# Health Conditions and Health Care

(HC)

# HC 1.1
# INFANT MORTALITY

Infancy is commonly divided into the neonatal period, the first 27 days of life, and the postneonatal period, 28 days to less than one year. About two-thirds of infant deaths occur during the neonatal period (although advances in neonatology in recent decades have greatly improved the chances that infants will survive this period). The three leading causes of death to infants (one year and younger) are congenital anomalies, disorders relating to a short gestation period and low birth weight, and sudden infant death syndrome (SIDS).[1] In 1994, SIDS dropped from the second to the third leading cause of infant mortality. The SIDS decline accounted for nearly one-third of the total drop in infant mortality in 1995 and 1996.[2] Infant deaths due to SIDS have been declining since 1989.[3]

The U.S. infant mortality rate has decreased rapidly over the past three decades, largely due to medical developments over this time. Between 1960 and 1997, the rate fell from 26.0 to 7.2 infant deaths per thousand live births (see Figure HC 1.1.A). There was a steep decline in the rate of neonatal deaths (from 18.7 to 4.8 infant deaths per thousand live births) and a smaller, more gradual decline in the rate of postneonatal deaths (from 7.3 to 2.5 infant deaths per thousand live births)[4].

**International Comparisons.** Despite declines in recent decades, the U.S. infant mortality rate ranks among the highest of industrialized nations. For example, in 1994, the rate of infant deaths per thousand live births was 4.3 in Japan, 5.6 in Germany, 6.2 in England and Wales, and 6.5 in France, compared with 8.0 deaths per thousand live births in the United States.[5] The Russian Federation, in contrast, had an infant mortality rate of 18.6 deaths per thousand live births in 1994.

**Differences by Race and Hispanic Origin.** While infant mortality rates have declined for all races and ethnic groups in the United States, there is, nevertheless, considerable variation by race and Hispanic origin (see Figure HC 1.1.B). Specifically:

- For white infants, the infant mortality rate declined by 74 percent between 1960 and 1997—from 22.9 to 6.0 deaths per thousand live births (see Table HC 1.1.A).
- For black infants, the infant mortality rate declined from 44.3 to 14.2 deaths per thousand live births (see Table HC 1.1.A).
- For Hispanic infants, the infant mortality rate declined from 8.6 to 6.0 deaths per thousand live births between 1985 and 1997 (see Table HC 1.1.A).
- For Asian/Pacific Islander infants, the infant mortality rate declined by 40 percent from an average of 8.3 deaths per thousand live births during the period 1983-1985 to 5.0 deaths per thousand live births in 1997 (see Table HC 1.1.B).[6]
- For American Indian/Alaska Native infants, the infant mortality rate declined by 37 percent from an average of 13.9 deaths per thousand live births during the period 1983-1985 to 8.7deaths per thousand live births in 1997 (see Table HC 1.1.B).

[1] Hoyert DL, Kochanek KD, Murphy SL. "Deaths: Final Data for 1997." *National Vital Statistics Report* 47 (19). Hyattsville, Md.: National Center for Health Statistics. 1999.

[2] Singh, G.K., Kochanek, K.D., and MacDorman, M.F. 1994. "Advance Report of Final Mortality Statistics, 1994." *Monthly Vital Statistics Report* 45 (3 Supp.). Hyattsville, Md.: National Center for Health Statistics.

[3] Ibid.

[4] Hoyert DL, Kochanek KD, Murphy SL. "Deaths: Final Data for 1997." *National Vital Statistics Report* 47 (19). Hyattsville, Md.: National Center for Health Statistics. 1999.

[5] National Center for Health Statistics. 1999. *Health, United States, 1999*. Hyattsville, Md.

[6] Infant mortality data for Asians/Pacific Islanders and American Indians/Alaska Natives are presented from the National Linked Files of Live Births and Infant Deaths in Table HC 1.1.B. Rather than relying solely on death certificates data, which may underestimate mortality for infants of Hispanic origin or of races other than white and black, data from the National Linked Files of Live Births and Infant Deaths use race from birth certificates and, therefore, provide more accurate data for these populations. The National Linked Files of Live Births and Infant Deaths data are available for 1983-1991 and 1995-1996, when they began being produced on a regular basis again.

Table HC 1.1.A

## Infant, neonatal, and postneonatal mortality rates (deaths per 1,000 live births) in the United States, by race and Hispanic origin:[a] selected years, 1960-1997

| | 1960[b,c] | 1970 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Infant[d]** | **26.0** | **20.0** | **12.6** | **10.6** | **9.2** | **8.9** | **8.5** | **8.4** | **8.0** | **7.6** | **7.3** | **7.2** |
| White | 22.9 | 17.6 | 10.9 | 9.2 | 7.6 | 7.3 | 6.9 | 6.8 | 6.6 | 6.3 | 6.1 | 6.0 |
| Black | 44.3 | 33.3 | 22.2 | 19.0 | 18.0 | 17.6 | 16.8 | 16.5 | 15.8 | 15.1 | 14.7 | 14.2 |
| Hispanic | — | — | — | 8.6 | 7.8 | 7.5 | 6.8 | 6.7 | 6.5 | 6.1 | 5.9 | 6.0 |
| **Neonatal[e]** | **18.7** | **15.1** | **8.5** | **7.0** | **5.8** | **5.6** | **5.4** | **5.3** | **5.1** | **4.9** | **4.8** | **4.8** |
| White | 17.2 | 13.7 | 7.4 | 6.0 | 4.8 | 4.5 | 4.3 | 4.3 | 4.2 | 4.1 | 4.0 | 4.0 |
| Black | 27.8 | 23.2 | 14.6 | 12.6 | 11.6 | 11.2 | 10.8 | 10.7 | 10.2 | 9.8 | 9.6 | 9.4 |
| Hispanic | — | — | — | 5.4 | 5.0 | 4.6 | 4.3 | 4.1 | 4.1 | 4.0 | 3.8 | 3.9 |
| **Postneonatal[f]** | **7.3** | **4.9** | **4.1** | **3.7** | **3.4** | **3.4** | **3.1** | **3.1** | **2.9** | **2.7** | **2.5** | **2.5** |
| White | 5.7 | 4.0 | 3.5 | 3.2 | 2.8 | 2.8 | 2.6 | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 |
| Black | 16.5 | 10.1 | 7.6 | 6.4 | 6.4 | 6.3 | 6.0 | 5.8 | 5.6 | 5.3 | 5.1 | 4.8 |
| Hispanic | — | — | — | 3.2 | 2.8 | 2.8 | 2.5 | 2.6 | 2.5 | 2.1 | 2.1 | 2.0 |

[a]Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race. Hispanic rates not available prior to 1985. Infant mortality by Hispanic origin reported by 17 states and the District of Columbia in 1985; 45 states, New York State (excluding New York City), and the District of Columbia in 1990; 47 states, New York State (excluding New York City), and the District of Columbia in 1991; 48 states and the District of Columbia in 1992; 49 states and the District of Columbia from 1993 to 1996; and all 50 states and the District of Columbia in 1997.

[b]Includes births and deaths of persons who were not residents of the 50 states and the District of Columbia.

[c]Data for 1960 are by race of child; all other years are by race of mother.

[d]Under one year old.

[e]Under 28 days old.

[f]Twenty-eight days to one year old.

Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Tables 25 and 26. Hyattsville, Md.: National Center for Health Statistics, 1997. Also previous issues of this annual report [Table 26 in 41 (7, Supp.), Table 25 in 42 (2, Supp.), Table 28 in 43 (6, Supp.), Table 32 in 44 (7, Supp.), and Table 25 in 45 (3, Supp.)]. 1970 data from the National Center for Health Statistics. 1996. *Vital Statistics of the United States, 1991.* Vol. II, Mortality, Part A. Washington, D.C.: Public Health Service, (Table 2-2). National Center for Health Statistics. 1988. *Vital Statistics of the United States*, *1985,* Vol. II, Mortality, Part A. Washington, D.C.: U.S. Government Printing Office, (Table 2-19). *National Vital Statistics Report* 47 (4), Table 14. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9), Table 26.

Table HC 1.1.B

## Infant mortality rates (deaths per 1,000 live births) in the United States, by detailed race[a] and Hispanic origin:[b] selected years, 1983-1997

| | 1983-1985 | 1986-1988 | 1989-1991 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|
| **Infant (all races)** | **10.6** | **9.8** | **9.0** | **7.6** | **7.3** | **7.2** |
| White | 9.0 | 8.2 | 7.4 | 6.3 | 6.1 | 6.0 |
| Black | 18.7 | 17.9 | 17.1 | 14.6 | 14.1 | 13.7 |
| American Indian/Alaska Native | 13.9 | 13.2 | 12.6 | 9.0 | 10.0 | 8.7 |
| Asian/Pacific Islander | 8.3 | 7.3 | 6.6 | 5.3 | 5.2 | 5.0 |
| Chinese | 7.4 | 5.8 | 5.1 | 3.8 | 3.2 | 3.1 |
| Japanese | 6.0 | 6.9 | 5.3 | 5.3 | 4.2 | 5.3 |
| Filipino | 8.2 | 6.9 | 6.4 | 5.6 | 5.8 | 5.8 |
| Hawaiian and part Hawaiian | 11.3 | 11.1 | 9.0 | 6.6 | 5.6 | 9.0 |
| Other Asian or Pacific Islander | 8.6 | 7.6 | 7.0 | 5.5 | 5.7 | 5.0 |
| Hispanic | 9.2 | 8.3 | 7.6 | 6.3 | 6.1 | 6.0 |
| Mexican American | 8.8 | 7.9 | 7.2 | 6.0 | 5.8 | 5.8 |
| Puerto Rican | 12.3 | 11.1 | 10.4 | 8.9 | 8.6 | 7.9 |
| Cuban | 8.0 | 7.3 | 6.2 | 5.3 | 5.1 | 5.5 |
| Central and South American | 8.2 | 7.6 | 6.6 | 5.5 | 5.0 | 5.5 |
| Other and unknown Hispanic | 9.9 | 9.0 | 8.2 | 7.4 | 7.7 | 6.2 |

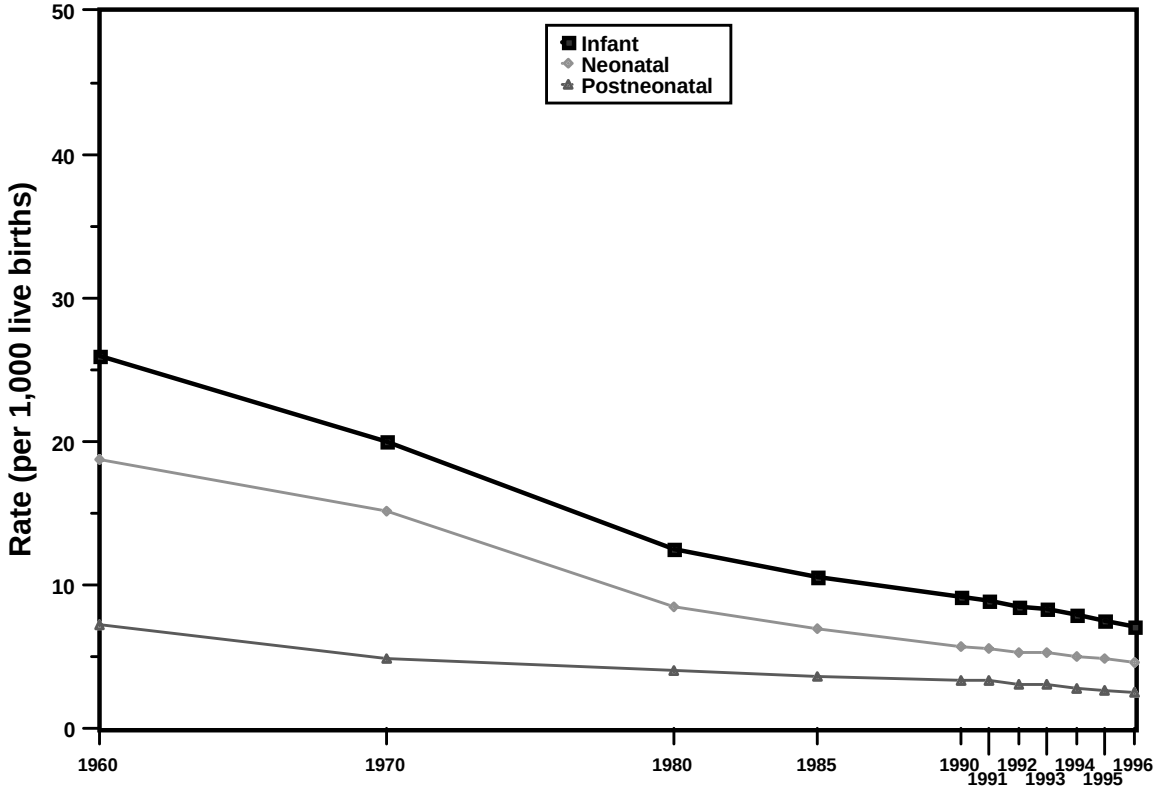
[a]Estimates are based on specified race or national origin of mother.

[b]Estimates for separate race groups include Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data from the National Linked Files of Live Births and Infant Deaths. *Health, United States, 1996-97*, Table 20. MacDorman, M.F., and Atkinson, J.O. 1998. "Infant Mortality Statistics from the 1996 Linked Birth/Infant Death Data Set." *Monthly Vital Statistics Report* 46 (12, Supp.). Hyattsville, Md.: National Center for Health Statistics, Tables A and C. MacDorman, M.F., and Atkinson, J.O. "Infant Mortality Statistics from the Linked Birth/Infant Death Data Set: 1995 Period Data."*Monthly Vital Statistics Report* 46 (6, Supp. 2). Hyattsville, Md.: National Center for Health Statistics, Tables A and C. MacDorman, M.F., and Atkinson, J.O. 1999. "Infant Mortality Statistics from the 1997 Linked Birth/Infant Death Dataset." *National Vital Statistics Report* 47(23). Hyattsville, Md.: National Center for Health Statistics, Tables A and C.

Figure HC 1.1.A

## Infant, neonatal, and postneonatal mortality rates (deaths per 1,000 live births) in the United States: selected years, 1960[a]-1996

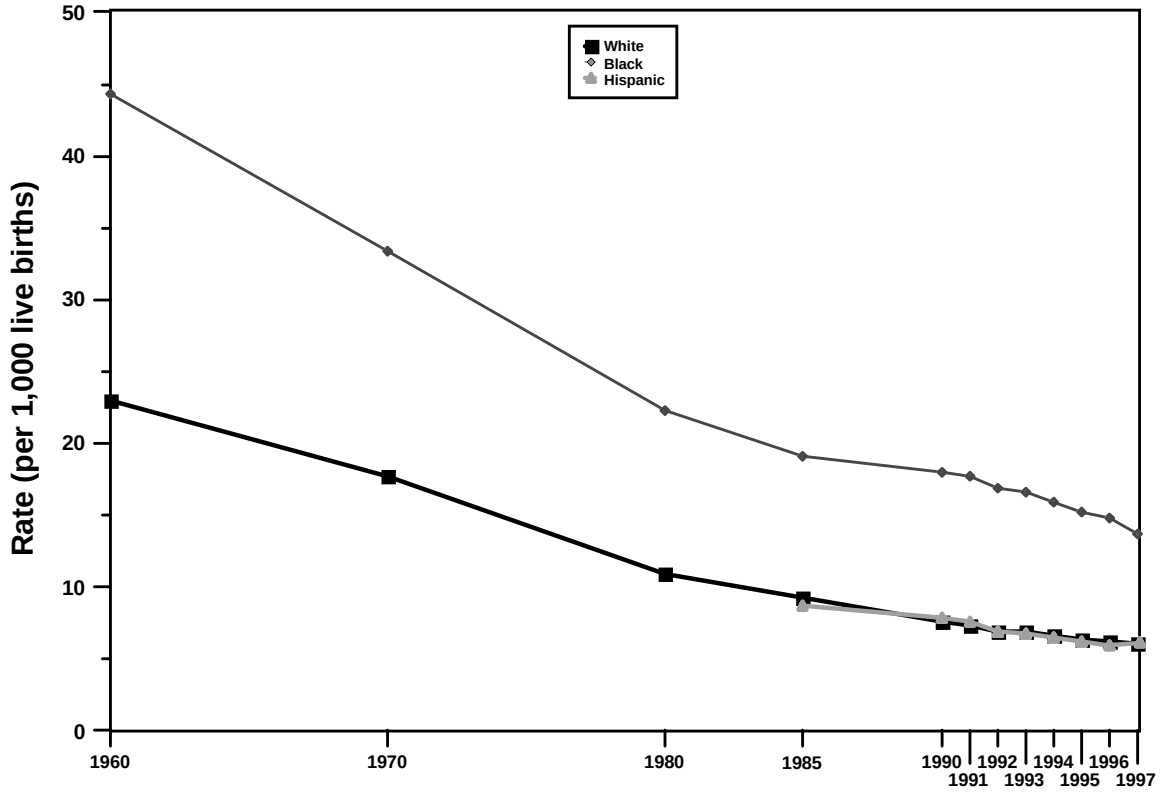



[a]Includes births and deaths of persons who were not residents of the 50 states and the District of Columbia.

Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Tables 25 and 26. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 26 in 41 (7, Supp.), Table 25 in 42 (2, Supp.), Table 28 in 43 (6, Supp.), Table 32 in 44 (7, Supp.), and Table 25 in 45 (3, Supp.)]. 1970 data from the National Center for Health Statistics. 1996. *Vital Statistics of the United States, 1991.* Vol. II, Mortality, Part A. Washington, D.C.: Public Health Service, (table 2-2). National Center for Health Statistics. 1988. *Vital Statistics of the United States*, *1985,* Vol. II, Mortality, Part A. Washington, D.C.: U.S. Government Printing Office, (Table 2-19). *National Vital Statistics Report* 47 (4), Table 14.

Figure HC 1.1.B

## Infant mortality rates (deaths per 1,000 live births) in the United States, by race and Hispanic origin:[a] selected years, 1960[b,c]-1997[d]




[a]Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race. Hispanic rates not available prior to 1985. Infant mortality by Hispanic origin reported by 17 states and the District of Columbia in 1985; 45 states, New York State (excluding New York City), and the District of Columbia in 1990; 47 states, New York State (excluding New York City), and the District of Columbia in 1991; 48 states and the District of Columbia in 1992; 49 states and the District of Columbia from 1993 to 1996; and all 50 states and the District of Columbia in 1997.

[b]Includes births and deaths of persons who were not residents of the 50 states and the District of Columbia.

[c]Data for 1960 are by race of child; all other years are by race of mother.

[d]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Tables 25 and 26. Hyattsville, Md.: National Center for Health Statistics, Also previous issues of this annual report [Table 26 in 41 (7, Supp.), Table 25 in 42 (2, Supp.), Table 28 in 43 (6, Supp.), Table 32 in 44 (7, Supp.), and Table 25 in 45 (3, Supp.)]. 1970 data from the National Center for Health Statistics. 1996. *Vital Statistics of the United States, 1991.* Vol. II, Mortality, Part A. Washington, D.C.: Public Health Service, (table 2-2). National Center for Health Statistics. 1988. *Vital Statistics of the United States*, *1985*, Vol. II, Mortality, Part A. Washington, D.C.: U.S. Government Printing Office, 1988, (Table 2-19). *National Vital Statistics Report* 47 (4), Table 14. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9), Table 26.

# HC 1.2
# CHILD AND YOUTH DEATHS

Injuries are a common cause of death for children of all ages.[7] Among children ages 1 to 4, unintentional injuries were the leading cause of death, followed by congenital anomalies, malignant neoplasms, homicide and legal intervention, and diseases of the heart.[7] In 1996, all injuries, including homicides and suicides, accounted for 52 percent of deaths to children ages 5 through 14 and for 80 percent of deaths to youth ages 15 through 19.[9,10]

Overall, child death rates have decreased substantially over the past several decades (see Table HC 1.2.A). In 1997, death rates per 100,000 were 35.8 for 1- through 4-year-olds, 18.5 for 5- through 9-year-olds, 23.2 for 10- through 14-year-olds, and 74.8 for 15- through 19-year-olds.

**Differences by Age.** The most dramatic declines in death rates occurred among children under age 15, with decreases of 67 percent among children ages 1 to 4, 62 percent among children ages 5 to 9, and 48 percent among children ages 10 through 14 since 1960 (see Figure HC 1.2.A). Most of the decline in the death rate for these groups occurred between 1960 and 1990. In contrast, death rates for youth ages 15 through 19 have decreased by only 21 percent since 1960. Moreover, unlike the fairly steady declines among the younger age groups, the death rate for this age group has had a variable pattern over the last 30 years (see Figure HC 1.2.A).

**Differences by Race and Hispanic Origin**. Multi-year data from the National Center for Health Statistics are used to examine the differences in the death rate of children and youth for several racial and ethnic groups across three time periods spanning from 1989 through 1996 (see Table HC 1.2.B). For children ages 1 to 14 and youth ages 15 to 24, black children and youth have the highest death rate, followed by American Indian/Alaska Native, Hispanic, and white children and youth. Asian children and youth consistently have the lowest death rates.

The death rate for children ages 1 to 14 decreased modestly for all racial and ethnic groups except American Indian/Alaska Native children over the three periods. Trends in the death rate for youth ages 15 to 24 were more mixed, decreasing for white and American Indian/Alaska Native youth and increasing for black, Hispanic, and Asian youth between the first two periods, and declining for all groups between 1992-1993 and 1994-1996. Overall, white and American Indian/Alaska Native youth experienced the largest decreases over the three periods for the 15- to 24-year-old age group.

**Differences by Race for Younger Children.** Data for earlier decades are available only for black and white children (see Table HC 1.2.A). These data show substantial differences between white and black children since at least 1970 for children ages 1 through 4, 5 through 9, and 10 through 14. In 1997, the death rate was 48 percent higher for black children ages 10 through 14 than for white children in that age group, 88 percent higher for children ages 5 though 9, and 86 percent higher for children ages 1 through 4.

[7] Injury-related deaths include deaths from motor vehicle crashes, fires and burns, drowning, suffocation, and accidents caused by firearms and other explosive materials, as well as homicides, suicides, and other external causes of death. See Fingerhut, L.A., Annest J.L., Baker, S.P., Kochanek, K.D., and McLoughlin, E. 1996. "Injury Mortality among Children and Teenagers in the United States, 1993." *Injury Prevention* 2: 93-94.

[8] Kochanek, K.D., and Murphy, S.L. "Deaths: Final Data for 1997." *National Vital Statistics Report* 47(19). Hyattsville, Md.: National Center for Health Statistics. 1999.

[9] Percentages calculated by Child Trends based on data on the number of deaths from all causes and from injuries. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9). Hyattsville, Md.: National Center for Health Statistics, Table 2; National Center for Injury Control and Prevention, Centers for Disease Control. "1996 United States Deaths and Rates per 100,000: All Injury," available online at http://www.cdc.gov/ncipc/osp/states/0001.htm, and http://www.cdc.gov/nchs/about/major/dvs/mortdata.htm.

[10] Discussion and data regarding motor vehicle crashes, the largest category of accident-related death for 15- to 19-year-olds, follows in the next section (HC 1.3).

**Differences by Race for Adolescents.** The black-white disparity among adolescents ages 15 through 19 was substantial in 1970 but had declined by 1980 to the point where black youth registered lower death rates than white youth (see Figure HC 1.2.B). This reversal was short-lived, however. Black death rates surged from 85.2 per 100,000 in 1985 to 145.0 per 100,000 by 1994, while white death rates remained fairly stable. Much of this increase in black teen deaths reflected a substantial increase in black teen male homicide rates, which are reviewed in Section HC 1.4 of this report. Recently, the difference between the white and black adolescent death rates has narrowed as the rate for blacks declined 27 percent between 1994 and 1997.

**Differences by Gender.** Male child death rates are higher than female rates for all age groups, but the differences are far more pronounced for the older age groups, for whom injury-related deaths disproportionately affect males (see Table HC 1.2.A).[11]

[11] Sections HC 1.3 through HC 1.5 further highlight the differences in death rates between males and females ages 15-19 for violent and injury-related deaths.

Table HC 1.2.A

## Child and youth death rates (death rates per 100,000 population in each age group) in the United States, by age group, gender, and race: selected years, 1960-1997

| | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ages 1-4** | | | | | | | | | | | | | | |
| **All children** | **109.1** | **95.9** | **84.5** | **69.9** | **63.9** | **51.8** | **46.8** | **47.4** | **43.6** | **44.8** | **42.9** | **40.6** | **38.3** | **35.8** |
| **Gender** | | | | | | | | | | | | | | |
| Male | 119.5 | 104.3 | 93.2 | 76.7 | 72.6 | 58.5 | 52.4 | 52.0 | 48.0 | 49.5 | 47.3 | 44.8 | 42.2 | 39.7 |
| Female | 98.4 | 87.1 | 75.4 | 62.7 | 54.7 | 44.8 | 41.0 | 42.7 | 39.0 | 39.9 | 38.2 | 36.2 | 34.3 | 31.8 |
| **Race** | | | | | | | | | | | | | | |
| White | 95.2 | 83.2 | 75.1 | 63.3 | 57.9 | 46.6 | 41.1 | 41.7 | 38.1 | 38.3 | 36.5 | 35.1 | 32.9 | 31.6 |
| Black | — | — | 140.0 | 106.2 | 97.6 | 80.7 | 76.8 | 79.7 | 73.2 | 79.1 | 77.2 | 70.3 | 67.6 | 59.2 |
| **Ages 5-9** | | | | | | | | | | | | | | |
| **All children** | **49.0** | **43.9** | **42.1** | **35.2** | **30.4** | **25.0** | **22.2** | **21.5** | **20.4** | **21.1** | **19.9** | **19.7** | **19.4** | **18.5** |
| **Gender** | | | | | | | | | | | | | | |
| Male | 56.3 | 50.8 | 49.7 | 41.4 | 35.0 | 28.5 | 25.6 | 24.5 | 23.7 | 23.2 | 22.6 | 22.5 | 22.1 | 20.2 |
| Female | 41.5 | 36.8 | 34.2 | 28.6 | 25.6 | 21.4 | 18.5 | 18.4 | 16.8 | 19.0 | 17.0 | 16.7 | 16.7 | 16.6 |
| **Race** | | | | | | | | | | | | | | |
| White | 46.2 | 40.8 | 39.9 | 33.0 | 28.4 | 22.9 | 20.3 | 19.8 | 18.3 | 19.0 | 17.6 | 17.7 | 17.5 | 16.2 |
| Black | — | — | 56.4 | 47.4 | 41.7 | 36.2 | 32.3 | 32.0 | 32.1 | 32.9 | 31.8 | 30.2 | 30.2 | 30.1 |
| **Ages 10-14** | | | | | | | | | | | | | | |
| **All children** | **44.0** | **40.5** | **40.6** | **35.3** | **30.8** | **28.0** | **26.0** | **25.8** | **24.6** | **25.6** | **25.2** | **25.5** | **24.0** | **23.2** |
| **Gender** | | | | | | | | | | | | | | |
| Male | 55.0 | 50.9 | 51.3 | 44.9 | 38.3 | 35.0 | 31.6 | 32.9 | 30.7 | 31.7 | 31.2 | 31.0 | 28.8 | 27.9 |
| Female | 32.6 | 29.7 | 29.5 | 25.3 | 22.9 | 20.6 | 20.2 | 18.2 | 18.2 | 19.2 | 18.8 | 19.6 | 18.9 | 18.3 |
| **Race** | | | | | | | | | | | | | | |
| White | 41.4 | 38.6 | 38.4 | 33.7 | 29.8 | 27.0 | 24.3 | 24.2 | 22.8 | 23.7 | 23.0 | 23.6 | 22.2 | 21.8 |
| Black | — | — | 54.6 | 44.3 | 36.6 | 34.8 | 36.6 | 36.4 | 35.3 | 37.2 | 37.9 | 36.8 | 34.1 | 32.1 |
| **Ages 15-19** | | | | | | | | | | | | | | |
| **All children** | **92.2** | **95.3** | **110.3** | **100.2** | **97.9** | **80.5** | **87.9** | **89.0** | **84.3** | **86.9** | **86.8** | **83.5** | **78.6** | **74.8** |
| **Gender** | | | | | | | | | | | | | | |
| Male | 130.1 | 136.0 | 157.8 | 145.4 | 141.4 | 113.4 | 127.2 | 128.6 | 122.4 | 126.0 | 126.6 | 119.5 | 111.0 | 104.5 |
| Female | 54.0 | 53.9 | 61.7 | 53.8 | 53.1 | 46.2 | 46.4 | 47.2 | 44.0 | 45.6 | 44.8 | 45.7 | 44.0 | 43.4 |
| **Race** | | | | | | | | | | | | | | |
| White | 87.9 | 90.9 | 103.1 | 98.0 | 99.1 | 80.2 | 81.4 | 80.5 | 75.6 | 77.0 | 76.8 | 75.6 | 71.6 | 69.5 |
| Black | — | — | 158.0 | 114.4 | 92.3 | 85.2 | 127.7 | 141.2 | 135.5 | 143.6 | 145.0 | 130.2 | 120.2 | 107.6 |

Sources: Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9). Hyattsville, Md.: National Center for Health Statistics, Table 2; Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Table 2. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 2 in 44 (7, Supp.)] and unpublished data provided by the Mortality Statistics Branch, National Center for Health Statistics.

Table HC 1.2.B

## Child and youth death rates (per 100,000 population in each age group) in the United States, by age group, gender, and race and Hispanic origin: 1989-1996

| | Combined Years 1989-1991 | | | Combined Years 1992-1993 | | | Combined Years 1994-1996 | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** |
| **Ages 1-14** | | | | | | | | | |
| **All races** | **31.4** | **36.2** | **26.3** | **29.3** | **33.7** | **24.6** | **27.6** | **31.7** | **23.3** |
| White[a] | 28.4 | 32.8 | 23.8 | 26.1 | 30.3 | 21.7 | 24.5 | 28.3 | 20.6 |
| Black[a] | 48.3 | 56.1 | 40.3 | 47.1 | 53.4 | 40.7 | 44.7 | 51.2 | 38.0 |
| Asian/Pacific Islander[a] | 22.7 | 25.3 | 20.0 | 20.3 | 23.1 | 17.4 | 18.7 | 21.3 | 16.0 |
| American Indian/ Alaska Native[a] | 37.3 | 45.1 | 29.2 | 38.9 | 47.0 | 30.6 | 40.0 | 45.1 | 34.8 |
| Hispanic origin[b] | 30.2 | 34.7 | 25.5 | 28.4 | 32.4 | 24.2 | 25.6 | 29.6 | 21.4 |
| **Ages 15-24** | | | | | | | | | |
| **All races** | **99.1** | **146.1** | **50.0** | **97.0** | **144.0** | **47.9** | **94.3** | **139.0** | **47.5** |
| White[a] | 89.3 | 129.5 | 47.0 | 84.2 | 122.3 | 44.1 | 83.0 | 120.2 | 43.8 |
| Black[a] | 161.9 | 254.9 | 69.8 | 174.8 | 279.5 | 70.6 | 161.5 | 253.3 | 69.7 |
| Asian/Pacific Islander[a] | 50.1 | 70.8 | 28.1 | 56.1 | 80.1 | 31.1 | 55.6 | 79.0 | 31.9 |
| American Indian/ Alaska Native[a] | 142.0 | 208.3 | 71.1 | 129.4 | 184.2 | 71.4 | 127.2 | 188.5 | 63.6 |
| Hispanic origin[b] | 103.3 | 156.5 | 40.9 | 107.5 | 167.3 | 40.2 | 102.1 | 158.1 | 39.9 |

[a]Includes persons of Hispanic origin.

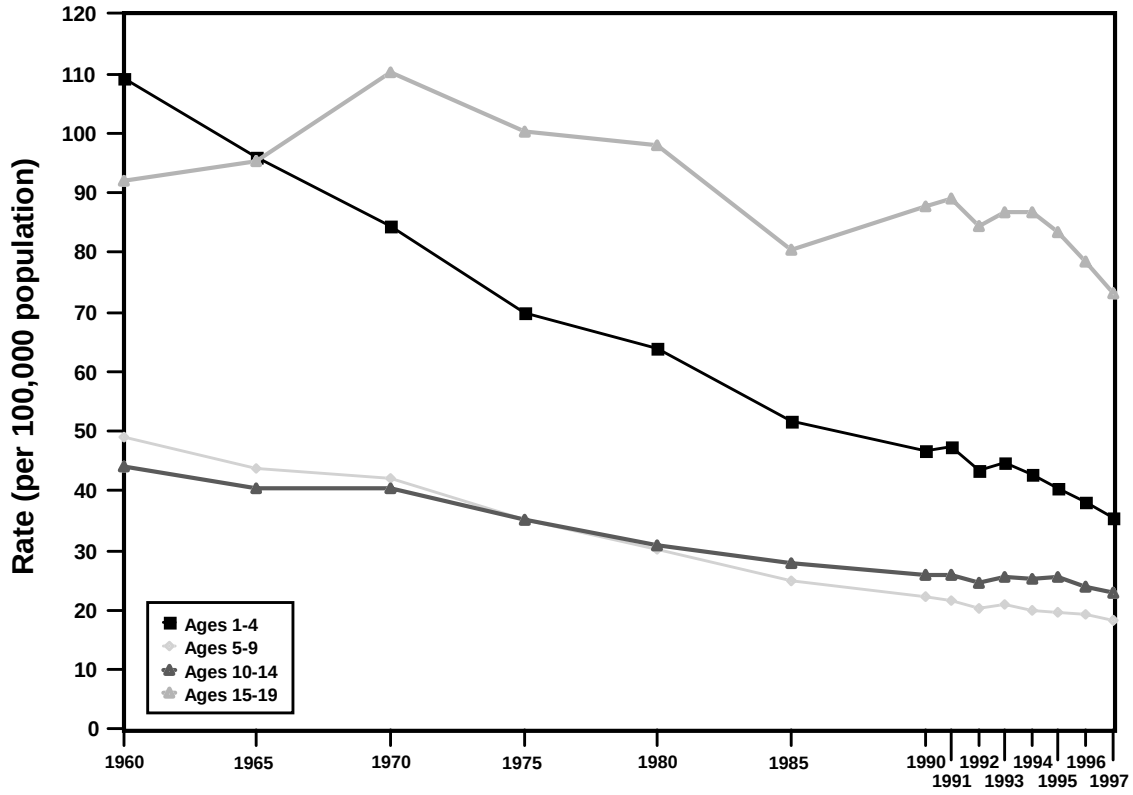
[b]Persons of Hispanic origin may be of any race. Death figures for Hispanic persons are based on data from 44 states and the District of Columbia that reported Hispanic origin on the death certificate in 1989, 47 states and the District of Columbia in 1990, 48 states and the District of Columbia in 1991 and 1992, and 49 states and the District of Columbia in 1993-1996.

Note: Death rates reported for white and black persons are based on highly consistent information. However, persons identified as American Indian, Asian, or Hispanic origin in the data from the Census Bureau (denominator of death rates) are sometimes misreported as white or non-Hispanic on the death certificate (numerator), resulting in underestimates of about 22 percent to 30 percent for death rates of American Indians, about 12 percent for death rates of Asians, and about 7 percent for persons of Hispanic origin. (National Center for Health Statistics, *Health, United States, 1993*, Table 33; Sorlie, P.D., Rogot E., and Johnson, N.J. 1992. "Validity of Demographic Characteristics on the Death Certificate." *Epidemiology* 3 (2): 181-184.)

Sources: Rosenberg HM, Maurer JD, Sorlie PD, Johnson NJ, et al. Quality of death rates by race and Hispanic origin: A summary of current research, 1999. National Center for Health Statistics. Vital Health Stat 2(128). 1999. Centers for Disease Control and Prevention, National Center for Health Statistics. Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from national population estimates for race groups. Also, data computed by Infant and Child Health Studies Branch, National Center for Health Statistics, from mortality data compiled by Division of Vital Statistics. National Center for Health Statistics. 1994. *Health, United States, 1993*, Table 32. Hyattsville, Md.: Public Health Service.

Figure HC 1.2.A

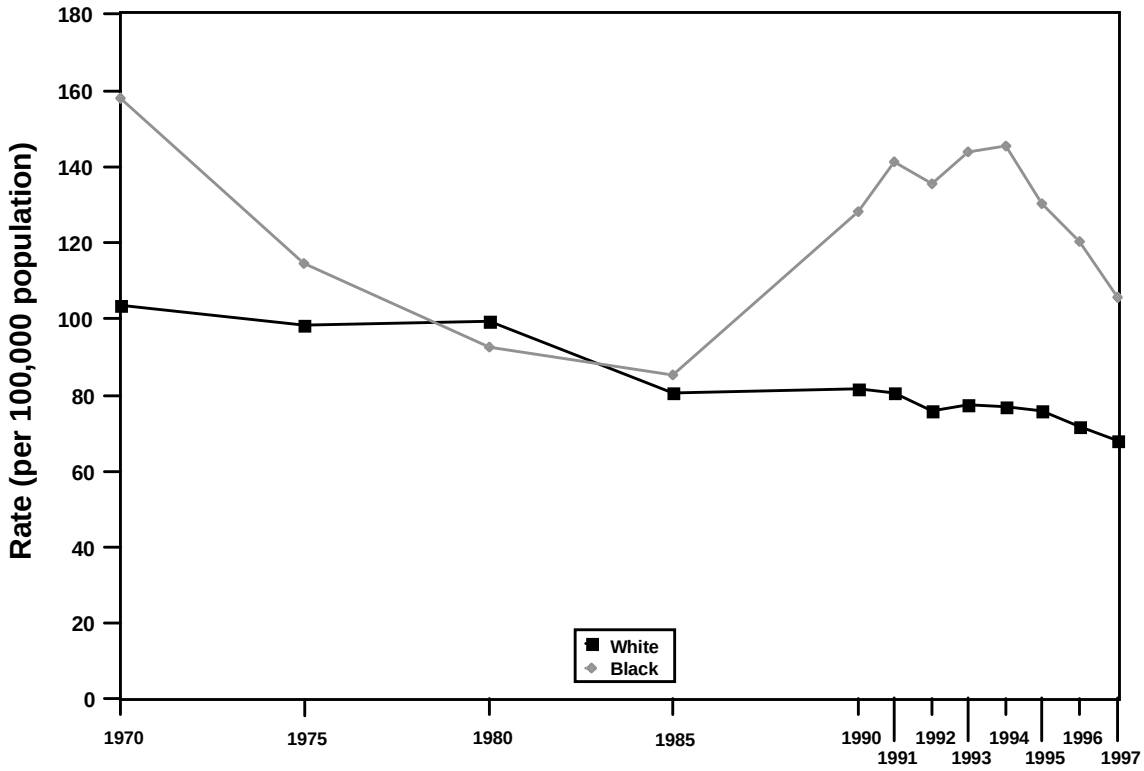
## Child and youth death rates (per 100,000 population in each age group) in the United States, by age group: selected years, 1960-1997




Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Table 2. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 2 in 44 (7, Supp.)] and unpublished data provided by the Mortality Statistics Branch, National Center for Health Statistics.

Figure HC 1.2.B

## Youth death rates (per 100,000 population in age group) in the United States for ages 15 through 19, by race: selected years, 1970-1997




Sources: Hoyert DL, Kochanek KD, Murphy SL. "Deaths: Final Data for 1997." *National Vital Statistics Reports* 47(19). Hyattsville, Md.: National Center for Health Statistics, 1999. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9). Hyattsville, Md.: National Center for Health Statistics, Table 2; Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Table 2. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 2 in 44 (7, Supp.)] and unpublished data provided by the Mortality Statistics Branch, National Center for Health Statistics.

# HC 1.3
# YOUTH MOTOR VEHICLE CRASH DEATHS

Youth ages 16 to 20 had the highest fatality and injury rates of any age group in 1997 due to motor vehicle crashes.[12] Such crashes are among the major causes of injury-related deaths[13] for 15- to 19-year-olds, accounting for 36 percent of injury deaths in 1996;[14] however, as a fraction of all violent deaths to teens, motor vehicle crashes have declined. Preliminary data for 1997 show that motor vehicle crashes claimed 26.5 lives per 100,000 youth ages 15 through 19, compared with 43.6 per 100,000 youth in 1970 (see Figure HC 1.3).[15] The rate of motor vehicle crash deaths among youth has been relatively constant since 1992.

**Differences by Gender and Race.** For persons under age 20, the decrease in the rate of youth motor vehicle deaths between 1970 and 1997 has been greatest among males ages 15 through 19, falling from 67.1 to 35.9 deaths per 100,000 white males and from 43.4 to 27.8 deaths per 100,000 black males (see Table HC 1.3). Similar decreases in the rates of motor vehicle crash deaths have not been seen among females ages 15 through 19. Among this group of white females, the rate of deaths due to motor vehicle crashes has fluctuated between 20 and 26 per 100,000; by 1997 it was 20.3 deaths per 100,000, compared with 24.4 deaths per 100,000 in 1970. Black females have had lower motor vehicle crash death rates than whites. After a drop from 11.1 deaths per 100,000 in 1970 to 6.7 deaths per 100,000 in 1980, rates have generally increased for this group, to 10.0 deaths per 100,000 in 1997.

**Differences by Age.** Among youth ages 10 through 14, motor vehicle death rates are quite low in comparison to older youth and dropped from 9.6 to 5.7 per 100,000 between 1970 and 1997. This decline was evident for both white and black males and females, with most of the decline occurring before 1990.

[12] National Highway Traffic Safety Administration. 1998. *Traffic Safety Facts 1997: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System*. Washington, D.C.: National Center for Statistics and Analysis, U.S. Department of Transportation.

[13] Injury-related deaths include deaths from motor vehicle crashes, fires and burns, drowning, suffocation, and unintentional injuries caused by firearms and other explosive materials, as well as homicides, suicides, and other external causes of death.

[14] Percentages calculated by Child Trends based on data on the number of deaths from all causes and from injuries. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. *National Vital Statistics Report* 47 (9), Table 2. National Center for Injury Control and Prevention, Centers for Disease Control. "1996 United States Deaths and Rates per 100,000: All Injury," available online at http://www.cdc.gov/ncipc/osp/states/0001.htm, 10/15/98.

[15] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Table HC 1.3

## Youth motor vehicle crash deaths (rate per 100,000) in the United States, by age, gender, and race: selected years, 1970-1997[a]

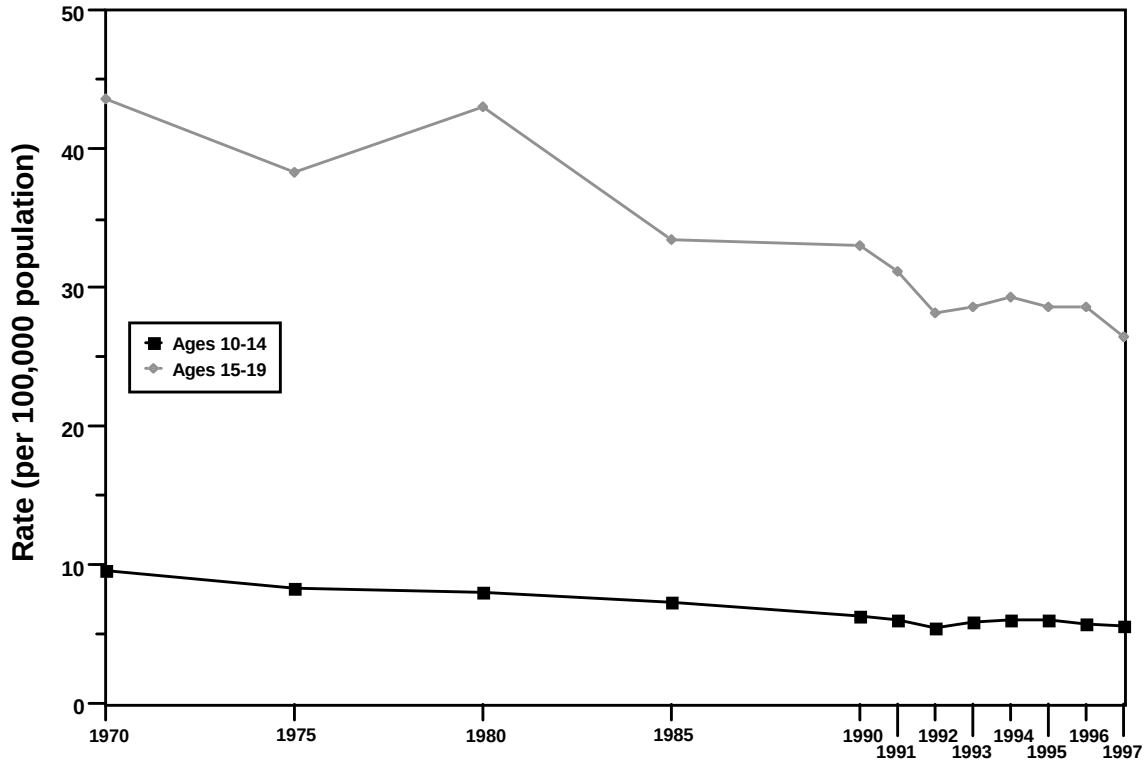
| | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **All youth** | | | | | | | | | | | | |
| Ages 10-14 | 9.6 | 8.4 | 8.1 | 7.4 | 6.4 | 6.1 | 5.5 | 5.9 | 6.0 | 6.1 | 5.8 | 5.7 |
| Ages 15-19 | 43.6 | 38.4 | 43.0 | 33.5 | 33.1 | 31.2 | 28.2 | 28.6 | 29.3 | 28.6 | 28.6 | 26.5 |
| **White males** | | | | | | | | | | | | |
| Ages 10-14 | 12.6 | 10.9 | 10.9 | 9.8 | 7.7 | 7.8 | 7.0 | 7.1 | 7.5 | 7.2 | 7.2 | 6.8 |
| Ages 15-19 | 67.1 | 61.7 | 69.1 | 51.3 | 49.3 | 44.5 | 39.6 | 41.6 | 41.7 | 38.9 | 39.5 | 35.9 |
| **White females** | | | | | | | | | | | | |
| Ages 10-14 | 6.6 | 5.8 | 5.7 | 5.6 | 5.3 | 4.4 | 4.1 | 4.4 | 4.8 | 5.0 | 4.8 | 4.8 |
| Ages 15-19 | 24.4 | 20.6 | 25.6 | 22.6 | 22.2 | 23.0 | 21.0 | 20.2 | 21.3 | 22.1 | 21.2 | 20.3 |
| **Black males** | | | | | | | | | | | | |
| Ages 10-14 | 11.9 | 9.6 | 7.9 | 8.9 | 7.9 | 8.8 | 7.8 | 8.3 | 7.6 | 7.7 | 6.8 | 7.4 |
| Ages 15-19 | 43.4 | 24.6 | 24.4 | 22.1 | 28.7 | 29.5 | 26.2 | 26.7 | 29.0 | 29.0 | 28.2 | 27.8 |
| **Black females** | | | | | | | | | | | | |
| Ages 10-14 | 6.4 | 4.2 | 4.0 | 3.0 | 3.8 | 3.3 | 3.6 | 4.8 | 4.8 | 4.2 | 3.0 | 4.4 |
| Ages 15-19 | 11.1 | 7.1 | 6.7 | 7.5 | 9.7 | 9.0 | 9.1 | 8.2 | 10.4 | 10.7 | 12.4 | 10.0 |

[a]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.3

## Youth motor vehicle crash deaths (rate per 100,000) in the United States, by age: selected years, 1970-1997[a]




[a]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

# HC 1.4
# YOUTH HOMICIDES

After more than a decade of sharp increases, the youth homicide rate decreased between 1993 and 1997. The rate of death from homicide for youth ages 15 through 19 more than doubled between 1970 and 1994, increasing from 8.1 per 100,000 in 1970 to 20.7 per 100,000 in 1993 (see Table HC 1.4.A). Virtually all of this increase occurred after 1985 (see Figure HC 1.4.A). Since 1993, rates have decreased steadily to 12.8 deaths per 100,000 in 1997.[16]

**Male Youth Homicide Rates by Race.** The trend in the death rate due to homicide for black males largely dominates the rate of youth homicides for ages 15 through 19. Since 1990, the rate of death due to homicide for black males ages 15 through 19 has been about 8 to 9 times higher than the rate for their white peers. The rate for this age group of black males actually declined nearly 30 percent from 1970 to 1985, but it increased dramatically from 46.7 per 100,000 in 1985 to 140.7 per 100,000 in 1993. Since 1993, this rate has decreased by over 40 percent, falling to 82.2 deaths per 100,000 by 1997 (see Figure HC 1.4.B).

While the homicide rate for white males of the same age group (15 through 19) is substantially less than that of black males, similar fluctuations in this rate can be seen over time, with the largest increases occurring between 1985 and the early 1990s and decreases in recent years. Overall, this rate has almost doubled going from 5.2 deaths per 100,000 in 1970 to 9.9 deaths per 100,000 in 1997.

**Female Youth Homicide Rates by Race.** Homicide rates for females ages 15 through 19 are considerably lower than among similarly aged males within the same race groups (rates for black females have actually been higher than rates for white males). For example, the rate for black females was 10.4 per 100,000 in 1997, 87 percent lower than the rate for black males. The gender disparity in homicide rates is also large for whites, although it is not as great as that between black males and females. In 1997, the homicide rate for white females ages 15 through 19 was 2.7 deaths per 100,000, just over a quarter of that for white males. As is the case for males, the youth homicide rate for black females is higher than the rate for white females—nearly four times higher in 1997.

**Homicide Rates for Younger Youth.** The homicide rate for youth ages 10 through 14 was 1.5 per 100,000 in 1997—substantially lower than the rate for older youth. The disparity between males and females is not as pronounced in this age group as the difference for older youth ages 15 through 19. However, the homicide rates for both white and black males ages 10 through 14 have been approximately twice those of females in recent years.

**Homicides Involving Firearms.** Firearms have been involved in the majority of youth homicides since 1980 (see Figure HC 1.4.C). Deaths to youth ages 15 through 19 involving firearms accounted for 66 percent of the total deaths due to homicide in 1980 (7.0 firearm deaths per 100,000 out of a total of 10.6 deaths per 100,000 due to homicide). The percentage of firearm-related homicides increased to 85 percent by 1997 for this same age group. Homicides due to firearms are more likely among black youth than among white youth, and most particularly among black males ages 15 through 19 (see Table HC 1.4.B). In 1997, 91 percent of homicides among older male black youth (ages 15 through 19) involved a firearm, compared with 84 percent among older white male youth. The rate of death due to firearms among black males ages 15 through 19 has decreased since 1993, serving as one explanation for the decline in the overall homicide rate among this group. Homicides among female youth involve a firearm less often, although firearms are still the means of the majority of female homicides.

[16] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Table HC 1.4.A

## Youth homicides[a] (rate per 100,000) in the United States, by age, gender, and race: selected years, 1970-1997[b]

| | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997[b] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **All youth** | | | | | | | | | | | | |
| Ages 10-14 | 1.2 | 1.2 | 1.4 | 1.5 | 2.1 | 2.2 | 2.4 | 2.5 | 2.2 | 2.1 | 1.8 | 1.5 |
| Ages 15-19 | 8.1 | 9.6 | 10.6 | 8.6 | 17.0 | 19.6 | 19.3 | 20.7 | 20.3 | 18.2 | 15.7 | 12.8 |
| **White males** | | | | | | | | | | | | |
| Ages 10-14 | 0.6 | 1.0 | 1.1 | 1.4 | 1.7 | 1.8 | 2.0 | 1.9 | 1.8 | 2.0 | 1.5 | 1.4 |
| Ages 15-19 | 5.2 | 8.1 | 10.9 | 7.2 | 12.5 | 14.4 | 15.2 | 15.2 | 15.4 | 14.7 | 12.2 | 9.9 |
| **White females** | | | | | | | | | | | | |
| Ages 10-14 | 0.6 | 0.8 | 1.1 | 0.9 | 0.9 | 0.9 | 1.0 | 1.2 | 0.9 | 1.0 | 0.9 | 0.5 |
| Ages 15-19 | 2.1 | 3.2 | 3.9 | 2.7 | 3.6 | 3.6 | 3.6 | 3.6 | 3.4 | 3.9 | 2.9 | 2.7 |
| **Black males** | | | | | | | | | | | | |
| Ages 10-14 | 6.8 | 4.1 | 3.9 | 4.2 | 8.1 | 9.1 | 9.6 | 10.5 | 9.1 | 8.2 | 6.0 | 5.4 |
| Ages 15-19 | 65.2 | 51.4 | 48.8 | 46.7 | 115.7 | 134.6 | 128.5 | 140.7 | 135.8 | 110.5 | 100.9 | 82.2 |
| **Black females** | | | | | | | | | | | | |
| Ages 10-14 | 2.3 | 2.3 | 2.4 | 1.7 | 4.8 | 3.8 | 5.1 | 5.2 | 4.6 | 3.0 | 3.1 | 2.2 |
| Ages 15-19 | 10.6 | 15.3 | 11.0 | 10.4 | 15.6 | 15.6 | 14.2 | 18.4 | 15.1 | 16.4 | 12.9 | 10.4 |

[a]Homicide includes death by legal intervention.

[b]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Table HC 1.4.B

## Youth homicides due to firearms[a] (rate per 100,000) in the United States, by age, gender, and race: selected years, 1980-1997[b]

| | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997[b] |
|---|---|---|---|---|---|---|---|---|---|---|
| **All youth** | | | | | | | | | | |
| Ages 10-14 | 0.8 | 0.8 | 1.5 | 1.6 | 1.9 | 1.9 | 1.7 | 1.6 | 1.3 | 1.0 |
| Ages 15-19 | 7.0 | 5.7 | 13.8 | 16.4 | 16.7 | 17.8 | 17.7 | 15.4 | 13.2 | 10.9 |
| **White males** | | | | | | | | | | |
| Ages 10-14 | 0.7 | 0.9 | 1.3 | 1.4 | 1.6 | 1.5 | 1.5 | 1.6 | 1.2 | 1.1 |
| Ages 15-19 | 7.2 | 4.9 | 9.4 | 11.7 | 12.9 | 12.6 | 12.9 | 12.3 | 10.0 | 8.3 |
| **White females** | | | | | | | | | | |
| Ages 10-14 | 0.5 | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.3 |
| Ages 15-19 | 1.7 | 1.2 | 2.0 | 2.1 | 2.3 | 2.2 | 2.4 | 2.2 | 1.7 | 1.5 |
| **Black males** | | | | | | | | | | |
| Ages 10-14 | 3.2 | 3.0 | 6.9 | 8.2 | 8.4 | 9.8 | 7.7 | 7.4 | 5.2 | 4.1 |
| Ages 15-19 | 38.4 | 36.6 | 104.4 | 122.6 | 118.8 | 130.1 | 126.6 | 101.7 | 91.7 | 75.2 |
| **Black females** | | | | | | | | | | |
| Ages 10-14 | 1.0 | 0.6 | 3.2 | 2.7 | 3.4 | 3.3 | 3.3 | 2.0 | 1.8 | 1.5 |
| Ages 15-19 | 6.2 | 5.0 | 10.4 | 11.2 | 10.5 | 14.3 | 11.1 | 12.3 | 9.9 | 7.2 |

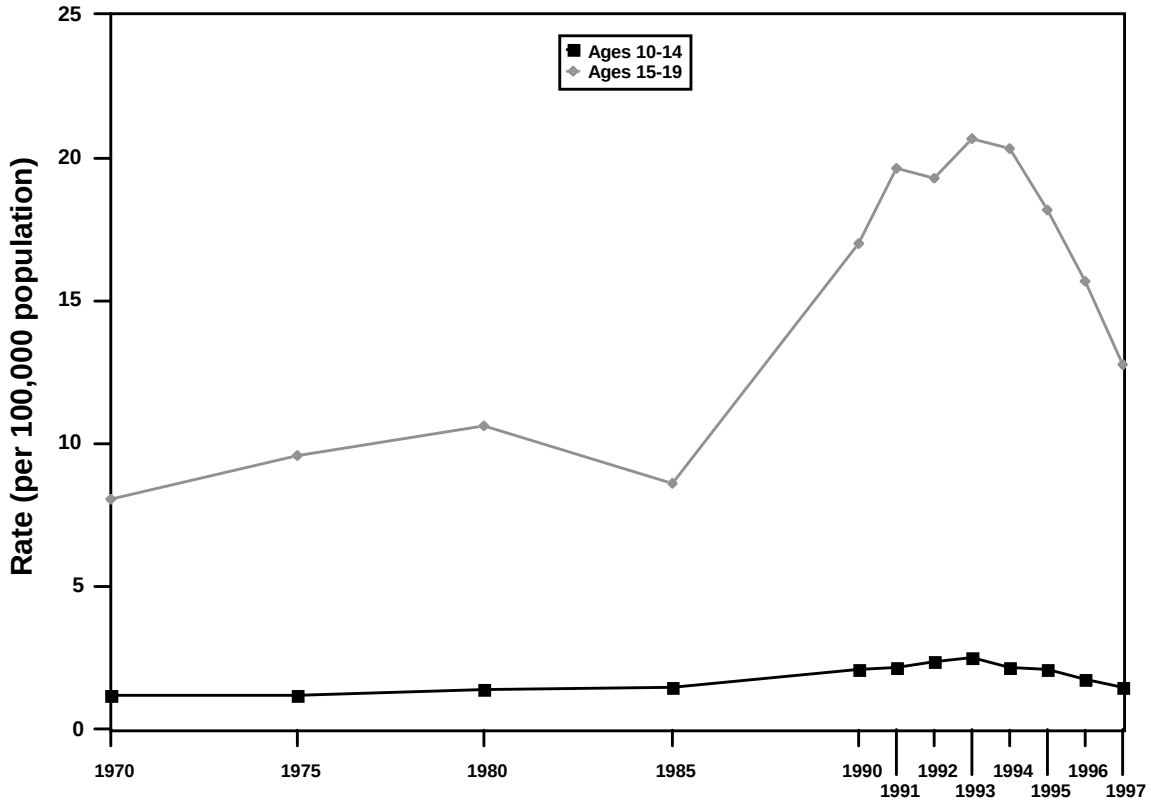
[a]Includes assault by handguns and all other and unspecified firearms.

[b]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.4.A

## Youth homicides[a] (rate per 100,000) in the United States, by age: selected years, 1970-1997[b]



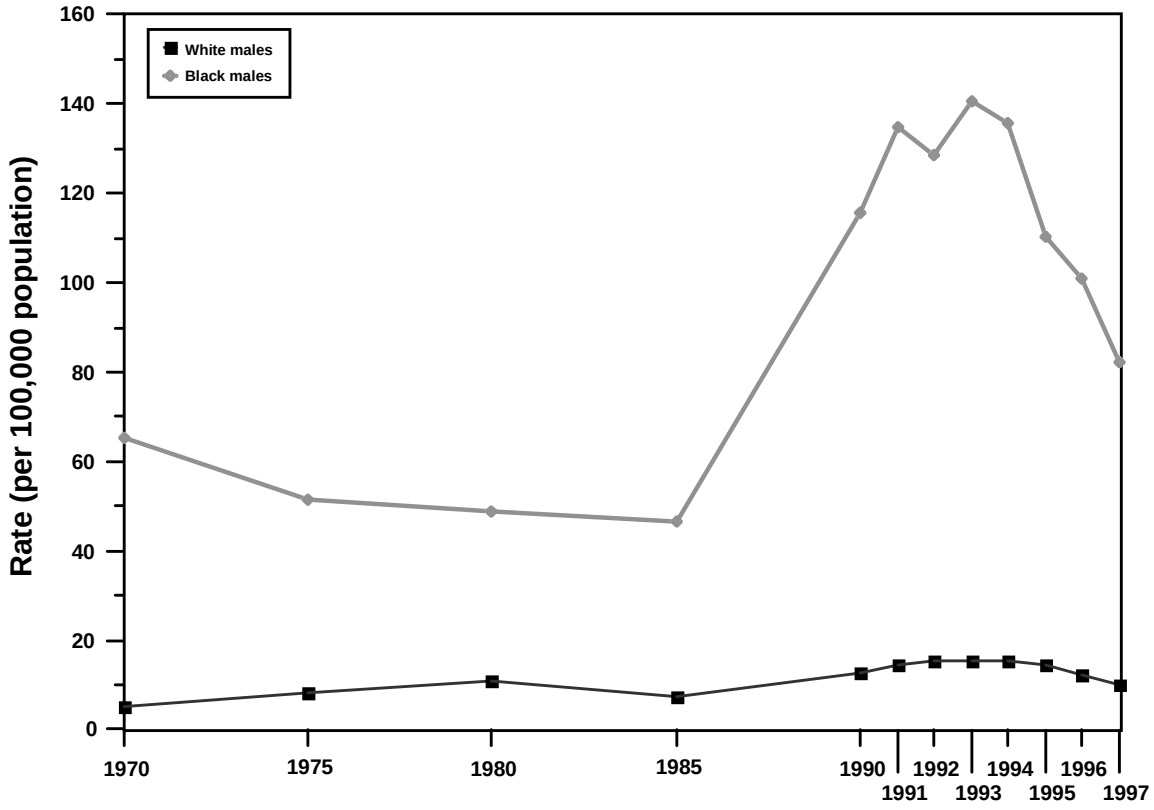

[a]Homicide includes death by legal intervention.

[b]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.4.B

## Youth homicides[a] for males ages 15 through 19 (rate per 100,000) in the United States, by race: selected years, 1970-1997[b]



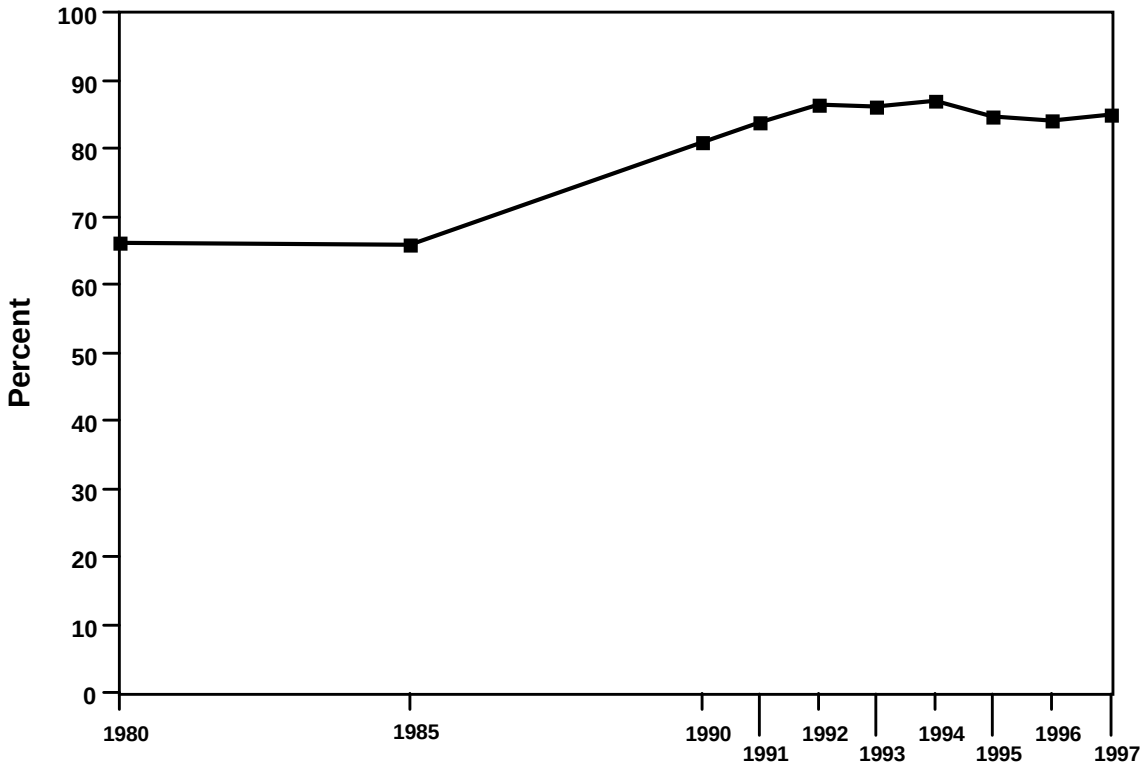

[a]Homicide includes death by legal intervention.

[b]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.4.C

## Percentage of youth homicides[a] due to firearms[b] in the United States, for youth ages 15 through 19: selected years, 1980-1997[c]




[a]Homicide includes death by legal intervention.

[b]Includes assault by handguns and all other and unspecified firearms.

[c]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

# HC 1.5
# YOUTH SUICIDES

Suicide, like homicide, has come to play a proportionately larger role in teen deaths over the past several decades. Between 1970 and 1990, the suicide rate for youth ages 15 through 19 nearly doubled, from 5.9 to 11.1 per 100,000 (see Figure HC 1.5). After remaining stable from 1990 to 1994 at approximately 11 deaths per 100,000 youth ages 15 through 19, the rate decreased slightly to 9.5 per 100,000 in 1997.

**Differences by Gender.** Male teens are more likely than females to commit suicide (see Table HC 1.5). The suicide rate for white males ages 15 through 19 was 16.0 per 100,000 in 1997, more than four times the rate of 3.5 per 100,000 for white females. Among blacks, males had a rate over four times that of black females for youth ages 15 through 19 in 1997 (11.4 and 2.7 per 100,000, respectively).

**Differences by Race.** White males ages 15 through 19 have long had a higher suicide rate than their black male peers (see Table HC 1.5). In 1970, white males ages 15 through 19 were twice as likely as black males to commit suicide (9.4 versus 4.7 per 100,000). However, the gap between white and black male suicide rates has narrowed in recent years, with suicide rates of 16.0 and 11.4 per 100,000, respectively, according to 1997 data for white and black males.[17] Among females ages 15 through 19, whites and blacks were equally likely to commit suicide in 1970, with rates of 2.9 per 100,000. By 1975, white female suicide rates were twice that of their black peers ages 15 through 19. White female suicide rates have remained higher than black female rates since that time.

**Suicide Rates for Younger Youth.** While considerably lower, suicide rates for youth ages 10 through 14 have followed trends similar to those among older youth, with males having higher rates of suicide than females and whites having higher suicide rates than blacks (see Table HC 1.5). In this age group, suicide is infrequent for both sexes and races, making gender or racial differences small as well.

[17] The race disparity in the suicide rate between all white youth ages 10 through 19 and all black youth ages 10 through 19 narrowed substantially between 1980 and 1995, largely due to the increase of suicide among black youth. In 1980, white youth (ages 10-19) had a suicide rate that was 157 percent greater than that of their black peers; by 1995, the rate among whites was 42 percent greater than the rate among blacks. [These data, not shown here, can be found in Centers for Disease Control and Prevention. March 20, 1998. "Suicide among Black Youths—United States, 1980-1995." *Morbidity and Mortality Weekly Report* 47 (10).]

Table HC 1.5

## Youth suicides (rate per 100,000) in the United States, by age, gender, and race: selected years, 1970-1997

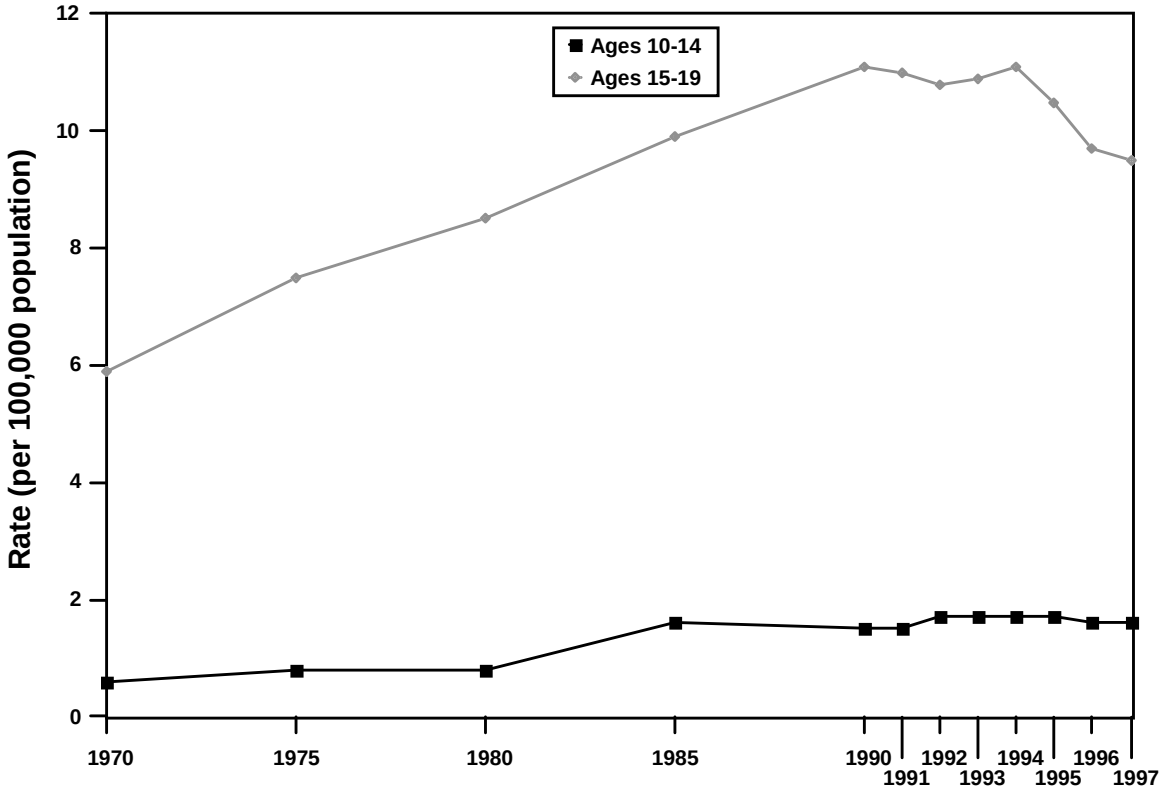
| | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| All youth | | | | | | | | | | | | |
| Ages 10-14 | 0.6 | 0.8 | 0.8 | 1.6 | 1.5 | 1.5 | 1.7 | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 |
| Ages 15-19 | 5.9 | 7.5 | 8.5 | 9.9 | 11.1 | 11.0 | 10.8 | 10.9 | 11.1 | 10.5 | 9.7 | 9.5 |
| White males | | | | | | | | | | | | |
| Ages 10-14 | 1.1 | 1.4 | 1.4 | 2.5 | 2.3 | 2.4 | 2.6 | 2.4 | 2.5 | 2.8 | 2.3 | 2.5 |
| Ages 15-19 | 9.4 | 12.9 | 15.0 | 17.1 | 19.3 | 19.1 | 18.4 | 18.5 | 18.7 | 18.4 | 16.3 | 16.0 |
| White females | | | | | | | | | | | | |
| Ages 10-14 | 0.3 | 0.4 | 0.3 | 0.9 | 0.9 | 0.8 | 1.1 | 1.0 | 1.0 | 0.9 | 0.9 | 0.8 |
| Ages 15-19 | 2.9 | 3.1 | 3.3 | 4.1 | 4.0 | 4.2 | 3.7 | 4.2 | 3.5 | 3.3 | 3.8 | 3.6 |
| Black males | | | | | | | | | | | | |
| Ages 10-14 | 0.3 | 0.2 | 0.5 | * | 1.6 | 2.0 | 2.0 | 2.3 | 2.1 | 1.6 | 1.9 | 1.9 |
| Ages 15-19 | 4.7 | 6.1 | 5.6 | 8.2 | 11.5 | 12.2 | 14.8 | 14.4 | 16.6 | 13.8 | 11.5 | 11.5 |
| Black females | | | | | | | | | | | | |
| Ages 10-14 | 0.4 | 0.3 | 0.1 | * | * | * | * | * | * | * | * | * |
| Ages 15-19 | 2.9 | 1.5 | 1.6 | 1.5 | 1.9 | * | 1.9 | * | 2.4 | 2.3 | 1.8 | 2.5 |

* = Not calculated because of unreliability due to infrequency of the event.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.5

## Youth suicides (rate per 100,000) in the United States, by age: selected years, 1970-1997




Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

## HC 1.6
# FIREARM-RELATED DEATHS

Death due to injury by firearms includes deaths due to homicide, suicide, legal intervention, unintentional death by firearms, and firearm-related deaths of undetermined intent. Taken together, suicide and homicide have accounted for the vast majority of firearm-related deaths over the past 30 years—as high as 94 percent in 1994.[18]

Firearm-related death is a growing public health concern for all ages, as it was a major contributor to death in 1994 and the fourth major cause of years of potential life lost before age 65.[19] However, the rate of firearm-related death among youth ages 15 through 19 is of particular concern, as homicide rates for this group rose dramatically in the late 1980s and early 1990s, particularly among black males. In addition, the rate of unintentional death due to firearms has historically been highest among youth ages 15 through 19. Overall, the rate of death due to injury by firearms doubled for youth ages 15 through 19 between 1980 and 1994, from 14.7 deaths to 28.2 deaths per 100,000. Since 1994, the firearm-related death rate has declined, and in 1997 it was at 18.2 deaths per 100,000 (see Table HC 1.6). The firearm-related death rate for youth ages 10 through 14, 2.2 per 100,000 in 1997, is considerably lower than the rate for older youth.[20]

**Differences by Race.** Among younger adolescents ages 10 through 14, and among females ages 15 through 19, the rate of death due to injury by firearms ranges from two to three times higher for blacks than for whites. According to preliminary data for 1997, the rate of firearm-related death for black males ages 15 through 19 is over four times the rate for their white peers, but it has decreased by 42 percent since 1993, when the rate was over five times higher than that of white males. Based on preliminary 1997 data, the rate for older black males decreased by 19 percent between 1996 and 1997, from 108.7 to 88.2 per 100,000. The high rate of deaths due to homicide among black males in this age group largely accounts for the high firearm-related death rate.[21]

**Differences by Gender**. Among blacks and whites in both age groups, firearm-related deaths are more prevalent among males; for example, the death rate for black females ages 15 through 19 was 8.8 per 100,000 in 1997, while the rate for their male peers was 10 times greater (88.2 per 100,000). Among whites ages 15 through 19, females experience firearm-related deaths at approximately one-sixth the rate of males.

[18] Ikeda, R.M., Gorwitz, R., James, S.P., Powell, K.E., and Mercy, J.A. 1997. "Fatal Firearm Injuries in the United States, 1962-1994." *Violence Surveillance Summary Series* (3). Atlanta: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

[19] Ibid.

[20] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

[21] Refer to section HC 1.4 for further discussion of youth homicide.

Table HC 1.6

## Youth deaths due to injury by firearms (rate per 100,000) in the United States, by age, gender and race: selected years, 1980-1997[a]

| | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| **All youth** | | | | | | | | | | |
| Ages 10-14 | 2.4 | 2.8 | 3.3 | 3.5 | 3.7 | 3.8 | 3.5 | 3.4 | 2.7 | 2.2 |
| Ages 15-19 | 14.7 | 13.3 | 23.3 | 26.4 | 26.2 | 27.8 | 28.2 | 24.5 | 21.2 | 18.2 |
| **White males** | | | | | | | | | | |
| Ages 10-14 | 3.6 | 4.5 | 4.2 | 4.6 | 4.5 | 4.4 | 4.3 | 4.4 | 3.6 | 3.1 |
| Ages 15-19 | 20.9 | 18.4 | 26.2 | 29.1 | 28.8 | 28.8 | 30.2 | 27.9 | 23.1 | 20.8 |
| **White females** | | | | | | | | | | |
| Ages 10-14 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.2 | 1.2 | 1.2 | 1.0 | 0.6 |
| Ages 15-19 | 4.1 | 3.5 | 4.6 | 4.6 | 4.3 | 4.9 | 4.7 | 4.2 | 3.8 | 3.5 |
| **Black males** | | | | | | | | | | |
| Ages 10-14 | 4.7 | 4.8 | 10.2 | 11.5 | 11.6 | 13.4 | 11.2 | 10.1 | 7.8 | 6.2 |
| Ages 15-19 | 46.7 | 46.5 | 119.7 | 140.5 | 140.9 | 153.1 | 151.1 | 120.3 | 108.7 | 88.2 |
| **Black females** | | | | | | | | | | |
| Ages 10-14 | 1.5 | * | 3.7 | 3.0 | 3.9 | 3.9 | 3.5 | 2.5 | 2.2 | 2.3 |
| Ages 15-19 | 7.5 | 6.1 | 12.1 | 12.7 | 12.4 | 15.8 | 13.3 | 14.2 | 11.7 | 8.8 |

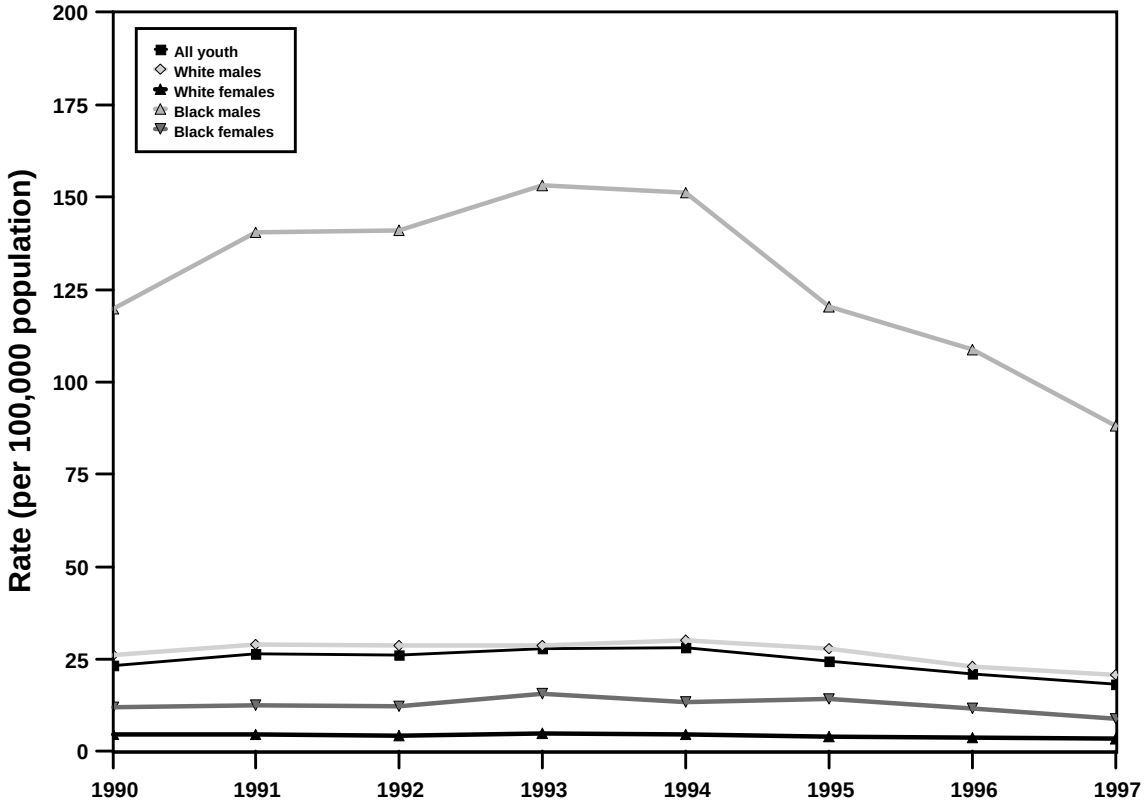
[a]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

* = Not calculated because of unreliability due to infrequency of the event.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.6

## Deaths due to injury by firearms (rate per 100,000) for youth ages 15 through 19 in the United States, by gender and race: 1990-1997[a]




[a]Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.