

A young child with dark hair is smiling broadly, showing their teeth. The child is wearing a light-colored, possibly white, collared shirt. The background is a soft, light blue overlay of the American flag, with the stars and stripes visible. The overall tone is positive and hopeful.

# Indicators of Children's Well-Being

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## Health Indicators

The World Health Organization defines health as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." This section presents information on several important measures of child health. Data depicted include indicators of general health and chronic disease, a measure of birth outcomes (low birthweight), mortality rates, immunization rates, and rates of births to adolescents. Important measures for which data are not available include child abuse and neglect, mental health, and disability.

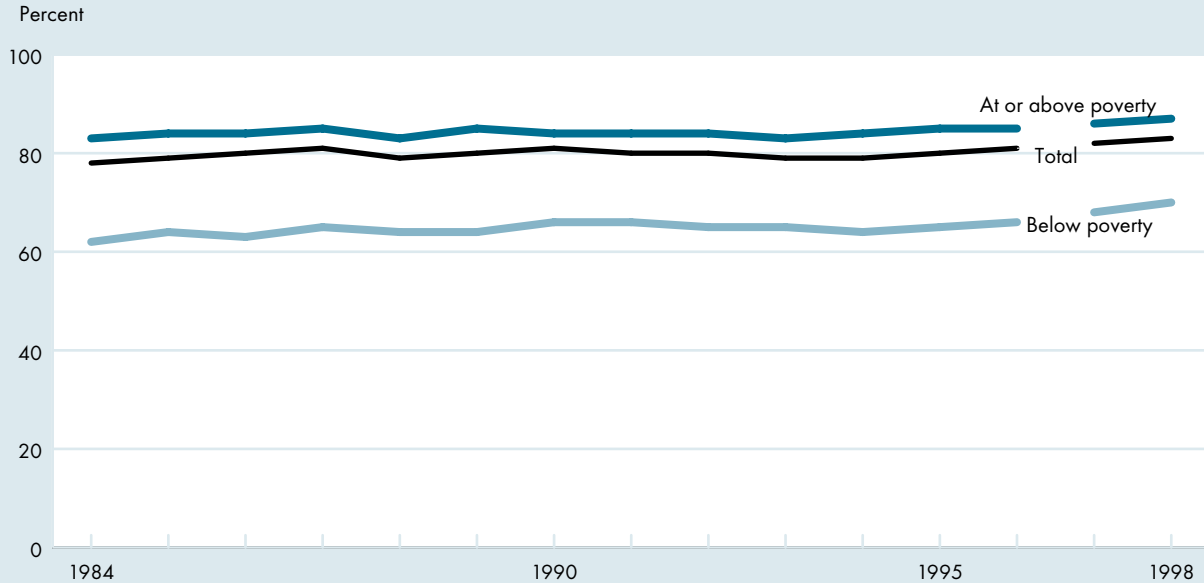


## General Health Status

The health of children and youth is basic to their well-being and optimal development. Parental reports of their children's health provide one indication of the overall health status of the Nation's children. This indicator measures the percentage of children whose parents report them to be in very good or excellent health.

### Indicator HEALTH1

### Percentage of children under age 18 in very good or excellent health by poverty status, 1984-98



NOTE: In 1997, the National Health Interview Survey was redesigned. Data for 1997-98 are not strictly comparable with earlier data.

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

- In 1998, about 83 percent of children were reported by their parents to be in very good or excellent health. This was similar to the 1997 rate of 82 percent.
- Children under age 5 are slightly more likely to be in very good or excellent health than children ages 5 to 17.
- Child health varies by family income. Children living below the poverty line are less likely than children in higher-income families to be in very good or excellent health. In 1998, about 70 percent of children in families below the poverty line were in very good or excellent health, compared with 87 percent of children in families living at or above the poverty line.
- The health gap between children below and those at or above the poverty line did not change between 1984 and 1998. Each year, children at or above the poverty line were substantially more likely to be in very good or excellent health than children whose families were below the poverty line.

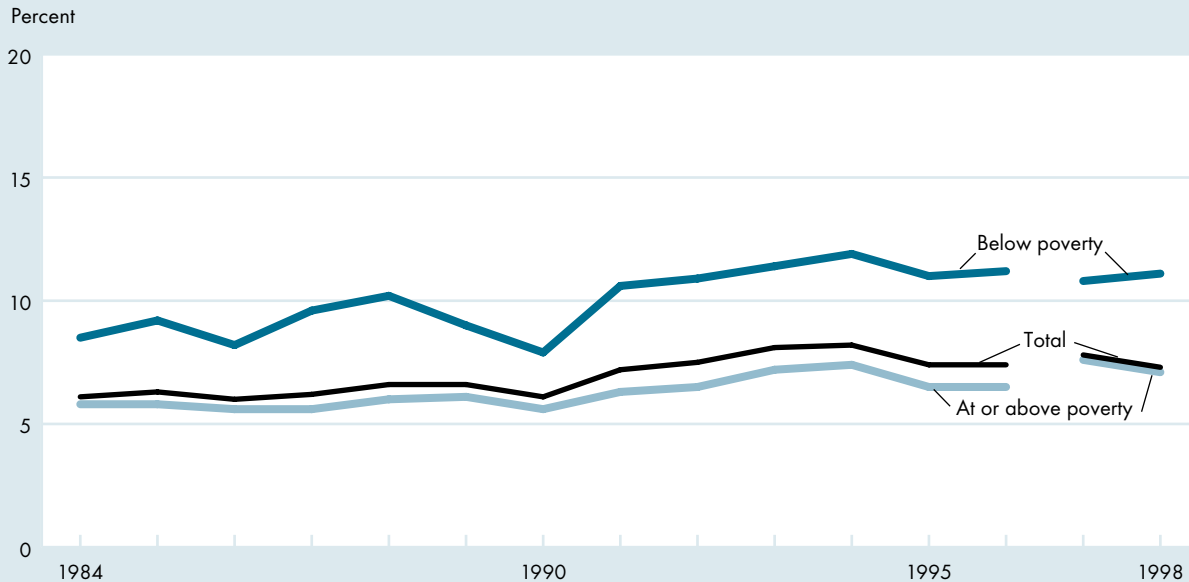
*Bullets contain references to data that can be found in Table HEALTH1 on page 87. See indicator ECON1.A and ECON1.B on pages 14-15 for a description of child poverty.*

## Activity Limitation

**C**hildren whose activities are limited by one or more chronic health conditions may need more specialized health care than children without such limitations. Their medical costs are generally higher; they are more likely to miss days from school; and they may require special education services.<sup>36,37</sup> Researchers use parental reports on limitations associated with chronic conditions to determine the prevalence of activity limitations. Chronic conditions (such as asthma, hearing impairment, or diabetes) included in this measure usually have a duration of more than 3 months. Activities include going to school, playing, and any other activities of children.

### Indicator HEALTH2

#### Percentage of children ages 5 to 17 with any limitation in activity resulting from chronic conditions by poverty status, 1984-98



NOTE: In 1997, the National Health Interview Survey was redesigned. Data for 1997-98 are not comparable with earlier data.

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

- In 1998, 7 percent of children ages 5 to 17 were limited in their activities because of one or more chronic health conditions, compared with 3 percent of children younger than 5. Children and youth ages 5 to 17 have much higher rates of activity limitation than younger children, partly because some chronic conditions are not diagnosed until children enter school.
- Children and youth in families living below the poverty line have significantly higher rates of activity limitation than children in more affluent families. Among children and youth ages 5 to 17, 11 percent of children living below poverty had activity limitations due to chronic conditions in 1998, whereas 7 percent of children in families at or above poverty had a limitation.

- The difference in activity limitation by income is also present among preschool-age children. Children under age 5 in families below poverty had a rate of activity limitation that was higher than that for children in families at or above poverty.
- Males ages 5 to 17 were more likely than females in the same age group to have activity limitations (10 percent of boys compared with 5 percent of girls in 1998).

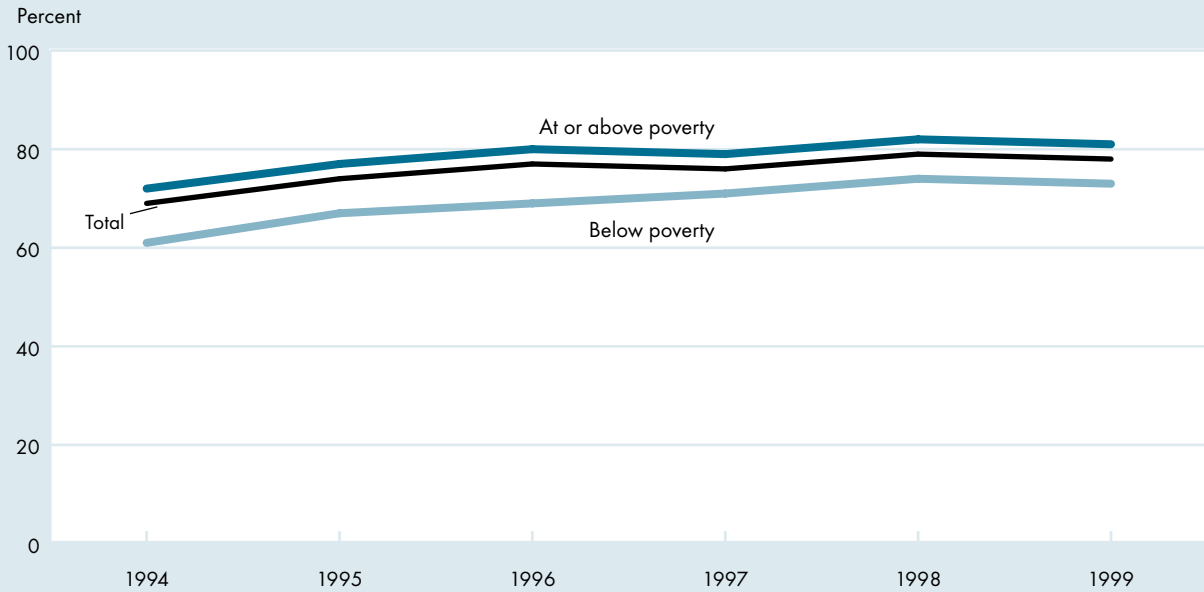
*Bullets contain references to data that can be found in Table HEALTH2 on page 88. Endnotes begin on page 58.*

## Childhood Immunization

**A**dequate immunization protects children against several diseases that killed or disabled many children in past decades. Rates of childhood immunization are one measure of the extent to which children are protected from serious vaccine-preventable illnesses. The combined immunization series (often referred to as the 4:3:1:3 combined series) rate measures the extent to which children have received four key vaccinations.

### Indicator HEALTH3

#### Percentage of children 19 to 35 months of age with the 4:3:1:3 combined series of vaccinations by poverty status, 1994-99



NOTE: Vaccinations included in the combined series are 4 doses of diphtheria and tetanus toxoids and pertussis vaccine (DTP)/diphtheria and tetanus toxoids (DT) vaccine, 3 doses of polio vaccine, 1 dose of a measles-containing vaccine (MCV), and 3 doses of *Haemophilus influenzae* type b (Hib) vaccine. The recommended immunization schedule for children is available at <http://www.cdc.gov/nip/recs/child-schedule.pdf>.

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

- In 1999, 78 percent of children ages 19 to 35 months had received the combined series of vaccines (often referred to as the 4:3:1:3 combined series).
- Children with family incomes below the poverty level had lower rates of coverage with the combined series than children with family incomes at or above the poverty line—73 percent of children below poverty compared with 81 percent of higher-income children.
- Overall and for children living above and below the poverty level, coverage with the combined series remained relatively stable between 1998 and 1999, as did the gap in coverage between children in families living above and below the poverty level.
- Coverage with three or more doses of Hib vaccine among children ages 19 to 35 months remained relatively stable at 94 percent.
- In 1999, coverage with three or more doses of hepatitis B vaccine among children ages 19 to 35 months remained relatively stable at 88 percent.
- Rates of coverage with the full series of vaccines were higher among white, non-Hispanic children than among black, non-Hispanic or Hispanic children. Eighty-one percent of white, non-Hispanic children ages 19 to 35 months received these immunizations compared with 74 percent of black, non-Hispanic children and 75 percent of Hispanic children.
- In 1999, coverage with varicella (chicken pox) vaccine among children ages 19 to 35 months continued to increase from 43 percent to 58 percent. Gains in coverage for varicella vaccine were seen among all children regardless of race or ethnicity and poverty level; however, children living at or above the poverty line had higher coverage levels.

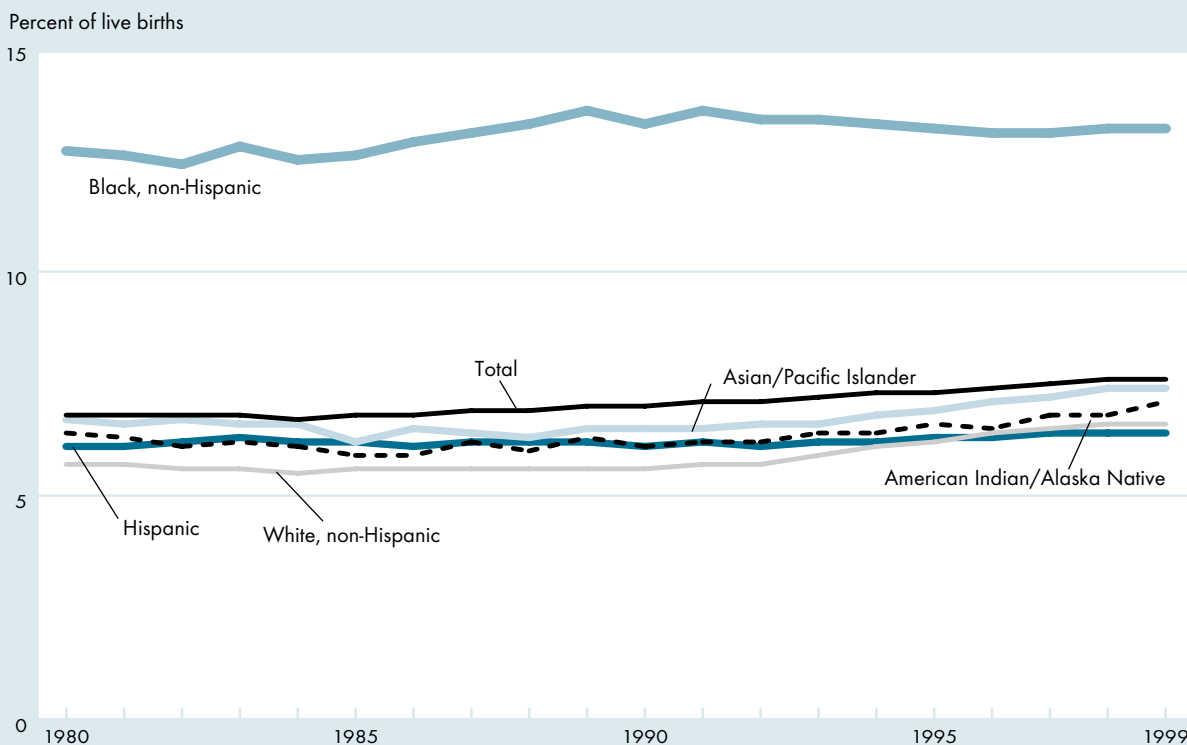
*Bullets contain references to data that can be found in Table HEALTH3 on page 89.*

## Low Birthweight

**L**ow-birthweight infants (infants born weighing less than 2,500 grams, or about 5.5 pounds) are at higher risk of death or long-term illness and disability than are infants of normal birthweight.<sup>38,39</sup> Low-birthweight infants are a diverse group: some are born prematurely, while others are small for their gestational age.

### Indicator HEALTH4

### Percentage of infants born of low birthweight by race and Hispanic origin, 1980-99



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

- The percentage of infants born of low birthweight was 7.6 in 1998 and 1999, up slightly from 7.5 percent in 1997. The low-birthweight rate has increased slowly but steadily since 1984. The rate in 1998 and 1999 is the highest since 1973.<sup>5,12</sup>
- The low-birthweight rate for black, non-Hispanic infants declined during the 1990s, to 13.1 percent in each year, 1996 and 1997, before rising slightly to 13.2 in 1998 and 1999. The rate was still higher than levels reported for the early to mid-1980s. The low-birthweight rate has risen for white, non-Hispanic infants, from 5.6 percent in 1990 to 6.6 percent in 1998 and 1999. Low birthweight among Hispanic infants remained at 6.4 percent in 1997 through 1999. The rate of low birthweight for American Indian/Alaska Native infants increased to 7.1 percent in 1999, and the overall rate for Asian/Pacific Islander infants was 7.4 percent in 1998 and 1999.<sup>5,12</sup>
- The percentage of low-birthweight births varies widely within Hispanic and Asian/Pacific Islander subgroups. Data for 1999 indicate that among Hispanics, women of Mexican origin had the lowest percentage of low-birthweight infants (5.9 percent) and Puerto Ricans the highest (9.3 percent). Among Asian/Pacific Islander subgroups, low birthweight was lowest for births to women of Chinese origin (5.2 percent) and highest for women of Filipino origin (8.3 percent).
- About 1.4 percent of infants were born with very low birthweight (less than 1,500 grams) in each year, 1996-99, up from 1.3 percent in each year 1989-95 and 1.2 percent in each year, 1981-88.
- One reason for the increase in low birthweight over the past several years is that the number of twin, triplet, and higher-order multiple births has increased.<sup>5,12,40,41</sup> Twins and other multiples are much more likely than singleton infants to be of low birthweight; 55 percent of twins and 94 percent of triplets, compared with 6 percent of singletons, were of low birthweight in 1998.<sup>12</sup>

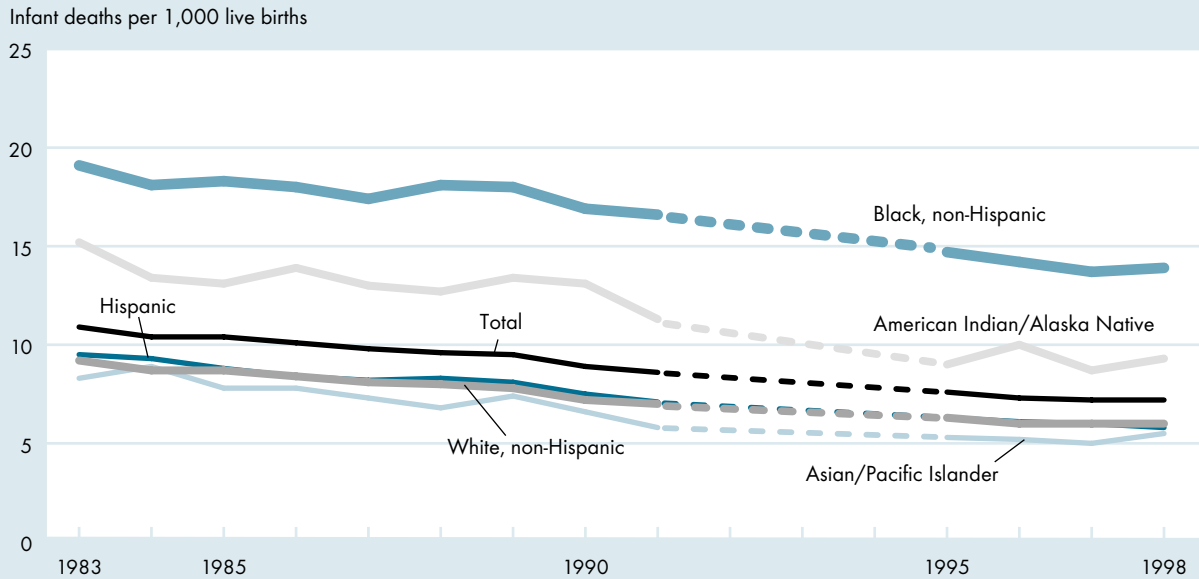
*Bullets contain references to data that can be found in Table HEALTH4 on page 90. Endnotes begin on page 58.*

## Infant Mortality

**I**nfant mortality is defined as the death of an infant before his or her first birthday. The infant mortality rate is an important measure of the well-being of infants, children, and pregnant women because it is associated with a variety of factors, such as maternal health, quality of access to medical care, socioeconomic conditions, and public health practices.<sup>42</sup> In the United States, about two-thirds of infant deaths occur in the first month after birth and are due mostly to health problems of the infant or the pregnancy, such as preterm delivery or birth defects. About one-third of infant deaths occur after the first month and may be influenced by social or environmental factors, such as exposure to cigarette smoke or access to health care.<sup>43</sup>

### Indicator HEALTH5

### Infant death rates by race and Hispanic origin, selected years 1983-98



NOTE: Data are available for 1983-91 and 1995-98. Infant deaths are deaths before the first birthday.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Linked File of Live Births and Infant Deaths.

- The 1998 infant mortality rate for the United States was 7.2 deaths per 1,000 live births, substantially below the 1983 rate of 10.9, but identical to the 1997 rate.
- While infant mortality rates continued to decrease for Hispanic infants in 1998, the rates increased for black, non-Hispanic, Asian/Pacific Islander and American Indian/Alaska Native infants.
- Infant mortality has dropped for all racial and ethnic groups over time, but substantial racial and ethnic disparities remain. Black, non-Hispanic infants have consistently had a higher infant mortality rate than white, non-Hispanic infants.<sup>44</sup> In 1998, the black, non-Hispanic infant mortality rate was 13.9 infant deaths per 1,000 live births and the American Indian/Alaska Native rate was 9.3, both significantly higher than the white, non-Hispanic rate of 6.0, the rate of 5.8 among Hispanic infants, or the rate of 5.5 among Asian/Pacific Islander infants.
- Infant mortality rates also vary within race and ethnic populations. For example, among Hispanics in the United States, the infant mortality rate ranged from 3.6 for infants of Cuban origin to a high of 7.8 for Puerto Ricans. Among Asians/Pacific Islanders, infant mortality rates ranged from 3.5 for infants of Japanese origin to 6.2 for Filipinos.

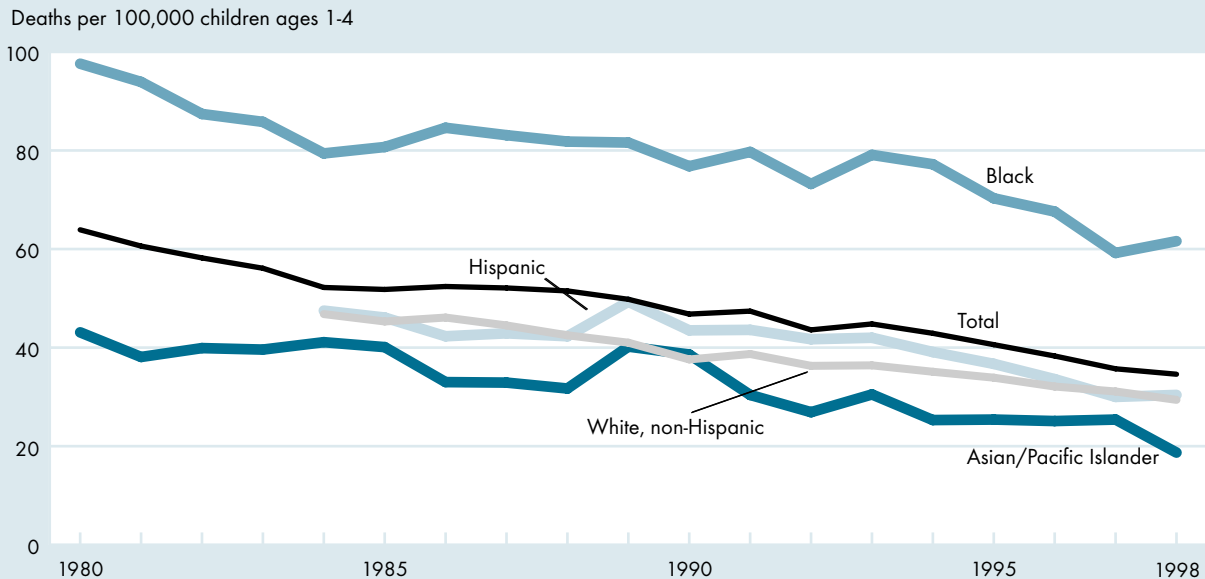
*Bullets contain references to data that can be found in Table HEALTH5 on page 91. Endnotes begin on page 58.*

## Child Mortality

**C**hild death rates are the most severe measure of ill health in children. These rates have generally declined over the past two decades. Deaths to children ages 1 to 4 are calculated separately from those for children ages 5 to 14 because causes and rates of death vary substantially by age.

### Indicator HEALTH6.A

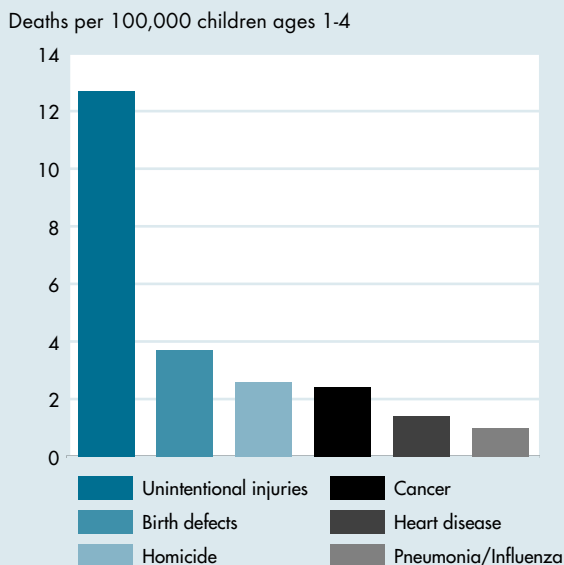
### Death rates among children ages 1 to 4 by race and Hispanic origin, 1980-98



NOTE: Total includes American Indians/Alaska Natives. Death rates for American Indians/Alaska Natives are not shown separately because the numbers of deaths were too small to calculate reliable rates.

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

### Death rates among children ages 1 to 4 by cause of death, 1998



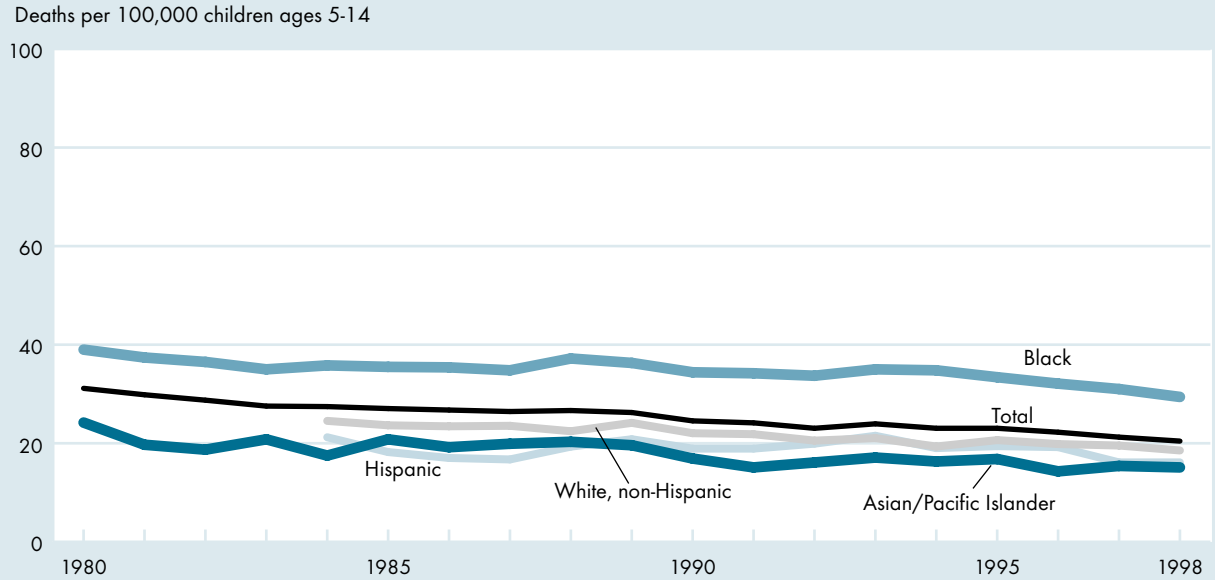
- In 1998, the death rate for children ages 1 to 4 was 35 per 100,000 children.
- Between 1980 and 1998, the death rate declined by almost half for children ages 1 to 4.
- Among children ages 1 to 4, black children had the highest death rate in 1998, at 62 per 100,000 children. Asian/Pacific Islander children had the lowest death rate, at 19 per 100,000.
- Among children ages 1 to 4, unintentional injuries were the leading cause of death, followed by birth defects. The death rate from unintentional injuries in 1998 was about half of what it was in 1980, having declined from about 26 to 13 per 100,000. Mortality from birth defects also declined by about half, from 8 deaths per 100,000 in 1980 to 4 in 1998.
- Most unintentional injury deaths among children result from motor vehicle traffic crashes. Use of child restraint systems, including safety seats, booster seats, and seat belts, can greatly reduce the number and severity of injuries to child occupants of motor vehicles. In 1998, 51 percent of child occupants ages 1 to 4 who died in crashes were unrestrained.<sup>45</sup>



**D**eath rates for children ages 5 to 14 are lower than for children under age 5.

**Indicator HEALTH6.B**

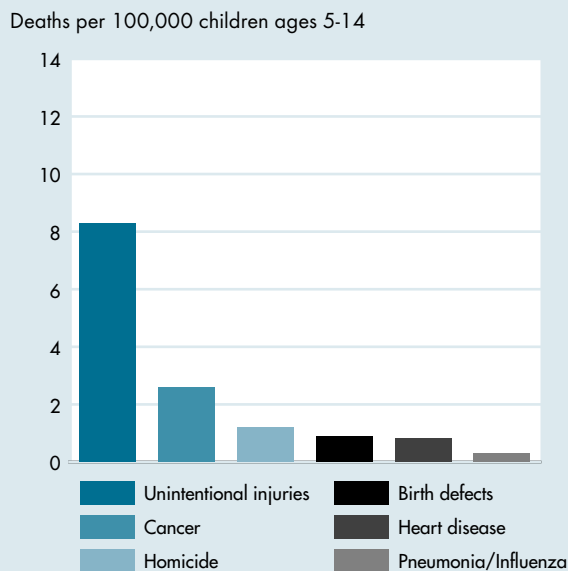
**Death rates among children ages 5 to 14 by race and Hispanic origin, 1980-98**



NOTE: Total includes American Indians/Alaska Natives. Death rates for American Indians/Alaska Natives are not shown separately because the numbers of deaths were too small to calculate reliable rates.

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

**Death rates among children ages 5 to 14 by cause of death, 1998**



- The death rate in 1998 for children ages 5 to 14 was 20 per 100,000 children.
- Between 1980 and 1998, the death rate declined by almost one-third, from 31 to 20 deaths per 100,000 children ages 5 to 14.
- Similar to mortality patterns for children under the age of 5, among children ages 5 to 14, black children had the highest death rates in 1998 at 29 deaths per 100,000, and Asians/Pacific Islanders had the lowest death rate at 15.
- Among children ages 5 to 14, unintentional injuries were the leading cause of death, followed by cancer, homicide, and birth defects.
- The majority of unintentional injury deaths among children ages 5 to 14 result from motor vehicle traffic crashes. Over 61 percent of children ages 5 to 14 who died in traffic crashes in 1998 were not wearing a seatbelt or other restraint.<sup>45</sup>

*Bullets contain references to data that can be found in Tables HEALTH6.A and HEALTH6.B on pages 92 - 93. Endnotes begin on page 58.*

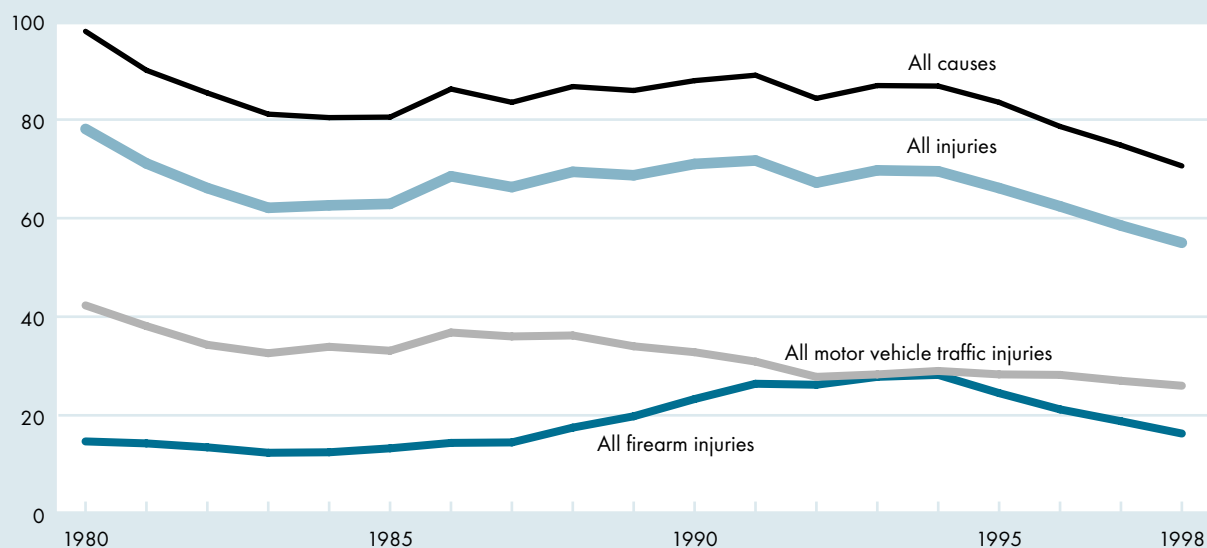
## Adolescent Mortality

**C**ompared with younger children, adolescents ages 15 to 19 have much higher mortality rates. Adolescents are much more likely to die from injuries sustained from motor vehicle traffic accidents or firearms.<sup>46</sup> This difference illustrates the importance of looking separately at mortality rates and causes of death among teenagers ages 15 to 19.

### Indicator HEALTH7.A

### Death rates among adolescents ages 15 to 19 by cause of death, 1980-98

Deaths per 100,000 adolescents ages 15-19



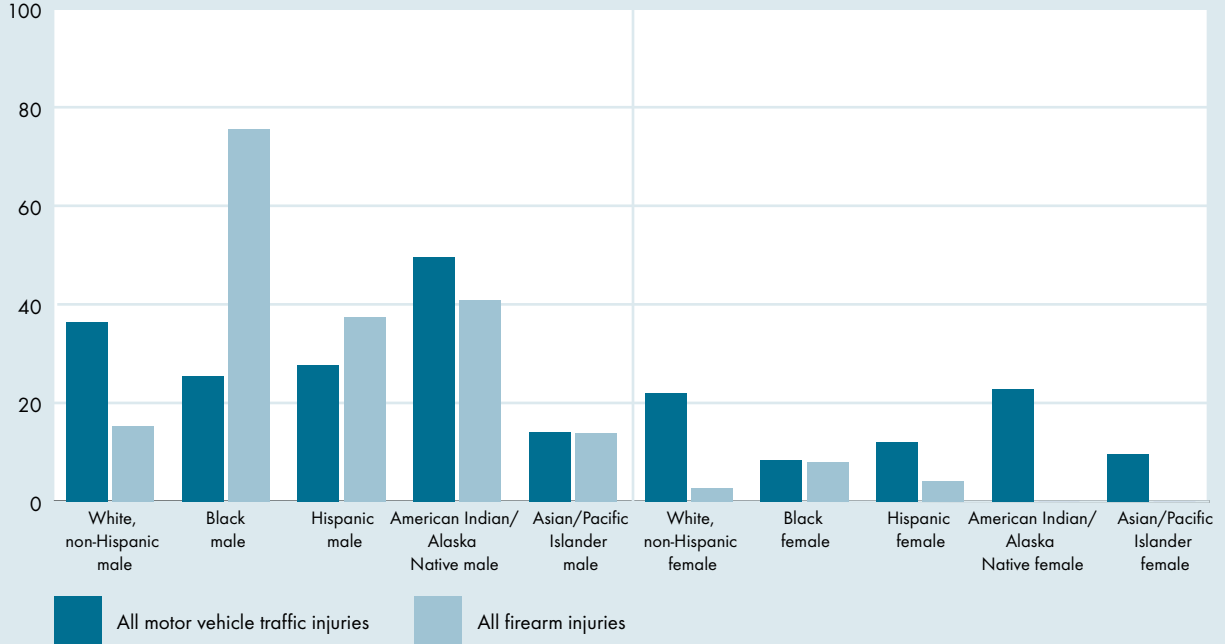
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.

- In 1998, the death rate for adolescents ages 15 to 19 was 71 deaths per 100,000. After increasing to 89 per 100,000 in 1991, the rate declined again and continues to be substantially lower than the rate in 1980. Injury, which includes homicide, suicide, and unintentional injuries, continues to account for over 3 out of 4 deaths among adolescents.
- Injuries from motor vehicles and firearms are the primary causes of death among youth ages 15 to 19. Motor vehicle traffic-related injuries accounted for 37 percent of deaths in this age group during 1998, while injuries from firearms accounted for 23 percent.
- Motor vehicle injuries were the leading cause of death among adolescents for each year between 1980 and 1998, but the motor vehicle death rate declined by one-third during the time period. Little change, however, has occurred since 1992.
- In 1980, motor vehicle traffic-related deaths among adolescents ages 15 to 19 occurred almost three times as often as firearm injuries (intentional and unintentional). Motor vehicle traffic-related and firearm death rates have followed different trends since 1980. From 1980 to 1985, both rates declined; in the following years, however, the motor vehicle traffic death rate continued to decline modestly while the firearm death rate increased markedly. During the years 1992-94, the two rates differed only slightly. However, since 1994, the firearm death rate has decreased by over one-third while the motor vehicle death rate has only decreased slightly.
- Most of the increase in firearm injury deaths between 1985 and 1992 resulted from an increase in homicides. The firearm homicide rate among youth ages 15 to 19 more than tripled from 5 to 18 per 100,000 between 1983 and 1993. At the same time, the firearm suicide rate rose from 5 to 7 per 100,000. From 1994 to 1998, the firearm homicide rate declined by nearly one-half and the firearm suicide rate declined by over one-fourth.

**Indicator HEALTH7.B**

**Injury death rates among adolescents ages 15 to 19 by gender, race, Hispanic origin, and type of injury, 1998**

Deaths per 100,000 adolescents ages 15-19



NOTE: There were too few firearm deaths to calculate a reliable rate for American Indian/Alaska Native females and Asian/Pacific Islander females.

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

- Motor vehicle and firearm injury deaths were both more common among male than among female adolescents. In 1998, the motor vehicle traffic death rate for males was twice the rate for females, and the firearm death rate among males was seven times that for females.
- Among adolescents in 1998, motor vehicle injuries were the most common cause of death among white, non-Hispanic, American Indian/Alaska Native, and Asian/Pacific Islander males and females; black females; and Hispanic females. Firearm injuries were the most common cause of death among black and Hispanic males. Black males were three times as likely to die from a firearm injury as from a motor vehicle traffic injury.
- Deaths from firearm suicides were more common than deaths from firearm homicides among white, non-Hispanic adolescents and American Indian/Alaska Native adolescents. Deaths from firearm homicides were more common than deaths from firearm suicides among black, Hispanic, and Asian/Pacific Islander adolescents.

- Motor vehicle and firearm mortality declined more for males than for females between 1994 and 1998.
- Deaths from firearm injuries among adolescents declined substantially between 1994 and 1998, particularly among black and Hispanic males. From 1994 to 1998, the firearm homicide rates for Hispanic and black adolescent males declined substantially, to 29 and 78 per 100,000, respectively.

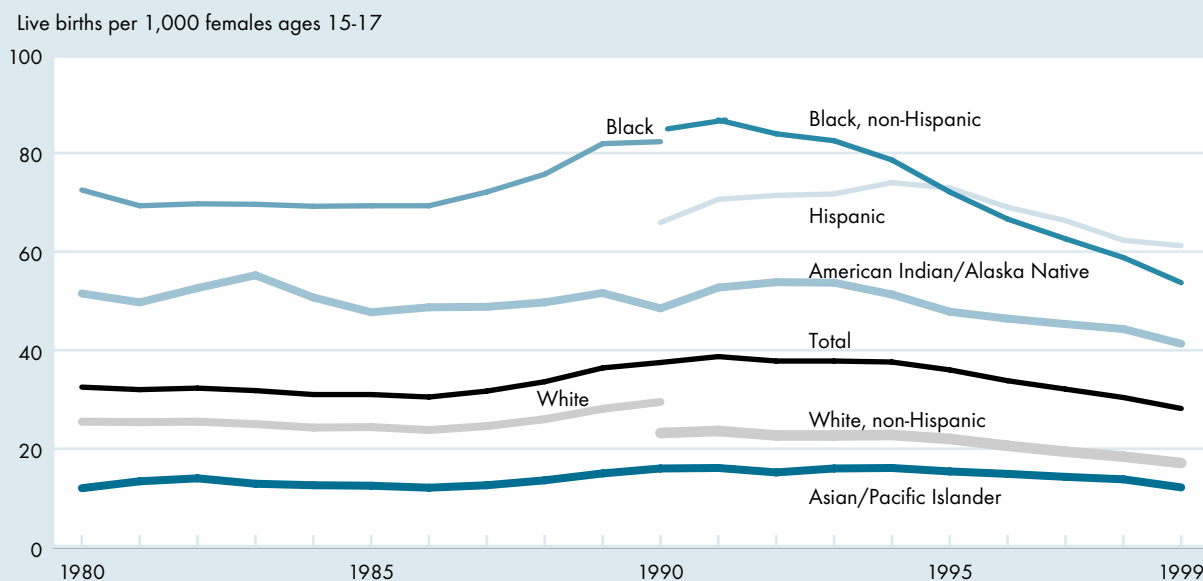
*Bullets contain references to data that can be found in Table HEALTH7 on pages 94-95. Endnotes begin on page 58.*

## Adolescent Births

**B**earing a child during adolescence is often associated with long-term difficulties for the mother and her child. These consequences are often attributable to poverty and the other adverse socioeconomic circumstances that frequently accompany early childbearing.<sup>47</sup> Compared with babies born to older mothers, babies born to adolescent mothers, particularly young adolescent mothers, are at higher risk of low birthweight and infant mortality.<sup>5,12,39</sup> They are more likely to grow up in homes that offer lower levels of emotional support and cognitive stimulation, and they are less likely to earn high school diplomas. For the mothers, giving birth during adolescence is associated with limited educational attainment, which in turn can reduce future employment prospects and earnings potential.<sup>48</sup> The birth rate of adolescents under age 18 is a measure of particular interest because the mothers are still of school age.

### Indicator HEALTH8

### Birth rates for females ages 15 to 17 by race and Hispanic origin, 1980-99



NOTE: Rates for 1980-89 are calculated for all whites and all blacks. Rates for 1980-89 are not shown for Hispanics, white, non-Hispanics or black, non-Hispanics because information on the Hispanic origin of the mother was not reported on the birth certificates of most states.

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

- In 1999, the adolescent birth rate was 29 per 1,000 young women ages 15 to 17. There were 163,588 births to these young women in 1999. The 1999 rate was a record low for the Nation.<sup>12</sup>
- The birth rate among teenagers ages 15 to 17 declined one-fourth, from 39 to 29 births per 1,000, between 1991 and 1999. This decline follows a one-fourth increase between 1986 and 1991. The 1999 rate was a record low for young teenagers.<sup>12</sup>
- There are substantial racial and ethnic disparities in birth rates among adolescents ages 15 to 17. In 1999 the birth rate for this age group was 12 per 1,000 for Asians/Pacific Islanders, 17 for white, non-Hispanics, 41 for American Indians/Alaska Natives, 54 for black, non-Hispanics, and 61 for Hispanics.
- The birth rate for black, non-Hispanic females ages 15 to 17 dropped by more than one-third between 1991 and 1999, completely reversing the increase from 1986 to 1991. The birth rate for white, non-Hispanic teens declined by more than one-fourth during 1991-99.

In contrast, the birth rate for Hispanics in this age group did not begin to decline until after 1994; the rate fell by more than one-sixth from 1994 to 1999.

- In 1999, 88 percent of births to females ages 15 to 17 were to unmarried mothers, compared with 62 percent in 1980.
- The steepest decline in birth rates for ages 15 to 17 in the mid 1990s has been for first births, which account for four-fifths of births to adolescents. Earlier in the decade, declines were much greater for second births to adolescents who had already had a first birth.<sup>12,49</sup>
- The pregnancy rate (the sum of births, abortions, and fetal losses per 1,000) declined by one-fifth for teenagers ages 15 to 17 during 1990-97, reaching a record low of 64 per 1,000 in 1997. Rates for births, abortions, and fetal losses declined for young teenagers in the 1990s.<sup>50,51</sup>

*Bullets contain references to data that can be found in Table HEALTH8 on page 96 and Table POP6.B on page 74. Endnotes begin on page 58.*

## Indicators Needed

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### Health

National indicators in several key dimensions of health are not yet available because of difficulty in definitions and measurement, particularly using survey research. The following health-related areas have been identified as priorities for indicator development by the Federal Interagency Forum on Child and Family Statistics:

- *Disability.* The Forum is working to develop an improved measure of disability among children that can be derived from regularly collected data. Disability in children may involve chronic health conditions or limitations in mobility and physical movement, sensory and communicative ability, activities of daily living, or cognitive and mental health functions. Many definitions of disability are currently in use by policy-makers and researchers, but there is little agreement regarding which components should be included, or how they are best measured. Parental or individual perceptions of limitations, the severity and impact of the limitation, and access to health care and services affect any estimate of disability among children. One measure of childhood disability was presented as the special feature in *America's Children, 1999*.
- *Mental health.* Efforts are currently underway to evaluate data from a mental health indicator that could be used in national surveys to estimate the number of children with mental, emotional, and behavioral problems. The National Institute of Mental Health and the Center for Mental Health Services in the Substance Abuse and Mental Health Services Administration are working with other Forum agencies and academic researchers to determine data needs on mental health for children as well as the best methods of obtaining the data.
- *Child abuse and neglect.* Also needed are regular, reliable estimates of the incidence of child abuse and neglect that are based on sample surveys rather than administrative records. One estimate of child abuse and neglect was presented as a special feature in *America's Children, 1997*. Since administrative data are based on cases reported to authorities, it is likely that these data underestimate the magnitude of the problem. Estimates based on sample survey data could potentially provide more accurate information; however, a number of issues still persist, including how to effectively elicit this sensitive information, how to identify the appropriate respondent for the questions, and whether there is a legal obligation for the surveyor to report abuse or neglect.

