.4	*	*	*
Wyoming . . . . .	10.5	6.7	6.1	10.6	6.8	6.3	*	*	*
Colorado . . . . .	8.5	6.3	5.6	8.3	6.2	5.4	14.7	9.7	10.1
New Mexico . . . . .	10.0	6.6	5.6	10.1	6.8	5.5	*19.2	*10.1	*10.6
Arizona . . . . .	9.6	7.1	5.8	9.4	7.2	5.6	*14.9	11.4	10.0
Utah . . . . .	7.9	6.4	4.9	7.9	6.4	5.0	*	*	*
Nevada . . . . .	10.3	6.5	4.9	10.0	6.1	4.7	*14.2	*12.6	*9.3

See notes at end of table.

**Table 17 (page 2 of 2). Neonatal mortality rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

<i>Geographic division and State</i>	<i>All races</i>			<i>White</i>			<i>Black</i>		
	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>
Neonatal deaths per 1,000 live births									
Pacific . . . . .	8.6	6.6	5.7	8.3	6.5	5.5	13.6	10.4	9.8
Washington . . . . .	9.1	6.5	5.6	9.1	6.5	5.6	11.8	8.8	8.5
Oregon . . . . .	8.5	6.7	5.2	8.5	6.7	5.2	*13.0	*10.7	*9.1
California . . . . .	8.5	6.6	5.7	8.1	6.4	5.5	13.7	10.5	9.9
Alaska . . . . .	8.9	7.0	5.6	7.8	6.2	5.2	*	*13.4	*6.6
Hawaii . . . . .	8.3	6.7	5.9	7.9	7.2	5.1	*9.1	*6.7	*9.8

\*Data for States with fewer than 5,000 live births for the 3-year period are considered unreliable. Data for States with fewer than 1,000 live births are considered highly unreliable and are not shown.

SOURCE: National Center for Health Statistics: Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics.

**Table 18 (page 1 of 2). Postneonatal mortality rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

<i>Geographic division and State</i>	<i>All races</i>			<i>White</i>			<i>Black</i>		
	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>
	Postneonatal deaths per 1,000 live births								
United States . . . . .	4.3	4.0	3.6	3.7	3.4	3.2	7.7	6.8	6.2
New England . . . . .	3.2	2.8	2.5	3.0	2.7	2.3	6.0	4.9	4.7
Maine . . . . .	3.6	3.4	3.0	3.6	3.4	3.0	*	*	*
New Hampshire . . . . .	2.6	2.7	2.8	2.7	2.7	2.8	*	*	*
Vermont . . . . .	3.3	3.8	3.0	3.2	3.8	2.9	*	*	*
Massachusetts . . . . .	3.1	2.7	2.4	2.9	2.6	2.2	5.8	5.0	5.1
Rhode Island . . . . .	3.9	2.3	2.5	3.7	2.1	2.5	*	*7.1	*2.7
Connecticut . . . . .	3.0	2.7	2.3	2.6	2.5	2.0	6.1	4.6	4.5
Middle Atlantic . . . . .	3.9	3.6	3.3	3.2	3.0	2.6	7.0	6.8	6.2
New York . . . . .	4.1	3.8	3.4	3.4	3.1	2.7	6.9	6.4	5.8
New Jersey . . . . .	3.8	3.6	3.2	2.8	2.6	2.4	7.8	7.7	6.6
Pennsylvania . . . . .	3.6	3.4	3.3	3.1	3.0	2.7	6.8	6.9	6.9
East North Central . . . . .	4.3	3.9	3.7	3.6	3.2	3.1	8.2	7.8	6.7
Ohio . . . . .	3.9	3.8	3.6	3.5	3.3	3.2	6.8	7.0	6.2
Indiana . . . . .	4.3	3.8	3.6	4.0	3.4	3.3	6.8	7.5	6.2
Illinois . . . . .	4.8	4.4	3.9	3.6	3.2	2.9	9.5	8.8	7.6
Michigan . . . . .	4.4	3.8	3.5	3.7	3.2	3.0	7.8	6.8	6.1
Wisconsin . . . . .	3.8	3.4	3.5	3.5	3.1	3.3	8.0	7.5	5.9
West North Central . . . . .	3.7	3.8	3.7	3.3	3.5	3.3	7.7	7.3	6.8
Minnesota . . . . .	3.5	3.7	3.5	3.4	3.5	3.3	*8.2	*7.5	*6.7
Iowa . . . . .	3.0	3.8	3.4	3.0	3.7	3.3	*6.7	*8.8	*6.4
Missouri . . . . .	4.3	4.1	3.8	3.6	3.6	3.3	8.0	7.5	6.9
North Dakota . . . . .	3.5	4.1	3.8	3.2	3.6	3.6	*	*	*
South Dakota . . . . .	4.9	4.1	5.2	3.5	3.0	3.7	*	*	*
Nebraska . . . . .	3.8	3.7	3.6	3.5	3.4	3.2	*9.2	*7.3	*7.7
Kansas . . . . .	3.4	3.5	3.7	3.2	3.2	3.4	*6.0	6.4	6.3
South Atlantic . . . . .	4.9	4.3	3.8	3.7	3.4	3.0	7.9	6.6	5.9
Delaware . . . . .	3.8	3.7	3.4	3.1	2.9	2.6	*6.5	*6.5	*6.3
Maryland . . . . .	4.0	3.6	3.6	3.2	2.9	3.0	6.1	5.4	5.1
District of Columbia . . . . .	5.8	6.0	4.9	*3.2	*3.2	*3.1	6.3	6.6	5.6
Virginia . . . . .	4.4	3.6	3.5	3.7	3.2	2.9	6.8	5.0	5.4
West Virginia . . . . .	4.7	4.1	3.4	4.7	4.0	3.2	*6.3	*6.3	*6.7
North Carolina . . . . .	4.9	4.4	3.9	3.4	3.7	3.2	8.2	5.9	5.7
South Carolina . . . . .	5.8	5.2	4.2	3.8	3.8	3.2	8.8	7.2	6.1
Georgia . . . . .	5.5	4.8	4.1	3.9	3.4	3.0	8.5	7.2	6.2
Florida . . . . .	4.8	4.3	3.8	3.5	3.3	3.0	8.6	7.5	6.5
East South Central . . . . .	5.2	4.6	4.1	3.9	3.7	3.3	8.5	7.1	6.4
Kentucky . . . . .	4.3	4.3	3.6	4.1	4.2	3.5	6.7	6.4	5.0
Tennessee . . . . .	4.5	4.1	4.0	3.9	3.5	3.3	6.9	6.1	6.4
Alabama . . . . .	5.8	4.8	4.2	3.9	3.4	3.0	9.2	7.4	6.5
Mississippi . . . . .	6.3	5.4	4.9	3.6	3.4	3.5	9.3	7.6	6.5
West South Central . . . . .	4.7	4.2	3.8	4.0	3.7	3.3	7.5	6.6	6.1
Arkansas . . . . .	5.2	4.8	4.5	3.8	3.6	3.8	9.1	8.4	6.9
Louisiana . . . . .	4.7	4.5	4.1	3.3	3.2	2.8	6.9	6.7	6.2
Oklahoma . . . . .	5.0	4.7	4.1	4.6	4.6	4.0	7.5	7.2	6.2
Texas . . . . .	4.6	3.9	3.5	4.1	3.6	3.2	7.5	6.2	5.8
Mountain . . . . .	4.6	3.9	4.0	4.2	3.7	3.8	6.1	5.7	5.5
Montana . . . . .	4.8	4.2	4.9	4.5	3.8	4.4	*	*	*
Idaho . . . . .	4.4	4.0	4.3	4.4	4.1	4.3	*	*	*
Wyoming . . . . .	5.3	3.3	4.7	5.2	3.2	4.5	*	*	*
Colorado . . . . .	4.5	3.4	3.7	4.5	3.5	3.6	*5.9	*4.4	*6.4
New Mexico . . . . .	5.4	4.3	3.8	4.6	3.9	3.7	*	*6.7	*6.7
Arizona . . . . .	5.0	4.0	3.7	4.0	3.4	3.5	*4.8	*4.8	*4.3
Utah . . . . .	3.6	4.0	4.1	3.4	4.0	4.1	*	*	*
Nevada . . . . .	4.8	4.2	4.1	4.6	3.9	4.1	*7.1	*8.0	*6.0

See notes at end of table.

**Table 18 (page 2 of 2). Postneonatal mortality rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

<i>Geographic division and State</i>	<i>All races</i>			<i>White</i>			<i>Black</i>		
	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>	<i>1975–77</i>	<i>1980–82</i>	<i>1985–87</i>
	Postneonatal death per 1,000 live births								
Pacific . . . . .	4.3	3.9	3.7	4.1	3.8	3.5	6.9	6.0	6.3
Washington . . . . .	4.9	4.5	4.5	4.7	4.3	4.5	*7.4	*7.4	5.4
Oregon . . . . .	4.7	4.5	4.7	4.6	4.5	4.7	*8.0	*5.5	*8.8
California . . . . .	4.1	3.7	3.5	3.9	3.6	3.3	6.9	5.9	6.3
Alaska . . . . .	6.4	5.0	5.1	5.3	3.8	4.2	*	*	*
Hawaii . . . . .	3.4	2.9	3.2	4.0	2.8	3.1	*	*	*5.7

\*Data for States with fewer than 10,000 live births for the 3-year period are considered unreliable. Data for States with fewer than 2,000 live births are considered highly unreliable and are not shown.

SOURCE: National Center for Health Statistics: Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics.

Table 19 (page 1 of 2). Fetal death rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87

[Data are based on the National Vital Statistics System]

Geographic division and State	All races			White			Black		
	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87
	Fetal deaths <sup>1</sup> per 1,000 live births plus fetal deaths								
United States . . . . .	10.3	9.0	7.7	9.1	8.0	6.8	16.1	14.0	12.6
New England . . . . .	8.7	7.3	6.4	8.4	7.1	6.0	13.5	11.5	11.1
Maine . . . . .	6.1	7.0	5.9	6.2	7.0	5.9	*	*	*
New Hampshire . . . . .	7.3	6.4	5.8	7.2	6.4	5.8	*	*	*
Vermont . . . . .	7.7	7.1	6.2	7.8	7.0	6.2	*	*	*
Massachusetts . . . . .	9.0	7.0	6.3	8.7	6.7	5.9	13.8	11.7	10.9
Rhode Island . . . . .	12.7	9.9	7.3	12.4	9.6	6.8	*19.1	*14.1	*13.1
Connecticut . . . . .	8.6	7.8	6.7	8.2	7.4	6.0	12.4	11.0	11.3
Middle Atlantic . . . . .	11.0	10.3	9.0	10.0	9.4	8.0	15.7	14.6	13.8
New York . . . . .	11.0	11.3	9.6	10.2	10.3	8.5	14.6	14.9	14.1
New Jersey . . . . .	9.9	8.3	8.0	8.9	7.3	6.9	14.3	12.5	12.7
Pennsylvania . . . . .	11.6	10.1	8.8	10.4	9.2	8.0	19.8	15.9	13.9
East North Central . . . . .	9.7	8.2	7.0	8.7	7.4	6.2	14.9	12.6	11.0
Ohio . . . . .	9.4	8.3	7.4	8.7	7.7	6.7	14.0	12.0	11.1
Indiana . . . . .	9.8	8.3	7.6	9.2	7.8	6.8	15.6	12.3	13.1
Illinois . . . . .	10.7	9.1	7.7	9.3	7.7	6.4	16.0	14.1	12.0
Michigan . . . . .	9.4	7.2	5.7	8.5	6.7	5.2	13.9	10.4	8.2
Wisconsin . . . . .	7.8	7.3	6.3	7.5	7.0	5.7	13.2	13.2	12.6
West North Central . . . . .	9.0	7.7	6.4	8.5	7.3	6.1	14.8	13.8	10.8
Minnesota . . . . .	8.3	6.6	6.2	8.2	6.5	6.1	*14.0	*10.4	9.9
Iowa . . . . .	8.2	7.2	6.1	8.0	7.1	6.0	*15.9	*10.8	*9.4
Missouri . . . . .	9.6	8.8	6.6	8.7	7.8	5.9	14.6	14.6	10.6
North Dakota . . . . .	9.3	7.7	6.1	9.2	7.4	5.9	*	*	*
South Dakota . . . . .	9.8	7.7	6.3	9.2	6.8	6.0	*	*	*
Nebraska . . . . .	8.5	8.3	7.3	8.1	7.9	7.0	*17.2	*14.2	*12.9
Kansas . . . . .	9.5	8.0	6.5	9.1	7.5	6.0	15.0	13.2	12.2
South Atlantic . . . . .	12.1	11.1	9.4	9.9	9.2	7.5	17.5	15.8	14.1
Delaware . . . . .	10.7	8.8	7.4	9.7	7.7	5.8	13.8	12.5	12.7
Maryland . . . . .	10.1	8.8	8.2	8.4	7.0	6.6	14.9	13.1	12.2
District of Columbia . . . . .	15.7	13.2	12.2	*8.6	*9.7	6.8	17.0	13.9	14.0
Virginia . . . . .	13.5	12.5	10.1	11.1	10.8	8.6	21.7	18.0	15.6
West Virginia . . . . .	11.0	9.3	7.9	10.6	9.2	7.8	*20.6	*13.5	*11.2
North Carolina . . . . .	12.1	10.1	8.5	9.9	8.3	7.2	17.0	14.2	11.9
South Carolina . . . . .	13.7	12.4	10.3	10.3	9.0	7.6	18.9	17.5	14.6
Georgia . . . . .	13.6	14.2	11.7	11.1	11.6	9.3	18.0	18.8	16.2
Florida . . . . .	10.6	9.9	8.4	8.8	8.5	6.7	15.7	14.1	13.7
East South Central . . . . .	12.5	10.5	9.1	10.1	8.6	7.3	19.1	15.6	13.8
Kentucky . . . . .	10.4	9.4	8.1	9.7	9.0	7.6	17.4	13.3	13.6
Tennessee . . . . .	11.5	8.8	7.0	10.2	7.7	6.1	16.3	12.8	9.7
Alabama . . . . .	12.6	11.3	10.6	9.7	8.9	8.2	18.1	15.7	15.2
Mississippi . . . . .	16.7	13.5	11.3	11.4	9.4	7.5	22.3	18.0	15.7
West South Central . . . . .	10.2	8.4	7.4	9.1	7.6	6.6	14.8	12.2	10.9
Arkansas . . . . .	11.3	8.7	7.9	9.3	7.3	6.8	17.6	12.9	11.2
Louisiana . . . . .	11.1	9.8	8.4	8.3	7.7	6.4	15.4	13.6	11.7
Oklahoma . . . . .	9.5	8.6	7.7	8.7	8.0	7.3	15.4	14.3	11.8
Texas . . . . .	9.9	7.9	7.0	9.3	7.5	6.6	13.5	10.6	10.2
Mountain . . . . .	9.4	8.0	6.9	9.1	7.8	6.7	15.7	13.2	10.7
Montana . . . . .	9.0	6.5	7.3	8.7	6.3	7.0	*	*	*
Idaho . . . . .	8.1	7.4	6.7	7.9	7.5	6.6	*	*	*
Wyoming . . . . .	10.0	8.3	6.9	10.0	8.5	6.8	*	*	*
Colorado . . . . .	12.2	9.8	8.3	12.1	9.6	8.1	17.9	15.0	11.5
New Mexico . . . . .	9.1	7.7	4.9	8.6	7.3	4.9	*15.4	*15.6	*6.2
Arizona . . . . .	8.6	7.8	6.5	8.2	7.3	6.2	*14.4	12.7	11.0
Utah . . . . .	8.0	7.1	6.7	8.0	7.0	6.7	*	*	*
Nevada . . . . .	8.1	8.0	7.2	7.5	7.6	6.8	*12.4	*12.0	10.4

See footnotes at end of table.



**Table 19 (page 2 of 2). Fetal death rates, according to race, geographic division, and State: United States, average annual 1975–77, 1980–82, and 1985–87**

[Data are based on the National Vital Statistics System]

Geographic division and State	All races			White			Black		
	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87	1975–77	1980–82	1985–87
	Fetal deaths <sup>1</sup> per 1,000 live births plus fetal deaths								
Pacific . . . . .	8.8	7.7	6.7	8.3	7.3	6.3	13.8	11.6	11.5
Washington . . . . .	8.0	7.4	5.9	7.9	7.3	5.8	13.5	12.4	9.4
Oregon . . . . .	8.4	6.8	6.2	8.3	6.8	6.3	*11.6	*9.2	*7.1
California . . . . .	8.8	7.7	6.7	8.2	7.4	6.3	13.9	11.5	11.8
Alaska . . . . .	8.2	7.4	6.7	7.8	6.8	6.1	*	*11.2	*7.1
Hawaii . . . . .	12.7	11.4	8.5	14.6	14.0	8.9	*15.2	*15.3	*11.6

<sup>1</sup>Deaths of fetuses of 20 weeks or more gestation.

\*Data for States with fewer than 5,000 live births for the 3-year period are considered unreliable. Data for States with fewer than 1,000 live births are considered highly unreliable and are not shown.

SOURCE: National Center for Health Statistics: Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics.

**Table 20. Infant mortality rates, perinatal mortality ratios, and average annual percent change: Selected countries, 1981 and 1986**

[Data are based on reporting by countries]

Country	Infant mortality rate			Perinatal mortality ratio		
	1981 <sup>1</sup>	1986 <sup>2</sup>	Average annual percent change	1981	1986 <sup>3</sup>	Average annual percent change
	Infant deaths per 1,000 live births			Perinatal deaths per 1,000 live births		
Japan	7.1	5.2	-6.0	10.8	7.3	-7.5
Finland	6.5	5.9	-1.9	7.9	6.4	-4.1
Sweden	6.9	5.9	-3.1	7.7	7.5	-0.5
Switzerland	7.6	6.8	-2.2	9.2	7.7	-3.5
Hong Kong	9.4	7.7	-3.9	10.9	8.3	-5.3
Netherlands	8.3	7.8	-1.2	10.8	9.8	-1.9
Canada	9.6	7.9	-3.8	10.8	8.5	-4.7
Norway	7.5	8.0	1.3	9.6	8.4	-2.6
France	9.7	8.0	-3.8	12.4	10.5	-3.3
Denmark	7.9	8.2	0.7	9.1	8.4	-1.6
Federal Republic of Germany	11.6	8.5	-6.0	10.6	7.6	-6.4
Spain	12.1	8.5	-6.8	14.6	11.9	-9.7
Ireland	10.3	8.7	-3.3	13.6	12.4	-2.3
Australia	10.0	8.9	-2.3	12.6	10.9	-2.9
Scotland	11.3	8.9	-4.7	11.7	10.2	-2.7
German Democratic Republic	12.3	9.2	-5.6	13.7	9.9	-7.8
Singapore	10.7	9.3	-2.8	12.7	10.3	-4.1
England and Wales	11.0	9.6	-2.7	11.9	9.6	-4.2
Italy	14.1	9.8	-7.0	16.8	13.5	-5.3
Northern Ireland	13.2	10.2	-5.0	15.5	9.5	-9.3
Austria	12.7	10.3	-4.1	12.0	9.2	-5.2
United States	11.9	10.4	-2.7	12.6	10.4	-3.8
New Zealand	11.8	11.4	-0.7	10.9	8.7	-4.4
Israel	15.6	11.4	-6.1	14.4	12.1	-5.6
Greece	16.3	12.3	-5.5	18.6	14.9	-5.4
Czechoslovakia	16.9	13.4	-4.5	16.4	12.4	-5.4
Cuba	18.5	13.6	-6.0	22.7	19.1	-3.4
Trinidad and Tobago	15.9	13.7	-3.7	13.0	---	---
Puerto Rico	18.5	13.7	-5.8	23.6	18.4	-4.9
Bulgaria	18.9	14.7	-4.9	13.4	11.9	-2.3
Kuwait	24.1	15.7	-8.2	19.9	18.7	-1.2
Portugal	21.8	15.9	-6.1	23.0	18.4	-4.4
Belgium	11.5	16.1	7.0	13.3	11.3	-5.3
Poland	20.6	17.5	-3.2	17.7	15.8	-2.2
Costa Rica	19.1	17.8	-1.4	---	---	---
Hungary	20.8	19.1	-1.7	21.2	18.3	-2.9
Chile	27.0	19.1	-6.7	17.8	14.1	-4.6
U.S.S.R.	25.1	25.1	0.0	---	---	---
Romania	28.6	25.6	-2.7	14.7	12.5	-4.0

<sup>1</sup>Data for the U.S.S.R. are for 1983.

<sup>2</sup>Data for Trinidad and Tobago are provisional for 1985; data for Romania are for 1985. Data for Spain are provisional.

<sup>3</sup>Data for the German Democratic Republic, Greece, Ireland, Italy, and Romania are for 1985; data for Belgium and Israel are for 1984; and data for Spain are for 1983.

NOTE: Rankings are from lowest to highest infant mortality rates based on the latest data available for countries or geographic areas with at least 1 million population and with "complete" counts of live births and infant deaths as indicated in the United Nations Demographic Yearbook, 1986.

SOURCES: World Health Organization: World Health Statistics Annuals. Vols. 1983-1988. Geneva. United Nations: Demographic Yearbook 1982 and 1986; Population and Vital Statistics Report. April 1, 1989. New York.

**Table 21 (page 1 of 2). Life expectancy at birth and at 65 years of age, according to sex: Selected countries, 1981 and 1986**

[Data are based on reporting by countries]

Country	At birth		At 65 years	
	1981 <sup>1</sup>	1986 <sup>2</sup>	1981 <sup>1</sup>	1986 <sup>2</sup>
Male				
Life expectancy in years				
Japan . . . . .	73.8	75.5	14.9	16.1
Greece . . . . .	73.5	74.1	15.4	15.4
Sweden . . . . .	73.1	74.0	14.4	14.9
Hong Kong . . . . .	73.4	73.8	15.8	14.9
Switzerland . . . . .	72.5	73.8	14.4	15.1
Israel . . . . .	72.8	73.4	14.7	14.9
Spain . . . . .	72.6	73.2	14.8	15.2
Netherlands . . . . .	72.8	73.1	14.1	14.1
Canada . . . . .	71.9	73.1	14.7	15.0
Australia . . . . .	71.4	73.0	14.0	14.9
Norway . . . . .	72.7	72.9	14.3	14.5
Cuba . . . . .	72.2	72.7	15.8	15.8
England and Wales . . . . .	71.2	72.6	13.1	13.9
Costa Rica . . . . .	71.0	72.0	14.8	14.2
Denmark . . . . .	71.4	71.9	13.7	14.1
Federal Republic of Germany . . . . .	70.2	71.9	13.1	13.8
Kuwait . . . . .	69.0	71.9	12.5	13.9
France . . . . .	70.9	71.8	14.3	14.7
Italy . . . . .	71.1	71.3	14.0	13.7
United States . . . . .	70.4	71.3	14.3	14.7
New Zealand . . . . .	70.5	71.1	13.5	13.9
Northern Ireland . . . . .	68.4	71.1	11.9	13.0
Austria . . . . .	69.3	71.0	13.0	14.0
Singapore . . . . .	69.1	71.0	12.6	13.4
Belgium . . . . .	70.0	70.9	13.0	13.6
Ireland . . . . .	70.1	70.8	12.5	12.4
Finland . . . . .	69.6	70.6	13.0	13.5
Puerto Rico . . . . .	70.8	70.2	16.1	15.0
Portugal . . . . .	68.2	70.2	13.2	14.1
Trinidad and Tobago . . . . .	---	70.2	---	15.0
Scotland . . . . .	69.1	70.1	12.2	12.6
German Democratic Republic . . . . .	69.0	69.5	12.3	12.4
Chile . . . . .	67.8	68.9	13.3	13.3
Bulgaria . . . . .	68.9	68.6	13.0	12.7
Czechoslovakia . . . . .	67.0	67.3	11.7	11.7
Romania . . . . .	66.8	67.1	12.9	12.8
Poland . . . . .	67.1	66.7	12.7	12.3
Hungary . . . . .	65.5	65.3	11.6	11.9
U.S.S.R . . . . .	---	64.2	---	12.3
Female				
Japan . . . . .	79.1	81.6	17.9	20.0
Switzerland . . . . .	79.4	80.6	18.5	19.4
Sweden . . . . .	79.3	80.2	18.2	19.0
France . . . . .	79.1	80.0	18.7	19.2
Norway . . . . .	79.5	79.9	18.4	19.0
Canada . . . . .	79.3	79.9	19.3	19.3
Netherlands . . . . .	79.6	79.8	18.8	18.9
Spain . . . . .	78.8	79.8	18.1	18.7
Australia . . . . .	78.7	79.6	18.4	18.9
Hong Kong . . . . .	79.4	79.2	19.4	18.2
Finland . . . . .	78.2	78.9	17.1	17.7
Greece . . . . .	78.0	78.9	17.5	17.7
Italy . . . . .	77.8	78.9	17.3	17.7
Federal Republic of Germany . . . . .	76.9	78.5	16.9	17.7
United States . . . . .	77.8	78.3	18.6	18.6
England and Wales . . . . .	77.2	78.3	17.2	17.9
Denmark . . . . .	77.6	77.8	17.9	18.1
Austria . . . . .	76.4	77.8	16.4	17.3
Belgium . . . . .	76.8	77.7	16.9	17.8
New Zealand . . . . .	77.0	77.5	17.5	17.8

See footnotes at end of table.

**Table 21 (page 2 of 2). Life expectancy at birth and at 65 years of age, according to sex: Selected countries, 1981 and 1986**

[Data are based on reporting by countries]

Country	At birth		At 65 years	
	1981 <sup>1</sup>	1986 <sup>2</sup>	1981 <sup>1</sup>	1986 <sup>2</sup>
Female—Con.				
Life expectancy in years				
Puerto Rico . . . . .	77.7	77.2	19.7	17.3
Northern Ireland . . . . .	75.0	77.2	15.7	16.9
Trinidad and Tobago . . . . .	---	77.2	---	17.3
Portugal . . . . .	75.2	77.1	16.2	17.3
Israel . . . . .	76.0	77.0	16.1	16.4
Costa Rica . . . . .	76.0	76.6	16.6	17.1
Ireland . . . . .	75.8	76.4	15.8	16.0
Singapore . . . . .	74.5	76.4	15.5	16.5
Scotland . . . . .	75.3	76.3	16.0	16.4
Cuba . . . . .	75.9	76.1	17.9	17.4
German Democratic Republic . . . . .	74.8	75.4	15.1	15.3
Chile . . . . .	74.7	75.4	16.8	16.5
Poland . . . . .	75.4	75.1	16.4	15.9
Kuwait . . . . .	73.8	74.9	15.2	15.4
Czechoslovakia . . . . .	74.5	74.8	15.0	15.0
Bulgaria . . . . .	74.4	74.7	15.1	14.9
Hungary . . . . .	73.0	73.3	14.8	15.1
U.S.S.R . . . . .	---	73.3	---	15.8
Romania . . . . .	72.4	72.7	14.7	14.7

<sup>1</sup>Data for Belgium are for 1979–1982; data for Costa Rica and Northern Ireland are for 1980; data for Chile and Kuwait are for 1982; and data for Switzerland are for 1981–1982.

<sup>2</sup>Data for Chile, the German Democratic Republic, Hong Kong, Italy, and Puerto Rico are for 1985; data for England and Wales and Northern Ireland are for 1987; data for Romania and Spain are for 1984; data for the U.S.S.R. are for 1985–1986; and data for Trinidad and Tobago are for 1983.

NOTES: Rankings are from highest to lowest life expectancy based on the latest available data for countries or geographic areas with at least 1 million population. This table is based on official mortality data from the country concerned, as submitted to the United Nations Demographic Yearbook or the World Health Statistics Annual.

SOURCES: World Health Organization: World Health Statistics Annuals. Vols. 1982–1985, 1987, and 1988. Geneva. United Nations: Demographic Yearbook 1985–1987. New York. National Center for Health Statistics: Vital Statistics of the United States, 1981, Vol. II, Mortality, Part A. DHHS Pub. No. (PHS) 86-1101. Public Health Service. Washington. U.S. Government Printing Office, 1986; Vital Statistics of the United States, 1986, Vol. II, Mortality, Part A. DHHS Pub. No. (PHS) 88-1122. Public Health Service. Washington. U.S. Government Printing Office, 1988.



**Table 22 (page 2 of 2). Death rates for all causes, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female	Deaths per 100,000 resident population								
All ages, age adjusted . . . . .	1,106.7	916.9	814.4	631.1	590.4	585.3	589.1	588.2	586.2
All ages, crude . . . . .	1,002.0	905.0	829.2	733.3	711.2	712.0	727.7	733.9	737.3
Under 1 year. . . . .	---	4,162.2	3,368.8	2,123.7	1,818.6	1,789.1	1,756.6	1,731.1	1,791.5
1–4 years . . . . .	---	173.3	129.4	84.4	73.6	72.2	70.3	76.5	73.5
5–14 years . . . . .	72.8	53.8	43.8	30.5	28.0	27.8	28.1	26.9	25.0
15–24 years . . . . .	213.1	107.5	111.9	70.5	65.6	61.6	59.5	64.3	67.9
25–34 years . . . . .	393.3	273.2	231.0	150.0	130.0	130.6	136.3	146.5	150.0
35–44 years . . . . .	758.1	568.5	533.0	323.9	276.1	285.7	278.4	290.2	295.9
45–54 years . . . . .	1,576.4	1,177.0	1,043.9	768.2	685.8	655.0	654.0	654.6	646.3
55–64 years . . . . .	3,089.4	2,510.9	1,986.2	1,561.0	1,526.3	1,489.7	1,501.7	1,469.8	1,445.0
65–74 years . . . . .	4,000.2	4,064.2	3,860.9	3,057.4	2,930.6	2,907.4	2,925.7	2,892.3	2,874.5
75–84 years . . . . .	---	6,730.0	6,691.5	6,212.1	6,064.6	6,184.1	6,252.0	6,148.8	6,145.7
85 years and over . . . . .	---	13,052.6	10,706.6	12,367.2	11,329.5	11,439.1	12,154.7	12,510.3	12,313.2

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTE: Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service, Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 23 (page 1 of 2). Age-adjusted death rates for selected causes of death, according to sex and race: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and cause of death</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Deaths per 100,000 resident population									
All races									
All causes . . . . .	840.5	760.9	714.3	585.8	550.5	545.9	546.1	541.7	535.5
Diseases of heart . . . . .	307.2	286.2	253.6	202.0	188.8	183.6	180.5	175.0	169.6
Ischemic heart disease . . . . .	---	---	---	149.8	135.2	129.7	125.5	118.8	113.9
Cerebrovascular diseases . . . . .	88.6	79.7	66.3	40.8	34.4	33.4	32.3	31.0	30.3
Malignant neoplasms . . . . .	125.3	125.8	129.8	132.8	132.6	133.5	133.6	133.2	132.9
Respiratory system . . . . .	12.8	19.2	28.4	36.4	37.9	38.4	38.8	39.0	39.7
Colorectal . . . . .	19.0	17.7	16.8	15.5	14.9	15.0	14.8	14.4	14.3
Prostate <sup>2</sup> . . . . .	13.4	13.1	13.3	14.4	14.6	14.5	14.6	15.0	14.9
Breast <sup>3</sup> . . . . .	22.2	22.3	23.1	22.7	22.7	23.2	23.2	23.1	22.9
Chronic obstructive pulmonary diseases . . . . .	4.4	8.2	13.2	15.9	17.4	17.7	18.7	18.8	18.7
Pneumonia and influenza . . . . .	26.2	28.0	22.1	12.9	11.8	12.2	13.4	13.5	13.1
Chronic liver disease and cirrhosis . . . . .	8.5	10.5	14.7	12.2	10.2	10.0	9.6	9.2	9.1
Diabetes mellitus . . . . .	14.3	13.6	14.1	10.1	9.9	9.5	9.6	9.6	9.8
Accidents and adverse effects . . . . .	57.5	49.9	53.7	42.3	35.3	35.0	34.7	35.2	34.6
Motor vehicle accidents . . . . .	23.3	22.5	27.4	22.9	18.5	19.1	18.8	19.4	19.5
Suicide . . . . .	11.0	10.6	11.8	11.4	11.4	11.6	11.5	11.9	11.7
Homicide and legal intervention . . . . .	5.4	5.2	9.1	10.8	8.6	8.4	8.3	9.0	8.6
Human immunodeficiency virus infection . . . . .	---	---	---	---	---	---	---	---	5.5
White male									
All causes . . . . .	963.1	917.7	893.4	745.3	698.4	689.9	688.7	679.8	668.2
Diseases of heart . . . . .	381.1	375.4	347.6	277.5	257.8	249.5	244.5	234.8	225.9
Ischemic heart disease . . . . .	---	---	---	218.0	195.7	187.0	180.8	169.9	161.7
Cerebrovascular diseases . . . . .	87.0	80.3	68.8	41.9	35.2	33.9	32.8	31.1	30.3
Malignant neoplasms . . . . .	130.9	141.6	154.3	160.5	158.9	159.0	159.2	158.8	158.4
Respiratory system . . . . .	21.6	34.6	49.9	58.0	58.0	58.4	58.2	58.0	58.6
Colorectal . . . . .	19.8	18.9	18.9	18.3	17.8	17.8	17.6	17.2	17.1
Prostate . . . . .	13.1	12.4	12.3	13.2	13.4	13.3	13.3	13.8	13.7
Chronic obstructive pulmonary diseases . . . . .	6.0	13.8	24.0	26.7	27.6	27.6	28.5	28.1	27.4
Pneumonia and influenza . . . . .	27.1	31.0	26.0	16.2	15.3	15.8	17.4	17.5	16.8
Chronic liver disease and cirrhosis . . . . .	11.6	14.4	18.8	15.7	13.4	13.2	12.6	12.2	12.1
Diabetes mellitus . . . . .	11.3	11.6	12.7	9.5	9.2	9.0	9.2	9.1	9.5
Accidents and adverse effects . . . . .	80.9	70.5	76.2	62.3	51.8	51.3	50.4	51.1	49.7
Motor vehicle accidents . . . . .	35.9	34.0	40.1	34.8	27.8	28.4	27.6	28.7	28.4
Suicide . . . . .	18.1	17.5	18.2	18.9	19.3	19.7	19.9	20.5	20.1
Homicide and legal intervention . . . . .	3.9	3.9	7.3	10.9	8.4	8.2	8.1	8.4	7.7
Human immunodeficiency virus infection . . . . .	---	---	---	---	---	---	---	---	8.3
Black male									
All causes . . . . .	1,373.1	1,246.1	1,318.6	1,112.8	1,019.6	1,011.7	1,024.0	1,026.9	1,023.2
Diseases of heart . . . . .	415.5	381.2	375.9	327.3	308.2	300.1	301.0	294.3	287.1
Ischemic heart disease . . . . .	---	---	---	196.0	175.8	168.5	164.9	153.9	150.8
Cerebrovascular diseases . . . . .	146.2	141.2	122.5	77.5	64.2	62.8	60.8	58.9	57.1
Malignant neoplasms . . . . .	126.1	158.5	198.0	229.9	232.2	234.9	231.6	229.0	227.9
Respiratory system . . . . .	16.9	36.6	60.8	82.0	83.3	85.9	84.4	83.9	84.2
Colorectal . . . . .	13.8	15.0	17.3	19.2	19.0	19.9	19.5	19.3	19.7
Prostate . . . . .	16.9	22.2	25.4	29.1	29.9	29.7	30.2	30.1	30.1
Chronic obstructive pulmonary diseases . . . . .	---	---	---	20.9	22.2	22.8	23.9	24.6	24.0
Pneumonia and influenza . . . . .	63.8	70.2	53.8	28.0	24.3	25.2	26.8	27.2	26.4
Chronic liver disease and cirrhosis . . . . .	8.8	14.8	33.1	30.6	22.8	22.5	23.4	20.8	22.0
Diabetes mellitus . . . . .	11.5	16.2	21.2	17.7	17.7	17.6	17.7	17.9	18.3
Accidents and adverse effects . . . . .	105.7	100.0	119.5	82.0	66.2	64.7	66.7	66.9	66.8
Motor vehicle accidents . . . . .	39.8	38.2	50.1	32.9	26.4	27.2	27.7	29.2	28.5
Suicide . . . . .	7.0	7.8	9.9	11.1	10.5	11.2	11.3	11.5	12.0
Homicide and legal intervention . . . . .	51.1	44.9	82.1	71.9	53.8	50.8	49.9	55.9	53.8
Human immunodeficiency virus infection . . . . .	---	---	---	---	---	---	---	---	25.4

See footnotes at end of table.

**Table 23 (page 2 of 2). Age-adjusted death rates for selected causes of death, according to sex and race: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and cause of death</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Deaths per 100,000 resident population									
White female									
All causes . . . . .	645.0	555.0	501.7	411.1	392.7	391.3	390.6	387.7	384.1
Diseases of heart. . . . .	223.6	197.1	167.8	134.6	126.7	124.0	121.7	119.0	116.3
Ischemic heart disease . . . . .	---	---	---	97.4	89.0	86.0	82.9	79.5	76.9
Cerebrovascular diseases. . . . .	79.7	68.7	56.2	35.2	29.6	28.9	27.9	27.1	26.3
Malignant neoplasms. . . . .	119.4	109.5	107.6	107.7	108.5	109.9	110.3	110.1	109.7
Respiratory system. . . . .	4.6	5.1	10.1	18.2	21.0	21.6	22.6	23.1	23.8
Colorectal . . . . .	19.0	17.0	15.3	13.3	12.5	12.8	12.3	12.0	11.8
Breast . . . . .	22.5	22.4	23.4	22.8	22.7	23.1	23.3	23.0	22.8
Chronic obstructive pulmonary diseases . . . . .	2.8	3.3	5.3	9.2	11.3	11.8	12.9	13.3	13.7
Pneumonia and influenza. . . . .	18.9	19.0	15.0	9.4	8.6	8.8	9.8	9.9	9.7
Chronic liver disease and cirrhosis . . . . .	5.8	6.6	8.7	7.0	6.0	5.9	5.6	5.4	5.1
Diabetes mellitus . . . . .	16.4	13.7	12.8	8.7	8.6	8.0	8.1	8.1	8.1
Accidents and adverse effects . . . . .	30.6	25.5	27.2	21.4	18.3	18.5	18.4	18.4	18.6
Motor vehicle accidents . . . . .	10.6	11.1	14.4	12.3	10.3	10.9	10.8	11.0	11.4
Suicide . . . . .	5.3	5.3	7.2	5.7	5.6	5.6	5.3	5.4	5.3
Homicide and legal intervention . . . . .	1.4	1.5	2.2	3.2	2.8	2.9	2.9	2.9	2.9
Human immunodeficiency virus infection . . . . .	---	---	---	---	---	---	---	---	0.6
Black female									
All causes . . . . .	1,106.7	916.9	814.4	631.1	590.4	585.3	589.1	588.2	586.2
Diseases of heart. . . . .	349.5	292.6	251.7	201.1	191.5	186.6	186.8	185.1	180.8
Ischemic heart disease . . . . .	---	---	---	116.1	106.8	102.6	100.8	97.0	93.6
Cerebrovascular diseases. . . . .	155.6	139.5	107.9	61.7	53.8	51.8	50.3	47.6	46.7
Malignant neoplasms. . . . .	131.9	127.8	123.5	129.7	129.8	131.0	130.4	132.1	132.0
Respiratory system. . . . .	4.1	5.5	10.9	19.5	22.0	21.4	22.5	23.3	24.3
Colorectal . . . . .	15.0	15.4	16.1	15.3	15.1	15.3	16.1	15.2	15.5
Breast . . . . .	19.3	21.3	21.5	23.3	24.4	26.1	25.3	25.8	26.5
Chronic obstructive pulmonary diseases . . . . .	---	---	---	6.3	7.6	8.1	8.7	8.9	9.5
Pneumonia and influenza. . . . .	50.4	43.9	29.2	12.7	10.2	11.3	12.4	13.1	12.2
Chronic liver disease and cirrhosis . . . . .	5.7	8.9	17.8	14.4	10.8	10.3	10.1	9.3	9.1
Diabetes mellitus . . . . .	22.7	27.3	30.9	22.1	21.1	20.5	21.1	21.4	21.3
Accidents and adverse effects . . . . .	38.5	35.9	35.3	25.1	21.9	20.1	20.7	21.0	21.0
Motor vehicle accidents . . . . .	10.3	10.0	13.8	8.4	7.5	7.6	8.2	8.5	8.7
Suicide . . . . .	1.7	1.9	2.9	2.4	2.1	2.3	2.1	2.4	2.1
Homicide and legal intervention . . . . .	11.7	11.8	15.0	13.7	11.2	11.0	10.8	11.8	12.3
Human immunodeficiency virus infection . . . . .	---	---	---	---	---	---	---	---	4.7

<sup>1</sup>Includes deaths of nonresidents of the United States.

<sup>2</sup>Male only.

<sup>3</sup>Female only.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics Rates in the United States, 1940–1960, by R. D. Grove and A. M. Hetzel. DHEW Pub. No. (PHS) 1677. Public Health Service, Washington, U.S. Government Printing Office, 1968; Unpublished data from the Division of Vital Statistics; Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service, Washington, U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.



**Table 24 (page 1 of 2). Crude death rates, numbers of deaths, and rank for selected causes of death, according to sex and race: United States, 1985-87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and cause of death</i>	1985	1986	1987	1985	1986	1987	1985	1986	1987
	Deaths per 100,000 resident population			Number			Rank		
<b>All races</b>									
All causes . . . . .	873.9	873.2	872.4	2,086,440	2,105,361	2,123,323	...	...	...
Diseases of heart . . . . .	323.0	317.5	312.4	771,169	765,490	760,353	1	1	1
Ischemic heart disease . . . . .	224.8	216.0	210.4	536,805	520,729	512,138	...	...	...
Cerebrovascular diseases . . . . .	64.1	62.1	61.6	153,050	149,643	149,835	3	3	3
Malignant neoplasms . . . . .	193.3	194.7	195.9	461,563	469,376	476,927	2	2	2
Respiratory system . . . . .	53.3	54.1	55.5	127,311	130,450	134,983	...	...	...
Colorectal . . . . .	23.6	23.2	23.1	56,451	55,816	56,334	...	...	...
Prostate <sup>1</sup> . . . . .	22.3	23.2	23.5	25,943	27,262	27,864	...	...	...
Breast <sup>2</sup> . . . . .	32.7	32.8	32.8	40,093	40,539	40,899	...	...	...
Chronic obstructive pulmonary diseases . . . . .	31.3	31.8	32.2	74,662	76,559	78,380	5	5	5
Pneumonia and influenza . . . . .	28.3	29.0	28.4	67,615	69,812	69,225	6	6	6
Chronic liver disease and cirrhosis . . . . .	11.2	10.9	10.8	26,767	26,159	26,201	9	9	9
Diabetes mellitus . . . . .	15.5	15.4	15.8	36,969	37,184	38,532	7	7	7
Accidents and adverse effects . . . . .	39.1	39.5	39.0	93,457	95,277	95,020	4	4	4
Motor vehicle accidents . . . . .	19.2	19.9	19.8	45,901	47,865	48,290	...	...	...
Suicide . . . . .	12.3	12.8	12.7	29,453	30,904	30,796	8	8	8
Homicide and legal intervention . . . . .	8.3	9.0	8.7	19,893	21,731	21,103	12	12	12
Human immunodeficiency virus infection . . . . .	---	---	5.5	<sup>3</sup> 6,040	<sup>3</sup> 10,900	13,468	19	16	15
<b>White male</b>									
All causes . . . . .	960.0	954.4	947.8	950,455	952,554	953,382	...	...	...
Diseases of heart . . . . .	358.9	348.6	340.1	355,374	347,967	342,063	1	1	1
Ischemic heart disease . . . . .	264.8	251.6	243.0	262,139	251,111	244,461	...	...	...
Cerebrovascular diseases . . . . .	52.5	50.5	49.9	51,965	50,365	50,237	4	4	4
Malignant neoplasms . . . . .	217.2	218.8	220.5	215,079	218,381	221,757	2	2	2
Respiratory system . . . . .	77.3	77.8	79.1	76,567	77,647	79,604	...	...	...
Colorectal . . . . .	25.0	24.6	24.8	24,782	24,593	24,901	...	...	...
Prostate . . . . .	21.7	22.8	23.0	21,472	22,708	23,169	...	...	...
Chronic obstructive pulmonary diseases . . . . .	43.5	43.4	43.0	43,074	43,341	43,290	5	5	5
Pneumonia and influenza . . . . .	29.3	29.9	29.1	29,028	29,891	29,284	6	6	6
Chronic liver disease and cirrhosis . . . . .	14.5	14.1	14.1	14,321	14,099	14,175	8	8	8
Diabetes mellitus . . . . .	12.9	12.8	13.5	12,758	12,788	13,553	9	9	9
Accidents and adverse effects . . . . .	54.4	55.0	53.6	53,856	54,864	53,936	3	3	3
Motor vehicle accidents . . . . .	28.2	29.2	28.8	27,894	29,163	29,017	...	...	...
Suicide . . . . .	21.5	22.3	22.1	21,256	22,270	22,188	7	7	7
Homicide and legal intervention . . . . .	8.2	8.6	7.9	8,122	8,567	7,979	12	11	12
Human immunodeficiency virus infection . . . . .	---	---	8.6	---	---	8,700	---	---	11
<b>Black male</b>									
All causes . . . . .	976.8	987.7	989.5	133,610	137,214	139,551	...	...	...
Diseases of heart . . . . .	285.0	281.3	276.1	38,982	39,076	38,934	1	1	1
Ischemic heart disease . . . . .	156.6	147.6	145.5	21,425	20,498	20,521	...	...	...
Cerebrovascular diseases . . . . .	58.5	57.1	55.7	8,000	7,938	7,852	4	4	4
Malignant neoplasms . . . . .	212.2	211.4	212.2	29,028	29,363	29,928	2	2	2
Respiratory system . . . . .	74.5	74.6	75.5	10,193	10,368	10,647	...	...	...
Colorectal . . . . .	18.3	18.5	18.7	2,504	2,564	2,642	...	...	...
Prostate . . . . .	31.2	31.4	31.8	4,273	4,358	4,488	...	...	...
Chronic obstructive pulmonary diseases . . . . .	23.1	23.8	23.5	3,154	3,302	3,319	8	8	8
Pneumonia and influenza . . . . .	26.8	27.6	26.9	3,664	3,836	3,795	6	6	6
Chronic liver disease and cirrhosis . . . . .	19.1	17.3	18.3	2,616	2,404	2,574	9	9	10
Diabetes mellitus . . . . .	16.3	16.5	16.9	2,230	2,295	2,388	10	10	11
Accidents and adverse effects . . . . .	64.0	65.0	64.9	8,752	9,035	9,159	3	3	3
Motor vehicle accidents . . . . .	26.7	28.6	27.7	3,659	3,974	3,913	...	...	...
Suicide . . . . .	10.8	11.1	11.6	1,481	1,537	1,635	13	14	14
Homicide and legal intervention . . . . .	48.4	55.0	53.3	6,616	7,634	7,518	5	5	5
Human immunodeficiency virus infection . . . . .	---	---	23.4	---	---	3,301	---	---	9

See footnotes at end of table.

**Table 24 (page 2 of 2). Crude death rates, numbers of deaths, and rank for selected causes of death, according to sex and race: United States, 1985-87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and cause of death</i>	1985	1986	1987	1985	1986	1987	1985	1986	1987
	Deaths per 100,000 resident population			Number			Rank		
<b>White female</b>									
All causes . . . . .	837.1	840.7	845.5	868,599	878,529	889,685	...	...	...
Diseases of heart. . . . .	320.7	319.0	317.1	332,778	333,396	333,669	1	1	1
Ischemic heart disease . . . . .	220.1	214.6	211.2	228,376	224,287	222,229	...	...	...
Cerebrovascular diseases. . . . .	78.1	76.2	75.8	81,067	79,641	79,810	3	3	3
Malignant neoplasms. . . . .	183.7	185.6	186.9	190,648	193,971	196,716	2	2	2
Respiratory system. . . . .	34.6	35.9	37.5	35,945	37,532	39,468	...	...	...
Colorectal . . . . .	24.7	24.2	24.0	25,620	25,249	25,212	...	...	...
Breast . . . . .	34.6	34.6	34.5	35,886	36,183	36,297	...	...	...
Chronic obstructive pulmonary diseases . . . . .	25.4	26.6	27.9	26,364	27,781	29,378	5	5	5
Pneumonia and influenza. . . . .	30.3	31.0	30.9	31,480	32,432	32,527	4	4	4
Chronic liver disease and cirrhosis . . . . .	7.6	7.5	7.2	7,871	7,817	7,591	10	11	11
Diabetes mellitus . . . . .	16.9	16.7	17.0	17,547	17,496	17,842	7	7	7
Accidents and adverse effects . . . . .	24.2	24.4	24.6	25,155	25,451	25,874	6	6	6
Motor vehicle accidents . . . . .	11.4	11.5	11.9	11,795	12,026	12,564	...	...	...
Suicide . . . . .	5.6	5.9	5.7	5,831	6,167	6,029	12	12	12
Homicide and legal intervention . . . . .	2.9	3.0	3.0	3,041	3,123	3,149	17	17	16
Human immunodeficiency virus infection . . . . .	---	---	0.6	---	---	628	---	---	24
<b>Black female</b>									
All causes . . . . .	727.7	733.9	737.3	110,597	113,112	115,263	...	...	...
Diseases of heart. . . . .	248.1	250.8	248.3	37,702	38,650	38,813	1	1	1
Ischemic heart disease . . . . .	136.4	134.3	131.4	20,736	20,703	20,549	...	...	...
Cerebrovascular diseases. . . . .	68.0	65.0	64.3	10,341	10,014	10,055	3	3	3
Malignant neoplasms. . . . .	143.9	146.7	147.8	21,878	22,616	23,099	2	2	2
Respiratory system. . . . .	23.3	24.3	25.4	3,536	3,744	3,975	...	...	...
Colorectal . . . . .	19.7	18.7	19.0	2,988	2,877	2,968	...	...	...
Breast . . . . .	25.6	26.2	27.2	3,896	4,045	4,252	...	...	...
Chronic obstructive pulmonary diseases . . . . .	9.9	10.1	11.1	1,505	1,554	1,733	11	11	11
Pneumonia and influenza. . . . .	17.6	18.6	17.7	2,674	2,864	2,770	7	6	6
Chronic liver disease and cirrhosis . . . . .	9.5	8.7	8.6	1,439	1,341	1,342	12	12	12
Diabetes mellitus . . . . .	25.5	26.0	26.3	3,874	4,004	4,109	4	4	4
Accidents and adverse effects . . . . .	22.7	23.0	23.1	3,455	3,550	3,618	5	5	5
Motor vehicle accidents . . . . .	8.3	8.5	8.8	1,257	1,313	1,374	...	...	...
Suicide . . . . .	2.1	2.3	2.1	314	355	328	19	19	19
Homicide and legal intervention . . . . .	11.0	12.1	12.6	1,666	1,861	1,969	9	9	10
Human immunodeficiency virus infection . . . . .	---	---	4.7	---	---	739	---	---	16

<sup>1</sup>Male only.  
<sup>2</sup>Female only.  
<sup>3</sup>Estimates.

NOTE: For data years shown, the code numbers for cause of death are based on the International Classification of Diseases, Ninth Revision, described in Appendix II, table V.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1985-87. Public Health Service, Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 25 (page 1 of 2). Years of potential life lost before age 65 for selected causes of death, according to sex and race: United States, 1980 and 1985-87**

[Data are based on the National Vital Statistics System]

Sex, race, and cause of death	Years lost in thousands				Years lost per 1,000 population under 65 years of age			
	1980	1985	1986	1987	1980	1985	1986	1987
All races								
All causes . . . . .	12,896	11,859	12,093	12,074	64.2	56.4	57.1	56.5
Diseases of heart . . . . .	1,691	1,577	1,557	1,520	8.4	7.5	7.3	7.1
Ischemic heart disease . . . . .	1,094	940	892	857	5.4	4.5	4.2	4.0
Cerebrovascular diseases . . . . .	283	251	246	248	1.4	1.2	1.2	1.2
Malignant neoplasms . . . . .	1,824	1,834	1,832	1,817	9.1	8.7	8.6	8.5
Respiratory system . . . . .	426	435	431	437	2.1	2.1	2.0	2.0
Colorectal . . . . .	138	136	133	138	0.7	0.6	0.6	0.6
Prostate <sup>1</sup> . . . . .	17	18	18	17	0.1	0.1	0.1	0.1
Breast <sup>2</sup> . . . . .	212	224	228	229	1.1	1.1	1.1	1.1
Chronic obstructive pulmonary diseases . . . . .	115	128	129	132	0.6	0.6	0.6	0.6
Pneumonia and influenza . . . . .	196	170	175	172	1.0	0.8	0.8	0.8
Chronic liver disease and cirrhosis . . . . .	292	238	232	235	1.5	1.1	1.1	1.1
Diabetes mellitus . . . . .	113	115	121	123	0.6	0.5	0.6	0.6
Accidents and adverse effects . . . . .	2,760	2,279	2,358	2,306	13.7	10.8	11.1	10.8
Motor vehicle accidents . . . . .	1,690	1,385	1,456	1,442	8.4	6.6	6.9	6.8
Suicide . . . . .	621	657	680	671	3.1	3.1	3.2	3.1
Homicide and legal intervention . . . . .	751	611	680	656	3.7	2.9	3.2	3.1
Human immunodeficiency virus infection . . . . .	---	---	---	363	---	---	---	1.7
White male								
All causes . . . . .	6,520	5,916	6,016	5,924	76.1	66.8	67.5	66.1
Diseases of heart . . . . .	1,010	914	892	864	11.8	10.3	10.0	9.6
Ischemic heart disease . . . . .	745	625	591	562	8.7	7.1	6.6	6.3
Cerebrovascular diseases . . . . .	105	92	89	90	1.2	1.0	1.0	1.0
Malignant neoplasms . . . . .	801	784	783	769	9.4	8.8	8.8	8.6
Respiratory system . . . . .	245	236	233	235	2.9	2.7	2.6	2.6
Colorectal . . . . .	63	63	61	63	0.7	0.7	0.7	0.7
Prostate . . . . .	13	13	14	14	0.2	0.1	0.2	0.2
Chronic obstructive pulmonary diseases . . . . .	55	56	57	57	0.6	0.6	0.6	0.6
Pneumonia and influenza . . . . .	76	69	72	69	0.9	0.8	0.8	0.8
Chronic liver disease and cirrhosis . . . . .	143	121	119	122	1.7	1.4	1.3	1.4
Diabetes mellitus . . . . .	45	48	50	53	0.5	0.5	0.6	0.6
Accidents and adverse effects . . . . .	1,774	1,420	1,464	1,408	20.7	16.0	16.4	15.7
Motor vehicle accidents . . . . .	1,115	870	918	893	13.0	9.8	10.3	10.0
Suicide . . . . .	436	468	487	476	5.1	5.3	5.5	5.3
Homicide and legal intervention . . . . .	313	243	260	237	3.7	2.7	2.9	2.6
Human immunodeficiency virus infection . . . . .	---	---	---	227	---	---	---	2.5
Black male								
All causes . . . . .	1,688	1,597	1,697	1,756	143.8	125.4	131.2	133.8
Diseases of heart . . . . .	195	197	199	196	16.6	15.4	15.4	14.9
Ischemic heart disease . . . . .	94	86	82	80	8.0	6.8	6.3	6.1
Cerebrovascular diseases . . . . .	41	37	38	37	3.5	2.9	2.9	2.8
Malignant neoplasms . . . . .	138	144	143	142	11.7	11.3	11.1	10.8
Respiratory system . . . . .	47	49	48	47	4.0	3.8	3.7	3.6
Colorectal . . . . .	9	10	10	11	0.8	0.8	0.8	0.8
Prostate . . . . .	4	4	4	4	0.3	0.3	0.3	0.3
Chronic obstructive pulmonary diseases . . . . .	13	14	15	16	1.1	1.1	1.2	1.2
Pneumonia and influenza . . . . .	37	32	32	34	3.2	2.5	2.5	2.6
Chronic liver disease and cirrhosis . . . . .	46	39	36	38	3.9	3.0	2.8	2.9
Diabetes mellitus . . . . .	12	13	14	14	1.0	1.0	1.1	1.1
Accidents and adverse effects . . . . .	271	238	253	257	23.1	18.7	19.6	19.6
Motor vehicle accidents . . . . .	120	113	124	122	10.2	8.8	9.6	9.3
Suicide . . . . .	38	42	43	46	3.3	3.3	3.4	3.5
Homicide and legal intervention . . . . .	267	213	250	249	22.8	16.7	19.3	19.0
Human immunodeficiency virus infection . . . . .	---	---	---	93	---	---	---	7.1

See footnotes at end of table.

**Table 25 (page 2 of 2). Years of potential life lost before age 65 for selected causes of death, according to sex and race: United States, 1980 and 1985-87**

[Data are based on the National Vital Statistics System]

Sex, race, and cause of death	Years lost in thousands				Years lost per 1,000 population under 65 years of age			
	1980	1985	1986	1987	1980	1985	1986	1987
<b>White female</b>								
All causes . . . . .	3,425	3,117	3,109	3,090	39.8	35.3	35.0	34.6
Diseases of heart . . . . .	345	325	321	317	4.0	3.7	3.6	3.5
Ischemic heart disease . . . . .	196	172	164	161	2.3	1.9	1.8	1.8
Cerebrovascular diseases . . . . .	96	82	80	80	1.1	0.9	0.9	0.9
Malignant neoplasms . . . . .	738	745	737	734	8.6	8.4	8.3	8.2
Respiratory system . . . . .	114	128	126	129	1.3	1.4	1.4	1.4
Colorectal . . . . .	55	51	50	50	0.6	0.6	0.6	0.6
Breast . . . . .	182	189	189	189	2.1	2.1	2.1	2.1
Chronic obstructive pulmonary diseases . . . . .	37	46	45	47	0.4	0.5	0.5	0.5
Pneumonia and influenza . . . . .	55	46	46	44	0.6	0.5	0.5	0.5
Chronic liver disease and cirrhosis . . . . .	68	52	50	48	0.8	0.6	0.6	0.5
Diabetes mellitus . . . . .	39	38	41	40	0.5	0.4	0.5	0.4
Accidents and adverse effects . . . . .	557	469	479	482	6.5	5.3	5.4	5.4
Motor vehicle accidents . . . . .	376	320	329	340	4.4	3.6	3.7	3.8
Suicide . . . . .	125	121	124	122	1.5	1.4	1.4	1.4
Homicide and legal intervention . . . . .	94	86	91	89	1.1	1.0	1.0	1.0
Human immunodeficiency virus infection . . . . .	---	---	---	17	---	---	---	0.2
<b>Black female</b>								
All causes . . . . .	1,015	951	983	1,010	79.3	69.0	70.3	71.3
Diseases of heart . . . . .	120	117	120	116	9.4	8.5	8.6	8.2
Ischemic heart disease . . . . .	49	44	43	41	3.8	3.2	3.1	2.9
Cerebrovascular diseases . . . . .	37	34	33	34	2.9	2.5	2.4	2.4
Malignant neoplasms . . . . .	124	128	135	136	9.7	9.3	9.7	9.6
Respiratory system . . . . .	17	19	19	20	1.3	1.4	1.4	1.4
Colorectal . . . . .	9	10	10	10	0.7	0.7	0.7	0.7
Breast . . . . .	27	32	36	37	2.1	2.3	2.6	2.6
Chronic obstructive pulmonary diseases . . . . .	8	10	10	11	0.7	0.7	0.7	0.8
Pneumonia and influenza . . . . .	24	19	21	20	1.8	1.4	1.5	1.4
Chronic liver disease and cirrhosis . . . . .	27	20	19	20	2.1	1.5	1.4	1.4
Diabetes mellitus . . . . .	14	14	15	14	1.1	1.0	1.0	1.0
Accidents and adverse effects . . . . .	92	84	90	89	7.2	6.1	6.4	6.3
Motor vehicle accidents . . . . .	38	39	41	43	3.0	2.8	2.9	3.0
Suicide . . . . .	9	8	9	9	0.7	0.6	0.7	0.7
Homicide and legal intervention . . . . .	63	55	62	65	4.9	4.0	4.4	4.6
Human immunodeficiency virus infection . . . . .	---	---	---	24	---	---	---	1.7

<sup>1</sup>Male only.  
<sup>2</sup>Female only.

NOTE: For data years shown, the code numbers for cause of death are based on the International Classification of Diseases, Ninth Revision, described in Appendix II, table V.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1980-87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 26 (page 1 of 2). Death rates for diseases of heart, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Deaths per 100,000 resident population									
All races									
All ages, age adjusted . . . . .	307.2	286.2	253.6	202.0	188.8	183.6	180.5	175.0	169.6
All ages, crude . . . . .	355.5	369.0	362.0	336.0	329.2	323.5	323.0	317.5	312.4
Under 1 year . . . . .	3.5	6.6	13.1	22.8	26.0	26.1	24.5	26.1	25.2
1–4 years . . . . .	1.3	1.3	1.7	2.6	2.5	2.4	2.1	2.5	2.2
5–14 years . . . . .	2.1	1.3	0.8	0.9	0.9	1.0	0.9	0.9	0.9
15–24 years . . . . .	6.8	4.0	3.0	2.9	2.6	2.7	2.8	2.8	2.8
25–34 years . . . . .	19.4	15.6	11.4	8.3	8.3	8.0	8.2	8.6	8.4
35–44 years . . . . .	86.4	74.6	66.7	44.6	39.3	38.7	38.0	37.5	35.6
45–54 years . . . . .	308.6	271.8	238.4	180.2	164.7	156.7	152.9	144.6	140.5
55–64 years . . . . .	808.1	737.9	652.3	494.1	463.0	450.3	439.1	424.2	408.8
65–74 years . . . . .	1,839.8	1,740.5	1,558.2	1,218.6	1,139.2	1,102.7	1,080.6	1,043.0	1,007.9
75–84 years . . . . .	4,310.1	4,089.4	3,683.8	2,993.1	2,816.3	2,748.6	2,712.6	2,637.5	2,560.0
85 years and over . . . . .	9,150.6	9,317.8	7,891.3	7,777.1	7,335.5	7,251.0	7,275.0	7,178.7	7,074.2
White male									
All ages, age adjusted . . . . .	381.1	375.4	347.6	277.5	257.8	249.5	244.5	234.8	225.9
All ages, crude . . . . .	433.0	454.6	438.3	384.0	370.9	361.8	358.9	348.6	340.1
Under 1 year . . . . .	4.1	6.9	12.0	22.5	24.1	24.6	23.8	26.0	24.8
1–4 years . . . . .	1.1	1.0	1.5	2.1	2.2	2.2	1.7	2.1	1.8
5–14 years . . . . .	1.7	1.1	0.8	0.9	0.9	0.9	0.8	0.9	0.9
15–24 years . . . . .	5.8	3.6	3.0	2.9	2.7	2.8	3.0	3.0	3.0
25–34 years . . . . .	20.1	17.6	12.3	9.1	9.6	9.2	9.2	9.5	9.3
35–44 years . . . . .	110.6	107.5	94.6	61.8	55.3	54.0	52.4	51.7	48.7
45–54 years . . . . .	423.6	413.2	365.7	269.8	243.0	231.2	224.4	208.8	201.6
55–64 years . . . . .	1,081.7	1,056.0	979.3	730.6	674.1	655.5	635.6	610.3	582.7
65–74 years . . . . .	2,308.3	2,297.9	2,177.2	1,729.7	1,603.6	1,533.0	1,501.0	1,440.9	1,378.0
75–84 years . . . . .	4,907.3	4,839.9	4,617.6	3,883.2	3,664.3	3,579.3	3,532.9	3,405.2	3,291.0
85 years and over . . . . .	9,950.5	10,135.8	8,818.0	8,958.0	8,503.4	8,416.4	8,396.3	8,138.4	8,030.6
Black male									
All ages, age adjusted . . . . .	415.5	381.2	375.9	327.3	308.2	300.1	301.0	294.3	287.1
All ages, crude . . . . .	348.4	330.6	330.3	301.0	288.5	282.2	285.0	281.3	276.1
Under 1 year . . . . .	---	13.9	33.5	42.8	54.5	48.4	46.7	49.8	45.7
1–4 years . . . . .	---	3.8	3.9	6.3	5.1	4.4	4.4	5.3	5.1
5–14 years . . . . .	6.4	3.0	1.4	1.3	1.5	1.5	1.5	1.4	1.6
15–24 years . . . . .	18.0	8.7	8.3	8.3	6.6	6.7	7.2	6.7	6.9
25–34 years . . . . .	51.9	43.1	41.6	30.3	27.5	27.5	29.1	29.3	26.9
35–44 years . . . . .	198.1	168.1	189.2	136.6	115.9	121.1	122.0	123.6	118.8
45–54 years . . . . .	624.1	514.0	512.8	433.4	398.2	384.6	382.4	365.1	362.8
55–64 years . . . . .	1,434.0	1,236.8	1,135.4	987.2	928.0	895.9	882.6	864.9	814.7
65–74 years . . . . .	2,140.1	2,281.4	2,237.8	1,847.2	1,804.5	1,734.7	1,738.4	1,673.1	1,659.7
75–84 years . . . . .	---	3,533.6	3,783.4	3,578.8	3,457.5	3,375.7	3,450.0	3,407.3	3,371.6
85 years and over . . . . .	---	6,037.9	5,367.6	6,819.5	5,907.9	6,015.9	6,098.5	6,268.7	6,050.7
White female									
All ages, age adjusted . . . . .	223.6	197.1	167.8	134.6	126.7	124.0	121.7	119.0	116.3
All ages, crude . . . . .	289.4	306.5	313.8	319.2	321.5	319.3	320.7	319.0	317.1
Under 1 year . . . . .	2.7	4.3	7.0	15.7	19.3	20.3	18.3	19.1	19.4
1–4 years . . . . .	1.1	0.9	1.2	2.1	2.1	2.0	1.6	2.1	1.7
5–14 years . . . . .	1.9	0.9	0.7	0.8	0.8	0.9	0.9	0.7	0.7
15–24 years . . . . .	5.3	2.8	1.7	1.7	1.6	1.8	1.7	1.6	1.7
25–34 years . . . . .	12.2	8.2	5.5	3.9	3.8	3.7	3.8	4.1	4.1
35–44 years . . . . .	40.5	28.6	23.9	16.4	14.5	14.1	14.3	13.8	13.1
45–54 years . . . . .	141.9	103.4	91.4	71.2	67.4	63.1	62.1	59.8	58.8
55–64 years . . . . .	460.2	383.0	317.7	248.1	237.5	231.6	225.8	221.4	217.1
65–74 years . . . . .	1,400.9	1,229.8	1,044.0	796.7	745.6	735.3	713.7	693.9	675.1
75–84 years . . . . .	3,925.2	3,629.7	3,143.5	2,493.6	2,332.4	2,273.1	2,233.3	2,180.2	2,120.7
85 years and over . . . . .	9,084.7	9,280.8	7,839.9	7,501.6	7,133.7	7,044.7	7,089.3	7,021.3	6,924.6

See footnote at end of table.

**Table 26 (page 2 of 2). Death rates for diseases of heart, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female	Deaths per 100,000 resident population								
All ages, age adjusted . . . . .	349.5	292.6	251.7	201.1	191.5	186.6	186.8	185.1	180.8
All ages, crude . . . . .	289.9	268.5	261.0	249.7	248.1	244.6	248.1	250.8	248.3
Under 1 year . . . . .	---	12.0	31.3	43.6	45.6	45.1	39.5	42.8	36.4
1–4 years . . . . .	---	2.8	4.2	4.4	3.6	4.3	5.2	4.8	4.4
5–14 years . . . . .	8.8	3.0	1.8	1.7	1.1	1.4	1.7	1.5	1.4
15–24 years . . . . .	19.8	10.0	6.0	4.6	4.4	4.3	4.6	4.6	4.4
25–34 years . . . . .	52.0	35.9	24.7	15.7	13.6	12.5	13.1	15.3	14.8
35–44 years . . . . .	185.0	125.3	99.8	61.7	53.0	52.8	50.4	50.1	46.5
45–54 years . . . . .	526.8	360.7	290.9	202.4	182.8	174.1	172.6	172.5	165.7
55–64 years . . . . .	1,210.7	952.3	710.5	530.1	517.7	499.6	500.4	479.0	469.9
65–74 years . . . . .	1,659.4	1,680.5	1,553.2	1,210.3	1,159.8	1,127.1	1,133.6	1,108.3	1,090.2
75–84 years . . . . .	---	2,926.9	2,964.1	2,707.2	2,660.1	2,618.9	2,606.0	2,623.5	2,566.3
85 years and over . . . . .	---	5,650.0	5,003.8	5,796.5	5,298.4	5,315.0	5,441.0	5,698.6	5,627.6

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics; Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 27 (page 1 of 2). Death rates for cerebrovascular diseases, according to sex, race, and age: United States, selected years 1950-87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
All races									
Deaths per 100,000 resident population									
All ages, age adjusted . . . . .	88.6	79.7	66.3	40.8	34.4	33.4	32.3	31.0	30.3
All ages, crude . . . . .	104.0	108.0	101.9	75.1	66.5	65.3	64.1	62.1	61.6
Under 1 year. . . . .	5.1	4.1	5.0	4.4	3.9	3.0	3.6	2.9	3.4
1-4 years . . . . .	0.9	0.8	1.0	0.5	0.4	0.4	0.3	0.3	0.4
5-14 years . . . . .	0.5	0.7	0.7	0.3	0.3	0.3	0.2	0.2	0.2
15-24 years . . . . .	1.6	1.8	1.6	1.0	0.8	0.8	0.8	0.7	0.6
25-34 years . . . . .	4.2	4.7	4.5	2.6	2.2	2.2	2.1	2.2	2.2
35-44 years . . . . .	18.7	14.7	15.6	8.5	7.3	7.5	7.2	7.1	7.0
45-54 years . . . . .	70.4	49.2	41.6	25.2	22.8	22.6	21.1	20.4	20.1
55-64 years . . . . .	195.3	147.3	115.8	65.2	57.6	55.8	54.3	53.0	52.2
65-74 years . . . . .	549.7	469.2	384.1	219.5	182.2	177.0	171.3	164.1	157.2
75-84 years . . . . .	1,499.6	1,491.3	1,254.2	788.6	652.7	626.2	605.8	573.8	562.6
85 years and over . . . . .	2,990.1	3,680.5	3,014.3	2,288.9	1,912.5	1,883.8	1,837.5	1,762.6	1,733.1
White male									
All ages, age adjusted . . . . .	87.0	80.3	68.8	41.9	35.2	33.9	32.8	31.1	30.3
All ages, crude . . . . .	100.5	102.7	93.5	63.3	55.5	53.8	52.5	50.5	49.9
Under 1 year. . . . .	5.9	4.3	4.5	3.8	4.0	2.6	3.7	2.5	3.6
1-4 years . . . . .	1.1	0.8	1.2	0.4	0.5	0.3	0.3	0.2	0.5
5-14 years . . . . .	0.5	0.7	0.8	0.2	0.2	0.2	0.2	0.2	0.2
15-24 years . . . . .	1.6	1.7	1.6	1.0	0.8	0.8	0.7	0.7	0.6
25-34 years . . . . .	3.4	3.5	3.2	2.0	1.9	1.8	1.8	1.8	1.8
35-44 years . . . . .	13.1	11.3	11.8	6.5	5.5	5.9	5.4	5.7	5.4
45-54 years . . . . .	53.7	40.9	35.6	21.7	19.1	19.3	18.0	16.5	16.7
55-64 years . . . . .	182.2	139.0	119.9	64.2	56.5	54.3	54.2	51.4	50.7
65-74 years . . . . .	569.7	501.0	420.0	240.4	197.1	190.4	183.7	171.4	165.4
75-84 years . . . . .	1,556.3	1,564.8	1,361.6	854.8	714.8	671.1	651.1	617.3	601.2
85 years and over . . . . .	3,127.1	3,734.8	3,018.1	2,236.9	1,862.9	1,846.4	1,747.8	1,697.0	1,663.1
Black male									
All ages, age adjusted . . . . .	146.2	141.2	122.5	77.5	64.2	62.8	60.8	58.9	57.1
All ages, crude . . . . .	122.0	122.9	108.8	73.1	61.3	60.0	58.5	57.1	55.7
Under 1 year. . . . .	---	8.5	12.3	11.2	7.5	8.2	9.8	8.0	5.9
1-4 years . . . . .	---	1.9	1.4	0.6	0.2	0.8	0.8	0.5	0.5
5-14 years . . . . .	0.7	0.9	0.8	0.5	0.4	0.6	0.1	0.2	0.3
15-24 years . . . . .	3.3	3.7	3.0	2.1	1.4	1.2	1.3	1.1	0.9
25-34 years . . . . .	12.0	12.8	14.6	7.7	5.9	5.7	5.7	6.1	5.4
35-44 years . . . . .	59.3	47.4	52.7	29.2	24.3	26.0	25.9	27.2	27.1
45-54 years . . . . .	211.9	166.1	136.1	82.1	74.1	72.9	70.6	68.2	67.5
55-64 years . . . . .	522.8	439.9	343.4	189.8	163.8	159.0	151.6	144.3	143.9
65-74 years . . . . .	783.6	899.2	780.1	472.8	388.0	379.8	358.9	337.8	318.5
75-84 years . . . . .	---	1,475.2	1,445.7	1,067.6	844.1	819.5	817.6	809.9	777.6
85 years and over . . . . .	---	2,700.0	1,963.1	1,873.2	1,479.4	1,395.2	1,363.1	1,350.7	1,339.1
White female									
All ages, age adjusted . . . . .	79.7	68.7	56.2	35.2	29.6	28.9	27.9	27.1	26.3
All ages, crude . . . . .	103.3	110.1	109.8	88.8	79.8	79.2	78.1	76.2	75.8
Under 1 year. . . . .	2.9	2.6	3.2	3.3	2.5	2.6	2.2	1.8	2.0
1-4 years . . . . .	0.6	0.5	0.6	0.4	0.2	0.3	0.3	0.2	0.3
5-14 years . . . . .	0.4	0.6	0.6	0.3	0.3	0.3	0.3	0.2	0.2
15-24 years . . . . .	1.2	1.4	1.1	0.7	0.7	0.6	0.7	0.6	0.6
25-34 years . . . . .	2.9	3.4	3.4	2.0	1.6	1.6	1.6	1.6	1.7
35-44 years . . . . .	13.6	10.1	11.5	6.7	5.6	5.6	5.3	5.0	5.1
45-54 years . . . . .	55.0	33.8	30.5	18.7	16.9	17.0	15.4	15.5	14.5
55-64 years . . . . .	156.9	103.0	78.1	48.7	42.6	42.0	39.7	40.1	38.7
65-74 years . . . . .	498.1	383.3	303.2	172.8	144.6	140.9	138.0	136.3	129.3
75-84 years . . . . .	1,471.3	1,444.7	1,176.8	730.3	602.0	580.9	559.4	530.7	524.0
85 years and over . . . . .	3,017.9	3,795.7	3,167.6	2,367.8	1,986.5	1,962.5	1,923.0	1,837.3	1,807.8

See footnote at end of table.

**Table 27 (page 2 of 2). Death rates for cerebrovascular diseases, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female	Deaths per 100,000 resident population								
All ages, age adjusted . . . . .	155.6	139.5	107.9	61.7	53.8	51.8	50.3	47.6	46.7
All ages, crude . . . . .	128.3	127.7	112.2	77.9	70.5	68.5	68.0	65.0	64.3
Under 1 year . . . . .	---	6.7	9.1	6.4	7.3	3.3	5.3	5.3	7.8
1–4 years . . . . .	---	1.3	1.4	0.5	0.5	0.5	0.5	0.4	0.6
5–14 years . . . . .	0.6	1.0	0.8	0.3	0.4	0.4	0.3	0.3	0.2
15–24 years . . . . .	4.2	3.4	3.0	1.7	1.6	1.7	1.5	1.0	1.1
25–34 years . . . . .	15.9	17.4	14.3	7.0	5.1	6.1	5.6	6.0	5.8
35–44 years . . . . .	75.0	57.4	49.1	21.6	20.1	19.2	19.3	18.5	17.5
45–54 years . . . . .	248.9	166.2	119.4	61.9	55.7	50.3	49.8	46.4	47.2
55–64 years . . . . .	567.7	452.0	272.4	138.7	126.0	112.6	111.3	109.4	108.7
65–74 years . . . . .	754.4	830.5	673.5	362.2	308.4	304.6	281.5	268.5	261.2
75–84 years . . . . .	---	1,413.1	1,338.3	918.6	786.7	803.4	775.4	710.7	685.7
85 years and over . . . . .	---	2,578.9	2,210.5	1,896.3	1,603.1	1,470.7	1,585.6	1,504.1	1,480.9

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.



**Table 28 (page 1 of 2). Death rates for malignant neoplasms, according to sex, race, and age: United States, selected years 1950-87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
All races									
Deaths per 100,000 resident population									
All ages, age adjusted . . . . .	125.3	125.8	129.8	132.8	132.6	133.5	133.6	133.2	132.9
All ages, crude . . . . .	139.8	149.2	162.8	183.9	189.3	191.8	193.3	194.7	195.9
Under 1 year. . . . .	8.7	7.2	4.7	3.2	3.6	3.1	3.0	2.6	2.7
1-4 years . . . . .	11.7	10.9	7.5	4.5	4.7	4.0	3.8	4.0	3.8
5-14 years . . . . .	6.7	6.8	6.0	4.3	3.9	3.6	3.5	3.4	3.3
15-24 years . . . . .	8.6	8.3	8.3	6.3	5.6	5.5	5.4	5.4	5.1
25-34 years . . . . .	20.0	19.5	16.5	13.7	12.8	13.0	13.1	13.1	12.4
35-44 years . . . . .	62.7	59.7	59.5	48.6	45.6	46.6	45.7	45.3	43.5
45-54 years . . . . .	175.1	177.0	182.5	180.0	172.2	170.5	169.1	165.7	164.3
55-64 years . . . . .	392.9	396.8	423.0	436.1	443.0	448.4	450.5	444.4	447.0
65-74 years . . . . .	692.5	713.9	751.2	817.9	829.3	835.1	838.3	847.0	843.6
75-84 years . . . . .	1,153.3	1,127.4	1,169.2	1,232.3	1,254.7	1,272.3	1,281.0	1,287.3	1,298.4
85 years and over . . . . .	1,451.0	1,450.0	1,320.7	1,594.6	1,583.4	1,604.0	1,591.5	1,612.0	1,618.0
White male									
All ages, age adjusted . . . . .	130.9	141.6	154.3	160.5	158.9	159.0	159.2	158.8	158.4
All ages, crude . . . . .	147.2	166.1	185.1	208.7	213.8	215.1	217.2	218.8	220.5
Under 1 year. . . . .	9.6	7.9	4.3	3.5	3.5	2.7	3.1	3.0	2.7
1-4 years . . . . .	13.1	13.1	8.5	5.4	5.3	4.4	4.4	4.7	4.1
5-14 years . . . . .	7.6	8.0	7.0	5.2	4.4	4.1	4.0	3.9	4.1
15-24 years . . . . .	9.9	10.3	10.6	7.8	6.7	6.8	6.5	6.8	6.0
25-34 years . . . . .	17.7	18.8	16.2	13.6	12.6	12.5	13.0	13.5	11.9
35-44 years . . . . .	44.5	46.3	50.1	41.1	38.3	38.5	39.5	37.7	36.7
45-54 years . . . . .	150.8	164.1	172.0	175.4	166.7	164.0	161.2	158.5	157.1
55-64 years . . . . .	409.4	450.9	498.1	497.4	499.5	504.5	508.4	504.3	509.8
65-74 years . . . . .	798.7	887.3	997.0	1,070.7	1,063.7	1,064.1	1,061.2	1,063.3	1,061.1
75-84 years . . . . .	1,367.6	1,413.7	1,592.7	1,779.7	1,805.3	1,806.9	1,820.1	1,827.0	1,826.6
85 years and over . . . . .	1,732.7	1,791.4	1,772.2	2,375.6	2,416.3	2,438.6	2,424.5	2,462.3	2,475.5
Black male									
All ages, age adjusted . . . . .	126.1	158.5	198.0	229.9	232.2	234.9	231.6	229.0	227.9
All ages, crude . . . . .	106.6	136.7	171.6	205.5	210.5	214.0	212.2	211.4	212.2
Under 1 year. . . . .	---	6.8	5.3	4.5	3.9	3.2	2.4	1.7	2.1
1-4 years . . . . .	---	7.9	7.6	5.1	4.7	3.5	3.3	3.1	4.3
5-14 years . . . . .	5.8	4.4	4.8	3.7	4.1	3.6	3.6	3.8	2.7
15-24 years . . . . .	7.9	9.7	9.4	8.1	5.6	6.4	6.4	6.3	6.5
25-34 years . . . . .	18.0	18.4	18.8	14.1	14.7	15.8	14.7	14.2	14.3
35-44 years . . . . .	55.7	72.9	81.3	73.8	70.7	74.4	71.2	71.4	64.9
45-54 years . . . . .	211.7	244.7	311.2	333.0	315.5	314.1	313.6	303.6	296.7
55-64 years . . . . .	490.8	579.7	689.2	812.5	821.6	841.7	803.3	776.0	767.3
65-74 years . . . . .	636.4	938.5	1,168.9	1,417.2	1,457.4	1,444.9	1,448.7	1,455.1	1,453.6
75-84 years . . . . .	---	1,053.3	1,624.8	2,029.6	2,196.8	2,226.3	2,238.3	2,249.2	2,329.5
85 years and over . . . . .	---	1,155.2	1,387.0	2,393.9	2,219.0	2,471.4	2,507.7	2,620.9	2,659.4
White female									
All ages, age adjusted . . . . .	119.4	109.5	107.6	107.7	108.5	109.9	110.3	110.1	109.7
All ages, crude . . . . .	139.9	139.8	149.4	170.3	177.9	181.7	183.7	185.6	186.9
Under 1 year. . . . .	7.8	6.8	5.4	2.7	3.5	2.9	3.0	2.4	3.0
1-4 years . . . . .	11.3	9.7	6.9	3.6	4.4	3.8	3.5	3.4	3.6
5-14 years . . . . .	6.3	6.2	5.4	3.7	3.4	3.0	3.1	3.1	2.8
15-24 years . . . . .	7.5	6.5	6.2	4.7	4.6	4.3	4.3	4.2	3.9
25-34 years . . . . .	20.9	18.8	16.3	13.5	12.3	12.8	12.6	12.1	12.3
35-44 years . . . . .	74.5	66.6	62.4	50.9	48.0	49.0	47.0	47.4	45.1
45-54 years . . . . .	185.8	175.7	177.3	166.4	160.0	160.0	160.6	155.6	154.9
55-64 years . . . . .	362.5	329.0	338.6	355.5	366.8	370.0	374.1	369.4	370.1
65-74 years . . . . .	616.5	562.1	554.7	605.2	627.4	638.6	645.3	658.7	654.0
75-84 years . . . . .	1,026.6	939.3	903.5	905.4	919.5	944.2	949.2	956.4	968.6
85 years and over . . . . .	1,348.3	1,304.9	1,126.6	1,266.8	1,265.7	1,284.3	1,270.9	1,283.6	1,291.0

See footnote at end of table.

**Table 28 (page 2 of 2). Death rates for malignant neoplasms, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female	Deaths per 100,000 resident population								
All ages, age adjusted . . . . .	131.9	127.8	123.5	129.7	129.8	131.0	130.4	132.1	132.0
All ages, crude . . . . .	111.8	113.8	117.3	136.5	140.7	142.9	143.9	146.7	147.8
Under 1 year . . . . .	---	6.7	3.3	3.0	3.3	2.5	4.3	2.8	1.8
1–4 years . . . . .	---	6.9	5.7	3.9	3.1	3.1	2.5	4.3	2.6
5–14 years . . . . .	3.9	4.8	4.0	3.4	3.6	3.3	3.0	2.9	3.0
15–24 years . . . . .	8.8	6.9	6.4	5.7	5.0	4.3	4.3	4.7	5.3
25–34 years . . . . .	34.3	31.0	20.9	18.3	17.3	16.5	17.0	17.8	15.8
35–44 years . . . . .	119.8	102.4	94.6	73.5	68.9	74.3	69.5	72.2	72.9
45–54 years . . . . .	277.0	254.8	228.6	230.2	217.8	215.1	208.1	215.3	214.5
55–64 years . . . . .	484.6	442.7	404.8	450.4	452.9	462.2	465.4	451.6	457.3
65–74 years . . . . .	477.3	541.6	615.8	662.4	694.2	685.8	694.2	717.5	703.4
75–84 years . . . . .	---	696.3	763.3	923.9	972.4	1,013.7	1,014.6	1,017.9	1,045.5
85 years and over . . . . .	---	728.9	791.5	1,159.9	1,132.6	1,154.9	1,228.8	1,254.5	1,256.6

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 29 (page 1 of 2). Death rates for malignant neoplasms of respiratory system, according to sex, race, and age: United States, selected years 1950-87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
All races									
Deaths per 100,000 resident population									
All ages, age adjusted . . . . .	12.8	19.2	28.4	36.4	37.9	38.4	38.8	39.0	39.7
All ages, crude . . . . .	14.1	22.2	34.2	47.9	51.3	52.3	53.3	54.1	55.5
Under 1 year . . . . .	0.1	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.1
1-4 years . . . . .	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
5-14 years . . . . .	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
15-24 years . . . . .	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
25-34 years . . . . .	0.9	1.1	1.0	0.8	0.7	0.7	0.8	0.7	0.8
35-44 years . . . . .	5.1	7.3	11.6	9.6	8.9	8.2	8.1	7.9	7.7
45-54 years . . . . .	22.9	32.0	46.2	56.5	54.6	53.9	52.8	51.7	51.6
55-64 years . . . . .	55.2	81.5	116.2	144.3	151.8	156.1	158.4	157.8	160.4
65-74 years . . . . .	69.3	117.2	174.6	243.1	258.7	262.7	268.0	271.7	278.1
75-84 years . . . . .	69.3	102.9	175.1	251.4	278.3	286.4	294.5	303.9	313.3
85 years and over . . . . .	64.0	79.1	113.5	184.5	191.6	199.3	202.0	214.9	221.8
White male									
All ages, age adjusted . . . . .	21.6	34.6	49.9	58.0	58.0	58.4	58.2	58.0	58.6
All ages, crude . . . . .	24.1	39.6	58.3	73.4	75.9	76.8	77.3	77.8	79.1
Under 1 year . . . . .	0.2	0.1	0.2	0.2	0.3	0.3	-	0.1	0.1
1-4 years . . . . .	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	-
5-14 years . . . . .	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-
15-24 years . . . . .	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
25-34 years . . . . .	1.2	1.6	1.4	0.9	0.7	0.8	0.7	0.9	0.9
35-44 years . . . . .	7.9	10.4	15.4	11.2	10.0	9.1	9.4	8.5	8.5
45-54 years . . . . .	39.1	53.0	67.6	74.3	68.7	67.8	65.2	63.7	63.5
55-64 years . . . . .	95.9	149.8	199.3	215.0	215.2	220.0	221.7	221.3	223.7
65-74 years . . . . .	119.4	225.1	344.8	418.4	420.7	421.3	419.1	417.0	422.9
75-84 years . . . . .	109.1	191.9	360.7	516.1	550.1	556.5	562.6	570.7	572.9
85 years and over . . . . .	102.7	133.9	221.8	391.5	435.9	446.8	459.1	477.5	495.4
Black male									
All ages, age adjusted . . . . .	16.9	36.6	60.8	82.0	83.3	85.9	84.4	83.9	84.2
All ages, crude . . . . .	14.3	31.1	51.2	70.8	72.6	75.5	74.5	74.6	75.5
Under 1 year . . . . .	-	0.4	0.4	0.4	0.4	1.1	0.3	-	0.7
1-4 years . . . . .	-	0.1	0.1	0.2	0.2	-	-	-	-
5-14 years . . . . .	0.1	0.0	0.1	0.0	0.0	0.0	0.0	-	-
15-24 years . . . . .	0.4	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2
25-34 years . . . . .	2.1	2.6	2.9	1.9	1.5	1.6	1.9	1.4	1.8
35-44 years . . . . .	9.4	20.7	32.6	26.9	23.0	23.6	22.8	22.3	19.6
45-54 years . . . . .	41.1	75.0	123.5	142.8	137.7	131.8	132.1	131.3	126.8
55-64 years . . . . .	78.8	161.8	250.3	340.3	346.2	373.0	352.1	337.3	333.3
65-74 years . . . . .	65.2	184.6	322.2	499.4	530.3	529.3	534.8	542.3	562.8
75-84 years . . . . .	---	126.3	290.6	499.6	536.8	576.5	581.3	606.5	629.9
85 years and over . . . . .	---	110.3	154.4	337.7	309.5	423.8	390.8	456.7	459.4
White female									
All ages, age adjusted . . . . .	4.6	5.1	10.1	18.2	21.0	21.6	22.6	23.1	23.8
All ages, crude . . . . .	5.4	6.4	13.1	26.5	31.5	32.8	34.6	35.9	37.5
Under 1 year . . . . .	-	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1
1-4 years . . . . .	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	0.1
5-14 years . . . . .	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
15-24 years . . . . .	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
25-34 years . . . . .	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6
35-44 years . . . . .	2.2	3.4	6.0	6.8	6.6	5.9	5.6	5.8	5.7
45-54 years . . . . .	6.5	9.8	22.1	33.9	35.3	35.6	36.0	34.9	35.0
55-64 years . . . . .	15.5	16.7	39.3	74.2	87.8	89.9	94.2	94.9	98.1
65-74 years . . . . .	27.2	26.5	45.4	108.1	132.3	139.2	149.1	156.0	161.1
75-84 years . . . . .	40.0	36.5	56.8	99.3	122.2	129.9	140.3	149.0	161.7
85 years and over . . . . .	44.0	45.2	57.4	96.8	96.7	102.5	102.1	113.8	117.6

See footnote at end of table.

**Table 29 (page 2 of 2). Death rates for malignant neoplasms of respiratory system, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female	Deaths per 100,000 resident population								
All ages, age adjusted . . . . .	4.1	5.5	10.9	19.5	22.0	21.4	22.5	23.3	24.3
All ages, crude . . . . .	3.4	4.9	10.1	19.3	22.3	21.9	23.3	24.3	25.4
Under 1 year . . . . .	—	—	—	0.4	—	—	0.4	—	—
1–4 years . . . . .	—	0.1	0.1	—	0.1	0.1	—	—	0.1
5–14 years . . . . .	—	0.1	—	0.0	0.0	0.0	0.0	—	0.0
15–24 years . . . . .	0.3	—	0.1	0.1	—	0.1	0.1	0.1	0.1
25–34 years . . . . .	1.2	0.8	0.5	0.8	0.7	0.6	1.0	0.6	0.4
35–44 years . . . . .	2.7	3.4	10.5	7.9	8.7	7.7	7.7	8.6	8.9
45–54 years . . . . .	8.8	12.8	25.3	46.4	45.4	42.4	40.7	42.8	43.9
55–64 years . . . . .	15.3	20.7	36.4	83.8	97.2	98.4	105.6	102.4	107.0
65–74 years . . . . .	16.4	20.7	49.3	91.7	110.6	106.1	118.9	130.9	136.5
75–84 years . . . . .	---	33.1	52.6	81.1	108.5	112.3	108.6	123.5	129.9
85 years and over . . . . .	---	44.7	47.6	90.5	96.9	86.5	112.2	102.1	110.5

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service, Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 30. Death rates for malignant neoplasm of breast for females, according to race and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Race and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Deaths per 100,000 resident population									
All races									
All ages, age adjusted . . . . .	22.2	22.3	23.1	22.7	22.7	23.2	23.2	23.1	22.9
All ages, crude . . . . .	24.7	26.1	28.4	30.6	31.6	32.5	32.7	32.8	32.8
Under 25 years . . . . .	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
25–34 years . . . . .	3.8	3.8	3.9	3.3	3.2	3.3	3.0	3.1	3.1
35–44 years . . . . .	20.8	20.2	20.4	17.9	16.6	18.5	17.5	18.3	17.5
45–54 years . . . . .	46.9	51.4	52.6	48.1	45.9	45.8	46.7	45.4	45.4
55–64 years . . . . .	70.4	70.8	77.6	80.5	81.9	82.0	83.6	80.9	80.7
65–74 years . . . . .	94.0	90.0	93.8	101.1	104.9	108.0	107.7	109.9	108.3
75–84 years . . . . .	139.8	129.9	127.4	126.4	130.9	136.2	137.7	136.2	137.8
85 years and over . . . . .	195.5	191.9	157.1	169.3	175.1	180.0	175.9	180.0	176.5
White									
All ages, age adjusted . . . . .	22.5	22.4	23.4	22.8	22.7	23.1	23.3	23.0	22.8
All ages, crude . . . . .	25.7	27.2	29.9	32.3	33.3	34.2	34.6	34.6	34.5
Under 25 years . . . . .	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
25–34 years . . . . .	3.7	3.6	3.7	3.0	3.0	3.1	2.8	2.7	2.9
35–44 years . . . . .	20.8	19.7	20.2	17.3	16.0	17.4	16.7	17.3	16.4
45–54 years . . . . .	47.1	51.2	53.0	48.1	45.3	45.3	46.5	44.4	44.3
55–64 years . . . . .	70.9	71.8	79.3	81.3	82.8	82.2	84.2	81.8	81.3
65–74 years . . . . .	96.3	91.6	95.9	103.7	106.9	110.1	110.0	112.4	110.6
75–84 years . . . . .	143.6	132.8	129.6	128.4	133.1	138.3	140.4	139.7	140.5
85 years and over . . . . .	204.2	199.7	161.9	171.7	178.6	183.7	178.9	182.7	179.2
Black									
All ages, age adjusted . . . . .	19.3	21.3	21.5	23.3	24.4	26.1	25.3	25.8	26.5
All ages, crude . . . . .	16.4	18.7	19.7	22.9	24.4	26.3	25.6	26.2	27.2
Under 25 years . . . . .	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.1
25–34 years . . . . .	4.9	6.1	5.9	5.3	4.6	5.0	4.4	5.6	4.7
35–44 years . . . . .	21.0	24.8	24.4	24.1	23.8	28.9	26.3	28.3	28.9
45–54 years . . . . .	46.5	54.4	52.0	52.7	55.3	55.5	54.4	59.1	60.1
55–64 years . . . . .	64.3	63.2	64.7	79.9	82.9	90.5	88.5	83.6	88.2
65–74 years . . . . .	67.0	72.3	77.3	84.3	95.0	100.1	99.3	100.5	101.0
75–84 years . . . . .	---	87.5	101.8	114.1	120.6	128.2	121.0	112.1	125.3
85 years and over . . . . .	---	92.1	112.1	149.9	143.4	149.6	152.5	162.1	162.5

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTE: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service, Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 31. Maternal mortality rates for complications of pregnancy, childbirth, and the puerperium, according to race and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Race and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
All races									
Deaths per 100,000 live births									
All ages, age adjusted . . . . .	73.7	32.1	21.5	9.4	7.9	7.3	7.6	7.0	6.1
All ages, crude . . . . .	83.3	37.1	21.5	9.2	8.0	7.8	7.8	7.2	6.6
Under 20 years . . . . .	70.7	22.7	18.9	7.6	5.4	6.3	6.9	5.9	5.1
20–24 years . . . . .	47.6	20.7	13.0	5.8	7.5	4.3	5.4	5.7	4.8
25–29 years . . . . .	63.5	29.8	17.0	7.7	6.6	6.9	6.4	5.8	5.3
30–34 years . . . . .	107.7	50.3	31.6	13.6	9.1	11.5	8.9	7.8	8.9
35 years and over <sup>2</sup> . . . . .	222.0	104.3	81.9	36.3	20.7	21.9	25.0	21.4	15.1
White									
All ages, age adjusted . . . . .	53.1	22.4	14.5	6.8	5.8	4.9	5.0	4.7	4.9
All ages, crude . . . . .	61.1	26.0	14.4	6.7	5.9	5.4	5.2	4.9	5.1
Under 20 years . . . . .	44.9	14.8	13.9	5.9	*4.4	*4.3	*4.3	*4.1	*5.4
20–24 years . . . . .	35.7	15.3	8.4	4.3	4.9	*2.0	3.4	3.7	3.9
25–29 years . . . . .	45.0	20.3	11.2	5.5	5.2	5.7	4.7	3.6	3.9
30–34 years . . . . .	75.9	34.3	18.8	9.4	6.0	7.8	5.2	5.2	6.0
35 years and over <sup>2</sup> . . . . .	174.1	73.9	59.6	25.8	17.3	16.0	17.8	16.1	11.8
Black									
All ages, age adjusted . . . . .	---	92.0	64.3	23.9	19.3	20.5	21.0	19.3	14.3
All ages, crude . . . . .	---	103.6	59.8	21.5	18.3	19.7	20.4	18.8	14.2
Under 20 years . . . . .	---	54.8	31.8	12.8	*7.0	*11.4	*12.1	*10.6	*4.1
20–24 years . . . . .	---	56.9	41.0	13.4	20.2	15.2	14.0	13.9	9.4
25–29 years . . . . .	---	92.8	63.8	21.4	16.0	15.6	18.4	19.3	14.3
30–34 years . . . . .	---	150.6	115.6	41.9	31.1	37.9	35.8	29.0	30.9
35 years and over <sup>2</sup> . . . . .	---	299.5	204.7	96.5	*41.4	*67.6	72.6	*58.6	*43.1

<sup>1</sup>Includes deaths of nonresidents of the United States.

<sup>2</sup>Rates computed by relating deaths of women 35 years and over to live births to women 35–49 years.

\*Based on fewer than 20 deaths.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Vital Statistics of the United States, Vol. I, Natality, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics; U.S. Bureau of the Census: Population estimates and projections. Current Population Reports. Series P-25, No. 499. Washington. U.S. Government Printing Office, May 1973.

**Table 32 (page 1 of 2). Death rates for motor vehicle accidents, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Deaths per 100,000 resident population									
All races									
All ages, age adjusted . . . . .	23.3	22.5	27.4	22.9	18.5	19.1	18.8	19.4	19.5
All ages, crude . . . . .	23.1	21.3	26.9	23.5	19.0	19.6	19.2	19.9	19.8
Under 1 year. . . . .	8.4	8.1	9.8	7.0	5.2	4.4	4.8	4.9	5.3
1–4 years . . . . .	11.5	10.0	11.5	9.2	7.5	6.9	7.1	7.0	6.8
5–14 years . . . . .	8.8	7.9	10.2	7.9	6.6	6.7	6.8	6.9	7.0
15–24 years . . . . .	34.4	38.0	47.2	44.8	35.1	36.7	36.1	39.0	37.8
25–34 years . . . . .	24.6	24.3	30.9	29.1	23.4	23.8	22.8	24.2	24.2
35–44 years . . . . .	20.3	19.3	24.9	20.9	16.8	17.1	17.1	16.6	17.3
45–54 years . . . . .	22.2	21.4	25.5	18.6	15.3	15.4	15.2	15.1	15.4
55–64 years . . . . .	29.2	25.1	27.9	17.4	14.7	15.7	15.5	15.1	15.6
65–74 years . . . . .	38.8	31.4	32.8	19.2	17.1	18.0	17.7	17.9	18.5
75–84 years . . . . .	52.7	41.8	43.5	28.1	26.0	28.2	27.6	28.8	29.3
85 years and over . . . . .	45.1	37.9	34.2	27.6	25.0	25.0	26.1	25.3	27.1
White male									
All ages, age adjusted . . . . .	35.9	34.0	40.1	34.8	27.8	28.4	27.6	28.7	28.4
All ages, crude . . . . .	35.1	31.5	39.1	35.9	28.5	29.1	28.2	29.2	28.8
Under 1 year. . . . .	9.1	8.8	9.1	7.0	5.7	3.9	4.5	4.1	4.3
1–4 years . . . . .	13.2	11.3	12.2	9.5	8.3	7.5	7.6	7.0	7.2
5–14 years . . . . .	12.0	10.3	12.6	9.8	8.4	8.4	8.5	8.7	9.1
15–24 years . . . . .	58.3	62.7	75.2	73.8	57.0	59.1	57.4	62.6	59.2
25–34 years . . . . .	39.1	38.6	47.0	46.6	37.0	37.3	35.5	37.3	36.8
35–44 years . . . . .	30.9	28.4	35.2	30.7	24.3	24.3	24.1	23.7	24.4
45–54 years . . . . .	31.6	29.7	34.6	26.3	21.2	21.7	20.9	20.8	20.6
55–64 years . . . . .	41.9	34.4	39.0	23.9	19.9	20.9	20.6	19.9	20.8
65–74 years . . . . .	59.1	45.5	46.2	25.8	22.5	24.0	21.7	22.4	24.0
75–84 years . . . . .	86.4	66.8	69.2	43.6	39.8	41.8	41.2	42.9	43.4
85 years and over . . . . .	79.3	61.9	65.5	57.3	54.7	52.6	56.4	51.6	58.6
Black male									
All ages, age adjusted . . . . .	39.8	38.2	50.1	32.9	26.4	27.2	27.7	29.2	28.5
All ages, crude . . . . .	37.2	33.1	44.3	31.1	25.2	26.4	26.7	28.6	27.7
Under 1 year. . . . .	---	6.8	10.6	7.8	3.6	5.7	5.9	8.0	8.3
1–4 years . . . . .	---	12.7	16.9	13.7	10.9	9.8	10.7	10.7	9.9
5–14 years . . . . .	9.7	10.4	16.1	10.5	8.5	8.7	8.9	9.6	9.2
15–24 years . . . . .	41.6	46.4	58.1	34.9	28.3	31.9	32.1	35.3	36.2
25–34 years . . . . .	57.4	51.0	70.4	44.9	35.9	36.8	37.2	41.7	38.2
35–44 years . . . . .	45.9	43.6	59.5	41.2	33.6	33.8	35.4	35.1	35.2
45–54 years . . . . .	49.9	48.1	61.4	39.1	32.4	28.5	29.9	31.4	32.4
55–64 years . . . . .	58.8	47.3	62.1	40.3	31.2	31.5	34.3	31.9	30.1
65–74 years . . . . .	48.5	46.1	54.9	41.8	29.6	35.5	30.0	27.2	31.2
75–84 years . . . . .	---	51.8	51.6	46.5	41.7	45.0	42.2	53.1	36.2
85 years and over . . . . .	---	58.6	45.7	34.0	28.6	57.1	36.9	62.7	40.6
White female									
All ages, age adjusted . . . . .	10.6	11.1	14.4	12.3	10.3	10.9	10.8	11.0	11.4
All ages, crude . . . . .	10.9	11.2	14.8	12.8	10.8	11.5	11.4	11.5	11.9
Under 1 year. . . . .	7.8	7.5	10.2	7.1	4.8	4.4	3.9	4.6	5.8
1–4 years . . . . .	10.1	8.3	9.6	7.7	6.0	5.4	5.7	6.0	5.9
5–14 years . . . . .	5.6	5.3	6.9	5.7	4.7	5.1	5.2	4.9	4.9
15–24 years . . . . .	12.6	15.6	22.7	23.0	18.8	20.1	20.1	21.5	21.7
25–34 years . . . . .	9.0	9.0	12.7	12.2	10.7	11.0	10.0	10.8	11.6
35–44 years . . . . .	8.1	8.9	12.3	10.6	8.8	9.4	9.4	8.4	9.3
45–54 years . . . . .	10.8	11.4	14.3	10.2	8.5	8.9	8.9	8.5	9.2
55–64 years . . . . .	15.0	15.3	16.1	10.5	9.3	10.3	9.9	9.6	10.4
65–74 years . . . . .	20.9	19.3	22.1	13.4	12.6	13.0	14.3	14.4	13.7
75–84 years . . . . .	25.4	23.8	28.1	19.0	17.9	20.6	19.9	20.5	22.0
85 years and over . . . . .	22.3	22.2	18.1	15.3	14.0	13.8	15.1	14.7	15.9

See footnote at end of table.

**Table 32 (page 2 of 2). Death rates for motor vehicle accidents, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female									
Deaths per 100,000 resident population									
All ages, age adjusted . . . . .	10.3	10.0	13.8	8.4	7.5	7.6	8.2	8.5	8.7
All ages, crude . . . . .	10.2	9.7	13.4	8.3	7.6	7.8	8.3	8.5	8.8
Under 1 year . . . . .	---	8.1	11.9	5.3	5.1	5.1	7.8	5.3	5.3
1–4 years . . . . .	---	8.8	12.6	9.5	8.0	6.9	6.8	6.9	7.5
5–14 years . . . . .	6.2	5.9	9.3	5.2	4.3	4.4	4.3	4.8	4.7
15–24 years . . . . .	11.5	9.9	13.4	8.0	8.6	8.4	9.1	9.1	9.5
25–34 years . . . . .	10.7	9.8	13.3	10.6	7.4	9.0	9.2	10.3	11.1
35–44 years . . . . .	11.1	11.0	16.1	8.3	7.3	8.6	9.1	8.7	9.2
45–54 years . . . . .	10.6	11.8	16.4	9.1	8.7	6.4	8.2	8.7	9.0
55–64 years . . . . .	14.0	14.0	17.0	9.3	8.1	8.5	9.5	10.9	8.8
65–74 years . . . . .	12.7	14.2	16.3	8.5	9.6	9.7	9.6	9.7	11.8
75–84 years . . . . .	---	8.8	14.4	11.1	15.1	13.7	15.0	10.0	10.9
85 years and over . . . . .	---	21.1	15.4	12.3	7.8	9.8	9.4	11.0	7.2

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.



**Table 33 (page 1 of 2). Death rates for homicide and legal intervention, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Deaths per 100,000 resident population									
All races									
All ages, age adjusted . . . . .	5.4	5.2	9.1	10.8	8.6	8.4	8.3	9.0	8.6
All ages, crude . . . . .	5.3	4.7	8.3	10.7	8.6	8.4	8.3	9.0	8.7
Under 1 year. . . . .	4.4	4.8	4.3	5.9	5.3	6.5	5.3	7.4	7.2
1–4 years . . . . .	0.6	0.7	1.9	2.5	2.3	2.4	2.4	2.7	2.3
5–14 years . . . . .	0.5	0.5	0.9	1.2	1.0	1.3	1.2	1.1	1.2
15–24 years . . . . .	6.3	5.9	11.7	15.6	12.4	12.0	12.1	14.2	14.0
25–34 years . . . . .	9.9	9.7	16.6	19.6	15.4	14.7	14.7	16.1	15.1
35–44 years . . . . .	8.8	8.1	13.7	15.1	11.8	11.3	11.3	11.4	10.8
45–54 years . . . . .	6.1	6.2	10.1	11.1	8.7	8.5	8.1	8.3	7.7
55–64 years . . . . .	4.0	4.2	7.1	7.0	6.1	5.8	5.7	5.4	5.5
65–74 years . . . . .	3.2	2.8	5.0	5.7	4.3	4.2	4.3	4.4	4.3
75–84 years . . . . .	2.6	2.4	4.0	5.2	4.9	4.4	4.3	4.6	4.8
85 years and over . . . . .	2.3	2.4	4.2	5.3	5.0	4.3	4.1	4.7	5.1
White male									
All ages, age adjusted . . . . .	3.9	3.9	7.3	10.9	8.4	8.2	8.1	8.4	7.7
All ages, crude . . . . .	3.9	3.6	6.8	10.9	8.6	8.3	8.2	8.6	7.9
Under 1 year. . . . .	4.3	3.8	2.9	4.3	3.3	4.9	3.7	5.4	6.0
1–4 years . . . . .	0.4	0.6	1.4	2.0	1.7	1.9	1.9	1.9	1.8
5–14 years . . . . .	0.4	0.4	0.5	0.9	0.9	0.9	1.1	0.9	0.8
15–24 years . . . . .	3.7	4.4	7.9	15.5	11.5	11.1	11.2	12.5	11.2
25–34 years . . . . .	5.4	6.2	13.0	18.9	14.9	14.1	13.9	14.6	13.2
35–44 years . . . . .	6.4	5.5	11.0	15.5	12.4	11.8	11.5	11.6	10.2
45–54 years . . . . .	5.5	5.0	9.0	11.9	9.1	9.4	8.6	8.6	8.3
55–64 years . . . . .	4.4	4.3	7.7	7.8	6.4	6.3	6.3	6.0	6.3
65–74 years . . . . .	4.1	3.4	5.6	6.9	4.6	4.2	4.5	4.3	4.2
75–84 years . . . . .	3.5	2.7	5.1	6.3	4.6	4.2	4.5	4.6	4.9
85 years and over . . . . .	1.8	2.7	6.4	6.4	5.6	5.3	3.9	4.4	5.4
Black male									
All ages, age adjusted . . . . .	51.1	44.9	82.1	71.9	53.8	50.8	49.9	55.9	53.8
All ages, crude . . . . .	47.3	36.6	67.6	66.6	51.4	48.7	48.4	55.0	53.3
Under 1 year. . . . .	---	10.3	14.3	18.6	14.0	20.1	16.0	22.5	19.4
1–4 years . . . . .	---	1.7	5.1	7.2	7.2	5.0	6.5	9.3	4.8
5–14 years . . . . .	1.8	1.4	4.2	2.9	3.1	3.2	3.2	3.2	4.3
15–24 years . . . . .	58.9	46.4	102.5	84.3	66.8	61.5	66.1	79.2	85.6
25–34 years . . . . .	110.5	92.0	158.5	145.1	102.0	96.2	94.3	108.0	98.9
35–44 years . . . . .	83.7	77.5	126.2	110.3	82.0	78.1	76.3	79.4	78.4
45–54 years . . . . .	54.6	54.8	100.5	83.8	57.8	57.1	51.1	56.3	46.0
55–64 years . . . . .	35.7	31.8	59.8	55.6	46.7	40.6	37.8	35.4	32.8
65–74 years . . . . .	18.7	19.1	40.6	33.9	28.1	30.3	27.6	30.0	28.0
75–84 years . . . . .	---	16.1	19.0	27.6	32.4	28.3	21.5	27.9	29.5
85 years and over . . . . .	---	10.3	19.6	17.0	27.0	28.6	16.9	25.4	29.0
White female									
All ages, age adjusted . . . . .	1.4	1.5	2.2	3.2	2.8	2.9	2.9	2.9	2.9
All ages, crude . . . . .	1.4	1.4	2.1	3.2	2.8	2.9	2.9	3.0	3.0
Under 1 year. . . . .	3.9	3.5	2.9	4.3	3.7	4.0	4.3	5.1	4.2
1–4 years . . . . .	0.6	0.5	1.2	1.5	1.2	1.7	1.6	1.4	1.5
5–14 years . . . . .	0.4	0.3	0.5	1.0	0.7	0.9	0.8	0.8	0.8
15–24 years . . . . .	1.3	1.5	2.7	4.7	3.7	4.3	3.6	4.3	3.9
25–34 years . . . . .	1.9	2.0	3.4	4.3	4.1	3.9	4.4	4.4	4.6
35–44 years . . . . .	2.2	2.2	3.2	4.1	3.5	3.4	3.6	3.5	3.5
45–54 years . . . . .	1.6	1.9	2.2	3.0	2.9	2.7	2.9	2.8	2.7
55–64 years . . . . .	1.3	1.5	2.0	2.1	2.2	2.2	2.3	1.9	1.9
65–74 years . . . . .	1.1	1.1	1.7	2.5	2.0	1.9	2.2	2.2	2.4
75–84 years . . . . .	1.2	1.2	2.5	3.3	3.1	2.9	3.1	3.1	3.1
85 years and over . . . . .	1.9	1.5	1.9	4.0	3.8	2.6	3.2	3.3	3.8

See footnote at end of table.

**Table 33 (page 2 of 2). Death rates for homicide and legal intervention, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female	Deaths per 100,000 resident population								
All ages, age adjusted . . . . .	11.7	11.8	15.0	13.7	11.2	11.0	10.8	11.8	12.3
All ages, crude . . . . .	11.5	10.4	13.3	13.5	11.3	11.2	11.0	12.1	12.6
Under 1 year. . . . .	---	13.8	10.7	12.8	15.3	16.4	10.3	17.0	18.7
1–4 years . . . . .	---	1.7	6.3	6.4	6.3	6.7	6.3	6.8	7.2
5–14 years . . . . .	1.2	1.0	2.0	2.2	1.4	3.1	2.0	2.3	2.0
15–24 years . . . . .	16.5	11.9	17.7	18.4	15.7	14.8	14.2	16.2	17.7
25–34 years . . . . .	26.6	24.9	25.6	25.8	19.9	19.3	19.8	21.9	22.4
35–44 years . . . . .	17.8	20.5	25.1	17.7	14.8	14.4	14.8	14.8	14.4
45–54 years . . . . .	8.5	12.7	17.5	12.5	9.5	7.5	9.0	8.5	10.5
55–64 years . . . . .	3.6	6.8	8.1	8.9	6.3	6.7	6.4	6.8	7.6
65–74 years . . . . .	3.4	3.3	7.7	8.6	7.0	6.8	7.2	8.7	6.9
75–84 years . . . . .	---	2.5	5.7	6.7	11.3	9.8	7.6	8.6	10.4
85 years and over . . . . .	---	2.6	9.8	8.5	8.5	7.5	11.5	13.1	10.5

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 34 (page 1 of 2). Death rates for suicide, according to sex, race, and age: United States, selected years 1950-87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Deaths per 100,000 resident population									
All races									
All ages, age adjusted . . . . .	11.0	10.6	11.8	11.4	11.4	11.6	11.5	11.9	11.7
All ages, crude . . . . .	11.4	10.6	11.6	11.9	12.1	12.4	12.3	12.8	12.7
Under 1 year . . . . .	...	...	...	...	...	...	...	...	...
1-4 years . . . . .	...	...	...	...	...	...	...	...	...
5-14 years . . . . .	0.2	0.3	0.3	0.4	0.6	0.7	0.8	0.8	0.7
15-24 years . . . . .	4.5	5.2	8.8	12.3	11.9	12.5	12.9	13.1	12.9
25-34 years . . . . .	9.1	10.0	14.1	16.0	15.8	15.5	15.2	15.7	15.4
35-44 years . . . . .	14.3	14.2	16.9	15.4	14.6	15.1	14.6	15.2	15.0
45-54 years . . . . .	20.9	20.7	20.0	15.9	16.2	16.2	15.6	16.4	15.9
55-64 years . . . . .	27.0	23.7	21.4	15.9	16.5	17.3	16.7	17.0	16.6
65-74 years . . . . .	29.3	23.0	20.8	16.9	17.7	18.8	18.5	19.7	19.4
75-84 years . . . . .	31.1	27.9	21.2	19.1	22.3	22.0	24.1	25.2	25.8
85 years and over . . . . .	28.8	26.0	19.0	19.2	19.0	18.4	19.1	20.8	22.1
White male									
All ages, age adjusted . . . . .	18.1	17.5	18.2	18.9	19.3	19.7	19.9	20.5	20.1
All ages, crude . . . . .	19.0	17.6	18.0	19.9	20.6	21.3	21.5	22.3	22.1
Under 1 year . . . . .	...	...	...	...	...	...	...	...	...
1-4 years . . . . .	...	...	...	...	...	...	...	...	...
5-14 years . . . . .	0.3	0.5	0.5	0.7	0.9	1.1	1.3	1.2	1.2
15-24 years . . . . .	6.6	8.6	13.9	21.4	20.6	22.0	22.7	23.6	22.7
25-34 years . . . . .	13.8	14.9	19.9	25.6	26.2	25.8	25.4	26.4	25.6
35-44 years . . . . .	22.4	21.9	23.3	23.5	23.2	23.7	23.5	23.9	23.9
45-54 years . . . . .	34.1	33.7	29.5	24.2	25.5	25.3	25.1	26.3	25.4
55-64 years . . . . .	45.9	40.2	35.0	25.8	27.4	28.8	28.6	28.7	28.7
65-74 years . . . . .	53.2	42.0	38.7	32.5	33.2	35.6	35.3	37.6	36.8
75-84 years . . . . .	61.9	55.7	45.5	45.5	52.5	52.0	57.1	58.9	60.9
85 years and over . . . . .	61.9	61.3	45.8	52.8	56.8	55.8	60.3	66.3	71.9
Black male									
All ages, age adjusted . . . . .	7.0	7.8	9.9	11.1	10.5	11.2	11.3	11.5	12.0
All ages, crude . . . . .	6.3	6.4	8.0	10.3	9.9	10.6	10.8	11.1	11.6
Under 1 year . . . . .	...	...	...	...	...	...	...	...	...
1-4 years . . . . .	...	...	...	...	...	...	...	...	...
5-14 years . . . . .	—	0.1	0.1	0.3	0.5	0.5	0.6	0.8	0.8
15-24 years . . . . .	4.9	4.1	10.5	12.3	11.5	11.2	13.3	11.5	12.9
25-34 years . . . . .	9.3	12.4	19.2	21.8	19.1	20.7	19.6	21.3	21.1
35-44 years . . . . .	10.4	12.8	12.6	15.6	14.0	16.5	14.9	17.5	17.9
45-54 years . . . . .	10.4	10.8	13.8	12.0	12.1	11.6	13.5	12.8	13.0
55-64 years . . . . .	16.5	16.2	10.6	11.7	11.6	13.4	11.5	9.9	10.3
65-74 years . . . . .	10.0	11.3	8.7	11.1	13.6	13.8	15.8	16.1	17.6
75-84 years . . . . .	---	6.6	8.9	10.5	15.8	15.1	15.6	16.0	20.9
85 years and over . . . . .	---	6.9	8.7	18.9	12.7	11.1	7.7	17.9	13.0
White female									
All ages, age adjusted . . . . .	5.3	5.3	7.2	5.7	5.6	5.6	5.3	5.4	5.3
All ages, crude . . . . .	5.5	5.3	7.1	5.9	5.9	5.9	5.6	5.9	5.7
Under 1 year . . . . .	...	...	...	...	...	...	...	...	...
1-4 years . . . . .	...	...	...	...	...	...	...	...	...
5-14 years . . . . .	0.1	0.1	0.1	0.2	0.3	0.3	0.5	0.3	0.3
15-24 years . . . . .	2.7	2.3	4.2	4.6	4.6	4.7	4.7	4.7	4.6
25-34 years . . . . .	5.2	5.8	9.0	7.5	7.2	6.6	6.4	6.2	6.3
35-44 years . . . . .	8.2	8.1	13.0	9.1	8.2	8.4	7.7	8.3	7.9
45-54 years . . . . .	10.5	10.9	13.5	10.2	9.9	10.0	9.0	9.6	9.4
55-64 years . . . . .	10.7	10.9	12.3	9.1	9.1	9.1	8.4	9.0	8.4
65-74 years . . . . .	10.6	8.8	9.6	7.0	7.9	7.8	7.3	7.7	7.6
75-84 years . . . . .	8.4	9.2	7.2	5.7	6.6	6.8	7.0	8.0	7.5
85 years and over . . . . .	8.9	6.1	5.8	5.8	5.3	5.1	4.7	5.0	4.8

See footnote at end of table.

**Table 34 (page 2 of 2). Death rates for suicide, according to sex, race, and age: United States, selected years 1950–87**

[Data are based on the National Vital Statistics System]

<i>Sex, race, and age</i>	1950 <sup>1</sup>	1960 <sup>1</sup>	1970	1980	1983	1984	1985	1986	1987
Black female	Deaths per 100,000 resident population								
All ages, age adjusted . . . . .	1.7	1.9	2.9	2.4	2.1	2.3	2.1	2.4	2.1
All ages, crude . . . . .	1.5	1.6	2.6	2.2	2.0	2.2	2.1	2.3	2.1
Under 1 year . . . . .	...	...	...	...	...	...	...	...	...
1–4 years . . . . .	...	...	...	...	...	...	...	...	...
5–14 years . . . . .	–	0.0	0.2	0.1	0.6	0.2	0.2	0.2	0.2
15–24 years . . . . .	1.8	1.3	3.8	2.3	2.7	2.4	2.0	2.3	2.5
25–34 years . . . . .	2.6	3.0	5.7	4.1	2.9	3.5	3.0	3.8	4.0
35–44 years . . . . .	2.0	3.0	3.7	4.6	3.5	3.2	3.6	2.8	2.9
45–54 years . . . . .	3.5	3.1	3.7	2.8	3.0	3.5	3.2	3.2	2.2
55–64 years . . . . .	1.1	3.0	2.0	2.3	1.7	3.1	2.2	4.2	1.8
65–74 years . . . . .	1.9	2.3	2.9	1.7	1.3	2.5	2.0	2.8	2.5
75–84 years . . . . .	---	1.3	1.7	1.4	1.3	0.5	4.5	2.6	2.3
85 years and over . . . . .	---	–	2.8	–	2.3	0.8	1.4	–	–

<sup>1</sup>Includes deaths of nonresidents of the United States.

NOTES: For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: National Center for Health Statistics: Vital Statistics of the United States, Vol. II, Mortality, Part A, for data years 1950–87. Public Health Service. Washington. U.S. Government Printing Office; Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from table 1.

**Table 35. Deaths for selected occupational diseases for males, according to age: United States, selected years 1970-87**

[Data are based on the National Vital Statistics System]

<i>Age and cause of death</i>	1970	1975	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
25 years and over												
	Number of deaths <sup>1</sup>											
Malignant neoplasm of peritoneum and pleura (mesothelioma) . . . . .	602	591	557	559	552	556	576	584	584	571	564	575
Coalworkers' pneumoconiosis . . . . .	1,155	973	840	918	977	1,053	954	926	923	947	882	823
Asbestosis . . . . .	25	43	64	86	96	98	99	128	131	130	180	195
Silicosis . . . . .	351	243	162	220	202	165	176	149	160	138	135	153
25-64 years												
Malignant neoplasm of peritoneum and pleura (mesothelioma) . . . . .	308	280	254	246	241	229	234	211	211	210	200	196
Coalworkers' pneumoconiosis . . . . .	294	188	116	130	136	116	116	88	97	89	71	71
Asbestosis . . . . .	17	22	31	29	30	21	26	30	25	29	37	32
Silicosis . . . . .	90	64	50	51	49	44	42	37	34	30	22	32
65 years and over												
Malignant neoplasm of peritoneum and pleura (mesothelioma) . . . . .	294	311	303	313	311	327	342	373	373	361	364	379
Coalworkers' pneumoconiosis . . . . .	861	785	724	788	841	937	838	838	826	858	811	752
Asbestosis . . . . .	8	21	33	57	66	77	73	98	106	101	143	163
Silicosis . . . . .	261	179	112	169	153	121	134	112	126	108	113	121

<sup>1</sup>This table classifies deaths according to underlying cause. Multiple cause of death data from the Vital Statistics System can be used to identify additional deaths for which occupational disease is a nonunderlying cause of death rather than the underlying cause. In 1985 and 1986 among men 25 years and over the numbers of additional deaths for which occupational disease is a nonunderlying cause are shown below.

<i>Nonunderlying cause of death</i>	1985	1986
Malignant neoplasm of peritoneum and pleura (mesothelioma) . . . . .	102	106
Coalworkers' pneumoconiosis . . . . .	1,652	1,536
Asbestosis . . . . .	382	494
Silicosis . . . . .	187	175

NOTE: Selection of occupational diseases based on definitions in D. Rutstein et al.: Sentinel health events (occupational): A basis for physician recognition and public health surveillance, Am. J. Public Health 73(9): 1054-1062, Sept. 1983. For data years shown, the code numbers for cause of death are based on the then current International Classification of Diseases, which are described in Appendix II, tables IV and V. Changes in number of deaths from 1978 to 1979 may be affected by changes in coding from the Eighth Revision to the Ninth Revision.

SOURCES: Data computed by the National Institute for Occupational Safety and Health from data compiled by the Division of Vital Statistics, National Center for Health Statistics; Data computed by the Division of Epidemiology and Health Promotion from data compiled by the Division of Vital Statistics.

**Table 36. Provisional death rates for all causes, according to race, sex, and age: United States, 1986-88**

[Data are based on a 10-percent sample of death certificates from the National Vital Statistics System]

Sex and age	All races			White			Black		
	1986	1987	1988	1986	1987	1988	1986	1987	1988
Deaths per 100,000 resident population									
Both sexes									
All ages, age adjusted . . . . .	540.2	536.2	536.3	518.2	514.0	513.4	768.7	767.1	769.9
All ages, crude . . . . .	870.8	874.0	883.0	895.4	900.2	910.0	842.1	843.6	853.9
Under 1 year. . . . .	1,036.7	1,006.5	1,001.9	877.3	836.9	818.4	1,952.1	2,001.7	2,030.4
1-4 years . . . . .	50.8	51.6	50.7	45.7	49.1	47.6	80.2	68.1	66.1
5-14 years . . . . .	26.4	25.6	26.2	24.5	24.2	23.9	36.9	35.7	38.7
15-24 years . . . . .	102.6	101.6	104.8	99.6	98.3	98.8	124.0	128.6	143.3
25-34 years . . . . .	130.2	131.4	133.6	114.5	116.0	115.6	252.4	248.7	266.5
35-44 years . . . . .	212.5	211.8	217.6	187.0	183.2	188.7	440.7	467.2	476.9
45-54 years . . . . .	504.6	498.9	486.4	460.2	454.2	441.4	923.7	913.3	908.9
55-64 years . . . . .	1,259.0	1,246.8	1,246.3	1,201.9	1,187.9	1,193.9	1,934.9	1,922.3	1,859.7
65-74 years . . . . .	2,787.8	2,763.6	2,731.2	2,734.8	2,711.3	2,679.4	3,634.5	3,609.4	3,587.3
75-84 years . . . . .	6,316.4	6,266.1	6,324.4	6,287.0	6,243.7	6,305.2	7,209.8	7,209.9	7,257.6
85 years and over . . . . .	15,291.1	15,405.7	15,577.7	15,503.3	15,698.5	15,888.0	13,563.4	12,868.8	13,206.1
Male									
All ages, age adjusted . . . . .	707.1	698.6	699.8	680.7	671.0	670.5	1,003.4	1,005.4	1,018.4
All ages, crude . . . . .	937.8	935.1	944.2	955.3	951.6	960.3	964.0	973.1	988.4
Under 1 year. . . . .	1,156.7	1,122.7	1,121.5	989.7	938.7	937.5	2,140.4	2,218.0	2,196.7
1-4 years . . . . .	56.1	58.4	56.2	51.0	54.2	51.7	84.0	85.1	82.8
5-14 years . . . . .	32.0	31.8	30.5	29.9	30.1	29.0	44.2	45.6	39.1
15-24 years . . . . .	151.5	150.5	154.0	146.3	145.3	144.4	189.9	194.9	214.2
25-34 years . . . . .	189.9	189.1	196.0	167.3	166.7	169.6	379.0	370.3	404.9
35-44 years . . . . .	286.7	290.4	296.2	250.8	251.1	254.7	635.9	673.5	703.9
45-54 years . . . . .	666.8	638.0	636.5	607.4	577.7	573.0	1,282.1	1,244.4	1,294.3
55-64 years . . . . .	1,647.9	1,625.8	1,624.2	1,579.8	1,554.7	1,557.4	2,499.5	2,473.5	2,415.9
65-74 years . . . . .	3,660.4	3,635.7	3,583.2	3,615.5	3,585.7	3,533.8	4,561.7	4,592.0	4,527.3
75-84 years . . . . .	8,296.8	8,206.1	8,243.2	8,304.9	8,200.1	8,234.6	9,103.4	9,238.8	9,360.3
85 years and over . . . . .	18,167.9	18,037.2	18,475.2	18,536.5	18,456.4	18,933.7	15,507.5	14,956.5	15,342.9
Female									
All ages, age adjusted . . . . .	405.4	404.5	403.5	387.0	386.9	385.8	585.0	579.9	574.9
All ages, crude . . . . .	807.2	815.9	825.0	838.3	851.0	861.8	732.3	726.7	732.6
Under 1 year. . . . .	911.5	883.8	876.3	758.2	729.7	692.8	1,759.9	1,780.9	1,860.1
1-4 years . . . . .	45.2	44.4	44.9	40.2	43.7	43.3	76.2	50.5	48.8
5-14 years . . . . .	20.6	19.1	21.7	18.8	18.1	18.5	29.3	25.6	38.4
15-24 years . . . . .	52.7	51.7	54.5	51.6	50.0	52.0	59.9	64.0	74.1
25-34 years . . . . .	70.4	73.6	71.2	60.6	64.2	60.5	139.7	140.1	142.8
35-44 years . . . . .	140.4	135.4	141.0	123.7	115.7	123.0	277.5	295.0	286.9
45-54 years . . . . .	351.5	367.3	344.3	318.6	335.0	314.2	633.7	644.4	596.3
55-64 years . . . . .	913.7	909.6	909.4	862.8	857.8	865.7	1,471.4	1,465.6	1,399.1
65-74 years . . . . .	2,098.3	2,070.4	2,051.4	2,035.6	2,012.4	1,993.0	2,955.7	2,879.4	2,887.1
75-84 years . . . . .	5,132.7	5,102.4	5,166.6	5,087.4	5,075.9	5,145.3	6,060.5	5,979.6	5,997.8
85 years and over . . . . .	14,154.2	14,376.5	14,451.7	14,327.7	14,641.8	14,727.8	12,671.2	11,921.1	12,259.5

NOTE: Includes deaths of nonresidents of the United States.

SOURCES: National Center for Health Statistics: Annual summary of births, marriages, divorces, and deaths, United States, 1987. Monthly Vital Statistics Report. Vol. 36, No. 13. DHHS Pub. No. (PHS) 88-1120. July 29, 1988; Annual summary of births, marriages, divorces, and deaths, United States, 1988. Monthly Vital Statistics Report. Vol. 37, No. 13. DHHS Pub. No. (PHS) 89-1120. July 26, 1989. Public Health Service. Hyattsville, Md.

**Table 37. Provisional age-adjusted death rates for selected causes of death: United States, 1986-88**

[Data are based on a 10-percent sample of death certificates from the National Vital Statistics System]

<i>Cause of death</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>
	Deaths per 100,000 resident population		
All causes . . . . .	540.2	536.2	536.3
Diseases of heart. . . . .	175.4	169.9	166.7
Ischemic heart disease . . . . .	119.6	114.0	110.4
Cerebrovascular diseases. . . . .	30.4	30.1	29.8
Malignant neoplasms. . . . .	132.5	133.1	133.3
Respiratory system. . . . .	38.3	39.3	40.6
Breast <sup>1</sup> . . . . .	23.4	23.0	23.3
Chronic obstructive pulmonary diseases . . . . .	18.5	18.7	19.2
Pneumonia and influenza. . . . .	13.6	13.2	14.2
Chronic liver disease and cirrhosis . . . . .	9.2	9.0	9.0
Diabetes mellitus . . . . .	9.4	9.6	9.9
Accidents and adverse effects . . . . .	35.5	34.6	35.1
Motor vehicle accidents . . . . .	19.8	19.7	20.1
Suicide. . . . .	12.0	11.7	11.3
Homicide and legal intervention . . . . .	8.8	8.4	9.0
Human immunodeficiency virus infection. . . . .	---	5.3	6.5

<sup>1</sup>Female only.

NOTES: Includes deaths of nonresidents of the United States. Code numbers for cause of death are based on the International Classification of Diseases, Ninth Revision, described in Appendix II, table V.

SOURCES: National Center for Health Statistics: Annual summary of births, marriages, divorces, and deaths, United States, 1986. Monthly Vital Statistics Report. Vol. 35, No. 13. DHHS Pub. No. (PHS) 87-1120. Aug. 24, 1987; Annual summary of births, marriages, divorces, and deaths, United States, 1987. Monthly Vital Statistics Report. Vol. 36, No. 13. DHHS Pub. No. (PHS) 88-1120. July 29, 1988; Annual summary of births, marriages, divorces, and deaths, United States, 1988. Monthly Vital Statistics Report. Vol. 37, No. 13. DHHS Pub. No. (PHS) 89-1120. July 26, 1989. Public Health Service, Hyattsville, Md. Figure for breast cancer was computed by Division of Analysis.

**Table 38. Provisional death rates for the 3 leading causes of death, according to age: United States, 1986–88**

[Data are based on a 10-percent sample of death certificates from the National Vital Statistics System]

<i>Cause of death and age</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>
Diseases of heart			
Deaths per 100,000 resident population			
All ages . . . . .	318.7	313.4	312.2
Under 1 year . . . . .	29.2	23.9	23.6
1–14 years . . . . .	1.3	1.3	1.4
15–24 years . . . . .	2.4	2.9	2.8
25–34 years . . . . .	7.6	7.5	7.3
35–44 years . . . . .	36.9	34.4	33.0
45–54 years . . . . .	142.8	140.7	131.4
55–64 years . . . . .	430.9	408.9	405.6
65–74 years . . . . .	1,047.6	1,019.5	985.6
75–84 years . . . . .	2,649.2	2,556.3	2,554.4
85 years and over . . . . .	7,169.2	7,122.1	7,119.1
Malignant neoplasms			
All ages . . . . .	193.3	196.1	198.6
Under 1 year . . . . .	1.6	3.7	1.3
1–14 years . . . . .	3.6	3.7	3.5
15–24 years . . . . .	5.4	5.1	5.0
25–34 years . . . . .	12.2	12.5	10.8
35–44 years . . . . .	46.3	44.4	44.3
45–54 years . . . . .	164.1	164.5	157.2
55–64 years . . . . .	447.1	448.5	456.5
65–74 years . . . . .	841.0	845.8	845.4
75–84 years . . . . .	1,261.4	1,282.8	1,324.8
85 years and over . . . . .	1,602.3	1,631.7	1,664.5
Cerebrovascular diseases			
All ages . . . . .	61.3	61.3	61.1
Under 1 year . . . . .	1.3	2.4	1.0
1–14 years . . . . .	0.2	0.2	0.1
15–24 years . . . . .	0.6	0.9	0.9
25–34 years . . . . .	2.1	2.2	2.1
35–44 years . . . . .	7.0	6.6	7.1
45–54 years . . . . .	19.7	20.8	20.4
55–64 years . . . . .	51.0	51.8	51.9
65–74 years . . . . .	162.4	153.4	155.7
75–84 years . . . . .	566.2	563.0	544.4
85 years and over . . . . .	1,750.0	1,734.2	1,710.3

NOTES: Includes deaths of nonresidents of the United States. Code numbers for cause of death are based on the International Classification of Diseases, Ninth Revision, described in Appendix II, table V.

SOURCES: National Center for Health Statistics: Annual summary of births, marriages, divorces, and deaths, United States, 1987. Monthly Vital Statistics Report. Vol. 36, No. 13. DHHS Pub. No. (PHS) 88-1120. July 29, 1988; Annual summary of births, marriages, divorces, and deaths, United States, 1988. Monthly Vital Statistics Report. Vol. 37, No. 13. DHHS Pub. No. (PHS) 89-1120. July 26, 1989. Public Health Service. Hyattsville, Md.



**Table 39. Progress toward 1990 health promotion goals: United States, selected years 1977–87**

1990 goals	1977	1979	1980	1982	1983	1984	1985	1986	1987	1990 goal
Deaths per 1,000 live births										
<b>Infants (under 1 year)</b>										
To continue to improve infant health and, by 1990, to reduce infant mortality by at least 35 percent to fewer than 9 deaths per 1,000 live births . . . . .	14.1	13.1	12.6	11.5	11.2	10.8	10.6	10.4	10.1	9
Deaths per 100,000 population										
<b>Children (1–14 years)</b>										
To improve child health, foster optimal childhood development and, by 1990, reduce deaths among children ages 1 to 14 years by at least 20 percent to fewer than 34 per 100,000 . . . . .	42.3	40.1	38.5	36.7	35.3	34.1	33.8	33.7	33.3	34
<b>Adolescents and young adults (15–24 years)</b>										
To improve the health and health habits of adolescents and young adults and, by 1990, to reduce deaths among people ages 15 to 24 by at least 20 percent to fewer than 93 per 100,000 . . . . .	114.8	114.8	115.4	101.0	96.0	96.8	95.9	102.3	99.4	93
<b>Adults (25–64 years)</b>										
To improve the health of adults and, by 1990, to reduce deaths among people ages 25 to 64 by at least 25 percent to fewer than 400 per 100,000 . . . . .	532.9	500.2	498.0	462.3	452.8	443.5	438.7	431.0	423.4	400
Restricted-activity days per person										
<b>Older adults (65 years and over)</b>										
To improve the health and quality of life for older adults and, by 1990, to reduce the average annual number of days of restricted activity due to acute and chronic conditions by 20 percent, to fewer than 30 days per year for people aged 65 and older <sup>1</sup> . . . . .	36.5	41.9	39.2	31.6	32.1	31.8	33.1	32.1	30.3	30
Bed-disability days per person										
To reduce the average annual number of days of bed disability due to acute and chronic conditions by 20 percent, to fewer than 12 days per year for people aged 65 and over <sup>1</sup> . . . . .	14.5	13.7	13.8	14.7	16.7	15.1	13.7	14.9	14.0	12

<sup>1</sup>Levels of estimates for 1982–87 may not be comparable to estimates for previous years because the 1982–87 data are based on a revised questionnaire and field procedures.

SOURCES: Office of the Assistant Secretary for Health and Surgeon General: *Healthy People—The Surgeon General's Report on Health Promotion and Disease Prevention*, 1979. DHEW Pub. No. (PHS) 79-55071. Public Health Service, Washington. U.S. Government Printing Office, 1979; National Center for Health Statistics: *Vital Statistics of the United States, Vol. II, Mortality, Part A*, for data years 1977–87. Public Health Service, Washington. U.S. Government Printing Office; Data computed by Division of Analysis from data compiled by Division of Vital Statistics and from table 1; Division of Health Interview Statistics: Current estimates from the National Health Interview Survey: United States, 1987. *Vital and Health Statistics, Series 10, No. 166*. DHHS Pub. No. (PHS) 88-1594. Public Health Service, Washington. U.S. Government Printing Office, Sept. 1988.

**Table 40. Vaccinations of children 1–4 years of age for selected diseases, according to race and residence in metropolitan statistical area (MSA): United States, 1970, 1976, and 1983–85**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Vaccination and year	Total	Race		Inside MSA		Outside MSA
		White	All other	Central city	Remaining areas	
All respondents						
Percent of population						
<b>Measles:</b>						
1970	57.2	60.4	41.9	55.2	61.7	54.3
1976	65.9	68.3	54.8	62.5	67.2	67.3
1983	64.9	66.8	57.2	60.4	66.3	66.7
1984	62.8	65.4	52.0	56.6	63.3	66.4
1985	60.8	63.6	48.8	55.5	63.3	61.9
<b>Rubella:</b>						
1970	37.2	38.3	31.8	38.3	39.2	34.3
1976	61.7	63.8	51.5	59.5	63.5	61.5
1983	64.0	66.3	54.7	59.5	65.2	66.0
1984	60.9	63.9	48.3	56.1	60.4	64.6
1985	58.9	61.6	47.7	53.9	61.0	60.3
<b>DTP:<sup>1,2</sup></b>						
1970	76.1	79.7	58.8	68.9	80.7	77.1
1976	71.4	75.3	53.2	64.1	75.7	72.9
1983	65.7	70.1	47.7	55.4	69.4	69.4
1984	65.7	69.1	51.3	57.9	66.6	69.8
1985	64.9	68.7	48.7	55.5	68.4	67.9
<b>Polio:<sup>2</sup></b>						
1970	65.9	69.2	50.1	61.0	70.8	64.7
1976	61.6	66.2	39.9	53.8	65.3	63.9
1983	57.0	61.9	36.7	47.7	60.3	60.3
1984	54.8	58.4	39.9	48.7	55.2	58.5
1985	55.3	58.9	40.1	47.1	58.4	58.0
<b>Mumps:</b>						
1970	---	---	---	---	---	---
1976	48.3	50.3	38.7	45.6	50.7	47.9
1983	59.5	61.8	50.0	52.6	60.2	63.6
1984	58.7	61.3	47.7	51.8	58.3	63.5
1985	58.9	61.8	47.0	52.4	61.0	61.4
Respondents consulting vaccination records, 1985 <sup>3</sup>						
Measles	76.9	78.1	67.2	73.5	76.7	79.0
Rubella	73.8	75.0	64.1	70.4	75.0	74.6
DTP <sup>1,2</sup>	87.0	88.5	75.2	79.6	89.7	88.6
Polio <sup>2</sup>	75.7	77.5	61.5	68.9	79.6	75.9
Mumps	75.5	77.1	62.7	70.5	76.8	77.0

<sup>1</sup>Diphtheria-tetanus-pertussis.

<sup>2</sup>3 doses or more.

<sup>3</sup>The data in this panel are based only on 35 percent of white respondents and 19 percent of all other respondents who consulted records for some or all vaccination questions. One month prior to interview all sampled households were asked to check vaccination records such as those from a private physician, the health department, or military.

NOTE: Beginning in 1976, the category "don't know" was added to response categories. Prior to 1976, the lack of this option resulted in some forced positive answers, particularly for vaccinations requiring multiple dose schedules, that is, polio and DTP.

SOURCE: Division of Immunization, Center for Prevention Services, Centers for Disease Control: Unpublished data from the United States Immunization Survey.

**Table 41. Selected notifiable disease rates, according to disease: United States, selected years 1950–88**

[Data are based on reporting by State health departments]

Disease	1950	1960	1970	1980	1985	1986	1987	1988
Cases per 100,000 population								
Diphtheria . . . . .	3.83	0.51	0.21	0.00	0.00	0.00	0.00	0.00
Hepatitis A <sup>1</sup> . . . . .	---	---	27.87	12.84	10.03	10.02	10.39	11.60
Hepatitis B <sup>1</sup> . . . . .	---	---	4.08	8.39	11.50	11.17	10.65	9.43
Mumps . . . . .	---	---	55.55	3.86	1.30	3.37	5.43	2.05
Pertussis (whooping cough) . . . . .	79.82	8.23	2.08	0.76	1.50	1.74	1.16	1.40
Poliomyelitis, total . . . . .	22.02	1.77	0.02	0.00	0.00	0.00	0.00	0.00
Paralytic <sup>2</sup> . . . . .	---	1.40	0.02	0.00	0.00	0.00	0.00	0.00
Rubella (German measles) . . . . .	---	---	27.75	1.72	0.26	0.23	0.13	0.09
Rubeola (measles) . . . . .	211.01	245.42	23.23	5.96	1.18	2.61	1.50	1.38
Salmonellosis, excluding typhoid fever. . . . .	---	3.85	10.84	14.88	27.37	20.73	20.92	19.91
Shigellosis. . . . .	15.45	6.94	6.79	8.41	7.14	7.11	9.80	12.46
Tuberculosis <sup>3</sup> . . . . .	80.50	30.83	18.22	12.25	9.30	9.44	9.25	9.13
Varicella (chickenpox) . . . . .	---	---	---	96.69	123.23	122.42	136.68	122.43
Sexually transmitted diseases: <sup>4</sup>								
Syphilis <sup>5</sup> . . . . .	146.02	68.78	45.26	30.51	28.50	28.53	35.81	42.37
Primary and secondary . . . . .	16.73	9.06	10.89	12.06	11.45	11.67	14.54	16.43
Early latent . . . . .	39.71	10.11	8.08	9.00	9.15	9.12	11.55	14.58
Late and late latent . . . . .	70.22	45.91	24.94	9.30	7.77	7.58	9.44	11.05
Congenital . . . . .	8.97	2.48	0.97	0.12	0.14	0.17	0.28	0.30
Gonorrhea . . . . .	192.45	145.33	297.22	444.99	384.28	376.37	323.14	298.74
Chancroid . . . . .	3.34	0.94	0.70	0.35	0.87	1.30	2.07	2.04
Granuloma inguinale. . . . .	1.19	0.17	0.06	0.02	0.02	0.02	0.01	0.00
Lymphogranuloma venereum . . . . .	0.95	0.47	0.30	0.09	0.10	0.14	0.13	0.07
Number of cases								
Diphtheria . . . . .	5,796	918	435	3	3	—	3	2
Hepatitis A <sup>1</sup> . . . . .	---	---	56,797	29,087	23,210	23,430	25,280	28,507
Hepatitis B <sup>1</sup> . . . . .	---	---	8,310	19,015	26,611	26,107	25,916	23,177
Mumps . . . . .	---	---	104,953	8,576	2,982	7,790	12,848	4,866
Pertussis (whooping cough) . . . . .	120,718	14,809	4,249	1,730	3,589	4,195	2,823	3,450
Poliomyelitis, total . . . . .	33,300	3,190	33	9	7	10	6	9
Paralytic <sup>2</sup> . . . . .	---	2,525	31	8	7	10	6	9
Rubella (German measles) . . . . .	---	---	56,552	3,904	630	551	306	225
Rubeola (measles) . . . . .	319,124	441,703	47,351	13,506	2,822	6,282	3,655	3,396
Salmonellosis, excluding typhoid fever. . . . .	---	6,929	22,096	33,715	65,347	49,984	50,916	48,948
Shigellosis. . . . .	23,367	12,487	13,845	19,041	17,057	17,138	23,860	30,617
Tuberculosis <sup>3</sup> . . . . .	121,742	55,494	37,137	27,749	22,201	22,768	22,517	22,436
Varicella (chickenpox) . . . . .	---	---	---	190,894	178,162	183,243	213,196	192,857
Sexually transmitted diseases: <sup>4</sup>								
Syphilis <sup>5</sup> . . . . .	217,558	122,538	91,382	68,832	67,563	68,291	86,545	103,437
Primary and secondary . . . . .	23,939	16,145	21,982	27,204	27,131	27,921	35,145	40,117
Early latent . . . . .	59,256	18,017	16,311	20,297	21,689	21,819	27,914	35,600
Late and late latent . . . . .	113,569	81,798	50,348	20,979	18,414	18,149	22,811	26,987
Congenital . . . . .	13,377	4,416	1,953	277	329	410	681	751
Gonorrhea . . . . .	286,746	258,933	600,072	1,004,029	911,419	900,856	780,905	719,536
Chancroid . . . . .	4,977	1,680	1,416	788	2,067	3,102	4,998	5,001
Granuloma inguinale. . . . .	1,783	296	124	51	44	56	22	11
Lymphogranuloma venereum . . . . .	1,427	835	612	199	226	335	303	185

<sup>1</sup>Reports from New York City are not available for 1985 and 1986.  
<sup>2</sup>Data for 1986 and 1987 updated due to late reports; data for 1988 may also be updated.  
<sup>3</sup>Data after 1974 are not comparable to prior years because of changes in reporting criteria effective in 1975.  
<sup>4</sup>Newly reported civilian cases.  
<sup>5</sup>Includes stage of syphilis not stated.

NOTES: Rates greater than 0 but less than 0.005 are shown as 0.00. The total resident population was used to calculate all rates except sexually transmitted diseases, for which the civilian resident population was used. Population data from those States where diseases were not notifiable or not available were excluded from rate calculation.

SOURCES: Centers for Disease Control: Final 1988 reports of notifiable diseases, Morbidity and Mortality Weekly Report 37(54). Public Health Service, Atlanta, Ga., Oct. 1989, in press; Division of Sexually Transmitted Diseases, Center for Prevention Services, Centers for Disease Control: Selected data.

**Table 42. Acquired immunodeficiency syndrome (AIDS) cases, according to age at diagnosis, sex, and race/ethnicity: United States, 1983–89**

[Data are based on reporting by State health departments]

Age at diagnosis, sex, and race/ethnicity	All years <sup>1,2</sup>	Number, by year of report							All years <sup>1,2</sup>	Percent distribution
		1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>		
Total <sup>3</sup> . . . . .	106,270	2,066	4,445	8,205	13,167	21,140	30,947	25,467	. . .	
Male										
All males, 13 years and over <sup>3</sup> . . . . .	95,231	1,891	4,118	7,551	12,011	19,137	27,313	22,442	100.0	
White, not Hispanic . . . . .	58,462	1,138	2,611	4,806	7,545	12,352	16,256	13,305	61.4	
Black, not Hispanic. . . . .	23,648	479	947	1,718	2,765	4,332	7,151	6,046	24.8	
Hispanic . . . . .	12,192	268	538	972	1,592	2,255	3,645	2,815	12.8	
13–19 years . . . . .	317	5	17	29	42	69	87	66	0.3	
20–29 years . . . . .	19,105	392	845	1,482	2,486	3,845	5,518	4,364	20.1	
30–39 years . . . . .	44,680	883	1,986	3,612	5,668	8,881	12,722	10,559	46.9	
40–49 years . . . . .	21,201	432	897	1,665	2,567	4,290	6,125	5,063	22.3	
50–59 years . . . . .	7,264	154	306	600	921	1,466	2,022	1,738	7.6	
60 years and over . . . . .	2,664	25	67	163	327	586	839	652	2.8	
Female										
All females, 13 years and over <sup>3</sup> . . . . .	9,266	141	277	525	970	1,684	3,064	2,553	100.0	
White, not Hispanic . . . . .	2,668	34	79	143	272	544	864	723	28.8	
Black, not Hispanic. . . . .	5,045	67	141	284	523	896	1,663	1,438	54.4	
Hispanic . . . . .	1,449	38	57	94	162	230	502	357	15.6	
13–19 years . . . . .	76	3	4	4	12	11	24	18	0.8	
20–29 years . . . . .	2,553	57	94	175	279	477	784	665	27.6	
30–39 years . . . . .	4,376	51	130	233	447	751	1,512	1,231	47.2	
40–49 years . . . . .	1,259	14	25	49	129	233	419	383	13.6	
50–59 years . . . . .	463	11	8	27	47	90	146	132	5.0	
60 years and over . . . . .	539	5	16	37	56	122	179	124	5.8	
Children										
All children, under 13 years <sup>3</sup> . . . . .	1,773	34	50	129	186	319	570	472	100.0	
White, not Hispanic . . . . .	411	7	10	25	43	86	152	84	23.2	
Black, not Hispanic. . . . .	977	22	28	86	107	161	302	264	55.1	
Hispanic . . . . .	369	5	12	18	35	69	111	117	20.8	
Under 1 year . . . . .	707	19	33	56	77	138	193	184	39.9	
1–12 years . . . . .	1,066	15	17	73	109	181	377	288	60.1	

<sup>1</sup>Includes cases prior to 1983.

<sup>2</sup>Data are as of September 30, 1989, and reflect reporting delays.

<sup>3</sup>Includes all other races not shown separately.

NOTES: The AIDS case definition was changed in September 1987 to allow for the presumptive diagnosis of AIDS-associated diseases and conditions and to expand the spectrum of human immunodeficiency virus-associated diseases reportable as AIDS. Excludes residents of U.S. territories.

SOURCE: Centers for Disease Control, Center for Infectious Diseases, AIDS Program.

**Table 43. Deaths among acquired immunodeficiency syndrome (AIDS) cases, according to age at diagnosis, sex, and race/ethnicity: United States, 1983–89**

[Data are based on reporting by State health departments]

Age at diagnosis, sex, and race/ethnicity	All years <sup>1,2</sup>	1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>	All years <sup>1,2</sup>	Percent distribution
Total <sup>3</sup> . . . . .	63,159	1,416	3,231	6,314	10,705	14,150	17,119	9,488		. . .
<b>Male</b>										
All males, 13 years and over <sup>3</sup> . . . . .	56,722	1,283	2,947	5,775	9,713	12,621	15,188	8,556		100.0
White, not Hispanic . . . . .	34,424	727	1,802	3,568	6,068	7,521	8,943	5,461		60.7
Black, not Hispanic . . . . .	14,610	372	728	1,423	2,299	3,314	4,123	2,146		25.8
Hispanic . . . . .	7,196	179	394	749	1,274	1,674	1,971	857		12.7
13–19 years . . . . .	177	3	12	23	32	42	37	27		0.3
20–29 years . . . . .	10,795	265	569	1,113	1,858	2,399	2,877	1,593		19.0
30–39 years . . . . .	25,862	586	1,348	2,649	4,459	5,761	6,821	3,922		45.6
40–49 years . . . . .	12,975	302	679	1,277	2,195	2,842	3,541	2,004		22.9
50–59 years . . . . .	4,921	114	264	529	819	1,064	1,323	749		8.7
60 years and over . . . . .	1,992	13	75	184	350	513	589	261		3.5
<b>Female</b>										
All females, 13 years and over <sup>3</sup> . . . . .	5,457	104	237	437	850	1,282	1,680	796		100.0
White, not Hispanic . . . . .	1,590	23	55	142	241	400	479	233		29.1
Black, not Hispanic . . . . .	2,998	56	134	209	458	711	918	473		54.9
Hispanic . . . . .	816	25	47	82	140	163	266	81		15.0
13–19 years . . . . .	46	2	1	5	10	11	11	5		0.8
20–29 years . . . . .	1,462	40	89	129	233	336	414	198		26.8
30–39 years . . . . .	2,487	35	104	197	393	567	785	375		45.6
40–49 years . . . . .	727	13	22	46	97	170	250	123		13.3
50–59 years . . . . .	300	9	7	18	38	84	93	46		5.5
60 years and over . . . . .	435	5	14	42	79	114	127	49		8.0
<b>Children</b>										
All children, under 13 years <sup>3</sup> . . . . .	980	29	47	102	142	247	251	136		100.0
White, not Hispanic . . . . .	251	6	9	27	34	66	67	35		25.6
Black, not Hispanic . . . . .	516	20	27	58	77	121	132	69		52.7
Hispanic . . . . .	201	3	11	16	29	57	49	29		20.5
Under 1 year . . . . .	489	17	31	44	68	116	122	75		49.9
1–12 years . . . . .	491	12	16	58	74	131	129	61		50.1

<sup>1</sup>Includes cases prior to 1983.

<sup>2</sup>Data are as of September 30, 1989, and reflect reporting delays.

<sup>3</sup>Includes all other races not shown separately.

NOTES: The AIDS case definition was changed in September 1987 to allow for the presumptive diagnosis of AIDS-associated diseases and conditions and to expand the spectrum of human immunodeficiency virus-associated diseases reportable as AIDS. Excludes residents of U.S. territories.

SOURCE: Centers for Disease Control, Center for Infectious Diseases, AIDS Program.

**Table 44 (page 1 of 2). Acquired immunodeficiency syndrome (AIDS) cases, according to race/ethnicity, sex, and transmission category for persons 13 years of age and over: United States, 1983–89**

[Data are based on reporting by State health departments]

Race/ethnicity, sex, and transmission category	All years <sup>1,2</sup>	1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>	All years <sup>1,2</sup>			
									1984	1988	1989 <sup>2</sup>	
Number, by year of report									Percent distribution			
Total <sup>3</sup>	104,497	2,032	4,395	8,076	12,981	20,821	30,377	24,995	100.0	100.0	100.0	100.0
Male homosexual/bisexual	64,726	1,263	2,867	5,426	8,521	13,546	17,911	14,670	61.9	65.2	59.0	58.7
Intravenous drug use	20,590	367	776	1,393	2,231	3,522	6,819	5,341	19.7	17.7	22.4	21.4
Male homosexual/bisexual and intravenous drug use	7,250	200	408	595	988	1,524	1,946	1,519	6.9	9.3	6.4	6.1
Hemophilia/coagulation disorder	1,002	11	36	75	123	214	298	238	1.0	0.8	1.0	1.0
Born in Caribbean/African countries	1,530	85	110	141	220	266	375	285	1.5	2.5	1.2	1.1
Heterosexual <sup>4</sup>	3,310	23	57	137	334	605	1,122	1,025	3.2	1.3	3.7	4.1
Sexual contact with intravenous drug user	2,367	16	42	101	231	419	817	734	2.3	1.0	2.7	2.9
Transfusion	2,571	26	52	168	305	630	836	550	2.5	1.2	2.8	2.2
Undetermined <sup>5</sup>	3,518	57	89	141	259	514	1,070	1,367	3.4	2.0	3.5	5.5
Race/ethnicity												
White, not Hispanic	61,130	1,172	2,690	4,949	7,817	12,896	17,120	14,028	100.0	100.0	100.0	100.0
Male homosexual/bisexual	47,064	927	2,160	4,047	6,219	10,045	12,903	10,393	77.0	80.3	75.4	74.1
Intravenous drug use	4,473	72	147	251	405	815	1,483	1,265	7.3	5.5	8.7	9.0
Male homosexual/bisexual and intravenous drug use	4,481	124	265	378	651	976	1,132	924	7.3	9.9	6.6	6.6
Hemophilia/coagulation disorder	848	10	26	64	113	184	245	199	1.4	1.0	1.4	1.4
Born in Caribbean/African countries	3	—	1	—	1	—	1	—	0.0	0.0	0.0	—
Heterosexual <sup>4</sup>	1,006	2	16	32	94	196	354	311	1.6	0.6	2.1	2.2
Sexual contact with intravenous drug user	559	—	9	16	45	101	202	185	0.9	0.3	1.2	1.3
Transfusion	1,918	21	39	130	236	475	606	407	3.1	1.4	3.5	2.9
Undetermined <sup>5</sup>	1,337	16	36	47	98	205	396	529	2.2	1.3	2.3	3.8
Black, not Hispanic	28,693	546	1,088	2,002	3,288	5,228	8,814	7,484	100.0	100.0	100.0	100.0
Male homosexual/bisexual	10,626	195	402	795	1,322	2,103	3,060	2,652	37.0	36.9	34.7	35.4
Intravenous drug use	11,111	182	405	749	1,201	1,872	3,685	2,952	38.7	37.2	41.8	39.4
Male homosexual/bisexual and intravenous drug use	1,946	44	95	145	236	387	577	440	6.8	8.7	6.5	5.9
Hemophilia/coagulation disorder	65	—	5	4	4	12	26	14	0.2	0.5	0.3	0.2
Born in Caribbean/African countries	1,510	85	109	141	218	263	369	278	5.3	10.0	4.2	3.7
Heterosexual <sup>4</sup>	1,674	10	23	79	160	306	549	543	5.8	2.1	6.2	7.3
Sexual contact with intravenous drug user	1,289	6	17	62	117	238	434	411	4.5	1.6	4.9	5.5
Transfusion	409	2	10	26	44	93	148	86	1.4	0.9	1.7	1.1
Undetermined <sup>5</sup>	1,352	28	39	63	103	192	400	519	4.7	3.6	4.5	6.9
Hispanic	13,641	306	595	1,066	1,754	2,485	4,147	3,172	100.0	100.0	100.0	100.0
Male homosexual/bisexual	6,352	137	289	542	893	1,250	1,747	1,440	46.6	48.6	42.1	45.4
Intravenous drug use	4,900	113	223	385	612	823	1,620	1,085	35.9	37.5	39.1	34.2
Male homosexual/bisexual and intravenous drug use	783	31	47	70	97	148	232	141	5.7	7.9	5.6	4.4
Hemophilia/coagulation disorder	65	1	4	7	5	11	22	15	0.5	0.7	0.5	0.5
Born in Caribbean/African countries	10	—	—	—	—	3	3	3	0.1	—	0.1	0.1
Heterosexual <sup>4</sup>	600	11	18	26	77	100	205	161	4.4	3.0	4.9	5.1
Sexual contact with intravenous drug user	506	10	16	23	69	79	173	134	3.7	2.7	4.2	4.2
Transfusion	186	2	2	7	19	44	64	48	1.4	0.3	1.5	1.5
Undetermined <sup>5</sup>	745	11	12	29	51	106	254	279	5.5	2.0	6.1	8.8

See footnotes at end of table.

**Table 44 (page 2 of 2). Acquired immunodeficiency syndrome (AIDS) cases, according to race/ethnicity, sex, and transmission category for persons 13 years of age and over: United States, 1983–89**

[Data are based on reporting by State health departments]

<i>Race/ethnicity, sex, and transmission category</i>	<i>All years</i> <sup>1,2</sup>	1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>	<i>All years</i> <sup>1,2</sup>	1984	1988	1989 <sup>2</sup>
Sex	Number, by year of report								Percent distribution			
Male . . . . .	95,231	1,891	4,118	7,551	12,011	19,137	27,313	22,442	100.0	100.0	100.0	100.0
Homosexual/bisexual . . . . .	64,726	1,263	2,867	5,426	8,521	13,546	17,911	14,670	68.0	69.6	65.6	65.4
Intravenous drug use . . . . .	15,785	287	605	1,110	1,755	2,685	5,204	4,025	16.6	14.7	19.1	17.9
Homosexual/bisexual and intravenous drug use . . . . .	7,250	200	408	595	988	1,524	1,946	1,519	7.6	9.9	7.1	6.8
Hemophilia/coagulation disorder . . . . .	976	11	34	72	119	209	293	231	1.0	0.8	1.1	1.0
Born in Caribbean/African countries . . . . .	1,127	73	93	111	164	191	266	190	1.2	2.3	1.0	0.8
Heterosexual <sup>4</sup> . . . . .	914	2	11	23	61	147	318	352	1.0	0.3	1.2	1.6
Sexual contact with intravenous drug user . . . . .	676	1	10	21	44	109	228	263	0.7	0.2	0.8	1.2
Transfusion . . . . .	1,607	16	30	109	201	415	506	329	1.7	0.7	1.9	1.5
Undetermined <sup>5</sup> . . . . .	2,846	39	70	105	202	420	869	1,126	3.0	1.7	3.2	5.0
Female . . . . .	9,266	141	277	525	970	1,684	3,064	2,553	100.0	100.0	100.0	100.0
Intravenous drug use . . . . .	4,805	80	171	283	476	837	1,615	1,316	51.9	61.7	52.7	51.5
Hemophilia/coagulation disorder . . . . .	26	–	2	3	4	5	5	7	0.3	0.7	0.2	0.3
Born in Caribbean/African countries . . . . .	403	12	17	30	56	75	109	95	4.3	6.1	3.6	3.7
Heterosexual <sup>4</sup> . . . . .	2,396	21	46	114	273	458	804	673	25.9	16.6	26.2	26.4
Sexual contact with intravenous drug user . . . . .	1,691	15	32	80	187	310	589	471	18.2	11.6	19.2	18.4
Transfusion . . . . .	964	10	22	59	104	215	330	221	10.4	7.9	10.8	8.7
Undetermined <sup>5</sup> . . . . .	672	18	19	36	57	94	201	241	7.3	6.9	6.6	9.4

<sup>1</sup>Includes cases prior to 1983.

<sup>2</sup>Data are as of September 30, 1989, and reflect reporting delays.

<sup>3</sup>Includes all other races not shown separately.

<sup>4</sup>Includes persons who have had heterosexual contact with a person with human immunodeficiency virus (HIV) infection or at risk of HIV infection.

<sup>5</sup>Includes persons for whom risk information is incomplete (because of death, refusal to be interviewed, or loss to followup), persons still under investigation, men reported only to have had heterosexual contact with prostitutes, and interviewed persons for whom no specific risk is identified.

NOTES: The AIDS case definition was changed in September 1987 to allow for the presumptive diagnosis of AIDS-associated diseases and conditions and to expand the spectrum of HIV-associated diseases reportable as AIDS. Excludes residents of U.S. territories.

SOURCE: Centers for Disease Control, Center for Infectious Diseases, AIDS Program.

**Table 45 (page 1 of 2). Deaths among acquired immunodeficiency syndrome (AIDS) cases, according to race/ethnicity, sex, and transmission category for persons 13 years of age and over: United States, 1983–89**

[Data are based on reporting by State health departments]

Race/ethnicity, sex, and transmission category	All years <sup>1,2</sup>	1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>	All years <sup>1,2</sup>			
									1984	1988	1989 <sup>2</sup>	1989 <sup>2</sup>
	Number, by year of death								Percent distribution			
Total <sup>3</sup>	62,179	1,387	3,184	6,212	10,563	13,903	16,868	9,352	100.0	100.0	100.0	100.0
Male homosexual/bisexual	38,366	823	1,972	3,966	6,774	8,361	10,092	5,975	61.7	61.9	59.8	63.9
Intravenous drug use	12,144	275	621	1,164	1,909	2,863	3,579	1,600	19.5	19.5	21.2	17.1
Male homosexual/bisexual and intravenous drug use	4,527	134	307	468	790	1,018	1,107	641	7.3	9.6	6.6	6.9
Hemophilia/coagulation disorder	628	9	24	72	100	149	174	92	1.0	0.8	1.0	1.0
Born in Caribbean/African countries	873	73	79	105	138	179	163	83	1.4	2.5	1.0	0.9
Heterosexual <sup>4</sup>	1,806	15	42	119	248	405	601	366	2.9	1.3	3.6	3.9
Sexual contact with intravenous drug user	1,283	10	35	82	171	290	424	263	2.1	1.1	2.5	2.8
Transfusion	1,871	18	64	184	341	488	535	232	3.0	2.0	3.2	2.5
Undetermined <sup>5</sup>	1,964	40	75	134	263	440	617	363	3.2	2.4	3.7	3.9
Race/ethnicity												
White, not Hispanic	36,014	750	1,857	3,710	6,309	7,921	9,422	5,694	100.0	100.0	100.0	100.0
Male homosexual/bisexual	27,605	582	1,453	2,923	4,946	5,947	7,088	4,401	76.7	78.2	75.2	77.3
Intravenous drug use	2,474	63	104	218	338	591	728	405	6.9	5.6	7.7	7.1
Male homosexual/bisexual and intravenous drug use	2,726	73	189	289	502	612	634	399	7.6	10.2	6.7	7.0
Hemophilia/coagulation disorder	541	8	21	59	88	128	154	75	1.5	1.1	1.6	1.3
Born in Caribbean/African countries	—	—	—	—	—	—	—	—	—	—	—	—
Heterosexual <sup>4</sup>	511	2	5	30	76	109	180	107	1.4	0.3	1.9	1.9
Sexual contact with intravenous drug user	273	—	4	10	38	60	92	67	0.8	0.2	1.0	1.2
Transfusion	1,421	15	51	140	264	373	405	168	3.9	2.7	4.3	3.0
Undetermined <sup>5</sup>	736	7	34	51	95	161	233	139	2.0	1.8	2.5	2.4
Black, not Hispanic	17,608	428	862	1,632	2,757	4,025	5,041	2,619	100.0	100.0	100.0	100.0
Male homosexual/bisexual	6,617	149	296	619	1,085	1,487	1,887	1,001	37.6	34.3	37.4	38.2
Intravenous drug use	6,798	135	345	633	1,069	1,571	2,015	962	38.6	40.0	40.0	36.7
Male homosexual/bisexual and intravenous drug use	1,263	40	77	124	201	284	343	178	7.2	8.9	6.8	6.8
Hemophilia/coagulation disorder	41	—	1	6	3	13	9	9	0.2	0.1	0.2	0.3
Born in Caribbean/African countries	867	73	79	104	138	177	163	80	4.9	9.2	3.2	3.1
Heterosexual <sup>4</sup>	966	8	23	63	109	236	309	212	5.5	2.7	6.1	8.1
Sexual contact with intravenous drug user	742	5	18	50	80	182	237	166	4.2	2.1	4.7	6.3
Transfusion	278	1	10	28	43	75	81	40	1.6	1.2	1.6	1.5
Undetermined <sup>5</sup>	778	22	31	55	109	182	234	137	4.4	3.6	4.6	5.2
Hispanic	8,012	204	441	831	1,414	1,837	2,237	938	100.0	100.0	100.0	100.0
Male homosexual/bisexual	3,767	90	204	401	692	841	995	500	47.0	46.3	44.5	53.3
Intravenous drug use	2,827	76	171	308	494	693	823	225	35.3	38.8	36.8	24.0
Male homosexual/bisexual and intravenous drug use	519	20	40	54	82	118	124	63	6.5	9.1	5.5	6.7
Hemophilia/coagulation disorder	37	1	2	5	9	6	8	6	0.5	0.5	0.4	0.6
Born in Caribbean/African countries	5	—	—	1	—	2	—	2	0.1	—	—	0.2
Heterosexual <sup>4</sup>	316	5	14	26	60	59	107	43	3.9	3.2	4.8	4.6
Sexual contact with intravenous drug user	263	5	13	22	52	48	92	29	3.3	2.9	4.1	3.1
Transfusion	125	1	2	10	26	27	40	17	1.6	0.5	1.8	1.8
Undetermined <sup>5</sup>	416	11	8	26	51	91	140	82	5.2	1.8	6.3	8.7

See footnotes at end of table.



**Table 45 (page 2 of 2). Deaths among acquired immunodeficiency syndrome (AIDS) cases, according to race/ethnicity, sex, and transmission category for persons 13 years of age and over: United States, 1983–89**

[Data are based on reporting by State health departments]

<i>Race/ethnicity, sex, and transmission category</i>	<i>All years<sup>1,2</sup></i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989<sup>2</sup></i>	<i>All years<sup>1,2</sup></i>	<i>1984</i>	<i>1988</i>	<i>1989<sup>2</sup></i>
<i>Sex</i>	<i>Number, by year of death</i>								<i>Percent distribution</i>			
Male . . . . .	56,722	1,283	2,947	5,775	9,713	12,621	15,188	8,556	100.0	100.0	100.0	100.0
Homosexual/bisexual . . . . .	38,366	823	1,972	3,966	6,774	8,361	10,092	5,975	67.6	66.9	66.4	69.8
Intravenous drug use . . . . .	9,374	218	476	933	1,477	2,212	2,734	1,226	16.5	16.2	18.0	14.3
Homosexual/bisexual and intravenous drug use . . . . .	4,527	134	307	468	790	1,018	1,107	641	8.0	10.4	7.3	7.5
Hemophilia/coagulation disorder . . . . .	610	9	23	68	97	147	168	90	1.1	0.8	1.1	1.1
Born in Caribbean/African countries . . . . .	637	64	61	87	94	129	111	51	1.1	2.1	0.7	0.6
Heterosexual <sup>4</sup> . . . . .	451	1	6	25	43	97	147	128	0.8	0.2	1.0	1.5
Sexual contact with intravenous drug user . . . . .	337	–	6	22	32	70	111	92	0.6	0.2	0.7	1.1
Transfusion . . . . .	1,171	7	43	118	236	295	328	142	2.1	1.5	2.2	1.7
Undetermined <sup>5</sup> . . . . .	1,586	27	59	110	202	362	501	303	2.8	2.0	3.3	3.5
Female . . . . .	5,457	104	237	437	850	1,282	1,680	796	100.0	100.0	100.0	100.0
Intravenous drug use . . . . .	2,770	57	145	231	432	651	845	374	50.8	61.2	50.3	47.0
Hemophilia/coagulation disorder . . . . .	18	–	1	4	3	2	6	2	0.3	0.4	0.4	0.3
Born in Caribbean/African countries . . . . .	236	9	18	18	44	50	52	32	4.3	7.6	3.1	4.0
Heterosexual <sup>4</sup> . . . . .	1,355	14	36	94	205	308	454	238	24.8	15.2	27.0	29.9
Sexual contact with intravenous drug user . . . . .	946	10	29	60	139	220	313	171	17.3	12.2	18.6	21.5
Transfusion . . . . .	700	11	21	66	105	193	207	90	12.8	8.9	12.3	11.3
Undetermined <sup>5</sup> . . . . .	378	13	16	24	61	78	116	60	6.9	6.8	6.9	7.5

<sup>1</sup>Includes cases prior to 1983.

<sup>2</sup>Data are as of September 30, 1989, and reflect reporting delays.

<sup>3</sup>Includes all other races not shown separately.

<sup>4</sup>Includes persons who have had heterosexual contact with a person with human immunodeficiency virus (HIV) infection or at risk of HIV infection.

<sup>5</sup>Includes persons for whom risk information is incomplete (because of death, refusal to be interviewed, or loss to followup), persons still under investigation, men reported only to have had heterosexual contact with prostitutes, and interviewed persons for whom no specific risk is identified.

NOTES: The AIDS case definition was changed in September 1987 to allow for the presumptive diagnosis of AIDS-associated diseases and conditions and to expand the spectrum of HIV-associated diseases reportable as AIDS. Excludes residents of U.S. territories.

SOURCE: Centers for Disease Control, Center for Infectious Diseases, AIDS Program.

**Table 46 (page 1 of 2). Acquired immunodeficiency syndrome (AIDS) cases, according to geographic division and State: United States, 1983-89**

[Data are based on reporting by State health departments]

Geographic division and State	All years <sup>1,2</sup>	1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>	All years <sup>1,2</sup>	12 months ending
										September 30, 1989
Number, by year of report									Percent distribution	Cases per 100,000 population <sup>3</sup>
United States . . . . .	106,270	2,066	4,445	8,205	13,167	21,140	30,947	25,467		
New England . . . . .	4,253	57	154	281	530	846	1,287	1,074	4.0	10.80
Maine . . . . .	130	-	-	11	21	25	27	46	0.1	3.97
New Hampshire . . . . .	124	1	3	4	13	32	38	33	0.1	4.11
Vermont . . . . .	47	-	1	2	6	15	11	11	0.0	2.20
Massachusetts . . . . .	2,330	33	87	165	282	455	712	583	2.2	13.01
Rhode Island . . . . .	266	4	6	12	31	69	85	59	0.3	8.45
Connecticut . . . . .	1,356	19	57	87	177	250	414	342	1.3	13.64
Middle Atlantic . . . . .	35,266	1,039	1,959	3,155	4,863	6,136	10,293	7,285	33.2	26.03
New York . . . . .	24,800	866	1,587	2,483	3,786	3,964	6,979	4,681	23.3	35.82
New Jersey . . . . .	7,430	136	281	469	770	1,512	2,458	1,741	7.0	28.88
Pennsylvania . . . . .	3,036	37	91	203	307	660	856	863	2.9	9.32
East North Central . . . . .	7,014	61	198	355	833	1,407	2,152	1,978	6.6	5.97
Ohio . . . . .	1,526	7	30	53	211	335	508	374	1.4	4.51
Indiana . . . . .	607	4	25	27	71	132	80	268	0.6	4.87
Illinois . . . . .	3,196	39	101	190	358	631	995	864	3.0	9.67
Michigan . . . . .	1,305	9	32	61	151	212	457	379	1.2	5.30
Wisconsin . . . . .	380	2	10	24	42	97	112	93	0.4	2.76
West North Central . . . . .	2,311	15	45	130	239	474	772	632	2.2	4.71
Minnesota . . . . .	592	4	11	41	95	130	167	141	0.6	4.36
Iowa . . . . .	152	-	3	12	21	29	42	45	0.1	2.00
Missouri . . . . .	1,134	7	27	51	73	238	412	325	1.1	8.54
North Dakota . . . . .	16	-	-	2	4	1	3	6	0.0	0.87
South Dakota . . . . .	16	-	-	1	2	2	7	4	0.0	0.83
Nebraska . . . . .	122	1	2	7	10	24	51	27	0.1	2.72
Kansas . . . . .	279	3	2	16	34	50	90	84	0.3	4.05
South Atlantic . . . . .	18,799	272	585	1,302	2,073	3,691	5,458	5,330	17.7	16.16
Delaware . . . . .	209	2	4	12	22	39	62	68	0.2	11.54
Maryland . . . . .	1,898	27	54	150	189	457	544	472	1.8	13.48
District of Columbia . . . . .	1,881	19	90	177	227	466	504	395	1.8	84.06
Virginia . . . . .	1,283	27	40	108	160	242	346	360	1.2	7.07
West Virginia . . . . .	96	-	5	6	8	22	21	34	0.1	2.04
North Carolina . . . . .	969	8	15	66	83	211	278	307	0.9	5.69
South Carolina . . . . .	610	11	7	38	58	84	173	239	0.6	8.01
Georgia . . . . .	2,777	26	56	191	300	512	827	853	2.6	17.99
Florida . . . . .	9,076	152	314	554	1,026	1,658	2,703	2,602	8.5	27.46
East South Central . . . . .	1,921	10	24	72	165	323	760	565	1.8	4.75
Kentucky . . . . .	289	4	10	17	32	47	91	88	0.3	2.91
Tennessee . . . . .	699	2	5	18	72	72	330	200	0.7	5.17
Alabama . . . . .	600	3	6	29	33	153	213	161	0.6	5.37
Mississippi . . . . .	333	1	3	8	28	51	126	116	0.3	5.65
West South Central . . . . .	9,417	112	315	617	1,185	2,161	2,874	2,133	8.9	10.34
Arkansas . . . . .	229	-	1	10	30	47	80	61	0.2	2.96
Louisiana . . . . .	1,449	18	55	103	165	337	403	368	1.4	10.44
Oklahoma . . . . .	444	5	9	20	50	107	153	100	0.4	4.52
Texas . . . . .	7,295	89	250	484	940	1,670	2,238	1,604	6.9	12.46
Mountain . . . . .	2,984	33	74	163	333	635	899	840	2.8	7.84
Montana . . . . .	34	-	-	1	3	6	16	8	0.0	1.54
Idaho . . . . .	48	-	-	4	3	10	11	20	0.0	2.14
Wyoming . . . . .	26	-	1	1	3	1	6	14	0.0	2.71
Colorado . . . . .	1,159	21	38	62	166	226	326	315	1.1	11.54
New Mexico . . . . .	220	1	3	14	21	47	59	75	0.2	6.34
Arizona . . . . .	863	7	20	51	80	218	280	206	0.8	7.63
Utah . . . . .	222	2	7	17	21	39	81	55	0.2	4.93
Nevada . . . . .	412	2	5	13	36	88	120	147	0.4	17.13

See footnotes at end of table.

**Table 46 (page 2 of 2). Acquired immunodeficiency syndrome (AIDS) cases, according to geographic division and State: United States, 1983-89**

[Data are based on reporting by State health departments]

Geographic division and State	All years <sup>1,2</sup>	1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>	All years <sup>1,2</sup>	12 months ending
										September 30, 1989
									Percent distribution	Cases per 100,000 population <sup>3</sup>
Number, by year of report										
Pacific . . . . .	24,305	467	1,091	2,130	2,946	5,467	6,452	5,630	22.9	19.13
Washington . . . . .	1,435	7	59	112	171	331	356	398	1.4	10.38
Oregon . . . . .	636	5	13	34	64	160	178	180	0.6	7.95
California . . . . .	21,744	446	1,005	1,951	2,638	4,878	5,794	4,913	20.5	22.19
Alaska . . . . .	69	1	1	5	16	15	19	12	0.1	2.57
Hawaii . . . . .	421	8	13	28	57	83	105	127	0.4	14.15

<sup>1</sup>Includes cases prior to 1983.

<sup>2</sup>Data are as of September 30, 1989, and reflect reporting delays.

<sup>3</sup>Resident population as of mid-1988, based on extrapolation from 1980-85 data from the U.S. Bureau of the Census.

NOTES: The AIDS case definition was changed in September 1987 to allow for the presumptive diagnosis of AIDS-associated diseases and conditions and to expand the spectrum of human immunodeficiency virus-associated diseases reportable as AIDS. Excludes residents of U.S. territories.

SOURCE: Centers for Disease Control, Center for Infectious Diseases, AIDS Program.

**Table 47 (page 1 of 2). Deaths among acquired immunodeficiency syndrome (AIDS) cases, according to geographic division and State: United States, 1983–89**

[Data are based on reporting by State health departments]

Geographic division and State	All years <sup>1,2</sup>	Number, by year of death								All years <sup>1,2</sup>	Percent distribution
		1983	1984	1985	1986	1987	1988	1989 <sup>2</sup>			
United States . . . . .	63,159	1,416	3,231	6,314	10,705	14,150	17,119	9,488	100.0		
New England . . . . .	2,215	45	101	216	364	488	618	338	3.5		
Maine . . . . .	61	—	—	7	14	10	19	11	0.1		
New Hampshire . . . . .	72	1	—	6	13	14	24	12	0.1		
Vermont . . . . .	21	1	1	1	6	5	5	2	0.0		
Massachusetts . . . . .	1,172	30	54	110	171	249	343	198	1.9		
Rhode Island . . . . .	145	2	5	7	21	42	42	26	0.2		
Connecticut . . . . .	744	11	41	85	139	168	185	89	1.2		
Middle Atlantic . . . . .	21,298	749	1,465	2,535	3,943	4,975	5,481	1,747	33.7		
New York . . . . .	14,793	615	1,147	1,966	2,853	3,469	3,762	668	23.4		
New Jersey . . . . .	4,609	104	232	415	785	1,079	1,185	737	7.3		
Pennsylvania . . . . .	1,896	30	86	154	305	427	534	342	3.0		
East North Central . . . . .	4,084	43	132	313	587	852	1,228	894	6.5		
Ohio . . . . .	851	9	32	62	127	186	254	174	1.3		
Indiana . . . . .	356	6	13	21	57	79	105	71	0.6		
Illinois . . . . .	1,892	21	63	154	273	368	583	409	3.0		
Michigan . . . . .	769	5	16	59	95	167	228	197	1.2		
Wisconsin . . . . .	216	2	8	17	35	52	58	43	0.3		
West North Central . . . . .	1,279	6	33	100	207	286	370	272	2.0		
Minnesota . . . . .	311	2	8	27	61	76	83	52	0.5		
Iowa . . . . .	76	1	2	7	15	17	19	14	0.1		
Missouri . . . . .	626	2	18	47	88	128	190	151	1.0		
North Dakota . . . . .	9	—	—	2	2	2	2	1	0.0		
South Dakota . . . . .	9	—	—	1	3	1	3	1	0.0		
Nebraska . . . . .	80	1	2	4	12	16	30	15	0.1		
Kansas . . . . .	168	—	3	12	26	46	43	38	0.3		
South Atlantic . . . . .	11,013	188	440	960	1,637	2,420	3,121	2,148	17.4		
Delaware . . . . .	121	—	2	6	20	30	30	31	0.2		
Maryland . . . . .	1,126	13	51	111	165	261	315	203	1.8		
District of Columbia . . . . .	1,136	13	41	130	198	233	298	213	1.8		
Virginia . . . . .	765	20	25	78	135	182	219	104	1.2		
West Virginia . . . . .	60	—	4	7	8	11	12	18	0.1		
North Carolina . . . . .	509	5	24	44	83	108	140	104	0.8		
South Carolina . . . . .	322	1	13	30	43	77	107	48	0.5		
Georgia . . . . .	1,592	17	55	127	215	337	482	345	2.5		
Florida . . . . .	5,382	119	225	427	770	1,181	1,518	1,082	8.5		
East South Central . . . . .	1,029	11	24	75	143	233	327	210	1.6		
Kentucky . . . . .	176	5	10	13	23	34	49	40	0.3		
Tennessee . . . . .	381	3	6	27	64	84	118	78	0.6		
Alabama . . . . .	332	3	6	27	34	79	106	76	0.5		
Mississippi . . . . .	140	—	2	8	22	36	54	16	0.2		
West South Central . . . . .	5,779	77	217	506	971	1,443	1,679	860	9.1		
Arkansas . . . . .	139	1	—	8	20	30	50	30	0.2		
Louisiana . . . . .	889	13	29	95	137	209	247	151	1.4		
Oklahoma . . . . .	250	1	11	12	39	64	82	41	0.4		
Texas . . . . .	4,501	62	177	391	775	1,140	1,300	638	7.1		
Mountain . . . . .	1,669	18	62	131	277	371	472	329	2.6		
Montana . . . . .	16	—	—	1	2	5	6	2	0.0		
Idaho . . . . .	26	—	—	1	3	6	11	5	0.0		
Wyoming . . . . .	13	—	1	2	1	3	1	5	0.0		
Colorado . . . . .	649	10	40	57	111	143	178	107	1.0		
New Mexico . . . . .	126	—	1	7	22	24	32	38	0.2		
Arizona . . . . .	462	4	12	38	86	100	137	82	0.7		
Utah . . . . .	136	1	3	12	25	31	40	24	0.2		
Nevada . . . . .	241	3	5	13	27	59	67	66	0.4		

See footnotes at end of table.

**Table 47 (page 2 of 2). Deaths among acquired immunodeficiency syndrome (AIDS) cases, according to geographic division and State: United States, 1983–89**

[Data are based on reporting by State health departments]

<i>Geographic division and State</i>	<i>All years</i> <sup>1,2</sup>	<i>Number, by year of death</i>							<i>All years</i> <sup>1,2</sup>	<i>Percent distribution</i>
		<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i> <sup>2</sup>		
Pacific . . . . .	14,793	279	757	1,478	2,576	3,082	3,823	2,690	23.4	
Washington . . . . .	771	8	31	81	127	176	224	122	1.2	
Oregon . . . . .	354	2	9	22	68	74	111	67	0.6	
California . . . . .	13,401	267	709	1,336	2,342	2,777	3,404	2,464	21.2	
Alaska . . . . .	25	1	–	6	7	3	7	–	0.0	
Hawaii . . . . .	242	1	8	33	32	52	77	37	0.4	

<sup>1</sup>Includes cases prior to 1983.

<sup>2</sup>Data are as of September 30, 1989, and reflect reporting delays.

NOTES: The AIDS case definition was changed in September 1987 to allow for the presumptive diagnosis of AIDS-associated diseases and conditions and to expand the spectrum of human immunodeficiency virus-associated diseases reportable as AIDS. Excludes residents of U.S. territories.

SOURCE: Centers for Disease Control, Center for Infectious Diseases, AIDS Program.

**Table 48. Age-adjusted cancer incidence rates for selected cancer sites, according to sex and race: Selected years 1973–87**

[Data are based on the Surveillance, Epidemiology, and End Results Program's population-based registries in Atlanta, Detroit, Seattle-Puget Sound, San Francisco-Oakland, Connecticut, Iowa, New Mexico, Utah, and Hawaii]

<i>Race, sex, and site</i>	1973	1975	1980	1983	1984	1985	1986	1987	<i>Estimated annual percent change<sup>1</sup></i>
White male									
Number of new cases per 100,000 population <sup>2</sup>									
All sites . . . . .	363.8	377.6	404.2	417.2	421.1	425.1	430.2	441.3	1.2
Oral cavity and pharynx . . . . .	17.4	18.2	16.8	18.0	16.8	16.4	16.1	16.8	-0.5
Esophagus . . . . .	4.8	4.8	4.9	5.1	4.8	5.3	5.2	5.5	0.6
Stomach . . . . .	14.0	12.5	12.3	10.8	10.9	10.6	10.8	10.4	-1.8
Colon and rectum . . . . .	54.2	54.9	58.4	60.1	62.7	63.4	61.9	60.5	0.9
Colon . . . . .	34.7	36.0	39.2	41.3	43.1	43.2	42.7	41.6	1.4
Rectum . . . . .	19.5	19.0	19.3	18.7	19.6	20.1	19.2	18.9	-0.1
Pancreas . . . . .	12.7	12.4	11.0	11.3	11.0	10.7	10.9	10.3	-1.0
Lung and bronchus . . . . .	72.5	75.7	82.1	82.3	84.4	82.0	81.6	82.3	0.8
Prostate gland . . . . .	62.4	68.5	78.0	83.3	82.0	85.7	89.1	99.2	2.7
Urinary bladder . . . . .	27.2	28.5	31.2	30.4	32.0	30.9	31.9	33.0	1.1
Non-Hodgkin's lymphoma . . . . .	10.3	11.4	12.5	14.4	15.3	15.6	16.4	17.8	3.8
Leukemia . . . . .	14.4	14.1	14.1	14.0	13.5	13.6	13.4	12.5	-0.7
Black male									
All sites . . . . .	437.8	435.5	507.9	526.3	529.8	522.3	518.3	520.1	1.6
Oral cavity and pharynx . . . . .	16.5	17.2	23.0	23.4	26.6	22.3	24.5	25.7	3.2
Esophagus . . . . .	12.9	17.3	16.3	20.1	17.5	19.1	21.4	17.3	1.5
Stomach . . . . .	25.9	19.8	21.4	22.1	17.4	18.3	18.4	19.8	-0.9
Colon and rectum . . . . .	42.4	46.8	63.5	60.6	54.9	59.0	58.0	58.5	2.0
Colon . . . . .	31.3	33.9	46.0	46.0	42.0	45.5	42.8	44.7	2.3
Rectum . . . . .	11.0	12.9	17.5	14.6	12.9	13.5	15.3	13.8	1.1
Pancreas . . . . .	15.7	15.4	17.6	18.6	15.1	19.6	15.9	15.2	0.0
Lung and bronchus . . . . .	104.4	100.7	130.7	129.4	139.0	129.6	131.3	118.9	2.0
Prostate gland . . . . .	105.1	110.7	125.5	131.0	136.4	130.2	126.8	136.1	2.0
Urinary bladder . . . . .	10.7	13.6	14.5	15.1	15.5	15.9	17.3	16.7	2.3
Non-Hodgkin's lymphoma . . . . .	9.0	7.1	9.3	9.0	11.0	9.8	11.0	8.8	2.6
Leukemia . . . . .	12.0	12.4	12.8	12.0	10.1	12.6	10.0	12.0	-0.4
White female									
All sites . . . . .	293.8	308.8	308.5	321.8	330.1	339.7	336.8	344.0	0.9
Colon and rectum . . . . .	41.6	42.9	44.5	43.9	44.5	45.7	42.8	40.5	0.1
Colon . . . . .	30.2	30.9	32.7	32.5	32.1	33.8	31.9	29.7	0.2
Rectum . . . . .	11.4	12.0	11.7	11.4	12.3	11.9	10.8	10.9	-0.2
Pancreas . . . . .	7.5	7.1	7.3	8.1	8.4	8.2	7.8	7.3	0.5
Lung and bronchus . . . . .	17.9	21.9	28.3	34.4	34.9	35.9	37.5	38.7	5.4
Melanoma of skin . . . . .	5.8	6.8	8.9	9.0	8.8	9.7	9.8	10.1	3.8
Breast . . . . .	83.8	89.0	86.7	95.2	99.5	105.7	108.4	115.9	1.8
Cervix uteri . . . . .	12.7	11.1	9.0	8.0	8.3	7.5	7.9	7.3	-3.6
Corpus uteri . . . . .	29.4	33.5	25.2	24.6	23.9	23.2	22.3	22.5	-2.8
Ovary . . . . .	14.6	14.4	14.0	14.0	14.7	15.0	13.4	14.5	-0.2
Non-Hodgkin's lymphoma . . . . .	7.5	8.4	9.1	10.0	10.9	11.1	11.1	10.9	2.7
Black female									
All sites . . . . .	279.0	292.5	302.6	317.0	321.3	323.5	328.6	321.8	1.2
Colon and rectum . . . . .	40.6	42.9	49.3	49.1	47.4	45.9	47.2	46.7	1.4
Colon . . . . .	29.2	32.3	40.8	36.1	37.6	36.1	36.6	36.1	1.9
Rectum . . . . .	11.5	10.5	8.5	13.0	9.8	9.8	10.6	10.5	0.0
Pancreas . . . . .	11.5	11.7	12.9	12.3	13.3	11.5	13.2	14.5	1.1
Lung and bronchus . . . . .	20.7	20.4	33.9	34.6	39.8	40.8	43.2	37.5	5.4
Breast . . . . .	67.8	77.2	73.3	85.7	83.6	92.9	94.6	90.9	2.0
Cervix uteri . . . . .	29.5	27.7	19.0	15.0	17.5	16.1	15.5	15.1	-4.6
Corpus uteri . . . . .	14.8	16.8	14.0	15.8	14.8	14.9	14.0	13.0	-0.4
Ovary . . . . .	10.3	10.1	9.9	11.6	9.3	10.2	8.8	10.1	0.1
Non-Hodgkin's lymphoma . . . . .	5.4	4.0	5.9	7.9	6.1	6.8	6.6	8.0	4.3

<sup>1</sup>The estimated annual percent change has been calculated by fitting a linear regression model to the natural logarithm of the yearly rates from 1973–87.

<sup>2</sup>Age adjusted by the direct method to the 1970 U.S. population.

SOURCE: National Cancer Institute, National Institutes of Health, 1988 Annual Cancer Statistics Review, Including a Report on the Status of Cancer Control. NIH Pub. No. 89-2789. U.S. Department of Health and Human Services. Public Health Service. Bethesda, Md., 1989.

**Table 49. Five-year relative cancer survival rates for selected sites, according to race and sex: 1974–76, 1977–80, and 1981–86**

[Data are based on the Surveillance, Epidemiology, and End Results Program's population-based registries in Atlanta, Detroit, Seattle-Puget Sound, San Francisco-Oakland, Connecticut, Iowa, New Mexico, Utah, and Hawaii]

Sex and site	All races			White			Black		
	1974–76	1977–80	1981–86	1974–76	1977–80	1981–86	1974–76	1977–80	1981–86
Male									
Percent of patients									
All sites . . . . .	40.6	42.9	45.1	41.7	44.1	46.6	31.1	32.4	32.8
Oral cavity and pharynx . . . . .	52.0	50.6	49.0	54.2	53.1	52.0	30.5	28.8	26.8
Esophagus . . . . .	3.6	4.9	7.1	4.3	5.7	7.5	2.2	2.9	5.9
Stomach . . . . .	13.6	14.8	15.8	12.8	13.8	14.7	15.6	15.4	17.5
Colon . . . . .	49.3	51.6	56.8	49.7	51.9	57.5	43.5	46.0	45.9
Rectum . . . . .	47.3	48.7	52.0	47.7	49.9	53.1	34.2	36.7	37.8
Pancreas . . . . .	3.0	2.4	2.8	3.2	2.4	2.7	1.1	3.5	3.2
Lung and bronchus . . . . .	11.0	11.7	11.6	10.9	11.9	11.8	10.8	9.7	9.9
Prostate gland . . . . .	66.5	70.6	73.3	67.4	71.7	74.7	57.7	62.2	62.1
Urinary bladder . . . . .	73.4	76.1	79.7	74.2	76.6	80.3	53.9	60.9	63.2
Non-Hodgkin's lymphoma . . . . .	46.7	46.0	49.7	47.4	46.6	50.6	43.5	42.3	41.5
Leukemia . . . . .	32.4	34.6	34.3	32.9	35.5	35.3	31.1	27.7	28.3
Female									
All sites . . . . .	56.4	55.4	55.9	57.2	56.2	57.0	46.5	45.7	44.4
Colon . . . . .	50.4	53.1	55.9	50.5	53.3	56.5	47.1	49.2	48.7
Rectum . . . . .	49.1	50.6	54.9	49.5	51.4	55.6	48.2	36.9	44.9
Pancreas . . . . .	2.3	2.7	3.4	2.3	2.2	3.1	3.2	6.7	3.8
Lung and bronchus . . . . .	15.5	16.2	16.0	15.7	16.2	16.2	12.6	16.9	13.7
Melanoma of skin . . . . .	84.2	86.1	86.5	84.3	86.3	86.6	- - -	- - -	*67.5
Breast . . . . .	74.0	74.3	76.6	74.7	75.0	77.5	62.6	62.9	64.3
Cervix uteri . . . . .	68.3	67.3	65.8	69.1	68.2	67.3	62.9	61.9	57.1
Corpus uteri . . . . .	88.2	84.3	82.6	89.0	85.6	84.0	62.2	56.0	55.0
Ovary . . . . .	36.5	38.0	38.9	36.2	37.4	38.7	40.8	39.4	37.6
Non-Hodgkin's lymphoma . . . . .	47.2	50.4	51.9	47.3	50.4	52.2	53.4	56.6	49.4

\*Standard error is greater than 10 percentage points.

NOTES: Rates are based on followup of patients through 1986. The rate is the ratio of the observed survival rate for the patient group to the expected survival rate for persons in the general population similar to the patient group with respect to age, sex, race, and calendar year of observation. It estimates the chance of surviving the effects of cancer.

SOURCE: National Cancer Institute, National Institutes of Health, 1988 Annual Cancer Statistics Review, Including a Report on the Status of Cancer Control. NIH Pub. No. 89-2789. U.S. Department of Health and Human Services. Public Health Service. Bethesda, Md., 1989; National Cancer Institute, Division of Cancer Prevention and Control: Unpublished data.

**Table 50. Limitation of activity caused by chronic conditions, according to selected characteristics: United States, 1983 and 1988**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Total with limitation of activity		Limited but not in major activity		Limited in amount or kind of major activity		Unable to carry on major activity	
	1983	1988	1983	1988	1983	1988	1983	1988
	Percent of population							
Total <sup>1,2</sup>	13.8	13.1	4.1	4.0	6.0	5.3	3.6	3.8
Age								
Under 15 years	4.8	5.0	1.3	1.2	3.1	3.4	0.4	0.4
Under 5 years	2.1	2.2	0.5	0.7	1.1	1.0	0.5	0.5
5-14 years	6.2	6.5	1.8	1.5	4.1	4.7	0.3	0.3
15-44 years	8.5	8.4	2.7	2.7	3.9	3.5	1.9	2.2
45-64 years	24.3	22.4	5.9	5.5	10.2	8.4	8.2	8.6
65 years and over	40.2	37.0	14.8	14.4	15.0	12.1	10.4	10.5
65-74 years	37.6	33.9	13.5	12.6	13.3	10.3	10.7	11.1
75 years and over	44.4	41.8	16.8	17.2	17.7	14.9	9.9	9.7
Sex <sup>1</sup>								
Male	13.9	13.2	3.8	3.7	5.6	5.2	4.6	4.3
Female	13.6	12.9	4.5	4.3	6.4	5.3	2.7	3.4
Race <sup>1</sup>								
White	13.4	12.8	4.2	4.0	5.9	5.3	3.3	3.5
Black	17.5	16.3	3.8	3.8	7.5	5.9	6.2	6.6
Family income <sup>1,3</sup>								
Less than \$10,000	23.0	23.2	5.4	5.4	9.6	8.6	8.0	9.1
\$10,000-\$14,999	16.6	15.4	4.5	4.2	6.8	6.2	5.2	5.0
\$15,000-\$19,999	14.4	13.1	4.3	4.0	6.6	5.3	3.5	3.7
\$20,000-\$34,999	11.0	10.7	3.7	3.5	5.1	4.6	2.1	2.6
\$35,000 or more	9.4	8.1	3.7	3.0	4.1	3.6	1.6	1.4
Geographic region <sup>1</sup>								
Northeast	13.0	11.5	4.0	3.8	5.4	4.2	3.6	3.4
Midwest	13.1	13.2	3.9	3.9	5.9	5.8	3.2	3.5
South	14.7	14.2	4.1	4.2	6.7	5.7	3.9	4.3
West	14.2	12.8	4.7	3.9	5.8	5.1	3.7	3.7
Location of residence <sup>1</sup>								
Within MSA	13.5	12.6	4.1	3.9	5.9	5.0	3.5	3.7
Outside MSA	14.4	14.9	4.2	4.2	6.4	6.4	3.8	4.3

<sup>1</sup>Age adjusted.

<sup>2</sup>Includes all other races not shown separately and unknown family income.

<sup>3</sup>Family income categories for 1983. Income categories for 1988 are: less than \$13,000; \$13,000-\$18,999; \$19,000-\$24,999; \$25,000-\$44,999; and \$45,000 or more.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.



**Table 51. Disability days associated with acute conditions and incidence of acute conditions, according to age: United States, 1983–88**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

<i>Age</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>
Restricted-activity days			Number per person			
All ages <sup>1</sup> . . . . .	7.2	7.4	6.8	7.7	6.8	7.1
Under 15 years . . . . .	8.2	7.9	6.9	8.2	7.5	8.1
Under 5 years . . . . .	9.5	8.8	7.5	9.0	9.4	9.7
5–14 years . . . . .	7.5	7.4	6.7	7.8	6.6	7.2
15–44 years . . . . .	6.6	7.1	6.5	7.0	6.5	6.7
45–64 years . . . . .	6.3	6.6	6.0	7.0	6.1	5.8
65 years and over . . . . .	9.2	9.1	9.6	10.2	8.0	8.2
65–74 years . . . . .	8.7	8.3	8.9	10.2	8.2	7.3
75 years and over . . . . .	10.1	10.2	10.9	10.1	7.7	9.6
Bed-disability days <sup>2</sup>						
All ages <sup>1</sup> . . . . .	3.4	3.3	3.1	3.4	3.0	3.1
Under 15 years . . . . .	4.0	3.6	3.4	3.8	3.4	3.9
Under 5 years . . . . .	4.7	3.8	3.5	3.9	4.4	4.9
5–14 years . . . . .	3.6	3.5	3.3	3.8	2.8	3.4
15–44 years . . . . .	3.0	3.2	2.8	3.1	2.8	2.8
45–64 years . . . . .	2.8	2.6	2.7	3.1	2.6	2.4
65 years and over . . . . .	4.5	3.9	3.9	4.6	3.4	3.4
65–74 years . . . . .	4.4	3.7	2.8	3.9	3.7	3.1
75 years and over . . . . .	4.7	4.3	5.7	5.5	3.0	4.0
Incidence of acute conditions <sup>3</sup>			Number per 100 persons			
All ages <sup>1</sup> . . . . .	182.9	184.9	183.1	189.5	180.8	184.8
Under 15 years . . . . .	288.1	289.3	280.0	302.7	281.7	296.5
Under 5 years . . . . .	354.5	345.1	334.6	360.4	358.9	362.8
5–14 years . . . . .	252.8	259.2	250.9	271.7	240.4	261.3
15–44 years . . . . .	165.1	172.2	170.1	180.5	168.7	162.6
45–64 years . . . . .	109.3	104.4	112.9	125.1	101.4	107.9
65 years and over . . . . .	100.9	98.8	98.4	119.5	100.4	108.9
65–74 years . . . . .	103.1	97.4	98.9	118.2	94.8	107.8
75 years and over . . . . .	97.3	101.0	97.7	121.5	109.4	110.6

<sup>1</sup>Age adjusted.

<sup>2</sup>A subset of restricted-activity days.

<sup>3</sup>Excludes conditions involving neither medical attention nor activity restriction.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.

**Table 52. Self-assessment of health, according to selected characteristics: United States, 1983 and 1988**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Total	Excellent		Very good		Good		Fair or poor	
		1983	1988	1983	1988	1983	1988	1983	1988
Percent distribution									
Total <sup>1,2</sup> . . . . .	100.0	40.7	40.2	25.4	27.7	23.2	22.7	10.7	9.4
Age									
Under 15 years . . . . .	100.0	53.3	53.3	24.9	26.6	18.8	17.4	3.0	2.7
Under 5 years . . . . .	100.0	54.0	53.9	25.1	26.2	18.0	16.4	2.9	3.4
5-14 years . . . . .	100.0	52.9	53.0	24.8	26.7	19.3	17.9	3.1	2.4
15-44 years . . . . .	100.0	44.7	42.6	27.9	30.5	21.5	21.4	6.0	5.5
45-64 years . . . . .	100.0	26.6	28.2	24.0	26.5	29.3	28.2	20.1	17.1
65 years and over . . . . .	100.0	16.6	16.3	19.2	21.5	30.8	32.8	33.3	29.4
65-74 years . . . . .	100.0	16.9	17.5	19.1	22.8	31.7	33.1	32.3	26.6
75 years and over . . . . .	100.0	16.2	14.5	19.4	19.5	29.4	32.2	34.9	33.8
Sex <sup>1</sup>									
Male . . . . .	100.0	43.0	42.2	25.0	27.5	21.8	21.4	10.2	8.9
Female . . . . .	100.0	38.6	38.3	25.7	27.8	24.6	24.0	11.1	9.9
Race <sup>1</sup>									
White . . . . .	100.0	42.6	41.8	25.8	28.4	22.1	21.4	9.6	8.5
Black . . . . .	100.0	28.5	30.1	21.8	23.3	30.0	30.2	19.7	16.4
Family income <sup>1,3</sup>									
Less than \$10,000 . . . . .	100.0	29.1	27.9	22.1	24.1	27.6	28.2	21.2	19.8
\$10,000-\$14,999 . . . . .	100.0	34.2	33.6	24.8	27.4	27.2	27.0	13.9	12.0
\$15,000-\$19,999 . . . . .	100.0	37.0	37.4	26.9	29.5	25.7	24.1	10.5	9.0
\$20,000-\$34,999 . . . . .	100.0	43.7	42.7	27.4	29.1	22.0	21.7	6.9	6.5
\$35,000 or more . . . . .	100.0	53.1	52.6	26.2	27.2	16.1	16.2	4.7	4.0
Geographic region <sup>1</sup>									
Northeast . . . . .	100.0	41.7	41.2	26.5	29.8	22.7	21.1	9.1	7.8
Midwest . . . . .	100.0	40.9	41.4	26.5	28.2	22.9	21.8	9.7	8.6
South . . . . .	100.0	38.3	37.5	24.0	25.9	24.7	25.1	13.1	11.5
West . . . . .	100.0	43.5	42.1	25.0	27.9	22.0	21.6	9.5	8.4
Location of residence <sup>1</sup>									
Within MSA . . . . .	100.0	41.5	41.4	25.8	27.6	22.7	22.2	10.0	9.0
Outside MSA . . . . .	100.0	39.1	36.2	24.4	28.1	24.6	24.8	12.0	11.0

<sup>1</sup>Age adjusted.

<sup>2</sup>Includes all other races not shown separately and unknown family income.

<sup>3</sup>Family income categories for 1983. Income categories for 1988 are: less than \$13,000; \$13,000-\$18,999; \$19,000-\$24,999; \$25,000-\$44,999; and \$45,000 or more.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.

**Table 53. Current cigarette smoking by persons 18 years of age and over, according to sex, race, and age: United States, selected years 1965–87**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

<i>Sex, race, and age</i>	<i>1965</i>	<i>1974</i>	<i>1979</i>	<i>1983</i>	<i>1985</i>	<i>1987</i>
Percent of persons 18 years of age and over						
All persons						
18 years and over, age adjusted . . . . .	42.3	37.2	33.5	32.2	30.0	28.7
18 years and over, crude . . . . .	42.4	37.1	33.5	32.1	30.1	28.8
All males						
18 years and over, age adjusted . . . . .	51.6	42.9	37.2	34.7	32.1	31.0
18 years and over, crude . . . . .	51.9	43.1	37.5	35.1	32.6	31.2
18–24 years. . . . .	54.1	42.1	35.0	32.9	28.0	28.2
25–34 years. . . . .	60.7	50.5	43.9	38.8	38.2	34.8
35–44 years. . . . .	58.2	51.0	41.8	41.0	37.6	36.6
45–64 years. . . . .	51.9	42.6	39.3	35.9	33.4	33.5
65 years and over . . . . .	28.5	24.8	20.9	22.0	19.6	17.2
White:						
18 years and over, age adjusted . . . . .	50.8	41.7	36.5	34.1	31.3	30.4
18–24 years. . . . .	53.0	40.8	34.3	32.5	28.4	29.2
25–34 years. . . . .	60.1	49.5	43.6	38.6	37.3	33.8
35–44 years. . . . .	57.3	50.1	41.3	40.8	36.6	36.2
45–64 years. . . . .	51.3	41.2	38.3	35.0	32.1	32.4
65 years and over . . . . .	27.7	24.3	20.5	20.6	18.9	16.0
Black:						
18 years and over, age adjusted . . . . .	59.2	54.0	44.1	41.3	39.9	39.0
18–24 years. . . . .	62.8	54.9	40.2	34.2	27.2	24.9
25–34 years. . . . .	68.4	58.5	47.5	39.9	45.6	44.9
35–44 years. . . . .	67.3	61.5	48.6	45.5	45.0	44.0
45–64 years. . . . .	57.9	57.8	50.0	44.8	46.1	44.3
65 years and over . . . . .	36.4	29.7	26.2	38.9	27.7	30.3
All females						
18 years and over, age adjusted . . . . .	34.0	32.5	30.3	29.9	28.2	26.7
18 years and over, crude . . . . .	33.9	32.1	29.9	29.5	27.9	26.5
18–24 years. . . . .	38.1	34.1	33.8	35.5	30.4	26.1
25–34 years. . . . .	43.7	38.8	33.7	32.6	32.0	31.8
35–44 years. . . . .	43.7	39.8	37.0	33.8	31.5	29.6
45–64 years. . . . .	32.0	33.4	30.7	31.0	29.9	28.6
65 years and over . . . . .	9.6	12.0	13.2	13.1	13.5	13.7
White:						
18 years and over, age adjusted . . . . .	34.3	32.3	30.6	30.1	28.3	27.2
18–24 years. . . . .	38.4	34.0	34.5	36.5	31.8	27.8
25–34 years. . . . .	43.4	38.6	34.1	32.2	32.0	31.9
35–44 years. . . . .	43.9	39.3	37.2	34.8	31.0	29.2
45–64 years. . . . .	32.7	33.0	30.6	30.6	29.7	29.0
65 years and over . . . . .	9.8	12.3	13.8	13.2	13.3	13.9
Black:						
18 years and over, age adjusted . . . . .	32.1	35.9	30.8	31.8	30.7	27.2
18–24 years. . . . .	37.1	35.6	31.8	32.0	23.7	20.4
25–34 years. . . . .	47.8	42.2	35.2	38.0	36.2	35.8
35–44 years. . . . .	42.8	46.4	37.7	32.7	40.2	35.3
45–64 years. . . . .	25.7	38.9	34.2	36.3	33.4	28.4
65 years and over . . . . .	7.1	8.9	8.5	13.1	14.5	11.7

NOTES: A current smoker is a person who has smoked at least 100 cigarettes and who now smokes; includes occasional smokers. Excludes unknown smoking status.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey; Data computed by the Division of Epidemiology and Health Promotion from data compiled by the Division of Health Interview Statistics.

**Table 54. Age-adjusted prevalence of current cigarette smoking by persons 25 years of age and over, according to sex, race, and education: United States, selected years 1974–87**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

<i>Sex, race, and education</i>	<i>1974</i>	<i>1979</i>	<i>1983</i>	<i>1985</i>	<i>1987</i>
Percent of persons 25 years of age and over, age adjusted					
All persons <sup>1</sup> . . . . .	37.1	33.3	31.7	30.2	29.1
Less than 12 years . . . . .	43.8	41.1	40.8	41.0	40.6
12 years . . . . .	36.4	33.7	33.6	32.1	31.8
13–15 years . . . . .	35.8	33.2	30.3	29.7	27.2
16 or more years . . . . .	27.5	22.8	20.7	18.6	16.7
All males <sup>1</sup> . . . . .	43.0	37.6	35.1	32.9	31.5
Less than 12 years . . . . .	52.4	48.1	47.2	46.0	45.7
12 years . . . . .	42.6	39.1	37.4	35.6	35.2
13–15 years . . . . .	41.6	36.5	33.0	33.0	28.4
16 or more years . . . . .	28.6	23.1	21.8	19.7	17.3
White males <sup>1</sup> . . . . .	41.9	36.9	34.5	31.9	30.6
Less than 12 years . . . . .	51.6	48.0	47.9	45.2	45.3
12 years . . . . .	42.2	38.6	37.1	34.8	34.6
13–15 years . . . . .	41.4	36.4	32.6	32.3	28.0
16 or more years . . . . .	28.1	22.8	21.1	19.2	17.4
Black males <sup>1</sup> . . . . .	53.8	44.9	42.8	42.5	41.9
Less than 12 years . . . . .	58.3	50.1	46.0	51.1	49.4
12 years . . . . .	*51.2	48.4	47.2	41.9	43.6
13–15 years . . . . .	*45.7	39.3	44.7	42.3	32.4
16 or more years . . . . .	*41.8	*37.9	*31.3	*32.0	20.9
All females <sup>1</sup> . . . . .	32.2	29.6	28.8	27.8	26.9
Less than 12 years . . . . .	36.8	35.0	35.3	36.7	36.1
12 years . . . . .	32.5	29.9	30.9	29.6	29.2
13–15 years . . . . .	30.2	30.0	27.5	26.7	26.0
16 or more years . . . . .	26.1	22.5	19.2	17.4	16.1
White females <sup>1</sup> . . . . .	31.9	29.8	28.8	27.6	27.0
Less than 12 years . . . . .	37.0	36.1	35.5	37.1	37.0
12 years . . . . .	32.1	29.9	30.9	29.4	29.4
13–15 years . . . . .	30.5	30.6	28.0	27.1	26.2
16 or more years . . . . .	25.8	21.9	18.9	16.8	16.4
Black females <sup>1</sup> . . . . .	35.9	30.6	31.8	32.1	28.6
Less than 12 years . . . . .	36.4	31.9	36.9	39.2	35.0
12 years . . . . .	41.9	33.0	35.2	32.3	28.1
13–15 years . . . . .	33.2	*28.8	26.5	23.7	27.2
16 or more years . . . . .	*35.2	*43.4	*38.7	27.5	19.5

<sup>1</sup>Includes unknown education.

\*For age groups where percent smoking was 0 or 100 the age-adjustment procedure was modified to substitute the percent from the next lower education group. These age-adjusted percents should be considered unreliable because of small sample size.

NOTES: A current smoker is a person who has smoked at least 100 cigarettes and who now smokes; includes occasional smokers. Excludes unknown smoking status.

SOURCE: Data computed by the Division of Epidemiology and Health Promotion, National Center for Health Statistics from data compiled by the Division of Health Interview Statistics.

**Table 55. Use of selected substances in the past month by youths 12–17 years of age and young adults 18–25 years of age, according to age and sex: United States, selected years 1974–88**

[Data are based on household interviews of a sample of the population 12 years of age and over in the coterminous United States]

<i>Substance, age, and sex</i>	1974	1976	1977	1979	1982	1985	1988
<b>Cigarettes</b>							
				Percent of population			
<b>Both sexes:</b>							
12–17 years . . . . .	25	23	22	( <sup>1</sup> )	15	15	12
12–13 years . . . . .	13	11	10	( <sup>1</sup> )	*3	6	3
14–15 years . . . . .	25	20	22	( <sup>1</sup> )	10	14	11
16–17 years . . . . .	38	39	35	( <sup>1</sup> )	30	25	20
18–25 years . . . . .	49	49	47	( <sup>1</sup> )	40	37	35
<b>Male:</b>							
12–17 years . . . . .	27	21	23	( <sup>1</sup> )	16	16	12
18–25 years . . . . .	50	48	50	( <sup>1</sup> )	37	38	36
<b>Female:</b>							
12–17 years . . . . .	24	26	22	( <sup>1</sup> )	13	15	11
18–25 years . . . . .	47	51	44	( <sup>1</sup> )	42	35	35
<b>Alcohol<sup>2</sup></b>							
<b>Both sexes:</b>							
12–17 years . . . . .	34	32	31	37	27	31	25
12–13 years . . . . .	19	19	13	20	10	11	6
14–15 years . . . . .	32	31	28	36	23	35	23
16–17 years . . . . .	51	47	52	55	45	46	42
18–25 years . . . . .	69	69	70	76	68	71	65
<b>Male:</b>							
12–17 years . . . . .	39	36	37	39	27	34	27
18–25 years . . . . .	---	79	82	84	75	78	75
<b>Female:</b>							
12–17 years . . . . .	29	29	25	36	27	28	23
18–25 years . . . . .	---	58	59	68	61	64	57
<b>Marijuana</b>							
<b>Both sexes:</b>							
12–17 years . . . . .	12	12	17	17	12	12	6
12–13 years . . . . .	*2	*3	*4	4	*2	*4	1
14–15 years . . . . .	12	13	16	17	8	11	5
16–17 years . . . . .	20	21	30	28	23	21	12
18–25 years . . . . .	25	25	27	35	27	22	15
<b>Male:</b>							
12–17 years . . . . .	12	14	20	19	13	13	6
18–25 years . . . . .	---	31	35	45	36	27	20
<b>Female:</b>							
12–17 years . . . . .	11	11	13	14	10	11	7
18–25 years . . . . .	---	19	20	26	19	17	11
<b>Cocaine<sup>3</sup></b>							
<b>Both sexes:</b>							
12–17 years . . . . .	*1.0	*1.0	*0.8	1.4	1.6	1.5	1.1
18–25 years . . . . .	3.1	2.0	3.7	9.3	6.8	7.6	4.5
<b>Male:</b>							
12–17 years . . . . .	---	---	---	---	1.8	2.0	0.9
18–25 years . . . . .	---	---	---	---	9.1	9.0	6.0
<b>Female:</b>							
12–17 years . . . . .	---	---	---	---	*1.5	*1.0	1.4
18–25 years . . . . .	---	---	---	---	4.7	6.3	3.0

<sup>1</sup>Data not comparable because definitions differ.

<sup>2</sup>In 1979, 1982, 1985, and 1988, private answer sheets were used for alcohol questions; in earlier years, respondents answered questions aloud.

<sup>3</sup>The Drug Abuse Warning Network (DAWN) provides data on the number of people admitted to emergency rooms following cocaine use, based on a nonrandom sample of 562 participating emergency rooms in 21 metropolitan areas and 78 medical examiner facilities located primarily in 27 metropolitan areas. Between 1985 and 1988 the annual number of cocaine-related emergency room visits in DAWN hospitals increased sharply from 11,136 to 46,825. Cocaine-related emergency room visits increased from 304 to 1,027 for youths 12–17 years of age and from 3,552 to 14,434 for young adults 18–25 years of age. (Unpublished data from National Institute on Drug Abuse, Drug Abuse Warning Network.)

\*Relative standard error greater than 30 percent.

SOURCES: National Institute on Drug Abuse: National Household Survey on Drug Abuse: Main Findings, 1979, by P. M. Fishburne, H. I. Abelson, and I. Cisin. DHHS Pub. No. (ADM) 80-976. Alcohol, Drug Abuse, and Mental Health Administration. Washington. U.S. Government Printing Office, 1980; National Household Survey on Drug Abuse: Main Findings, 1982, by J. D. Miller et al. DHHS Pub. No. (ADM) 83-1263. Alcohol, Drug Abuse, and Mental Health Administration. Washington. U.S. Government Printing Office, 1983; National Household Survey on Drug Abuse: Main Findings, 1985. DHHS Pub. No. (ADM) 88-1586. National Household Survey on Drug Abuse: Main Findings, 1988; Unpublished data.

**Table 56. Alcohol consumption status of persons 18 years of age and over, according to sex: United States, selected years 1971–85**

[Data are based on interviews of samples of the noninstitutionalized population]

<i>Sex and alcohol consumption</i>	1971	1973	1974	1975	1976	1979	1983	1985
Both sexes		Percent distribution						
Abstain . . . . .	36	34	36	36	33	33	40	35
Light . . . . .	34	29	28	31	38	34	29	35
Moderate . . . . .	20	23	28	21	19	24	21	22
Heavier . . . . .	10	14	11	12	10	9	10	8
Male								
Abstain . . . . .	30	25	24	27	26	25	28	24
Light . . . . .	29	24	24	27	33	29	28	33
Moderate . . . . .	26	29	34	26	24	31	28	29
Heavier . . . . .	15	22	18	20	18	14	16	14
Female								
Abstain . . . . .	42	42	42	45	39	40	50	45
Light . . . . .	40	35	32	35	44	38	30	37
Moderate . . . . .	13	17	21	15	15	18	15	15
Heavier . . . . .	5	6	5	4	3	4	4	3

NOTE: Alcohol consumption status is defined in ounces of absolute alcohol (ethanol) consumed per day as follows: abstain, 0; light, .01–.21; moderate, .22–.99; and heavier, 1.00 or more.

SOURCES: Clark, W. B., Midanik, L., and Knupfer, G.: Report on the 1979 National Survey. University of California. Contract No. ADM 281-77-0021. Prepared for the National Institute on Alcohol Abuse and Alcoholism. Rockville, Md., Dec. 1981. Data for 1983 and 1985 computed by the National Institute on Alcohol Abuse and Alcoholism from data compiled by the National Center for Health Statistics, Division of Health Interview Statistics.

**Table 57 (page 1 of 2). Elevated blood pressure among persons 20–74 years of age, according to race, sex, and age: United States, 1960–62, 1971–74, and 1976–80**

[Data are based on physical examinations of a sample of the civilian noninstitutionalized population]

Sex and age	All races			White			Black		
	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80
Percent of population with systolic pressure at least 140 mmHg or diastolic pressure at least 90 mmHg									
Both sexes <sup>1</sup>									
20–74 years, age adjusted . . . . .	37.4	38.4	38.0	36.2	37.3	37.0	48.8	49.6	46.6
20–74 years, crude . . . . .	38.1	38.1	37.2	37.1	37.3	36.5	48.7	47.3	43.2
20–24 years. . . . .	12.9	13.5	16.1	13.1	13.7	16.0	13.1	13.7	16.9
25–34 years. . . . .	16.2	20.0	21.3	15.3	19.2	21.2	23.4	28.2	22.8
35–44 years. . . . .	30.0	32.3	33.1	28.3	29.7	31.0	44.0	54.5	47.6
45–54 years. . . . .	44.4	46.9	47.0	42.4	45.8	45.8	60.6	57.4	58.2
55–64 years. . . . .	62.3	59.4	56.7	60.9	58.4	55.2	78.9	71.8	70.5
65–74 years. . . . .	73.8	70.3	63.1	73.1	69.3	61.9	85.2	80.0	71.9
Male									
20–74 years, age adjusted . . . . .	40.8	42.7	43.6	40.0	42.1	43.1	48.9	51.0	48.5
20–74 years, crude . . . . .	41.0	42.0	42.5	40.4	41.6	42.3	49.6	48.9	45.7
20–24 years. . . . .	21.7	20.2	24.7	22.1	20.7	25.6	*18.4	18.6	22.2
25–34 years. . . . .	23.3	27.5	31.1	22.3	27.2	31.3	31.9	33.6	31.7
35–44 years. . . . .	37.4	38.1	39.5	37.0	36.0	37.7	44.2	60.5	52.8
45–54 years. . . . .	47.2	52.8	51.8	46.0	53.0	51.8	56.3	53.3	49.8
55–64 years. . . . .	59.3	59.3	58.7	58.2	58.9	57.6	75.1	67.5	71.8
65–74 years. . . . .	65.9	65.4	62.0	65.0	64.0	60.6	*76.8	79.3	69.2
Female <sup>1</sup>									
20–74 years, age adjusted . . . . .	34.0	34.3	32.6	32.3	32.6	31.0	49.0	48.5	45.2
20–74 years, crude . . . . .	35.3	34.6	32.3	34.0	33.3	31.0	47.9	46.1	41.2
20–24 years. . . . .	4.2	7.1	7.8	3.8	6.9	6.5	8.7	9.3	12.2
25–34 years. . . . .	9.2	12.7	11.7	8.2	11.2	11.0	17.3	24.0	15.6
35–44 years. . . . .	22.9	26.9	27.1	19.9	23.8	24.6	43.8	49.9	43.7
45–54 years. . . . .	41.8	41.5	42.4	39.0	39.1	40.1	64.8	61.0	65.6
55–64 years. . . . .	65.0	59.5	54.9	63.3	57.9	53.0	82.8	75.3	69.4
65–74 years. . . . .	80.3	74.1	63.9	79.8	73.4	62.9	*92.1	80.6	74.0
Percent of population with systolic pressure at least 160 mmHg or diastolic pressure at least 95 mmHg									
Both sexes <sup>1</sup>									
20–74 years, age adjusted . . . . .	18.8	19.3	18.1	17.2	18.0	17.4	32.9	32.4	24.6
20–74 years, crude . . . . .	19.2	19.2	17.6	17.8	18.0	17.0	32.6	30.5	22.3
20–24 years. . . . .	4.3	3.7	4.9	4.3	3.7	5.0	5.1	4.5	4.3
25–34 years. . . . .	5.6	6.8	8.0	4.3	6.1	7.8	14.8	13.3	9.3
35–44 years. . . . .	13.4	15.5	13.9	11.5	13.5	12.4	29.0	31.9	24.7
45–54 years. . . . .	21.4	24.3	25.1	19.1	22.2	24.1	39.5	43.7	36.1
55–64 years. . . . .	31.8	33.2	28.1	30.1	31.6	26.9	50.4	52.1	39.3
65–74 years. . . . .	48.7	40.9	34.5	46.9	39.5	33.9	71.9	55.7	36.7
Male									
20–74 years, age adjusted . . . . .	18.8	20.7	20.9	17.4	19.6	20.4	32.9	31.8	26.1
20–74 years, crude . . . . .	19.0	20.2	20.1	17.6	19.3	19.8	32.9	30.1	23.9
20–24 years. . . . .	6.7	5.7	7.4	6.5	5.8	8.0	*9.7	5.6	4.3
25–34 years. . . . .	7.8	8.9	12.2	6.1	8.3	12.2	21.8	16.1	13.4
35–44 years. . . . .	16.2	19.1	17.0	14.9	17.2	15.2	28.1	36.8	33.9
45–54 years. . . . .	21.4	26.8	28.2	19.6	25.8	28.4	34.6	37.0	27.8
55–64 years. . . . .	29.3	32.5	31.2	27.4	31.2	29.8	50.3	49.5	45.5
65–74 years. . . . .	40.5	36.4	33.3	38.6	35.1	32.6	*63.3	50.3	32.3

See footnote at end of table.

**Table 57 (page 2 of 2). Elevated blood pressure among persons 20–74 years of age, according to race, sex, and age: United States, 1960–62, 1971–74, and 1976–80**

[Data are based on physical examinations of a sample of the civilian noninstitutionalized population]

Sex and age	All races			White			Black		
	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80
Percent of population with systolic pressure at least 160 mmHg or diastolic pressure at least 95 mmHg									
Female <sup>1</sup>									
20–74 years, age adjusted . . . . .	18.6	18.0	15.4	16.9	16.3	14.4	33.2	33.0	23.5
20–74 years, crude . . . . .	19.3	18.3	15.2	18.0	16.8	14.5	32.3	30.9	21.0
20–24 years . . . . .	1.9	1.9	2.5	2.1	1.7	2.0	1.3	3.5	4.4
25–34 years . . . . .	3.4	4.8	3.8	2.5	4.0	3.4	9.7	11.2	6.0
35–44 years . . . . .	10.8	12.2	11.0	8.3	10.0	9.7	29.8	28.2	17.5
45–54 years . . . . .	21.5	21.9	22.3	18.7	18.8	20.0	44.3	49.4	43.4
55–64 years . . . . .	34.1	33.9	25.2	32.5	32.0	24.3	50.5	54.2	34.2
65–74 years . . . . .	55.4	44.4	35.4	53.8	42.9	34.9	*79.0	59.8	40.0

<sup>1</sup>Excludes pregnant women.

\*Percents based on fewer than 45 persons are considered unreliable. Percents based on fewer than 25 persons are considered highly unreliable and are not shown.

NOTE: Percents are based on a single measurement of blood pressure to provide comparable data across the 3 time periods.

SOURCE: Division of Health Examination Statistics, National Center for Health Statistics: Unpublished data.



**Table 58. Hypertension among persons 20–74 years of age, according to race, sex, and age: United States, 1960–62, 1971–74, and 1976–80**

[Data are based on physical examinations of a sample of the civilian noninstitutionalized population]

Sex and age	All races			White			Black		
	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80
Percent of population									
Both sexes <sup>1</sup>									
20–74 years, age adjusted . . . . .	38.5	40.0	40.6	37.1	38.7	39.4	51.4	53.5	50.5
20–74 years, crude . . . . .	39.0	39.7	39.7	37.9	38.7	38.9	51.3	51.0	46.7
20–24 years . . . . .	13.4	13.6	16.4	13.3	13.8	16.2	15.6	13.7	18.2
25–34 years . . . . .	17.3	20.6	22.0	16.1	19.5	21.9	26.5	31.3	24.2
35–44 years . . . . .	30.7	33.4	34.5	28.6	30.6	32.3	47.0	58.0	49.6
45–54 years . . . . .	45.5	49.1	50.2	43.4	47.5	48.9	62.2	63.5	64.3
55–64 years . . . . .	63.5	62.5	61.4	61.9	61.2	59.8	82.0	77.7	76.0
65–74 years . . . . .	75.7	73.5	69.7	74.9	72.5	68.5	88.1	83.8	80.7
Male									
20–74 years, age adjusted . . . . .	41.4	44.0	45.3	40.6	43.3	44.8	49.7	54.2	50.5
20–74 years, crude . . . . .	41.7	43.3	44.0	41.0	42.8	43.8	50.5	52.1	47.4
20–24 years . . . . .	21.6	20.4	24.7	22.0	20.9	25.6	*18.4	18.4	22.2
25–34 years . . . . .	23.5	27.6	31.4	22.5	27.3	31.7	32.4	33.6	32.1
35–44 years . . . . .	37.7	39.1	40.5	37.1	36.6	38.6	46.6	64.7	54.3
45–54 years . . . . .	47.6	55.0	53.6	46.5	54.6	53.5	56.3	61.1	53.3
55–64 years . . . . .	60.3	62.5	61.8	59.1	62.1	60.8	76.2	72.0	73.8
65–74 years . . . . .	68.8	67.2	67.1	68.1	65.8	65.8	*76.8	81.5	75.1
Female <sup>1</sup>									
20–74 years, age adjusted . . . . .	35.5	36.1	36.0	33.4	34.1	34.2	53.4	52.9	50.6
20–74 years, crude . . . . .	36.6	36.5	35.6	34.9	34.9	34.2	52.0	50.2	46.1
20–24 years . . . . .	5.3	7.2	8.3	4.4	6.9	6.8	13.3	9.5	14.6
25–34 years . . . . .	11.2	13.7	12.8	9.7	11.7	12.0	22.2	29.6	17.7
35–44 years . . . . .	24.0	28.2	28.8	20.6	24.9	26.2	47.3	52.8	46.0
45–54 years . . . . .	43.4	43.6	47.1	40.6	40.9	44.5	68.1	65.6	73.9
55–64 years . . . . .	66.4	62.5	61.1	64.4	60.5	59.0	87.8	82.5	77.9
65–74 years . . . . .	81.5	78.3	71.8	80.7	77.5	70.6	*97.5	85.6	85.0

<sup>1</sup>Excludes pregnant women.

\*Percents based on fewer than 45 persons are considered unreliable. Percents based on fewer than 25 persons are considered highly unreliable and are not shown.

NOTE: 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. Percents are based on a single measurement of blood pressure to provide comparable data across the 3 time periods. In 1976–80, 31.3 percent of persons 20–74 years of age had hypertension, based on the average of 3 blood pressure measurements, in contrast to 39.7 percent when a single measurement is used.

SOURCE: Division of Health Examination Statistics, National Center for Health Statistics: Unpublished data.

**Table 59 (page 1 of 2). Borderline high and high serum cholesterol levels among persons 20–74 years of age, according to race, sex, and age: United States, 1960–62, 1971–74, and 1976–80**

[Data are based on physical examinations of a sample of the civilian noninstitutionalized population]

Sex and age	All races			White			Black		
	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80
Percent of population with borderline high serum cholesterol									
Both sexes									
20–74 years, age adjusted . . . . .	32.2	32.3	30.7	32.5	32.4	30.8	29.5	31.5	29.3
20–74 years, crude . . . . .	32.7	32.2	30.3	33.0	32.3	30.4	30.7	31.0	28.4
20–24 years . . . . .	21.5	22.5	22.1	22.7	22.3	22.1	14.7	24.9	21.5
25–34 years . . . . .	32.1	29.4	25.9	32.6	29.7	25.9	25.1	28.5	23.9
35–44 years . . . . .	39.6	35.1	32.3	39.6	35.7	32.9	42.0	29.1	29.1
45–54 years . . . . .	36.6	37.0	34.7	37.1	37.1	34.5	33.6	36.0	33.5
55–64 years . . . . .	29.1	35.2	35.6	28.6	34.7	35.5	34.7	36.7	34.2
65–74 years . . . . .	28.4	32.5	33.5	29.4	32.4	33.3	17.8	33.8	35.3
Male									
20–74 years, age adjusted . . . . .	35.2	33.7	31.6	35.6	34.1	31.9	31.1	29.2	27.5
20–74 years, crude . . . . .	35.7	33.5	31.1	36.0	34.0	31.5	33.3	28.7	26.7
20–24 years . . . . .	23.3	19.6	20.4	24.1	19.6	20.7	*15.8	19.8	18.9
25–34 years . . . . .	33.7	30.8	28.0	34.1	31.6	28.3	24.5	25.2	22.6
35–44 years . . . . .	40.7	36.0	33.0	39.7	37.0	33.7	49.4	25.4	28.1
45–54 years . . . . .	38.2	38.0	35.2	38.9	38.0	35.5	35.4	38.6	31.8
55–64 years . . . . .	36.3	39.9	37.3	36.7	40.0	37.6	36.3	33.6	29.7
65–74 years . . . . .	35.5	35.8	34.8	37.2	36.3	34.6	*14.1	32.0	35.7
Female									
20–74 years, age adjusted . . . . .	29.5	31.2	30.0	29.8	30.9	29.7	27.8	33.2	30.8
20–74 years, crude . . . . .	30.0	31.0	29.6	30.2	30.7	29.4	28.4	32.9	29.9
20–24 years . . . . .	20.0	25.1	23.7	21.4	24.7	23.6	13.8	29.0	23.5
25–34 years . . . . .	30.7	28.2	23.9	31.1	27.8	23.6	25.5	31.0	25.0
35–44 years . . . . .	38.5	34.3	31.7	39.4	34.5	32.1	35.7	31.9	29.9
45–54 years . . . . .	35.0	36.1	34.2	35.3	36.3	33.5	31.7	33.9	34.9
55–64 years . . . . .	22.3	31.0	34.0	21.0	29.9	33.7	*32.9	39.2	38.0
65–74 years . . . . .	22.7	30.0	32.5	23.0	29.5	32.2	*20.7	35.2	35.0
Percent of population with high serum cholesterol									
Both sexes									
20–74 years, age adjusted . . . . .	33.4	28.7	28.0	34.1	28.7	28.0	29.1	28.9	26.2
20–74 years, crude . . . . .	33.6	28.2	26.8	34.6	28.4	27.2	28.4	27.2	23.8
20–24 years . . . . .	9.4	8.5	6.4	10.0	8.5	6.3	2.7	6.6	5.2
25–34 years . . . . .	15.9	13.7	13.5	16.2	13.5	13.6	15.8	15.6	13.4
35–44 years . . . . .	28.3	25.3	24.1	29.2	25.2	24.4	21.1	24.6	20.3
45–54 years . . . . .	43.1	38.1	38.7	43.5	38.1	38.6	42.0	39.2	40.5
55–64 years . . . . .	56.2	45.1	45.3	58.3	45.3	45.9	41.8	44.9	41.4
65–74 years . . . . .	54.8	47.7	43.0	54.5	47.7	43.6	60.2	47.8	39.3
Male									
20–74 years, age adjusted . . . . .	30.0	27.3	26.0	30.6	27.4	26.0	25.9	26.6	25.7
20–74 years, crude . . . . .	30.7	26.8	24.9	31.4	26.9	25.0	26.7	25.1	23.9
20–24 years . . . . .	8.1	7.0	6.2	9.1	7.6	6.1	*–	1.7	2.9
25–34 years . . . . .	18.6	15.8	15.3	19.5	15.5	15.0	13.9	19.4	19.3
35–44 years . . . . .	33.9	31.8	27.9	35.5	31.8	27.9	19.9	28.0	24.5
45–54 years . . . . .	39.2	37.5	36.9	39.2	38.1	36.5	40.8	32.8	40.3
55–64 years . . . . .	41.6	36.2	36.8	42.3	36.1	37.3	39.5	39.2	35.3
65–74 years . . . . .	38.0	34.7	31.7	37.5	34.4	32.4	*44.9	38.6	27.2

See notes at end of table.

**Table 59 (page 2 of 2). Borderline high and high serum cholesterol levels among persons 20–74 years of age, according to race, sex, and age: United States, 1960–62, 1971–74, and 1976–80**

[Data are based on physical examinations of a sample of the civilian noninstitutionalized population]

Sex and age	All races			White			Black		
	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80
Female									
Percent of population with high serum cholesterol									
20–74 years, age adjusted . . . . .	36.4	29.7	29.2	37.0	29.6	29.6	31.8	30.8	26.6
20–74 years, crude . . . . .	36.3	29.6	28.5	37.5	29.8	29.2	29.9	28.8	23.7
20–24 years . . . . .	10.5	9.8	6.6	10.8	9.4	6.5	4.7	10.6	7.0
25–34 years . . . . .	13.5	11.7	11.8	13.2	11.5	12.4	17.1	12.7	8.7
35–44 years . . . . .	23.1	19.3	20.7	23.3	18.9	21.1	22.1	22.0	16.9
45–54 years . . . . .	46.9	38.7	40.5	47.6	38.2	40.6	43.3	44.6	40.7
55–64 years . . . . .	70.1	53.1	52.9	73.0	53.7	53.7	*44.4	49.4	46.5
65–74 years . . . . .	68.5	57.7	51.6	68.7	57.9	52.1	*72.6	54.8	48.4

\*Percents based on fewer than 45 persons are considered unreliable. Percents based on fewer than 25 persons are considered highly unreliable and are not shown.

NOTES: Borderline high serum cholesterol is defined as greater than or equal to 200 mg/dl (5.17 mmol/L) but less than or equal to 239 mg/dl (6.19 mmol/L). High serum cholesterol is defined as greater than or equal to 240 mg/dl (6.20 mmol/L). Risk levels have been defined by the National Cholesterol Education Program Expert Panel on Detection, Evaluation and Treatment of High Blood Cholesterol in Adults, Nov. 1987. (Archives of Internal Medicine: January 1988, 148: 36–69).

SOURCE: Division of Health Examination Statistics, National Center for Health Statistics: Unpublished data.

**Table 60. Overweight persons 20–74 years of age, according to race, sex, and age: United States, 1960–62, 1971–74, and 1976–80**

[Data are based on physical examinations of a sample of the civilian noninstitutionalized population]

Sex and age	All races			White			Black		
	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80	1960–62	1971–74	1976–80
Percent of population									
Both sexes									
20–74 years, age adjusted . . . . .	25.0	25.7	26.2	24.1	24.8	25.1	32.6	35.7	37.7
20–74 years, crude . . . . .	25.5	25.5	25.7	24.6	24.7	24.8	33.4	34.9	35.7
20–24 years . . . . .	11.6	11.3	11.7	11.5	10.9	11.2	11.6	15.8	15.3
25–34 years . . . . .	18.7	20.5	20.2	17.5	19.7	19.4	31.1	29.1	26.3
35–44 years . . . . .	23.5	28.4	27.9	21.4	26.6	26.4	38.0	45.3	40.8
45–54 years . . . . .	29.4	30.0	31.7	28.6	29.1	30.2	34.3	39.4	52.1
55–64 years . . . . .	35.4	32.0	32.8	34.6	31.0	31.9	44.0	43.9	44.2
65–74 years . . . . .	33.5	31.5	32.7	33.8	31.0	31.9	31.5	37.3	46.0
Male									
20–74 years, age adjusted . . . . .	23.2	24.1	24.8	23.5	24.3	24.9	21.7	25.0	27.5
20–74 years, crude . . . . .	23.4	24.0	24.2	23.7	24.1	24.4	22.5	24.5	25.7
20–24 years . . . . .	15.5	12.1	12.1	16.1	12.8	12.7	*8.5	8.2	5.5
25–34 years . . . . .	21.6	23.6	20.4	21.2	23.6	20.9	33.0	26.1	17.5
35–44 years . . . . .	22.8	29.4	28.9	22.0	28.9	28.2	28.6	39.3	40.9
45–54 years . . . . .	28.1	27.6	31.0	29.0	28.2	30.5	20.6	22.4	41.4
55–64 years . . . . .	26.9	24.8	28.1	28.5	24.9	28.6	17.1	25.6	26.0
65–74 years . . . . .	21.8	23.0	25.2	22.6	23.1	25.8	*11.7	21.6	26.4
Female									
20–74 years, age adjusted . . . . .	26.5	26.9	27.4	24.4	25.0	25.2	42.9	44.5	46.1
20–74 years, crude . . . . .	27.4	27.0	27.1	25.4	25.2	25.1	43.0	43.2	43.8
20–24 years . . . . .	7.9	10.5	11.4	6.7	9.1	9.6	14.2	22.5	23.7
25–34 years . . . . .	15.9	17.6	20.0	13.9	15.9	17.9	29.6	31.5	33.5
35–44 years . . . . .	24.1	27.3	27.0	20.9	24.5	24.8	46.1	49.9	40.8
45–54 years . . . . .	30.7	32.3	32.5	28.2	29.9	29.9	47.8	53.5	61.2
55–64 years . . . . .	43.2	38.5	37.0	40.1	36.6	34.8	71.4	58.7	59.4
65–74 years . . . . .	42.9	38.0	38.5	42.8	37.0	36.5	*47.8	49.2	60.8

\*Based on fewer than 45 persons.

NOTES: Overweight is defined for men as body mass index greater than or equal to 27.8 kilograms/meter<sup>2</sup>, and for women as body mass index greater than or equal to 27.3 kilograms/meter<sup>2</sup>. These cut points were used because they represent the sex-specific 85th percentiles for persons 20–29 years of age in the 1976–80 National Health and Nutrition Examination Survey. Excludes pregnant women. Height was measured without shoes; 2 pounds are deducted from data for 1960–62 to allow for weight of clothing.

SOURCE: Division of Health Examination Statistics, National Center for Health Statistics: Unpublished data.

**Table 61. Air pollution, according to source and type of pollutant: United States, selected years 1970–87**

[Data are calculated emissions estimates]

Type of pollutant and year	All sources	Transportation	Stationary fuel combustion	Industrial processes	Solid waste	Other
Emissions in 10 <sup>6</sup> metric tons per year						
<b>Particulate matter</b>						
1970.....	18.5	1.2	4.6	10.5	1.1	1.1
1975.....	10.6	1.3	2.8	5.2	0.6	0.7
1980.....	8.5	1.3	2.4	3.3	0.4	1.1
1983.....	7.1	1.3	2.0	2.4	0.3	1.1
1984.....	7.4	1.3	2.1	2.8	0.3	0.9
1985.....	7.0	1.4	1.8	2.8	0.3	0.8
1986.....	6.8	1.4	1.8	2.5	0.3	0.8
1987.....	7.0	1.4	1.8	2.5	0.3	1.0
<b>Sulfur oxides</b>						
1970.....	28.4	0.6	21.3	6.4	0.0	0.1
1975.....	25.8	0.7	20.2	5.0	0.0	0.0
1980.....	23.4	0.9	18.7	3.8	0.0	0.0
1983.....	20.7	0.8	16.7	3.3	0.0	0.0
1984.....	21.5	0.8	17.4	3.3	0.0	0.0
1985.....	21.1	0.9	17.0	3.2	0.0	0.0
1986.....	20.7	0.9	16.7	3.1	0.0	0.0
1987.....	20.4	0.9	16.4	3.1	0.0	0.0
<b>Nitrogen oxides</b>						
1970.....	18.3	7.7	9.1	0.7	0.4	0.3
1975.....	19.2	9.0	9.3	0.7	0.1	0.1
1980.....	20.4	9.3	10.1	0.7	0.1	0.2
1983.....	19.0	8.5	9.6	0.5	0.1	0.2
1984.....	19.7	8.6	10.2	0.6	0.1	0.2
1985.....	19.8	8.8	10.2	0.6	0.1	0.1
1986.....	19.3	8.5	10.0	0.6	0.1	0.1
1987.....	19.5	8.4	10.3	0.6	0.1	0.1
<b>Volatile organic compounds</b>						
1970.....	26.2	11.1	1.1	8.9	1.8	3.3
1975.....	22.1	9.2	1.1	8.3	0.9	2.5
1980.....	22.3	7.4	2.2	9.2	0.6	2.9
1983.....	20.4	6.7	2.6	7.9	0.6	2.7
1984.....	21.5	6.8	2.6	8.8	0.6	2.7
1985.....	20.1	6.4	2.3	8.5	0.6	2.2
1986.....	19.3	6.2	2.3	8.1	0.6	2.2
1987.....	19.6	6.0	2.3	8.3	0.6	2.4
<b>Carbon monoxide</b>						
1970.....	100.2	73.2	4.4	9.0	6.4	7.2
1975.....	82.2	63.2	4.2	6.9	3.1	4.8
1980.....	77.0	53.5	7.3	6.3	2.2	7.6
1983.....	71.3	49.3	7.9	4.4	1.9	7.7
1984.....	68.7	47.6	8.1	4.8	1.9	6.3
1985.....	64.6	45.5	7.2	4.6	2.0	5.3
1986.....	61.1	42.8	7.2	4.5	1.7	5.0
1987.....	61.4	40.7	7.2	4.7	1.7	7.1
Emissions in 10 <sup>3</sup> metric tons per year						
<b>Lead</b>						
1970.....	203.8	163.6	9.6	23.9	6.7	---
1975.....	147.0	122.6	9.3	10.3	4.8	---
1980.....	70.6	59.4	3.9	3.6	3.7	---
1983.....	46.3	40.7	0.6	2.4	2.6	---
1984.....	40.1	34.7	0.5	2.3	2.6	---
1985.....	21.1	15.5	0.5	2.3	2.8	---
1986.....	8.6	3.5	0.5	1.9	2.7	---
1987.....	8.1	3.0	0.5	2.0	2.6	---

NOTE: Because of modifications in methodology and use of more refined emission factors, data from this table should not be compared with data in previous editions of Health, United States.

SOURCE: Office of Air Quality Planning and Standards, Technical Support Division, National Air Data Branch: National Air Pollutant Emission Estimates, 1940–1987. EPA-450/4-88-022. U.S. Environmental Protection Agency, Research Triangle Park, N.C., Mar. 1989.

**Table 62. Employees with potential exposure to continuous noise without controls in selected industries, according to size of facility: United States, 1972-74 and 1981-83**

[Data are based on interviews of a sample of nonagricultural businesses]

Industry	All facilities		8-99 employees		100-499 employees		500 or more employees	
	1972-74	1981-83	1972-74	1981-83	1972-74	1981-83	1972-74	1981-83
	Number of employees with potential exposure							
All industries . . . . .	3,451,828	2,543,810	935,163	976,695	1,196,451	946,106	1,320,214	621,008
General building contractors . . . . .	77,526	93,120	22,783	63,862	54,743	22,563	*-	*6,693
Heavy construction contractors . . . . .	36,697	95,661	17,706	38,848	9,057	43,385	*9,933	*13,427
Special trade contractors . . . . .	70,362	171,213	38,605	151,886	31,756	19,327	*-	---
Textile mill products . . . . .	51,306	101,109	20,055	21,898	25,312	46,430	*5,938	32,780
Apparel and other textile products . . . . .	131,850	122,264	77,077	19,896	54,300	73,380	*472	*28,987
Lumber and wood products . . . . .	54,135	99,913	32,468	61,981	14,743	29,783	*6,923	*8,147
Paper and allied products . . . . .	175,953	77,728	38,330	19,760	75,073	41,214	*62,549	16,753
Printing and publishing . . . . .	120,275	116,221	36,600	43,960	16,805	38,081	66,869	34,179
Chemicals and allied products . . . . .	48,037	42,329	14,569	12,036	25,749	21,281	7,718	9,011
Primary metals industries . . . . .	414,976	132,726	35,585	17,135	88,711	55,683	290,679	59,907
Fabricated metal products . . . . .	354,055	194,830	126,239	86,187	145,497	70,147	82,318	38,495
Machinery, except electrical . . . . .	245,086	140,604	56,522	63,052	64,348	47,989	124,215	29,562
Miscellaneous manufacturing industries . . . . .	71,039	22,038	20,442	8,793	32,232	13,244	*18,364	*-
Transportation by air . . . . .	31,352	47,441	*946	13,034	6,665	*30,658	*23,740	3,749
Auto repair services and garages . . . . .	17,861	33,820	17,301	33,114	*560	*706	---	---
Miscellaneous repair services . . . . .	24,294	4,282	4,125	2,688	*17,304	*1,593	*2,865	---
Electric and electronic equipment . . . . .	90,585	72,471	4,287	12,126	35,673	16,224	50,624	44,120
	Percent of employees with potential exposure							
All industries . . . . .	9.0	7.6	6.1	8.8	10.8	9.6	11.1	5.0
General building contractors . . . . .	11.1	10.4	7.6	11.3	14.7	11.4	*-	*5.0
Heavy construction contractors . . . . .	6.7	16.1	6.0	13.7	3.8	20.9	*67.3	*13.3
Special trade contractors . . . . .	5.5	10.8	4.1	12.1	9.5	5.8	*-	---
Textile mill products . . . . .	22.1	14.2	21.7	20.7	26.2	13.4	*13.8	12.6
Apparel and other textile products . . . . .	14.4	9.8	15.4	4.7	14.3	12.0	*1.2	*13.9
Lumber and wood products . . . . .	33.9	17.2	39.6	20.4	28.9	16.2	*26.0	*8.8
Paper and allied products . . . . .	30.8	12.4	30.3	14.4	28.3	14.6	*35.0	8.1
Printing and publishing . . . . .	9.7	9.8	10.5	9.2	5.4	10.6	11.6	9.9
Chemicals and allied products . . . . .	5.0	4.6	7.4	6.7	13.5	8.2	1.3	1.9
Primary metals industries . . . . .	30.8	12.4	29.5	12.4	39.9	17.9	28.9	9.6
Fabricated metal products . . . . .	26.2	13.0	28.3	15.5	28.1	11.8	21.3	11.0
Machinery, except electrical . . . . .	15.9	5.9	21.1	10.4	17.4	7.3	13.8	2.7
Miscellaneous manufacturing industries . . . . .	18.5	4.2	14.7	5.3	21.2	8.9	*19.7	*-
Transportation by air . . . . .	6.1	10.5	*3.1	16.8	11.2	*28.0	*5.6	1.4
Auto repair services and garages . . . . .	14.0	8.0	15.7	8.0	*3.3	*8.6	---	---
Miscellaneous repair services . . . . .	13.2	2.1	2.7	1.5	*76.4	*6.5	*28.8	---
Electric and electronic equipment . . . . .	6.0	3.7	4.3	5.3	10.7	2.9	4.7	3.7

\*Based on fewer than 10 facilities.

SOURCE: National Institute for Occupational Safety and Health: Unpublished data from the 1972-74 National Occupational Hazard Survey and 1981-83 National Occupational Exposure Survey.

**Table 63. Health and safety services in manufacturing industries, according to size of facility: United States, 1972-74 and 1981-83**

[Data are based on interviews of a sample of nonagricultural businesses]

<i>Health and safety services available in facility</i>	<i>All facilities</i>		<i>8-99 employees</i>		<i>100-499 employees</i>		<i>500 or more employees</i>	
	<i>1972-74</i>	<i>1981-83</i>	<i>1972-74<sup>1</sup></i>	<i>1981-83</i>	<i>1972-74</i>	<i>1981-83</i>	<i>1972-74</i>	<i>1981-83</i>
	Number in thousands							
Employees . . . . .	38,263	33,218	15,394	11,078	10,883	9,856	11,985	12,283
Occupational health and safety practices	Percent of employees							
Regularly monitor environmental conditions <sup>2</sup> . . . . .	21.7	48.0	2.5	11.1	12.0	43.4	55.5	85.1
Personal protective devices required in some work areas <sup>3</sup> . . . . .	39.2	53.5	32.5	45.9	45.9	59.0	41.6	56.0
Employer provides protective devices . . . . .	52.5	80.2	41.9	70.4	59.8	82.8	59.7	86.8
Medical facilities and practices								
Health unit at the facility . . . . .	31.5	42.7	3.3	3.8	18.8	31.7	79.5	86.7
Access to physician or clinic . . . . .	70.7	100.0	49.0	100.0	76.3	100.0	93.5	100.0
Preemployment medical exams. . . . .	38.5	49.4	12.8	20.0	35.0	47.0	74.9	77.9
Periodic medical exams . . . . .	14.4	30.1	6.0	8.4	13.4	26.4	26.1	52.7
Records of employee absenteeism showing type of illness . . . . .	14.2	4.8	4.7	8.1	10.1	3.0	30.4	3.3

<sup>1</sup>Includes facilities with fewer than 8 employees.

<sup>2</sup>Monitoring environmental conditions such as presence of fumes, gases, dust, noise, vibration, radiation.

<sup>3</sup>Includes respirators, protective clothing, etc.

SOURCE: National Institute for Occupational Safety and Health: Unpublished data from the 1972-74 National Occupational Hazard Survey and 1981-83 National Occupational Exposure Survey.

**Table 64. Physician contacts, according to place of contact and selected patient characteristics: United States, 1983 and 1988**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Place of contact												
	Physician contacts		Total	Doctor's office		Hospital outpatient department <sup>1</sup>		Telephone		Home		Other <sup>2</sup>	
	1983	1988		1983	1988	1983	1988	1983	1988	1983	1988	1983	1988
	Number per person		Percent distribution										
Total <sup>3,4</sup>	5.1	5.3	100.0	56.1	59.3	14.9	12.8	15.5	13.7	1.5	1.4	12.0	12.7
Age													
Under 15 years	4.6	4.6	100.0	54.7	58.1	13.3	11.7	20.5	18.2	*0.3	0.9	11.2	11.1
Under 5 years	6.9	7.0	100.0	54.2	58.9	13.2	11.5	21.0	17.9	*0.5	*1.1	11.1	10.5
5-14 years	3.3	3.3	100.0	55.3	57.2	13.4	11.9	20.0	18.4	*0.1	*0.7	11.2	11.8
15-44 years	4.4	4.7	100.0	54.9	59.4	16.5	13.1	14.3	11.9	0.6	0.8	13.7	14.7
45-64 years	5.8	6.1	100.0	59.0	59.7	15.3	14.1	12.5	12.6	1.8	1.3	11.4	12.2
65 years and over	7.6	8.7	100.0	59.2	61.8	12.4	12.4	11.9	9.9	7.9	5.5	8.7	10.4
65-74 years	7.3	8.4	100.0	60.7	61.4	14.2	14.0	11.4	10.4	3.4	2.4	10.3	11.7
75 years and over	8.2	9.2	100.0	56.9	62.4	9.8	10.0	12.7	9.2	14.3	9.9	6.3	8.5
Sex <sup>3</sup>													
Male	4.4	4.6	100.0	54.8	58.2	17.1	14.7	13.5	12.3	1.5	1.4	13.2	13.5
Female	5.7	6.0	100.0	56.8	60.1	13.6	11.8	16.8	14.4	1.5	1.4	11.2	12.4
Race <sup>3</sup>													
White	5.2	5.5	100.0	57.6	60.6	13.4	11.8	16.3	14.4	1.5	1.3	11.1	11.9
Black	4.9	4.8	100.0	44.3	49.3	26.8	21.5	9.7	8.6	1.1	2.3	18.2	18.3
Family income <sup>3,5</sup>													
Less than \$10,000	5.9	6.2	100.0	49.9	49.4	18.5	19.2	12.4	11.3	1.5	2.1	17.7	18.0
\$10,000-\$14,999	5.0	5.3	100.0	52.3	56.2	17.6	15.1	13.0	12.0	2.0	1.1	15.1	15.6
\$15,000-\$19,999	4.7	5.0	100.0	54.5	58.7	16.7	13.8	16.4	13.7	1.3	1.6	11.1	12.2
\$20,000-\$34,999	5.0	5.5	100.0	59.3	61.7	13.3	10.7	16.2	16.1	0.7	0.8	10.5	10.7
\$35,000 or more	5.4	5.5	100.0	59.7	62.4	11.6	9.3	19.0	15.1	1.1	1.6	8.6	11.6
Geographic region <sup>3</sup>													
Northeast	4.9	5.0	100.0	58.3	60.8	15.6	15.0	14.1	12.3	1.8	1.5	10.2	10.4
Midwest	5.2	5.4	100.0	53.5	55.7	14.7	12.5	17.2	16.7	1.2	1.8	13.5	13.2
South	4.8	5.2	100.0	56.9	62.4	14.5	12.1	15.7	12.5	1.9	1.1	11.1	11.9
West	5.4	5.9	100.0	56.0	57.8	15.3	12.6	14.5	13.2	0.8	1.2	13.3	15.2
Location of residence <sup>3</sup>													
Within MSA	5.2	5.5	100.0	54.9	58.3	15.7	12.8	16.0	14.0	1.3	1.4	12.2	13.5
Outside MSA	4.6	4.9	100.0	59.1	63.4	13.2	13.1	14.5	12.5	1.9	1.2	11.4	9.9

<sup>1</sup>Includes hospital outpatient clinic, emergency room, and other hospital contacts.

<sup>2</sup>Includes clinics or other places outside a hospital.

<sup>3</sup>Age adjusted.

<sup>4</sup>Includes all other races not shown separately and unknown family income.

<sup>5</sup>Family income categories for 1983. Income categories for 1988 are: less than \$13,000; \$13,000-\$18,999; \$19,000-\$24,999; \$25,000-\$44,999; and \$45,000 or more.

\*Relative standard error greater than 30 percent.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.



**Table 65. Interval since last physician contact, according to selected patient characteristics: United States, 1964, 1983, and 1988**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Total	Less than 1 year			1 year—less than 2 years			2 years or more <sup>1</sup>		
		1964	1983	1988	1964	1983	1988	1964	1983	1988
Percent distribution										
Total <sup>2,3</sup> . . . . .	100.0	66.9	75.2	77.1	14.0	10.9	10.5	19.1	13.9	12.4
Age										
Under 15 years . . . . .	100.0	68.4	80.5	82.0	14.8	11.0	10.9	16.7	8.5	7.1
Under 5 years . . . . .	100.0	80.7	92.4	93.2	11.1	5.6	5.2	8.2	2.0	1.5
5–14 years . . . . .	100.0	61.7	74.2	76.1	16.9	13.8	13.9	21.4	12.0	10.0
15–44 years . . . . .	100.0	66.3	70.8	72.2	15.0	12.6	12.3	18.7	16.6	15.5
45–64 years . . . . .	100.0	64.5	73.2	76.1	13.0	9.9	9.0	22.5	17.0	14.9
65 years and over . . . . .	100.0	69.7	82.1	85.8	9.3	6.0	4.9	21.0	11.9	9.4
65–74 years . . . . .	100.0	68.8	80.6	84.9	9.4	6.6	4.9	21.8	12.8	10.2
75 years and over . . . . .	100.0	71.3	84.7	87.1	9.3	5.0	4.8	19.5	10.3	8.0
Sex <sup>2</sup>										
Male . . . . .	100.0	63.5	70.6	72.3	15.0	12.0	11.8	21.5	17.3	15.9
Female . . . . .	100.0	69.9	79.4	81.7	13.1	9.9	9.3	17.0	10.7	9.0
Race <sup>2</sup>										
White . . . . .	100.0	68.1	75.6	77.6	13.8	10.6	10.2	18.1	13.8	12.2
Black <sup>4</sup> . . . . .	100.0	58.3	74.7	75.8	15.1	12.2	12.0	26.6	13.1	12.2
Family income <sup>2,5</sup>										
Less than \$10,000 . . . . .	100.0	58.6	74.7	76.4	13.2	10.5	10.4	28.2	14.8	13.2
\$10,000–\$14,999 . . . . .	100.0	62.5	72.4	73.9	14.2	11.3	11.3	23.3	16.3	14.8
\$15,000–\$19,999 . . . . .	100.0	66.8	74.0	76.3	14.5	11.4	10.7	18.7	14.6	13.0
\$20,000–\$34,999 . . . . .	100.0	70.2	76.0	78.1	14.0	10.8	10.1	15.7	13.3	11.8
\$35,000 or more . . . . .	100.0	73.6	79.0	81.0	12.9	10.0	9.2	13.5	11.0	9.8
Geographic region <sup>2</sup>										
Northeast . . . . .	100.0	68.0	77.2	79.6	14.1	10.1	9.3	17.9	12.6	11.2
Midwest . . . . .	100.0	66.6	75.7	78.1	14.2	10.9	9.9	19.2	13.4	11.9
South . . . . .	100.0	65.2	73.8	75.5	13.9	11.7	11.5	20.9	14.5	13.0
West . . . . .	100.0	69.0	75.0	76.5	13.7	10.3	10.6	17.3	14.7	12.9
Location of residence <sup>2</sup>										
Within MSA . . . . .	100.0	68.2	76.1	77.8	14.0	10.6	10.2	17.8	13.3	12.0
Outside MSA . . . . .	100.0	64.0	73.3	75.0	14.1	11.5	11.5	21.9	15.1	13.5

<sup>1</sup>Includes persons who never visited a physician.

<sup>2</sup>Age adjusted.

<sup>3</sup>Includes all other races not shown separately and unknown family income.

<sup>4</sup>1964 data include all other races.

<sup>5</sup>Family income categories for 1983. Income categories in 1964 are: less than \$2,000; \$2,000–\$3,999; \$4,000–\$6,999; \$7,000–\$9,999; and \$10,000 or more; and, in 1988 are: less than \$13,000; \$13,000–\$18,999; \$19,000–\$24,999; \$25,000–\$44,999; and \$45,000 or more.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.

**Table 66. Office visits to physicians, according to physician specialty and selected patient characteristics: United States, 1980 and 1985**

[Data are based on reporting by a sample of office-based physicians]

Characteristic	<i>All specialties</i> <sup>1</sup>		<i>General and family practice</i>		<i>Internal medicine</i>		<i>Obstetrics and gynecology</i>		<i>Pediatrics</i>		<i>General surgery</i>	
	1980	1985	1980	1985	1980	1985	1980	1985	1980	1985	1980	1985
	Visits per person											
Total <sup>2</sup> . . . . .	2.63	2.71	0.86	0.81	0.30	0.30	0.23	0.22	0.37	0.40	0.13	0.12
Age												
Under 15 years . . . . .	2.21	2.31	0.54	0.58	0.03	0.05	0.01	0.01	1.20	1.28	0.05	0.03
15-44 years . . . . .	2.36	2.28	0.81	0.75	0.20	0.19	0.48	0.44	0.04	0.06	0.12	0.10
45-64 years . . . . .	2.99	3.10	1.08	0.99	0.58	0.49	0.12	0.15	0.01	0.01	0.20	0.21
65 years and over . . . . .	4.22	4.85	1.56	1.41	0.95	1.07	0.06	0.07	0.01	0.01	0.22	0.30
65-74 years . . . . .	4.01	4.54	1.49	1.31	0.89	1.00	0.06	0.09	0.00	0.00	0.23	0.29
75 years and over . . . . .	4.58	5.35	1.70	1.57	1.06	1.18	0.05	0.04	0.01	0.01	0.20	0.32
Sex <sup>2</sup>												
Male . . . . .	2.25	2.28	0.73	0.68	0.28	0.25	0.01	0.00	0.39	0.38	0.12	0.11
Female . . . . .	2.98	3.11	0.98	0.94	0.33	0.33	0.44	0.42	0.34	0.42	0.13	0.14
Race <sup>2</sup>												
White . . . . .	2.73	2.84	0.89	0.84	0.31	0.31	0.23	0.22	0.39	0.43	0.13	0.12
All other . . . . .	2.03	1.94	0.70	0.69	0.24	0.21	0.23	0.18	0.25	0.23	0.08	0.11

<sup>1</sup>Includes other specialties not shown separately.

<sup>2</sup>Age adjusted.

NOTE: Rates are based on the civilian noninstitutionalized population, excluding Alaska and Hawaii.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Ambulatory Medical Care Survey.

**Table 67. Office visits to physicians, according to selected patient characteristics: United States, 1980 and 1985**

[Data are based on reporting by a sample of office-based physicians]

Characteristic	Patient's first visit		Visit lasted 10 minutes or less <sup>1</sup>		Return visit scheduled	
	1980	1985	1980	1985	1980	1985
	Percent of visits					
Total <sup>2</sup> . . . . .	15.3	17.7	47.3	42.6	58.0	58.8
Age						
Under 15 years . . . . .	14.6	17.8	57.5	50.8	48.8	49.2
15-44 years . . . . .	18.7	20.8	46.9	41.6	58.2	58.9
45-64 years . . . . .	12.7	14.8	38.9	36.3	64.5	65.6
65 years and over . . . . .	8.6	10.5	36.7	35.6	71.3	72.8
65-74 years . . . . .	8.9	11.2	38.0	34.6	70.5	72.6
75 years and over . . . . .	8.3	9.6	35.1	36.9	72.6	73.1
Sex <sup>2</sup>						
Male . . . . .	17.3	19.5	46.4	43.3	55.9	56.7
Female . . . . .	14.4	16.9	47.7	42.2	58.9	59.8
Race <sup>2</sup>						
White . . . . .	14.8	17.4	47.3	42.3	57.8	58.4
All other . . . . .	18.9	20.1	48.0	45.0	60.1	62.2
Location of physician's office <sup>2</sup>						
Within MSA . . . . .	15.5	18.6	44.9	39.8	60.0	60.5
Outside MSA . . . . .	14.6	14.3	55.1	53.8	51.6	52.1

<sup>1</sup>Time spent in face-to-face contact between physician and patient.

<sup>2</sup>Age adjusted.

NOTE: Rates are based on the civilian noninstitutionalized population, excluding Alaska and Hawaii.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Ambulatory Medical Care Survey.

**Table 68. Dental visits and interval since last visit, according to selected patient characteristics: United States, 1964, 1981, and 1986**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Interval since last dental visit <sup>1</sup>											
	Dental visits			Less than 1 year			2 years or more			Never visited dentist		
	1964	1981	1986	1964	1981	1986	1964	1981	1986	1964	1981	1986
	Number per person			Percent of population								
Total <sup>2,3</sup>	1.6	1.7	2.0	42.7	50.4	56.3	28.7	25.1	25.0	15.5	11.0	10.4
Age												
Under 15 years	1.3	1.5	1.7	39.6	48.5	53.8	5.4	6.7	7.2	46.6	34.6	33.1
Under 5 years	0.3	0.5	0.4	11.1	15.0	19.5	0.3	0.6	0.5	87.0	82.2	78.5
5-14 years	1.9	2.0	2.3	55.1	65.2	71.7	8.2	9.8	10.7	24.6	10.9	9.3
15-44 years	1.9	1.8	2.0	51.8	55.6	61.6	26.9	24.9	26.1	4.0	2.1	1.6
45-64 years	1.7	1.8	2.2	39.1	50.1	55.9	46.3	36.6	35.5	1.3	0.6	0.6
65 years and over	0.8	1.5	2.1	21.5	34.9	42.6	69.0	56.6	51.1	1.5	0.5	0.5
65-74 years	0.9	1.6	2.4	24.9	38.9	47.3	65.2	52.1	46.6	1.1	0.3	0.5
75 years and over	0.6	1.3	1.6	14.9	28.1	35.1	76.3	64.0	58.3	2.4	0.6	*0.5
Sex <sup>2</sup>												
Male	1.4	1.5	1.8	40.9	48.4	54.1	29.6	26.5	26.7	16.1	11.4	10.6
Female	1.7	1.8	2.1	44.4	52.4	58.5	28.0	23.8	23.3	15.0	10.8	10.1
Race <sup>2</sup>												
White	1.7	1.8	2.1	45.3	52.6	58.4	27.8	24.0	23.6	13.8	10.4	9.9
Black <sup>4</sup>	0.8	1.1	1.3	22.3	36.3	42.6	37.6	33.9	35.6	28.0	14.4	12.7
Family income <sup>2,5</sup>												
Less than \$10,000	0.9	1.1	1.3	26.4	37.3	41.0	35.4	33.7	36.2	27.4	15.3	13.4
\$10,000-\$14,999	0.9	1.3	1.3	30.0	37.8	42.7	35.2	33.2	34.2	22.0	14.3	13.6
\$15,000-\$19,999	1.4	1.4	1.6	39.7	42.6	49.3	30.6	30.3	29.9	15.8	13.0	12.0
\$20,000-\$34,999	1.9	1.7	2.2	50.1	50.5	59.0	25.3	24.8	22.7	10.9	10.6	10.0
\$35,000 or more	2.7	2.1	2.7	63.9	63.9	71.8	16.8	16.4	14.0	7.2	7.6	7.1
Geographic region <sup>2</sup>												
Northeast	2.1	2.1	2.2	48.5	55.6	60.9	26.1	22.6	23.0	12.5	9.0	8.9
Midwest	1.6	1.7	2.0	44.6	52.5	60.0	29.3	24.9	23.5	12.9	9.8	8.7
South	1.2	1.5	1.6	35.8	45.2	49.5	30.9	28.5	29.1	20.9	12.9	12.1
West	1.7	1.7	2.2	43.8	50.8	59.1	27.9	22.4	21.5	14.3	11.9	10.7
Location of residence <sup>2</sup>												
Within MSA	1.8	1.8	2.0	44.9	52.4	57.8	27.5	23.3	23.9	14.4	10.7	10.2
Outside MSA	1.2	1.4	1.7	37.8	46.3	51.8	31.8	28.7	28.3	17.9	11.8	11.0

<sup>1</sup>Percent not shown for an interval of 1 year-less than 2 years.

<sup>2</sup>Age adjusted.

<sup>3</sup>Includes all other races not shown separately and unknown family income.

<sup>4</sup>1964 data are for all other races.

<sup>5</sup>Family income categories for 1986. Income categories in 1964 are: less than \$2,000; \$2,000-\$3,999; \$4,000-\$6,999; \$7,000-\$9,999; and \$10,000 or more; and, in 1981 are: less than \$7,000; \$7,000-\$9,999; \$10,000-\$14,999; \$15,000-\$24,999; and \$25,000 or more.

\*Relative standard error greater than 30 percent.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.

**Table 69. Discharges, days of care, and average length of stay in short-stay hospitals, according to selected characteristics: United States, 1964, 1984, and 1988**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Discharges			Days of care			Average length of stay		
	1964	1984	1988	1964	1984	1988	1964	1984	1988
	Number per 1,000 population						Number of days		
Total <sup>1,2</sup> . . . . .	109.1	114.7	93.4	970.9	871.9	622.7	8.9	7.6	6.7
Age									
Under 15 years . . . . .	67.6	60.9	45.9	405.7	334.4	256.4	6.0	5.5	5.6
Under 5 years . . . . .	94.3	96.7	77.6	731.1	595.8	522.4	7.8	6.2	6.7
5-14 years . . . . .	53.1	41.6	29.0	229.1	193.4	114.8	4.3	4.6	4.0
15-44 years . . . . .	100.6	81.7	67.1	760.7	530.8	373.8	7.6	6.5	5.6
45-64 years . . . . .	146.2	160.6	134.5	1,559.3	1,344.5	946.5	10.7	8.4	7.0
65 years and over . . . . .	190.0	318.0	259.7	2,292.7	2,917.6	2,082.4	12.1	9.2	8.0
65-74 years . . . . .	181.2	277.7	235.8	2,150.4	2,528.3	1,876.8	11.9	9.1	8.0
75 years and over . . . . .	206.7	382.6	297.6	2,560.4	3,542.9	2,407.3	12.4	9.3	8.1
Sex <sup>1</sup>									
Male . . . . .	103.8	114.2	94.8	1,010.2	926.6	647.4	9.7	8.1	6.8
Female . . . . .	113.7	115.8	92.9	933.4	829.2	605.8	8.2	7.2	6.5
Race <sup>1</sup>									
White . . . . .	112.4	114.3	92.5	961.4	833.2	607.8	8.6	7.3	6.6
Black <sup>3</sup> . . . . .	84.0	127.2	106.8	1,062.9	1,247.8	825.3	12.7	9.8	7.7
Family income <sup>1,4</sup>									
Less than \$10,000 . . . . .	102.4	150.2	144.6	1,051.2	1,420.3	1,019.8	10.3	9.5	7.1
\$10,000-\$14,999 . . . . .	116.4	134.7	100.4	1,213.9	1,098.9	647.7	10.4	8.2	6.5
\$15,000-\$19,999 . . . . .	110.7	119.8	90.7	939.8	868.0	600.9	8.5	7.2	6.6
\$20,000-\$34,999 . . . . .	109.2	105.8	83.5	882.6	717.1	517.1	8.1	6.8	6.2
\$35,000 or more . . . . .	110.7	96.1	67.5	918.9	608.2	408.6	8.3	6.3	6.1
Geographic region <sup>1</sup>									
Northeast . . . . .	98.5	104.5	84.5	993.8	877.5	634.7	10.1	8.4	7.5
Midwest . . . . .	109.2	125.2	101.4	944.9	965.6	623.8	8.7	7.7	6.2
South . . . . .	117.8	126.4	104.3	968.0	953.7	731.4	8.2	7.5	7.0
West . . . . .	110.5	92.9	74.6	985.9	596.7	413.1	8.9	6.4	5.5
Location of residence <sup>1</sup>									
Within MSA . . . . .	107.5	108.1	87.4	1,015.4	864.6	606.3	9.4	8.0	6.9
Outside MSA . . . . .	113.3	128.4	113.9	871.9	888.9	682.1	7.7	6.9	6.0

<sup>1</sup>Age adjusted.

<sup>2</sup>Includes all other races not shown separately and unknown family income.

<sup>3</sup>1964 data include all other races.

<sup>4</sup>Family income categories for 1984. Income categories in 1964 are: less than \$2,000; \$2,000-\$3,999; \$4,000-\$6,999; \$7,000-\$9,999; and \$10,000 or more; and, in 1988 are: less than \$13,000; \$13,000-\$18,999; \$19,000-\$24,999; \$25,000-\$44,999; and \$45,000 or more.

NOTE: Excludes deliveries.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.

**Table 70 (page 1 of 2). Discharges, days of care, and average length of stay in non-Federal short-stay hospitals, according to selected characteristics: United States, 1980-88**

[Data are based on a sample of hospital records]

<i>Characteristic</i>	<i>1980<sup>1</sup></i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988<sup>2</sup></i>
	Discharges per 1,000 population								
Total <sup>3</sup> . . . . .	159.1	160.2	158.5	157.1	148.2	138.0	132.8	127.9	117.8
Sex <sup>3</sup>									
Male . . . . .	140.1	141.0	140.5	139.9	131.8	123.5	119.8	115.0	105.8
Female . . . . .	178.1	179.5	176.5	174.4	164.7	152.7	146.2	141.2	130.2
Age									
Under 15 years . . . . .	71.6	72.9	71.2	70.8	62.0	57.2	53.5	51.3	49.2
15-44 years . . . . .	150.2	148.7	145.0	140.3	132.2	125.1	118.9	115.1	104.0
45-64 years . . . . .	194.8	195.3	195.5	192.2	183.3	169.5	162.2	156.9	140.5
65 years and over . . . . .	383.7	396.5	398.8	412.7	400.4	368.3	367.3	350.5	334.1
65-74 years . . . . .	315.9	330.0	324.2	334.2	319.6	294.9	296.8	280.9	262.8
75 years and over . . . . .	489.1	498.4	511.4	529.3	520.1	476.5	470.5	451.6	436.5
Geographic region <sup>3</sup>									
Northeast . . . . .	148.4	146.5	145.9	144.2	135.1	129.7	124.1	118.9	126.5
Midwest . . . . .	176.4	179.9	176.0	167.9	156.7	143.5	139.8	135.3	120.2
South . . . . .	166.2	165.2	165.2	167.7	159.5	143.4	136.3	127.9	118.9
West . . . . .	138.0	141.1	138.2	139.6	132.3	131.0	127.8	128.6	103.6
	Days of care per 1,000 population								
Total <sup>3</sup> . . . . .	1,136.5	1,134.0	1,101.7	1,068.8	960.1	877.1	833.1	808.7	754.8
Sex <sup>3</sup>									
Male . . . . .	1,072.6	1,075.4	1,047.6	1,025.7	917.6	841.2	803.4	789.2	739.6
Female . . . . .	1,201.7	1,196.1	1,157.7	1,115.7	1,005.8	914.7	865.0	831.1	772.6
Age									
Under 15 years . . . . .	315.8	337.1	326.4	323.4	277.7	260.8	244.7	240.6	245.3
15-44 years . . . . .	787.0	769.6	742.0	707.5	647.3	603.6	575.7	556.9	493.1
45-64 years . . . . .	1,597.6	1,564.0	1,536.7	1,460.6	1,316.8	1,192.8	1,101.4	1,068.6	955.3
65 years and over . . . . .	4,098.3	4,155.3	4,026.2	4,004.3	3,574.8	3,215.1	3,120.7	3,029.9	2,970.0
65-74 years . . . . .	3,147.6	3,259.2	3,101.1	3,069.5	2,711.0	2,417.8	2,363.8	2,294.4	2,214.8
75 years and over . . . . .	5,576.5	5,529.3	5,423.5	5,392.7	4,855.5	4,389.4	4,227.9	4,097.8	4,054.3
Geographic region <sup>3</sup>									
Northeast . . . . .	1,217.3	1,190.2	1,149.8	1,115.6	1,012.3	963.1	877.6	847.1	928.7
Midwest . . . . .	1,309.4	1,306.7	1,283.0	1,184.4	1,059.9	955.7	914.2	885.3	749.3
South . . . . .	1,114.5	1,112.9	1,083.3	1,087.1	962.9	851.4	817.6	781.5	729.0
West . . . . .	844.6	859.3	825.7	821.9	756.5	717.9	703.0	712.5	606.7
	Average length of stay in days								
Total <sup>3</sup> . . . . .	7.1	7.1	7.0	6.8	6.5	6.4	6.3	6.3	6.4
Sex <sup>3</sup>									
Male . . . . .	7.7	7.6	7.5	7.3	7.0	6.8	6.7	6.9	7.0
Female . . . . .	6.7	6.7	6.6	6.4	6.1	6.0	5.9	5.9	5.9
Age									
Under 15 years . . . . .	4.4	4.6	4.6	4.6	4.5	4.6	4.6	4.7	5.0
15-44 years . . . . .	5.2	5.2	5.1	5.0	4.9	4.8	4.8	4.8	4.7
45-64 years . . . . .	8.2	8.0	7.9	7.6	7.2	7.0	6.8	6.8	6.8
65 years and over . . . . .	10.7	10.5	10.1	9.7	8.9	8.7	8.5	8.6	8.9
65-74 years . . . . .	10.0	9.9	9.6	9.2	8.5	8.2	8.0	8.2	8.4
75 years and over . . . . .	11.4	11.1	10.6	10.2	9.3	9.2	9.0	9.1	9.3

See footnotes at end of table.

**Table 70 (page 2 of 2). Discharges, days of care, and average length of stay in non-Federal short-stay hospitals, according to selected characteristics: United States, 1980–88**

[Data are based on a sample of hospital records]

<i>Characteristic</i>	<i>1980</i> <sup>1</sup>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i> <sup>2</sup>
<b>Geographic region<sup>3</sup></b>									
	<b>Average length of stay in days</b>								
Northeast .....	8.2	8.1	7.9	7.7	7.5	7.4	7.1	7.1	7.3
Midwest .....	7.4	7.3	7.3	7.1	6.8	6.7	6.5	6.5	6.2
South .....	6.7	6.7	6.6	6.5	6.0	5.9	6.0	6.1	6.1
West. ....	6.1	6.1	6.0	5.9	5.7	5.5	5.5	5.5	5.9

<sup>1</sup>Geographic data for 1980 are based on the civilian population as of April 1, 1980.

<sup>2</sup>Comparisons of 1988 data with data for earlier years should be made with caution as estimates of change between 1987 and 1988 may reflect improvements in the 1988 design (see Appendix I) rather than true changes in hospital use.

<sup>3</sup>Age adjusted.

NOTES: Excludes newborn infants. Rates are based on the civilian population as of July 1.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Hospital Discharge Survey.

**Table 71. Discharges, days of care, and average length of stay in non-Federal short-stay hospitals for patients discharged with the diagnosis of acquired immunodeficiency syndrome (AIDS) and for all patients: United States, 1984–88**

[Data are based on a sample of hospital records]

<i>Type of discharge, sex, age, and year</i>	<i>Discharges</i>		<i>Days of care</i>		<i>Average length of stay in days</i>
	<i>Number in thousands</i>	<i>Number per 1,000 population</i>	<i>Number in thousands</i>	<i>Number per 1,000 population</i>	
Diagnosis of AIDS					
Total:					
1984 . . . . .	10	0.04	123	0.52	12.1
1985 . . . . .	23	0.10	387	1.63	17.1
1986 . . . . .	37	0.16	606	2.53	16.2
1987 . . . . .	50	0.21	782	3.24	15.7
1988 <sup>1</sup> . . . . .	71	0.29	983	4.03	13.8
Male, 20–49 years:					
1984 . . . . .	*9	*0.17	*114	*2.26	*13.2
1985 . . . . .	21	0.41	355	6.90	16.8
1986 . . . . .	30	0.58	482	9.21	16.0
1987 . . . . .	40	0.75	621	11.70	15.6
1988 <sup>1</sup> . . . . .	58	1.09	753	13.98	12.9
All patients					
Total:					
1984 . . . . .	37,162	158.5	244,652	1,043.6	6.6
1985 . . . . .	35,056	147.9	226,217	954.4	6.5
1986 . . . . .	34,256	143.1	218,496	912.8	6.4
1987 . . . . .	33,387	138.2	214,942	889.4	6.4
1988 <sup>1</sup> . . . . .	31,146	127.6	203,678	834.3	6.5
Male, 20–49 years:					
1984 . . . . .	4,497	89.5	27,725	551.5	6.2
1985 . . . . .	4,393	85.4	27,117	527.4	6.2
1986 . . . . .	4,300	82.2	26,488	506.3	6.2
1987 . . . . .	4,075	76.8	26,295	495.2	6.5
1988 <sup>1</sup> . . . . .	3,670	68.2	22,697	421.6	6.2

<sup>1</sup>Comparisons of 1988 data with data for earlier years should be made with caution as estimates of change between 1987 and 1988 may reflect improvements in the 1988 design (see Appendix I) rather than true changes in hospital use.

\*Based on a sample size of 30–59 discharges and should be used with caution.

NOTES: Excludes newborn infants. Rates are based on the civilian population as of July 1. AIDS diagnostic category based on the International Classification of Diseases, 9th Revision, Clinical Modification and International Classification of Diseases, 9th Revision Update. For a listing of the code numbers, see Appendix II, table VI.

SOURCES: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Hospital Discharge Survey; Utilization of short-stay hospitals by patients with AIDS: United States, 1984–1986, by E. J. Graves. Advance Data From Vital and Health Statistics, No. 156. DHHS Pub. No. (PHS) 88–1250. Public Health Service, Hyattsville, Md., 1988; Unpublished data.



**Table 72 (page 1 of 2). Rates of discharges and days of care in non-Federal short-stay hospitals, according to sex, age, and selected first-listed diagnosis: United States, 1980, 1985, 1987, and 1988**

[Data are based on a sample of hospital records]

Sex, age, and first-listed diagnosis	Discharges				Days of care			
	1980	1985	1987	1988 <sup>1</sup>	1980	1985	1987	1988 <sup>1</sup>
Both sexes								
Number per 1,000 population								
Total <sup>2,3</sup>	159.1	138.0	127.9	117.8	1,136.5	877.1	808.7	754.8
Females with delivery	14.7	14.1	14.0	13.4	55.5	46.1	42.8	39.2
Diseases of heart	13.1	13.7	13.8	13.2	123.5	98.4	94.5	92.2
Malignant neoplasms	7.6	7.4	7.1	6.2	90.5	65.2	60.8	57.6
Fracture, all sites	4.9	4.4	4.0	3.8	51.2	37.1	34.3	30.8
Pneumonia, all forms	3.5	3.6	3.7	3.6	27.7	26.5	27.7	28.5
Male								
All ages <sup>2,3</sup>	140.1	123.5	115.0	105.8	1,072.6	841.2	789.2	739.6
Diseases of heart	15.9	16.8	17.2	16.4	145.0	116.9	114.0	111.8
Malignant neoplasms	8.2	7.8	7.3	6.4	98.7	71.1	65.9	59.9
Fracture, all sites	5.2	4.7	4.3	4.1	46.9	35.3	34.7	29.3
Pneumonia, all forms	4.1	3.9	4.1	4.1	32.5	29.8	31.4	32.3
Cerebrovascular diseases	3.5	3.6	3.3	2.8	41.9	36.0	31.5	26.8
Inguinal hernia	4.3	3.0	2.3	2.0	20.0	9.3	5.8	4.8
Under 15 years <sup>3</sup>	78.7	63.8	57.3	54.6	341.5	287.5	269.9	275.5
Acute respiratory infection	5.9	5.2	4.2	3.8	22.0	17.2	13.6	11.7
Pneumonia, all forms	5.2	4.3	4.2	3.9	25.2	18.1	18.6	16.9
Bronchitis, emphysema, and asthma	4.0	4.1	3.9	4.1	16.3	13.7	12.7	11.0
Congenital anomalies	4.0	3.8	2.9	3.5	22.2	20.5	15.9	18.7
Chronic disease of tonsils and adenoids	5.4	3.5	2.9	2.3	9.2	5.1	3.5	3.3
Noninfectious enteritis and colitis	4.0	2.8	2.2	1.6	16.1	8.3	6.2	5.2
Otitis media and eustachian tube disorders	4.5	2.2	1.8	2.0	11.3	4.7	4.1	4.2
15-44 years <sup>3</sup>	91.5	75.4	68.7	61.5	581.0	458.9	441.1	388.2
Fracture, all sites	6.3	5.3	4.9	4.5	50.1	34.7	36.8	27.1
Psychoses	3.0	3.7	4.1	3.9	39.2	47.4	51.4	51.9
Alcohol dependence syndrome	3.5	3.5	2.8	2.1	33.4	38.8	30.9	24.8
Diseases of heart	2.9	3.0	2.8	2.8	21.7	16.6	15.8	16.1
Intervertebral disc disorders	2.3	2.9	2.8	2.5	20.7	18.7	14.8	12.6
Lacerations and open wounds	3.4	2.6	2.5	2.2	17.9	11.0	9.4	9.4
45-64 years <sup>3</sup>	195.4	176.2	163.1	146.4	1,590.3	1,219.9	1,099.1	993.2
Diseases of heart	33.7	36.6	36.7	34.1	288.1	237.4	218.8	210.1
Malignant neoplasms	14.4	13.1	12.7	9.8	167.2	119.8	114.2	95.1
Inguinal hernia	6.9	5.1	4.0	3.3	36.5	15.3	8.8	7.7
Cerebrovascular diseases	4.7	5.0	4.7	4.2	49.6	50.7	47.3	35.7
Intervertebral disc disorders	3.7	4.6	4.8	3.9	34.5	32.8	29.5	21.8
Alcohol dependence syndrome	6.4	4.5	3.2	2.2	67.8	43.4	31.8	18.8
65 years and over <sup>3</sup>	411.8	393.2	381.9	360.3	4,244.0	3,315.0	3,163.3	3,083.5
Diseases of heart	78.5	82.6	87.0	84.0	786.3	626.9	639.0	635.7
Malignant neoplasms	46.2	44.4	40.0	37.0	587.9	418.4	374.0	351.8
Cerebrovascular diseases	24.4	25.1	22.5	18.3	301.2	249.7	206.3	191.9
Pneumonia, all forms	15.0	17.3	18.4	20.1	166.1	172.6	180.9	200.4
Hyperplasia of prostate	18.1	15.5	17.0	15.4	176.7	103.5	96.4	93.0
Female								
All ages <sup>2,3</sup>	178.1	152.7	141.2	130.2	1,201.7	914.7	831.1	772.6
Delivery	29.0	27.7	27.6	26.5	109.4	91.0	84.5	77.4
Diseases of heart	10.7	11.0	11.0	10.5	105.1	82.5	78.3	75.7
Malignant neoplasms	7.3	7.3	7.1	6.2	85.8	61.7	57.9	56.6
Fracture, all sites	4.4	4.0	3.7	3.3	52.1	36.6	32.1	30.4
Pneumonia, all forms	3.0	3.2	3.4	3.2	24.0	24.3	25.1	25.7
Pregnancy with abortive outcome	4.1	2.8	2.1	1.9	8.7	5.9	4.7	4.3

See footnotes at end of table.

**Table 72 (page 2 of 2). Rates of discharges and days of care in non-Federal short-stay hospitals, according to sex, age, and selected first-listed diagnosis: United States, 1980, 1985, 1987, and 1988**

[Data are based on a sample of hospital records]

Sex, age, and first-listed diagnosis	Discharges				Days of care			
	1980	1985	1987	1988 <sup>1</sup>	1980	1985	1987	1988 <sup>1</sup>
Female—Con.								
Number per 1,000 population								
Under 15 years <sup>3</sup> . . . . .	64.2	50.2	45.0	43.4	288.9	232.9	209.9	213.6
Chronic disease of tonsils and adenoids . . . . .	6.4	3.7	2.7	2.4	11.2	6.0	3.1	2.5
Acute respiratory infection . . . . .	4.6	3.6	3.0	2.5	16.0	11.3	8.9	8.9
Pneumonia, all forms . . . . .	3.6	3.6	3.5	3.1	17.7	16.4	15.5	14.9
Bronchitis, emphysema, and asthma . . . . .	2.5	2.6	2.6	2.5	9.6	9.0	9.3	7.3
Noninfectious enteritis and colitis . . . . .	3.7	2.3	1.9	2.0	16.8	6.8	5.0	5.4
Otitis media and eustachian tube disorders . . . . .	3.2	1.7	1.4	1.4	7.1	3.9	3.6	3.0
15–44 years <sup>3</sup> . . . . .	206.9	173.4	160.3	145.6	986.4	744.3	669.7	595.6
Delivery . . . . .	70.7	67.8	67.4	64.9	264.5	222.4	206.6	189.4
Pregnancy with abortive outcome . . . . .	9.9	6.7	5.1	4.6	21.2	14.4	11.3	10.5
Inflammatory disease of female pelvic organs . . . . .	5.1	3.7	3.2	2.5	25.7	17.7	13.9	11.6
Benign neoplasms . . . . .	4.8	3.4	3.1	3.0	25.7	17.2	14.1	13.2
Psychoses . . . . .	2.4	3.4	3.7	3.6	36.7	52.3	52.0	57.7
Disorders of menstruation . . . . .	6.6	2.6	2.0	1.5	21.6	9.7	7.0	5.5
45–64 years <sup>3</sup> . . . . .	194.3	163.4	151.2	135.1	1,604.1	1,168.1	1,040.5	920.5
Diseases of heart . . . . .	17.8	17.9	18.7	17.2	152.9	120.5	121.8	106.5
Malignant neoplasms . . . . .	16.6	15.6	16.2	14.7	190.8	129.6	125.0	122.2
Benign neoplasms . . . . .	6.7	5.1	4.8	4.9	44.8	32.0	25.3	24.8
Cholelithiasis . . . . .	4.7	4.4	4.6	4.1	42.9	30.9	28.2	24.2
Psychoses . . . . .	3.1	4.1	4.6	4.2	50.6	70.5	64.9	62.0
Diabetes . . . . .	6.3	3.8	3.8	2.8	63.5	31.4	30.0	21.8
65 years and over <sup>3</sup> . . . . .	364.7	351.4	329.1	316.2	3,999.8	3,147.1	2,938.6	2,892.3
Diseases of heart . . . . .	64.8	68.1	66.9	65.8	701.1	551.3	511.0	520.6
Malignant neoplasms . . . . .	28.5	28.1	26.4	23.4	383.8	280.6	250.6	258.5
Cerebrovascular diseases . . . . .	21.6	23.3	22.1	19.6	287.9	249.3	236.8	193.0
Fracture, all sites . . . . .	19.2	19.3	17.3	16.6	309.5	232.5	203.0	192.7
Pneumonia, all forms . . . . .	9.7	11.8	12.6	13.4	109.2	116.9	126.9	138.7
Eye diseases and conditions . . . . .	16.4	8.2	4.7	5.8	67.3	21.0	13.1	12.5

<sup>1</sup>Comparisons of 1988 data with data for earlier years should be made with caution as estimates of change between 1987 and 1988 may reflect improvements in the 1988 design (see Appendix I) rather than true changes in hospital use.

<sup>2</sup>Age adjusted.

<sup>3</sup>Includes discharges with first-listed diagnoses not shown in table.

NOTES: Excludes newborn infants. Rates are based on the civilian population. In each sex and age group, data are shown for diagnoses with the 5 highest discharge rates in 1980 and 1987. Diagnostic categories are based on the International Classification of Diseases, 9th Revision, Clinical Modification. For a listing of the code numbers, see Appendix II, table VI.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Hospital Discharge Survey.

**Table 73 (page 1 of 2). Discharges and average length of stay in non-Federal short-stay hospitals, according to sex, age, and selected first-listed diagnosis: United States, 1980, 1985, 1987, and 1988<sup>1</sup>**

[Data are based on a sample of hospital records]

Sex, age, and first-listed diagnosis	Discharges				Average length of stay			
	1980	1985	1987	1988 <sup>1</sup>	1980	1985	1987	1988 <sup>1</sup>
Both sexes								
	Number in thousands				Number of days			
Total <sup>2</sup> . . . . .	37,832	35,056	33,387	31,146	7.3	6.5	6.4	6.5
Females with delivery . . . . .	3,762	3,854	3,911	3,781	3.8	3.3	3.1	2.9
Diseases of heart . . . . .	3,201	3,584	3,736	3,641	9.5	7.3	6.9	7.1
Malignant neoplasms . . . . .	1,829	1,911	1,879	1,670	12.0	8.9	8.7	9.4
Fracture, all sites. . . . .	1,163	1,129	1,062	1,014	10.8	8.7	8.9	8.4
Pneumonia, all forms . . . . .	782	854	924	924	7.9	7.4	8.0	8.4
Male								
All ages <sup>2</sup> . . . . .	15,145	14,160	13,568	12,642	7.7	6.9	6.9	7.1
Diseases of heart . . . . .	1,688	1,910	2,016	1,955	9.1	7.0	6.7	6.9
Malignant neoplasms . . . . .	875	892	868	772	12.0	9.1	9.0	9.4
Fracture, all sites. . . . .	582	550	519	506	9.0	7.7	8.3	7.2
Pneumonia, all forms . . . . .	414	433	468	472	8.2	7.8	7.9	8.3
Cerebrovascular diseases . . . . .	371	416	392	336	12.1	10.0	9.6	9.8
Inguinal hernia . . . . .	458	343	266	232	4.7	3.1	2.5	2.5
Under 15 years <sup>2</sup> . . . . .	2,063	1,698	1,537	1,486	4.3	4.5	4.7	5.0
Acute-respiratory infection . . . . .	154	138	114	103	3.8	3.3	3.2	3.1
Pneumonia, all forms . . . . .	136	115	113	105	4.9	4.2	4.4	4.4
Bronchitis, emphysema, and asthma . . . . .	105	110	105	111	4.0	3.3	3.3	2.7
Congenital anomalies . . . . .	106	101	79	95	5.5	5.4	5.4	5.4
Chronic disease of tonsils and adenoids. . . . .	141	92	77	64	1.7	1.5	1.2	1.4
Noninfectious enteritis and colitis . . . . .	106	74	59	44	4.0	3.0	2.8	3.2
Otitis media and eustachian tube disorders. . . . .	118	59	47	55	2.5	2.1	2.3	2.1
15-44 years <sup>2</sup> . . . . .	4,687	4,153	3,874	3,485	6.3	6.1	6.4	6.3
Fracture, all sites. . . . .	320	290	274	257	8.0	6.6	7.6	6.0
Psychoses . . . . .	155	204	231	219	12.9	12.8	12.5	13.4
Alcohol dependence syndrome . . . . .	180	195	160	118	9.5	11.0	10.9	11.9
Diseases of heart . . . . .	149	165	157	159	7.5	5.5	5.7	5.7
Intervertebral disc disorders. . . . .	120	161	157	139	8.8	6.4	5.3	5.1
Lacerations and open wounds. . . . .	176	143	140	124	5.2	4.2	3.8	4.3
45-64 years <sup>2</sup> . . . . .	4,127	3,776	3,528	3,221	8.1	6.9	6.7	6.8
Diseases of heart . . . . .	712	784	795	751	8.5	6.5	6.0	6.2
Malignant neoplasms . . . . .	304	281	275	215	11.6	9.1	9.0	9.7
Inguinal hernia . . . . .	146	110	88	72	5.3	3.0	2.2	2.3
Cerebrovascular diseases . . . . .	99	107	102	93	10.6	10.2	10.0	8.5
Intervertebral disc disorders. . . . .	78	98	103	86	9.4	7.2	6.2	5.6
Alcohol dependence syndrome . . . . .	134	97	70	49	10.7	9.6	9.9	8.4
65 years and over <sup>2</sup> . . . . .	4,268	4,533	4,629	4,450	10.3	8.4	8.3	8.6
Diseases of heart . . . . .	814	953	1,054	1,038	10.0	7.6	7.3	7.6
Malignant neoplasms . . . . .	479	512	485	457	12.7	9.4	9.3	9.5
Cerebrovascular diseases . . . . .	253	289	273	226	12.3	9.9	9.2	10.5
Pneumonia, all forms . . . . .	156	199	222	248	11.1	10.0	9.9	10.0
Hyperplasia of prostate . . . . .	188	179	206	191	9.8	6.7	5.7	6.0
Female								
All ages <sup>2</sup> . . . . .	22,686	20,896	19,818	18,504	7.0	6.2	6.1	6.2
Delivery . . . . .	3,762	3,854	3,911	3,781	3.8	3.3	3.1	2.9
Diseases of heart . . . . .	1,513	1,674	1,720	1,636	10.0	7.6	7.2	7.4
Malignant neoplasms . . . . .	954	1,019	1,011	898	12.0	8.7	8.3	9.4
Fracture, all sites. . . . .	580	579	543	508	12.6	9.8	9.4	9.7
Pneumonia, all forms . . . . .	368	421	456	452	8.4	8.1	8.1	8.6
Pregnancy with abortive outcome . . . . .	531	382	301	266	2.1	2.1	2.2	2.3

See footnotes at end of table.

**Table 73 (page 2 of 2). Discharges and average length of stay in non-Federal short-stay hospitals, according to sex, age, and selected first-listed diagnosis: United States, 1980, 1985, 1987, and 1988**

[Data are based on a sample of hospital records]

Sex, age, and first-listed diagnosis	Discharges				Average length of stay			
	1980	1985	1987	1988 <sup>1</sup>	1980	1985	1987	1988 <sup>1</sup>
Female—Con.	Number in thousands				Number of days			
Under 15 years <sup>2</sup> . . . . .	1,609	1,274	1,150	1,125	4.5	4.6	4.7	4.9
Chronic disease of tonsils and adenoids . . . . .	160	94	69	61	1.8	1.6	1.2	1.1
Acute respiratory infection . . . . .	115	91	76	65	3.5	3.2	3.0	3.5
Pneumonia, all forms . . . . .	91	91	90	79	4.9	4.6	4.4	4.9
Bronchitis, emphysema, and asthma . . . . .	63	65	67	66	3.8	3.5	3.6	2.9
Noninfectious enteritis and colitis . . . . .	92	59	48	52	4.6	2.9	2.7	2.7
Otitis media and eustachian tube disorders . . . . .	81	42	37	36	2.2	2.3	2.5	2.2
15–44 years <sup>2</sup> . . . . .	10,949	9,813	9,268	8,448	4.8	4.3	4.2	4.1
Delivery . . . . .	3,741	3,838	3,897	3,768	3.7	3.3	3.1	2.9
Pregnancy with abortive outcome . . . . .	525	378	297	264	2.1	2.2	2.2	2.3
Inflammatory disease of female pelvic organs . . . . .	268	210	184	145	5.1	4.8	4.4	4.6
Benign neoplasms . . . . .	253	194	180	176	5.4	5.0	4.5	4.4
Psychoses . . . . .	129	192	216	210	15.1	15.4	13.9	15.9
Disorders of menstruation . . . . .	347	148	114	88	3.3	3.7	3.6	3.6
45–64 years <sup>2</sup> . . . . .	4,533	3,834	3,571	3,235	8.3	7.1	6.9	6.8
Diseases of heart . . . . .	415	420	441	411	8.6	6.7	6.5	6.2
Malignant neoplasms . . . . .	387	367	383	351	11.5	8.3	7.7	8.3
Benign neoplasms . . . . .	156	120	113	116	6.7	6.3	5.3	5.1
Cholelithiasis . . . . .	109	103	109	97	9.2	7.1	6.1	6.0
Psychoses . . . . .	72	95	108	99	16.3	17.4	14.3	14.9
Diabetes . . . . .	148	88	89	67	10.0	8.3	7.9	7.8
65 years and over <sup>2</sup> . . . . .	5,596	5,975	5,830	5,696	11.0	9.0	8.9	9.1
Diseases of heart . . . . .	995	1,158	119	119	10.8	8.1	7.6	7.9
Malignant neoplasms . . . . .	437	478	468	422	13.5	10.0	9.5	11.0
Cerebrovascular diseases . . . . .	331	396	392	352	13.3	10.7	10.7	9.9
Fracture, all sites . . . . .	295	328	307	300	16.1	12.1	11.7	11.6
Pneumonia, all forms . . . . .	150	201	223	242	11.2	9.9	10.1	10.3
Eye diseases and conditions . . . . .	251	140	83	105	4.1	2.5	2.8	2.1

<sup>1</sup>Comparisons of 1988 data with data for earlier years should be made with caution as estimates of change between 1987 and 1988 may reflect improvements in the 1988 design (see Appendix I) rather than true changes in hospital use.

<sup>2</sup>Includes discharges with first-listed diagnoses not shown in table.

NOTES: Excludes newborn infants. In each sex and age group, data are shown for diagnoses with the 5 highest discharge rates in 1980 and 1987. Diagnostic categories are based on the International Classification of Diseases, 9th Revision, Clinical Modification. For a listing of the code numbers, see Appendix II, table VI.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Hospital Discharge Survey.

**Table 74 (page 1 of 2). Operations for inpatients discharged from non-Federal short-stay hospitals, according to sex, age, and surgical category: United States, 1980, 1985, 1987, and 1988**

[Data are based on a sample of hospital records]

<i>Sex, age, and surgical category</i>	<i>Operations in thousands</i>				<i>Operations per 1,000 population</i>			
	<i>1980</i>	<i>1985</i>	<i>1987</i>	<i>1988<sup>1</sup></i>	<i>1980</i>	<i>1985</i>	<i>1987</i>	<i>1988<sup>1</sup></i>
<b>Male</b>								
All ages <sup>2,3</sup> . . . . .	8,505	8,805	9,073	9,069	78.1	76.3	76.4	75.4
Cardiac catheterization . . . . .	228	439	533	598	2.2	3.9	4.7	5.2
Repair of inguinal hernia . . . . .	483	370	290	261	4.6	3.3	2.5	2.2
Prostatectomy . . . . .	335	367	410	358	3.1	3.2	3.4	2.9
Reduction of fracture (excluding skull, nose, and jaw) . . . . .	325	339	367	337	2.9	2.8	3.0	2.7
Direct heart revascularization (coronary bypass) . . . . .	108	172	244	270	1.0	1.6	2.1	2.3
Tonsillectomy, with or without adenoidectomy . . . . .	195	135	115	94	2.0	1.3	1.2	0.9
Under 15 years <sup>3</sup> . . . . .	1,068	831	725	751	40.7	31.3	27.0	27.6
Tonsillectomy, with or without adenoidectomy . . . . .	138	97	85	69	5.3	3.6	3.2	2.6
Reduction of fracture (excluding skull, nose, and jaw) . . . . .	55	57	55	52	2.1	2.1	2.1	1.9
Myringotomy . . . . .	115	53	41	45	4.4	2.0	1.5	1.6
Repair of inguinal hernia . . . . .	86	46	34	31	3.3	1.7	1.3	1.1
Appendectomy, excluding incidental <sup>4</sup> . . . . .	43	41	38	33	1.6	1.5	1.4	1.2
Circumcision . . . . .	43	31	26	20	1.6	1.2	1.0	0.7
15-44 years <sup>3</sup> . . . . .	2,900	2,717	2,640	2,489	56.6	49.4	46.8	43.9
Reduction of fracture (excluding skull, nose, and jaw) . . . . .	188	187	206	178	3.7	3.4	3.7	3.1
Excision or destruction of intervertebral disc and spinal fusion . . . . .	67	119	110	111	1.3	2.2	1.9	2.0
Operations on muscles, tendons, fascia, and bursa . . . . .	110	100	95	93	2.2	1.8	1.7	1.6
Appendectomy, excluding incidental <sup>4</sup> . . . . .	85	88	101	88	1.7	1.6	1.8	1.5
Debridement of wound, infection, or burn . . . . .	75	75	106	84	1.5	1.4	1.9	1.5
Excision of semilunar cartilage of knee . . . . .	94	48	28	30	1.8	0.9	0.5	0.5
45-64 years <sup>3</sup> . . . . .	2,313	2,494	2,612	2,568	109.5	116.4	120.7	116.7
Cardiac catheterization . . . . .	129	241	289	296	6.1	11.3	13.4	13.5
Repair of inguinal hernia . . . . .	152	116	91	80	7.2	5.4	4.2	3.6
Direct heart revascularization (coronary bypass) . . . . .	72	102	131	134	3.4	4.8	6.1	6.1
Prostatectomy . . . . .	83	81	90	67	3.9	3.8	4.2	3.1
Excision or destruction of intervertebral disc and spinal fusion . . . . .	43	60	74	69	2.1	2.8	3.4	3.1
Operations on muscles, tendons, fascia, and bursa . . . . .	58	50	51	44	2.8	2.3	2.4	2.0
65 years and over <sup>3</sup> . . . . .	2,224	2,762	3,097	3,261	214.6	239.5	255.5	264.0
Prostatectomy . . . . .	251	284	318	290	24.2	24.7	26.3	23.4
Cardiac catheterization . . . . .	52	126	182	222	5.0	10.9	15.0	17.9
Repair of inguinal hernia . . . . .	119	116	96	88	11.4	10.1	7.9	7.1
Biopsies on the digestive system . . . . .	61	107	113	121	5.9	9.3	9.3	9.8
Direct heart revascularization (coronary bypass) . . . . .	27	57	105	122	2.6	5.0	8.7	9.8
Extraction of lens . . . . .	124	53	18	24	12.0	4.6	1.5	1.9
<b>Female</b>								
All ages <sup>2,3</sup> . . . . .	15,989	15,994	16,583	16,555	126.1	117.2	118.3	116.9
Procedures to assist delivery . . . . .	2,391	2,494	2,938	3,131	18.4	18.0	20.7	22.0
Cesarean section <sup>5</sup> . . . . .	619	877	953	933	4.8	6.3	6.7	6.5
Hysterectomy . . . . .	649	670	655	578	5.2	5.0	4.8	4.3
Oophorectomy and salpingo-oophorectomy . . . . .	483	525	490	451	3.9	4.0	3.7	3.4
Repair of current obstetrical laceration . . . . .	355	548	660	690	2.8	3.9	4.7	4.9
Bilateral destruction or occlusion of fallopian tubes . . . . .	641	466	415	406	4.9	3.3	2.9	2.9
Diagnostic dilation and curettage of uterus . . . . .	923	349	206	143	7.3	2.6	1.5	1.1
Under 15 years <sup>3</sup> . . . . .	771	553	471	519	30.8	21.8	18.4	20.0
Tonsillectomy, with or without adenoidectomy . . . . .	156	100	74	66	6.2	3.9	2.9	2.5
Myringotomy . . . . .	87	36	20	32	3.5	1.4	0.8	1.2
Reduction of fracture (excluding skull, nose, and jaw) . . . . .	32	33	28	24	1.3	1.3	1.1	0.9
Appendectomy, excluding incidental <sup>4</sup> . . . . .	34	28	28	25	1.4	1.1	1.1	1.0
Operations on muscles, tendons, fascia, and bursa . . . . .	23	11	11	16	0.9	0.5	0.4	0.6
Adenoidectomy without tonsillectomy . . . . .	31	*7	*	*6	1.2	*0.3	*	*0.2

See footnotes at end of table.

**Table 74 (page 2 of 2). Operations for inpatients discharged from non-Federal short-stay hospitals, according to sex, age, and surgical category: United States, 1980, 1985, 1987, and 1988**

[Data are based on a sample of hospital records]

Sex, age, and surgical category	Operations in thousands				Operations per 1,000 population			
	1980	1985	1987	1988 <sup>1</sup>	1980	1985	1987	1988 <sup>1</sup>
Female—Con.								
15–44 years <sup>3</sup> . . . . .	9,625	9,340	9,937	10,007	181.9	165.0	171.9	172.5
Procedures to assist delivery . . . . .	2,381	2,483	2,927	3,121	45.0	43.9	50.6	53.8
Cesarean section . . . . .	614	875	951	931	11.6	15.5	16.4	16.0
Repair of current obstetrical laceration . . . . .	352	546	656	688	6.7	9.6	11.3	11.9
Bilateral destruction or occlusion of fallopian tubes . . . . .	632	461	413	404	11.9	8.1	7.1	7.0
Hysterectomy . . . . .	402	421	406	340	7.6	7.4	7.0	5.9
Diagnostic dilation and curettage of uterus . . . . .	625	232	141	86	11.8	4.1	2.4	1.5
45–64 years <sup>3</sup> . . . . .	3,113	2,893	2,847	2,622	133.4	123.3	120.5	109.5
Hysterectomy . . . . .	203	190	188	188	8.7	8.1	8.0	7.9
Oophorectomy and salpingo-oophorectomy . . . . .	162	165	163	165	7.0	7.0	6.9	6.9
Cardiac catheterization . . . . .	58	108	151	136	2.5	4.6	6.4	5.7
Cholecystectomy . . . . .	107	104	114	101	4.6	4.4	4.8	4.2
Biopsies on the digestive system . . . . .	66	71	77	61	2.8	3.0	3.3	2.6
Biopsies on the integumentary system (breast, skin, and subcutaneous tissue) . . . . .	69	48	39	38	2.9	2.1	1.7	1.6
65 years and over <sup>3</sup> . . . . .	2,480	3,208	3,328	3,407	161.6	188.7	187.9	189.2
Reduction of fracture (excluding skull, nose, and jaw) . . . . .	127	163	169	156	8.3	9.6	9.5	8.6
Biopsies on the digestive system . . . . .	72	140	152	144	4.7	8.2	8.6	8.0
Arthroplasty and replacement of hip . . . . .	72	108	115	112	4.7	6.4	6.5	6.2
Cardiac catheterization . . . . .	32	101	146	163	2.1	6.0	8.2	9.1
Insertion of prosthetic lens (pseudophakos) . . . . .	93	92	35	63	6.1	5.4	2.0	3.5
Cholecystectomy . . . . .	83	89	106	100	5.4	5.2	6.0	5.5

<sup>1</sup>Comparisons of 1988 data with data for earlier years should be made with caution as estimates of change between 1987 and 1988 may reflect improvements in the 1988 design (see Appendix I) rather than true changes in hospital use.

<sup>2</sup>Rates are age adjusted.

<sup>3</sup>Includes operations not listed in table.

<sup>4</sup>Limited to estimated number of appendectomies, excluding those performed incidental to other abdominal surgery.

<sup>5</sup>Cesarean sections accounted for 16.5 percent of all deliveries in 1980, 22.7 percent in 1985, 24.4 percent in 1987, and 24.7 percent in 1988.

\*Estimates based on fewer than 30 discharges are not shown; estimates based on 30–59 discharges should be used with caution.

NOTES: Excludes newborn infants. Data do not reflect total use of operations because operations for outpatients are not included in the National Hospital Discharge Survey. In recent years, for example, lens extractions and myringotomies are frequently performed on outpatients. Rates are based on the civilian population. In each sex and age group, data are shown for operations with the 5 highest rates in 1980 and 1987. Surgical categories are based on the International Classification of Diseases, 9th Revision, Clinical Modification. For a listing of the code numbers, see Appendix II, table VII.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Hospital Discharge Survey.

**Table 75 (page 1 of 2). Diagnostic and other nonsurgical procedures for inpatients discharged from non-Federal short-stay hospitals, according to sex, age, and procedure category: United States, 1980, 1985, 1987, and 1988**

[Data are based on a sample of hospital records]

<i>Sex, age, and procedure category</i>	<i>Procedures in thousands</i>				<i>Procedures per 1,000 population</i>			
	<i>1980</i>	<i>1985</i>	<i>1987</i>	<i>1988<sup>1</sup></i>	<i>1980</i>	<i>1985</i>	<i>1987</i>	<i>1988<sup>1</sup></i>
<b>Male</b>								
All ages <sup>2,3</sup> . . . . .	3,386	5,889	6,643	6,665	31.3	51.1	56.2	55.6
Computerized axial tomography (CAT scan) . . . . .	152	671	814	775	1.4	5.8	6.8	6.3
Diagnostic ultrasound . . . . .	114	478	616	599	1.0	4.1	5.2	5.1
Cystoscopy . . . . .	543	461	444	399	5.1	4.0	3.7	3.2
Angiocardiology using contrast material . . . . .	174	431	617	749	1.6	3.9	5.4	6.4
Radioisotope scan . . . . .	236	375	350	315	2.1	3.3	2.9	2.6
Arteriography using contrast material . . . . .	180	262	251	246	1.7	2.3	2.1	2.0
Endoscopy of large intestine . . . . .	228	259	245	170	2.1	2.2	2.0	1.4
Under 15 years <sup>3</sup> . . . . .	217	297	377	424	8.3	11.1	14.1	15.6
Spinal tap . . . . .	39	62	76	84	1.5	2.3	2.8	3.1
Computerized axial tomography (CAT scan) . . . . .	17	35	54	42	0.7	1.3	2.0	1.5
Diagnostic ultrasound . . . . .	*6	23	34	51	*0.2	0.9	1.3	1.9
Electroencephalogram . . . . .	*5	19	20	15	*0.2	0.7	0.8	0.5
Application of cast or splint . . . . .	21	16	13	14	0.8	0.6	0.5	0.5
Cystoscopy . . . . .	23	11	*8	*4	0.9	0.4	*0.3	*0.1
Radioisotope scan . . . . .	*8	*9	11	11	*0.3	*0.4	0.4	0.4
15-44 years <sup>3</sup> . . . . .	884	1,294	1,368	1,382	17.3	23.5	24.3	24.4
Computerized axial tomography (CAT scan) . . . . .	37	174	217	218	0.7	3.2	3.8	3.8
Contrast myelogram . . . . .	88	130	111	79	1.7	2.4	2.0	1.4
Diagnostic ultrasound . . . . .	25	96	113	111	0.5	1.7	2.0	2.0
Radioisotope scan . . . . .	48	67	65	62	0.9	1.2	1.2	1.1
Endoscopy of small intestine . . . . .	38	61	67	43	0.7	1.1	1.2	0.8
Endoscopy of large intestine . . . . .	52	54	36	25	1.0	1.0	0.6	0.4
Cystoscopy . . . . .	80	47	39	36	1.6	0.9	0.7	0.6
Application of cast or splint . . . . .	54	30	27	27	1.1	0.6	0.5	0.5
45-64 years <sup>3</sup> . . . . .	1,128	1,866	2,060	2,038	53.4	87.1	95.2	92.6
Angiocardiology using contrast material . . . . .	106	251	350	388	5.0	11.7	16.2	17.6
Computerized axial tomography (CAT scan) . . . . .	43	182	205	200	2.0	8.5	9.5	9.1
Diagnostic ultrasound . . . . .	41	146	178	173	1.9	6.8	8.2	7.9
Radioisotope scan . . . . .	75	121	106	102	3.5	5.7	4.9	4.7
Cystoscopy . . . . .	153	114	108	93	7.3	5.3	5.0	4.2
Arteriography using contrast material . . . . .	76	94	92	95	3.6	4.4	4.2	4.3
Endoscopy of large intestine . . . . .	86	76	70	48	4.0	3.5	3.2	2.2
65 years and over <sup>3</sup> . . . . .	1,158	2,432	2,838	2,821	111.8	211.0	234.2	228.4
Cystoscopy . . . . .	287	288	290	266	27.7	25.0	23.9	21.6
Computerized axial tomography (CAT scan) . . . . .	54	280	337	316	5.2	24.3	27.8	25.6
Diagnostic ultrasound . . . . .	42	213	290	264	4.0	18.4	24.0	21.4
Radioisotope scan . . . . .	105	177	167	139	10.1	15.4	13.8	11.3
Endoscopy of large intestine . . . . .	86	126	138	94	8.3	10.9	11.3	7.6
Angiocardiology using contrast material . . . . .	35	123	196	264	3.4	10.7	16.2	21.3
<b>Female</b>								
All ages <sup>2,3</sup> . . . . .	3,532	6,072	6,820	6,902	27.5	43.3	47.3	47.3
Diagnostic ultrasound . . . . .	204	756	981	963	1.6	5.4	6.7	6.6
Computerized axial tomography (CAT scan) . . . . .	154	707	833	838	1.2	4.9	5.6	5.6
Radioisotope scan . . . . .	289	463	409	390	2.1	3.2	2.8	2.6
Endoscopy of small intestine . . . . .	164	281	341	279	1.3	2.0	2.3	1.8
Angiocardiology using contrast material . . . . .	84	219	375	439	0.7	1.6	2.7	3.1
Laparoscopy (excluding that for ligation and division of fallopian tubes) . . . . .	235	209	176	133	1.8	1.5	1.2	0.9
Cystoscopy . . . . .	324	184	149	143	2.6	1.3	1.0	1.0

See footnotes at end of table.

**Table 75 (page 2 of 2). Diagnostic and other nonsurgical procedures for inpatients discharged from non-Federal short-stay hospitals, according to sex, age, and procedure category: United States, 1980, 1985, 1987, and 1988**

[Data are based on a sample of hospital records]

Sex, age, and procedure category	Procedures in thousands				Procedures per 1,000 population			
	1980	1985	1987	1988 <sup>1</sup>	1980	1985	1987	1988 <sup>1</sup>
Female—Con.								
Under 15 years <sup>3</sup> . . . . .	191	256	293	356	7.6	10.1	11.5	13.8
Spinal tap . . . . .	26	50	66	70	1.0	2.0	2.6	2.7
Computerized axial tomography (CAT scan) . . . . .	*10	33	32	39	*0.4	1.3	1.3	1.5
Diagnostic ultrasound . . . . .	*5	25	35	45	*0.2	1.0	1.4	1.7
Electroencephalogram . . . . .	*	15	15	19	*	0.6	0.6	0.7
Cystoscopy . . . . .	38	*8	*5	*5	1.5	*0.3	*0.2	*0.2
Radioisotope scan . . . . .	*6	*8	*7	6	*0.2	*0.3	*0.3	0.2
Application of cast or splint . . . . .	13	*6	*8	9	0.5	*0.2	*0.3	0.3
15–44 years <sup>3</sup> . . . . .	1,203	1,606	1,687	1,643	22.7	28.4	29.2	28.3
Diagnostic ultrasound . . . . .	94	283	376	365	1.8	5.0	6.5	6.3
Laparoscopy (excluding that for ligation and division of fallopian tubes) . . . . .	214	197	162	124	4.1	3.5	2.8	2.1
Computerized axial tomography (CAT scan) . . . . .	36	137	149	156	0.7	2.4	2.6	2.7
Contrast myelogram . . . . .	66	96	80	57	1.2	1.7	1.4	1.0
Biliary tract X-ray . . . . .	60	90	107	109	1.1	1.6	1.9	1.9
Endoscopy of large intestine . . . . .	77	58	51	29	1.5	1.0	0.9	0.5
Cystoscopy . . . . .	97	51	37	44	1.8	0.9	0.6	0.8
45–64 years <sup>3</sup> . . . . .	1,030	1,584	1,734	1,711	44.2	67.5	73.4	71.4
Computerized axial tomography (CAT scan) . . . . .	42	167	191	188	1.8	7.1	8.1	7.8
Diagnostic ultrasound . . . . .	44	154	182	176	1.9	6.6	7.7	7.3
Radioisotope scan . . . . .	92	128	113	113	3.9	5.5	4.8	4.7
Angiocardiology using contrast material . . . . .	49	105	173	189	2.1	4.5	7.3	7.9
Endoscopy of small intestine . . . . .	55	78	93	68	2.3	3.3	3.9	2.8
Cystoscopy . . . . .	93	48	44	33	4.0	2.1	1.9	1.4
65 years and over <sup>3</sup> . . . . .	1,107	2,626	3,106	3,192	72.1	154.4	175.3	177.2
Computerized axial tomography (CAT scan) . . . . .	66	370	461	455	4.3	21.8	26.0	25.3
Diagnostic ultrasound . . . . .	62	294	387	377	4.0	17.3	21.8	20.9
Radioisotope scan . . . . .	143	244	219	209	9.3	14.4	12.4	11.6
Endoscopy of large intestine . . . . .	131	181	188	154	8.5	10.7	10.6	8.6
Endoscopy of small intestine . . . . .	55	133	180	150	3.6	7.8	10.2	8.3
Cystoscopy . . . . .	96	77	62	61	6.2	4.5	3.5	3.4

<sup>1</sup>Comparisons of 1988 data with data for earlier years should be made with caution as estimates of change between 1987 and 1988 may reflect improvements in the 1988 design (see Appendix I) rather than true changes in hospital use.

<sup>2</sup>Rates are age adjusted.

<sup>3</sup>Includes nonsurgical procedures not shown.

\*Estimates based on fewer than 30 discharges are not shown; estimates based on 30–59 discharges should be used with caution.

NOTES: Excludes newborn infants. Data do not reflect total use of procedures because procedures for outpatients are not included in the National Hospital Discharge Survey. For example, CAT scans are frequently performed on outpatients. Rates are based on the civilian population. In each sex and age group, data are shown for procedures with the 5 highest rates in 1980 and 1987. Procedure categories are based on the International Classification of Diseases, 9th Revision, Clinical Modification. For a listing of the code numbers, see Appendix II, table VIII.

SOURCE: Division of Health Care Statistics, National Center for Health Statistics: Data from the National Hospital Discharge Survey.



**Table 76. Admissions, average length of stay, and outpatient visits in short-stay hospitals, according to type of ownership: United States, selected years 1960–87**

[Data are based on reporting by a census of registered hospitals]

Type of ownership	1960	1970	1975	1980	1984	1985	1986	1987
Admissions								
	Number in thousands							
All ownerships. . . . .	24,324	30,706	35,270	38,140	37,143	35,478	34,399	33,592
Federal. . . . .	1,354	1,454	1,751	1,942	1,941	1,977	1,988	1,959
Non-Federal . . . . .	22,970	29,252	33,519	36,198	35,202	33,501	32,410	31,633
Nonprofit. . . . .	16,788	20,948	23,735	25,576	25,246	24,188	23,492	22,946
Proprietary. . . . .	1,550	2,031	2,646	3,165	3,314	3,242	3,231	3,157
State-local government. . . . .	4,632	6,273	7,138	7,458	6,642	6,071	5,687	5,530
Average length of stay								
	Number of days							
All ownerships. . . . .	8.4	8.7	8.0	7.8	7.5	7.3	7.3	7.4
Federal. . . . .	21.4	17.0	14.4	12.9	11.9	11.6	11.3	11.3
Non-Federal . . . . .	7.6	8.2	7.7	7.6	7.3	7.1	7.1	7.2
Nonprofit. . . . .	7.4	8.2	7.8	7.7	7.4	7.2	7.2	7.2
Proprietary. . . . .	5.7	6.8	6.6	6.5	6.3	6.1	6.1	6.3
State-local government. . . . .	8.8	8.7	7.6	7.4	7.3	7.2	7.4	7.6
Outpatient visits <sup>1</sup>								
	Number in thousands							
All ownerships. . . . .	---	173,058	245,938	255,320	267,868	272,833	285,216	300,960
Federal. . . . .	---	39,514	49,627	48,568	51,394	50,059	50,946	53,256
Non-Federal . . . . .	---	133,545	196,311	206,752	216,474	222,773	234,270	247,704
Nonprofit. . . . .	---	90,992	132,368	142,864	153,928	160,002	168,284	178,089
Proprietary. . . . .	---	4,698	7,713	9,696	11,090	12,378	14,896	16,566
State-local government. . . . .	---	37,854	56,230	54,192	51,457	50,394	51,091	53,049

<sup>1</sup>Because of modifications in 1977 and 1982 in the collection of outpatient data, there are discontinuities in the trends for this item.

NOTE: Excludes psychiatric and tuberculosis and other respiratory disease hospitals.

SOURCES: American Hospital Association: Hospitals. JAHA 35(15):396–401 and 45(15):463–467, Aug. 1961 and Aug. 1971; Hospital Statistics, 1976, 1981, 1985–88 Editions. Chicago, 1976, 1981, 1985–88. (Copyrights 1961, 1971, 1976, 1981, 1985–88: Used with the permission of the American Hospital Association.)

**Table 77. Nursing home and personal care home residents 65 years of age and over and rate per 1,000 population, according to age, sex, and race: United States, 1963, 1973-74, 1977, and 1985**

[Data are based on a sample of nursing homes]

Age, sex, and race	Residents				Residents per 1,000 population <sup>1</sup>			
	1963	1973-74 <sup>2</sup>	1977 <sup>3</sup>	1985	1963	1973-74 <sup>2</sup>	1977 <sup>3</sup>	1985
<b>Age</b>								
All ages . . . . .	445,600	961,500	1,126,000	1,318,300	25.4	44.7	47.1	46.2
65-74 years . . . . .	89,600	163,100	211,400	212,100	7.9	12.3	14.4	12.5
75-84 years . . . . .	207,200	384,900	464,700	509,000	39.6	57.7	64.0	57.7
85 years and over . . . . .	148,700	413,600	449,900	597,300	148.4	257.3	225.9	220.3
<b>Sex</b>								
Male . . . . .	141,000	265,700	294,000	334,400	18.1	30.0	30.3	29.0
65-74 years . . . . .	35,100	65,100	80,200	80,600	6.8	11.3	12.6	10.8
75-84 years . . . . .	65,200	102,300	122,100	141,300	29.1	39.9	44.9	43.0
85 years and over . . . . .	40,700	98,300	91,700	112,600	105.6	182.7	146.3	145.7
Female . . . . .	304,500	695,800	832,000	983,900	31.1	54.9	58.6	57.9
65-74 years . . . . .	54,500	98,000	131,200	131,500	8.8	13.1	15.8	13.8
75-84 years . . . . .	142,000	282,600	342,600	367,700	47.5	68.9	75.4	66.4
85 years and over . . . . .	108,000	315,300	358,200	484,700	175.1	294.9	262.4	250.1
<b>Race<sup>4</sup></b>								
White . . . . .	431,700	920,600	1,059,900	1,227,400	26.6	46.9	48.9	47.7
65-74 years . . . . .	84,400	150,100	187,500	187,800	8.1	12.5	14.2	12.3
75-84 years . . . . .	202,000	369,700	443,200	473,600	41.7	60.3	67.0	59.1
85 years and over . . . . .	145,400	400,800	429,100	566,000	157.7	270.8	234.2	228.7
Black . . . . .	13,800	37,700	60,800	82,000	10.3	22.0	30.7	35.0
65-74 years . . . . .	5,200	12,200	22,000	22,500	5.9	11.1	17.6	15.4
75-84 years . . . . .	5,300	13,400	19,700	30,600	13.8	26.7	33.4	45.3
85 years and over . . . . .	3,300	12,100	19,100	29,000	41.8	105.7	133.6	141.5

<sup>1</sup>Residents per 1,000 population for 1973-74 and 1977 will differ from those presented in the sources because the rates have been recomputed using revised census estimates for these years (see source note).

<sup>2</sup>Excludes residents in personal care or domiciliary care homes.

<sup>3</sup>Includes residents in domiciliary care homes.

<sup>4</sup>For data years 1973-74 and 1977, all Hispanics were included in the white category. For 1963, black includes all other races.

SOURCES: National Center for Health Statistics: Characteristics of residents in institutions for the aged and chronically ill, United States, April-June 1963, by G. S. Wunderlich. Vital and Health Statistics. Series 12, No. 2. DHEW Pub. No. (PHS) 1000. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1965; Characteristics, social contacts, and activities of nursing home residents, United States: 1973-74 National Nursing Home Survey, by A. Zappolo. Vital and Health Statistics. Series 13, No. 27. DHEW Pub. No. (HRA) 77-1778. Health Resources Administration. Washington. U.S. Government Printing Office, May 1977; Characteristics of nursing home residents, health status, and care received: National Nursing Home Survey, United States, May-December 1977, by E. Hing. Vital and Health Statistics. Series 13, No. 51. DHHS Pub. No. (PHS) 81-1712. Public Health Service. Washington. U.S. Government Printing Office, April 1981; The National Nursing Home Survey: 1985 summary for the United States, by E. Hing, E. Sekscenski, and G. Strahan. Vital and Health Statistics. Series 13, No. 97. DHHS Pub. No. (PHS) 89-1758. Public Health Service. Washington. U.S. Government Printing Office, January 1989. U.S. Bureau of the Census: Preliminary estimates of the population of the United States by age, sex, and race: 1970-1981. Current Population Reports. Series P-25, No. 917. Washington. U.S. Government Printing Office, July 1982.

**Table 78. Nursing home residents, according to selected functional status and age: United States, 1977 and 1985**

[Data are based on a sample of nursing homes]

Functional status	1977					1985				
	All ages	Under 65 years	65-74 years	75-84 years	85 years and over	All ages	Under 65 years	65-74 years	75-84 years	85 years and over
Number of residents										
All residents . . . . .	1,303,100	177,100	211,400	464,700	449,900	1,491,400	173,100	212,100	509,000	597,300
Percent distribution										
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dressing										
Independent . . . . .	30.6	44.8	38.8	27.5	24.2	24.6	41.1	29.8	24.1	18.3
Requires assistance <sup>1</sup> . . . . .	69.4	55.2	61.2	72.5	75.8	75.4	58.9	70.2	75.9	81.7
Using toilet room										
Independent . . . . .	47.5	61.8	53.1	45.7	41.0	39.1	57.1	43.4	39.7	32.0
Requires assistance . . . . .	42.5	28.1	37.8	44.7	48.0	48.9	31.5	45.8	47.8	55.9
Does not use . . . . .	10.1	10.1	9.1	9.6	11.0	12.0	11.4	10.8	12.6	12.1
Mobility										
Walks independently . . . . .	33.9	53.6	43.2	33.2	22.5	29.3	51.0	39.6	30.4	18.4
Walks with assistance . . . . .	28.8	15.7	21.4	30.5	35.6	24.8	13.5	20.4	24.7	29.6
Chairfast . . . . .	32.0	25.5	30.5	31.5	35.9	39.5	29.3	33.7	38.7	45.1
Bedfast . . . . .	5.3	5.2	5.0	4.9	6.1	6.5	6.2	6.3	6.1	6.9
Continence										
No difficulty controlling bowel or bladder . .	54.7	68.0	62.4	52.9	47.8	48.1	67.7	57.1	45.0	41.9
Difficulty controlling—										
Bowel . . . . .	3.7	3.0	3.7	4.0	3.8	1.9	*1.5	*2.0	1.7	2.2
Bladder . . . . .	9.0	5.8	6.5	9.4	11.1	10.3	6.4	6.8	11.0	12.0
Bowel and bladder . . . . .	25.9	16.8	20.6	26.9	30.8	31.7	16.8	27.5	33.6	35.8
Ostomy in either bowel or bladder . . . . .	6.7	6.4	6.8	6.9	6.5	8.1	7.5	6.6	8.7	8.1
Eating										
Independent . . . . .	67.4	73.8	72.9	66.2	63.5	60.7	68.5	66.6	60.9	56.1
Requires assistance <sup>2</sup> . . . . .	32.6	26.2	27.1	33.8	36.5	39.3	31.5	33.4	39.1	43.9
Vision										
Not impaired . . . . .	67.2	81.0	75.4	67.9	57.2	75.9	88.5	83.3	77.8	68.1
Partially impaired . . . . .	19.0	10.9	13.4	19.6	24.1	14.6	5.9	10.0	14.2	19.1
Severely impaired . . . . .	6.6	2.2	3.3	6.1	10.4	5.6	*1.9	4.3	4.1	8.4
Completely lost . . . . .	2.9	2.2	2.6	2.6	3.8	2.5	*2.5	*1.3	2.1	3.2
Unknown . . . . .	4.3	3.8	5.3	3.9	4.5	1.4	*1.2	*1.0	1.8	1.2
Hearing										
Not impaired . . . . .	69.5	87.6	81.0	71.6	54.9	78.5	96.1	90.4	82.6	65.7
Partially impaired . . . . .	21.7	6.6	11.4	21.2	33.1	16.7	*3.1	7.4	14.8	25.5
Severely impaired . . . . .	4.3	*0.4	1.9	3.0	8.4	3.4	*0.1	*1.1	1.5	6.8
Completely lost . . . . .	0.7	*1.1	*0.7	*0.6	*0.7	0.6	*0.1	*0.4	*0.6	*0.8
Unknown . . . . .	3.7	4.4	5.0	3.6	3.0	0.8	*0.5	*0.7	*0.5	1.1

<sup>1</sup>Includes those who do not dress.

<sup>2</sup>Includes those who are tube or intravenously fed.

\*Relative standard error greater than 30 percent.

SOURCES: Division of Health Care Statistics, National Center for Health Statistics: Characteristics of nursing home residents, health status, and care received: National Nursing Home Survey, United States, May-December 1977, by E. Hing, Vital and Health Statistics. Series 13, No. 51. DHHS Pub. No. (PHS) 81-1712. Public Health Service, Washington. U.S. Government Printing Office, April 1981; The National Nursing Home Survey: 1985 summary for the United States, by E. Hing, E. Sekscenski, and G. Strahan. Vital and Health Statistics. Series 13, No. 97. DHHS Pub. No. (PHS) 89-1758. Public Health Service, Washington. U.S. Government Printing Office, January 1989.

**Table 79. Admissions to mental health organizations and rate per 100,000 civilian population, according to type of service and organization: United States, selected years 1969–86**

[Data are based on inventories of mental health organizations]

Service and organization	Admissions in thousands				Rate per 100,000 civilian population			
	1969	1975	1983	1986	1969	1975	1983	1986
<b>Inpatient and residential treatment</b>								
All organizations . . . . .	1,283	1,558	1,633	1,817	644.2	736.5	701.4	759.9
State and county mental hospitals . . . . .	487	434	339	330	244.4	205.1	146.0	139.1
Private psychiatric hospitals . . . . .	92	126	165	235	46.2	59.4	70.9	98.0
Non-Federal general hospital psychiatric services . . . . .	478	544	786	849	240.1	257.2	336.8	354.8
Veterans Administration psychiatric services <sup>1</sup> . . . . .	135	181	149	180	67.9	85.5	64.3	75.1
Federally funded community mental health centers . . . . .	60	236	...	...	30.0	111.7	...	...
Residential treatment centers for emotionally disturbed children . . . . .	8	12	17	25	3.8	5.7	7.1	10.2
All other <sup>2,3</sup> . . . . .	23	25	177	198	11.8	11.9	76.3	82.7
<b>Outpatient treatment</b>								
All organizations . . . . .	1,147	2,291	2,665	2,765	575.9	1,083.2	1,147.5	1,155.7
State and county mental hospitals . . . . .	164	146	84	62	82.5	69.1	36.3	26.0
Private psychiatric hospitals . . . . .	26	33	78	123	12.8	15.6	33.4	51.5
Non-Federal general hospital psychiatric services . . . . .	171	255	469	494	85.7	120.5	202.1	206.3
Veterans Administration psychiatric services <sup>1</sup> . . . . .	17	94	103	125	8.4	44.4	44.5	52.3
Federally funded community mental health centers . . . . .	177	785	...	...	88.7	371.2	...	...
Residential treatment centers for emotionally disturbed children . . . . .	8	20	33	62	4.0	9.4	14.1	25.8
Freestanding psychiatric outpatient clinics <sup>3</sup> . . . . .	538	871	538	391	270.4	411.8	231.7	163.2
All other <sup>2,3</sup> . . . . .	46	87	1,360	1,508	23.4	41.2	585.4	630.6
<b>Partial care treatment</b>								
All organizations . . . . .	55	163	177	189	27.8	77.2	76.3	78.9
State and county mental hospitals . . . . .	11	14	4	6	5.3	6.7	1.6	2.4
Private psychiatric hospitals . . . . .	3	3	6	9	1.4	1.5	2.4	3.7
Non-Federal general hospital psychiatric services . . . . .	18	14	46	39	9.1	6.7	19.8	16.4
Veterans Administration psychiatric services <sup>1</sup> . . . . .	4	8	10	7	1.8	3.7	4.4	3.1
Federally funded community mental health centers . . . . .	13	94	...	...	6.5	44.5	...	...
Residential treatment centers for emotionally disturbed children . . . . .	1	3	3	5	0.3	1.6	1.5	2.3
Freestanding psychiatric outpatient clinics <sup>3,4</sup> . . . . .	4	22	5	...	2.2	10.4	2.3	...
All other <sup>2,3,5</sup> . . . . .	2	5	103	123	1.2	2.1	44.3	51.0

<sup>1</sup>Includes Veterans Administration neuropsychiatric hospitals and Veterans Administration general hospitals with separate psychiatric services.

<sup>2</sup>Includes other multiservice mental health organizations with inpatient and residential treatment services that are not elsewhere classified.

<sup>3</sup>Beginning in 1983 a definitional change sharply increased the number of multiservice mental health organizations while decreasing the number of freestanding psychiatric outpatient clinics. See Appendix I.

<sup>4</sup>Beginning in 1986 outpatient psychiatric clinics providing partial care are counted as multiservice mental health organizations in the "all other" category.

<sup>5</sup>Includes freestanding psychiatric partial care organizations.

NOTES: Changes in reporting procedures in 1981 affect the comparability of data with those from previous years. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health; R. W. Manderscheid and S. A. Barrett: Mental Health, United States, 1987. DHHS Pub. No. (ADM) 87-1518. U.S. Government Printing Office, 1987; Unpublished data.

**Table 80. Inpatient and residential treatment episodes in mental health organizations, rate per 100,000 civilian population, and inpatient days, according to type of organization: United States, selected years 1969-86**

[Data are based on inventories of mental health organizations]

Organization	1969	1975	1981 <sup>1</sup>	1983	1986
Episodes in thousands					
All organizations . . . . .	1,710	1,817	1,720	1,861	2,055
State and county mental hospitals . . . . .	767	599	499	459	445
Private psychiatric hospitals . . . . .	103	137	177	181	258
Non-Federal general hospital psychiatric services . . .	535	566	677	820	883
Veterans Administration psychiatric services <sup>2</sup> . . . . .	187	214	206	171	204
Federally funded community mental health centers . .	65	247	...	...	...
Residential treatment centers for emotionally disturbed children . . . . .	21	28	34	33	47
All other <sup>3,4</sup> . . . . .	32	26	127	197	218
Episodes per 100,000 civilian population					
All organizations . . . . .	859.1	859.6	755.6	799.1	858.9
State and county mental hospitals . . . . .	385.3	283.3	219.3	197.7	186.0
Private psychiatric hospitals . . . . .	51.5	64.8	77.5	77.8	107.9
Non-Federal general hospital psychiatric services . . .	269.0	267.6	297.3	351.3	369.0
Veterans Administration psychiatric services <sup>2</sup> . . . . .	93.9	101.4	90.3	73.4	85.2
Federally funded community mental health centers . .	32.6	116.8	...	...	...
Residential treatment centers for emotionally disturbed children . . . . .	10.7	13.4	15.1	14.0	19.7
All other <sup>3,4</sup> . . . . .	16.1	12.3	56.1	84.9	91.1
Days in thousands					
All organizations . . . . .	168,934	104,970	77,053	81,821	83,413
State and county mental hospitals . . . . .	134,185	70,584	44,558	42,427	39,075
Private psychiatric hospitals . . . . .	4,237	4,401	5,578	6,010	8,568
Non-Federal general hospital psychiatric services . . .	6,500	8,349	10,727	12,529	12,570
Veterans Administration psychiatric services <sup>2</sup> . . . . .	17,206	11,725	7,591	7,425	7,753
Federally funded community mental health centers . .	1,924	3,718	...	...	...
Residential treatment centers for emotionally disturbed children . . . . .	4,528	5,900	6,127	5,776	8,267
All other <sup>3,4</sup> . . . . .	354	293	2,472	7,654	7,180

<sup>1</sup>In 1981, some organizations were reclassified and data for some organization types were not available, resulting in a particularly large increase for the "all other" category in 1981.

<sup>2</sup>Includes Veterans Administration neuropsychiatric hospitals and Veterans Administration general hospitals with separate psychiatric services.

<sup>3</sup>Includes other multiservice mental health organizations with inpatient and residential treatment services that are not elsewhere classified.

<sup>4</sup>Beginning in 1983 a definitional change sharply increased the number of multiservice mental health organizations. See Appendix I.

NOTES: Changes in reporting procedures in 1981 affect the comparability of data with those from previous years. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health; R. W. Manderscheid and S. A. Barrett: Mental Health, United States, 1987. DHHS Pub. No. (ADM) 87-1518. U.S. Government Printing Office, 1987; Unpublished data.

**Table 81 (page 1 of 2). Admissions to selected inpatient psychiatric organizations and rate per 100,000 civilian population, according to sex, age, and race: United States, 1975, 1980, and 1986**

[Data are based on a survey of patients]

<i>Sex, age, and race</i>	<i>State and county mental hospitals</i>			<i>Private psychiatric hospitals</i>			<i>Non-Federal general hospitals<sup>1</sup></i>		
	<i>1975</i>	<i>1980</i>	<i>1986</i>	<i>1975</i>	<i>1980</i>	<i>1986</i>	<i>1975</i>	<i>1980</i>	<i>1986</i>
Both sexes									
Number in thousands									
Total . . . . .	385	369	326	130	141	207	516	564	794
Under 18 years. . . . .	25	17	16	15	17	42	43	44	46
18-24 years . . . . .	72	77	58	19	23	22	93	98	120
25-44 years . . . . .	166	177	189	47	56	91	220	249	405
45-64 years . . . . .	102	78	48	35	32	34	121	123	142
65 years and over. . . . .	21	20	15	13	14	18	38	50	82
White. . . . .	296	265	217	119	123	177	451	469	607
All other. . . . .	89	104	109	10	18	30	65	95	187
Male									
Total . . . . .	249	239	205	56	67	107	212	255	379
Under 18 years. . . . .	16	11	10	8	9	23	20	20	21
18-24 years . . . . .	52	56	39	10	13	14	45	52	57
25-44 years . . . . .	107	119	125	20	27	50	85	115	215
45-64 years . . . . .	61	43	25	14	13	14	48	46	60
65 years and over. . . . .	13	11	7	5	5	6	14	21	26
White. . . . .	191	171	135	51	58	89	184	213	274
All other. . . . .	58	68	69	5	9	18	27	42	105
Female									
Total . . . . .	136	130	121	74	74	101	304	309	415
Under 18 years. . . . .	9	5	6	8	7	20	23	23	25
18-24 years . . . . .	20	22	19	9	10	8	48	45	63
25-44 years . . . . .	59	58	64	28	29	41	135	135	190
45-64 years . . . . .	41	35	24	21	18	20	74	77	81
65 years and over. . . . .	8	9	8	8	9	12	24	29	56
White. . . . .	105	94	82	69	65	88	267	256	333
All other. . . . .	31	36	40	5	9	13	37	53	82
Both sexes									
Rate per 100,000 civilian population									
Total . . . . .	182.2	163.6	136.1	61.4	62.6	86.7	243.8	250.0	331.7
Under 18 years. . . . .	38.1	26.1	25.2	23.3	26.3	67.1	64.4	68.5	72.0
18-24 years . . . . .	271.8	264.6	215.5	73.7	79.6	81.3	352.8	334.2	443.7
25-44 years . . . . .	314.1	282.9	251.9	89.3	89.1	121.6	416.8	399.0	540.4
45-64 years . . . . .	233.5	175.7	107.0	80.1	71.0	75.2	278.5	276.4	314.9
65 years and over. . . . .	91.8	78.0	50.9	57.7	54.1	61.9	170.3	195.4	281.5
White. . . . .	161.1	136.8	106.7	64.9	63.4	87.3	245.4	241.8	299.0
All other. . . . .	321.9	328.0	299.8	37.9	57.5	83.1	233.3	300.0	514.3
Male									
Total . . . . .	243.7	219.8	176.6	54.5	61.9	92.1	207.1	233.8	327.6
Under 18 years. . . . .	48.3	35.4	30.1	22.5	28.9	69.8	59.1	62.6	63.7
18-24 years . . . . .	409.0	387.9	292.6	78.0	92.2	103.2	350.8	365.3	428.5
25-44 years . . . . .	418.4	388.1	338.4	76.6	86.8	136.1	332.8	374.7	584.2
45-64 years . . . . .	291.5	202.3	114.4	66.8	63.2	65.5	228.6	219.1	281.1
65 years and over. . . . .	136.4	105.3	57.1	50.3	47.3	52.1	152.0	203.4	223.1
White. . . . .	214.2	182.2	137.1	57.0	61.7	90.3	206.9	226.3	278.3
All other. . . . .	444.5	457.8	403.0	38.1	62.7	102.8	209.1	281.1	610.3

See footnote at end of table.

**Table 81 (page 2 of 2). Admissions to selected inpatient psychiatric organizations and rate per 100,000 civilian population, according to sex, age, and race: United States, 1975, 1980, and 1986**

[Data are based on a survey of patients]

<i>Sex, age, and race</i>	<i>State and county mental hospitals</i>			<i>Private psychiatric hospitals</i>			<i>Non-Federal general hospitals<sup>1</sup></i>		
	<i>1975</i>	<i>1980</i>	<i>1986</i>	<i>1975</i>	<i>1980</i>	<i>1986</i>	<i>1975</i>	<i>1980</i>	<i>1986</i>
Female									
Rate per 100,000 civilian population									
Total . . . . .	124.7	111.1	98.1	67.8	63.3	81.5	278.1	265.1	335.5
Under 18 years . . . . .	27.5	16.4	20.0	24.1	23.6	64.3	70.0	74.6	80.7
18-24 years . . . . .	143.1	145.8	141.0	69.6	67.4	60.2	354.6	304.4	458.3
25-44 years . . . . .	215.9	182.3	168.1	101.2	91.2	107.6	495.8	422.2	498.1
45-64 years . . . . .	180.5	151.7	100.2	92.3	78.1	84.0	324.3	328.2	345.8
65 years and over . . . . .	60.8	59.6	46.7	62.8	58.8	68.6	182.9	190.0	321.3
White . . . . .	111.2	94.1	78.1	72.5	65.0	84.5	281.7	256.4	318.6
All other . . . . .	212.0	212.6	207.2	37.7	52.8	65.5	254.9	316.7	428.0

<sup>1</sup>Non-Federal general hospitals include public and nonpublic facilities.

SOURCES: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health: C. A. Taube and S. A. Barrett: Mental Health, United States, 1985. DHHS Pub. No. (ADM) 85-1378. U.S. Government Printing Office, 1985; Unpublished data.

**Table 82. Admissions to selected inpatient psychiatric organizations, according to selected primary diagnoses and age: United States, 1975, 1980, and 1986**

[Data are based on a survey of patients]

Primary diagnosis and age	State and county mental hospitals			Private psychiatric hospitals			Non-Federal general hospitals <sup>1</sup>		
	1975	1980	1986	1975	1980	1986	1975	1980	1986
All diagnoses <sup>2</sup>									
Number per 100,000 civilian population									
All ages. . . . .	182.2	163.6	136.1	61.4	62.6	86.7	243.8	250.0	331.7
Under 25 years . . . . .	104.8	101.2	82.1	37.7	43.1	71.4	146.7	152.2	183.1
25-44 years. . . . .	314.1	282.9	251.9	89.3	89.1	121.6	416.8	399.0	540.4
45-64 years. . . . .	233.5	175.7	107.0	80.1	71.0	75.2	278.5	276.4	314.9
65 years and over . . . . .	91.8	78.0	50.9	57.7	54.1	61.9	170.3	195.4	281.5
Alcohol related									
All ages. . . . .	50.4	35.5	22.5	5.1	5.8	6.6	17.0	18.8	41.4
Under 25 years . . . . .	10.7	12.4	15.5	0.4	1.4	2.2	2.4	4.4	13.4
25-44 years. . . . .	86.2	64.0	42.6	7.6	9.3	10.0	31.0	34.3	92.6
45-64 years. . . . .	110.0	57.7	15.3	12.5	10.9	11.0	34.5	30.6	31.8
65 years and over . . . . .	14.8	11.5	*3.2	4.3	4.4	4.5	10.2	12.8	11.3
Drug related									
All ages. . . . .	6.8	7.8	8.7	1.5	1.8	6.1	8.4	7.4	20.2
Under 25 years . . . . .	7.2	9.4	5.8	1.5	1.8	7.5	7.7	7.8	18.4
25-44 years. . . . .	12.6	12.9	14.2	2.3	3.0	9.3	13.8	9.3	41.2
45-64 years. . . . .	*0.6	1.4	10.5	0.1	1.0	*1.8	6.5	7.1	*2.1
65 years and over . . . . .	*3.5	*0.7	*0.8	0.4	0.6	---	*2.6	*2.0	*0.1
Organic disorders <sup>3</sup>									
All ages. . . . .	9.6	6.8	4.3	2.5	2.2	2.0	9.0	7.4	9.8
Under 25 years . . . . .	2.2	1.2	*0.2	0.7	0.5	*0.5	1.1	*0.8	1.7
25-44 years. . . . .	6.4	4.7	2.6	1.1	0.9	*0.3	5.4	5.6	6.1
45-64 years. . . . .	12.2	8.1	7.3	1.7	2.7	*1.5	9.3	6.9	5.7
65 years and over . . . . .	43.3	30.0	17.2	14.5	10.8	11.7	49.3	36.4	50.7
Affective disorders									
All ages. . . . .	21.3	22.0	22.8	26.0	26.8	41.9	91.9	79.2	121.9
Under 25 years . . . . .	7.5	9.1	9.6	9.5	13.5	28.5	35.3	32.2	49.2
25-44 years. . . . .	40.6	36.9	43.2	39.4	38.9	63.4	160.9	123.7	176.8
45-64 years. . . . .	29.4	32.4	25.0	43.3	36.3	38.5	135.6	113.8	147.3
65 years and over . . . . .	16.8	14.3	7.9	29.6	29.2	33.4	78.5	81.0	166.3
Schizophrenia									
All ages. . . . .	61.2	62.1	49.7	13.4	13.3	9.9	58.9	59.9	63.3
Under 25 years . . . . .	35.9	36.6	18.6	11.1	10.6	5.7	42.0	38.3	30.4
25-44 years. . . . .	125.8	125.0	107.5	23.8	22.5	18.9	118.0	114.5	118.6
45-64 years. . . . .	63.5	54.8	35.9	11.3	11.6	8.5	50.3	53.6	68.9
65 years and over . . . . .	9.3	13.9	18.3	2.7	3.6	*1.8	5.6	16.3	14.0

<sup>1</sup>Non-Federal general hospitals include public and nonpublic facilities.

<sup>2</sup>Includes all other diagnoses not listed separately.

<sup>3</sup>Excludes alcohol and drug-related diagnoses.

\*Based on fewer than 5 sample admissions.

NOTES: Primary diagnosis categories are based on the then current International Classification of Diseases and Diagnostic and Statistical Manual of Mental Disorders. For a listing of the code numbers, see Appendix II, table IX.

SOURCES: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health; C. A. Taube and S. A. Barrett: Mental Health, United States, 1985. DHHS Pub. No. (ADM) 85-1378. U.S. Government Printing Office, 1985; Unpublished data.



**Table 83. Persons employed in health service sites: United States, selected years 1970–88**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Site	1970 <sup>1</sup>	1975	1980	1982	1983	1984	1985	1986	1987	1988
Number of persons in thousands										
All employed civilians . . . . .	76,805	85,846	99,303	99,526	100,834	105,005	107,150	109,597	112,440	114,968
All health service sites . . . . .	4,246	5,945	7,339	7,810	7,874	7,934	7,910	8,129	8,478	8,781
Offices of physicians . . . . .	477	618	777	898	888	896	894	896	950	985
Offices of dentists . . . . .	222	331	415	415	441	468	480	497	552	521
Offices of chiropractors <sup>2</sup> . . . . .	19	30	40	53	54	61	59	66	72	77
Hospitals . . . . .	2,690	3,441	4,036	4,341	4,348	4,288	4,269	4,368	4,444	4,520
Nursing and personal care facilities . . . . .	509	891	1,199	1,217	1,342	1,362	1,309	1,339	1,337	1,467
Other health service sites . . . . .	330	634	872	886	801	859	899	963	1,123	1,211
Percent of employed civilians										
All health service sites . . . . .	5.5	6.9	7.4	7.8	7.8	7.6	7.4	7.4	7.5	7.6
Percent distribution										
All health service sites . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Offices of physicians . . . . .	11.2	10.4	10.6	11.5	11.3	11.3	11.3	11.0	11.2	11.2
Offices of dentists . . . . .	5.2	5.6	5.7	5.3	5.6	5.9	6.1	6.1	6.5	5.9
Offices of chiropractors <sup>2</sup> . . . . .	0.4	0.5	0.5	0.7	0.7	0.8	0.7	0.8	0.8	0.9
Hospitals . . . . .	63.4	57.9	55.0	55.6	55.2	54.0	54.0	53.7	52.4	51.5
Nursing and personal care facilities . . . . .	12.0	15.0	16.3	15.6	17.0	17.2	16.5	16.5	15.8	16.7
Other health service sites . . . . .	7.8	10.7	11.9	11.3	10.2	10.8	11.4	11.8	13.2	13.8

<sup>1</sup>April 1, derived from decennial census; all other data years are annual averages from the Current Population Survey.

<sup>2</sup>Data for 1980 and 1982 are from the American Chiropractic Association; data for all other years are from the U.S. Bureau of Labor Statistics.

NOTES: Totals exclude persons in health-related occupations who are working in nonhealth industries, as classified by the U.S. Bureau of the Census, such as pharmacists employed in drugstores, school nurses, and nurses working in private households. Totals include Federal, State, and county health workers. In 1970–82, employed persons were classified according to the industry groups used in the 1970 Census of Population. Beginning in 1983, persons were classified according to the system used in the 1980 Census of Population.

SOURCES: U.S. Bureau of the Census: 1970 Census of Population, occupation by industry. Subject Reports. Final Report PC(2)-7C. Washington. U.S. Government Printing Office, Oct. 1972; U.S. Bureau of Labor Statistics: Labor Force Statistics Derived from the Current Population Survey: A Databook, Vol. I. Washington. U.S. Government Printing Office, Sept. 1982; Employment and Earnings, January 1983–89. Vol. 30, No. 1, Vol. 31, No. 1, Vol. 32, No. 1, Vol. 33, No. 1, Vol. 34, No. 1, Vol. 35, No. 1, and Vol. 36, No. 1. Washington. U.S. Government Printing Office, Jan. 1983–89; American Chiropractic Association: Unpublished data.

**Table 84 (page 1 of 2). Active non-Federal physicians per 10,000 civilian population, according to geographic division, State, and primary specialty: United States, 1975, 1985, and 1987**

Geographic division and State	Doctors of medicine <sup>2</sup>								
	Total physicians <sup>1</sup>			Patient care <sup>3</sup>			Primary care <sup>4</sup>		
	1975	1985	1987	1975	1985	1987	1975	1985	1987
	Number per 10,000 civilian population								
United States . . . . .	15.3	20.7	21.4	13.5	18.0	18.9	4.1	5.4	5.5
New England . . . . .	19.1	26.7	27.7	16.9	22.9	24.2	4.6	6.2	6.2
Maine . . . . .	12.8	18.7	19.3	10.7	15.6	16.0	3.8	5.4	5.4
New Hampshire . . . . .	14.3	18.1	18.5	13.1	16.7	17.2	4.6	5.6	5.7
Vermont . . . . .	18.2	23.8	24.5	15.5	20.3	21.5	5.2	6.5	6.6
Massachusetts . . . . .	20.8	30.2	31.2	18.3	25.4	27.0	4.7	6.4	6.4
Rhode Island . . . . .	17.8	23.3	24.9	16.1	20.2	21.8	4.4	5.5	5.6
Connecticut . . . . .	19.8	27.6	29.0	17.7	24.3	25.7	4.7	6.4	6.5
Middle Atlantic . . . . .	19.5	26.1	27.3	17.0	22.2	23.6	4.5	5.9	6.0
New York . . . . .	22.7	29.0	30.1	20.2	25.2	26.9	5.1	6.3	6.3
New Jersey . . . . .	16.2	23.4	24.5	14.0	19.8	21.1	4.1	5.5	5.8
Pennsylvania . . . . .	16.6	23.6	24.8	13.9	19.2	20.4	4.0	5.4	5.5
East North Central . . . . .	13.9	19.3	19.9	12.0	16.4	17.1	3.7	5.0	5.1
Ohio . . . . .	14.1	19.9	20.6	12.2	16.8	17.5	3.7	4.8	4.8
Indiana . . . . .	10.6	14.7	15.4	9.6	13.2	14.0	3.8	4.6	4.7
Illinois . . . . .	14.5	20.5	21.1	13.1	18.2	18.9	4.1	5.5	5.7
Michigan . . . . .	15.4	20.8	21.3	12.0	16.0	16.4	3.2	4.5	4.4
Wisconsin . . . . .	12.5	17.7	18.4	11.4	15.9	16.7	4.0	5.4	5.6
West North Central . . . . .	13.3	18.3	19.1	11.4	15.6	16.4	3.8	5.2	5.3
Minnesota . . . . .	14.9	20.5	21.1	13.7	18.5	19.3	4.6	6.5	6.5
Iowa . . . . .	11.4	15.6	16.5	9.4	12.4	13.1	3.5	4.3	4.4
Missouri . . . . .	15.0	20.5	21.3	11.6	16.3	17.1	3.3	4.7	4.6
North Dakota . . . . .	9.7	15.8	16.7	9.2	14.9	15.8	4.1	5.8	6.0
South Dakota . . . . .	8.2	13.4	14.0	7.7	12.3	13.0	3.4	5.0	5.6
Nebraska . . . . .	12.1	15.7	16.7	10.9	14.4	15.5	4.2	5.3	5.4
Kansas . . . . .	12.8	17.3	17.8	11.2	15.1	15.7	3.9	5.2	5.1
South Atlantic . . . . .	14.0	19.7	20.8	12.6	17.6	18.6	3.7	5.2	5.4
Delaware . . . . .	14.3	19.7	20.2	12.7	17.1	17.7	3.8	4.7	4.7
Maryland . . . . .	18.6	30.4	31.5	16.5	24.9	26.7	4.2	6.5	6.8
District of Columbia . . . . .	39.6	55.3	57.2	34.6	45.6	47.5	7.2	10.3	10.6
Virginia . . . . .	12.9	19.5	20.1	11.9	17.8	18.6	3.8	5.4	5.6
West Virginia . . . . .	11.0	16.3	17.2	10.0	14.6	15.2	3.3	4.4	4.6
North Carolina . . . . .	11.7	16.9	17.7	10.6	15.0	16.1	3.5	4.7	4.9
South Carolina . . . . .	10.0	14.7	15.5	9.3	13.6	14.5	3.3	4.5	4.7
Georgia . . . . .	11.5	16.2	16.8	10.6	14.7	15.4	3.3	4.3	4.4
Florida . . . . .	15.2	20.2	21.1	13.4	17.8	18.7	3.9	5.3	5.6
East South Central . . . . .	10.5	15.0	15.9	9.7	14.0	14.9	3.2	4.5	4.7
Kentucky . . . . .	10.9	15.1	16.0	10.1	13.9	15.1	3.6	4.8	5.0
Tennessee . . . . .	12.4	17.7	18.6	11.3	16.2	17.3	3.2	4.7	4.9
Alabama . . . . .	9.2	14.2	15.0	8.6	13.1	14.0	3.0	4.2	4.4
Mississippi . . . . .	8.4	11.8	12.5	8.0	11.1	11.9	3.1	4.2	4.3
West South Central . . . . .	11.9	16.4	17.1	10.5	14.5	15.2	3.5	4.5	4.5
Arkansas . . . . .	9.1	13.8	14.4	8.5	12.8	13.5	3.4	4.8	4.9
Louisiana . . . . .	11.4	17.3	17.9	10.5	16.1	16.8	3.3	4.5	4.5
Oklahoma . . . . .	11.6	16.1	16.7	9.4	12.9	13.4	3.2	4.0	4.4
Texas . . . . .	12.5	16.8	17.3	11.0	14.7	15.3	3.6	4.5	4.5
Mountain . . . . .	14.3	17.8	18.5	12.6	15.7	16.3	4.1	5.0	5.2
Montana . . . . .	10.6	14.0	15.2	10.1	13.2	14.4	4.5	5.4	5.7
Idaho . . . . .	9.5	12.1	12.2	8.9	11.4	11.5	4.0	4.8	4.8
Wyoming . . . . .	9.5	12.9	13.3	8.9	12.0	12.6	4.1	4.6	5.1
Colorado . . . . .	17.3	20.7	21.0	15.0	17.7	18.3	4.6	5.6	5.6
New Mexico . . . . .	12.2	17.0	17.7	10.1	14.7	15.5	3.4	4.8	5.2
Arizona . . . . .	16.7	20.2	20.9	14.1	17.1	17.8	4.2	5.1	5.2
Utah . . . . .	14.1	17.2	17.7	13.0	15.5	16.1	3.8	4.4	4.5
Nevada . . . . .	11.9	16.0	16.1	10.9	14.5	14.7	3.6	4.6	4.7

See footnotes at end of table.

**Table 84 (page 2 of 2). Active non-Federal physicians per 10,000 civilian population, according to geographic division, State, and primary specialty: United States, 1975, 1985, and 1987**

<i>Geographic division and State</i>	<i>Doctors of medicine<sup>2</sup></i>								
	<i>Total physicians<sup>1</sup></i>			<i>Patient care<sup>3</sup></i>			<i>Primary care<sup>4</sup></i>		
	<i>1975</i>	<i>1985</i>	<i>1987</i>	<i>1975</i>	<i>1985</i>	<i>1987</i>	<i>1975</i>	<i>1985</i>	<i>1987</i>
	Number per 10,000 civilian population								
Pacific . . . . .	17.9	22.5	22.9	16.3	20.5	20.9	5.2	6.6	6.5
Washington . . . . .	15.3	20.2	20.8	13.6	17.9	18.5	4.7	6.3	6.4
Oregon . . . . .	15.6	19.7	20.0	13.8	17.6	18.1	4.6	6.1	6.0
California . . . . .	18.8	23.7	23.8	17.3	21.5	21.7	5.5	6.7	6.6
Alaska . . . . .	8.4	13.0	13.8	7.8	12.1	12.7	3.5	5.6	5.7
Hawaii . . . . .	16.2	21.5	22.5	14.7	19.8	20.7	4.9	7.0	7.1

<sup>1</sup>Includes active non-Federal doctors of medicine and doctors of osteopathy in all other specialties not shown separately.

<sup>2</sup>Excludes doctors of osteopathy; States with large numbers are Florida, Michigan, Missouri, New Jersey, Ohio, Pennsylvania, and Texas.

<sup>3</sup>Excludes doctors of medicine in medical teaching, administration, research, and other nonpatient care activities.

<sup>4</sup>Includes doctors of medicine in patient care office-based general practice and family practice, internal medicine, and pediatrics.

SOURCES: Compiled by Health Resources and Services Administration, Bureau of Health Professions based on data from the American Medical Association Physician Distribution and Licensure in the U.S., 1975, Physician Characteristics and Distribution in the U.S., 1986 Edition, and unpublished data; American Osteopathic Association: 1975-76 Yearbook and Directory of Osteopathic Physicians, 1985-86 Yearbook and Directory of Osteopathic Physicians, and 1987-88 Yearbook and Directory of Osteopathic Physicians.

**Table 85. Active physicians, according to type of physician, and number per 10,000 population: United States and outlying U.S. areas, selected 1950–87 estimates and 1990 and 2000 projections**

[Data are based on reporting by physicians and medical schools]

<i>Year</i>	<i>All active physicians</i>	<i>Doctors of medicine</i>	<i>Doctors of osteopathy</i>	<i>Active physicians per 10,000 population</i>
Number of physicians				
1950 . . . . .	219,900	209,000	10,900	14.1
1960 . . . . .	259,400	247,300	12,200	14.0
1970 . . . . .	326,500	314,200	12,300	15.6
1971 . . . . .	337,400	325,000	12,400	16.1
1972 . . . . .	348,300	335,500	12,800	16.4
1973 . . . . .	355,700	342,500	13,200	16.4
1974 . . . . .	370,000	356,400	13,600	16.9
1975 . . . . .	384,500	370,400	14,100	17.4
1976 . . . . .	399,500	385,000	14,500	17.9
1977 . . . . .	405,900	390,800	15,100	18.0
1978 . . . . .	424,000	408,300	15,700	18.6
1979 . . . . .	440,400	424,000	16,400	19.1
1980 . . . . .	457,500	440,400	17,100	19.7
1981 . . . . .	466,600	448,700	18,000	19.9
1982 . . . . .	483,700	465,000	18,700	20.5
1983 . . . . .	501,200	481,500	19,700	21.1
1984 . . . . .	---	---	20,800	---
1985 . . . . .	534,800	512,900	21,900	22.0
1986 . . . . .	544,100	520,900	23,200	22.2
1987 . . . . .	560,300	536,200	24,100	22.6
Projections				
1990 . . . . .	601,100	573,300	27,800	24.0
2000 . . . . .	721,600	682,100	39,500	26.9

NOTES: Population estimates include residents in the United States, Puerto Rico, and other U.S. outlying areas; U.S. citizens in foreign countries; and the Armed Forces in the United States and abroad. For 1990 and 2000, the Series II projections of the total population from the U.S. Bureau of the Census are used. Estimation and projection methods are from the Bureau of Health Professions. The numbers for doctors of medicine differ from American Medical Association figures because physicians not classified by activity status and whose addresses are unknown are included in this table.

SOURCES: Bureau of Health Professions: Sixth Report to the President and Congress on the Status of Health Personnel in the United States. Health Resources and Services Administration. DHHS Pub. No. HRS-P-OD-88-1, Rockville, Md., 1988. Seventh Report to the President and Congress on the Status of Health Personnel in the United States. Health Resources and Services Administration. Forthcoming; Unpublished data; American Medical Association: data from annual surveys; Unpublished data.

**Table 86. Physicians, according to activity and place of medical education: United States and outlying U.S. areas, selected years 1970-87**

[Data are based on reporting by physicians]

<i>Activity and place of medical education</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>
	Number of physicians					
Doctors of medicine . . . . .	334,028	393,742	467,679	552,716	569,160	585,597
Professionally active . . . . .	310,845	340,280	414,916	497,140	505,750	521,328
Place of medical education:						
U.S. medical graduates . . . . .	256,427	---	333,325	392,007	398,314	410,300
Foreign medical graduates <sup>1</sup> . . . . .	54,418	---	81,591	105,133	107,436	111,028
Activity:						
Non-Federal . . . . .	281,344	312,089	397,129	475,573	483,812	499,582
Patient care . . . . .	255,027	287,837	361,915	431,527	436,877	453,230
Office-based practice . . . . .	188,924	213,334	271,268	329,041	325,757	337,507
General and family practice . . . . .	50,816	46,347	47,772	53,862	53,622	55,117
Cardiovascular diseases . . . . .	3,882	5,046	6,725	9,054	9,413	9,925
Dermatology . . . . .	2,932	3,442	4,372	5,325	5,354	5,532
Gastroenterology . . . . .	1,112	1,696	2,735	4,135	4,409	4,764
Internal medicine . . . . .	22,950	28,188	40,514	52,712	52,287	55,452
Pediatrics . . . . .	10,310	12,687	17,436	22,392	22,530	23,370
Pulmonary diseases . . . . .	785	1,166	2,040	3,035	3,188	3,474
General surgery . . . . .	18,068	19,710	22,409	24,708	23,542	23,689
Obstetrics and gynecology . . . . .	13,847	15,613	19,503	23,525	23,580	24,271
Ophthalmology . . . . .	7,627	8,795	10,598	12,212	12,134	12,538
Orthopedic surgery . . . . .	6,533	8,148	10,719	13,033	13,061	13,520
Otolaryngology . . . . .	3,914	4,297	5,262	5,751	5,768	6,022
Plastic surgery . . . . .	1,166	1,706	2,437	3,299	3,355	3,520
Urological surgery . . . . .	4,273	5,025	6,222	7,081	7,030	7,182
Anesthesiology . . . . .	7,369	8,970	11,336	15,285	15,310	15,986
Diagnostic radiology . . . . .	896	1,978	4,190	7,735	8,065	8,557
Emergency medicine . . . . .	---	---	---	---	7,277	7,564
Neurology . . . . .	1,192	1,862	3,245	4,691	4,797	5,087
Pathology, anatomical/clinical . . . . .	2,993	4,195	5,952	6,877	6,529	6,747
Psychiatry . . . . .	10,078	12,173	15,946	18,521	18,162	18,695
Radiology . . . . .	5,781	6,970	7,791	7,355	6,144	6,149
Other specialty . . . . .	12,400	15,320	24,064	28,453	20,200	20,346
Hospital-based practice . . . . .	66,103	74,503	90,647	102,486	111,120	115,723
Residents and interns . . . . .	45,840	53,527	59,615	72,159	77,618	79,483
Full-time hospital staff . . . . .	20,263	20,976	31,032	30,327	33,502	36,240
Other professional activity <sup>2</sup> . . . . .	26,317	24,252	35,214	44,046	46,935	46,352
Federal . . . . .	29,501	28,191	17,787	21,567	21,938	21,746
Patient care . . . . .	23,508	24,100	14,597	17,293	16,985	16,902
Office-based practice . . . . .	3,515	2,095	732	1,156	1,221	1,149
Hospital-based practice . . . . .	19,993	22,005	13,865	16,137	15,764	15,753
Residents and interns . . . . .	5,388	4,275	2,427	3,252	2,858	2,717
Full-time hospital staff . . . . .	14,605	17,730	11,438	12,885	12,906	13,036
Other professional activity <sup>2</sup> . . . . .	5,993	4,091	3,190	4,274	4,953	4,844
Inactive . . . . .	19,621	21,449	25,744	38,646	46,835	48,042
Not classified <sup>3</sup> . . . . .	358	26,145	20,629	13,950	13,661	13,364
Unknown address . . . . .	3,204	5,868	6,390	2,980	2,914	2,863

<sup>1</sup>Foreign medical graduates received their medical education in schools outside the United States and Canada.

<sup>2</sup>Includes medical teaching, administration, research, clinical fellows, and other.

<sup>3</sup>Not classified established in 1970; however, complete data not available until 1972.

NOTES: Numbers in this table differ from previous editions; data are now included for Puerto Rico, Virgin Islands, Guam and other outlying areas. Data for 1970-86 are as of December 31. Data for 1987 are as of January 1, 1988.

SOURCES: Haug, J. N., Roback, G. A., and Martin, B. C.: *Distribution of Physicians in the United States, 1970*. Chicago. American Medical Association, 1971; Goodman, L. J., and Mason, H. R.: *Physician Distribution and Medical Licensure in the U.S., 1975*. Chicago. American Medical Association, 1976; Bidese, C. M., and Danais, D. G.: *Physician Characteristics and Distribution in the U.S., 1981*. Chicago. American Medical Association, 1982; Roback, G. A., Mead, D., and Randolph, L. L.: *Physician Characteristics and Distribution in the U.S., 1986*. Chicago. American Medical Association, 1986; Department of Data Release Services: *Physician Characteristics and Distribution in the U.S., 1987*. Chicago. American Medical Association, 1987; Unpublished data. (Copyrights 1971, 1976, 1982, and 1986-87: Used with the permission of the American Medical Association.)

**Table 87. Active health personnel and number per 100,000 population, according to occupation and geographic region: United States, 1970, 1980, and 1987**

Year and occupation	Number of active health personnel	United States	Geographic region			
			Northeast	Midwest	South	West
			Number per 100,000 population <sup>1</sup>			
1970						
Physicians . . . . .	---	---	---	---	---	---
Federal . . . . .	---	---	---	---	---	---
Non-Federal . . . . .	290,862	142.7	185.0	127.5	114.8	158.2
Doctors of medicine <sup>2</sup> . . . . .	279,212	137.0	178.7	118.2	111.5	154.8
Doctors of osteopathy . . . . .	11,650	5.7	6.3	9.3	3.3	3.4
Dentists <sup>3</sup> . . . . .	95,700	47.0	58.9	46.3	35.3	54.9
Optometrists . . . . .	18,400	9.0	9.7	10.3	6.6	10.5
Pharmacists . . . . .	112,570	55.4	60.1	57.5	50.6	52.9
Podiatrists . . . . .	7,110	3.5	6.0	3.6	1.6	3.0
Registered nurses . . . . .	750,000	368.9	491.2	367.5	281.8	355.9
Veterinarians . . . . .	25,900	12.7	8.3	16.1	11.8	15.0
1980						
Physicians . . . . .	427,028	189.8	---	---	---	---
Federal . . . . .	17,548	7.8	---	---	---	---
Non-Federal . . . . .	409,480	182.0	224.5	165.2	157.0	200.0
Doctors of medicine <sup>2</sup> . . . . .	393,407	174.9	216.1	153.3	152.8	195.8
Doctors of osteopathy . . . . .	16,073	7.1	8.4	11.9	4.2	4.2
Dentists <sup>3</sup> . . . . .	121,240	53.5	66.2	52.7	42.6	59.2
Optometrists . . . . .	22,330	9.8	9.9	10.9	7.7	11.6
Pharmacists . . . . .	142,780	62.5	66.5	67.8	62.1	51.8
Podiatrists . . . . .	8,880	4.0	6.3	3.9	2.5	4.1
Registered nurses . . . . .	1,272,900	560.0	736.0	583.6	443.4	533.7
Associate and diploma . . . . .	908,300	399.9	536.0	429.2	316.5	351.1
Baccalaureate . . . . .	297,300	130.9	161.0	127.8	103.8	148.1
Masters and doctorate . . . . .	67,300	29.6	39.0	26.7	23.0	34.6
Veterinarians . . . . .	36,000	16.3	10.8	19.9	16.0	18.5
1987						
Physicians . . . . .	538,216	222.7	---	---	---	---
Federal . . . . .	21,746	9.0	---	---	---	---
Non-Federal . . . . .	516,470	213.7	273.9	196.8	187.2	217.5
Doctors of medicine <sup>2</sup> . . . . .	493,743	204.3	262.1	181.4	181.2	212.0
Doctors of osteopathy . . . . .	22,727	9.4	11.7	15.4	6.0	5.5
Dentists <sup>3</sup> . . . . .	140,300	57.8	69.3	60.7	46.8	61.0
Optometrists . . . . .	25,600	10.4	---	---	---	---
Pharmacists . . . . .	156,300	63.8	---	---	---	---
Podiatrists . . . . .	11,100	4.5	---	---	---	---
Registered nurses . . . . .	1,627,000	668.5	845.1	723.7	557.8	611.4
Associate and diploma . . . . .	1,054,300	433.2	550.2	484.9	364.9	368.3
Baccalaureate . . . . .	468,860	192.6	236.1	197.6	158.9	199.6
Masters and doctorate . . . . .	103,810	42.6	58.9	40.9	33.8	43.2
Veterinarians . . . . .	45,700	18.6	---	---	---	---

<sup>1</sup>Ratios for physicians and dentists are based on civilian population; ratios for all other health occupations are based on resident population.

<sup>2</sup>Excludes physicians not classified according to activity status.

<sup>3</sup>Excludes dentists in military service.

SOURCES: Division of Health Professions Analysis, Bureau of Health Professions: Supply and Characteristics of Selected Health Personnel. DHHS Pub. No. (HRA) 81-20. Health Resources Administration. Hyattsville, Md., June 1981; Unpublished data; American Medical Association: Physician Characteristics and Distribution in the U.S., 1981 edition. Chicago 1981; Unpublished data; American Osteopathic Association: 1980-81 Yearbook and Directory of Osteopathic Physicians. Chicago, 1980; 1987-88 Yearbook and Directory of Osteopathic Physicians. Chicago, 1987.

**Table 88. Full-time equivalent employment in selected occupations for community hospitals: United States, 1981 and 1985-87**

[Data are based on reporting by a census of registered hospitals]

Occupation	1981	1985	1986	1987	Average annual percent change	
					1981-85	1985-87
All hospital personnel <sup>1</sup> . . . . .	3,069,955	3,024,929	3,055,071	3,143,077	-0.4	1.9
Administrators and assistant administrators . . . . .	26,734	30,174	32,990	32,978	3.1	4.5
Registered nurses . . . . .	629,354	709,253	736,253	758,976	3.0	3.4
Licensed practical nurses . . . . .	234,226	186,780	174,154	170,433	-5.5	-4.5
Ancillary nursing personnel . . . . .	280,614	235,853	226,821	234,162	-4.3	-0.4
Medical record administrators and technicians . . . . .	38,186	41,199	44,057	45,064	1.9	4.6
Licensed pharmacists and pharmacy technicians . . . . .	47,053	52,973	54,679	57,297	3.0	4.0
Medical technologists and other laboratory personnel . . . . .	147,451	144,831	145,622	146,183	-0.4	0.5
Dietitians and dietetic technicians . . . . .	40,192	33,305	34,241	34,539	-4.6	1.8
Radiologic service personnel . . . . .	90,738	91,353	94,683	97,944	0.2	3.5
Occupational therapists and recreational therapists . . . . .	8,481	10,030	11,210	12,331	4.3	10.9
Physical therapists and physical therapy assistants and aides . . . . .	27,675	29,064	30,216	31,692	1.2	4.4
Speech pathologists and audiologists . . . . .	2,463	3,253	3,776	4,035	7.2	11.4
Respiratory therapists and respiratory therapy technicians . . . . .	47,312	51,056	52,751	54,103	1.9	2.9
Medical social workers . . . . .	13,915	15,192	16,042	17,747	2.2	8.1
Total trainee personnel <sup>2</sup> . . . . .	66,906	63,367	67,366	65,284	-1.3	1.5

<sup>1</sup>Includes occupational categories not shown.

<sup>2</sup>This category is primarily composed of medical residents.

SOURCE: Compiled by the Office of Data Analysis and Management, Bureau of Health Professions, from the American Hospital Association's 1981, 1985, 1986, and 1987 Annual Survey of Hospitals.

**Table 89 (page 1 of 2). Full-time equivalent patient care staff in mental health organizations, according to type of organization and staff discipline: United States, selected years 1976–86**

[Data are based on inventories of mental health organizations]

<i>Organization and discipline</i>	1976	1978	1984 <sup>1</sup>	1986	1976	1981	1984 <sup>1</sup>	1986
All organizations	Number				Percent distribution			
All patient care staff . . . . .	288,463	292,699	313,243	346,630	100.0	100.0	100.0	100.0
Professional patient care staff . . . . .	143,105	153,598	202,474	232,481	49.6	52.5	64.6	67.1
Psychiatrists . . . . .	15,339	14,492	18,482	17,874	5.3	5.0	5.9	5.2
Psychologists <sup>2</sup> . . . . .	15,251	16,501	21,052	20,210	5.3	5.6	6.7	5.8
Social workers . . . . .	25,887	28,125	36,397	40,951	9.0	9.6	11.6	11.8
Registered nurses . . . . .	39,392	42,399	54,406	66,180	13.7	14.5	17.4	19.1
Other professional staff <sup>3</sup> . . . . .	47,236	52,081	72,137	87,266	16.4	17.8	23.0	25.2
Other mental health workers . . . . .	145,358	139,101	110,769	114,149	50.4	47.5	35.4	32.9
State and county mental hospitals								
All patient care staff . . . . .	141,127	131,187	117,630	119,073	100.0	100.0	100.0	100.0
Professional patient care staff . . . . .	46,596	45,131	51,290	54,853	33.0	34.4	43.6	46.1
Psychiatrists . . . . .	4,333	3,712	4,108	3,762	3.1	2.8	3.5	3.2
Psychologists <sup>2</sup> . . . . .	3,039	3,149	3,239	3,412	2.2	2.4	2.8	2.9
Social workers . . . . .	5,948	5,924	6,175	6,238	4.2	4.5	5.2	5.2
Registered nurses . . . . .	15,098	14,859	16,051	19,425	10.7	11.3	13.6	16.3
Other professional staff <sup>3</sup> . . . . .	18,178	17,487	21,717	22,016	12.9	13.3	18.5	18.5
Other mental health workers . . . . .	94,531	86,056	66,340	64,220	67.0	65.6	56.4	53.9
Private psychiatric hospitals								
All patient care staff . . . . .	17,196	18,728	26,359	35,480	100.0	100.0	100.0	100.0
Professional patient care staff . . . . .	9,879	11,419	19,524	27,246	57.4	61.0	74.1	76.8
Psychiatrists . . . . .	1,369	1,285	1,447	1,554	8.0	6.9	5.5	4.4
Psychologists <sup>2</sup> . . . . .	559	590	1,461	1,557	3.3	3.2	5.5	4.4
Social workers . . . . .	784	920	2,179	2,893	4.6	4.9	8.3	8.2
Registered nurses . . . . .	3,395	3,967	6,818	10,147	19.7	21.2	25.9	28.6
Other professional staff <sup>3</sup> . . . . .	3,772	4,657	7,619	11,095	21.9	24.9	28.9	31.3
Other mental health workers . . . . .	7,317	7,309	6,835	8,234	42.6	39.0	25.9	23.2
Non-Federal general hospitals' psychiatric services								
All patient care staff . . . . .	33,969	34,966	59,848	61,148	100.0	100.0	100.0	100.0
Professional patient care staff . . . . .	21,231	22,401	46,335	50,233	62.5	64.1	77.4	82.1
Psychiatrists . . . . .	3,933	3,583	6,679	6,009	11.6	10.2	11.2	9.8
Psychologists <sup>2</sup> . . . . .	1,356	1,512	3,283	2,983	4.0	4.3	5.5	4.9
Social workers . . . . .	2,515	2,552	4,898	5,634	7.4	7.3	8.2	9.2
Registered nurses . . . . .	9,445	10,611	20,454	23,454	27.8	30.3	34.2	38.4
Other professional staff <sup>3</sup> . . . . .	3,982	4,143	11,021	12,153	11.7	11.8	18.4	19.9
Other mental health workers . . . . .	12,738	12,565	13,513	10,915	37.5	35.9	22.6	17.9
Veterans Administration psychiatric services								
All patient care staff . . . . .	25,226	26,282	22,948	23,559	100.0	100.0	100.0	100.0
Professional patient care staff . . . . .	13,129	13,954	16,265	17,782	52.0	53.1	70.9	75.5
Psychiatrists . . . . .	1,320	1,471	2,463	2,245	5.2	5.6	10.7	9.5
Psychologists <sup>2</sup> . . . . .	1,134	1,255	1,247	1,439	4.5	4.8	5.4	6.1
Social workers . . . . .	1,412	1,620	1,545	1,680	5.6	6.2	6.7	7.1
Registered nurses . . . . .	4,503	5,326	5,699	6,761	17.9	20.3	24.8	28.7
Other professional staff <sup>3</sup> . . . . .	4,760	4,282	5,311	5,657	18.9	16.3	23.1	24.0
Other mental health workers . . . . .	12,097	12,328	6,683	5,777	48.0	46.9	29.1	24.5
Residential treatment centers for emotionally disturbed children								
All patient care staff . . . . .	13,824	16,464	15,297	25,146	100.0	100.0	100.0	100.0
Professional patient care staff . . . . .	8,990	10,824	10,551	17,599	65.0	65.7	69.0	70.0
Psychiatrists . . . . .	149	140	240	335	1.1	0.9	1.6	1.3
Psychologists <sup>2</sup> . . . . .	434	497	820	911	3.1	3.0	5.4	3.6
Social workers . . . . .	1,778	2,196	2,283	4,585	12.9	13.3	14.9	18.2
Registered nurses . . . . .	301	324	485	746	2.2	2.0	3.2	3.0
Other professional staff <sup>3</sup> . . . . .	6,328	7,667	6,723	11,022	45.8	46.6	43.9	43.8
Other mental health workers . . . . .	4,834	5,640	4,746	7,547	35.0	34.3	31.0	30.0

See footnotes at end of table.



**Table 89 (page 2 of 2). Full-time equivalent patient care staff in mental health organizations, according to type of organization and staff discipline: United States, selected years 1976–86**

[Data are based on inventories of mental health organizations]

<i>Organization and discipline</i>	<i>1976</i>	<i>1978</i>	<i>1984<sup>1</sup></i>	<i>1986</i>	<i>1976</i>	<i>1981</i>	<i>1984<sup>1</sup></i>	<i>1986</i>
All other organizations <sup>4</sup>	Number				Percent distribution			
All patient care staff . . . . .	57,121	65,072	71,161	82,224	100.0	100.0	100.0	100.0
Professional patient care staff . . . . .	43,280	49,869	58,509	64,768	75.8	76.6	82.2	78.8
Psychiatrists . . . . .	4,235	4,301	3,545	3,969	7.4	6.6	5.0	4.8
Psychologists <sup>2</sup> . . . . .	8,729	9,498	11,002	9,908	15.3	14.6	15.5	12.1
Social workers . . . . .	13,450	14,913	19,317	19,921	23.5	22.9	27.1	24.2
Registered nurses . . . . .	6,650	7,312	4,899	5,647	11.6	11.2	6.9	6.9
Other professional staff <sup>3</sup> . . . . .	10,216	13,845	19,746	25,323	17.9	21.3	27.7	30.8
Other mental health workers . . . . .	13,841	15,203	12,652	17,456	24.2	23.4	17.8	21.2

<sup>1</sup>In 1984, some organizations were reclassified.

<sup>2</sup>During 1976–78, this category included all psychologists with a B.A. degree and above. Beginning in 1984, only psychologists with an M.A. degree and above are included.

<sup>3</sup>Includes occupational therapists, recreation therapists, vocational rehabilitation counselors, and teachers.

<sup>4</sup>Includes freestanding outpatient, partial care, and multiservice organizations. In 1976 and 1978, also includes community mental health centers.

SOURCES: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health: R. W. Manderscheid and S. A. Barrett: Mental Health, United States, 1987. DHHS Pub. No. (ADM) 87–1518. U.S. Government Printing Office, 1987; Unpublished data.

**Table 90. First-year enrollment and graduates of health professions schools and number of schools, according to profession: United States, selected 1950–88 estimates and 1990 and 2000 projections**

[Data are based on reporting by health professions schools]

Year	Medicine	Osteopathy	Nursing <sup>1</sup>	Dentistry	Optometry	Pharmacy	Chiropractic
First-year enrollment							
1980.....	17,014	1,426	105,952	6,132	1,202	8,035	---
1981.....	17,204	1,496	110,201	6,030	1,258	7,551	---
1982.....	17,320	1,582	115,279	5,855	1,249	6,899	---
1983.....	17,230	1,682	120,579	5,498	1,147	6,574	---
1984.....	17,175	1,746	123,824	5,274	1,219	6,715	---
1985.....	16,992	1,750	118,224	5,047	1,187	6,849	---
1986.....	16,929	1,737	100,791	4,843	1,251	7,084	---
1987.....	16,779	1,724	90,693	4,554	1,268	7,632	---
1988.....	16,686	1,692	94,594	4,316	---	7,864	---
Graduates							
1950.....	5,553	373	25,790	2,565	961	---	---
1960.....	7,081	427	29,895	3,253	364	3,497	660
1970.....	8,367	432	43,103	3,749	445	4,758	642
1975.....	12,714	702	73,915	4,969	806	6,712	1,093
1980.....	15,135	1,059	75,523	5,256	1,073	7,278	2,049
1981.....	15,667	1,151	73,985	5,550	980	7,362	2,526
1982.....	15,985	1,017	74,052	5,371	1,020	6,859	2,631
1983.....	15,824	1,317	77,408	5,756	1,040	6,374	2,948
1984.....	16,327	1,287	80,312	5,337	1,089	5,963	---
1985.....	16,319	1,474	82,075	5,353	1,163	5,724	---
1986.....	16,125	1,560	77,027	4,957	1,114	5,800	---
1987.....	15,836	1,587	70,561	4,717	1,106	5,854	---
1988.....	15,947	1,564	64,915	4,581	---	---	---
1990 <sup>2</sup> .....	16,362	1,598	61,700	4,140	1,030	5,760	2,860
2000 <sup>2</sup> .....	15,774	1,557	66,600	3,350	1,030	5,110	2,950
Schools <sup>3</sup>							
1950.....	79	6	1,304	42	10	---	20
1960.....	86	6	1,128	47	10	76	12
1970.....	103	7	1,340	53	11	74	11
1975.....	114	9	1,362	59	12	73	12
1980.....	126	14	1,385	60	15	72	14
1981.....	126	15	1,401	60	16	72	16
1982.....	127	15	1,432	60	16	72	16
1983.....	127	15	1,466	60	16	72	17
1984.....	127	15	1,477	60	16	72	17
1985.....	127	15	1,473	60	16	72	17
1986.....	127	15	1,469	59	16	73	17
1987.....	127	15	1,465	58	16	74	---
1988.....	127	15	1,442	58	16	74	---

<sup>1</sup>Registered nurses only.

<sup>2</sup>Projected.

<sup>3</sup>Some nursing schools offer more than 1 type of program. Numbers shown for nursing are number of nursing programs.

NOTE: Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: Bureau of Health Professions: Seventh Report to the President and Congress on the Status of Health Personnel in the United States. Health Resources and Services Administration. Forthcoming; Health Resources and Services Administration: Unpublished data; National League for Nursing: Nursing Student Census, 1988. New York, 1989; American Dental Association Council on Dental Education: Annual Report on Dental Education 1987–88. Chicago, 1988; American Medical Association: Medical education in the United States. JAMA. Vol. 260, No. 8, August 26, 1988; American Association of Colleges of Osteopathic Medicine: Annual Statistical Report 1988. Rockville, Md., 1988; American Chiropractic Association: Unpublished data.

**Table 91. Total and first-year enrollment of minorities and women in schools for selected health occupations: United States, academic years 1977-78 and 1987-88**

Enrollment and health occupation	<i>All races, both sexes</i>		<i>Black</i>		<i>Other minority</i>		<i>Women</i>	
	1977-78	1987-88	1977-78	1987-88 <sup>1</sup>	1977-78	1987-88 <sup>1</sup>	1977-78	1987-88 <sup>1</sup>
<b>Total enrollment</b>	<b>Number of students</b>		<b>Percent of students</b>					
Medicine:								
Allopathic . . . . .	60,039	65,735	6.0	6.0	6.1	14.5	23.7	34.3
Osteopathic . . . . .	3,926	6,586	1.9	1.9	2.5	8.1	14.5	28.9
Podiatry . . . . .	2,388	2,790	3.3	8.5	2.8	9.0	9.3	24.4
Dentistry <sup>2</sup> . . . . .	21,510	17,632	4.5	5.6	5.5	17.7	---	29.0
Optometry . . . . .	4,209	4,509	1.9	2.6	5.1	12.7	---	39.1
Pharmacy <sup>2,3</sup> . . . . .	23,373	27,292	4.2	8.1	5.2	14.5	38.1	60.0
Veterinary medicine . . . . .	6,918	8,558	---	2.3	---	4.1	30.8	55.0
Registered nurses <sup>4</sup> . . . . .	245,390	182,947	5.8	7.2	2.6	4.2	95.2	95.0
<b>First-year enrollment</b>								
Medicine:								
Allopathic . . . . .	16,136	16,713	6.7	7.3	6.6	16.9	25.6	36.5
Osteopathic . . . . .	1,163	1,692	2.2	2.2	3.2	10.4	16.5	29.0
Podiatry . . . . .	665	716	3.8	11.3	3.3	10.6	9.8	24.2
Dentistry <sup>2</sup> . . . . .	5,890	4,316	5.0	6.5	5.9	23.5	14.8	32.0
Optometry . . . . .	1,140	1,234	---	---	---	---	19.8	43.8
Pharmacy <sup>2</sup> . . . . .	8,235	7,407	4.7	6.2	5.3	12.5	40.5	59.2
Veterinary medicine . . . . .	1,973	2,207	---	2.8	---	4.3	35.8	57.3
Registered nurses <sup>4</sup> . . . . .	110,950	90,693	7.3	10.9	3.0	5.6	93.7	92.8

<sup>1</sup>Total and first-year enrollment percentages for registered nurses are based on 1986-87 data.

<sup>2</sup>Excludes Puerto Rican schools.

<sup>3</sup>Pharmacy enrollment data for 1977-78 are for students in the final 3 years of pharmacy education. 1987-88 data for all pharmacy students are shown.

<sup>4</sup>Percentages based on schools reporting minority data.

SOURCES: Association of American Medical Colleges, Section for Student Services: Unpublished data; American Association of Colleges of Osteopathic Medicine: Annual Statistical Report, 1988. Rockville, Md., 1988; National League for Nursing: Nursing Student Census, 1988. New York, 1989. American Association of Colleges of Podiatric Medicine: Podiatric Medical Education in the Eighties. Rockville, Md., 1988; National League for Nursing: Nursing Student Census, 1987. New York, 1988. American Dental Association; American Optometric Association; American Association of Colleges of Pharmacy; Association of American Veterinary Medical Colleges; Unpublished data.

**Table 92. Total and first-year enrollment and percent of women in schools of medicine, according to race and ethnicity: United States, academic years 1971–72, 1977–78, and 1987–88**

<i>Enrollment and race/ethnicity</i>	<i>Both sexes</i>			<i>Women</i>			
	<i>1971–72</i>	<i>1977–78</i>	<i>1987–88</i>	<i>1971–72</i>	<i>1977–78</i>	<i>1987–88</i>	
<b>Total enrollment</b>		<b>Number of students</b>			<b>Percent of students</b>		
All races <sup>1</sup> . . . . .	43,650	60,039	65,735	10.9	23.7	34.3	
White . . . . .	---	51,974	51,728	---	22.4	32.7	
Minority . . . . .	3,072	6,728	13,487	19.0	33.0	40.3	
Black . . . . .	2,055	3,587	3,968	20.4	38.2	51.8	
Mexican American . . . . .	252	831	1,144	9.5	22.7	33.1	
Mainland Puerto Rican . . . . .	76	261	467	17.1	34.1	37.5	
Other Hispanic . . . . .	---	426	1,937	---	23.2	35.5	
American Indian . . . . .	42	201	233	23.8	27.4	39.9	
Asian . . . . .	647	1,422	5,738	17.9	29.3	35.8	
<b>First-year enrollment</b>		<b>Number of students</b>			<b>Percent of students</b>		
All races <sup>1</sup> . . . . .	12,361	16,136	16,713	13.7	25.6	36.5	
White . . . . .	---	13,732	12,511	---	24.1	34.7	
Minority . . . . .	1,280	2,002	4,043	20.8	35.2	42.1	
Black . . . . .	882	1,085	1,221	22.7	40.8	54.5	
Mexican American . . . . .	118	246	308	8.5	26.8	35.4	
Mainland Puerto Rican . . . . .	40	68	116	15.0	33.8	35.3	
Other Hispanic . . . . .	---	157	503	---	27.4	37.8	
American Indian . . . . .	23	51	68	34.8	29.4	42.6	
Asian . . . . .	217	395	1,827	19.4	29.1	36.6	

<sup>1</sup>Includes race/ethnicity unspecified.

SOURCES: Association of American Medical Colleges, Section for Student Services, Annual Fall Enrollment Surveys; Unpublished data.

**Table 93. Short-stay hospitals, beds, and occupancy rates, according to type of ownership: United States, selected years 1960-87**

[Data are based on reporting by a census of registered hospitals]

<i>Type of ownership</i>	1960	1970	1975	1980	1984	1985	1986	1987
Hospitals								
	Number							
All ownerships. . . . .	5,768	6,193	6,310	6,229	6,118	6,091	6,035	5,967
Federal. . . . .	361	334	331	325	304	307	307	308
Non-Federal . . . . .	5,407	5,859	5,979	5,904	5,814	5,784	5,728	5,659
Nonprofit. . . . .	3,291	3,386	3,364	3,339	3,366	3,364	3,338	3,289
Proprietary. . . . .	856	769	775	730	786	805	834	828
State-local government. . . . .	1,260	1,704	1,840	1,835	1,662	1,615	1,556	1,542
Beds								
All ownerships. . . . .	735,451	935,724	1,036,025	1,080,164	1,102,166	1,087,750	1,066,611	1,046,013
Federal. . . . .	96,394	87,492	89,049	88,144	82,415	84,612	85,071	84,523
Non-Federal . . . . .	639,057	848,232	946,976	992,020	1,019,751	1,003,138	981,540	961,490
Nonprofit. . . . .	445,753	591,937	658,948	692,929	716,869	707,806	689,685	673,308
Proprietary. . . . .	37,029	52,739	73,495	87,033	99,980	103,921	106,716	105,746
State-local government. . . . .	156,275	203,556	214,533	212,058	202,902	191,411	185,139	182,436
Occupancy rate								
	Percent of beds occupied							
All ownerships. . . . .	75.7	77.9	75.0	75.6	69.5	65.5	64.9	65.5
Federal. . . . .	82.5	77.5	77.6	77.8	76.6	74.3	72.6	71.8
Non-Federal . . . . .	74.7	78.0	74.8	75.4	68.9	64.8	64.2	64.9
Nonprofit. . . . .	76.6	80.1	77.4	78.2	71.4	67.2	66.8	67.6
Proprietary. . . . .	65.4	72.2	65.9	65.2	57.0	52.1	50.7	51.1
State-local government. . . . .	71.6	73.2	69.7	70.7	65.9	62.8	62.6	63.1

NOTE: Excludes psychiatric and tuberculosis and other respiratory disease hospitals.

SOURCES: American Hospital Association: Hospitals. JAHA 35(15):396-401 and 45(15):463-467, Aug. 1961 and Aug. 1971; Hospital Statistics, 1976, 1981, 1985-88 Editions. Chicago, 1976, 1981, 1985-88. (Copyrights 1961, 1971, 1976, 1981, 1985-88: Used with the permission of the American Hospital Association.)

**Table 94. Long-term hospitals, beds, and occupancy rates, according to type of hospital and ownership: United States, selected years 1970–87**

[Data are based on reporting by a census of registered hospitals]

Type of hospital and ownership	1970	1975	1980	1983	1984	1985	1986	1987
<b>Hospitals</b>								
	Number							
General . . . . .	75	44	17	22	25	23	21	16
Federal . . . . .	38	23	9	13	15	14	13	13
Non-Federal . . . . .	37	21	8	9	10	9	8	3
Psychiatric . . . . .	459	419	381	377	382	383	390	391
Federal . . . . .	33	26	23	22	19	19	18	18
Nonprofit . . . . .	56	45	47	50	54	57	55	51
Proprietary . . . . .	39	51	57	65	77	81	91	96
State-local government . . . . .	331	297	254	240	232	226	226	226
Tuberculosis and other respiratory diseases . . . . .	103	34	10	5	5	5	2	3
All other . . . . .	200	196	150	124	124	122	129	126
Federal . . . . .	1	2	1	2	3	3	4	3
Nonprofit . . . . .	110	94	66	58	61	59	61	58
Proprietary . . . . .	2	9	11	10	10	13	15	17
State-local government . . . . .	87	91	72	54	50	47	49	48
<b>Beds</b>								
General . . . . .	42,569	17,329	8,253	11,464	13,846	12,985	11,112	9,792
Federal . . . . .	31,403	14,406	7,205	9,978	11,994	10,073	9,079	9,232
Non-Federal . . . . .	11,166	2,923	1,048	1,486	1,852	2,912	2,033	560
Psychiatric . . . . .	551,847	344,257	218,400	183,843	171,367	162,968	157,378	150,727
Federal . . . . .	41,500	27,523	20,871	18,549	16,205	15,739	15,167	14,585
Nonprofit . . . . .	8,892	5,366	6,645	6,814	6,941	6,708	6,668	5,994
Proprietary . . . . .	3,399	4,821	5,877	7,214	8,458	8,832	9,270	9,786
State-local government . . . . .	498,056	306,547	185,007	151,266	139,763	131,689	126,273	120,362
Tuberculosis and other respiratory diseases . . . . .	19,937	5,699	1,500	547	664	574	183	339
All other . . . . .	49,152	49,268	37,911	29,578	30,124	29,519	29,614	27,541
Federal . . . . .	357	968	357	578	1,694	1,599	1,812	1,451
Nonprofit . . . . .	12,638	12,733	10,038	8,363	9,049	9,391	9,829	8,785
Proprietary . . . . .	101	879	1,356	1,213	1,067	1,364	1,844	1,681
State-local government . . . . .	36,056	34,688	26,160	19,424	18,314	17,165	16,129	15,624
<b>Occupancy rate</b>								
	Percent of beds occupied							
General . . . . .	79.2	84.4	83.9	85.3	83.9	80.2	79.1	75.0
Federal . . . . .	80.4	85.2	84.6	85.9	84.1	80.7	77.8	74.7
Non-Federal . . . . .	75.8	80.4	79.0	81.3	83.0	78.6	85.0	80.4
Psychiatric . . . . .	84.9	81.3	85.9	87.6	87.6	87.2	87.0	87.9
Federal . . . . .	83.4	88.3	87.9	86.8	86.9	83.5	79.6	83.1
Nonprofit . . . . .	85.2	84.8	87.2	87.2	86.8	86.5	85.5	81.7
Proprietary . . . . .	78.4	74.1	76.3	77.3	77.2	77.6	75.8	75.8
State-local government . . . . .	85.0	80.8	86.0	88.2	88.4	88.3	88.8	89.8
Tuberculosis and other respiratory diseases . . . . .	61.9	57.6	66.4	66.4	62.3	64.3	59.6	70.5
All other . . . . .	83.3	82.3	85.9	86.6	88.8	88.7	87.5	87.2
Federal . . . . .	73.4	86.3	65.3	79.4	84.4	81.9	80.1	82.2
Nonprofit . . . . .	82.8	83.3	87.3	89.3	90.0	89.9	88.4	87.9
Proprietary . . . . .	87.1	86.0	86.5	92.0	92.1	85.6	82.6	76.3
State-local government . . . . .	83.6	81.7	85.6	85.3	88.4	88.9	88.4	88.5

SOURCES: American Hospital Association: Hospitals. JAHA 45(15):463–467, Aug. 1971; Hospital Statistics, 1976, 1981, 1984–88 Editions. Chicago, 1976, 1981, 1984–88. (Copyrights 1971, 1976, 1981, 1984–88: Used with the permission of the American Hospital Association.)

**Table 95. Inpatient and residential treatment beds in mental health organizations and rate per 100,000 civilian population, according to type of organization: United States, selected years 1970–86**

[Data are based on inventories of mental health organizations]

Organization	1970	1976	1980 <sup>1</sup>	1982 <sup>2</sup>	1984	1986
	Number					
All organizations . . . . .	524,878	338,963	274,713	247,312	262,673	267,613
State and county mental hospitals . . . . .	413,066	222,202	156,482	140,140	130,411	119,033
Private psychiatric hospitals . . . . .	14,295	16,091	17,157	19,011	21,474	30,201
Non-Federal general hospital psychiatric services . . . . .	22,394	28,706	29,384	36,525	46,045	45,808
Veterans Administration psychiatric services <sup>3</sup> . . . . .	50,688	35,913	33,796	24,646	23,546	26,874
Federally funded community mental health centers . . . . .	8,108	17,029	16,264	...	...	...
Residential treatment centers for emotionally disturbed children . . . . .	15,129	18,029	20,197	18,475	16,745	24,547
All other <sup>4,5</sup> . . . . .	1,198	993	1,433	8,515	24,452	21,150
	Number per 100,000 civilian population					
All organizations . . . . .	263.6	160.3	124.3	108.1	112.9	111.7
State and county mental hospitals . . . . .	207.4	105.1	70.2	61.2	56.1	49.7
Private psychiatric hospitals . . . . .	7.2	7.6	7.7	8.3	9.2	12.6
Non-Federal general hospital psychiatric services . . . . .	11.2	13.6	13.7	16.0	19.8	19.1
Veterans Administration psychiatric services <sup>3</sup> . . . . .	25.5	17.0	15.7	10.8	10.1	11.2
Federally funded community mental health centers . . . . .	4.1	8.0	7.3	...	...	...
Residential treatment centers for emotionally disturbed children . . . . .	7.6	8.5	9.1	8.1	7.2	10.3
All other <sup>4,5</sup> . . . . .	0.6	0.5	0.6	3.7	10.5	8.8

<sup>1</sup>During 1979–80, comparable data were not available for certain organization types, and data for either an earlier or later period were substituted.

<sup>2</sup>During 1981–82, some organizations were reclassified and data for some organization types were not available, resulting in a particularly large increase for the "all other" category in 1982.

<sup>3</sup>Includes Veterans Administration neuropsychiatric hospitals and Veterans Administration general hospitals with separate psychiatric services.

<sup>4</sup>Includes other multiservice mental health organizations with inpatient and residential treatment services that are not elsewhere classified.

<sup>5</sup>Beginning in 1983 a definitional change sharply increased the number of multiservice mental health organizations. See Appendix I.

NOTE: Changes in reporting procedures in 1979–80 and 1981–82 affect the comparability of data with those from previous years.

SOURCES: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health; R. W. Manderscheid and S. A. Barrett: Mental Health, United States, 1987. DHHS Pub. No. (ADM) 87-1518. U.S. Government Printing Office, 1987; Unpublished data.

**Table 96 (page 1 of 2). Community hospital beds per 1,000 population and average annual percent change, according to geographic division and State: United States, selected years 1940–87**

[Data are based on reporting by facilities]

Geographic division and State	<i>Beds per 1,000 civilian population</i>								<i>Average annual percent change</i>			
	1940 <sup>1</sup>	1950 <sup>1</sup>	1960 <sup>2</sup>	1970	1980	1985	1986	1987	1940–60 <sup>1,2</sup>	1960–70 <sup>2</sup>	1970–80	1980–87
United States . . . . .	3.2	3.3	3.6	4.3	4.5	4.2	4.1	4.0	0.6	1.8	0.5	-1.7
New England . . . . .	4.4	4.2	3.9	4.1	4.1	4.0	3.8	3.6	-0.6	0.5	0.0	-1.8
Maine . . . . .	3.0	3.2	3.4	4.7	4.7	4.2	4.2	4.0	0.6	3.3	0.0	-2.3
New Hampshire . . . . .	4.2	4.2	4.4	4.0	3.9	3.4	3.3	3.2	0.2	-0.9	-0.3	-2.8
Vermont . . . . .	3.3	4.0	4.5	4.5	4.4	3.8	4.0	3.3	1.6	0.0	-0.2	-4.0
Massachusetts . . . . .	5.1	4.8	4.2	4.4	4.4	4.4	4.3	4.0	-1.0	0.5	0.0	-1.4
Rhode Island . . . . .	3.9	3.8	3.7	4.0	3.8	3.6	3.5	3.4	-0.3	0.8	-0.5	-1.6
Connecticut . . . . .	3.7	3.6	3.4	3.4	3.5	3.3	3.1	3.0	-0.4	0.0	0.3	-2.2
Middle Atlantic . . . . .	3.9	3.8	4.0	4.4	4.6	4.4	4.3	4.2	0.1	1.0	0.4	-1.3
New York . . . . .	4.3	4.1	4.3	4.6	4.5	4.4	4.3	4.2	0.0	0.7	-0.2	-1.0
New Jersey . . . . .	3.5	3.2	3.1	3.6	4.2	3.9	3.9	3.8	-0.6	1.5	1.6	-1.4
Pennsylvania . . . . .	3.5	3.8	4.1	4.7	4.8	4.7	4.6	4.4	0.8	1.4	0.2	-1.2
East North Central . . . . .	3.2	3.2	3.6	4.4	4.7	4.5	4.3	4.2	0.6	2.0	0.7	-1.6
Ohio . . . . .	2.7	2.9	3.4	4.2	4.7	4.6	4.4	4.3	1.2	2.1	1.1	-1.3
Indiana . . . . .	2.3	2.6	3.1	4.0	4.5	4.2	4.2	4.1	1.5	2.6	1.2	-1.3
Illinois . . . . .	3.4	3.6	4.0	4.7	5.1	4.7	4.5	4.4	0.8	1.6	0.8	-2.1
Michigan . . . . .	4.0	3.3	3.3	4.3	4.4	4.1	4.0	3.9	-1.0	2.7	0.2	-1.7
Wisconsin . . . . .	3.4	3.7	4.3	5.2	4.9	4.6	4.5	4.2	1.2	1.9	-0.6	-2.2
West North Central . . . . .	3.1	3.7	4.3	5.7	5.8	5.4	5.3	5.2	1.6	2.9	0.2	-1.5
Minnesota . . . . .	3.9	4.4	4.8	6.1	5.7	5.2	5.0	4.8	1.0	2.4	-0.7	-2.4
Iowa . . . . .	2.7	3.2	3.9	5.6	5.7	5.2	5.2	5.2	1.9	3.7	0.2	-1.3
Missouri . . . . .	2.9	3.3	3.9	5.1	5.7	5.2	5.1	4.9	1.5	2.7	1.1	-2.1
North Dakota . . . . .	3.5	4.3	5.2	6.8	7.4	7.4	7.2	7.3	2.0	2.7	0.8	-0.2
South Dakota . . . . .	2.8	4.4	4.5	5.6	5.5	6.6	6.5	6.3	2.4	2.2	-0.2	2.0
Nebraska . . . . .	3.4	4.2	4.4	6.2	6.0	6.0	5.9	5.9	1.3	3.5	-0.3	-0.2
Kansas . . . . .	2.8	3.4	4.2	5.4	5.8	5.2	5.0	4.9	2.0	2.5	0.7	-2.4
South Atlantic . . . . .	2.5	2.8	3.3	4.0	4.5	4.1	4.0	3.9	1.4	1.9	1.2	-2.0
Delaware . . . . .	4.4	3.9	3.7	3.7	3.6	3.5	3.4	3.1	-0.9	0.0	-0.3	-2.1
Maryland . . . . .	3.9	3.6	3.3	3.1	3.6	3.4	3.3	3.0	-0.8	-0.6	1.5	-2.6
District of Columbia . . . . .	5.5	5.5	5.9	7.4	7.3	7.8	7.7	7.6	0.4	2.3	-0.1	0.6
Virginia . . . . .	2.2	2.5	3.0	3.7	4.1	3.8	3.7	3.6	1.6	2.1	1.0	-1.8
West Virginia . . . . .	2.7	3.1	4.1	5.4	5.5	5.1	5.1	4.8	2.1	2.8	0.2	-1.9
North Carolina . . . . .	2.2	2.6	3.4	3.8	4.2	3.7	3.5	3.4	2.2	1.1	1.0	-3.0
South Carolina . . . . .	1.8	2.4	2.9	3.7	3.9	3.6	3.4	3.4	2.4	2.5	0.5	-1.9
Georgia . . . . .	1.7	2.0	2.8	3.8	4.6	4.3	4.3	4.3	2.5	3.1	1.9	-1.0
Florida . . . . .	2.8	2.9	3.1	4.4	5.1	4.6	4.4	4.2	0.5	3.6	1.5	-2.7
East South Central . . . . .	1.7	2.1	3.0	4.4	5.1	5.0	5.0	4.9	2.9	3.9	1.5	-0.6
Kentucky . . . . .	1.8	2.2	3.0	4.0	4.5	4.4	4.4	4.5	2.6	2.9	1.2	0.0
Tennessee . . . . .	1.9	2.3	3.4	4.7	5.5	5.3	5.3	5.0	3.0	3.3	1.6	-1.4
Alabama . . . . .	1.5	2.0	2.8	4.3	5.1	5.0	5.0	4.8	3.2	4.4	1.7	-0.9
Mississippi . . . . .	1.4	1.7	2.9	4.4	5.3	5.2	5.2	5.3	3.7	4.3	1.9	0.0
West South Central . . . . .	2.1	2.7	3.3	4.3	4.7	4.2	4.0	4.0	2.3	2.7	0.9	-2.3
Arkansas . . . . .	1.4	1.6	2.9	4.2	5.0	4.8	4.7	4.5	3.7	3.8	1.8	-1.5
Louisiana . . . . .	3.1	3.8	3.9	4.2	4.8	4.6	4.5	4.5	1.2	0.7	1.3	-0.9
Oklahoma . . . . .	1.9	2.5	3.2	4.5	4.6	4.1	4.0	4.0	2.6	3.5	0.2	-2.0
Texas . . . . .	2.0	2.7	3.3	4.3	4.7	4.1	3.8	3.7	2.5	2.7	0.9	-3.4
Mountain . . . . .	3.6	3.8	3.5	4.3	3.8	3.5	3.4	3.3	-0.1	2.1	-1.2	-2.0
Montana . . . . .	4.9	5.3	5.1	5.8	5.9	5.5	5.7	5.6	0.2	1.3	0.2	-0.7
Idaho . . . . .	2.6	3.4	3.2	4.0	3.7	3.5	3.3	3.2	1.0	2.3	-0.8	-2.1
Wyoming . . . . .	3.5	3.9	4.6	5.5	3.6	4.3	4.4	4.6	1.4	1.8	-4.1	3.6
Colorado . . . . .	3.9	4.2	3.8	4.6	4.2	3.6	3.5	3.3	-0.1	1.9	-0.9	-3.4
New Mexico . . . . .	2.7	2.2	2.9	3.5	3.1	2.9	2.9	2.8	0.4	1.9	-1.2	-1.4
Arizona . . . . .	3.4	4.0	3.0	4.1	3.6	3.2	3.1	3.0	-0.6	3.2	-1.3	-2.6
Utah . . . . .	3.2	2.9	2.8	3.6	3.1	2.7	2.7	2.7	-0.7	2.5	-1.5	-2.0
Nevada . . . . .	5.0	4.4	3.9	4.2	4.2	3.7	3.7	3.5	-1.2	0.7	0.0	-2.6

See footnotes at end of table.



**Table 96 (page 2 of 2). Community hospital beds per 1,000 population and average annual percent change, according to geographic division and State: United States, selected years 1940–87**

[Data are based on reporting by facilities]

<i>Geographic division and State</i>	<i>Beds per 1,000 civilian population</i>								<i>Average annual percent change</i>			
	<i>1940<sup>1</sup></i>	<i>1950<sup>1</sup></i>	<i>1960<sup>2</sup></i>	<i>1970</i>	<i>1980</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1940–60<sup>1,2</sup></i>	<i>1960–70<sup>2</sup></i>	<i>1970–80</i>	<i>1980–87</i>
Pacific . . . . .	4.1	3.2	3.1	3.7	3.5	3.2	3.1	3.0	-1.4	1.8	-0.6	-2.2
Washington . . . . .	3.4	3.6	3.3	3.5	3.1	3.0	3.0	2.9	-0.1	0.6	-1.2	-0.9
Oregon . . . . .	3.5	3.1	3.5	4.0	3.5	3.2	3.1	3.0	0.0	1.3	-1.3	-2.2
California . . . . .	4.4	3.3	3.0	3.8	3.6	3.2	3.1	3.0	-1.9	2.4	-0.5	-2.6
Alaska . . . . .	...	...	2.4	2.3	2.7	2.2	2.4	2.4	...	-0.4	1.6	-1.7
Hawaii . . . . .	...	...	3.7	3.4	3.1	2.8	2.6	2.5	...	-0.8	-0.9	-3.0

<sup>1</sup>1940 and 1950 data are estimated based on published figures.

<sup>2</sup>1960 includes hospital units of institutions.

SOURCES: American Medical Association: Hospital service in the United States. JAMA 116(11):1055–1144, 1941, and 146(2):109–184, 1951. (Copyright 1941 and 1951: Used with the permission of the American Medical Association.); American Hospital Association: Hospitals. JAHA 35(15):383–430, Aug. 1, 1961. (Copyright 1961: Used with the permission of the American Hospital Association.); Data computed by the Division of Analysis, National Center for Health Statistics from data compiled by the Division of Health Care Statistics, National Master Facility Inventory and the American Hospital Association 1987 annual survey; U.S. Bureau of the Census: Current Population Reports. Series P-25, Nos. 72, 304, 460, 640, 970, 1010, 1024, and 1044. Washington. U.S. Government Printing Office, 1953, 1965, 1971, 1976, 1980, 1985, 1986, and 1989.

**Table 97 (page 1 of 2). Occupancy rates in community hospitals and average annual percent change, according to geographic division and State: United States, selected years 1940-87**

[Data are based on reporting by facilities]

Geographic division and State	Percent of beds occupied							Average annual percent change			
	1940 <sup>1</sup>	1960 <sup>2</sup>	1970	1980	1985	1986	1987	1940-60 <sup>1,2</sup>	1960-70 <sup>2</sup>	1970-80	1980-87
United States . . . . .	69.9	74.7	77.3	75.2	65.1	64.5	65.0	0.3	0.3	-0.3	-2.1
New England . . . . .	72.5	75.2	79.7	80.1	72.8	69.7	71.9	0.2	0.6	0.1	-1.5
Maine . . . . .	72.4	73.2	73.0	74.5	66.8	67.0	68.0	0.1	-0.0	0.2	-1.3
New Hampshire . . . . .	65.3	66.5	73.4	73.2	63.4	65.0	64.9	0.1	1.0	-0.0	-1.7
Vermont . . . . .	68.8	68.5	76.3	73.7	68.0	67.6	67.1	-0.0	1.1	-0.3	-1.3
Massachusetts . . . . .	71.8	75.8	80.3	81.7	74.1	68.8	71.0	0.3	0.6	0.2	-2.0
Rhode Island . . . . .	77.7	75.7	82.9	85.9	76.2	75.0	80.5	-0.1	0.9	0.4	-0.9
Connecticut . . . . .	75.9	78.2	82.6	80.4	75.4	73.4	76.4	0.1	0.5	-0.3	-0.7
Middle Atlantic . . . . .	75.5	78.1	82.4	83.2	77.1	76.8	77.9	0.2	0.5	0.1	-0.9
New York . . . . .	78.9	79.4	82.9	85.9	83.9	82.1	83.4	0.0	0.4	0.4	-0.4
New Jersey . . . . .	72.4	78.4	82.5	82.8	74.8	74.9	76.8	0.4	0.5	0.0	-1.1
Pennsylvania . . . . .	71.3	76.0	81.5	79.5	68.7	70.2	70.7	0.3	0.7	-0.2	-1.7
East North Central . . . . .	71.0	78.4	79.5	76.9	64.2	62.9	62.9	0.5	0.1	-0.3	-2.8
Ohio . . . . .	72.1	81.3	81.8	79.2	63.9	63.8	64.4	0.6	0.1	-0.3	-2.9
Indiana . . . . .	68.5	79.6	80.3	77.6	61.6	57.8	58.0	0.8	0.1	-0.3	-4.1
Illinois . . . . .	73.1	76.0	79.3	74.9	64.4	64.1	63.2	0.2	0.4	-0.6	-2.4
Michigan . . . . .	71.5	80.5	80.6	78.2	67.4	64.3	64.7	0.6	0.0	-0.3	-2.7
Wisconsin . . . . .	65.2	73.9	73.2	73.6	61.8	61.1	61.1	0.6	-0.1	0.1	-2.6
West North Central . . . . .	65.7	71.8	73.6	71.2	60.3	60.0	60.4	0.4	0.2	-0.3	-2.3
Minnesota . . . . .	71.0	72.3	73.9	73.7	63.8	63.4	63.4	0.1	0.2	-0.0	-2.1
Iowa . . . . .	63.6	72.6	71.9	68.7	57.3	58.1	59.4	0.7	-0.1	-0.5	-2.1
Missouri . . . . .	68.6	75.8	79.3	75.1	63.0	62.9	63.0	0.5	0.5	-0.5	-2.5
North Dakota . . . . .	61.9	71.3	67.1	68.6	61.1	61.2	61.1	0.7	-0.6	0.2	-1.6
South Dakota . . . . .	59.1	66.0	66.3	60.6	57.5	56.6	57.7	0.6	0.0	-0.9	-0.7
Nebraska . . . . .	59.0	65.6	69.9	67.4	58.4	56.6	55.7	0.5	0.6	-0.4	-2.7
Kansas . . . . .	60.4	69.1	71.4	68.8	54.3	54.2	55.3	0.7	0.3	-0.4	-3.1
South Atlantic . . . . .	66.7	74.8	77.9	75.5	65.5	65.7	66.4	0.6	0.4	-0.3	-1.8
Delaware . . . . .	59.2	70.2	78.8	81.8	68.0	69.1	74.8	0.9	1.2	0.4	-1.3
Maryland . . . . .	74.6	73.9	79.3	84.0	73.5	73.3	77.6	-0.0	0.7	0.6	-1.1
District of Columbia . . . . .	76.2	80.8	77.7	83.0	75.9	76.6	78.2	0.3	-0.4	0.7	-0.8
Virginia . . . . .	70.0	78.0	81.1	77.8	67.2	67.6	67.6	0.5	0.4	-0.4	-2.0
West Virginia . . . . .	62.1	74.5	79.3	75.6	60.7	60.2	60.2	0.9	0.6	-0.5	-3.2
North Carolina . . . . .	64.6	73.9	78.5	77.8	64.9	67.1	69.0	0.7	0.6	-0.1	-1.7
South Carolina . . . . .	69.1	76.9	76.4	77.0	67.7	69.3	67.5	0.5	-0.1	0.1	-1.9
Georgia . . . . .	62.7	71.7	76.5	70.4	64.4	63.9	65.7	0.7	0.7	-0.8	-1.0
Florida . . . . .	57.5	73.9	76.2	71.7	62.5	62.1	61.5	1.3	0.3	-0.6	-2.2
East South Central . . . . .	62.6	71.8	78.2	74.6	62.7	61.8	60.8	0.7	0.9	-0.5	-2.9
Kentucky . . . . .	61.6	73.4	79.6	77.4	64.0	63.3	60.2	0.9	0.8	-0.3	-3.5
Tennessee . . . . .	65.5	75.9	78.2	75.9	64.6	63.2	64.3	0.7	0.3	-0.3	-2.3
Alabama . . . . .	59.0	70.8	80.0	73.3	62.3	61.5	59.3	0.9	1.2	-0.9	-3.0
Mississippi . . . . .	63.8	62.8	73.6	70.5	58.1	57.7	57.2	-0.1	1.6	-0.4	-2.9
West South Central . . . . .	62.5	68.7	73.2	69.7	56.9	56.3	55.9	0.5	0.6	-0.5	-3.1
Arkansas . . . . .	55.6	70.0	74.4	69.6	56.0	56.9	58.1	1.2	0.6	-0.7	-2.5
Louisiana . . . . .	75.0	67.9	73.6	69.7	58.6	58.1	55.9	-0.5	0.8	-0.5	-3.1
Oklahoma . . . . .	54.5	71.0	72.5	68.1	56.2	56.3	56.9	1.3	0.2	-0.6	-2.5
Texas . . . . .	59.6	68.2	73.0	70.1	56.6	55.7	55.3	0.7	0.7	-0.4	-3.3
Mountain . . . . .	60.9	69.9	71.2	69.6	58.6	58.3	58.7	0.7	0.2	-0.2	-2.4
Montana . . . . .	62.8	60.3	65.9	66.1	59.1	58.8	60.1	-0.2	0.9	0.0	-1.4
Idaho . . . . .	65.4	55.9	66.1	65.2	56.6	56.9	55.0	-0.8	1.7	-0.1	-2.4
Wyoming . . . . .	47.5	61.1	63.1	57.2	52.0	50.7	50.7	1.3	0.3	-1.0	-1.7
Colorado . . . . .	62.1	80.6	74.0	71.6	59.0	59.3	59.9	1.3	-0.9	-0.3	-2.5
New Mexico . . . . .	47.8	65.1	69.8	66.2	60.0	59.5	60.1	1.6	0.7	-0.5	-1.4
Arizona . . . . .	61.2	74.2	73.3	74.2	61.5	62.6	61.8	1.0	-0.1	0.1	-2.6
Utah . . . . .	65.8	70.0	73.7	70.0	58.7	58.0	57.4	0.3	0.5	-0.5	-2.8
Nevada . . . . .	67.9	70.7	72.7	68.8	52.6	47.1	52.4	0.2	0.3	-0.5	-3.8

See footnotes at end of table.

**Table 97 (page 2 of 2). Occupancy rates in community hospitals and average annual percent change, according to geographic division and State: United States, selected years 1940–87**

[Data are based on reporting by facilities]

<i>Geographic division and State</i>	<i>Percent of beds occupied</i>							<i>Average annual percent change</i>			
	<i>1940<sup>1</sup></i>	<i>1960<sup>2</sup></i>	<i>1970</i>	<i>1980</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1940–60<sup>1,2</sup></i>	<i>1960–70<sup>2</sup></i>	<i>1970–80</i>	<i>1980–87</i>
Pacific . . . . .	69.7	71.4	71.0	69.0	61.6	61.1	63.3	0.1	-0.1	-0.3	-1.2
Washington . . . . .	67.5	63.4	69.7	71.7	58.5	57.6	59.0	-0.3	1.0	0.3	-2.7
Oregon . . . . .	71.2	65.8	69.3	69.3	55.6	54.9	55.5	-0.4	0.5	0.0	-3.1
California . . . . .	69.9	74.3	71.3	68.5	62.3	61.9	64.3	0.3	-0.4	-0.4	-0.9
Alaska . . . . .	...	53.8	59.1	58.3	62.6	55.2	52.6	...	0.9	-0.1	-1.5
Hawaii . . . . .	...	61.5	75.7	74.7	76.4	74.4	79.9	...	2.1	-0.1	1.0

<sup>1</sup>1940 data are estimated based on published figures.

<sup>2</sup>1960 includes hospital units of institutions.

SOURCES: American Medical Association: Hospital service in the United States. JAMA 116(11):1055–1144, 1941. (Copyright 1941: Used with the permission of the American Medical Association.); American Hospital Association: Hospitals. JAHA 35(15):388–430, Aug. 1, 1961. (Copyright 1961: Used with the permission of the American Hospital Association.); Data computed by the Division of Analysis, National Center for Health Statistics from data compiled by the Division of Health Care Statistics, National Master Facility Inventory and the American Hospital Association 1987 annual survey.

**Table 98 (page 1 of 2). Full-time equivalent employees per 100 average daily patients in community hospitals and average annual percent change, according to geographic division and State: United States, selected years 1960–87**

[Data are based on reporting by facilities]

<i>Geographic division and State</i>	<i>Employees per 100 average daily patients</i>						<i>Average annual percent change</i>		
	1960 <sup>1</sup>	1970	1980	1985	1986	1987	1960–70 <sup>1</sup>	1970–80	1980–87
United States . . . . .	226	302	394	472	492	511	2.9	2.7	3.8
New England . . . . .	249	351	456	532	563	587	3.5	2.7	3.7
Maine . . . . .	227	289	409	494	504	525	2.4	3.5	3.6
New Hampshire . . . . .	240	310	400	517	519	539	2.6	2.6	4.4
Vermont . . . . .	227	318	348	434	436	522	3.4	0.9	6.0
Massachusetts . . . . .	252	365	488	547	593	625	3.8	2.9	3.6
Rhode Island . . . . .	270	383	454	547	566	547	3.6	1.7	2.7
Connecticut . . . . .	247	347	440	529	553	568	3.5	2.4	3.7
Middle Atlantic . . . . .	225	311	383	450	465	488	3.3	2.1	3.5
New York . . . . .	233	336	396	436	457	481	3.7	1.7	2.8
New Jersey . . . . .	225	278	332	423	423	438	2.1	1.8	4.0
Pennsylvania . . . . .	214	287	390	491	503	529	3.0	3.1	4.5
East North Central . . . . .	226	299	396	494	521	546	2.8	2.8	4.7
Ohio . . . . .	232	302	392	526	543	567	2.7	2.6	5.4
Indiana . . . . .	216	280	374	482	525	556	2.6	2.9	5.8
Illinois . . . . .	226	301	407	492	510	538	2.9	3.1	4.1
Michigan . . . . .	239	313	417	513	554	569	2.7	2.9	4.5
Wisconsin . . . . .	199	277	367	405	430	464	3.4	2.9	3.4
West North Central . . . . .	212	273	357	422	438	457	2.6	2.7	3.6
Minnesota . . . . .	220	273	347	384	395	407	2.2	2.4	2.3
Iowa . . . . .	208	258	349	427	441	452	2.2	3.1	3.8
Missouri . . . . .	217	289	385	471	506	535	2.9	2.9	4.8
North Dakota . . . . .	177	254	295	326	335	342	3.7	1.5	2.1
South Dakota . . . . .	188	247	352	323	339	364	2.8	3.6	0.5
Nebraska . . . . .	220	276	326	397	408	424	2.3	1.7	3.8
Kansas . . . . .	210	270	368	478	463	487	2.5	3.1	4.1
South Atlantic . . . . .	217	295	379	458	478	491	3.1	2.5	3.8
Delaware . . . . .	243	328	405	526	556	573	3.0	2.1	5.1
Maryland . . . . .	237	354	403	473	508	514	4.1	1.3	3.5
District of Columbia . . . . .	240	363	483	599	572	601	4.2	2.9	3.2
Virginia . . . . .	193	289	369	435	461	475	4.1	2.5	3.7
West Virginia . . . . .	198	255	351	452	462	481	2.6	3.2	4.6
North Carolina . . . . .	196	277	363	464	507	502	3.5	2.7	4.7
South Carolina . . . . .	185	257	356	426	444	466	3.3	3.3	3.9
Georgia . . . . .	233	294	396	458	470	476	2.4	3.0	2.7
Florida . . . . .	245	295	375	450	462	486	1.9	2.4	3.8
East South Central . . . . .	227	275	348	409	420	448	1.9	2.4	3.7
Kentucky . . . . .	229	276	332	403	409	451	1.9	1.9	4.5
Tennessee . . . . .	231	284	359	420	437	456	2.1	2.4	3.5
Alabama . . . . .	233	266	357	410	425	458	1.3	3.0	3.6
Mississippi . . . . .	207	270	334	392	394	411	2.7	2.1	3.0
West South Central . . . . .	225	297	384	471	498	519	2.8	2.6	4.4
Arkansas . . . . .	209	274	355	429	440	451	2.7	2.6	3.5
Louisiana . . . . .	218	292	392	483	493	529	3.0	3.0	4.4
Oklahoma . . . . .	218	296	404	480	496	503	3.1	3.2	3.2
Texas . . . . .	232	304	383	473	510	532	2.7	2.3	4.8
Mountain . . . . .	226	299	413	486	508	536	2.8	3.3	3.8
Montana . . . . .	216	247	302	351	350	366	1.4	2.0	2.8
Idaho . . . . .	255	281	374	427	444	511	1.0	2.9	4.6
Wyoming . . . . .	217	251	445	417	423	442	1.5	5.9	-0.1
Colorado . . . . .	221	306	398	481	517	565	3.3	2.7	5.1
New Mexico . . . . .	228	314	430	536	531	557	3.3	3.2	3.8
Arizona . . . . .	222	327	455	523	547	574	3.9	3.4	3.4
Utah . . . . .	243	304	460	579	604	615	2.3	4.2	4.2
Nevada . . . . .	224	284	427	490	530	502	2.4	4.2	2.3

See footnote at end of table.

**Table 98 (page 2 of 2). Full-time equivalent employees per 100 average daily patients in community hospitals and average annual percent change, according to geographic division and State: United States, selected years 1960–87**

[Data are based on reporting by facilities]

<i>Geographic division and State</i>	<i>Employees per 100 average daily patients</i>						<i>Average annual percent change</i>		
	<i>1960<sup>1</sup></i>	<i>1970</i>	<i>1980</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1960–70<sup>1</sup></i>	<i>1970–80</i>	<i>1980–87</i>
Pacific . . . . .	243	327	467	545	564	561	3.0	3.6	2.7
Washington . . . . .	263	313	428	544	565	585	1.8	3.2	4.6
Oregon . . . . .	232	303	417	548	597	638	2.7	3.2	6.3
California . . . . .	241	334	481	550	563	555	3.3	3.7	2.1
Alaska . . . . .	220	301	454	515	555	546	3.2	4.2	2.7
Hawaii . . . . .	226	278	401	435	500	475	2.1	3.7	2.4

<sup>1</sup>1960 includes hospital units of institutions, but excludes students, interns, and residents.

SOURCES: American Hospital Association: Hospitals. JAHA 35(15):383–430, Aug. 1, 1961. (Copyright 1961: Used with the permission of the American Hospital Association.); Data computed by the Division of Analysis, National Center for Health Statistics from data compiled by the Division of Health Care Statistics, National Master Facility Inventory and the American Hospital Association 1987 annual survey.

**Table 99 (page 1 of 2). Nursing homes with 25 or more beds, beds, and bed rates, according to geographic division and State: United States, 1976, 1982, and 1986**

[Data are based on reporting by facilities]

<i>Geographic division and State</i>	<i>Nursing homes</i>			<i>Beds</i>			<i>Bed rate<sup>1</sup></i>		
	<i>1976</i>	<i>1982</i>	<i>1986</i>	<i>1976</i>	<i>1982</i>	<i>1986</i>	<i>1976</i>	<i>1982</i>	<i>1986</i>
United States . . . . .	14,133	14,565	16,033	1,291,632	1,469,357	1,615,771	681.4	603.0	582.2
New England . . . . .	1,211	1,246	1,235	91,885	105,293	108,474	719.7	643.4	597.2
Maine . . . . .	121	155	144	7,027	9,717	9,685	602.9	630.1	561.3
New Hampshire . . . . .	68	70	75	5,633	6,729	6,987	702.1	636.4	557.4
Vermont . . . . .	53	51	47	3,477	3,196	3,083	678.0	501.5	434.1
Massachusetts . . . . .	645	620	612	47,169	50,366	51,126	744.0	634.2	585.4
Rhode Island . . . . .	85	95	101	6,766	8,885	9,927	682.6	679.6	681.2
Connecticut . . . . .	239	255	256	21,813	26,400	27,666	738.0	680.7	645.8
Middle Atlantic . . . . .	1,567	1,587	1,921	187,435	210,010	243,962	554.3	491.9	517.0
New York . . . . .	708	732	777	97,489	108,898	114,192	587.7	524.7	501.7
New Jersey . . . . .	313	332	356	31,147	36,638	39,071	511.7	465.5	439.6
Pennsylvania . . . . .	546	523	788	58,799	64,474	90,699	527.9	458.2	583.6
East North Central . . . . .	2,904	2,966	2,999	281,144	326,171	330,342	786.4	730.3	666.5
Ohio . . . . .	750	830	886	60,680	74,276	82,522	646.4	636.2	641.8
Indiana . . . . .	420	449	449	35,799	47,196	47,257	747.5	807.3	724.0
Illinois . . . . .	805	809	775	84,085	99,777	96,684	844.8	813.8	713.3
Michigan . . . . .	508	471	480	53,966	55,349	53,651	782.5	628.4	542.7
Wisconsin . . . . .	421	407	409	46,614	49,573	50,228	986.5	816.6	745.3
West North Central . . . . .	1,965	2,171	2,142	157,057	185,774	187,781	772.8	734.6	683.6
Minnesota . . . . .	385	390	399	38,177	42,500	44,357	862.1	735.5	697.3
Iowa . . . . .	440	475	440	31,785	38,150	34,942	812.5	790.9	686.1
Missouri . . . . .	408	530	552	32,539	46,403	50,204	602.4	705.7	692.0
North Dakota . . . . .	82	80	81	6,413	6,402	6,789	901.8	730.2	718.9
South Dakota . . . . .	117	116	114	8,047	7,938	7,918	897.6	706.0	652.9
Nebraska . . . . .	210	225	214	18,408	18,516	18,132	898.7	726.7	665.4
Kansas . . . . .	323	355	342	21,688	25,865	25,439	741.6	725.7	655.9
South Atlantic . . . . .	1,475	1,745	2,152	142,245	177,495	212,382	539.2	485.5	484.1
Delaware . . . . .	22	27	36	2,123	2,194	3,345	490.5	376.3	485.5
Maryland . . . . .	165	179	200	18,559	21,164	24,402	685.9	584.4	575.2
District of Columbia . . . . .	17	16	19	2,604	2,556	3,029	440.2	377.0	383.7
Virginia . . . . .	208	267	288	23,816	29,251	29,653	696.8	652.7	561.8
West Virginia . . . . .	73	95	103	4,858	7,505	8,692	281.0	356.2	374.6
North Carolina . . . . .	276	346	402	20,903	28,156	34,049	569.1	560.5	562.5
South Carolina . . . . .	102	130	157	8,311	11,560	14,071	507.1	515.9	518.1
Georgia . . . . .	304	306	298	28,732	32,194	31,738	862.4	742.0	607.5
Florida . . . . .	308	379	649	32,339	42,915	63,403	365.0	318.2	382.9
East South Central . . . . .	856	865	887	66,994	85,565	90,180	579.0	589.1	541.4
Kentucky . . . . .	267	276	277	19,929	25,837	26,426	646.5	681.5	621.3
Tennessee . . . . .	258	251	267	19,448	26,111	28,599	556.9	576.2	544.7
Alabama . . . . .	209	190	203	19,207	20,490	21,736	646.7	555.6	506.5
Mississippi . . . . .	122	148	140	8,410	13,127	13,419	415.2	522.2	469.0
West South Central . . . . .	1,740	1,789	1,922	157,173	177,237	189,920	912.1	802.5	736.3
Arkansas . . . . .	208	200	237	19,322	19,327	21,910	861.1	689.7	703.2
Louisiana . . . . .	200	224	276	18,969	24,836	32,747	713.9	748.7	836.4
Oklahoma . . . . .	341	359	382	25,990	28,902	30,359	877.6	788.6	751.0
Texas . . . . .	991	1,006	1,027	92,892	104,172	104,904	991.4	846.9	712.7
Mountain . . . . .	495	529	631	41,881	47,857	57,414	597.9	503.5	506.1
Montana . . . . .	69	59	57	4,725	5,120	4,804	584.3	553.3	491.5
Idaho . . . . .	54	47	60	4,263	4,102	5,240	598.1	448.6	517.0
Wyoming . . . . .	22	25	27	1,753	2,060	2,301	595.2	556.8	550.0
Colorado . . . . .	174	157	183	17,792	16,848	18,402	873.1	644.3	610.2
New Mexico . . . . .	30	31	56	2,489	2,351	4,915	360.0	241.5	416.5
Arizona . . . . .	67	109	134	5,832	9,888	12,740	402.6	428.9	424.3
Utah . . . . .	63	76	84	3,707	5,025	5,995	503.3	518.8	511.2
Nevada . . . . .	16	25	30	1,320	2,463	3,017	481.6	570.5	534.5

See footnote at end of table.

**Table 99 (page 2 of 2). Nursing homes with 25 or more beds, beds, and bed rates, according to geographic division and State: United States, 1976, 1982, and 1986**

[Data are based on reporting by facilities]

<i>Geographic division and State</i>	<i>Nursing homes</i>			<i>Beds</i>			<i>Bed rate<sup>1</sup></i>		
	<i>1976</i>	<i>1982</i>	<i>1986</i>	<i>1976</i>	<i>1982</i>	<i>1986</i>	<i>1976</i>	<i>1982</i>	<i>1986</i>
Pacific . . . . .	1,920	1,667	2,144	165,818	153,955	195,316	670.9	481.0	520.8
Washington . . . . .	318	309	328	29,415	30,017	32,021	835.1	670.0	623.9
Oregon . . . . .	202	177	214	15,758	15,711	17,404	660.1	503.9	495.1
California . . . . .	1,369	1,148	1,569	118,144	105,325	143,179	646.1	445.5	512.7
Alaska . . . . .	8	10	10	738	1,031	1,082	1,232.1	1,458.3	950.0
Hawaii . . . . .	23	23	23	1,763	1,871	1,630	384.0	269.4	200.5

<sup>1</sup>Number of beds per 1,000 resident population 85 years of age and over.

NOTE: The 1982 inventory excluded certain types of nursing homes that the 1976 and 1986 inventories included (nursing home units of hospitals, nursing homes for the blind, etc.). To make the data comparable, these types of homes and their beds were subtracted from the 1976 and 1986 figures.

SOURCES: Division of Health Care Statistics, National Center for Health Statistics: Trends in nursing and related care homes and hospitals, United States, selected years 1969-80, by G. W. Strahan. Vital and Health Statistics. Series 14, No. 30. DHHS Pub. No. (PHS) 84-1825. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1984; Nursing and related care homes as reported from the 1982 National Master Facility Inventory Survey, by D. A. Roper. Vital and Health Statistics. Series 14, No. 32. DHHS Pub. No. (PHS) 86-1827. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1986; data from the National Master Facility Inventory; Final data from the 1986 Inventory of Long-term Care Places; Resident population computed by the Division of Analysis, National Center for Health Statistics from the Compressed Mortality File, a county-level national mortality and population data base.

**Table 100. Gross national product and national health expenditures: United States, selected years 1929–87**

[Data are compiled by the Health Care Financing Administration]

Year	Gross national product in billions	National health expenditures		
		Amount in billions	Percent of gross national product	Amount per capita
1929.....	\$ 103.9	\$ 3.6	3.5	\$ 29
1935.....	72.8	2.9	4.0	23
1940.....	100.4	4.0	4.0	29
1950.....	288.3	12.7	4.4	80
1955.....	405.9	17.7	4.4	101
1960.....	515.3	26.9	5.2	142
1965.....	705.1	41.9	5.9	206
1966.....	772.0	46.3	6.0	224
1967.....	816.4	51.5	6.3	247
1968.....	892.6	58.2	6.5	277
1969.....	963.9	65.6	6.8	309
1970.....	1,015.5	75.0	7.4	349
1971.....	1,102.7	83.5	7.6	385
1972.....	1,212.8	94.0	7.7	429
1973.....	1,359.3	103.4	7.6	468
1974.....	1,472.8	116.1	7.9	521
1975.....	1,598.4	132.7	8.3	591
1976.....	1,782.8	150.8	8.5	665
1977.....	1,990.5	169.9	8.5	743
1978.....	2,249.7	189.7	8.4	822
1979.....	2,508.2	214.7	8.6	921
1980.....	2,731.9	248.1	9.1	1,055
1981.....	3,052.6	287.0	9.4	1,208
1982.....	3,166.0	323.6	10.2	1,348
1983.....	3,405.7	357.2	10.5	1,473
1984.....	3,772.2	388.5	10.3	1,587
1985.....	4,014.9	419.0	10.4	1,696
1986.....	4,240.3	455.7	10.7	1,827
1987.....	4,526.7	500.3	11.1	1,987

NOTE: These data reflect Bureau of Economic Analysis, Department of Commerce, revisions to the gross national product as of December 1988 and Social Security Administration revisions to the population as of April 1988.

SOURCE: Office of National Cost Estimates, Office of the Actuary: National health expenditures, 1987. Health Care Financing Review. Vol. 10, No. 2. HCFA Pub. No. 03276. Health Care Financing Administration. Washington. U.S. Government Printing Office, Feb. 1989.



**Table 101. Total health expenditures as a percentage of gross domestic product: Selected countries, selected years 1960–87**

<i>Country</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>
Australia . . . . .	4.6	4.9	5.0	5.7	6.5	7.0	7.1	7.1
Austria . . . . .	4.6	5.0	5.4	7.3	7.9	8.1	8.3	8.4
Belgium . . . . .	3.4	3.9	4.0	5.8	6.6	7.2	7.2	7.2
Canada . . . . .	5.5	6.1	7.2	7.3	7.4	8.4	8.7	8.6
Denmark . . . . .	3.6	4.8	6.1	6.5	6.8	6.2	6.0	6.0
Finland . . . . .	3.9	4.9	5.7	6.3	6.5	7.2	7.3	7.4
France . . . . .	4.2	5.2	5.8	6.8	7.6	8.6	8.7	8.6
Germany . . . . .	4.7	5.1	5.5	7.8	7.9	8.2	8.1	8.2
Greece . . . . .	3.2	3.6	4.0	4.1	4.3	4.9	5.3	5.3
Iceland . . . . .	1.2	2.8	4.3	5.9	6.4	7.3	7.7	7.8
Ireland . . . . .	4.0	4.4	5.6	7.7	8.5	8.0	7.8	7.4
Italy . . . . .	3.3	4.0	4.8	5.8	6.8	6.7	6.6	6.9
Japan . . . . .	2.9	4.3	4.4	5.5	6.4	6.6	6.7	6.8
Netherlands . . . . .	3.9	4.4	6.0	7.7	8.2	8.3	8.3	8.5
New Zealand . . . . .	4.4	4.5	5.1	6.4	7.2	6.6	6.9	6.9
Norway . . . . .	3.3	3.9	5.0	6.7	6.6	6.4	7.1	7.5
Portugal . . . . .	---	---	---	6.4	5.9	7.0	6.6	6.4
Spain . . . . .	2.3	2.7	4.1	5.1	5.9	6.0	6.1	6.0
Sweden . . . . .	4.7	5.6	7.2	8.0	9.5	9.4	9.1	9.0
Switzerland . . . . .	3.3	3.8	5.2	7.0	7.3	7.7	7.6	7.7
United Kingdom . . . . .	3.9	4.1	4.5	5.5	5.8	6.0	6.1	6.1
United States . . . . .	5.2	6.0	7.4	8.4	9.2	10.6	10.9	11.2

NOTES: Gross domestic product differs slightly from gross national product shown in the previous table. For definitions, see Appendix II. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCES: Organization for Economic Cooperation and Development: Measuring Health Care 1960–1983, OECD Pub. No. 43239. Paris, France, 1985; G. Schieber and J. Poullier: International health care expenditure trends: 1987. Health Affairs. Vol. 8, No. 4, Fall 1989.

**Table 102. National health expenditures and percent distribution, according to type of expenditure: United States, selected years 1950-87**

[Data are compiled by the Health Care Financing Administration]

Type of expenditure	1950	1960	1965	1970	1975	1980	1984	1985	1986	1987
Amount in billions										
Total . . . . .	\$ 12.7	\$ 26.9	\$ 41.9	\$ 75.0	\$132.7	\$248.1	\$390.5	\$419.0	\$455.7	\$500.3
Percent distribution										
All expenditures . . . . .	100	100	100	100	100	100	100	100	100	100
Health services and supplies . . . . .	92	94	92	93	94	95	95	96	96	97
Personal health care . . . . .	86	88	86	87	88	89	87	88	88	88
Hospital care . . . . .	30	34	33	37	40	41	40	40	39	39
Physician services . . . . .	22	21	20	19	19	19	19	19	20	21
Dentist services . . . . .	8	7	7	6	6	6	6	6	6	7
Nursing home care . . . . .	2	2	5	6	8	8	8	8	8	8
Other professional services . . . . .	3	3	2	2	2	2	3	3	3	3
Drugs and medical sundries . . . . .	14	14	12	11	9	8	7	7	7	7
Eyeglasses and appliances . . . . .	4	3	3	3	2	2	2	2	2	2
Other health services . . . . .	4	4	3	3	3	2	2	2	2	2
Program administration and net cost of health insurance . . . . .	4	4	4	4	3	4	6	5	5	5
Government public health activities . . . . .	3	2	2	2	2	3	3	3	3	3
Research and construction . . . . .	8	6	8	7	6	5	4	4	4	3
Noncommercial research . . . . .	1	3	4	3	3	2	2	2	2	2
Construction . . . . .	7	4	5	5	4	3	2	2	2	2

NOTE: Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCE: Office of National Cost Estimates, Office of the Actuary; National health expenditures, 1987. Health Care Financing Review, Vol. 10, No. 2. HCFA Pub. No. 03276. Health Care Financing Administration. Washington. U.S. Government Printing Office, Feb. 1989.

**Table 103. National health expenditures average annual percent change, according to type of expenditure: United States, selected years 1950-87**

[Data are compiled by the Health Care Financing Administration]

<i>Type of expenditure</i>	1950-60	1960-65	1965-70	1970-75	1975-80	1980-85	1984-85	1985-86	1986-87
	Average annual percent change								
All expenditures . . . . .	7.8	9.3	12.3	12.1	13.3	11.0	7.9	8.7	9.8
Health services and supplies . . . . .	8.0	8.8	12.6	12.3	13.7	11.3	8.2	8.9	10.0
Personal health care . . . . .	8.1	8.7	12.8	12.4	13.4	10.9	8.3	9.0	10.2
Hospital care . . . . .	9.0	9.0	14.9	13.4	14.2	10.4	6.8	7.0	9.1
Physician services . . . . .	7.5	8.3	11.1	11.7	13.4	11.7	9.3	12.6	12.2
Dentist services . . . . .	7.5	7.3	11.1	11.6	13.3	12.0	10.2	9.0	11.1
Nursing home care . . . . .	10.9	31.5	17.8	16.4	15.2	11.2	9.6	7.8	8.6
Other professional services . . . . .	8.1	3.7	9.1	10.4	16.8	16.9	14.6	13.4	15.2
Drugs and medical sundries . . . . .	7.8	7.2	9.1	8.3	9.4	8.7	7.6	9.9	8.9
Eyeglasses and appliances . . . . .	4.7	8.6	10.7	10.1	9.9	8.9	10.3	11.6	9.3
Other health services . . . . .	7.7	0.7	12.5	12.8	9.5	10.5	9.3	9.5	12.2
Program administration and net cost of health insurance . . . . .	9.1	9.8	10.1	7.2	18.1	19.7	4.1	6.0	8.4
Government public health activities . . . . .	1.4	14.5	11.9	17.2	18.2	11.5	14.4	9.6	7.0
Research and construction . . . . .	5.9	15.5	9.0	9.2	7.3	5.5	-1.0	4.9	4.5
Noncommercial research . . . . .	18.9	18.0	5.4	11.1	10.3	6.7	9.2	10.4	6.2
Construction . . . . .	2.2	13.8	11.4	8.1	5.1	4.4	-8.9	-0.3	2.8

NOTE: Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCE: Office of National Cost Estimates, Office of the Actuary: National health expenditures, 1987. Health Care Financing Review. Vol. 10, No. 2. HCFA Pub. No. 03276. Health Care Financing Administration, Washington, U.S. Government Printing Office, Feb. 1989.

**Table 104. Personal health care expenditures average annual percent change and percent distribution of factors affecting growth: United States, 1965–87**

[Data are compiled by the Health Care Financing Administration]

Period	Average annual percent change	Factors affecting growth			
		All factors	Prices	Population	Intensity <sup>1</sup>
		Percent distribution			
1965–87	12.1	100	60	8	32
1965–66	10.6	100	46	11	43
1966–67	12.2	100	55	9	36
1967–68	13.1	100	45	8	47
1968–69	13.4	100	42	8	50
1969–70	14.5	100	48	8	44
1970–71	10.4	100	67	11	22
1971–72	11.6	100	39	9	52
1972–73	10.5	100	46	8	45
1973–74	13.8	100	68	6	26
1974–75	15.7	100	69	6	26
1975–76	13.4	100	62	7	32
1976–77	12.3	100	64	7	29
1977–78	12.2	100	64	8	28
1978–79	13.3	100	67	8	25
1979–80	15.8	100	73	7	21
1980–81	15.9	100	67	7	26
1981–82	12.5	100	69	9	23
1982–83	9.8	100	66	10	23
1983–84	8.1	100	74	12	14
1984–85	8.3	100	60	12	28
1985–86	9.0	100	53	11	37
1986–87	10.2	100	53	9	38

<sup>1</sup>Represents changes in use and/or kinds of services and supplies.

NOTE: Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCE: Office of National Cost Estimates, Office of the Actuary: National health expenditures, 1987. Health Care Financing Review. Vol. 10, No. 2. HCFA Pub. No. 03276. Health Care Financing Administration. Washington. U.S. Government Printing Office, Feb. 1989.

**Table 105. Consumer Price Index and average annual percent change for all items and selected items: United States, selected years 1950–88**

[Data are based on reporting by samples of providers and other retail outlets]

<i>Year</i>	<i>All items</i>	<i>Medical care</i>	<i>Food</i>	<i>Apparel and upkeep</i>	<i>Housing</i>	<i>Energy</i>	<i>Personal care</i>
Consumer Price Index							
1950.....	24.1	15.1	25.4	40.3	---	---	26.2
1955.....	26.8	18.2	27.8	42.9	---	---	29.9
1960.....	29.6	22.3	30.0	45.7	---	22.4	34.6
1965.....	31.5	25.2	32.2	47.8	---	22.9	36.6
1970.....	38.8	34.0	39.2	59.2	36.4	25.5	43.5
1975.....	53.8	47.5	59.8	72.5	50.7	42.1	57.9
1976.....	56.9	52.0	61.6	75.2	53.8	45.1	61.7
1977.....	60.6	57.0	65.5	78.6	57.4	49.4	65.7
1978.....	65.2	61.8	72.0	81.4	62.4	52.5	69.9
1979.....	72.6	67.5	79.9	84.9	70.1	65.7	75.2
1980.....	82.4	74.9	86.8	90.9	81.1	86.0	81.9
1981.....	90.9	82.9	93.6	95.3	90.4	97.7	89.1
1982.....	96.5	92.5	97.4	97.8	96.9	99.2	95.4
1983.....	99.6	100.6	99.4	100.2	99.5	99.9	100.3
1984.....	103.9	106.8	103.2	102.1	103.6	100.9	104.3
1985.....	107.6	113.5	105.6	105.0	107.7	101.6	108.3
1986.....	109.6	122.0	109.0	105.9	110.9	88.2	111.9
1987.....	113.6	130.1	113.5	110.6	114.2	88.6	115.1
1988.....	118.3	138.6	118.2	115.4	118.5	89.3	119.4
Average annual percent change							
1950–55.....	2.1	3.8	1.8	1.3	---	---	2.7
1955–60.....	2.0	4.1	1.5	1.3	---	---	3.0
1960–65.....	1.3	2.5	1.4	0.9	---	0.4	1.1
1965–70.....	4.3	6.2	4.0	4.4	---	2.2	3.5
1970–75.....	6.8	6.9	8.8	4.1	6.9	10.5	5.9
1975–80.....	8.9	9.5	7.7	4.6	9.9	15.4	7.2
1975–76.....	5.8	9.5	3.0	3.7	6.1	7.1	6.6
1976–77.....	6.5	9.6	6.3	4.5	6.7	9.5	6.5
1977–78.....	7.6	8.4	9.9	3.6	8.7	6.3	6.4
1978–79.....	11.3	9.2	11.0	4.3	12.3	25.1	7.6
1979–80.....	13.5	11.0	8.6	7.1	15.7	30.9	8.9
1980–85.....	5.5	8.7	4.0	2.9	5.8	3.4	5.7
1980–81.....	10.3	10.7	7.8	4.8	11.5	13.6	8.8
1981–82.....	6.2	11.6	4.1	2.6	7.2	1.5	7.1
1982–83.....	3.2	8.8	2.1	2.5	2.7	0.7	5.1
1983–84.....	4.3	6.2	3.8	1.9	4.1	1.0	4.0
1984–85.....	3.6	6.3	2.3	2.8	4.0	0.7	3.8
1985–86.....	1.9	7.5	3.2	0.9	3.0	-13.2	3.3
1986–87.....	3.6	6.6	4.1	4.4	3.0	0.5	2.9
1987–88.....	4.1	6.5	4.1	4.3	3.8	0.8	3.7

NOTE: 1982–84 = 100.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor: Consumer Price Index. Various releases.

**Table 106. Consumer Price Index for all items and medical care components: United States, selected years 1950–88**

[Data are based on reporting by samples of providers and other retail outlets]

<i>Item and medical care component</i>	1950	1960	1965	1970	1975	1980	1985	1986	1987	1988
	Consumer Price Index									
CPI, all items . . . . .	24.1	29.6	31.5	38.8	53.8	82.4	107.6	109.6	113.6	118.3
Less medical care . . . . .	---	30.2	32.0	39.2	54.3	82.8	107.2	108.8	112.6	117.0
CPI, all services . . . . .	16.9	24.1	26.6	35.0	48.0	77.9	109.9	115.4	120.2	125.7
All medical care . . . . .	15.1	22.3	25.2	34.0	47.5	74.9	113.5	122.0	130.1	138.6
Medical care services . . . . .	12.8	19.5	22.7	32.3	46.6	74.8	113.2	121.9	130.0	138.3
Professional medical services . . . . .	---	---	---	37.0	50.8	77.9	113.5	120.8	128.8	137.5
Physicians' services . . . . .	15.7	21.9	25.1	34.5	48.1	76.5	113.3	121.5	130.4	139.8
Dental services . . . . .	21.0	27.0	30.3	39.2	53.2	78.9	114.2	120.6	128.8	137.5
Eye care <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	103.5	108.7
Services by other medical professionals <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	102.4	108.3
Hospital and related services . . . . .	---	---	---	---	---	69.2	116.1	123.1	131.6	143.9
Hospital rooms . . . . .	4.9	9.3	12.3	23.6	38.3	68.0	115.4	122.3	131.1	143.3
Other inpatient services <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	103.9	114.0
Outpatient services <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	103.3	112.5
Medical care commodities . . . . .	39.7	46.9	45.0	46.5	53.3	75.4	115.2	122.8	131.0	139.9
Prescription drugs . . . . .	43.4	54.0	47.8	47.4	51.2	72.5	120.1	130.4	140.8	152.0
Nonprescription drugs and medical supplies <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	103.1	108.1
Internal and respiratory over-the-counter drugs . . . . .	---	---	39.0	42.3	51.8	74.9	112.2	117.7	123.9	130.8
Nonprescription medical equipment and supplies . . . . .	---	---	---	---	---	79.2	109.6	115.0	119.6	123.9

<sup>1</sup>Dec. 1986 = 100.

NOTE: 1982–84 = 100, except where noted.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor: Consumer Price Index. Various releases.

**Table 107. Consumer Price Index average annual percent change for all items and medical care components: United States, selected years 1950–88**

[Data are based on reporting by samples of providers and other retail outlets]

<i>Item and medical care component</i>	<i>1950–60</i>	<i>1960–65</i>	<i>1965–70</i>	<i>1970–75</i>	<i>1975–80</i>	<i>1980–85</i>	<i>1985–86</i>	<i>1986–87</i>	<i>1987–88</i>
	Average annual percent change								
CPI, all items . . . . .	2.1	1.3	4.3	6.8	8.9	5.5	1.9	3.6	4.1
Less medical care . . . . .	---	1.2	4.1	6.7	8.8	5.3	1.5	3.5	3.9
CPI, all services . . . . .	3.6	2.0	5.6	6.5	10.2	7.1	5.0	4.2	4.6
All medical care . . . . .	4.0	2.5	6.2	6.9	9.5	8.7	7.5	6.6	6.5
Medical care services . . . . .	4.3	3.1	7.3	7.6	9.9	8.6	7.7	6.6	6.4
Professional medical services . . . . .	---	---	---	6.5	8.9	7.8	6.4	6.6	6.8
Physicians' services . . . . .	3.4	2.8	6.6	6.9	9.7	8.2	7.2	7.3	7.2
Dental services . . . . .	2.5	2.3	5.3	6.3	8.2	7.7	5.6	6.8	6.8
Eye care <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	5.0
Services by other medical professionals <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	5.8
Hospital and related services . . . . .	---	---	---	---	---	10.9	6.0	6.9	9.3
Hospital rooms . . . . .	6.6	5.8	13.9	10.2	12.2	11.2	6.0	7.2	9.3
Other inpatient services <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	9.7
Outpatient services <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	8.9
Medical care commodities . . . . .	1.7	-0.8	0.7	2.8	7.2	8.8	6.6	6.7	6.8
Prescription drugs . . . . .	2.2	-2.4	-0.2	1.6	7.2	10.6	8.6	8.0	8.0
Nonprescription drugs and medical supplies <sup>1</sup> . . . . .	---	---	---	---	---	---	---	---	4.8
Internal and respiratory over-the-counter drugs . . . . .	---	---	1.6	4.1	7.7	8.4	4.9	5.3	5.6
Nonprescription medical equipment and supplies . . . . .	---	---	---	---	---	6.7	4.9	4.0	3.6

<sup>1</sup>Dec. 1986 = 100.

NOTE: 1982–84 = 100, except where noted.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor: Consumer Price Index. Various releases.

**Table 108. Hospital expenses and personnel and average annual percent change: United States, 1971-87**

[Data are based on reporting by a census of hospitals]

Year and period	Adjusted expenses for inpatient care			Employee costs as percent of total <sup>1</sup>	Personnel <sup>2</sup>	
	Total in millions	Per inpatient day	Per inpatient stay		Number in thousands	Number per 100 patients
1971.....	\$22,400	\$83	\$667	63.9	1,999	272
1972.....	25,549	95	747	62.6	2,056	278
1973.....	28,496	102	794	61.8	2,149	280
1974.....	32,751	113	883	60.7	2,289	289
1975.....	39,110	133	1,025	59.4	2,399	298
1976.....	45,402	152	1,172	57.9	2,483	304
1977.....	51,832	173	1,317	57.5	2,581	315
1978.....	58,348	194	1,470	57.2	2,662	323
1979.....	66,184	216	1,631	57.0	2,762	328
1980.....	76,970	244	1,844	56.4	2,879	334
1981.....	90,739	284	2,168	56.7	3,039	347
1982.....	105,094	327	2,493	56.7	3,110	353
1983.....	116,632	368	2,776	56.5	3,102	357
1984.....	123,550	410	2,984	56.1	3,023	367
1985.....	130,700	460	3,239	55.2	3,003	385
1986.....	140,907	499	3,530	53.9	3,032	392
1987.....	152,909	537	3,849	53.1	3,120	400
Average annual percent change						
1971-87.....	12.8	12.4	11.6	...	2.8	2.4
1971-72.....	14.1	14.5	12.0	...	2.9	2.2
1972-73.....	11.5	7.4	6.3	...	4.5	0.7
1973-74.....	14.9	10.8	11.2	...	6.5	3.2
1974-75.....	19.4	17.7	16.1	...	4.8	3.1
1975-76.....	16.1	14.3	14.3	...	3.5	2.0
1976-77.....	14.2	13.8	12.4	...	3.9	3.6
1977-78.....	12.6	12.1	11.6	...	3.1	2.5
1978-79.....	13.4	11.3	11.0	...	3.8	1.5
1979-80.....	16.3	13.0	13.1	...	4.2	1.8
1980-81.....	17.9	16.4	17.6	...	5.6	3.9
1981-82.....	15.8	15.1	15.0	...	2.3	1.7
1982-83.....	11.0	12.5	11.4	...	-0.3	1.1
1983-84.....	5.9	11.4	7.5	...	-2.5	2.8
1984-85.....	5.8	12.2	8.5	...	-0.7	4.9
1985-86.....	7.8	8.5	9.0	...	1.0	1.8
1986-87.....	8.5	7.6	9.0	...	2.9	2.0

<sup>1</sup>Includes employee payroll and benefit costs. Does not include contracted labor services.

<sup>2</sup>Full-time equivalent personnel.

NOTE: Data refer to non-Federal short-term general and other specialty hospitals.

SOURCE: American Hospital Association: Hospital Statistics, 1988 Edition. Chicago, 1988. (Copyright 1988: Used with the permission of the American Hospital Association.)



**Table 109. National health expenditures and average annual percent change, according to source of funds: United States, selected years 1929–87**

[Data are compiled by the Health Care Financing Administration]

Year	All health expenditures in billions	Private funds			Public funds		
		Amount in billions	Amount per capita <sup>1</sup>	Percent of total	Amount in billions	Amount per capita <sup>1</sup>	Percent of total
1929	\$ 3.6	\$ 3.2	\$ 25	86.4	\$ 0.5	\$ 4	13.6
1935	2.9	2.4	18	80.8	0.6	4	19.2
1940	4.0	3.2	23	79.7	0.8	6	20.3
1950	12.7	9.2	58	72.8	3.4	21	27.2
1955	17.7	13.2	75	74.3	4.6	26	25.7
1960	26.9	20.3	107	75.3	6.6	35	24.7
1965	41.9	30.9	152	73.8	11.0	54	26.2
1966	46.3	32.7	159	70.7	13.6	66	29.3
1967	51.5	32.5	156	63.2	19.0	91	36.8
1968	58.2	36.1	172	62.0	22.1	105	38.0
1969	65.6	40.7	191	62.0	24.9	117	38.0
1970	75.0	47.2	220	63.0	27.8	129	37.0
1971	83.5	51.8	239	62.1	31.6	146	37.9
1972	94.0	58.5	267	62.3	35.4	162	37.7
1973	103.4	64.0	290	61.9	39.4	178	38.1
1974	116.1	69.1	310	59.5	47.0	211	40.5
1975	132.7	76.4	340	57.5	56.3	251	42.5
1976	150.8	88.0	388	58.4	62.8	277	41.6
1977	169.9	100.1	438	58.9	69.7	305	41.1
1978	189.7	110.1	477	58.0	79.6	345	42.0
1979	214.7	124.2	533	57.9	90.5	388	42.1
1980	248.1	142.9	608	57.6	105.2	447	42.4
1981	287.0	165.8	698	57.8	121.2	510	42.2
1982	323.6	188.4	785	58.2	135.3	564	41.8
1983	357.2	209.7	865	58.7	147.5	609	41.3
1984	388.5	228.8	935	58.9	159.6	652	41.1
1985	419.0	244.0	987	58.2	175.0	708	41.8
1986	455.7	266.8	1,069	58.5	188.9	757	41.5
1987	500.3	293.0	1,164	58.6	207.3	824	41.4
Average annual percent change							
1929–65	7.1	6.5	5.1	...	9.0	7.5	...
1965–87	11.9	10.8	9.7	...	14.3	13.2	...
1929–35	-3.6	-4.6	-5.3	...	2.2	0.0	...
1935–40	6.3	6.0	5.0	...	7.6	8.4	...
1940–50	12.2	11.2	9.7	...	15.5	13.3	...
1950–55	7.0	7.4	5.3	...	5.8	4.4	...
1955–60	8.7	9.0	7.4	...	7.8	6.1	...
1960–65	9.3	8.8	7.3	...	10.6	9.1	...
1965–70	12.3	8.8	7.7	...	20.4	19.0	...
1970–75	12.1	10.1	9.1	...	15.2	14.2	...
1975–80	13.3	13.4	12.3	...	13.3	12.2	...
1980–85	11.0	11.3	10.2	...	10.7	9.6	...
1980–81	15.7	16.0	14.8	...	15.2	14.1	...
1981–82	12.8	13.6	12.5	...	11.6	10.6	...
1982–83	10.4	11.3	10.2	...	9.1	8.0	...
1983–84	8.8	9.1	8.1	...	8.2	7.1	...
1984–85	7.9	6.6	5.6	...	9.6	8.6	...
1985–86	8.7	9.3	8.3	...	7.9	6.9	...
1986–87	9.8	9.8	8.9	...	9.8	8.9	...

<sup>1</sup>Reflects May 1988 revisions to the social security area population estimates.

NOTE: Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCE: Office of National Cost Estimates, Office of the Actuary: National health expenditures, 1987. Health Care Financing Review. Vol. 10, No. 2. HCFA Pub. No. 03276. Health Care Financing Administration. Washington. U.S. Government Printing Office, Feb. 1989.

**Table 110. Personal health care expenditures and percent distribution, according to source of funds: United States, selected years 1929–87**

[Data are compiled by the Health Care Financing Administration]

Year	Total in billions <sup>1</sup>	Per capita	All sources	Direct payment	Private health insurance	Philanthropy and industry	Government		
							Total	Federal	State and local
Percent distribution									
1929	\$ 3.2	\$ 26	100.0	<sup>2</sup> 88.4	( <sup>3</sup> )	2.6	9.0	2.7	6.3
1935	2.7	21	100.0	<sup>2</sup> 82.4	( <sup>3</sup> )	2.8	14.7	3.4	11.3
1940	3.5	26	100.0	<sup>2</sup> 81.3	( <sup>3</sup> )	2.6	16.1	4.1	12.0
1950	10.9	70	100.0	65.5	9.1	2.9	22.4	10.4	12.0
1955	15.7	93	100.0	58.1	16.1	2.8	23.0	10.5	12.5
1960	23.7	129	100.0	54.9	21.1	2.3	21.8	9.3	12.5
1965	35.9	176	100.0	51.6	24.2	2.2	22.0	10.1	11.9
1970	65.4	304	100.0	40.5	23.4	1.7	34.3	22.2	12.1
1971	72.2	332	100.0	38.9	23.8	1.8	35.5	23.2	12.3
1972	80.5	367	100.0	38.0	23.6	2.5	35.8	23.5	12.3
1973	89.0	403	100.0	37.4	24.0	2.5	36.1	23.7	12.4
1974	101.3	454	100.0	35.7	24.8	1.5	38.0	25.4	12.6
1975	117.1	521	100.0	32.5	26.7	1.3	39.5	26.8	12.7
1976	132.8	586	100.0	31.6	28.3	1.4	38.7	27.2	11.5
1977	149.1	652	100.0	31.1	28.8	1.3	38.7	27.4	11.3
1978	167.4	725	100.0	30.3	29.3	1.2	39.2	27.7	11.5
1979	189.7	814	100.0	29.4	30.0	1.2	39.3	28.1	11.2
1980	219.7	934	100.0	28.7	30.7	1.2	39.4	28.4	10.9
1981	254.7	1,072	100.0	28.5	30.8	1.3	39.5	29.1	10.3
1982	286.5	1,194	100.0	27.8	31.4	1.2	39.6	29.3	10.3
1983	314.7	1,298	100.0	28.2	31.1	1.3	39.4	29.5	9.9
1984	340.1	1,389	100.0	28.1	31.0	1.2	39.7	29.7	10.0
1985	368.3	1,490	100.0	28.2	30.4	1.2	40.2	30.2	10.0
1986	401.6	1,610	100.0	28.0	31.0	1.2	39.7	30.0	9.8
1987	442.6	1,758	100.0	27.8	31.4	1.2	39.6	29.6	10.0

<sup>1</sup>Includes all expenditures for health services and supplies other than expenses for prepayment and administration and government public health activities.

<sup>2</sup>Includes any insurance benefits and expenses for prepayment (insurance premiums less insurance benefits).

<sup>3</sup>Figures are not separable from direct payment.

NOTE: Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCE: Office of National Cost Estimates, Office of the Actuary: National health expenditures, 1987. Health Care Financing Review. Vol. 10, No. 2. HCFA Pub. No. 03276. Health Care Financing Administration, Washington. U.S. Government Printing Office, Feb. 1989.

**Table 111. Expenditures on hospital care, nursing home care, and physician services and percent distribution, according to source of funds: United States, selected years, 1965–87**

[Data are compiled by the Health Care Financing Administration]

Service and year	Total in billions	Direct payment	Private health insurance	Government		
				Total <sup>1</sup>	Medicaid	Medicare
Hospital care				Percent distribution		
1965 .....	\$ 14.0	16.8	41.1	39.9	...	...
1970 .....	28.0	11.4	34.6	52.4	8.0	18.2
1975 .....	52.4	7.9	35.9	55.1	9.1	21.9
1980 .....	101.6	7.8	38.1	53.1	9.4	25.5
1983 .....	146.8	9.0	37.4	52.3	8.8	27.6
1984 .....	156.1	9.0	36.2	53.7	8.9	28.5
1985 .....	166.7	9.2	35.3	54.3	9.0	28.9
1986 .....	178.4	9.4	36.1	53.4	8.9	28.2
1987 .....	194.7	9.5	36.9	52.5	9.1	27.4
Nursing home care						
1965 .....	2.1	64.5	0.1	34.3	...	...
1970 .....	4.7	50.3	0.4	48.6	30.3	5.6
1975 .....	10.1	42.7	0.7	56.0	47.9	2.9
1980 .....	20.4	43.6	0.9	54.9	48.0	1.9
1983 .....	29.4	48.0	0.9	50.4	44.4	1.8
1984 .....	31.6	49.0	0.9	49.4	43.7	1.7
1985 .....	34.7	49.7	0.9	48.7	43.4	1.6
1986 .....	37.4	50.3	0.9	48.1	42.8	1.5
1987 .....	40.6	49.3	0.9	49.1	43.9	1.4
Physician services						
1965 .....	8.5	61.6	31.4	6.9	...	...
1970 .....	14.3	45.4	33.6	20.9	4.8	11.3
1975 .....	24.9	34.1	39.5	26.3	7.5	13.5
1980 .....	46.8	30.4	42.6	26.9	5.2	16.9
1983 .....	68.4	28.3	43.2	28.4	4.3	19.6
1984 .....	74.4	26.8	44.7	28.4	4.2	19.5
1985 .....	81.4	26.6	43.7	29.7	4.3	20.5
1986 .....	91.6	25.9	43.9	30.2	4.3	21.1
1987 .....	102.7	25.6	43.4	30.9	4.3	21.7

<sup>1</sup>Includes other government expenditures for these health care services, for example, care funded by the Veterans Administration and State and local expenditures on public health.

NOTES: Philanthropy and Industry, which together accounted for 1.2 percent of personal health care expenditures in 1987, have been omitted from the sources of funds. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCE: Office of National Cost Estimates, Office of the Actuary: National health expenditures, 1987. Health Care Financing Review. Vol. 10, No. 2. HCFA Pub. No. 03276. Health Care Financing Administration. Washington. U.S. Government Printing Office, Feb. 1989.

**Table 112. Nursing home average monthly charges per resident and percent of residents, according to primary source of payments and selected facility characteristics: United States, 1977 and 1985**

[Data are based on a sample of nursing homes]

Facility characteristic	Own income or family support		Medicare		Medicaid		Public assistance welfare		All other sources	
	1977	1985	1977	1985	1977	1985	1977	1985	1977	1985
	Average monthly charge <sup>1</sup>									
All facilities . . . . .	\$690	\$1,450	\$1,167	\$2,141	\$720	\$1,504	\$508	\$ 863	\$440	\$1,099
Ownership										
Proprietary . . . . .	686	1,444	1,048	2,058	677	1,363	501	763	562	1,174
Nonprofit and government. . . . .	698	1,462	1,325	*2,456	825	1,851	534	1,237	324	1,029
Certification										
Skilled nursing facility . . . . .	866	1,797	1,136	2,315	955	2,000	575	*1,338	606	1,589
Skilled nursing and intermediate facility. . . . .	800	1,643	1,195	2,156	739	1,509	623	1,215	630	1,702
Intermediate facility . . . . .	567	1,222	...	...	563	1,150	479	900	*456	1,460
Not certified . . . . .	447	999	...	...	...	...	401	664	*155	464
Bed size										
Less than 50 beds . . . . .	516	886	*869	*1,348	663	1,335	394	*835	*295	*749
50-99 beds . . . . .	686	1,388	*1,141	1,760	634	1,323	493	774	468	1,116
100-199 beds. . . . .	721	1,567	1,242	2,192	691	1,413	573	855	551	1,504
200 beds or more. . . . .	823	1,701	*1,179	2,767	925	1,919	602	1,071	370	*866
Geographic region										
Northeast. . . . .	909	1,645	1,369	2,109	975	2,035	*511	738	395	1,244
Midwest. . . . .	652	1,398	*1,160	2,745	639	1,382	537	1,241	524	1,416
South. . . . .	585	1,359	*1,096	2,033	619	1,200	452	727	342	1,057
West . . . . .	663	1,498	*868	1,838	663	1,501	564	837	*499	*843
	Percent of residents									
All facilities . . . . .	38.4	41.6	2.0	1.4	47.8	50.4	6.4	3.4	5.3	3.2
Ownership										
Proprietary . . . . .	37.5	40.1	1.7	1.6	49.6	52.1	7.3	3.9	3.8	2.3
Nonprofit and government. . . . .	40.4	44.9	2.7	*0.9	43.8	46.6	4.4	2.3	8.6	5.3
Certification										
Skilled nursing facility . . . . .	41.5	39.1	4.6	2.6	41.4	53.7	7.7	2.1	4.8	2.4
Skilled nursing and intermediate facility. . . . .	31.6	36.8	2.6	1.9	58.3	57.8	3.2	1.3	4.1	2.2
Intermediate facility . . . . .	36.3	41.4	...	...	55.3	55.9	5.3	*1.5	3.1	*1.1
Not certified . . . . .	64.2	65.5	...	...	...	...	19.0	18.0	16.7	12.9
Bed size										
Less than 50 beds . . . . .	49.6	53.1	*1.8	*1.2	32.7	33.8	10.5	11.2	5.4	*0.6
50-99 beds . . . . .	39.5	49.5	*1.2	*1.3	46.5	42.9	8.1	3.9	4.7	2.5
100-199 beds. . . . .	38.4	39.6	2.6	1.5	50.4	55.2	4.6	1.6	4.0	2.1
200 beds or more . . . . .	28.6	30.1	2.3	*1.5	55.5	57.7	4.6	3.0	9.1	7.7
Geographic region										
Northeast . . . . .	34.6	34.8	3.3	1.7	53.3	52.9	3.8	7.1	5.1	3.5
Midwest. . . . .	44.5	49.1	1.5	*0.8	42.1	45.9	6.5	2.5	5.4	1.6
South. . . . .	32.2	39.4	*1.4	*1.2	52.5	53.8	8.2	2.5	5.7	3.1
West . . . . .	41.3	40.4	2.5	*2.7	44.7	49.2	6.7	*1.2	4.8	6.6

<sup>1</sup>Includes life-care residents and no-charge residents.

\*Relative standard error greater than 30 percent.

SOURCES: National Center for Health Statistics: The National Nursing Home Survey, 1977 summary for the United States, by J. F. Van Nostrand, A. Zappolo, E. Hing, et al. Vital and Health Statistics. Series 13, No. 43. DHEW Pub. No. (PHS) 79-1794. Public Health Service, Washington, U.S. Government Printing Office, July 1979; and The National Nursing Home Survey: 1985 summary for the United States, by E. Hing, E. Sekscenski, and G. Strahan. Vital and Health Statistics. Series 13, No. 97. DHHS Pub. No. (PHS) 89-1758. Public Health Service, Washington, U.S. Government Printing Office, January 1989.

**Table 113. Nursing home average monthly charges per resident and percent of residents, according to selected facility and resident characteristics: United States, 1964, 1973-74, 1977, and 1985**

[Data are based on reporting by a sample of nursing homes]

Facility and resident characteristic	Average monthly charge <sup>1</sup>				Percent of residents			
	1964	1973-74 <sup>2</sup>	1977	1985	1964	1973-74 <sup>2</sup>	1977	1985
<b>Facility</b>								
All facilities . . . . .	\$186	\$479	\$689	\$1,456	100.0	100.0	100.0	100.0
Ownership:								
Proprietary . . . . .	205	489	670	1,379	60.2	69.8	68.2	68.7
Nonprofit and government . . . . .	145	456	732	1,624	39.8	30.2	31.8	31.3
Certification: <sup>3</sup>								
Skilled nursing facility . . . . .	...	566	880	1,905	...	39.8	20.7	18.5
Skilled nursing and intermediate facility . . . . .	...	514	762	1,571	...	24.5	40.5	45.2
Intermediate facility . . . . .	...	376	556	1,179	...	22.4	28.3	24.9
Not certified . . . . .	...	329	390	875	...	13.3	10.6	11.4
Bed size:								
Less than 50 beds . . . . .	---	397	546	1,036	---	15.2	12.9	8.9
50-90 beds . . . . .	---	448	643	1,335	---	34.1	30.5	27.6
100-199 beds . . . . .	---	502	706	1,478	---	35.6	38.8	43.2
200 beds or more . . . . .	---	576	837	1,759	---	15.1	17.9	20.2
Geographic region:								
Northeast . . . . .	213	651	918	1,781	28.6	22.0	22.4	23.6
Midwest . . . . .	171	433	640	1,399	36.6	34.6	34.5	32.5
South . . . . .	161	410	585	1,256	18.1	26.0	27.2	29.4
West . . . . .	204	454	653	1,458	16.7	17.4	15.9	14.5
<b>Resident</b>								
All residents . . . . .	186	479	689	1,456	100.0	100.0	100.0	100.0
Age:								
Under 65 years . . . . .	155	434	585	1,379	12.0	10.6	13.6	11.6
65-74 years . . . . .	184	473	669	1,372	18.9	15.0	16.2	14.2
75-84 years . . . . .	191	488	710	1,468	41.7	35.5	35.7	34.1
85 years and over . . . . .	194	485	719	1,497	27.5	38.8	34.5	40.0
Sex:								
Male . . . . .	171	466	652	1,438	35.0	29.1	28.8	28.4
Female . . . . .	194	484	705	1,463	65.0	70.9	71.2	71.6

<sup>1</sup>Includes life-care residents and no-charge residents.

<sup>2</sup>Data exclude residents of personal care homes.

<sup>3</sup>Medicare extended care facilities and Medicaid skilled nursing homes from the 1973-74 survey were considered to be equivalent to Medicare or Medicaid skilled nursing facilities in 1977 and 1985 for the purposes of this comparison.

SOURCES: National Center for Health Statistics: Charges for care and sources of payment for residents in nursing homes, United States, June-August 1969, by J. F. Van Nostrand and J. F. Sutton. Vital and Health Statistics. Series 12, No. 21. DHEW Pub. No. (HRA) 74-1706. Public Health Service. Washington. U.S. Government Printing Office, July 1973; Charges for care and sources of payment for residents in nursing homes, United States, National Nursing Home Survey, Aug. 1973-Apr. 1974, by E. Hing. Vital and Health Statistics. Series 13, No. 32. DHEW Pub. No. (PHS) 78-1783. Public Health Service. Washington. U.S. Government Printing Office. Nov. 1977; The National Nursing Home Survey: 1977 summary for the United States, by J. F. Van Nostrand, A. Zappolo, E. Hing, et al. Vital and Health Statistics. Series 13, No. 43. DHEW Pub. No. (PHS) 79-1794. Public Health Service. Washington. U.S. Government Printing Office, July 1979; and The National Nursing Home Survey: 1985 summary for the United States, by E. Hing, E. Sekscenski, and G. Strahan. Vital and Health Statistics. Series 13, No. 97. DHHS Pub. No. (PHS) 89-1758. Public Health Service. Washington. U.S. Government Printing Office, January 1989.

**Table 114. National funding for health research and development and average annual percent change, according to source of funds: United States, selected years 1960–88**

[Data are based on multiple sources]

Year and period	Source of funds				
	All funding	Federal	State and local	Industry <sup>1</sup>	Private nonprofit organizations
Amount in millions					
1960.....	\$ 886	\$ 448	\$ 46	\$ 253	\$139
1965.....	1,890	1,174	90	450	176
1970.....	2,847	1,667	170	795	215
1971.....	3,168	1,877	198	860	233
1972.....	3,536	2,147	228	934	227
1973.....	3,750	2,225	245	1,048	232
1974.....	4,443	2,754	254	1,183	252
1975.....	4,701	2,832	286	1,319	264
1976.....	5,107	3,059	312	1,469	267
1977.....	5,568	3,396	338	1,614	220
1978 <sup>2</sup> .....	6,262	3,811	416	1,800	236
1979 <sup>2</sup> .....	7,133	4,321	465	2,093	254
1980 <sup>2</sup> .....	7,935	4,723	480	2,459	274
1981 <sup>2</sup> .....	8,703	4,848	564	2,998	292
1982 <sup>2</sup> .....	9,483	4,970	634	3,561	318
1983 <sup>2</sup> .....	10,634	5,399	712	4,145	377
1984 <sup>2</sup> .....	12,014	6,087	793	4,643	491
1985 <sup>2</sup> .....	13,408	6,791	874	5,244	500
1986 <sup>2</sup> .....	14,801	6,895	1,026	6,166	714
1987 <sup>2</sup> .....	16,827	7,827	1,146	7,130	725
1988 <sup>3</sup> .....	18,729	8,454	1,272	8,260	744
Average annual percent change					
1960–88.....	11.5	11.1	12.6	13.3	6.2
1960–65.....	16.4	21.2	14.4	12.2	4.8
1965–70.....	8.5	7.3	13.6	12.1	4.1
1970–75.....	10.6	11.2	11.0	10.7	4.2
1970–71.....	11.3	12.6	16.5	8.2	8.4
1971–72.....	11.6	14.4	15.2	8.6	-2.6
1972–73.....	6.1	3.6	7.5	12.2	2.2
1973–74.....	18.5	23.8	3.7	12.9	8.6
1974–75.....	5.8	2.8	12.6	11.5	4.8
1975–80.....	11.0	10.8	10.9	13.3	0.7
1975–76.....	8.6	8.0	9.1	11.4	1.1
1976–77.....	9.0	11.0	8.3	9.9	-17.6
1977–78.....	12.5	12.2	23.1	11.5	7.3
1978–79.....	13.9	13.4	11.8	16.3	7.6
1979–80.....	11.2	9.3	3.2	17.5	7.9
1980–85.....	11.1	7.5	12.7	16.4	12.8
1980–81.....	9.7	2.6	17.5	21.9	6.6
1981–82.....	9.0	2.5	12.4	18.8	8.9
1982–83.....	12.1	8.6	12.3	16.4	18.6
1983–84.....	13.0	12.7	11.4	12.0	30.2
1984–85.....	11.6	11.6	10.2	12.9	1.8
1985–86.....	10.4	1.5	17.4	17.6	42.8
1986–87.....	13.7	13.5	11.7	15.6	1.5
1987–88.....	11.3	8.0	11.0	15.8	2.6

<sup>1</sup>Includes expenditures for drug research. These expenditures are included in the "drugs and sundries" component of the Health Care Financing Administration's National Health Expenditure Series, not under "research."

<sup>2</sup>Revised figures.

<sup>3</sup>Projected.

SOURCES: National Institutes of Health: NIH Data Book, 1989. Public Health Service, U.S. Department of Health and Human Services, NIH Pub. No. 90-1261, Dec. 1989; National Institutes of Health, Office of Science Policy and Legislation: Selected data.

**Table 115. Federal funding for health research and development and percent distribution, according to agency: United States, selected fiscal years 1970–88**

[Data are compiled from Federal Government sources]

Agency	1970 <sup>1</sup>	1975 <sup>1</sup>	1980	1983	1984	1985	1986	1987 <sup>2</sup>	1988 <sup>2</sup>
Amount in millions									
Total . . . . .	\$1,667	\$2,832	\$4,723	\$5,399	\$6,087	\$6,791	\$6,895	\$7,827	\$8,454
Percent distribution									
All Federal agencies . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Department of Health and Human Services . . . . .	70.6	77.6	78.2	80.0	78.9	79.7	81.1	83.5	83.9
National Institutes of Health . . . . .	52.4	66.4	67.4	70.2	69.9	71.1	72.6	74.8	74.4
Centers for Disease Control . . . . .	---	1.5	1.8	1.4	0.7	0.7	0.8	0.8	1.0
Other Public Health Service . . . . .	16.2	8.3	7.9	7.5	7.5	7.3	7.3	7.9	8.1
Other Department of Health and Human Services . . . . .	2.0	1.3	1.1	0.8	0.7	0.6	0.5	0.4	0.4
Other agencies . . . . .	29.4	22.4	21.8	20.0	21.1	20.3	18.9	16.5	16.1
Department of Agriculture . . . . .	3.0	2.2	3.1	2.7	2.4	2.1	1.1	1.3	1.8
Department of Defense . . . . .	7.5	4.1	4.5	5.7	6.8	6.5	7.2	5.2	5.1
Department of Education <sup>3</sup> . . . . .	...	...	0.7	0.5	0.7	0.6	0.6	0.4	0.4
Department of Energy <sup>4</sup> . . . . .	6.3	5.8	4.5	3.1	3.0	2.6	2.4	2.3	2.4
Department of the Interior . . . . .	0.7	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Environmental Protection Agency . . . . .	...	1.3	1.7	0.7	0.7	0.8	0.5	0.6	0.3
International Development Cooperation Agency <sup>5</sup> . . . . .	0.6	0.2	0.3	0.6	0.3	0.6	0.4	0.4	0.3
National Aeronautics and Space Administration . . . . .	5.2	2.6	1.5	1.4	1.8	1.7	1.9	1.7	1.6
National Science Foundation . . . . .	1.7	1.6	1.6	1.4	1.4	1.3	1.2	1.1	1.0
Veterans Administration . . . . .	3.5	3.3	2.8	3.0	3.1	3.3	2.7	2.7	2.5
All other departments and agencies . . . . .	0.9	1.0	0.4	0.4	0.3	0.4	0.4	0.4	0.3

<sup>1</sup>Data for fiscal year ending June 30; all other data for fiscal year ending September 30.

<sup>2</sup>Estimates.

<sup>3</sup>Office of Handicapped Research, formerly included in other Department of Health and Human Services.

<sup>4</sup>Includes Atomic Energy Commission and Energy Research and Development Administration.

<sup>5</sup>Includes Department of State and Agency for International Development.

SOURCES: National Institutes of Health: NIH Data Book, 1989. Public Health Service, U.S. Department of Health and Human Services, NIH Pub. No. 90-1261, Dec. 1989; Office of Science Policy and Legislation, National Institutes of Health, Public Health Service: Selected data.

**Table 116. Federal spending for human immunodeficiency virus (HIV)-related activities according to agency and type of activity: United States, fiscal years 1982–88**

<i>Agency and type of activity</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>
<i>Agency</i>	<i>Amount in millions</i>						
All Federal spending . . . . .	\$6	\$44	\$104	\$207	\$509	\$899	\$1,548
Department of Health and Human Services, total . .	6	39	97	197	407	769	1,408
Public Health Service, total . . . . .	6	29	61	109	234	502	957
National Institutes of Health . . . . .	3	22	44	64	135	261	468
Alcohol, Drug Abuse, and Mental Health							
Administration . . . . .	–	1	3	3	12	48	112
Centers for Disease Control . . . . .	2	6	14	33	62	136	305
Food and Drug Administration . . . . .	–	–	1	9	10	16	30
Health Resources and Services Administration . . .	–	–	–	–	15	12	37
Office of the Assistant Secretary for Health . . . . .	–	–	–	–	–	30	4
Health Care Financing Administration . . . . .	–	10	30	75	140	215	360
Social Security Administration . . . . .	–	–	6	13	33	51	88
Other Department of Health and Human Services							
Agencies . . . . .	–	–	–	–	–	–	3
Department of Veterans Affairs . . . . .	–	5	6	10	23	54	83
Department of Defense . . . . .	–	–	–	–	79	74	52
Other departments . . . . .	–	–	–	–	1	2	5
<i>Activity</i>							
Research . . . . .	3	22	59	86	204	345	626
Public Health Service . . . . .	3	22	57	83	164	317	607
Department of Veterans Affairs . . . . .	–	–	2	3	3	6	8
Department of Defense . . . . .	–	–	–	–	38	22	12
Other . . . . .	–	–	–	–	–	1	1
Education and prevention . . . . .	2	7	4	25	73	172	354
Public Health Service . . . . .	2	7	4	25	55	145	321
Department of Defense . . . . .	–	–	–	–	18	25	26
Other . . . . .	–	–	–	–	–	2	8
Medical care . . . . .	–	15	35	83	199	331	480
Department of Veterans Affairs . . . . .	–	5	5	8	20	47	74
Public Health Service . . . . .	–	–	–	–	16	41	29
Department of Defense . . . . .	–	–	–	–	23	27	15
Other . . . . .	–	–	–	–	1	1	1
Health Care Financing Administration:							
Medicaid (Federal share) . . . . .	–	10	30	70	130	200	330
Medicare . . . . .	–	–	–	5	10	15	30
Cash assistance . . . . .	–	–	6	13	33	51	88
Social Security Administration:							
Disability Insurance . . . . .	–	–	5	10	25	40	70
Supplemental Security Income . . . . .	–	–	1	3	8	11	18

NOTES: In 1988 total expenditures on HIV-related activities were estimated at \$4.4 billion. This total includes, for example, expenditures covered by private health insurance, out-of-pocket costs to patients, and the States' share of Medicaid, public hospital, and other local expenditures.

SOURCE: W. Winkenwerder, A. R. Kessler, and R. M. Stolec: Federal spending for illness caused by the human immunodeficiency virus. *The New England Journal of Medicine*. Vol. 320, No. 24, June 15, 1989.



**Table 117. Public health expenditures by State and territorial health agencies, according to source of funds and program area: United States, selected fiscal years 1976–87**

<i>Funds and program area</i>	<i>1976</i>	<i>1978</i>	<i>1980</i>	<i>1982</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>
Amount in millions								
Total . . . . .	\$2,539.8	\$3,256.2	\$4,450.8	\$5,144.5	\$6,241.9	\$6,949.5	\$7,491.0	\$8,127.6
Source of funds								
Federal grants and contracts . . . . .	796.9	1,133.2	1,573.1	1,777.8	2,344.0	2,555.7	2,699.6	2,821.7
Department of Agriculture . . . . .	153.7	350.8	678.4	916.3	1,306.7	1,455.1	1,551.2	1,651.6
Other . . . . .	643.2	782.3	894.7	861.4	1,037.3	1,100.7	1,148.4	1,170.1
State . . . . .	1,485.7	1,802.1	2,513.3	2,922.9	3,352.2	3,809.6	4,123.7	4,562.1
Local . . . . .	96.1	87.0	114.0	122.9	150.5	149.2	147.9	139.7
Fees, reimbursements, and other . .	161.2	233.8	250.3	321.0	395.3	435.0	519.7	604.1
Program area								
WIC <sup>1</sup> . . . . .	137.7	337.2	660.7	889.7	1,268.6	1,431.1	1,534.1	1,622.1
Noninstitutional personal health other than WIC <sup>2</sup> . . . . .	1,079.0	1,356.1	1,698.2	1,904.9	2,379.7	2,521.4	2,776.9	3,129.5
State health agency-operated institutions . . . . .	531.1	641.1	819.3	949.6	978.7	1,153.4	1,235.8	1,226.7
Environmental health . . . . .	199.2	237.0	298.0	354.6	414.8	467.0	479.8	528.2
Health resources . . . . .	208.2	297.2	356.5	360.2	562.8	626.7	650.9	709.4
Laboratory . . . . .	104.1	131.1	161.1	181.6	214.1	229.2	237.9	264.7
Other <sup>3</sup> . . . . .	280.6	256.3	457.0	503.9	423.2	520.8	575.6	646.9
Percent distribution								
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Source of funds								
Federal grants and contracts . . . . .	31.4	34.8	35.3	34.6	37.6	36.8	36.0	34.7
Department of Agriculture . . . . .	6.1	10.8	15.2	17.8	20.9	20.9	20.7	20.3
Other . . . . .	25.3	24.0	20.1	16.7	16.6	15.8	15.3	14.4
State . . . . .	58.5	55.3	56.5	56.8	53.7	54.8	55.0	56.1
Local . . . . .	3.8	2.7	2.6	2.4	2.4	2.1	2.0	1.7
Fees, reimbursements, and other . .	6.3	7.2	5.6	6.2	6.3	6.3	6.9	7.4
Program area								
WIC <sup>1</sup> . . . . .	5.4	10.4	14.8	17.3	20.3	20.6	20.5	20.0
Noninstitutional personal health other than WIC <sup>2</sup> . . . . .	42.5	41.6	38.2	37.0	38.1	36.3	37.1	38.5
State health agency-operated institutions . . . . .	20.9	19.7	18.4	18.5	15.7	16.6	16.5	15.1
Environmental health . . . . .	7.8	7.3	6.7	6.9	6.6	6.7	6.4	6.5
Health resources . . . . .	8.2	9.1	8.0	7.0	9.0	9.0	8.7	8.7
Laboratory . . . . .	4.1	4.0	3.6	3.5	3.4	3.3	3.2	3.3
Other <sup>3</sup> . . . . .	11.0	7.9	10.3	9.8	6.8	7.5	7.7	8.0

<sup>1</sup>Supplemental Food Program for Women, Infants, and Children.

<sup>2</sup>Includes funds for maternal and child health services other than WIC, handicapped children's services, communicable disease control, dental health, chronic disease control, mental health, alcohol and drug abuse, and supporting personal health programs.

<sup>3</sup>Funds for general administration and funds to local health departments not allocated to program areas.

NOTE: Data are reported for 55 health agencies in 50 States, the District of Columbia, and 4 territories (Puerto Rico, American Samoa, Guam, and the Virgin Islands).

SOURCES: Public Health Foundation: Public Health Agencies 1987: Expenditures and Sources of Funds. Washington. 1987; Unpublished data.

**Table 118 (page 1 of 2). Personal health care per capita expenditures and average annual percent change, according to geographic division and State: United States, selected years 1966-82**

[Data are compiled by the Health Care Financing Administration]

Geographic division and State	1966	1969	1972	1976	1980	1982	Average annual percent change	
							1966-80	1980-82
Amount per capita								
United States . . . . .	\$201	\$280	\$381	\$ 605	\$ 958	\$1,220	11.8	12.8
New England . . . . .	234	328	441	686	1,058	1,356	11.4	13.2
Maine . . . . .	173	242	328	542	870	1,091	12.2	12.0
New Hampshire . . . . .	188	245	330	507	759	986	10.5	14.0
Vermont . . . . .	197	274	352	531	778	978	10.3	12.1
Massachusetts . . . . .	253	360	489	760	1,175	1,508	11.6	13.3
Rhode Island . . . . .	231	315	413	672	1,062	1,351	11.5	12.8
Connecticut . . . . .	236	330	438	675	1,046	1,348	11.2	13.5
Middle Atlantic . . . . .	227	319	425	662	1,017	1,310	11.3	13.5
New York . . . . .	258	366	488	745	1,107	1,417	11.0	13.1
New Jersey . . . . .	192	264	355	578	877	1,115	11.5	12.8
Pennsylvania . . . . .	201	279	372	590	972	1,273	11.9	14.4
East North Central . . . . .	203	278	378	610	978	1,249	11.9	13.0
Ohio . . . . .	195	264	361	597	958	1,247	12.0	14.1
Indiana . . . . .	182	252	337	542	861	1,101	11.7	13.1
Illinois . . . . .	220	300	407	634	1,033	1,308	11.7	12.5
Michigan . . . . .	211	286	388	635	1,014	1,281	11.9	12.4
Wisconsin . . . . .	192	269	373	610	952	1,219	12.1	13.2
West North Central . . . . .	200	273	369	597	973	1,241	12.0	12.9
Minnesota . . . . .	216	287	389	602	976	1,229	11.4	12.2
Iowa . . . . .	197	265	351	563	935	1,176	11.8	12.1
Missouri . . . . .	198	273	365	627	997	1,285	12.2	13.5
North Dakota . . . . .	197	273	367	676	1,034	1,325	12.6	13.2
South Dakota . . . . .	181	241	327	522	887	1,154	12.0	14.1
Nebraska . . . . .	195	268	371	598	948	1,216	12.0	13.3
Kansas . . . . .	195	270	379	568	988	1,271	12.3	13.4
South Atlantic . . . . .	169	242	342	551	879	1,115	12.5	12.6
Delaware . . . . .	209	286	381	599	912	1,153	11.1	12.4
Maryland . . . . .	190	273	390	609	957	1,232	12.2	13.5
District of Columbia . . . . .	430	667	958	1,349	2,198	2,838	12.4	13.6
Virginia . . . . .	151	213	301	493	811	1,054	12.8	14.0
West Virginia . . . . .	161	227	313	508	808	1,057	12.2	14.4
North Carolina . . . . .	143	204	282	461	737	931	12.4	12.4
South Carolina . . . . .	125	182	251	423	686	857	12.9	11.8
Georgia . . . . .	150	217	319	515	843	1,048	13.1	11.5
Florida . . . . .	184	264	377	623	975	1,228	12.6	12.2
East South Central . . . . .	148	211	294	483	798	1,025	12.8	13.3
Kentucky . . . . .	155	218	286	444	739	957	11.8	13.8
Tennessee . . . . .	166	232	324	531	874	1,144	12.6	14.4
Alabama . . . . .	145	210	300	501	809	1,033	13.1	13.0
Mississippi . . . . .	115	163	242	425	730	897	14.1	10.8
West South Central . . . . .	170	242	331	533	859	1,096	12.3	13.0
Arkansas . . . . .	142	198	284	470	766	994	12.8	13.9
Louisiana . . . . .	156	226	322	511	857	1,106	12.9	13.6
Oklahoma . . . . .	183	263	351	539	852	1,086	11.6	12.9
Texas . . . . .	177	249	338	549	876	1,110	12.1	12.6
Mountain . . . . .	189	259	346	541	849	1,070	11.3	12.3
Montana . . . . .	175	236	325	510	801	1,036	11.5	13.7
Idaho . . . . .	153	210	292	455	695	868	11.4	11.8
Wyoming . . . . .	200	268	327	451	710	873	9.5	10.9
Colorado . . . . .	233	311	396	605	942	1,209	10.5	13.3
New Mexico . . . . .	157	214	282	458	722	904	11.5	11.9
Arizona . . . . .	190	271	376	582	882	1,112	11.6	12.3
Utah . . . . .	158	211	286	458	714	896	11.4	12.0
Nevada . . . . .	196	282	389	658	1,163	1,380	13.6	8.9

See notes at end of table.

**Table 118 (page 2 of 2). Personal health care per capita expenditures and average annual percent change, according to geographic division and State: United States, selected years 1966–82**

[Data are compiled by the Health Care Financing Administration]

<i>Geographic division and State</i>	1966	1969	1972	1976	1980	1982	<i>Average annual percent change</i>		
							1966–80	1980–82	
	Amount per capita								
Pacific . . . . .	234	328	440	691	1,093	1,380	11.6	12.4	
Washington . . . . .	219	297	390	584	915	1,165	10.8	12.8	
Oregon . . . . .	197	274	364	587	912	1,165	11.6	13.0	
California . . . . .	242	340	460	727	1,152	1,451	11.8	12.2	
Alaska . . . . .	227	289	340	560	961	1,187	10.9	11.1	
Hawaii . . . . .	208	300	401	598	932	1,228	11.3	14.8	

NOTE: Per capita spending estimates are the expenditure level of services rendered in a geographic area per resident population. Per capita figures cannot be interpreted directly as spending per resident unless substantially all of the services provided in a State are consumed by residents of that State. U.S. estimates do not include services provided in U.S. territories or possessions, services rendered by U.S. taxpayers while living abroad, and services furnished to U.S. personnel living abroad or on military vessels.

SOURCE: Office of the Actuary: Personal health care expenditures by State, selected years 1966–1982, by K. R. Levit. Health Care Financing Review. HCFA Pub. No. 03199. Health Care Financing Administration. Washington. U.S. Government Printing Office, Summer 1985.

**Table 119 (page 1 of 2). Hospital care per capita expenditures and average annual percent change, according to geographic division and State: United States, selected years 1966–82**

[Data are compiled by the Health Care Financing Administration]

Geographic division and State	1966	1969	1972	1976	1980	1982	Average annual percent change	
							1966–80	1980–82
Amount per capita								
United States . . . . .	\$ 80	\$119	\$166	\$276	\$ 441	\$ 577	13.0	14.4
New England . . . . .	101	151	207	335	515	669	12.3	14.0
Maine . . . . .	74	107	138	246	411	517	13.0	12.2
New Hampshire . . . . .	73	98	134	213	334	458	11.5	17.1
Vermont . . . . .	86	126	162	242	338	443	10.3	14.5
Massachusetts . . . . .	116	178	247	400	624	810	12.8	13.9
Rhode Island . . . . .	101	148	196	328	492	623	12.0	12.5
Connecticut . . . . .	91	133	185	296	444	578	12.0	14.1
Middle Atlantic . . . . .	94	144	200	328	495	641	12.6	13.8
New York . . . . .	110	171	236	377	540	679	12.0	12.1
New Jersey . . . . .	71	103	145	254	371	498	12.5	15.9
Pennsylvania . . . . .	82	127	178	300	505	675	13.9	15.6
East North Central . . . . .	81	117	167	286	465	615	13.3	15.0
Ohio . . . . .	74	107	154	273	446	599	13.7	15.9
Indiana . . . . .	63	95	134	235	383	512	13.8	15.6
Illinois . . . . .	90	132	195	323	539	700	13.6	14.0
Michigan . . . . .	90	123	170	295	477	628	12.7	14.7
Wisconsin . . . . .	76	117	163	268	401	539	12.6	15.9
West North Central . . . . .	79	117	158	270	451	592	13.3	14.6
Minnesota . . . . .	89	122	168	272	425	540	11.8	12.7
Iowa . . . . .	69	103	139	238	404	536	13.5	15.2
Missouri . . . . .	81	123	164	295	510	679	14.0	15.4
North Dakota . . . . .	83	121	156	283	479	624	13.3	14.1
South Dakota . . . . .	75	101	133	234	398	530	12.7	15.4
Nebraska . . . . .	75	115	157	259	429	568	13.3	15.1
Kansas . . . . .	76	116	160	269	451	593	13.6	14.7
South Atlantic . . . . .	68	103	151	252	411	539	13.7	14.5
Delaware . . . . .	91	131	174	291	437	552	11.9	12.4
Maryland . . . . .	84	122	185	287	464	606	13.0	14.3
District of Columbia . . . . .	192	334	564	903	1,516	2,021	15.9	15.5
Virginia . . . . .	63	92	132	218	372	506	13.5	16.6
West Virginia . . . . .	70	107	152	264	424	564	13.7	15.3
North Carolina . . . . .	57	85	121	201	324	428	13.2	14.9
South Carolina . . . . .	51	79	107	188	303	397	13.6	14.5
Georgia . . . . .	56	86	135	228	386	492	14.8	12.9
Florida . . . . .	66	103	151	268	434	569	14.4	14.5
East South Central . . . . .	60	91	131	226	383	507	14.2	15.1
Kentucky . . . . .	60	91	121	202	326	433	12.9	15.2
Tennessee . . . . .	67	102	149	252	430	578	14.2	15.9
Alabama . . . . .	61	92	134	238	408	541	14.5	15.2
Mississippi . . . . .	48	73	111	198	343	431	15.1	12.1
West South Central . . . . .	66	97	135	229	380	500	13.3	14.7
Arkansas . . . . .	56	77	114	197	324	443	13.4	16.9
Louisiana . . . . .	63	94	145	239	412	549	14.4	15.4
Oklahoma . . . . .	63	102	132	224	378	498	13.7	14.8
Texas . . . . .	69	101	137	233	379	495	12.9	14.3
Mountain . . . . .	76	109	145	234	377	483	12.1	13.2
Montana . . . . .	67	95	122	193	336	445	12.2	15.1
Idaho . . . . .	50	75	104	162	254	335	12.3	14.8
Wyoming . . . . .	85	116	123	188	313	398	9.8	12.8
Colorado . . . . .	100	136	171	274	422	557	10.8	14.9
New Mexico . . . . .	69	96	122	222	348	449	12.3	13.6
Arizona . . . . .	78	119	169	256	396	498	12.3	12.1
Utah . . . . .	58	81	114	188	307	399	12.6	14.0
Nevada . . . . .	68	108	151	273	540	630	16.0	8.0

See notes at end of table.

**Table 119 (page 2 of 2). Hospital care per capita expenditures and average annual percent change, according to geographic division and State: United States, selected years 1966–82**

[Data are compiled by the Health Care Financing Administration]

<i>Geographic division and State</i>	<i>1966</i>	<i>1969</i>	<i>1972</i>	<i>1976</i>	<i>1980</i>	<i>1982</i>	<i>Average annual percent change</i>		
							<i>1966–80</i>	<i>1980–82</i>	
	Amount per capita								
Pacific . . . . .	85	123	169	280	445	583	12.6	14.5	
Washington . . . . .	72	102	133	223	337	434	11.7	13.5	
Oregon . . . . .	66	96	127	219	347	468	12.6	16.1	
California . . . . .	88	129	180	298	479	626	12.9	14.3	
Alaska . . . . .	149	173	164	255	446	552	8.1	11.3	
Hawaii . . . . .	79	115	146	222	352	479	11.3	16.7	

NOTE: Per capita spending estimates are the expenditure level of services rendered in a geographic area per resident population. Per capita figures cannot be interpreted directly as spending per resident unless substantially all of the services provided in a State are consumed by residents of that State.

SOURCE: Office of the Actuary: Personal health care expenditures by State, selected years 1966–1982, by K. R. Levit. Health Care Financing Review. HCFA Pub. No. 03199. Health Care Financing Administration. Washington. U.S. Government Printing Office, Summer 1985.

**Table 120 (page 1 of 2). Nursing home care per capita expenditures and average annual percent change, according to geographic division and State: United States, selected years 1966–82**

[Data are compiled by the Health Care Financing Administration]

Geographic division and State	1966	1969	1972	1976	1980	1982	Average annual percent change	
							1966–80	1980–82
Amount per capita								
United States . . . . .	\$12	\$19	\$31	\$52	\$ 90	\$114	15.5	12.5
New England . . . . .	20	28	47	85	145	186	15.2	13.3
Maine . . . . .	15	23	40	70	134	176	16.9	14.6
New Hampshire . . . . .	16	20	35	43	71	90	11.2	12.6
Vermont . . . . .	19	27	39	75	121	149	14.1	11.0
Massachusetts . . . . .	22	32	52	94	152	192	14.8	12.4
Rhode Island . . . . .	15	21	34	78	169	214	18.9	12.5
Connecticut . . . . .	19	29	49	90	156	206	16.2	14.9
Middle Atlantic . . . . .	14	21	36	66	108	145	15.7	15.9
New York . . . . .	16	26	46	85	135	184	16.5	16.7
New Jersey . . . . .	10	15	24	45	77	97	15.7	12.2
Pennsylvania . . . . .	12	18	28	48	88	116	15.3	14.8
East North Central . . . . .	12	19	31	54	97	125	16.1	13.5
Ohio . . . . .	12	18	27	53	99	143	16.3	20.2
Indiana . . . . .	12	20	33	57	102	129	16.5	12.5
Illinois . . . . .	13	20	33	52	90	109	14.8	10.1
Michigan . . . . .	10	17	27	48	86	106	16.6	11.0
Wisconsin . . . . .	14	22	39	71	120	150	16.6	11.8
West North Central . . . . .	18	28	44	69	131	172	15.2	14.6
Minnesota . . . . .	22	33	57	91	175	235	16.0	15.9
Iowa . . . . .	22	36	51	81	143	168	14.3	8.4
Missouri . . . . .	12	19	29	47	95	139	15.9	21.0
North Dakota . . . . .	19	33	47	60	112	154	13.5	17.3
South Dakota . . . . .	18	30	49	69	132	165	15.3	11.8
Nebraska . . . . .	17	27	42	68	112	140	14.4	11.8
Kansas . . . . .	18	26	42	65	130	163	15.2	12.0
South Atlantic . . . . .	8	12	20	33	59	77	15.3	14.2
Delaware . . . . .	8	12	20	42	67	86	16.4	13.3
Maryland . . . . .	9	17	24	46	75	102	16.4	16.6
District of Columbia . . . . .	6	10	18	22	43	55	15.1	13.1
Virginia . . . . .	6	9	16	30	63	85	18.3	16.2
West Virginia . . . . .	3	5	12	20	41	62	20.5	23.0
North Carolina . . . . .	6	11	16	30	58	75	17.6	13.7
South Carolina . . . . .	6	9	16	28	62	76	18.2	10.7
Georgia . . . . .	8	13	23	37	67	79	16.4	8.6
Florida . . . . .	11	15	25	31	48	65	11.1	16.4
East South Central . . . . .	7	11	20	35	67	86	17.5	13.3
Kentucky . . . . .	9	14	23	40	81	104	17.0	13.3
Tennessee . . . . .	6	10	17	28	56	76	17.3	16.5
Alabama . . . . .	8	14	22	40	62	79	15.8	12.9
Mississippi . . . . .	4	7	15	30	71	90	22.8	12.6
West South Central . . . . .	12	19	31	48	79	94	14.4	9.1
Arkansas . . . . .	13	21	34	50	95	112	15.3	8.6
Louisiana . . . . .	8	13	22	38	68	89	16.5	14.4
Oklahoma . . . . .	19	31	47	58	91	111	11.8	10.4
Texas . . . . .	11	18	30	48	78	88	15.0	6.2
Mountain . . . . .	10	15	23	35	59	74	13.5	12.0
Montana . . . . .	12	17	33	43	66	92	12.9	18.1
Idaho . . . . .	12	17	26	45	69	84	13.3	10.3
Wyoming . . . . .	6	12	23	24	38	49	14.1	13.6
Colorado . . . . .	15	21	33	54	86	104	13.3	10.0
New Mexico . . . . .	5	9	15	16	34	49	14.7	20.0
Arizona . . . . .	8	13	17	22	41	53	12.4	13.7
Utah . . . . .	9	12	17	30	55	63	13.8	7.0
Nevada . . . . .	7	10	20	29	60	82	16.6	16.9

See notes at end of table.

**Table 120 (page 2 of 2). Nursing home care per capita expenditures and average annual percent change, according to geographic division and State: United States, selected years 1966–82**

[Data are compiled by the Health Care Financing Administration]

<i>Geographic division and State</i>	<i>1966</i>	<i>1969</i>	<i>1972</i>	<i>1976</i>	<i>1980</i>	<i>1982</i>	<i>Average annual percent change</i>		
							<i>1966–80</i>	<i>1980–82</i>	
	Amount per capita								
Pacific .....	12	18	31	48	82	97	14.7	8.8	
Washington .....	16	21	43	61	109	137	14.7	12.1	
Oregon .....	17	24	37	57	94	113	13.0	9.6	
California .....	11	18	30	47	78	91	15.0	8.0	
Alaska .....	1	2	9	17	14	26	20.7	36.3	
Hawaii .....	6	10	18	28	36	63	13.7	32.3	

NOTE: Per capita spending estimates are the expenditure level of services rendered in a geographic area per resident population. Per capita figures cannot be interpreted directly as spending per resident unless substantially all of the services provided in a State are consumed by residents of that State.

SOURCE: Office of the Actuary: Personal health care expenditures by State, selected years 1966–1982, by K. R. Levit. Health Care Financing Review. HCFA Pub. No. 03199. Health Care Financing Administration. Washington. U.S. Government Printing Office, Summer 1985.

**Table 121. Health care coverage for persons under 65 years of age, according to type of coverage and selected characteristics: United States, 1980, 1982, and 1986**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Private insurance			Medicaid <sup>1</sup>			Not covered <sup>2</sup>		
	1980	1982	1986	1980	1982	1986	1980	1982	1986
Percent of population									
Total <sup>3,4</sup> . . . . .	78.8	77.3	75.9	5.9	5.6	5.9	12.5	14.7	15.3
Age									
Under 15 years . . . . .	74.7	72.7	71.4	10.2	9.8	10.4	12.8	15.8	16.1
Under 5 years . . . . .	70.3	69.7	68.0	12.0	11.4	12.0	15.2	17.0	17.5
5–14 years . . . . .	76.7	74.2	73.1	9.4	8.9	9.5	11.7	15.2	15.3
15–44 years . . . . .	79.3	77.6	75.8	4.2	4.1	4.1	14.2	16.5	17.4
45–64 years . . . . .	83.6	83.1	82.4	3.1	2.7	3.0	8.6	9.7	10.3
Sex <sup>3</sup>									
Male . . . . .	79.5	78.0	76.4	4.7	4.5	4.8	12.7	14.8	15.8
Female . . . . .	78.2	76.7	75.4	7.1	6.6	6.8	12.2	14.5	14.9
Race <sup>3</sup>									
White . . . . .	81.9	80.4	79.1	3.9	3.6	4.0	11.4	13.5	14.0
Black . . . . .	60.1	59.6	57.0	17.9	17.2	17.4	19.0	21.2	22.6
Family income <sup>3,5</sup>									
Less than \$10,000 . . . . .	38.6	38.3	31.3	27.6	24.9	28.4	31.0	35.0	37.0
\$10,000–\$14,999 . . . . .	61.1	67.6	58.1	9.2	4.4	8.8	25.9	24.7	31.3
\$15,000–\$19,999 . . . . .	79.0	81.3	72.6	3.0	2.0	*2.7	15.0	14.2	21.2
\$20,000–\$34,999 . . . . .	90.2	91.8	88.3	1.1	0.7	*1.0	6.2	5.7	8.4
\$35,000 or more . . . . .	93.7	93.8	93.7	0.6	0.5	*0.4	3.9	4.1	3.9
Geographic region <sup>3</sup>									
Northeast . . . . .	81.7	80.5	81.6	7.0	6.9	5.9	10.3	11.0	10.7
Midwest . . . . .	83.8	82.0	79.7	5.8	5.8	7.6	9.0	10.9	10.9
South . . . . .	75.6	74.3	71.6	4.8	4.6	5.1	15.0	17.5	19.2
West . . . . .	74.3	72.4	72.9	6.5	5.8	5.1	15.3	19.1	18.8
Location of residence <sup>3</sup>									
Within MSA . . . . .	79.7	78.0	76.8	6.2	6.0	5.7	11.3	13.6	14.5
Outside MSA . . . . .	77.0	75.9	72.7	5.2	4.7	6.2	14.8	17.0	18.2

<sup>1</sup>Includes persons receiving Aid to Families with Dependent Children or Supplemental Security Income or those with current Medicaid cards.

<sup>2</sup>Includes persons not covered by private insurance, Medicaid, Medicare, and military plans.

<sup>3</sup>Age adjusted.

<sup>4</sup>Includes all other races not shown separately and unknown family income.

<sup>5</sup>Family income categories for 1982 and 1986. Income categories in 1980 are less than \$7,000; \$7,000–\$9,999; \$10,000–\$14,999; \$15,000–\$24,999; \$25,000 or more.

\*Relative standard error greater than 30 percent.

NOTES: Denominators include persons with unknown health insurance (1.7 percent in 1986). Percents do not add to 100 because the percent with other types of health insurance (e.g., Medicare, military) and unknown health insurance are not shown, and because persons with both private insurance and Medicaid appear in both columns.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.



**Table 122. Health care coverage for persons 65 years of age and over, according to type of coverage and selected characteristics: United States, 1980, 1982, and 1986**

[Data are based on household interviews of a sample of the civilian noninstitutionalized population]

Characteristic	Medicare and private insurance			Medicare and Medicaid <sup>1</sup>			Medicare <sup>2</sup>		
	1980	1982	1986	1980	1982	1986	1980	1982	1986
Percent of population									
Total <sup>3,4</sup> . . . . .	64.4	65.5	71.6	8.1	6.1	5.8	22.7	23.1	17.9
Age									
65-74 years . . . . .	67.0	68.2	73.5	6.8	4.8	4.9	20.6	20.5	15.7
75 years and over . . . . .	59.9	60.6	68.2	10.3	8.3	7.3	26.4	27.7	21.7
75-84 years . . . . .	61.9	62.7	70.4	9.7	8.1	7.0	24.8	26.0	19.8
85 years and over . . . . .	51.2	51.3	58.7	12.7	9.3	8.8	33.0	34.9	29.6
Sex <sup>3</sup>									
Male . . . . .	65.6	66.2	72.8	5.7	4.3	3.7	23.1	23.4	18.4
Female . . . . .	63.6	65.0	70.8	9.6	7.3	7.3	22.4	23.0	17.5
Race <sup>3</sup>									
White . . . . .	68.3	68.9	75.4	6.6	4.8	4.5	21.0	21.6	16.1
Black . . . . .	26.5	33.0	34.2	23.3	18.2	19.7	40.6	38.5	34.9
Family income <sup>3,5</sup>									
Less than \$10,000 . . . . .	53.4	55.6	54.7	15.7	11.7	14.4	28.2	28.9	27.1
\$10,000-\$14,999 . . . . .	72.9	76.3	78.0	4.8	3.3	*3.9	19.1	17.3	15.5
\$15,000-\$19,999 . . . . .	74.1	74.1	82.8	3.9	1.8	*2.0	18.3	17.8	11.5
\$20,000-\$34,999 . . . . .	74.4	74.6	82.0	2.5	*1.2	*2.2	16.8	17.9	10.0
\$35,000 or more . . . . .	71.9	73.7	77.5	2.2	*1.3	*1.4	18.3	16.0	13.9
Geographic region <sup>3</sup>									
Northeast . . . . .	67.4	66.6	74.1	5.6	4.1	4.1	22.3	23.3	17.0
Midwest . . . . .	71.2	71.3	77.7	4.9	3.1	3.8	19.9	21.2	14.5
South . . . . .	58.9	60.2	65.3	10.8	9.2	8.0	25.6	25.4	21.0
West . . . . .	60.7	65.3	70.6	10.9	7.2	6.6	21.7	21.5	18.2
Location of residence <sup>3</sup>									
Within MSA . . . . .	64.2	66.1	71.7	7.5	5.0	5.2	23.0	22.8	17.8
Outside MSA . . . . .	64.9	64.3	71.2	9.2	7.8	7.2	22.2	23.7	18.1

<sup>1</sup>Includes persons receiving Aid to Families with Dependent Children or Supplemental Security Income or those with current Medicaid cards.

<sup>2</sup>Includes persons not covered by private insurance or Medicaid.

<sup>3</sup>Age adjusted.

<sup>4</sup>Includes all other races not shown separately and unknown family income.

<sup>5</sup>Family income categories for 1982 and 1986. Income categories in 1980 are less than \$7,000; \$7,000-\$9,999; \$10,000-\$14,999; \$15,000-\$24,999; \$25,000 or more.

\*Relative standard error greater than 30 percent.

NOTES: Persons with Medicare, private insurance, and Medicaid appear in both columns. Denominators include persons with unknown health insurance (0.8 percent in 1986). In 1986,

5.0 percent of all persons 65 years of age and over had no Medicare but only 0.6 percent were without health insurance.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey.

**Table 123. Health maintenance organizations and enrollment, according to model type, geographic region, and Federal program: United States, selected years 1976–89**

<i>Plans and enrollment</i>	1976	1978	1980	1982	1984	1985 <sup>1</sup>	1986	1987	1989
<i>Plans</i>					<i>Number</i>				
All plans . . . . .	174	202	235	264	304	478	623	647	604
Model type: <sup>2</sup>									
Individual practice association <sup>3</sup> . . . . .	41	70	97	97	125	244	384	409	385
Group . . . . .	122	129	138	167	179	234	239	238	219
Geographic region:									
Northeast . . . . .	29	49	55	59	67	81	105	114	118
Midwest . . . . .	52	57	72	87	105	157	202	203	183
South . . . . .	23	33	45	52	67	141	188	194	172
West . . . . .	70	63	63	66	65	99	128	136	131
<i>Enrollment<sup>4</sup></i>					<i>Number of persons in thousands</i>				
Total . . . . .	5,987	7,450	9,078	10,807	15,101	21,005	25,725	29,232	31,883
Model type: <sup>2</sup> . . . . .									
Individual practice association <sup>3</sup> . . . . .	390	1,051	1,694	1,471	2,929	6,379	9,932	12,014	13,542
Group . . . . .	5,562	6,376	7,384	9,336	12,172	14,625	15,793	17,217	18,342
Federal program: <sup>5</sup>									
Medicaid . . . . .	---	230	265	197	349	561	802	811	---
Medicare . . . . .	---	376	391	431	671	1,064	1,490	1,674	1,561
					<i>Number per 1,000 population</i>				
Geographic region:									
Northeast . . . . .	19.9	24.9	31.4	39.0	57.8	79.4	100.5	117.0	137.7
Midwest . . . . .	15.2	18.7	28.1	37.2	61.6	96.8	116.4	130.5	129.2
South . . . . .	4.3	6.2	8.3	11.1	20.4	37.5	54.4	64.2	70.5
West . . . . .	96.9	113.3	121.8	128.7	148.0	172.5	190.4	205.6	225.5

<sup>1</sup>Increases partly due to changes in reporting methods (see Appendix I).

<sup>2</sup>11 HMO's with 35,000 enrollment did not report model type in 1976. 3 HMO's with 23,000 enrollment did not report model type in 1978.

<sup>3</sup>An individual practice association is a health maintenance organization that contracts with an association of physicians from various settings (a mixture of solo and group practices) to provide health services.

<sup>4</sup>Enrollment in hybrid and open-ended HMO plans, amounting to nearly 1.5 million on Jan. 1, 1989, is not included in this table.

<sup>5</sup>Federal program enrollment in HMO's refers to enrollment by Medicaid or Medicare beneficiaries, where the Medicaid or Medicare program contracts directly with the HMO to pay the appropriate annual premium.

NOTES: Data as of June 30 each year, except August in 1978, December 31 in 1985–87, and January 1 in 1989. HMO's in Guam are not included.

SOURCES: Office of Health Maintenance Organizations: Summary of the National HMO census of prepaid plans—June 1976, National HMO census of prepaid plans 1978, and National HMO Census 1980. Public Health Service. Washington. U.S. Government Printing Office. DHHS Pub. No. (PHS) 80–50159; InterStudy: National HMO Census: Annual Report on the Growth of HMO's in the U.S., 1982–1985 Editions; The InterStudy Edge, Spring 1987, Spring 1988, 1989, vol. 2; Unpublished data; 1986 December Update of Medicare Enrollment in HMO's. 1988 January Update of Medicare Enrollment in HMO's. Excelsior, Minnesota (Copyrights 1983, 1984, 1985, 1986, 1987, 1988, 1989: Used with the permission of InterStudy); Regional populations obtained from U.S. Bureau of the Census, unpublished data; Data computed by the Division of Analysis.

**Table 124. Medicare enrollees and expenditures and percent distribution, according to type of service: United States, selected years 1967-88**

[Data are compiled by the Health Care Financing Administration]

Type of service	1967	1970	1975	1980	1985	1986	1987	1988 <sup>1</sup>
Enrollees <sup>2</sup>								
Number in millions								
Total <sup>3</sup> . . . . .	19.5	20.5	25.0	28.5	31.1	31.7	32.4	33.0
Hospital insurance (HI) . . . . .	19.5	20.4	24.6	28.1	30.6	31.2	31.8	---
Supplementary medical insurance (SMI) . . . . .	17.9	19.6	23.9	27.4	30.0	30.6	31.2	---
Expenditures								
Amount in millions								
Total . . . . .	\$4,737	\$7,493	\$16,316	\$36,822	\$72,294	\$77,721	\$82,030	\$88,560
Total hospital insurance (HI) <sup>4</sup> . . . . .	3,430	5,281	11,581	25,577	48,414	50,422	50,289	53,331
Inpatient hospital . . . . .	3,034	4,827	10,877	24,082	44,698	46,746	46,446	49,265
Skilled nursing facility . . . . .	282	246	278	401	578	587	631	666
Home health agency . . . . .	29	51	160	568	2,148	2,230	2,195	2,320
Hospice . . . . .	...	...	...	...	20	42	70	98
Administrative expenses <sup>5</sup> . . . . .	77	157	266	512	834	664	793	815
Total supplementary medical insurance (SMI) . . . . .	1,307	2,212	4,735	11,245	23,880	27,299	31,741	35,229
Physician . . . . .	1,128	1,790	3,415	8,188	17,311	19,212	22,618	24,338
Outpatient hospital . . . . .	26	117	652	1,935	4,304	5,144	5,903	6,545
Home health agency . . . . .	17	31	87	195	54	45	53	52
Group practice prepayment . . . . .	19	26	80	203	720	1,113	1,361	2,019
Independent laboratory . . . . .	7	11	39	114	558	725	885	1,015
Administrative expenses . . . . .	110	237	462	610	933	1,060	921	1,260
Percent distribution of expenditures								
Total hospital insurance (HI) <sup>4</sup> . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inpatient hospital . . . . .	88.5	91.4	93.9	94.2	92.3	92.7	92.4	92.4
Skilled nursing facility . . . . .	8.2	4.7	2.4	1.6	1.2	1.2	1.3	1.2
Home health agency . . . . .	0.8	1.0	1.4	2.2	4.4	4.4	4.4	4.4
Hospice . . . . .	...	...	...	...	0.0	0.1	0.1	0.2
Administrative expenses <sup>5</sup> . . . . .	2.2	3.0	2.3	2.0	1.7	1.3	1.6	1.5
Total supplementary medical insurance (SMI) . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Physician . . . . .	86.3	80.9	72.1	72.8	72.5	70.4	71.3	69.1
Outpatient hospital . . . . .	2.0	5.3	13.8	17.2	18.0	18.8	18.6	18.6
Home health agency . . . . .	1.3	1.4	1.8	1.7	0.2	0.2	0.2	0.1
Group practice prepayment . . . . .	1.5	1.2	1.7	1.8	3.0	4.1	4.3	5.7
Independent laboratory . . . . .	0.5	0.5	0.8	1.0	2.3	2.7	2.8	2.9
Administrative expenses . . . . .	8.4	10.7	9.8	5.4	3.9	3.9	2.9	3.6

<sup>1</sup>Preliminary figures.

<sup>2</sup>Includes the U.S. population residing in the United States, Puerto Rico, Virgin Islands, Guam, other outlying areas, and foreign countries, and residence unknown.

<sup>3</sup>Number enrolled in the hospital insurance and/or supplementary medical insurance programs on July 1.

<sup>4</sup>Includes coverage for outpatient hospital diagnostic service under HI terminated after Mar. 31, 1968, and Medicaid and Maternal and Child Health Professional Standard Review Organization activity through 1981, Peer Review Organization activity after 1983; is counted as an inpatient hospital benefit in other actuarial tables presenting benefit payments by type of benefit.

<sup>5</sup>Includes costs of experiments and demonstration projects.

NOTE: Distribution of benefits by type is estimated and subject to change.

SOURCE: Office of Medicare Cost Estimates, Office of the Actuary. Health Care Financing Administration. Washington. Feb. 1989.

**Table 125. Medicare enrollment, persons served, and payments for Medicare enrollees 65 years of age and over, according to selected characteristics: United States and other areas, 1967, 1977, and 1986**

[Data are compiled by the Health Care Financing Administration]

Characteristic	Enrollment in millions <sup>1</sup>			Persons served per 1,000 enrollees <sup>2</sup>			Payments per person served <sup>3</sup>			Payments per enrollee <sup>3</sup>		
	1967	1977	1986	1967	1977	1986	1967	1977	1986	1967	1977	1986
Total . . . . .	19.5	23.8	28.8	367	570	732	\$592	\$1,332	\$2,870	\$217	\$ 759	\$2,100
Age												
65-66 years . . . . .	2.8	3.3	3.9	300	533	652	496	1,075	2,118	149	573	1,381
67-68 years . . . . .	2.6	3.2	3.5	326	511	656	521	1,173	2,441	170	599	1,601
69-70 years . . . . .	2.4	2.9	3.3	339	531	689	530	1,211	2,579	180	643	1,777
71-72 years . . . . .	2.3	2.6	3.1	351	555	719	560	1,228	2,777	197	681	1,997
73-74 years . . . . .	2.1	2.3	2.8	369	576	735	574	1,319	2,910	212	759	2,140
75-79 years . . . . .	3.9	4.5	5.6	398	597	768	624	1,430	3,100	248	853	2,380
80-84 years . . . . .	2.2	3.0	3.6	430	623	808	693	1,549	3,310	298	965	2,674
85 years and over . . . . .	1.3	2.1	2.9	465	652	827	740	1,636	3,477	345	1,068	2,875
Sex												
Male . . . . .	8.3	9.6	11.5	357	546	691	647	1,505	3,272	231	821	2,261
Female . . . . .	11.3	14.2	17.3	373	586	759	554	1,223	2,626	207	717	1,992
Race <sup>4</sup>												
White . . . . .	17.4	21.1	25.2	375	576	738	593	1,328	2,842	222	765	2,097
Other . . . . .	1.5	2.1	2.7	260	514	683	557	1,404	3,185	145	722	2,174
Geographic region <sup>5</sup>												
Northeast . . . . .	5.1	5.7	6.5	385	613	775	604	1,426	2,933	233	874	2,274
Midwest . . . . .	5.6	6.3	7.3	352	541	729	599	1,401	2,894	211	757	2,110
South . . . . .	5.6	7.5	9.4	351	556	736	528	1,198	2,744	186	666	2,018
West . . . . .	2.9	3.8	5.0	455	632	727	620	1,341	3,051	282	848	2,218

<sup>1</sup>Includes fee-for-service and Health Maintenance Organization (HMO) enrollees and is as of July 1 each year.

<sup>2</sup>Excludes HMO enrollees.

<sup>3</sup>Excludes amounts for HMO services.

<sup>4</sup>Excludes persons of unknown race.

<sup>5</sup>Includes the resident population of the United States but not residence unknown.

NOTES: Data include the United States, residence unknown, Puerto Rico, Virgin Islands, Guam, other outlying areas and foreign countries. Some numbers in this table have been revised and differ from previous editions of Health, United States.

SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration: Unpublished data.

**Table 126. Selected rates of non-Federal short-stay hospital utilization and benefit payments for aged and disabled Medicare enrollees, according to geographic division: United States, 1980, 1984, and 1987**

[Data are compiled by the Health Care Financing Administration]

Geographic division	Discharges from short-stay hospitals			Average length of stay in short-stay hospitals			Average days of care in short-stay hospitals		
	1980	1984	1987	1980	1984	1987	1980	1984	1987
	Number per 1,000 hospital insurance enrollees			Number of days per hospital discharge			Number per 1,000 hospital insurance enrollees		
United States . . . . .	372	371	324	10.6	8.9	9.0	4,016	3,297	2,902
New England . . . . .	333	343	299	12.1	10.4	10.5	4,130	3,562	3,130
Middle Atlantic . . . . .	329	348	318	13.4	11.8	11.4	4,528	4,099	3,607
East North Central . . . . .	373	367	327	11.2	9.0	8.8	4,243	3,288	2,882
West North Central . . . . .	426	400	324	9.9	7.9	8.0	4,371	3,176	2,603
South Atlantic . . . . .	372	375	320	10.3	8.6	9.2	3,880	3,205	2,928
East South Central . . . . .	436	450	410	9.6	8.1	8.2	4,260	3,649	3,358
West South Central . . . . .	433	436	355	9.1	7.7	8.0	4,025	3,364	2,856
Mountain . . . . .	360	333	298	8.7	7.3	7.1	3,243	2,432	2,128
Pacific . . . . .	338	326	288	8.7	7.3	7.5	2,988	2,389	2,161

Geographic division	Benefit payments								
	Average total charges in short-stay hospitals <sup>1</sup>			Hospital insurance <sup>2</sup>			Supplementary medical insurance		
	1980	1984	1987	1980	1984	1987	1980	1984	1987
	Amount per day			Amount per enrollee					
United States . . . . .	\$296	\$552	\$ 763	\$ 909	\$1,466	\$1,587	\$390	\$672	\$ 996
New England . . . . .	295	496	659	978	1,543	1,497	402	672	1,165
Middle Atlantic . . . . .	304	502	642	965	1,596	1,649	428	763	1,075
East North Central . . . . .	298	560	769	1,008	1,542	1,753	370	636	991
West North Central . . . . .	246	506	724	888	1,387	1,461	304	477	735
South Atlantic . . . . .	277	538	749	818	1,346	1,414	384	663	954
East South Central . . . . .	249	491	709	754	1,296	1,621	281	479	786
West South Central . . . . .	259	516	773	798	1,434	1,546	352	652	960
Mountain . . . . .	310	623	899	782	1,269	1,478	368	625	931
Pacific . . . . .	424	819	1,119	1,003	1,551	1,657	509	863	1,199

<sup>1</sup>Includes charges for Medicare covered and noncovered services and days.

<sup>2</sup>Benefit payments represent cash-flow disbursements from the Medicare Hospital Insurance and Supplementary Medical Insurance Trust Funds for all types of covered services and include retroactive adjustments for nonbilling reimbursement such as Prospective Payment System pass-throughs (capital, direct medical education, kidney acquisitions, and bad debts by Medicare patients), indirect medical education, lump sum interim payments, and audited fiscal year cost adjustments. Approximately 90 percent of total benefit payments are for short-stay hospital services.

SOURCE: Health Care Financing Administration: Unpublished data.

**Table 127. Medicaid recipients and medical vendor payments, according to basis of eligibility: United States, selected years 1972–88**

[Data are compiled by the Health Care Financing Administration]

<i>Basis of eligibility</i>	1972 <sup>1</sup>	1975 <sup>1</sup>	1980 <sup>2</sup>	1984 <sup>2</sup>	1985 <sup>2</sup>	1986 <sup>2</sup>	1987 <sup>2</sup>	1988 <sup>2</sup>
Recipients								
Number in millions								
All recipients . . . . .	17.6	22.0	21.6	21.6	21.8	22.5	23.1	22.9
Percent distribution								
Total . . . . .	100.0	100.0	...	...	...	...	...	...
Aged <sup>3</sup> . . . . .	18.8	16.4	15.9	15.0	14.0	13.9	14.1	13.8
Blind and disabled . . . . .	9.8	11.2	13.5	13.5	13.8	14.2	14.6	15.2
Adults in AFDC <sup>4</sup> families . . . . .	17.8	20.6	22.6	25.9	25.3	25.1	24.2	24.0
Children in AFDC <sup>4</sup> families . . . . .	44.5	43.6	43.2	44.8	44.7	44.4	44.0	43.8
Other Title XIX <sup>5</sup> . . . . .	9.0	8.2	6.9	5.5	5.6	6.0	6.1	5.9
Vendor payments								
Amount in billions								
All payments . . . . .	\$ 6.3	\$ 12.2	\$ 23.3	\$ 33.9	\$ 37.5	\$ 41.0	\$ 45.0	\$ 48.7
Percent distribution								
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Aged <sup>3</sup> . . . . .	30.6	35.6	37.5	37.8	37.6	36.8	35.6	35.2
Blind and disabled . . . . .	22.2	25.7	32.7	35.3	35.9	36.4	37.3	38.2
Adults in AFDC <sup>4</sup> families . . . . .	15.3	16.8	13.9	13.0	12.7	11.9	12.4	12.1
Children in AFDC <sup>4</sup> families . . . . .	18.1	17.9	13.4	11.7	11.8	12.5	12.2	12.0
Other Title XIX <sup>5</sup> . . . . .	13.9	4.0	2.6	2.1	2.1	2.4	2.4	2.5
Vendor payments per recipient								
Amount								
All recipients . . . . .	\$358	\$ 556	\$1,079	\$1,569	\$1,719	\$1,821	\$1,949	\$2,126
Aged <sup>3</sup> . . . . .	580	1,206	2,540	3,958	4,605	4,808	4,974	5,426
Blind and disabled . . . . .	807	1,276	2,618	4,112	4,459	4,686	4,974	5,332
Adults in AFDC <sup>4</sup> families . . . . .	307	455	662	789	860	864	999	1,069
Children in AFDC <sup>4</sup> families . . . . .	145	228	335	411	452	512	542	583
Other Title XIX <sup>5</sup> . . . . .	555	273	398	590	657	720	763	892

<sup>1</sup>Data for fiscal year ending June 30.

<sup>2</sup>Data for fiscal year ending September 30. Recipients included in more than 1 category.

<sup>3</sup>65 years and over.

<sup>4</sup>Aid to Families with Dependent Children.

<sup>5</sup>Includes some participants in Supplemental Security Income program and other people deemed medically needy in participating States.

SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration: Unpublished data.

**Table 128 (page 1 of 2). Medicaid recipients and medical vendor payments, according to type of service: United States, selected fiscal years 1972–88**

[Data are compiled by the Health Care Financing Administration]

<i>Type of service</i>	1972 <sup>1</sup>	1975 <sup>1</sup>	1980 <sup>2</sup>	1984 <sup>2</sup>	1985 <sup>2</sup>	1986 <sup>2</sup>	1987 <sup>2</sup>	1988 <sup>2</sup>
Recipients								
Number in millions								
All recipients . . . . .	17.6	22.0	21.6	21.6	21.8	22.5	23.1	22.9
Percent of recipients <sup>3</sup>								
Inpatient services:								
General hospitals . . . . .	16.1	15.6	17.0	16.0	15.7	15.7	16.3	16.7
Mental hospitals . . . . .	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3
Skilled nursing facility services . . . . .	3.1	2.9	2.8	2.6	2.5	2.5	2.5	2.5
Intermediate care facility services:								
Mentally retarded . . . . .	---	0.3	0.6	0.7	0.7	0.6	0.6	0.6
All other . . . . .	---	3.1	3.7	3.7	3.8	3.7	3.7	3.8
Physician services . . . . .	69.8	69.1	63.7	65.7	66.0	66.2	66.5	66.6
Dental services . . . . .	13.6	17.9	21.5	22.9	21.4	22.9	22.2	22.1
Other practitioner services . . . . .	9.1	12.1	15.0	15.5	15.4	15.3	15.3	15.2
Outpatient hospital services . . . . .	29.6	33.8	44.9	46.4	46.2	47.5	47.5	46.0
Clinic services . . . . .	2.8	4.9	7.1	9.4	9.7	9.0	9.4	9.8
Laboratory and radiological services . . . . .	20.0	21.5	14.9	22.3	29.1	31.6	32.9	33.1
Home health services . . . . .	0.6	1.6	1.8	2.0	2.5	2.6	2.6	2.5
Prescribed drugs . . . . .	63.3	64.3	63.4	64.5	63.8	65.3	65.3	66.9
Family planning services . . . . .	...	5.5	5.2	7.3	7.5	7.7	7.1	6.7
Early and periodic screening . . . . .	...	...	...	8.6	8.7	9.5	9.7	10.0
Rural health clinic services . . . . .	...	...	...	0.4	0.4	0.5	0.6	0.6
Other care . . . . .	14.4	13.2	11.9	11.7	15.5	14.7	15.6	18.2
Vendor payments								
Amount in billions								
All payments . . . . .	\$6.3	\$12.2	\$23.3	\$33.9	\$37.5	\$41.0	\$45.1	\$48.7
Percent distribution								
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inpatient services:								
General hospitals . . . . .	40.6	27.6	27.5	26.1	25.2	25.3	25.1	24.8
Mental hospitals . . . . .	1.8	3.3	3.3	3.1	3.2	2.7	3.1	2.8
Skilled nursing facility services . . . . .	23.3	19.9	15.8	14.2	13.5	13.8	13.2	13.0
Intermediate care facility services:								
Mentally retarded . . . . .	---	3.1	8.5	12.6	12.6	12.4	12.4	12.4
All other . . . . .	---	15.4	18.0	17.2	17.4	16.5	16.2	16.3
Physician services . . . . .	12.6	10.0	8.0	6.6	6.3	6.2	6.2	6.1
Dental services . . . . .	2.7	2.8	2.0	1.4	1.2	1.3	1.2	1.2
Other practitioner services . . . . .	0.9	1.0	0.8	0.7	0.7	0.6	0.6	0.6
Outpatient hospital services . . . . .	5.8	3.0	4.7	4.9	4.8	4.8	4.9	5.0
Clinic services . . . . .	0.7	3.2	1.4	1.8	1.9	2.0	2.1	2.3
Laboratory and radiological services . . . . .	1.3	1.0	0.5	0.6	0.9	1.0	1.1	1.1
Home health services . . . . .	0.4	0.6	1.4	2.3	3.0	3.3	3.8	4.1
Prescribed drugs . . . . .	8.1	6.7	5.7	5.8	6.2	6.6	6.6	6.8
Family planning services . . . . .	...	0.5	0.3	0.5	0.5	0.6	0.5	0.4
Early and periodic screening . . . . .	...	...	...	0.2	0.2	0.2	0.3	0.3
Rural health clinic services . . . . .	...	...	...	0.0	0.0	0.0	0.0	0.0
Other care . . . . .	1.8	1.9	1.9	2.2	2.5	2.7	2.7	2.9

See footnotes at end of table.

**Table 128 (page 2 of 2). Medicaid recipients and medical vendor payments, according to type of service: United States, selected fiscal years 1972-88**

[Data are compiled by the Health Care Financing Administration]

Type of service	1972 <sup>1</sup>	1975 <sup>1</sup>	1980 <sup>2</sup>	1984 <sup>2</sup>	1985 <sup>2</sup>	1986 <sup>2</sup>	1987 <sup>2</sup>	1988 <sup>2</sup>
Vendor payments per recipient		Amount						
Total payment per recipient . . . . .	\$ 358	\$ 556	\$ 1,079	\$ 1,569	\$ 1,719	\$ 1,821	\$ 1,949	\$ 2,126
Inpatient services:								
General hospitals . . . . .	903	983	1,742	2,552	2,753	2,924	3,000	3,151
Mental hospitals . . . . .	2,825	6,045	11,742	29,771	19,867	21,000	24,719	22,917
Skilled nursing facility services . . . . .	2,665	3,863	6,081	8,605	9,274	9,912	10,432	10,974
Intermediate care facility services:								
Mentally retarded . . . . .	---	5,507	16,438	30,184	32,102	34,979	37,523	41,531
All other . . . . .	---	2,764	5,326	7,315	7,882	8,180	8,575	9,149
Physician services . . . . .	65	81	136	156	163	171	181	193
Dental services . . . . .	71	86	99	95	98	103	105	114
Other practitioner services . . . . .	37	48	61	69	75	73	74	82
Outpatient hospital services . . . . .	70	50	113	164	178	185	203	229
Clinic services . . . . .	82	358	209	292	337	398	441	490
Laboratory and radiological services . . . . .	23	27	38	43	53	60	63	72
Home health services . . . . .	229	204	847	1,767	2,093	2,280	2,775	3,541
Prescribed drugs . . . . .	46	58	96	141	166	183	198	215
Family planning services . . . . .	...	55	72	104	119	130	138	135
Early and periodic screening . . . . .	...	...	...	42	45	48	51	54
Rural health clinic services . . . . .	...	...	...	75	81	93	101	107
Other care . . . . .	44	80	172	298	274	331	340	343

<sup>1</sup>Data for fiscal year ending June 30.

<sup>2</sup>Data for fiscal year ending September 30.

<sup>3</sup>Recipients included in more than 1 category.

SOURCE: Bureau of Data Management and Strategy, Health Care Financing Administration; Unpublished data.



**Table 129. Veterans medical care expenditures and percent distribution, according to type of service: United States, selected fiscal years 1965–88**

[Data are compiled from Veterans Administration sources]

<i>Type of service</i>	1965 <sup>1</sup>	1970 <sup>1</sup>	1975 <sup>1</sup>	1980	1985	1986	1987 <sup>2</sup>	1988
<b>Patients treated</b>		<b>Number in thousands</b>						
Inpatient hospital . . . . .	730	787	1,065	1,235	1,306	1,328	1,077	1,086
Outpatient care . . . . .	5,987	7,312	13,799	18,206	19,586	20,188	21,890	23,232
Veterans Administration nursing homes and domiciliaries. . . . .	---	34	30	28	34	37	40	44
Community nursing homes. . . . .	---	15	24	28	39	41	42	42
All other <sup>3</sup> . . . . .	---	43	53	57	56	56	52	52
<b>Expenditures</b>		<b>Amount in millions</b>						
All expenditures <sup>4</sup> . . . . .	\$1,150	\$1,689	\$3,328	\$5,981	\$8,936	\$9,275	\$9,673	\$10,230
		<b>Percent distribution</b>						
All services . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inpatient hospital . . . . .	81.9	71.3	66.4	64.3	60.3	57.2	55.5	53.9
Outpatient care . . . . .	12.0	14.0	17.8	19.1	18.9	20.7	21.5	22.7
Veterans Administration nursing homes and domiciliaries. . . . .	2.9	4.3	4.8	5.1	5.4	5.9	6.2	6.5
Community nursing homes. . . . .	0.0	1.2	1.4	2.0	3.0	3.3	3.4	3.5
All other <sup>3</sup> . . . . .	3.2	9.1	9.6	9.6	12.4	12.9	13.4	13.4

<sup>1</sup>Data for fiscal year ending June 30; all other data for fiscal year ending September 30.

<sup>2</sup> Reflects reclassification of 1-day dialysis treatment of ambulatory patients as an outpatient procedure rather than a 1-day hospital admission.

<sup>3</sup>Includes miscellaneous benefits and services, contract hospitals, education and training, subsidies to State veterans hospitals, nursing homes, and domiciliaries, and the Civilian Health and Medical Program of the Veterans Administration.

<sup>4</sup>Medical care expenditures exclude construction, medical administration, and miscellaneous operating expenses.

SOURCE: Budget Office, Veterans Administration: Unpublished data.

**Table 130. Mental health expenditures, percent distribution, and per capita expenditures, according to type of mental health organization: United States, selected years 1969–86**

[Data are based on inventories of mental health organizations]

<i>Type of organization</i>	<i>1969</i>	<i>1975</i>	<i>1979</i>	<i>1983</i>	<i>1986</i>
Amount in thousands					
All organizations . . . . .	\$3,292,563	\$6,564,312	\$8,763,795	\$14,431,943	\$18,457,741
State and county mental hospitals . . . . .	1,814,101	3,185,049	3,756,754	5,491,473	6,325,844
Private psychiatric hospitals . . . . .	220,026	466,720	743,037	1,711,907	2,629,009
Non-Federal general hospitals with separate psychiatric services . . . . .	298,000	621,284	722,868	2,175,657	2,877,739
Veterans Administration medical centers <sup>1</sup> . . . . .	450,000	699,027	848,469	1,316,127	1,337,943
Federally funded community mental health centers . . . . .	143,491	775,580	1,480,890	—	—
Residential treatment centers for emotionally disturbed children . . . . .	122,711	278,950	436,246	572,983	977,616
Freestanding psychiatric outpatient clinics . . . . .	185,517	421,557	588,690	430,025	518,069
All other organizations <sup>2</sup> . . . . .	58,717	116,145	186,841	2,733,771	3,791,521
Percent distribution					
All organizations . . . . .	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals . . . . .	55.1	48.5	42.9	38.0	34.4
Private psychiatric hospitals . . . . .	6.7	7.1	8.5	11.9	14.2
Non-Federal general hospitals with separate psychiatric services . . . . .	9.0	9.5	8.2	15.1	15.6
Veterans Administration medical centers <sup>1</sup> . . . . .	13.7	10.6	9.7	9.1	7.2
Federally funded community mental health centers . . . . .	4.4	11.8	16.9	—	—
Residential treatment centers for emotionally disturbed children . . . . .	3.7	4.3	5.0	4.0	5.3
Freestanding psychiatric outpatient clinics . . . . .	5.6	6.4	6.7	3.0	2.8
All other organizations <sup>2</sup> . . . . .	1.8	1.8	2.1	18.9	20.5
Amount per capita <sup>3</sup>					
All organizations . . . . .	\$17	\$31	\$40	\$62	\$77
State and county mental hospitals . . . . .	9	15	17	24	26
Private psychiatric hospitals . . . . .	1	2	3	7	11
Non-Federal general hospitals with separate psychiatric services . . . . .	2	3	3	9	12
Veterans Administration medical centers <sup>1</sup> . . . . .	2	3	4	6	6
Federally funded community mental health centers . . . . .	1	4	7	—	—
Residential treatment centers for emotionally disturbed children . . . . .	1	1	2	2	4
Freestanding psychiatric outpatient clinics . . . . .	1	2	3	2	2
All other organizations <sup>2</sup> . . . . .	—	1	1	12	16

<sup>1</sup>Includes Veterans Administration neuropsychiatric hospitals, general hospital psychiatric services, and psychiatric outpatient clinics.

<sup>2</sup>Includes freestanding psychiatric partial care organizations and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984; see Appendix I.

<sup>3</sup>Civilian population.

NOTE: Changes in reporting procedures in 1983 affect the comparability of data with those from previous years.

SOURCES: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health; R. W. Manderscheid and S. A. Barrett; Mental Health, United States, 1987. DHHS Pub. No. (ADM) 87-1518. U.S. Government Printing Office, 1987; Unpublished data.

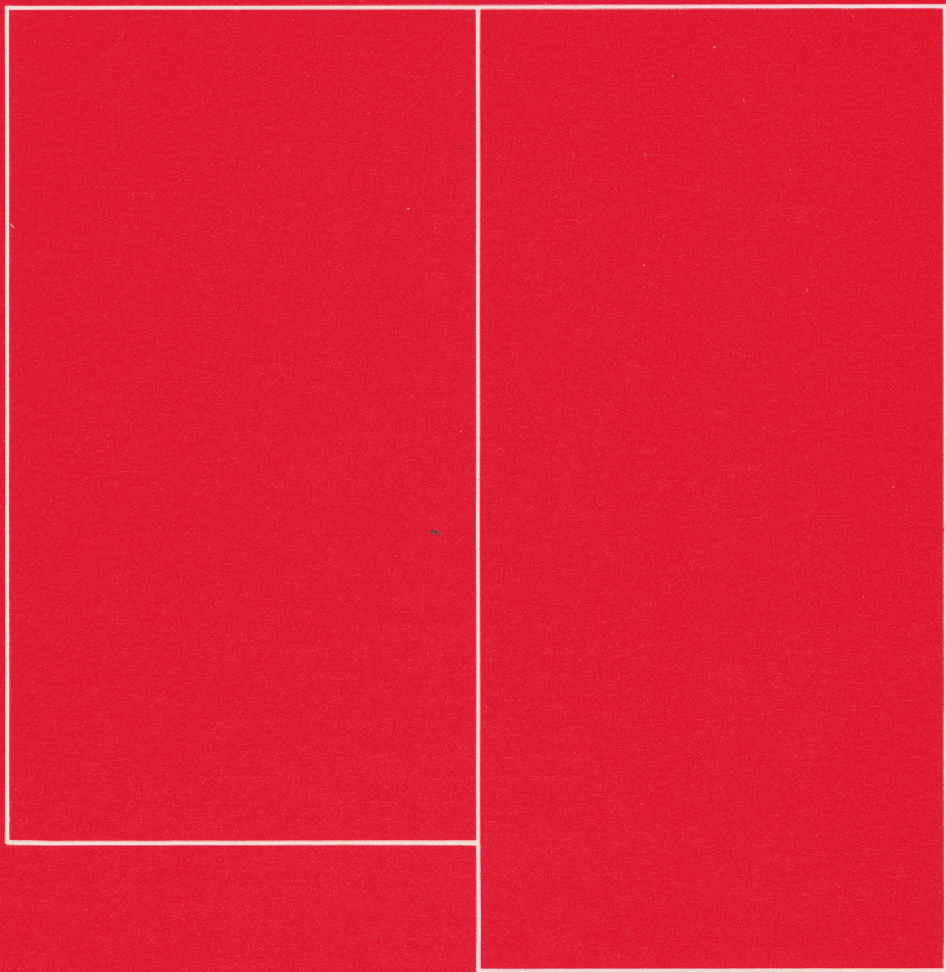
**Table 131. State mental health agency per capita expenditures for mental health services, and average annual percent change, according to State: United States, fiscal years 1981, 1983, and 1985**

<i>State</i>	<i>1981</i>	<i>1983</i>	<i>1985</i>	<i>Average annual percent change 1981-85</i>
	Amount per capita			
United States . . . . .	\$27	\$31	\$35	6.8
Alabama . . . . .	20	24	28	8.7
Alaska . . . . .	38	41	45	4.3
Arizona . . . . .	10	10	12	4.8
Arkansas . . . . .	17	20	24	9.1
California . . . . .	28	29	34	4.2
Colorado . . . . .	24	25	28	3.9
Connecticut . . . . .	32	39	44	8.5
Delaware . . . . .	44	51	46	0.9
District of Columbia . . . . .	---	23	28	---
Florida . . . . .	20	23	26	6.4
Georgia . . . . .	25	26	23	-1.8
Hawaii . . . . .	19	22	23	4.7
Idaho . . . . .	13	15	15	2.9
Illinois . . . . .	18	21	24	7.4
Indiana . . . . .	19	23	27	9.9
Iowa . . . . .	8	10	11	7.4
Kansas . . . . .	17	22	27	11.3
Kentucky . . . . .	15	17	19	6.1
Louisiana . . . . .	19	23	26	8.0
Maine . . . . .	25	32	36	9.5
Maryland . . . . .	33	37	40	4.9
Massachusetts . . . . .	32	36	46	9.7
Michigan . . . . .	32	39	49	10.8
Minnesota <sup>1</sup> . . . . .	17	30	32	17.3
Mississippi . . . . .	14	16	24	14.8
Missouri . . . . .	24	25	28	4.1
Montana . . . . .	24	28	29	4.5
Nebraska . . . . .	16	19	21	6.6
Nevada . . . . .	22	25	26	4.4
New Hampshire . . . . .	35	39	42	4.9
New Jersey . . . . .	26	31	36	7.9
New Mexico . . . . .	24	25	25	0.9
New York . . . . .	67	74	90	7.8
North Carolina . . . . .	24	29	38	12.2
North Dakota . . . . .	38	42	36	-1.5
Ohio . . . . .	25	28	30	5.3
Oklahoma . . . . .	22	33	31	8.8
Oregon . . . . .	20	21	25	5.0
Pennsylvania . . . . .	41	47	52	6.6
Rhode Island . . . . .	36	32	35	-0.7
South Carolina . . . . .	31	33	33	1.4
South Dakota . . . . .	17	21	22	6.2
Tennessee . . . . .	18	20	23	6.3
Texas . . . . .	13	16	17	7.3
Utah . . . . .	13	16	17	6.8
Vermont . . . . .	32	40	44	8.3
Virginia . . . . .	23	29	32	9.1
Washington . . . . .	18	24	30	13.4
West Virginia . . . . .	20	20	22	2.5
Wisconsin . . . . .	22	27	28	5.5
Wyoming . . . . .	23	28	31	7.2

<sup>1</sup>1981 data not comparable with 1983 and 1985 data.

SOURCE: National Institute of Mental Health: R. W. Manderscheid and S. A. Barrett: Mental Health, United States, 1987. DHHS Pub. No. (ADM) 87-1518. U.S. Government Printing Office, 1987.

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# Appendix I

## Sources and Limitations of Data

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### Introduction

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

Much of the data presented in the detailed tables are from the ongoing data collection systems of the National Center for Health Statistics. For an overview of these systems, see National Center for Health Statistics, M.G. Kovar: Data systems of the National Center for Health Statistics. *Vital and Health Statistics*. Series 1, No. 23. DHHS Pub. No. (PHS) 89-1325. Public Health Service. Hyattsville, Md. 1989. However, health care personnel data come primarily from the Bureau of Health Professions, Health Resources and Services Administration, and the American Medical Association. National health expenditures data were compiled by the Office of the Actuary, Health Care Financing Administration.

Although a detailed description and comprehensive evaluation of each data source is beyond the scope of this appendix, users should be aware of the general strengths and weaknesses of the different data collection systems. For example, population-based surveys obtain socioeconomic data, data on family characteristics, and information on the impact of an illness, such as days

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

The population covered by different data collection systems may not be the same, and understanding the differences is critical to interpreting the data. Data on vital statistics and national expenditures cover the entire population. Most data on morbidity and utilization of health resources cover only the civilian noninstitutionalized population. Thus, statistics are not included for military personnel, who are usually young; for institutionalized people, who may be any age; or for nursing home residents, who are usually old.

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

Overall estimates generally have relatively small sampling errors, but estimates for certain population subgroups may be based on small numbers and have relatively large sampling errors. Numbers of births and deaths from the vital statistics system represent complete counts (except for births in those States where data are based on a 50-percent sample for certain years). Therefore, they are not subject to sampling error. However, when the figures are used for analytical purposes, such as

the comparison of rates over a time period, the number of events that actually occurred may be considered as one of a large series of possible results that could have arisen under the same circumstances. When the number of events is small and the probability of such an event is small, considerable caution must be observed in interpreting the conditions described by the figures. Estimates that are unreliable because of large sampling errors or small numbers of events have been noted with asterisks in selected tables. The criteria used to designate unreliable estimates are indicated as notes to the applicable tables.

The descriptive summaries that follow provide a general overview of study design, methods of data collection, and reliability and validity of the data. More complete and detailed discussions are found in the publications referenced at the end of each summary. The data set or source is listed under the agency or organization that sponsored the data collection.

### Department of Health and Human Services

#### Public Health Service

#### Centers for Disease Control

#### National Center for Health Statistics

#### National Vital Statistics System

Through the National Vital Statistics System, the National Center for Health Statistics (NCHS) collects and publishes data on births, deaths, marriages, and divorces in the United States. Fetal deaths are classified and tabulated separately from other deaths. The Division of Vital Statistics obtains information on births and deaths from the registration offices of all States, New York City, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. Geographic coverage for births and deaths has been complete since 1933.

Until 1972, microfilm copies of all death certificates and a 50-percent sample of birth certificates were received from all registration areas and processed by NCHS. Beginning in 1972, some States began sending

their data to NCHS through the Cooperative Health Statistics System (CHSS). States that participated in the CHSS program processed 100 percent of their death and birth records and sent the entire data file to NCHS on computer tape. Currently, the data are sent to NCHS through the Vital Statistics Cooperative Program (VSCP), following the same procedures as the CHSS. The number of participating States grew from 6 in 1972 to 46 in 1984. All 50 States and the District of Columbia participated in the VSCP in 1985.

The standard certificates of birth, death, and fetal death recommended by NCHS are modified in each registration area to serve the area's needs. However, most certificates conform closely in content and arrangement to the standard certificate, and all certificates contain a minimum data set specified by NCHS.

Information on births of Hispanic parentage was available for 22 States in 1980 and 1981. The 22 States that included items on their birth certificates on the ethnic or Hispanic origin of the mother and father were Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Maine, Mississippi, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Texas, Utah, and Wyoming. In 1982, these data also became available in Tennessee, and in 1983 the District of Columbia began reporting information on births of Hispanic parentage; so that since 1983 information on births of Hispanic parentage is available for 23 States and the District of Columbia. In 1986 about 90 percent of the total U.S. Hispanic population resided in these States.

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

Sample. The Current Mortality Sample is a 10-percent systematic sample of death certificates received each month in the vital statistics offices in the 50 States, the District of Columbia, and the independent registration area of New York City. All death certificates received during the 1-month period are sampled regardless of the month or year in which the death occurred.

For more information, see: National Center for Health Statistics, *Vital Statistics of the United States, 1986*, Vol. I, DHHS Pub. No. (PHS) 88-1113 and Vol. II, Part A, DHHS Pub. No. (PHS) 88-1122, Public Health Service, Washington, U.S. Government Printing Office, 1988.

### National Survey of Family Growth

Data from the National Survey of Family Growth are based on samples of women ages 15-44 years in the civilian noninstitutionalized population living in the coterminous United States. The first and second cycles excluded women who had never been married, except those with offspring in the household. The third and fourth cycles include all women ages 15-44 years, regardless of whether they have ever been married.

The purpose of the survey is to provide national data on the demographic and social factors associated with childbearing, adoption, and maternal and child health. These factors include sexual activity, marriage, unmarried cohabitation, divorce and remarriage, contraception and sterilization, infertility, breastfeeding, pregnancy loss, low-birth weight, and use of medical care for family planning, infertility, and prenatal care. Interviews are conducted in person by professional female interviewers using a standardized, printed questionnaire. The average interview length is about 1 hour.

Cycle I of the National Survey of Family Growth was conducted from June 1973 through February 1974. The counties and independent cities of the United States were combined to form a frame of primary sampling units (PSU's), and 101 PSU's were selected as the first-stage sample. The next three stages produced a clustered sample of 28,998 households within the 101 PSU's. At 26,028 of these households (89.8 percent), household

screeners interviews were completed. These screeners produced a fifth-stage sample of 10,879 women of whom 9,797 were interviewed. Never-married women (except those with offspring in the household) were excluded from Cycle I.

Cycle II of NSFG was conducted from January to September 1976. The sample design was basically the same as it was in Cycle I. The sample consisted of 27,162 households in 79 PSU's. Household screener interviews were completed at 25,479 of these households (93.8 percent). Of the 10,202 women in the sample, 8,611 were interviewed. Again, never-married women (except those with offspring in the household) were excluded from the sample for Cycle II.

Interviewing for Cycle III of the NSFG was conducted from August 1982 through February 1983. The sample design was similar to that in Cycle II: 31,027 households were selected in 79 PSU's. Household screener interviews were completed in 29,511 households (95.1 percent). Of the 9,964 eligible women identified, 7,969 were interviewed. The sample for Cycle III included black women and women 15-19 years of age at higher rates than other women. Women of all marital statuses were interviewed in Cycle III.

Cycle IV was conducted between January and August 1988. The sample was obtained from households that had been interviewed in the 1985, 1986, or 1987 National Health Interview Surveys. Women living in Alaska and Hawaii were included, so that the survey covered women from the noninstitutionalized population of the entire United States. Interviews were completed with 8,450 women. As in Cycle III, black women were oversampled.

In order to produce estimates for the entire population of eligible women in the United States, data for the interviewed sample women were inflated by the reciprocal of the probability of selection at each stage of sampling and adjusted for both screener and interview nonresponse. Cycles I and II estimates for ever-married women were poststratified to benchmark population values for 12 age-race categories based on data from the Current Population Survey of the

U.S. Bureau of the Census. Cycle III estimates were poststratified within 24 categories of age, race, and marital status. In Cycle IV, the poststratification was done within categories of age, race, marital status, and parity.

Quality control procedures for interviewer selection, interviewer training, field listing, and data processing were built into the NSFG to minimize nonsampling error and bias. In addition, the nonresponse adjustments in the estimator were designed to minimize the effect of nonresponse bias by assigning to nonrespondents the characteristics of similar respondents. Sampling errors for NSFG were estimated by balanced half-sample replication.

Detailed information on the NSFG sample design are available in the following reports: National Center for Health Statistics, D. K. French: National Survey of Family Growth, Cycle I, sample design, estimation procedures, and variance estimation. *Vital and Health Statistics*. Series 2, No. 76. DHEW Pub. No. (PHS) 78-1350. Public Health Service. Washington. U.S. Government Printing Office, Jan. 1979; National Center for Health Statistics, W. R. Grady: National Survey of Family Growth, Cycle II: sample design, estimation procedures, and variance estimation. *Vital and Health Statistics*. Series 2, No. 87. DHHS Pub. No. (PHS) 81-1361. Public Health Service. Washington. U.S. Government Printing Office, Feb. 1981; and National Center for Health Statistics, C. Bachrach, M. Horn, W. Mosher, and I. Shimizu: National Survey of Family Growth, Cycle III: Estimation procedures, weighting, and variance estimation. *Vital and Health Statistics*. Series 2, No. 98. DHHS Pub. No. (PHS) 85-1372. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1985.

#### National Health Interview Survey

The National Health Interview Survey (NHIS) is a continuing nationwide sample survey in which data are collected through personal household interviews. Information is obtained on personal and demographic characteristics, illnesses, injuries, impairments, chronic conditions, utilization of health

resources, and other health topics. The household questionnaire is reviewed each year, with special health topics being added or deleted. For most health topics, data are collected over an entire calendar year.

The sample design plan of the NHIS follows a multistage probability design that permits a continuous sampling of the civilian noninstitutionalized population residing in the United States. The survey is designed in such a way that the sample scheduled for each week is representative of the target population and the weekly samples are additive over time. The response rate for the survey has been between 95 and 98 percent over the years.

In 1985, the NHIS adopted several new sample design features although, conceptually, the sampling plan remained the same as the previous design. Two major changes included reducing the number of primary sampling locations from 376 to 198 for sampling efficiency and oversampling the black population to improve the precision of the statistics.

The sample was designed so that a typical NHIS sample for the data collection years 1985-94 will consist of approximately 7,500 segments containing about 59,000 assigned households. Of these households, an expected 10,000 will be vacant, demolished, or occupied by persons not in the target population of the survey. The expected sample of 49,000 occupied households will yield a probability sample of about 127,000 persons. In 1987, there was a sample of about 123,000 persons and in 1988, a sample of about 122,000 persons.

A description of the survey design, the methods used in estimation, and general qualifications of the data obtained from the survey are presented in: National Center for Health Statistics, P. F. Adams and A. M. Hardy: Current estimates from the National Health Interview Survey, United States, 1988. *Vital and Health Statistics*. Series 10, No. 173. DHHS Pub. No. (PHS) 89-1501. Public Health Service. Washington. U.S. Government Printing Office, Oct. 1989.

#### National Health Examination Survey

The National Health Examination Survey (NHES) is a continuing

nationwide sample survey conducted by the National Center for Health Statistics in which data for determining the health status of the population are collected through direct standardized physical examinations, clinical and laboratory tests, and measurements. The content of the NHES program is revised periodically, and selected components are added or deleted to meet the current needs for health data of this type.

For the first program or cycle of the National Health Examination Survey (NHES I), 1960-62, data were collected on the total prevalence of certain chronic diseases as well as the distributions of various physical and physiological measures, including blood pressure and serum cholesterol levels. For that program, a highly stratified, multistage probability sample of 7,710 adults, of whom 86.5 percent were examined, was selected to represent the 111 million civilian noninstitutionalized adults 18-79 years of age in the United States at that time. The sample areas consisted of 42 primary sampling units from the 1,900 geographic units. In 1971, a nutrition surveillance component was added and the survey name was changed to the National Health and Nutrition Examination Survey.

For more information on NHES I, see: National Center for Health Statistics: Cycle I of the National Health Examination Survey, sample and response, United States, 1960-62. T. Gordon and H. W. Miller. *Vital and Health Statistics*. Series 11, No. 1. PHS Pub. No. 1000. Public Health Service. Washington. U.S. Government Printing Office, May 1964.

#### National Health and Nutrition Examination Survey

Through this survey, health-related data are obtained by means of direct physical examinations, clinical and laboratory tests, and related measurement procedures. In the first National Health and Nutrition Examination Survey (NHANES I), conducted from 1971 through 1974, a major purpose was to measure and monitor indicators of the nutritional status of the American people through dietary intake data, biochemical tests, physical measurements, and clinical



assessments for evidence of nutritional deficiency. Detailed examinations were given by dentists, ophthalmologists, and dermatologists with an assessment of need for treatment. In addition, data were obtained for a subsample of adults on overall health care needs and behavior, and more detailed examination data were collected on cardiovascular, respiratory, arthritic, and hearing conditions.

The NHANES I target population was the civilian noninstitutionalized population 1-74 years of age residing in the coterminous United States, except for people residing on any of the reservation lands set aside for the use of American Indians. The sample design was a multistage, stratified probability sample of clusters of persons in land-based segments. The sample areas consisted of 65 primary sampling units (PSU's) selected from the 1,900 PSU's in the coterminous United States. A subsample of persons 25-74 years of age was selected to receive the more detailed health examination. Groups at high risk of malnutrition were oversampled at known rates throughout the process.

Household interviews were completed for more than 96 percent of the 28,043 persons selected for the NHANES I sample, and about 75 percent (20,749) were examined.

For NHANES II, conducted from 1976 through 1980, the nutrition component remained nearly identical to that fielded for NHANES I. In the medical area, primary emphasis was placed on diabetes, kidney and liver functions, allergy, and speech pathology.

The NHANES II target population was the civilian noninstitutionalized population 6 months-74 years of age residing in the United States, including Alaska and Hawaii. NHANES II utilized a multistage probability design that involved selection of PSU's, segments (clusters of households) within PSU's, households, eligible persons, and finally sample persons. The sample design provided for oversampling among those persons 6 months-5 years of age, those 60-74 years of age, and those living in poverty areas.

A sample of 27,801 persons was selected for NHANES II. Of this

sample, 20,322 (73.1 percent) were examined.

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

For more information on NHANES I, see: National Center for Health Statistics, H. W. Miller: Plan and operation of the National Health and Nutrition Examination Survey, United States, 1971-73. *Vital and Health Statistics*. Series 1, Nos. 10a and 10b. DHEW Pub. No. (HSM) 73-1310. Health Services and Mental Health Administration. Washington. U.S. Government Printing Office, Feb. 1973; and National Center for Health Statistics, A. Engel, R. S. Murphy, K. Maurer, and E. Collins: Plan and operation of the NHANES I Augmentation Survey of Adults 25-74 Years, United States, 1974-75. *Vital and Health Statistics*. Series 1, No. 14. DHEW Pub. No. (PHS) 78-1314. Public Health Service. Washington. U.S. Government Printing Office, June 1978.

For more information on NHANES II, see: National Center for Health Statistics, A. McDowell, A. Engel, J. T. Massey, and K. Maurer: Plan and operation of the Second National Health and Nutrition Examination Survey, 1976-80. *Vital and Health Statistics*. Series 1, No. 15. DHHS Pub. No. (PHS) 81-1317. Public Health Service. Washington. U.S. Government Printing Office, July 1981. For information on nutritional applications of these surveys, see: Yetley, E., and C. Johnson, 1987. Nutritional applications of the Health and Nutrition Examination Surveys (HANES). *Ann Rev Nutr* 7:441-63.

#### National Master Facility Inventory

The National Master Facility Inventory (NMFI) is a comprehensive file of inpatient health facilities in the United States. The three broad categories of facilities in NMFI are hospitals, nursing and related care homes, and other custodial or remedial care facilities.

To be included in NMFI, hospitals must have at least six inpatient beds; nursing and related care homes and other facilities must have at least three inpatient beds.

NMFI is kept current by the periodic addition of names and addresses obtained from State licensing and other agencies for all newly established inpatient facilities. In addition, annual surveys of hospitals and periodic surveys of nursing homes and other facilities are conducted to update name and location, type of business, number of beds, and number of residents or patients in the facilities, and to identify those facilities that have gone out of business.

From 1968 through 1975, the hospital survey was conducted in conjunction with the American Hospital Association (AHA) Annual Survey of Hospitals. AHA performed the data collection for its member hospitals, while the National Center for Health Statistics (NCHS) collected the data for the approximately 400 non-AHA registered hospitals. Since 1976, however, all of the data collection has been performed by AHA.

Hospitals are requested to report data for the full year ending September 30. More than half of the responding hospitals used this reporting period for the 1982 survey. The remaining hospitals used various other reporting periods. The response rate for the 1982 hospital survey was about 90 percent and 96 percent for the 1986 survey.

The nursing home and other facilities survey was conducted by NCHS in 1963, 1967, 1969, 1971, 1973, 1976, 1978, 1980, 1982, and 1986. In the 1980 and 1982 NMFI surveys, only nursing and related care homes were covered. In 1986, nursing and related care homes and facilities for the mentally retarded were covered and called the Inventory of Long-Term Care Places. In 1982, arrangements were made with 35 States for obtaining their data on nursing and related care homes. NCHS surveyed certain types of homes that were excluded from the State surveys.

Statistics derived from the hospital and nursing home and other facilities surveys were adjusted for

both facility and item nonresponse. Missing items on the questionnaire were imputed, when possible, by using information reported by the same facility in a previous survey. When data were not available from a previous census for a responding facility, the data were imputed by using data from similar responding facilities. Similar facilities are defined as those with the same types of business, ownership, service, and approximately the same bed size.

For more detailed information on NMFI, see: National Center for Health Statistics, D. A. Roper: Nursing and related care homes as reported from the 1982 NMFI survey. *Vital and Health Statistics*. Series 14, No. 32. DHHS Pub. No. (PHS) 86-1827. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1986; and National Center for Health Statistics, A. Sirrocco. The 1986 Inventory of Long-Term Care Places: An overview of facilities for the mentally retarded. *Advance Data From Vital and Health Statistics*. No. 143. DHHS Pub. No. (PHS) 87-1250. Public Health Service. Hyattsville, Md., 1987.

#### National Hospital Discharge Survey

The National Hospital Discharge Survey (NHDS) is a continuing nationwide sample survey of short-stay hospitals in the United States. The scope of NHDS encompasses patients discharged from noninstitutional hospitals, exclusive of military and Veterans Administration hospitals, located in the 50 States and the District of Columbia. Only hospitals having six or more beds for patient use and those in which the average length of stay for all patients is less than 30 days are included in the survey. Although all discharges of patients from these hospitals are within the scope of the survey, discharges of newborn infants from all hospitals are excluded from this report as well as discharges of all patients from Federal hospitals.

The original sample was selected in 1964 from a frame of short-stay hospitals listed in the National Master Facility Inventory. A two-stage stratified sample design was used, and hospitals were stratified according to bed size and geographic region. Sample hospitals were selected with

probabilities ranging from certainty for the largest hospitals to 1 in 40 for the smallest hospitals. Within each sample hospital, a systematic random sample of discharges was selected from the daily listing sheet. Initially, the within-hospital sampling rates for selecting discharges varied inversely with the probability of hospital selection so that the overall probability of selecting a discharge was approximately the same across the sample. Those rates were adjusted for individual hospitals in subsequent years to control the reporting burden of those hospitals.

In 1985, for the first time, two data collection procedures were used for the survey. The first was the traditional manual system of sample selection and data abstraction. In the manual system, sample selection and transcription of information from the hospital records to abstract forms were performed by either the hospital staff or representatives of the National Center for Health Statistics (NCHS) or both. The second was an automated method, used in approximately 17 percent of the sample hospitals in 1985, involving the purchase of data tapes from commercial abstracting services. Upon receipt of these tapes they were subject to NCHS sampling, editing, and weighting procedures.

In 1988, the NHDS was redesigned. The hospitals with the most beds and/or discharges annually were selected with certainty, but the remaining sample was selected using a three-stage stratified design. The first stage is a sample of the primary sampling units (PSU's) used by the National Health Interview Survey. Within PSU's, hospitals were stratified or arrayed by abstracting status (whether subscribing to a commercial abstracting service) and within abstracting status arrayed by type of service and bed size. Within these strata and arrays, a systematic sampling scheme with probability proportional to the number of discharges annually was used to select hospitals. The rates for systematic sampling of discharges within hospitals vary inversely with probability of hospital selection within PSU. Discharge records from hospitals submitting data via commercial abstracting services (approximately 25 percent of sample

hospitals) were arrayed by primary diagnoses, patient sex and age group, and date of discharge prior to sampling. Otherwise, the procedures for sampling discharges within hospitals is the same as that used in the prior design.

The basic unit of estimation for NHDS is the sample patient abstract. The estimation procedure involves inflation by the reciprocal of the probability of selection, adjustment for nonresponding hospitals and missing abstracts, and ratio adjustments to fixed totals. Of the 558 hospitals selected for the survey, 492 were within the scope of the survey, and 400 participated in the survey in 1987. Data were abstracted from about 181,000 medical records.

For more detailed information on the design of NHDS and the magnitude of sampling errors associated with NHDS estimates, see: National Center for Health Statistics, E. J. Graves: Utilization of short-stay hospitals, United States, 1987, annual summary. *Vital and Health Statistics*. Series 13, No. 99. DHHS Pub. No. (PHS) 89-1760. Public Health Service. Washington. U.S. Government Printing Office, April 1989.

#### National Nursing Home Survey

The National Center for Health Statistics (NCHS) has conducted three National Nursing Home Surveys. The first survey was conducted from August 1973 through April 1974; the second survey from May through December 1977; and the third from August 1985 through January 1986.

Much of the background information and experience used to develop the first National Nursing Home Survey was obtained from a series of three ad hoc sample surveys of nursing and personal care homes called the Resident Places Surveys (RPS-1, -2, -3). The three surveys were conducted by the National Center for Health Statistics during April-June 1963, May-June 1964, and June-August 1969, respectively. During the first survey, RPS-1, data were collected on nursing homes, chronic disease and geriatric hospitals, nursing home units, and chronic disease wards of general and mental hospitals. RPS-2 concentrated mainly on nursing homes and

geriatric hospitals. During the third survey, RPS-3, nursing and personal care homes in the coterminous United States were sampled.

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

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

The scope of the 1985 NNHS was similar to the 1977 survey in that it included all types of nursing homes. The sample of 1,220 homes was selected from a sampling frame of 20,479 nursing and related care homes. The frame consisted of all homes in the 1982 NMFI; homes identified in the 1982 Complement Survey of the NMFI as "missing" from the 1982 NMFI; facilities that opened for business between 1982 and June 1984; and hospital-based nursing homes obtained from the Health Care Financing Administration. Information on the facility was collected through a personal interview with the administrator. Accountants were asked to either complete a questionnaire on expenditures or provide a financial statement. Resident data were provided by a nurse familiar with the care provided to the resident. The

nurse relied on the medical record and personal knowledge of the resident. In addition to employee data that were collected during the interview with the administrator, a sample of registered nurses completed a self-administered questionnaire. Discharge data were based on information recorded in the medical record. Additional data about the current and discharged residents were obtained in telephone interviews with next of kin. Data were obtained from 1,079 facilities, 2,763 registered nurses, 5,243 current residents, and 6,023 discharges. Response rates were 93 percent for facilities, 68 percent for expenses, 80 percent for registered nurses, 97 percent for residents, 95 percent for discharges, and 88 percent for next of kin.

Statistics for all three surveys were derived by a ratio-estimation procedure. Statistics were adjusted for failure of a home to respond, failure to fill out one of the questionnaires, and failure to complete an item on a questionnaire.

For more information on the 1973-74 NNHS, see: National Center for Health Statistics, M. R. Meiners: Selected operating and financial characteristics of nursing homes, United States, 1973-74 National Nursing Home Survey. *Vital and Health Statistics*. Series 13, No. 22. DHEW Pub. No. (HRA) 76-1773. Health Resources Administration. Washington. U.S. Government Printing Office, Dec. 1975. For more information on the 1977 NNHS, see: National Center for Health Statistics, J. F. Van Nostrand, A. Zappolo, E. Hing, et al.: The National Nursing Home Survey, 1977 Summary for the United States. *Vital and Health Statistics*. Series 13, No. 43. DHHS Pub. No. (PHS) 79-1794. Public Health Service. Washington. U.S. Government Printing Office, July 1979. For more information on the 1985 NNHS, see: National Center for Health Statistics, G. Strahan. Nursing home characteristics, preliminary data from the 1985 National Nursing Home Survey. *Advance Data From Vital and Health Statistics*. No. 131, DHHS Pub. No. (PHS) 87-1250. Public Health Service. Hyattsville, Md. 1987; National Center for Health Statistics, E. Hing. Use of nursing homes by the elderly: Preliminary data from the 1985 National Nursing

Home Survey. *Advance Data From Vital and Health Statistics*. No. 135, DHHS Pub. No. (PHS) 87-1250. Public Health Service. Hyattsville, Md. 1987.

#### National Ambulatory Medical Care Survey

The National Ambulatory Medical Care Survey (NAMCS) is a continuing national probability sample of ambulatory medical encounters. The scope of the survey covers physician-patient encounters in the offices of nonfederally employed physicians classified by the American Medical Association or American Osteopathic Association as "office-based, patient care" physicians. Excluded are visits to hospital-based physicians, visits to specialists in anesthesiology, pathology, and radiology and visits to physicians who are principally engaged in teaching, research, or administration. Telephone contacts and nonoffice visits are also excluded.

A multistage probability design is employed. The first-stage sample consists of 87 primary sampling units (PSU's) selected from about 1,900 such units into which the United States has been divided. In each sample PSU, a sample of practicing physicians is selected. The final stage involves selection within a randomly assigned 7-day reporting period, and the selection of samples of patient visits during that period.

For the 1985 survey, a sample of 5,032 non-Federal, office-based physicians was selected from masterfiles maintained by the American Medical Association and the American Osteopathic Association. The physician response rate for 1985 was 70.2 percent, providing data concerning a random sample of about 71,594 patient visits.

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

For more detailed information on the design of NAMCS and the magnitude of sampling errors associated with NAMCS estimates, see: National Center for Health Statistics, T. McLemore and J. DeLozier. 1985 Summary: National Ambulatory Medical Care Survey.

*Advance Data From Vital and Health Statistics*. No. 128. DHHS Pub. No. (PHS) 87-1250. Public Health Service. Hyattsville, Md. 1987.

## Center for Infectious Diseases

### AIDS Surveillance

Acquired immunodeficiency syndrome (AIDS) surveillance is conducted by health departments in each State, territory, and the District of Columbia. Although surveillance activities range from passive to active, most areas employ multifaceted active surveillance programs, which include four major reporting sources of AIDS information: hospitals and hospital-based physicians, physicians in non-hospital practice, public and private clinics, and medical record systems (death certificates, tumor registries, hospital discharge abstracts, and communicable disease reports). Using a standard confidential case report form, the health departments collect information without personal identifiers, which is coded and computerized either at the Centers for Disease Control (CDC) or at health departments from which it is then transmitted electronically to CDC.

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

For more information on AIDS surveillance, contact: Chief, Surveillance Section, Surveillance and Evaluation Branch, AIDS Program, Center for Infectious Diseases, Centers for Disease Control, Atlanta, Ga. 30333.

## Epidemiology Program Office

### National Notifiable Diseases Surveillance System

The Epidemiology Program Office (EPO) of the Centers for Disease Control (CDC), in partnership with the Council of State and Territorial Epidemiologists (CSTE), operates the National Notifiable Diseases Surveillance

System. The purpose of this system is primarily to provide weekly provisional information on the occurrence of diseases defined as notifiable by CSTE. In addition, the system also provides summary data on an annual basis. State epidemiologists report cases of notifiable diseases to EPO, and EPO tabulates and publishes these data in the *Morbidity and Mortality Weekly Report (MMWR)* and the *Summary of Notifiable Diseases, United States* (entitled *Annual Summary* before 1985). Notifiable disease surveillance is used by public health practitioners at local, State, and national levels as part of disease prevention and control activities.

Notifiable disease reports are received from 52 areas in the United States and 5 territories. To calculate U.S. rates, data reported by 50 States, New York City, and Washington, D.C., are used. (New York State is reported as Upstate New York, which excludes New York City).

Completeness of reporting varies because not all cases receive medical care and not all treated conditions are reported. Although State laws and regulations mandate disease reporting, reporting to CDC by States and territories is voluntary. Reporting of varicella (chickenpox) and mumps to CDC is not done by some States in which these diseases are not notifiable to local or State authorities. The number of areas reporting varicella was 31 in 1985, 32 in 1986, and 33 in 1987 and 1988. The number of areas reporting mumps was 48 in 1985 and 1986, 49 in 1987, and 48 in 1988.

Estimates of underreporting of some diseases have been made. For example, it is estimated that only 10 percent of cases of congenital rubella syndrome are reported. Only 10-15 percent of all measles cases were reported prior to the institution of the Measles Elimination Program in 1978; but now it is estimated that all cases are reported in most areas of the country. Data from a study of tetanus deaths suggest that only 40 percent of tetanus cases are reported to CDC.

For more information, see: Centers for Disease Control, Final 1987 reports of notifiable diseases, *Morbidity and Mortality Weekly Report*, 37(54), Public Health Service, DHHS, Atlanta, Ga., Oct., 1989, or write to Centers for Disease Control,

Director, Division of Surveillance and Epidemiologic Studies, Epidemiology Program Office, Atlanta, Ga. 30333.

## Center for Chronic Disease Prevention and Health Promotion

### Abortion Surveillance

The Centers for Disease Control (CDC) acquires abortion service statistics by State of occurrence from three sources—central health agencies, hospitals and other medical facilities, and the National Center for Health Statistics. Most of the central health agencies have established direct reporting systems, although a few collected data by surveying abortion facilities. Epidemiologic surveillance of abortion was initiated in eight States in 1969, and now statewide abortion data are also reported by the remaining States.

The total number of abortions reported to CDC is about 16 percent less than the total estimated independently by the Alan Guttmacher Institute, the research and development division of the Planned Parenthood Federation of America, Inc.

For more information, contact: Director, Division of Reproductive Health, Center for Health Promotion and Education, Centers for Disease Control, Atlanta, Ga. 30333.

## Center for Prevention Services

### U.S. Immunization Survey

This system is the result of a contractual agreement between the Centers for Disease Control and the U.S. Bureau of the Census. Estimates from the Immunization Survey are based on data obtained during the third week of September in certain years for a subsample of households interviewed for the Current Population Survey, which is described separately in this appendix.

The reporting system contains demographic variables and vaccine history along with disease history when relevant to vaccine history. The system is used to estimate the immunization level of the Nation's child population against the vaccine-preventable diseases; from time to time, immunization level data on the adult population are collected.

The scope of the U.S. Immunization Survey covers the 50 States and the District of Columbia. For example, the 1981 sample included approximately 45,000 household units. Six thousand sample units were found to be vacant or otherwise not to be interviewed. Of the approximately 39,000 occupied households eligible for interview, about 1,500 were not interviewed because the occupants either were not at home after repeated calls or were unavailable for some other reason.

The estimating procedure that was used involves the inflation of weighted sample results to independent estimates of the civilian noninstitutionalized population of the United States by age and race.

Starting in 1979, the questionnaire was modified to solicit information regarding the source of immunization responses given by the interviewee. This change was made to measure the percent of responses for which a family immunization record was the source of the information.

For more information about the survey methodology, contact: Director, Division of Immunization, Center for Preventive Services, Centers for Disease Control, Atlanta, Ga. 30333.

## National Institute for Occupational Safety and Health

### National Occupational Hazard Survey

The National Occupational Hazard Survey (NOHS) was conducted by the National Institute for Occupational Safety and Health (NIOSH) to obtain data on employee exposure to particular chemicals and physical agents in various industries.

A random sample of 4,636 urban workplaces was selected by the U.S. Department of Labor, Bureau of Labor Statistics. Because mining and government activities are not within the coverage of the Occupational Safety and Health Act and agricultural and rural areas were beyond the logistical capacity of the survey, the sample excluded those types of facilities. Included were facilities in 66 different two-digit Standard Industrial Classifications (SIC's), located in 67 standard metropolitan statistical areas. Field work was performed by 20 industrial

hygiene surveyors who collected data from February 1972 through June 1974.

Information in Part I, elicited during a questionnaire interview of management, profiled the SIC and size of facility, along with its medical, safety, and industrial hygiene programs. Part II, the greatest part of the NOHS data, contained the recorded observations of the surveyor's management-escorted "walk-through" of all facility work areas. Part II listed, by job title, the number of employees who were potentially exposed to the same chemicals and physical agents. The surveyor recorded all materials and physical agents each employee group encountered, regardless of toxicity; hazardous nature; conditions of use; and the presence, absence, or effectiveness of any exposure control measures. For each potential exposure listed within an occupational group, the surveyor also recorded the duration, intensity, form, and the control utilized and whether it functioned.

For more information on NOHS, see: National Institute for Occupational Safety and Health, National Occupational Hazard Survey, Vol. I, Survey manual, DHEW Pub. No. (NIOSH) 74-127; Vol. II, Data editing and data base development, DHEW Pub. No. (NIOSH) 77-213; Vol. III, Survey analysis and supplemental tables, DHEW Pub. No. (NIOSH) 78-114.

### National Occupational Exposure Survey

During 1981-83, NIOSH conducted a second national survey of worksites, patterned after the NOHS. In this second survey, known as the National Occupational Exposure Survey (NOES), information was collected essentially identical to the NOHS in a sample of 4,490 facilities over a 30-month period.

For further information on NOES, see: National Institute for Occupational Safety and Health, National Occupational Exposure Survey, Field Guidelines, DHHS Pub. No. (NIOSH) 86-116.

## Health Resources and Services Administration

### Bureau of Health Professions

#### Physician Supply Projections

Physician supply projections in this report are based on a model developed by the Bureau of Health Professions to forecast the supply of physicians by specialty, activity, and by State of practice. The 1981 supply of active physicians (M.D.'s) was used as the starting point for the most recent projections of active physicians. The major source of data used to obtain 1981 figures was the American Medical Association (AMA) Physician Masterfile.

In the first stage of the projections, graduates from U.S. schools of allopathic (M.D.) and osteopathic (D.O.) medicine and foreign-trained additions were estimated on a year-by-year basis. Estimates of first-year enrollments, student attrition, other medical school-related trends, and a model of net foreign medical graduate immigration were used in deriving these annual additions. These year-by-year additions were then combined with the already existing active supply in a given year to produce a preliminary estimate of the active work force in each succeeding year. These estimates were then reduced to account for mortality and retirement. Gender-specific mortality and retirement losses were computed by 5-year age cohorts on an annual basis, using age distributions and mortality and retirement rates based on AMA data.

For more information, see: Bureau of Health Professions, *Seventh Report to the President and Congress on the Status of Health Personnel in the United States*, Forthcoming, Health Resources and Services Administration, Rockville, Md.

#### Nurse Supply Estimates

Nursing estimates in this report are based on a model developed by the Bureau of Health Professions to meet the requirements of Section 951, P.L. 94-63. The model estimates the following for each State:

1. Nurse population—those with current licenses to practice

2. Nurse supply—all practicing nurses either full or part time (or all of those available to practice at that time)
3. Full-time equivalent supply—nurses practicing full time plus one-half of those practicing part time (or available on that basis)

Each of the three estimates are divided into three levels of highest educational preparation: associate degree or diploma; baccalaureate; master's and doctorate.

Among the factors considered are new graduates, changes in educational status, nursing employment rates, age, migration patterns, death rates, and licensure phenomena. Data sources include data on nursing education from the National League for Nursing and data on licensure from the National Council of State Boards of Nursing. Data on the number and characteristics of registered nurses are based on data from the National Sample Survey of Registered Nurses conducted by the Division of Nursing, Bureau of Health Professions in March 1988.

## **Alcohol, Drug Abuse, and Mental Health Administration**

### **National Institute on Alcohol Abuse and Alcoholism**

#### **National Survey of Drinking**

Data on trends in alcohol consumption were drawn from national surveys funded by the National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse. The 1979 survey was based on self-reported consumption and was designed to represent adults 18 years of age and over living in households in the coterminous United States. A total of 1,772 interviews were conducted, representing a response rate of 66 percent.

For more information on the National Survey of Drinking, write: Laboratory for Epidemiology and Population Studies, National Institute on Alcohol Abuse and Alcoholism, 5600 Fishers Lane, Rockville, Md. 20857. For further information on alcoholism services, see: National

Institute on Alcohol Abuse and Alcoholism, *Characteristics of alcoholism services in the United States—1984*. Data from the September 1984 National Alcoholism and Drug Abuse Program Inventory. P. G. Reed and D. S. Sanchez. Division of Biometry and Epidemiology. June 1986.

### **National Institute on Drug Abuse**

#### **National Household Surveys on Drug Abuse**

Data on trends in use of marijuana, cigarettes, and alcohol among youths 12–17 years of age and young adults 18–25 years of age are from the National Household Survey on Drug Abuse. The 1988 survey is the ninth in a series that began in 1971 under the auspices of the National Commission on Marijuana and Drug Abuse. Since 1974, the survey has been sponsored by the National Institute on Drug Abuse.

The survey covers the population 12 years of age and over living in households in the coterminous United States. Youths (12–17 years) and young adults (18–25 years of age) are oversampled as are blacks and Hispanics.

The most recent survey (1988) is based on home personal interviews of 8,814 randomly selected Americans 12 years of age and over. The interview response rate in this survey was 82 percent for the youth sample (12–17 years).

For more information on the National Household Survey on Drug Abuse, see: Population Estimates, 1988. For further information on drug abuse treatment units, see: National Institute on Drug Abuse, *National Drug and Alcoholism Treatment Unit Survey (NDATUS), Final Report, 1987*. DHHS Pub. No. (ADM) 89–1626, U.S. Government Printing Office, 1989.

### **National Institute of Mental Health**

#### **Surveys of Mental Health Organizations**

The Survey and Reports Branch of the Division of Biometry and Applied Sciences conducts several inventories of mental health organizations. Some of the data in

this report are derived from more than one of these inventories. The response rate to most of the items on these inventories is relatively high (90 percent or better) as is the rate for data presented in this report. However, for some inventory items, the response rate may be somewhat lower.

The Inventories of Mental Health Organizations are the primary source for National Institute of Mental Health (NIMH) data included in this report. This data system is based on questionnaires mailed every other year to mental health organizations in the United States, including psychiatric hospitals, non-Federal general hospitals with psychiatric services, Veterans Administration psychiatric services, residential treatment centers for emotionally disturbed children, freestanding outpatient psychiatric clinics, and other types of partial care organizations. Federally funded community mental health centers (CMHC's) were included separately through 1980. In 1981, with the advent of block grants, the changes in definition of CMHC's, and the discontinuation of CMHC monitoring by NIMH, organizations formerly classified as CMHC's have been reclassified as other organization types, primarily "multiservice mental health organizations, not elsewhere classified" and "freestanding psychiatric outpatient clinics."

Beginning in 1983 any organization that provides services in any combination of two or more services (e.g., outpatient plus partial care, residential treatment plus outpatient plus partial care) and is neither a hospital nor a residential treatment center for emotionally disturbed children is classified as a multiservice mental health organization. Prior to 1983 an organization had to have either inpatient or residential treatment services in combination with at least one other service to be a "multiservice mental health organization." The result of this definitional change is to increase sharply the number of multiservice mental health organizations while decreasing the number of freestanding psychiatric outpatient clinics.

Other surveys conducted by the Survey and Reports Branch

encompass samples of patients admitted to State, county, and private mental hospitals, outpatient psychiatric services, and Veterans Administration psychiatric services. The purpose of these surveys is to determine the sociodemographic, clinical, and treatment characteristics of patients served by these facilities.

For more information, write: Survey and Reports Branch, Division of Biometry and Applied Sciences, National Institute of Mental Health, Room 18C-07, 5600 Fishers Lane, Rockville, Md. 20857. For further information on mental health, see: National Institute of Mental Health, *Mental Health, United States, 1987*. R. W. Manderscheid and S. A. Barrett, eds. DHHS Pub. No. (ADM) 87-1518, U.S. Government Printing Office, 1987.

## National Institutes of Health

### National Cancer Institute

#### Surveillance, Epidemiology, and End Results Program

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

Data are submitted to the Institute twice a year. Patients included in this report include those diagnosed between 1973 and 1986. Patients diagnosed between 1973 and 1985 have been followed through 1986 and are included in survival calculations using the actuarial method. All patients were residents of one of the following geographic areas at the time of their initial diagnosis of cancer: Atlanta, Georgia; Detroit, Michigan; Seattle-Puget Sound, Washington; San Francisco-Oakland, California; Connecticut; Iowa; New Mexico; Utah; and Hawaii. Data from New Jersey were excluded because those data are available only since 1979. Further, data from Puerto Rico were also excluded because this analysis focuses on trends occurring within the United States exclusive of its territories.

Population estimates used to calculate incidence rates are obtained from the U.S. Bureau of the Census. Currently, the Bureau has provided population projections through 1985. Population projections for 1986 have been made by NCI. Rates presented in this report may differ somewhat from previous reports due to revised population estimates and the addition and deletion of small numbers of incidence cases.

Life tables used to determine normal life expectancy when calculating relative survival rates were obtained from the National Center for Health Statistics. Separate life tables are used for each race-sex-specific group included in the SEER Program.

For further information, see: National Cancer Institute, *Cancer Statistics Review, 1973-86* by E. Sondik et al., NIH Pub. No. 89-2789. Public Health Service, Bethesda, Md., May 1989.

### Health Care Financing Administration

#### Office of the Actuary

##### Estimates of National Health Expenditures

Estimates of public and private expenditures for health (National Health Accounts) are compiled annually by type of expenditure and source of funds. The Health Care Financing Administration occasionally revises its health expenditure estimates. Data in this volume may differ slightly from those appearing in earlier volumes of *Health, United States*. The data for Federal health programs are taken from administrative sources.

Estimates for non-Federal expenditures come from an array of sources. American Hospital Association data on hospital finances are the primary source for estimates relating to hospital care. The salaries of dentists and physicians on the staffs of hospitals and hospital outpatient facilities are considered a component of hospital care. Expenditures for the education and training of medical personnel are considered to be expenditures for education, and where they can be separated, they are

excluded from health expenditures. Since 1977 the costs of services of health professionals have been estimated using data from the U.S. Bureau of the Census Services Annual Survey, the Bureau of Labor Statistics, and the Consumer Price Index with some adjustments using data from the Medicare program, the Internal Revenue Service, and health maintenance organizations. Expenditures for drugs, drug sundries, eyeglasses, and appliances exclude those provided to inpatients and are obtained principally from the estimate of personal consumption expenditures prepared by the U.S. Department of Commerce's Bureau of Economic Analysis. Nursing home care expenditures by both public and private sources are based on revenue data from the National Nursing Home Survey conducted by the National Center for Health Statistics. Data on the financial expenditures of health insurance organizations come from special Health Care Financing Administration analyses of private health insurers. Expenditures for construction include the erection or renovation of hospitals, nursing homes, medical clinics, and medical research facilities but not for private office buildings providing office space for private practitioners.

For more specific information on items included and excluded and on general methodology used, see: National health expenditures, 1985, by H. Lazenby, K. R. Levit, and D. R. Waldo, *Health Care Financing Notes*, HCFA Pub. No. 03232, Health Care Financing Administration, Washington, U.S. Government Printing Office, Sept. 1986.

#### Medicare Statistical System

The Medicare Statistical System (MSS) provides data for examining the program's effectiveness and for tracking the eligibility of enrollees and the benefits they use, the certification status of institutional providers and the payments made for covered services. Records are maintained on about 33 million enrollees and 24,000 participating institutional providers; and about 420 million bills for services are processed annually.

The MSS contains four major computer files: the health insurance master file, the service provider file,

the Hospital Insurance (HI) claims file, and the Supplementary Medical Insurance (SMI) payment records file.

The health insurance master file contains records for each aged and disabled enrollee and includes data on type of entitlement, deductible status, benefit period status and benefits used, as well as demographic information such as age, sex, race, and residence.

The service provider file contains information on hospitals, home health agencies, skilled nursing facilities, independent clinical laboratories, and suppliers of portable x ray or outpatient physical therapy services that participate in Medicare. For hospitals, data on number of beds, type of ownership and other characteristics are included.

The HI claims file contains information on the beneficiaries' entitlement and their use of benefits during the benefit period for hospital, skilled nursing facility, and home health agency services.

The SMI payment record file provides information on whether the enrollee has met the deductible and on amounts paid for physicians' services and other SMI-covered services and supplies.

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

For further information on the Medicare statistical system, see: Health Care Financing Administration, Medicare Statistical File Manual, HCFA Pub. No. 03272 Baltimore, Md., July 1988.

### Medicaid Data System

The majority of Medicaid data are compiled from forms submitted annually by State Medicaid agencies to the Health Care Financing Administration (HCFA) for Federal fiscal years ending September 30 on the Form HCFA-2082, *Statistical Report on Medical Care: Eligibles, Recipients, Payments, and Services*.

When using the data keep the following caveats in mind:

- Counts of recipients and eligibles categorized by basis of eligibility generally count each person only

once—based on the person's basis of eligibility as of first appearance on the Medicaid rolls during the Federal fiscal year covered by the report.

Note, however, that some States report duplicated counts of recipients; that is, they report an individual in as many categories as the individual had different eligibility statuses during the year. In such cases, the sum of all basis-of-eligibility cells will be greater than the "total recipients" number.

- Expenditure data include payments for all claims adjudicated or paid during the fiscal year covered by the report. Note that this is not the same as summing payments for services that were rendered during the reporting period.

- Some States fail to submit the HCFA-2082 for a particular year. When this happens, HCFA estimates the current year's HCFA-2082 data for missing States based upon prior year's submissions and information the State entered on Form HCFA-64 (the form States use to claim reimbursement for Federal matching funds for Medicaid).

- HCFA-2082's submitted by States frequently contain obvious errors in one or more cells in the form. For cells obviously in error, HCFA estimates values that appear to be more reasonable.

For further information on Medicaid data, see: *Health Care Financing Program Statistics: Analysis of State Medicaid Program Characteristics, 1986*, by C. Howe and R. Terrell, HCFA Pub. No. 03249, Health Care Financing Administration, Baltimore, Md., U.S. Government Printing Office, Aug. 1987.

## Department of Commerce

### Bureau of the Census

#### U.S. Census of Population

The census of population has been taken in the United States every 10 years since 1790. In the 1980 census, data were collected on sex, race, age, and marital status from 100 percent of the enumerated population. More detailed information such as income, education, housing, occupation, and industry were collected from a 20-percent sample. The 20-percent sample was

dichotomized by size of place of residence, with 50 percent of households in places of less than 2,500 population and 1 out of 6 households in places of 2,500 or more population receiving the more detailed questionnaire.

For more information on the 1980 census, see: U.S. Bureau of the Census, *1980 Census of Population and Housing, Users Guide, Part A Text*, PHC 80-R1-A.

#### Current Population Survey

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

A list of housing units from the 1980 census, supplemented by newly constructed units and households known to be missed in the 1980 census, provides the sampling frame in most areas for the present CPS. In some rural locations, current household listings of selected land areas serve as the frame.

The present CPS sample is located in 729 sample areas, with coverage in every State and the District of Columbia. In an average month during 1988, the number of housing units or living quarters eligible for the national sample was about 70,000, of which about 55,800 were interviewed households, and 2,600 were households at which the members were not available for interview. About 11,500 households were visited but were not eligible for interview.

The estimation procedure used involves inflation by the reciprocal of the probability of selection, adjustment for nonresponse, and ratio adjustment.

For more information, see: U.S. Bureau of the Census, *The Current Population Survey, Design and Methodology*, Technical Paper 40, Washington, U.S. Government Printing Office, Jan. 1978.

#### Population Estimates

National estimates are derived by use of decennial census data as



benchmarks and of data available from various agencies as follows: births and deaths (Public Health Service); immigrants (Immigration and Naturalization Service); the Armed Forces (Department of Defense); net movement between Puerto Rico and the U.S. mainland (Puerto Rico Planning Board); and Federal employees abroad (Office of Personnel Management and Department of Defense). State estimates are based on similar data and also on a variety of data series, including school statistics from State departments of education and parochial school systems.

Current estimates are generally consistent with official decennial census figures and do not reflect the amount of estimated decennial census under enumeration.

For more information, see: U.S. Bureau of the Census, Estimates of the population of the United States, by age, sex, and race: 1980-1987, *Current Population Reports*, Series P-25, No. 1022, Washington, U.S. Government Printing Office, 1988.

## Department of Labor

### Bureau of Labor Statistics

#### Consumer Price Index

The Consumer Price Index is a monthly measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The all urban index (CPI-U) introduced in 1978 is representative of the buying habits of about 80 percent of the noninstitutionalized population of the United States.

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

The index measures price changes from a designated reference date—1982 to 1984—which equals 100. An increase of 22 percent, for example, is shown as 122. This change can also be expressed in dollars as follows: The price of a base period “market basket” of goods and services bought

by all urban consumers has risen from \$10 in 1982 to 1984 to \$11.83 in 1988.

The most recent revision of the CPI, completed in 1987, reflected spending patterns based on the Survey of Consumer Expenditures from 1982 to 1984, the 1980 Census of Population, and the ongoing Point-of-Purchase Survey. Using this improved sample design, prices for the goods and services required to calculate the index are collected in 85 urban areas throughout the country and from about 21,000 retail and service establishments. In addition, data on rents are collected from about 40,000 tenants and 20,000 owner-occupied housing units. Food, fuels, and a few other items are priced monthly in all 85 locations. Prices of most other goods and services are collected bimonthly in the remaining areas. All price information is obtained through visits or calls by trained Bureau of Labor Statistics field representatives.

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

For more information, see: Bureau of Labor Statistics, *Handbook of Methods*, BLS Bulletin 2285, U.S. Department of Labor, Washington, April 1988; I. K. Ford and P. Sturm. CPI revision provides more accuracy in the medical care services component, *Monthly Labor Review*, U.S. Department of Labor, Bureau of Labor Statistics, Washington, April 1988.

#### Employment and Earnings

The Division of Monthly Industry Employment Statistics and the Division of Employment and Unemployment Analysis of the Bureau of Labor Statistics (BLS) publish data on employment and earnings. The data are collected by the Bureau of the Census, State Employment Security Agencies, and

State Departments of Labor in cooperation with BLS.

The major data source is the Current Population Survey (CPS), a household interview survey conducted monthly by the Bureau of the Census to collect labor force data for BLS. CPS is described separately in this appendix. Data based on establishment records are also compiled each month from mail questionnaires by BLS, in cooperation with State agencies.

For more information, see: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, January 1989, Vol. 36, No. 1, Washington, U.S. Government Printing Office, Jan. 1989.

## Environmental Protection Agency

### National Aerometric Surveillance Network

The Environmental Protection Agency (EPA), through extensive monitoring of activities conducted by Federal, State, and local air pollution control agencies, collects data on the six pollutants for which National Ambient Air Quality Standards have been set. These pollution control agencies submit data quarterly to EPA's National Aerometric Data Bank (NADB). There are about 3,400 total stations reporting. Data from some short-term or sporadic monitoring for such purposes as special studies and complaint investigations are usually not included in NADB because the data are not extensive enough to provide equitable comparisons with routine data from permanent monitoring sites.

For more information, see: Environmental Protection Agency, *National Air Pollutant Emission Estimates, 1940-87*, EPA-450/4-88-022, Research Triangle Park, N.C., Mar. 1989, or write to Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, N.C. 27711.

## United Nations

### Demographic Yearbook

The Statistical Office of the United Nations prepares the

*Demographic Yearbook*, a comprehensive collection of international demographic statistics.

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

Lack of international comparability between estimates arises from differences in concepts, definitions, and time of data collection. The comparability of population data is affected by several factors, including (1) the definitions of the total population, (2) the definitions used to classify the population into its urban and rural components, (3) difficulties relating to age reporting, (4) the extent of over- or underenumeration, and (5) the quality of population estimates. The completeness and accuracy of vital statistics data also vary from one country to another. Differences in statistical definitions of vital events may also influence comparability.

For more information, see: United Nations, *Demographic Yearbook 1987*, Pub. No. ST/ESA/STAT/SER.R/15, United Nations, New York, N.Y., 1987.

#### World Health Statistics Annual

The World Health Organization (WHO) prepares the *World Health Statistics Annual*, an annual volume of information on vital statistics and causes of death designed for use by the medical and public health professions. Each volume is the result of a joint effort by the national health and statistical administrations of many countries, the United Nations, and WHO.

United Nations estimates of vital rates and population size and composition, where available, are reprinted directly in the *Statistics Annual*. For those countries for which the United Nations does not prepare demographic estimates, primarily smaller populations, the latest available data reported to the United Nations and based on

reasonably complete coverage of events are used.

Information published on late fetal and infant mortality is based entirely on official national data either reported directly or made available to the World Health Organization.

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

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

For more information, see: World Health Organization, *World Health Statistics Annual 1988*, World Health Organization, Geneva, Switzerland, 1988.

#### Alan Guttmacher Institute

##### Abortion Survey

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

The number of abortions estimated by AGI is about 20 percent

more than the number reported to the Centers for Disease Control.

For more information, write to: The Alan Guttmacher Institute, 111 5th Avenue, 11th Floor, New York, N.Y. 10003-1089.

#### American Hospital Association

##### Annual Survey of Hospitals

Data from this survey are based on questionnaires that are sent to all hospitals in the United States and its associated areas accepted for registration by the American Hospital Association (AHA). In 1987, questionnaires were mailed to all hospitals on AHA files. Overall, 6,425 hospitals reported data, a response rate of 91 percent. For nonreporting hospitals and for the survey questionnaires of reporting hospitals on which some information was missing, estimates were made for all data except those on beds, bassinets, and facilities. Data for beds and bassinets of nonreporting hospitals were based on the most recent information available from those hospitals. Facilities and services and inpatient service area data include only reporting hospitals and, therefore, do not include estimates.

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

Hospitals are requested to report data for the full year ending September 30; 41.5 percent of the responding hospitals used this reporting period. In the 1987 survey, the remaining hospitals used various reporting periods.

For more information on the AHA Annual Survey of Hospitals, see: American Hospital Association, *Hospital Statistics, 1988 Edition, Data from the American Hospital Association 1987 Annual Survey*, Chicago, 1988.

#### American Medical Association

##### Physician Masterfile

A masterfile of physicians has been maintained by the American

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

Masterfile data are obtained from over 2,100 organizations and institutions. These data are collected and processed on an ongoing basis for the maintenance and updating of over 550,000 individual physician records.

A file is initiated on each individual upon entry into medical school or, in the case of foreign graduates, upon entry into the United States. A census of physicians is conducted every 4 years to update the file information on professional activities, specialization, and present employment status. Between censuses, AMA keeps the file current by continuous checks of professional publications and State licensure notices for changes in any physician's activities. When a change is noted, the physician may be sent a questionnaire to verify the change.

For more information on the AMA Physician Masterfile, see: Division of Survey and Data Resources, American Medical Association, *Physician Characteristics and Distribution in the U.S.*, 1987 edition, Chicago, 1987.

### Annual Census of Hospitals

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

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

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

For more information on the AMA Annual Census of Hospitals, see: American Medical Association, Hospital service in the United States, *Journal of the American Medical Association*, 116(11):1055-1144, 1941.

### Interstudy

#### National Health Maintenance Organization Census

From 1976 to 1981 the Office of Health Maintenance Organizations conducted a census of health maintenance organizations (HMO). Since 1982, Interstudy has conducted the census. A questionnaire is sent to all HMO's in the United States asking for updated enrollment, profit status, and Federal qualification status. New HMO's are also asked to provide information on model type. When necessary, information is obtained, supplemented, or clarified by telephone. For nonresponding HMO's State-supplied information or the most current available data are used.

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

For further information, see: Interstudy, *National HMO Census*:

*Annual Report on the Growth of HMO's in the U.S., 1982-1986 Editions; The InterStudy Edge*, spring 1987 and 1988 editions and 1989, volume 2. Excelsior, Minn., 1983-89.

### Public Health Foundation

#### Association of State and Territorial Health Officials Reporting System

The Association of State and Territorial Health Officials (ASTHO) Reporting System, operated by the Public Health Foundation, is a statistical system that provides comprehensive information about the public health programs of State and local health departments. The Reporting System was established in 1970 by ASTHO in response to congressional requests for information about State health agency uses of block grant funds (i.e., PHS Act, Section 314(d) grant monies). Today, the Reporting System maintains a data base and publishes annual reports on State health agency personnel, expenditures, funding sources, programs, and services.

The Foundation's ASTHO Reporting System conducts an annual survey of the official State health agency (SHA) in each of the 50 States, the District of Columbia, and four U.S. territories. The survey includes extensive detail on the agencies' expenditures and funding sources, and the services and activities in four program areas: personal health, environmental health, health resources, and laboratory. Supplementary data on clients, services, and selected health outcomes are collected in the areas of maternal and child health, handicapped children's services, dental health, and tuberculosis control. In addition, special studies are undertaken periodically to gather information on public health topics of high national priority.

For more information, contact: Public Health Foundation, 1220 L Street, N.W., Suite 350, Washington, D.C. 20005.

# Appendix II

## Glossary

### General Terms

#### Social and Demographic Terms

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

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

In this report, the death rates are age adjusted to the U.S. population enumerated in 1940. Computations may be simplified by expressing the 1940 U.S. population on a per million basis (table I). Adjustment is based on 11 age groups. An exception is cause-specific provisional death rates, which are based on 10 age groups with 1-4 and 5-14 years of age combined as one group. Maternal mortality rates for complications of pregnancy, childbirth, and the puerperium are calculated as the number of deaths per 100,000 live births. These rates are age adjusted to the live births in the United States in

**Table I. Standard million age distribution used to adjust death rates to the U.S. population in 1940**

Age	Standard million
All ages . . . . .	1,000,000
Under 1 year . . . . .	15,343
1-4 years . . . . .	64,718
5-14 years . . . . .	170,355
15-24 years . . . . .	181,677
25-34 years . . . . .	162,066
35-44 years . . . . .	139,237
45-54 years . . . . .	117,811
55-64 years . . . . .	80,294
65-74 years . . . . .	48,426
75-84 years . . . . .	17,303
85 years and over . . . . .	2,770

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

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

1970 using the intervals for mother's age in table II.

The data from the National Health Interview Survey (NHIS), National Health Examination Survey (NHES), National Health and Nutrition Examination Survey (NHANES), National Ambulatory Medical Care Survey (NAMCS), and the National Hospital Discharge Survey (NHDS) are age adjusted to the 1970 civilian noninstitutionalized population. Most of the data from the NHIS, NAMCS, and NHDS are age adjusted using the following four age groups: under 15 years, 15-44 years, 45-64 years, and 65 years and over. The NHES and NHANES data are age adjusted using the following six age groups: 20-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, and 65-74 years. The 1970 civilian noninstitutionalized population used to age adjust data from each survey are shown in table III and derived as follows: Institutionalized population =  $(1 - \text{proportion of total population not institutionalized on April 1, 1970}) \times \text{total population on July 1, 1970}$ . Civilian noninstitutionalized population = civilian population on July 1, 1970 - institutionalized population.

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

$$\left( \frac{P_n}{P_0} \right)^{1/N} - 1 \times 100$$

where  $P_n$  = later time period  
 $P_0$  = earlier time period  
 $N$  = number of years in interval

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

**Table III. Population and age groups used to adjust data to the U.S. civilian noninstitutionalized population in 1970: Selected surveys**

Survey and age	Number in thousands
NHIS, NAMCS, and NHDS	
All ages . . . . .	199,584
Under 15 years . . . . .	57,745
15-44 years . . . . .	81,189
45-64 years . . . . .	41,537
65 years and over . . . . .	19,113
NHIS health care coverage	
65 years and over . . . . .	19,113
65-74 years . . . . .	12,224
75 years and over . . . . .	6,889
NHIS smoking data	
18 years and over . . . . .	130,158
18-24 years . . . . .	22,464
25-34 years . . . . .	24,430
35-44 years . . . . .	22,614
45-64 years . . . . .	41,537
65 years and over . . . . .	19,113
NHES and NHANES	
20-74 years . . . . .	116,182
20-24 years . . . . .	15,378
25-34 years . . . . .	24,430
35-44 years . . . . .	22,614
45-54 years . . . . .	23,070
55-64 years . . . . .	18,467
65-74 years . . . . .	12,223

Source: Calculated from Bureau of Census: Estimates of the Population of the United States by Age, Sex, and Race: 1970 to 1977. Population Estimates and Projections. *Current Population Reports*. Series P-25, No. 721, Washington. U.S. Government Printing Office, April 1978.

**Race**—Beginning in 1976, the Federal Government's data systems classified individuals into the following racial groups: American Indian or Alaskan Native, Asian or Pacific Islander, black, and white. In this report, three racial categories are generally used: "white," "all other," and "black." The "all other" category includes all races other than white.

Depending on the data source, the classification by race may be based on self-classification or on observation by an interviewer or other persons filling out the questionnaire. In the National Vital Statistics System, newborn infants are assigned the race of their parents. If the parents are of different races and one is white, the child is assigned the other parent's race. If either parent is Hawaiian, the child is classified as Hawaiian. In all other cases the child is assigned the father's race. Prior to 1964, the National Vital Statistics System classified all births for which race was unknown as "white." Beginning in 1964 these births are

classified according to information on the previous record. The National Health Interview Survey assigns children whose parents are of different races to the race of the mother.

**Family income**—For purposes of the National Health Interview Survey and National Health and Nutrition Examination Survey, all people within a household related to each other by blood, marriage, or adoption constitute a family. Each member of a family is classified according to the total income of the family. Unrelated individuals are classified according to their own income. Family income, then, is the total income received by the members of a family (or by an unrelated individual) in the 12 months prior to interview, including wages, salaries, rents from property, interest, dividends, profits and fees from their own businesses, pensions, and help from relatives.

**Marital status**—The population is classified through self-reporting into the categories married and unmarried. Married includes all married people including those separated from their spouses. Unmarried includes those who are single (never married), divorced, or widowed. The Abortion Surveillance Reports of the Centers for Disease Control classify separated people as unmarried for all States except Rhode Island.

**Population**—The U.S. Bureau of the Census collects and publishes data on several different types of population in the United States. Various statistical systems then use the appropriate population in calculating rates.

**Total population** is the population of the United States, including all members of the Armed Forces living in foreign countries, Puerto Rico, Guam, and the U.S. Virgin Islands. Other Americans abroad (e.g., civilian Federal employees and dependents of members of the Armed Forces or other Federal employees) are not included.

**Resident population** is the population living in the United States. This includes members of the Armed Forces stationed in the United States and their families as well as foreigners working or studying here; it excludes foreign military, naval, and diplomatic personnel and

their families located here and residing in embassies or similar quarters as well as Americans living abroad. The resident population is often the denominator when calculating birth and death rates and incidence of disease.

**Civilian population** is the resident population excluding members of the Armed Forces. Families of members of the Armed Forces are included, however. This population is the denominator in rates calculated for the NCHS National Hospital Discharge Survey.

**Civilian noninstitutionalized population** is the civilian population not residing in institutions. Institutions include correctional institutions, detention homes, and training schools for juvenile delinquents; homes for the aged and dependent (e.g., nursing homes and convalescent homes); homes for dependent and neglected children; homes and schools for the mentally or physically handicapped; homes for unwed mothers; psychiatric, tuberculosis, and chronic disease hospitals; and residential treatment centers. This population is the denominator in rates calculated for the National Center for Health Statistics' National Health Interview Survey, National Health and Nutrition Examination Survey, and National Ambulatory Medical Care Survey.

## Geographic Terms

**Division and region**—The 50 States and the District of Columbia are grouped for statistical purposes by the U.S. Bureau of the Census into nine divisions within four regions. The groupings are as follows:

- Northeast
  - New England
    - Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
  - Middle Atlantic
    - New York, New Jersey, Pennsylvania
- Midwest
  - East North Central
    - Ohio, Indiana, Illinois, Michigan, Wisconsin

West North Central

- Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas

- South
  - South Atlantic
    - Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida

East South Central

- Kentucky, Tennessee, Alabama, Mississippi

West South Central

- Arkansas, Louisiana, Oklahoma, Texas

- West
  - Mountain
    - Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada
  - Pacific
    - Washington, Oregon, California, Alaska, Hawaii

**Registration area**—The United States has separate registration areas for birth, death, marriage, and divorce statistics, which collect data annually from States whose registration data are at least 90-percent complete.

The **death registration area** was established in 1900 with 10 States and the District of Columbia, and the **birth registration area** was established in 1915, also with 10 States and the District of Columbia. Both areas have covered the entire United States since 1933. Currently, Puerto Rico, the U.S. Virgin Islands, and Guam are also included, although in statistical tabulations they are not part of the U.S. total.

**Reporting area**—In the National Vital Statistics System, reporting requirements on birth certificates vary according to State. Thus, different numbers of States report various characteristics. For example, in 1986, the educational attainment of mother was reported in 47 States and the District of Columbia.

**Metropolitan statistical area (MSA)**—The definitions and titles of MSA's are established by the U.S. Office of Management and Budget with the advice of the Federal Committee on Metropolitan Statistical Areas. Generally speaking, an MSA consists of a county or group of counties containing at least one city (or twin cities) having a population of 50,000 or more plus adjacent counties

that are metropolitan in character and are economically and socially integrated with the central city. In New England, towns and cities rather than counties are the units used in defining MSA's. There is no limit to the number of adjacent counties included in the MSA as long as they are integrated with the central city, nor is an MSA limited to a single State; boundaries may cross State lines. The metropolitan population in this report is based on MSA's as defined in the 1980 census and does not include any subsequent additions or changes.

## Health Status and Determinants

### Fertility

**Abortion**—The Centers for Disease Control's surveillance program counts *legal abortions* only. For surveillance purposes, legal abortion is defined as a procedure performed by a licensed physician or someone acting under the supervision of a licensed physician.

**Birth rate**—This measure divides the number of live births in a population in a given period by the resident population at the middle of that period. It is expressed as the number of live births per 1,000 population. The rate may be restricted to births to women of specific age, race, marital status, or geographic location, or it may be related to the entire population.

**Completed fertility rate**—Sum of the central birth rates over all ages (14–49 years) of childbearing for a given birth cohort.

**Gestation**—For both the National Vital Statistics System and the Centers for Disease Control's Abortion Surveillance, the period of gestation is defined as beginning with the first day of the last normal menstrual period and ending with the day of birth.

**Live birth**—In the World Health Organization's definition, also adopted by the United Nations and the National Center for Health Statistics, a live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any

other evidence of life such as heartbeat, umbilical cord pulsation, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.

**Live-birth order**—In the National Vital Statistics System, this item from the birth certificate indicates the number of live births a woman has had, counting the birth being recorded.

**Low birth weight**—Prior to 1979 low birth weight was defined as 2,500 grams or less. Beginning in 1979, low birth weight is defined as less than 2,500 grams.

### Mortality

**Cause of death**—For the purpose of national mortality statistics, every death is attributed to one underlying condition, based on information reported on the death certificate and utilizing the international rules for selecting the underlying cause of death from the reported conditions. For data years 1979–88 the *International Classification of Diseases, Ninth Revision* is used for coding. Earlier data used the then current revision of the *International Classification of Diseases* (tables IV and V).

Use of successive revisions for classification of diseases may introduce discontinuities in the comparability of cause-of-death statistics over time. For further discussion, see National Center for Health Statistics: *Vital Statistics of the United States, 1986*, Volume II, Mortality, Part A DHHS Pub. No. (PHS) 88–1122, Public Health Service, Washington, U.S. Government Printing Office, 1988.

### Codes for HIV infection—

Beginning with data for 1987, NCHS introduced category numbers \*042–\*044 for classifying and coding human immunodeficiency virus (HIV) infection, formerly referred to as human T-cell lymphotropic virus-III/lymphadenopathy-associated virus (HTLV-III/LAV) infection. The asterisk before the category numbers indicates that these codes are not part of the Ninth Revision of the International Classification of Diseases (ICD-9). For 1986 and previous years, deaths involving HIV infection were classified to Deficiency of cell-mediated immunity (ICD-9 No. 279.1), contained in the title All other diseases; to Pneumocystosis (ICD-9 No. 136.3), contained in the title All other infectious and parasitic diseases; to Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues; and to a number of other causes. Therefore, beginning with 1987 cause-of-death data are not strictly comparable with data for earlier years.

**Death rate**—This measure is derived by dividing the number of deaths in a population in a given period by the resident population at the middle of that period. It is expressed as the number of deaths per 1,000 or 100,000 population. It may be restricted to deaths in specific age, race, sex, or geographic groups or it may be related to the entire population.

**Cause-of-death ranking**—Cause-of-death ranking is based on the List of 72 Selected Causes of Death and the category human immunodeficiency virus infection (\*042–\*044). The List of 72 Selected Causes of Death was adapted from one of the special lists for mortality tabulations recommended by the

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

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

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

Cause of death	Code numbers			
	Sixth Revision	Seventh Revision	Eighth Revision	Ninth Revision
Diseases of heart . . . . .	400-402, 410-443	400-402, 410-443	390-398, 402, 404, 410-429	390-398, 402, 404-429
Ischemic heart disease . . . . .	...	...	...	410-414
Cerebrovascular diseases . . . . .	330-334	330-334	430-438	430-438
Malignant neoplasms . . . . .	140-205	140-205	140-209	140-208
Respiratory system . . . . .	160-164	160-164	160-163	160-165
Colorectal . . . . .	153-154	153-154	153-154	153, 154
Breast . . . . .	170	170	174	174, 175
Prostate . . . . .	177	177	185	185
Chronic obstructive pulmonary diseases . . . . .	241, 501, 502, 527.1	241, 501, 502, 527.1	490-493, 519.3	490-496
Pneumonia and influenza . . . . .	480-483, 490-493	480-483, 490-493	470-474, 480-486	480-487
Tuberculosis . . . . .	001-019	001-019	010-019	010-018
Chronic liver disease and cirrhosis . . . . .	581	581	571	571
Diabetes mellitus . . . . .	260	260	250	250
Accidents and adverse effects . . . . .	E800-E962	E800-E962	E800-E949	E800-E949
Motor vehicle accidents . . . . .	E810-E835	E810-E835	E810-E823	E810-E825
Suicide . . . . .	E963, E970-E979	E963, E970-E979	E950-E959	E950-E959
Homicide and legal intervention . . . . .	E964, E980-E985	E964, E980-E985	E960-E978	E960-E978
Complications of pregnancy, childbirth, and the puerperium . . . . .	640-689	640-689	630-678	630-676
Malignant neoplasm of peritoneum and pleura . . . . .	...	...	158, 163.0	158, 163
Coalworkers' pneumoconiosis . . . . .	...	...	515.1	500
Asbestosis . . . . .	...	...	515.2	501
Silicosis . . . . .	...	...	515.0	502

World Health Organization for use with the Ninth Revision of the *International Classification of Diseases*. Two group titles—major cardiovascular diseases and symptoms, signs, and ill-defined conditions—are not ranked. In addition, category titles that begin with the words “other” and “all other” are not ranked. The remaining category titles are ranked according to the number of deaths to determine the leading causes of death. When one of the titles that represents a subtotal is ranked (for example, accidents and adverse effects), its component parts (in this case, motor vehicle accidents and all other accidents and adverse effects) are not ranked.

**Infant mortality**—Infant mortality is the death of live-born children who have not reached their first birthday and is usually expressed as a rate (i.e., the number of infant deaths during a year per 1,000 live births reported in the year).

**International Classification of Diseases, Ninth Revision**—The *International Classification of Diseases* (ICD) classifies mortality information for statistical purposes. ICD was first used in 1900 and has been revised about every 10 years since then. The *Ninth Revision*, published in 1977, is used to code U.S. mortality data beginning with data for 1979. The

clinical modification of the *Ninth Revision* is used to code U.S. morbidity data.

Both are arranged in 17 main chapters. Most of the diseases are arranged according to their principal anatomical site, with special chapters for infective and parasitic diseases; neoplasms; endocrine, metabolic, and nutritional diseases; mental diseases; complications of pregnancy and childbirth; certain diseases peculiar to the perinatal period; and ill-defined conditions. In addition, two supplemental classifications are provided: the classification of factors influencing health status and contact with health service and the classification of external causes of injury and poisoning.

**Neonatal mortality rate**—The neonatal mortality rate is the number of deaths under 28 days of age per 1,000 live births.

**Postneonatal mortality rate**—The postneonatal mortality rate is the number of deaths that occur from 28 days to 365 days after birth per 1,000 live births.

**Fetal death rate**—The fetal death rate is the number of fetal deaths with stated or presumed gestation of 20 weeks or more per 1,000 live births plus fetal deaths.

**Late fetal death rate**—The late fetal death rate is the number of fetal deaths with stated or presumed

gestation of 28 weeks or more per 1,000 live births plus late fetal deaths.

**Perinatal mortality rate**—The perinatal mortality rate is the number of late fetal deaths plus infant deaths within 7 days of birth per 1,000 live births plus late fetal deaths.

**Perinatal mortality ratio**—The perinatal mortality ratio is the number of late fetal deaths plus infant deaths within 7 days of birth per 1,000 live births.

**Life expectancy**—Life expectancy is the average number of years of life remaining to a person at a particular age and is based on a given set of age-specific death rates, generally the mortality conditions existing in the period mentioned. Life expectancy may be determined by race, sex, or other characteristics using age-specific death rates for the population with that characteristic.

**Years of potential life lost**—Years of potential life lost are calculated over the age range from birth to 65 years. The number of deaths for each age group is multiplied by the years of life lost (the difference between 65 and the midpoint of the age group) and then years of potential life lost are summed over all age groups. (Centers for Disease Control. *MMWR*. Dec. 19, 1986. Vol. 35, Supp. No. 2S.)

## Determinants and Measures of Health

**AIDS**—Acquired immunodeficiency syndrome (AIDS) is an illness characterized by:

- One or more specified indicator diseases (listed in the complete case definition) and
- Either a positive test for human immunodeficiency virus (HIV) infection or absence of specified causes of underlying immunodeficiency.

The AIDS case definition was changed in September 1987 to allow for the presumptive diagnosis of AIDS-associated diseases and conditions and to expand the spectrum of HIV-associated diseases reportable as AIDS. The list of expanded diseases includes HIV encephalopathy, HIV wasting syndrome, and others.

For more information, see: Centers for Disease Control. Revision of the CDC Surveillance Case definition for acquired immunodeficiency syndrome. *MMWR* 1987; 36 (suppl. no. 1S): 1S–15S.

**Condition**—A health condition is a departure from a state of physical or mental well-being. Conditions, except impairments, are coded according to the *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*.

Based on duration, there are two categories of conditions, acute and chronic. In the National Health Interview Survey, an *acute condition* is a condition that has lasted less than 3 months and has involved either a physician visit (medical attention) or restricted activity, and a *chronic condition* is any condition lasting 3 months or more or is one of certain conditions classified as chronic regardless of their time of onset. The National Nursing Home Survey uses a specific list of conditions classified as chronic, also disregarding time of onset.

**Disability**—Disability is any temporary or long-term reduction of a person's activity as a result of an acute or chronic condition. It is often measured in terms of the number of days that a person's activity has been reduced.

**Disability day**—The National Health Interview Survey identifies several types of days on which a person's usual activity is reduced

because of illness or injury (reported for the 2-week period preceding the week of the interview). These short-term disability days are not mutually exclusive categories but are defined as follows:

A *restricted-activity day* is any day on which a person cuts down on his or her usual activities for more than one half day because of an illness or an injury. Restricted-activity days are unduplicated counts of bed-disability, work-loss, and school-loss days as well as other days during which a person cuts down on his or her usual activities.

A *bed-disability day* is a day on which a person stays in bed for more than half of the daylight hours (or normal waking hours) because of a specific illness or injury. All *hospital days* are bed-disability days. Bed-disability days may also be work-loss or school-loss days.

A *work-loss day* is a day on which a person did not work at his or her job or business for at least half of his or her normal workday because of a specific illness or injury. The number of work-loss days is determined only for currently employed persons.

A *school-loss day* is a day on which a child did not attend school for at least half of his or her normal school day because of a specific illness or injury. School-loss days are determined only for children 5–17 years of age, beginning in 1982.

**Incidence**—Incidence is the number of cases of disease having their onset during a prescribed period of time and is often expressed as a rate (e.g., the incidence of measles per 1,000 children 5–15 years of age during a year). Incidence is a measure of morbidity or other events that occur within a specified period of time.

**Limitation of activity**—Each person identified by the National Health Interview Survey as having a chronic condition is classified according to the extent to which his or her activities are limited because of the condition as follows:

- Persons unable to carry on *major activity*

- Persons limited in the amount or kind of major activity performed
- Persons not limited in major activity but otherwise limited
- Persons not limited in activity

**Major activity (or usual activity)**—This is the principal activity of a person or of his or her age-sex group. For 1–5 years of age, it refers to ordinary play with other children; for 5–17 years of age, it refers to school attendance; for 18 years of age and over, it usually refers to a job, housework, or school attendance.

**Notifiable disease**—A notifiable disease is one that health providers are required, usually by law, to report to State or local public health officials when diagnosed. Notifiable diseases are those of public interest by reason of their contagiousness, severity, or frequency.

**Particulate matter**—Particulate matter is defined as particles of solid or liquid matter in the air, including both nontoxic materials (soot, dust, and dirt) and toxic materials (lead, asbestos, suspended sulfates and nitrates, etc.).

**Pollutant**—A pollutant is any substance that renders the atmosphere or water foul or noxious to health.

**Prevalence**—Prevalence is the number of cases of a disease, infected persons, or persons with some other attribute present during a particular interval of time. It is often expressed as a rate (e.g., the prevalence of diabetes per 1,000 persons during a year).

**Relative survival rate**—The relative survival rate is the ratio of the observed survival rate for the patient group to the expected survival rate for persons in the general population similar to the patient group with respect to age, sex, race, and calendar year of observation. The 5-year relative survival rate is used to estimate the proportion of cancer patients potentially curable. Because over half of all cancers occur in persons 65 years of age and over, many of these individuals die of other causes with no evidence of recurrence of their cancer. Thus, because it is obtained by adjusting observed survival for the normal life expectancy of the general population of the same age, the relative survival rate is an estimate of the chance of surviving the effects of cancer.



## Utilization and Resources

### Ambulatory Care

*Dental visit*—The National Health Interview Survey counts visits to a dentist's office for treatment or advice, including services by a technician or hygienist acting under the dentist's supervision, as dental visits. Services provided to hospital inpatients are not included.

*Office*—In the National Health Interview Survey, an office refers to the office of any physician in private practice, including physicians connected with prepaid group practices. In the National Ambulatory Medical Care Survey, an office is any location for a physician's ambulatory practice other than hospitals, nursing homes, other extended care facilities, patients' homes, and industrial clinics. However, private offices in hospitals are included.

*Physician contact*—The National Health Interview Survey counts as a physician contact, a visit in person or by telephone to a doctor of medicine or doctor of osteopathy for the purpose of examination, diagnosis, treatment, or advice. The service may be provided directly by the physician or by a nurse or other person acting under the physician's supervision. Contacts involving services provided on a mass basis are not included nor are contacts for hospital inpatients.

Physician contacts are generally classified by the type of place of contact. In the National Health Interview Survey, this includes the *office, hospital outpatient clinic or emergency room, telephone* (advice given by a physician in a telephone call), *home* (any place in which a person was staying at the time a physician was called there), as well as other places.

In the National Ambulatory Medical Care Survey, an *office visit* is any direct personal exchange between an ambulatory patient and a physician or members of his or her staff for the purposes of seeking care and rendering health services.

### Inpatient Care

*Average daily census or average daily patients*—This refers to the average number of inpatients receiving care each day during a reporting period, excluding newborns.

*Average length of stay*—In the National Hospital Discharge Survey, the average length of stay is the total number of patient days accumulated at the time of discharge, counting the date of admission but not the date of discharge by patients discharged during a reporting period, divided by the number of patients discharged.

As measured in the National Nursing Home Survey, *length of stay for residents* is the time from their admission until the reporting time, and the *length of stay for discharges* is the time between the date of admission and the date of discharge.

*Bed*—Any bed that is set up and staffed for use for inpatients is counted as a bed in a facility. In the National Master Facility Inventory, the count is of beds at the end of the reporting period; for the American Hospital Association, it is of the average number of beds during the entire period. The World Health Organization defines a hospital bed as one regularly maintained and staffed for the accommodation and full-time care of a succession of inpatients and situated in a part of the hospital where continuous medical care for inpatients is provided.

*Day*—According to the American Hospital Association and National Master Facility Inventory, *days or inpatient days* are the number of adult and pediatric days of care rendered during a reporting period. Days of care for newborns are excluded.

In the National Health Interview Survey, *hospital days during the year* refer to the total number of hospital days occurring in the 12-month period prior to the interview week. A *hospital day* is a night spent in the hospital for persons admitted as inpatients to a hospital.

In the National Hospital Discharge Survey, *days of care* refer to the total number of patient days accumulated by patients at the time of discharge from non-Federal short-stay hospitals during a reporting period. All days from and including the date of admission but not including the date of discharge are counted. A *patient* is a person who is formally admitted to the inpatient service of the hospital for observation, care, diagnosis, or treatment.

*Discharge*—The National Health Interview Survey defines a *hospital discharge* as the completion of any

continuous period of stay of 1 night or more in a hospital as an inpatient, excepting the period of stay of a well newborn infant.

According to the National Hospital Discharge Survey, American Hospital Association, and National Master Facility Inventory, this is the formal release of an inpatient by a hospital, that is, the termination of a period of hospitalization (including stays of 0 nights) by death or by disposition to a place of residence, nursing home, or another hospital. In this report, newborn infants are excluded.

In the National Nursing Home Survey, this is the formal release of a resident by a nursing home.

*First-listed diagnosis*—In the National Hospital Discharge Survey, this is the diagnosis listed first on the face sheet of the medical record.

*Hospital*—According to the American Hospital Association (AHA) and National Master Facility Inventory (NMFI), hospitals are institutions licensed as hospitals whose primary function is to provide diagnostic and therapeutic patient services for medical conditions and that have at least six beds, an organized physician staff, and continuous nursing services under the supervision of registered nurses. AHA data differ slightly from those of NMFI, because data from NMFI reflect osteopathic hospitals as well as hospitals not registered with AHA. Non-AHA hospitals comprise 5–10 percent of all hospitals in the country. The World Health Organization considers an establishment a hospital if it is permanently staffed by at least one physician, can offer inpatient accommodation, and can provide active medical and nursing care.

Hospitals may be classified by type of service, ownership, and length of stay.

*General hospitals* provide both diagnostic and treatment services for patients with a variety of medical conditions, both surgical and nonsurgical. According to the World Health Organization, these hospitals provide medical and nursing care for more than one category of medical discipline (e.g., general medicine, specialized medicine, general surgery, specialized surgery, and obstetrics); excluded

are hospitals, usually ones in rural areas, that provide a more limited range of care.

*Psychiatric hospitals* are ones whose major type of service is psychiatric care. (See Psychiatric Care section.)

*Specialty hospitals*, such as psychiatric, tuberculosis, chronic disease, rehabilitation, maternity, and alcoholic or narcotic, provide a particular type of service to the majority of their patients.

*Federal hospitals* are operated by the Federal Government.

*Non-Federal government hospitals* are operated by State or local governments.

*Nonprofit hospitals* are operated by a church or other nonprofit organization.

*Proprietary hospitals* are operated for profit by individuals, partnerships, or corporations.

*Community hospitals* include all non-Federal short-stay hospitals classified by the American Hospital Association according to one of the following services: general medical and surgical; obstetrics and gynecology; eye, ear, nose, and throat; rehabilitation; orthopedic; other specialty; children's general; children's eye, ear, nose, and throat; children's rehabilitation; children's orthopedic; and children's other specialty.

*Short-stay hospitals* in the National Hospital Discharge Survey are those in which the average length of stay is less than 30 days. The American Hospital Association and National Master Facility Inventory define *short-term hospitals* as hospitals in which more than half the patients are admitted to units with an average length of stay of less than 30 days and *long-term hospitals* as ones in which more than half the patients are admitted to units with an average length of stay of 30 days or more. The National Health Interview Survey defines *short-stay hospitals* as any hospital or hospital department in which the type of service provided is general; maternity; eye, ear, nose, and throat; children's; or osteopathic.

*Registered hospitals* are hospitals registered with the

**Table VI. Codes for diagnostic categories from the *International Classification of Diseases, 9th Revision, Clinical Modification***

Diagnostic category	Code numbers
Females with delivery . . . . .	V27
Acquired immunodeficiency syndrome (AIDS) . . . . .	042.0-042.2, 042.9, 279.19
Malignant neoplasms . . . . .	140-208, 230-234
Benign neoplasms . . . . .	210-229, 235-239
Diabetes . . . . .	250
Psychoses . . . . .	290-299
Alcohol dependence syndrome . . . . .	303
Eye diseases and conditions . . . . .	360-379
Otitis media and eustachian tube disorders . . . . .	381-382
Diseases of heart . . . . .	391-392.0, 393-398, 402, 404, 410-416, 420-429
Cerebrovascular diseases . . . . .	430-438
Acute respiratory infection . . . . .	460-466
Chronic disease of tonsils and adenoids . . . . .	474
Pneumonia, all forms . . . . .	480-486
Bronchitis, emphysema, and asthma . . . . .	490-493
Inguinal hernia . . . . .	550
Noninfectious enteritis and colitis . . . . .	555-556, 558
Cholelithiasis . . . . .	574
Hyperplasia of prostate . . . . .	600
Inflammatory disease of female pelvic organs . . . . .	614-616
Disorders of menstruation . . . . .	626
Pregnancy with abortive outcome . . . . .	630-639
Intervertebral disc disorders . . . . .	722
Congenital anomalies . . . . .	740-759
Fracture, all sites . . . . .	800-829
Lacerations and open wounds . . . . .	870-904

American Hospital Association. About 98 percent of hospitals are registered.

*International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*—The ICD-9-CM is based on and is completely compatible with the *International Classification of Diseases,*

*Ninth Revision.* The *Ninth Revision* is used to code mortality data (Mortality section), and ICD-9-CM is used to code morbidity data.

Diagnostic groupings and code number inclusions are shown in table VI; surgical groupings and code number inclusions are shown in table VII; and diagnostic and other nonsurgical procedure groupings and

**Table VII. Codes for surgical categories from the *International Classification of Diseases, 9th Revision, Clinical Modification***

Surgical category	Code numbers
Extraction of lens . . . . .	13.1-13.6
Insertion of prosthetic lens (pseudophakos) . . . . .	13.7
Myringotomy . . . . .	20.0
Tonsillectomy, with or without adenoidectomy . . . . .	28.2-28.3
Adenoidectomy without tonsillectomy . . . . .	28.6
Direct heart revascularization (coronary bypass) . . . . .	36.1
Cardiac catheterization . . . . .	37.21-37.23
Biopsies on the digestive system . . . . .	42.24, 44.14, 44.15, 45.14, 45.15, 45.25, 45.26, 45.27, 48.24, 48.25, 48.26, 49.22, 49.23, 50.11, 50.12, 51.12, 51.13, 52.11, 52.12, 54.22, 54.23
Appendectomy, excluding incidental . . . . .	47.0
Cholecystectomy . . . . .	51.2
Repair of inguinal hernia . . . . .	53.0-53.1
Prostatectomy . . . . .	60.2-60.6
Circumcision . . . . .	64.0
Oophorectomy and salpingo-oophorectomy . . . . .	65.3-65.6
Bilateral destruction or occlusion of fallopian tubes . . . . .	66.2-66.3
Hysterectomy . . . . .	68.3-68.7
Diagnostic dilation and curettage of uterus . . . . .	69.09
Procedures to assist delivery . . . . .	72-73
Cesarean section . . . . .	74.0-74.2, 74.4, 74.99
Repair of current obstetrical laceration . . . . .	75.5-75.6
Reduction of fracture (excluding skull, nose, and jaw) . . . . .	76.70, 76.78-76.79, 79.0-79.6
Excision or destruction of intervertebral disc and spinal fusion . . . . .	80.5, 81.0
Excision of semilunar cartilage of knee . . . . .	80.6
Arthroplasty and replacement of hip . . . . .	81.5-81.6
Operations on muscles, tendons, fascia, and bursa . . . . .	82-83.1, 83.3-83.9
Biopsies on the integumentary system (breast, skin, and subcutaneous tissue) . . . . .	85.11-85.12, 86.11
Debridement of wound, infection, or burn . . . . .	86.22, 86.28

**Table VIII. Codes for diagnostic and other nonsurgical procedure categories from the *International Classification of Diseases, 9th Revision, Clinical Modification***

Procedure category	Code numbers
Spinal tap . . . . .	03.31
Endoscopy of small intestine . . . . .	45.11-45.13
Endoscopy of large intestine . . . . .	45.21-45.24
Laparoscopy (excluding that for ligation and division of fallopian tubes) . . . . .	54.21
Cystoscopy . . . . .	57.31-57.32
Arthroscopy of knee . . . . .	80.26
Computerized axial tomography (CAT scan) . . . . .	87.03, 87.41, 87.71, 88.01, 88.38
Contrast myelogram . . . . .	87.21
Biliary tract x ray . . . . .	87.5
Arteriography using contrast material . . . . .	88.4
Angiocardiology using contrast material . . . . .	88.5
Diagnostic ultrasound . . . . .	88.7
Electroencephalogram . . . . .	89.14
Radioisotope scan . . . . .	92.0-92.1
Application of cast or splint . . . . .	93.51, 93.53-93.54

code number inclusions are shown in table VIII.

**Nursing care**—Nursing care is the provision of any of the following services: Application of dressings or bandages; bowel and bladder retraining; catheterization; enema; full bed bath; hypodermic, intramuscular, or intravenous injection; irrigation; nasal feeding; oxygen therapy; and temperature-pulse-respiration or blood pressure measurement.

**Nursing home**—A nursing home is an establishment with three or more beds that provides nursing or personal care to the aged, infirm, or chronically ill. Definitions of nursing home types apply to data collected through 1977.

**Nursing care homes** must employ one or more full-time registered or licensed practical nurses and must provide nursing care to at least half the residents.

**Personal care homes with nursing** have some but fewer than half the residents receiving nursing care. In addition, such homes must employ one or more registered or licensed practical nurses or must provide administration of medications and treatments in accordance with physicians' orders, supervision of self-administered medications, or three or more personal services.

**Personal care homes without nursing** have no residents receiving nursing care. These homes provide administration of medications and treatments in accordance with physicians' orders, supervision of self-administered medications, or three or more personal services.

**Domiciliary care homes** primarily provide supervisory care but also provide one or two personal services.

**Certification of nursing homes**—Facilities are certified by the Medicare and/or Medicaid program. Definitions of certification levels apply to data collected through 1985.

**Skilled nursing facilities** provide the most intensive nursing care available outside of a hospital. Facilities certified by Medicare provide posthospital care to eligible Medicare enrollees. Facilities certified by Medicaid as skilled nursing facilities provide skilled nursing services on a daily basis to individuals eligible for Medicaid benefits.

**Intermediate care facilities** are certified by the Medicaid program to provide health-related services on a regular basis to Medicaid eligibles who do not require hospital or skilled nursing facility care but do require institutional care above the level of room and board.

**Not certified facilities** are not certified as providers of care by Medicare or Medicaid.

**Occupancy rate**—The National Master Facility Inventory and American Hospital Association define **hospital occupancy rate** as the average daily census divided by the number of hospital beds during a reporting period. The **occupancy rate for other facilities** is calculated as the number of residents reported at the time of

the interview divided by the number of beds reported.

**Outpatient visit**—According to the American Hospital Association, these are visits by patients not lodged in the hospital for medical, dental, or other services. (See Ambulatory Care section.)

**Resident**—In the National Nursing Home Survey, a resident is a person who has been formally admitted to but not discharged from an establishment.

## Psychiatric Care

The definitions for psychiatric care are those used by the National Institute of Mental Health.

**Admission**—An individual is classified as an admission to a psychiatric organization by being a new admission, a readmission, a return from leave, or a transfer from another service of the same organization or another organization.

**Inpatient care episodes**—Episodes are defined as the number of residents in inpatient organizations at the beginning of the year, plus the total additions to these organizations during the year. Total additions during the year include new admissions and readmissions. In counting admissions rather than persons, the same individual may be counted more than once. First, if the same person is admitted more than once to a particular organization during the year, that person is counted as many times as admitted. Second, if the same person is admitted to two or more different organizations during the year, that person is counted as an admission for each organization.

**Mental disorder**—A mental disorder is any of several disorders listed in the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) or *Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (DSM-III). Table IX shows diagnostic categories and code numbers for ICD-9-CM/DSM-III and corresponding codes for the *International Classification of Diseases, 8th Revision* (ICDA-8) and *Diagnostic and Statistical Manual of Mental Disorders, Second Edition* (DSM-II).

**Table IX. Mental illness codes, according to applicable revision of the *Diagnostic and Statistical Manual of Mental Disorders and International Classification of Diseases***

Diagnostic category	DSM-II/ICDA-8	DSM-III/ICD-9-CM
Alcohol-related . . . . .	291; 303; 309.13	291; 303; 305.0
Drug-related . . . . .	294.3; 304; 309.14	292; 304; 305.1-305.9; 327; 328
Organic disorders (other than alcoholism and drug) . . . . .	290; 292; 293; 294 (except 294.3); 309.0; 309.2-309.9	290; 293; 294; 310
Affective disorders . . . . .	296; 298.0; 300.4	296; 298.0; 300.4; 301.11; 301.13
Schizophrenia . . . . .	295	295; 299

**Mental health organization**—A mental health organization is an administratively distinct public or private agency or institution whose primary concern is the provision of direct mental health services to the mentally ill or emotionally disturbed. Organizations include State and county and private psychiatric hospitals, psychiatric services of general hospitals, residential treatment centers for emotionally disturbed children, federally funded community mental health centers (prior to 1983), freestanding outpatient psychiatric clinics and partial care organizations, and multiservice mental health organizations.

**Psychiatric hospitals** are hospitals primarily concerned with providing inpatient care and treatment for the mentally ill. **Psychiatric inpatient units of Veterans Administration general hospitals and Veterans Administration neuropsychiatric hospitals** are combined into the category **Veterans Administration psychiatric hospitals** because of their similarity in size, operation, and length of stay. Other psychiatric hospitals include State and county mental hospitals and private mental hospitals.

**General hospitals providing separate psychiatric services** are general hospitals that provide psychiatric services either in a separate psychiatric inpatient, outpatient, or partial hospitalization service with assigned staff and space.

**Residential treatment centers for emotionally disturbed children** must meet all of the following criteria: (a) not licensed as a psychiatric hospital, and primary purpose is to provide individually planned mental health treatment services in conjunction with residential care; (b) has a clinical program that is directed by a psychiatrist, psychologist, social

worker, or psychiatric nurse with a graduate degree; (c) serves children and youth primarily under the age of 18; (d) the primary reason for the majority of admissions is mental illness classified by DMS-II/ICDA-8 or DSM-III/ICD-9-CM codes, other than mental retardation, developmental disability, and substance-related disorders.

**Freestanding psychiatric outpatient clinics** provide only ambulatory mental health services on either a regular or emergency basis. The medical responsibility for services is generally assumed by a psychiatrist.

**Multiservice mental health organizations** directly provide two or more of the program elements defined under service type and are not classifiable as a psychiatric or general hospital or as a residential treatment center for emotionally disturbed children. (The classification of a psychiatric or general hospital or a residential treatment center for emotionally disturbed children takes precedence over a multiservice classification, even if two or more services are offered.)

**Service type**—Service type refers to the kinds of mental health services available: inpatient care, residential treatment care, outpatient care, and partial care.

**Inpatient care** is the provision of 24-hour mental health care in a mental health hospital setting.

**Residential treatment care** is the provision of overnight mental health care in conjunction with an intensive treatment program in a setting other than a hospital. For example, residential treatment centers for emotionally disturbed children, as well as residential treatment centers for mentally ill adults are included.

**Outpatient care** is the provision of ambulatory mental

health services for less than 3 hours at a single visit, on an individual, group, or family basis, usually in a clinic or similar organization. Emergency care on a walk-in basis, as well as care provided by mobile teams who visit patients outside these organizations are included while all "Hotline" services are excluded.

**Partial care treatment** is a planned program of mental health treatment services generally provided in visits of 3 or more hours to groups of patients. Included are: treatment programs which emphasize intensive short-term therapy and rehabilitation; programs that focus on recreation, and/or occupational program activities, including sheltered workshops; education and training programs including special education classes, therapeutic nursery schools, and vocational training.

## Personnel

**Full-time equivalent employee (FTE)**—The American Hospital Association and National Master Facility Inventory use an estimate of full-time equivalent employees that counts two part-time employees as one full-time employee, a *full-time employee* being someone working 35 hours or more a week. The National Nursing Home Survey uses an estimate of full-time employees that counts 35 hours of part-time employees' work per week as equivalent to one full-time employee.

The National Institute of Mental Health calculates full-time equivalent employees by counting the total hours worked by all full-time employees, part-time employees, and trainees in each staff discipline in 1 week, divided by 40, to indicate the number of person weeks.

**Physician**—Physicians are licensed doctors of medicine or osteopathy

classified by the American Medical Association and others through self reporting as follows:

*Active physicians* or *professionally active physicians* are ones currently practicing, regardless of the number of hours worked per week. *Federal physicians* are employed by the Federal Government; *non-Federal* or *civilian physicians* are not.

*Office-based physicians* are physicians who spend the plurality of their time working in practices based in private offices; *hospital-based physicians* spend the plurality of their time as salaried physicians in hospitals.

*Physician specialty*—A physician specialty is any specific branch of medicine in which a physician may concentrate. The specialty classification used by the Bureau of Health Professions and National Ambulatory Medical Care Survey (NAMCS) follow these American Medical Association categories:

*Primary care specialties* include general practice (or family practice), internal medicine, and pediatrics.

*Medical specialties* include, along with internal medicine and pediatrics, the areas of allergy, cardiovascular disease, dermatology, gastroenterology, pediatric allergy and cardiology, and pulmonary diseases.

*Surgical specialties* include general surgery, neurological surgery, obstetrics and gynecology, ophthalmology, orthopedic surgery, otolaryngology, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

*Other specialties* covered by NAMCS are geriatrics, neurology, preventive medicine, psychiatry, and public health. Other specialties covered by the Bureau of Health Professions are aerospace medicine, anesthesiology, child psychiatry, neurology, occupational medicine, pathology, physical medicine and rehabilitation, psychiatry, public health, and radiology.

## Health Expenditures

*Consumer Price Index (CPI)*—The CPI is prepared by the U.S. Bureau of Labor Statistics. It is a monthly measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The medical care component of the CPI shows trends in medical care prices based on specific indicators of hospital, medical, dental, and drug prices.

A revision of the CPI has been in use since January 1988, and changes are noted where applicable in this report.

*Gross national product (GNP)/ gross domestic product (GDP)*—These are two broadly comparable measures of a nation's total output of goods and services. GNP represents the value of all goods and services produced for sale by the nation plus the estimated value of certain imputed outputs (i.e., goods and services that are neither bought nor sold). The GNP is the sum of: (1) consumption expenditures by both individuals and nonprofit organizations plus certain imputed values; (2) business investment in equipment, inventories, and new construction; (3) Federal, State, and local government purchases of goods and services; and (4) the sale of goods and services abroad minus purchases from abroad. GDP equals GNP plus an adjustment (typically small) for the value of productive services performed domestically by foreign subjects minus the value of productive services performed abroad by nationals.

*Health maintenance organization (HMO)*—A prepaid health plan delivering comprehensive care to members through designated providers, having a fixed monthly payment for health care services, and requiring members to be in plan for a specified period of time (usually 1 year). HMO model types are:

*Group*—An HMO that delivers health services through a physician group that is controlled by the HMO unit or an HMO that contracts with one or more independent group practices to provide health services.

*Individual Practice Association (IPA)*—An HMO that contracts

directly with physicians in independent practice, and/or contracts with one or more associations of physicians in independent practice, and/or contracts with one or more multispecialty group practices (but the plan is predominantly organized around solo-single specialty practices).

These definitions differ somewhat from those used by the Office of Health Maintenance Organizations for Federal designation.

*Medicaid*—This program is federally aided but State operated and administered. It provides medical benefits for certain low-income persons in need of medical care. The program, authorized in 1965 by Title XIX of the Social Security Act, categorically covers participants in the Aid to Families with Dependent Children program as well as some participants in the Supplemental Security Income program and other people deemed medically needy in a participating State. States also determine the benefits covered, rates of payment for providers, and methods of administering the program.

*Medicare*—This is a nationwide health insurance program providing health insurance protection to people 65 years of age and over, people eligible for social security disability payments for more than 2 years, and people with end-stage renal disease, regardless of income. The program was enacted July 30, 1965, as Title XVIII, *Health Insurance for the Aged*, of the Social Security Act and became effective on July 1, 1966. It consists of two separate but coordinated programs: hospital insurance (Part A) and supplementary medical insurance (Part B).

*National health expenditures*—This measure estimates the amount spent for all health services and supplies and health-related research and construction activities consumed in the United States during a specified time period. Detailed estimates are available by source of expenditure (e.g., direct payment, private health insurance, and government programs) and by type of expenditure (e.g., hospitals, physicians, and drugs). Data are compiled from a variety of

*sources that collect data from the providers of care.*

*Health services and supplies expenditures* are outlays for goods and services relating directly to patient care plus expenses for administering health insurance programs and for government public health activities. This category is equivalent to total national health expenditures minus expenditures for research and construction.

*Private expenditures* are outlays for services provided or paid for by nongovernmental sources—consumers, insurance companies, private industry, and philanthropic organizations.

*Public expenditures* are outlays for services provided or paid for by Federal, State, and local government agencies or expenditures required by governmental action (such as workmen's compensation insurance payments).

*Nursing home expenditures*—These expenditures cover care rendered in skilled nursing and intermediate care facilities, including those for the mentally retarded. The costs of long-term care provided by hospitals are excluded.

*Personal health care expenditures*—These are outlays for goods and services relating directly to patient care. The expenditures in this category are total national health expenditures minus expenditures for research and construction, expenses for administering health insurance programs, and government public health activities.

*State health agency (SHA)*—The agency or department headed by the State or territorial health official. Generally, the SHA is responsible for setting State-wide public health priorities, carrying out national and State mandates, responding to public health hazards, and assuring access to health care for underserved State residents.