

## Health Status

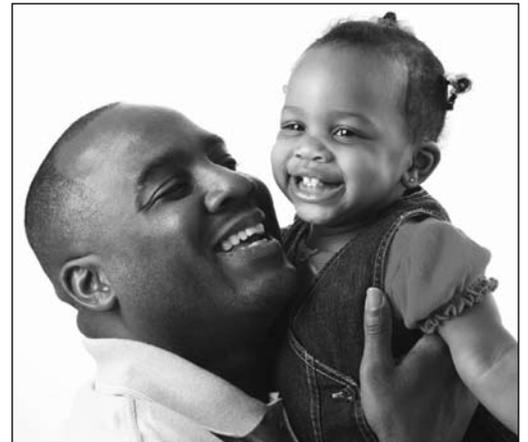
Monitoring the health status of infants, children, and adolescents allows health professionals, program planners, and policymakers to assess the impact of past and current health intervention and prevention programs and identify areas of need within the child population. Although indicators of child health and well-being are often assessed on an annual basis, some surveillance systems collect data at intervals, such as every 2, 3, or 5 years. Trends can be identified by examining and comparing data from one data collection period to the next whenever multiple years of data are available.

In the following section, mortality, disease, injury, and health behavior indicators are presented by age group. The health status indicators in this section are based on vital statistics and national surveys and surveillance systems. Population-based samples are designed to yield information that is representative of the maternal and child populations that are affected by, or in need of, specific health services or interventions.



## **Health Status - Infants**

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## BREASTFEEDING

Breastfeeding has been shown to promote the health and development of infants, as well as their immunity to disease, and may provide a number of maternal health benefits. For this reason, the American Academy of Pediatrics recommends exclusive breastfeeding—with no supplemental food or liquids—through the first 6 months of life, and continued supplemental breastfeeding through at least the first year of life.

Breastfeeding initiation rates in the United States have increased steadily since the early 1990s. In 2007, the parents of 75.5 percent of children aged newborn to 5 years reported that

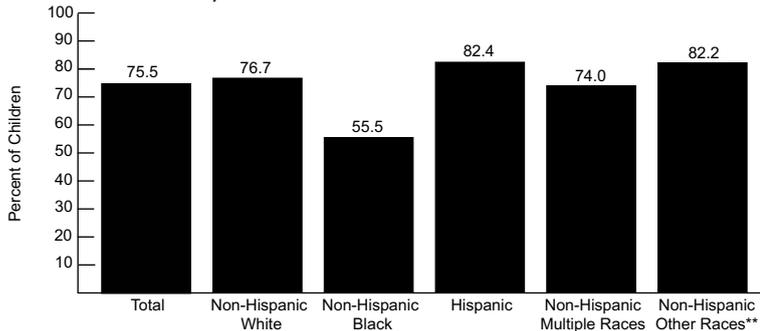
the child had ever been breastfed. Hispanic children were most likely to have been breastfed (82.4 percent), followed by children of other races, including Asian/Pacific Islanders and Native Americans/Alaska Natives (82.2 percent). Non-Hispanic Black children were the least likely to be breastfed (55.5 percent). Breastfeeding rates tend to increase with maternal age, higher educational achievement, and higher income.

Rates of exclusive breastfeeding are significantly lower than rates of breastfeeding initiation. In 2007, the parents of only 12.4 percent of children aged 6 months to 5 years reported that their child was exclusively breastfed for the first 6

months of life. The rate of exclusive breastfeeding varied by family income, with 10.6 percent of children with family incomes below 100 percent of the Federal Poverty Level (FPL) being exclusively breastfed through 6 months, compared to 14.7 percent of children with family incomes of 400 percent FPL or above. Exclusive breastfeeding rates have not shown the same improvement over time as have breastfeeding initiation rates, and as with breastfeeding initiation, exclusive breastfeeding varies by a number of demographic and socioeconomic factors, such as maternal age and education.

### Breastfeeding\* among Children Under Age 6, by Race/Ethnicity, 2007

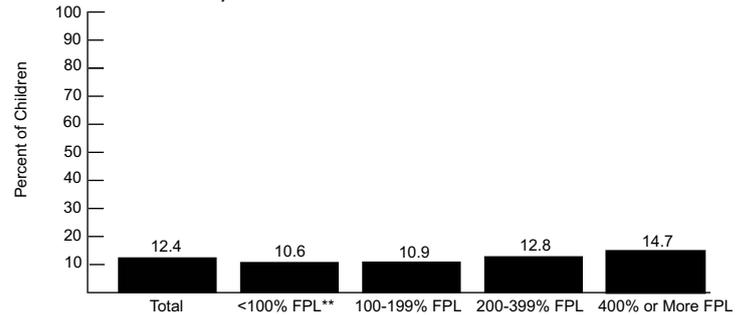
Source (I.8): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Ever breastfed. \*\*Includes Asian/Pacific Islanders, American Indian/Alaska Natives, and children of other races.

### Exclusive\* Breastfeeding among Children Aged 6 Months to 5 Years, by Income, 2007

Source (I.8): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Fed only breast milk for the first 6 months of life. \*\*The Federal Poverty Level, as determined by the U.S. Department of Health and Human Services, was \$20,650 for a family of four in 2007.

## LOW BIRTH WEIGHT

Low birth weight is one of the leading causes of neonatal mortality (death before 28 days of age). Low birth weight infants are more likely to experience long-term disability or to die during the first year of life than are infants of normal weight.

According to preliminary data, 8.2 percent of infants were born low birth weight (less than 2,500 grams, or 5 pounds 8 ounces) in 2007; this represents a slight decrease from the rate recorded in 2006 (8.3 percent), which was the sixth consecutive year of increase and the highest rate recorded in four decades.

The increase in multiple births, more than half of which are delivered at less than 2,500 grams, has strongly influenced the increase in low birth weight; however, rates of low birth weight are also on the rise for singleton births.

In 2007, the low birth weight rate was much higher among infants born to non-Hispanic Black women (13.8 percent) than among infants of other racial/ethnic groups. The next highest rate, which occurred among infants born to Asian/Pacific Islanders, was 8.1 percent, followed by a rate of 7.5 percent among American Indian/Alaska Natives. Low birth weight occurred among 7.2 percent of infants born to non-Hispanic White women, while infants of Hispanic women experienced the

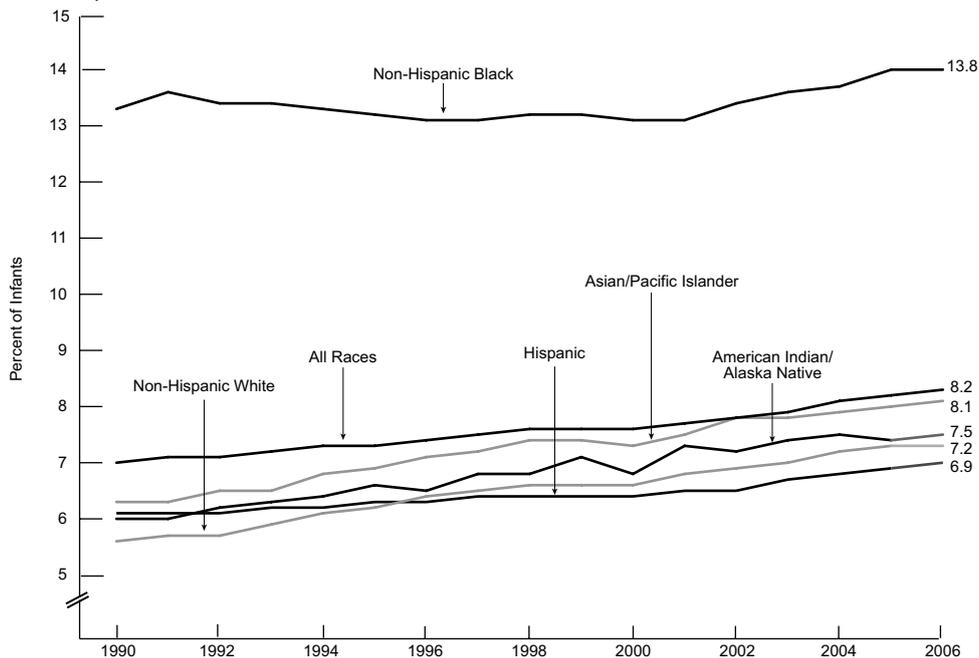
lowest rate (6.9 percent). The low birth weight rate remained steady or decreased for infants born to mothers of all racial/ethnic groups in 2007.

Low birth weight also varied by maternal age. In 2006 (the latest year for which data are available), the rate of low birth weight was highest

among babies born to women aged 40-54 years (20.3 percent), followed by babies born to women under 15 years of age (13.4 percent.) The lowest rates occurred among babies born to mothers aged 25-29 years and 30-34 years (7.5 and 7.6 percent, respectively; data not shown).

### Low Birth Weight Among Infants, by Maternal Race/Ethnicity, 1990–2007\*

Source (I.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Data for 2007 are preliminary.

## VERY LOW BIRTH WEIGHT

According to preliminary data, 1.5 percent of live births were among very low birth weight infants (less than 1,500 grams, or 3 pounds 4 ounces) in 2007. The proportion of very low birth weight infants has slowly climbed from just over one percent in 1980.

Infants born at such low birth weights are approximately 100 times more likely to die in the first year of life than are infants of normal birth weight (above 5 pounds 8 ounces). Very low birth weight infants who survive are at a significantly increased risk of severe problems, including physical and visual difficulties, developmental delays, and cognitive impairment, requiring increased levels of medical, educational, and parental care.

Infants born to non-Hispanic Black women are more than two and a half times more likely than infants born to mothers of other racial/ethnic groups to be born very low birth weight. Among infants born to non-Hispanic Black women, 3.2 percent were very low birth weight in 2006, compared to 1.1 percent of infants born to Asian/Pacific Islander women, 1.2 percent of infants born to non-Hispanic Whites and Hispanics, and 1.3 percent of infants born to American Indian/Alaska Native women. This difference is a major contributor to the disparity in infant mor-

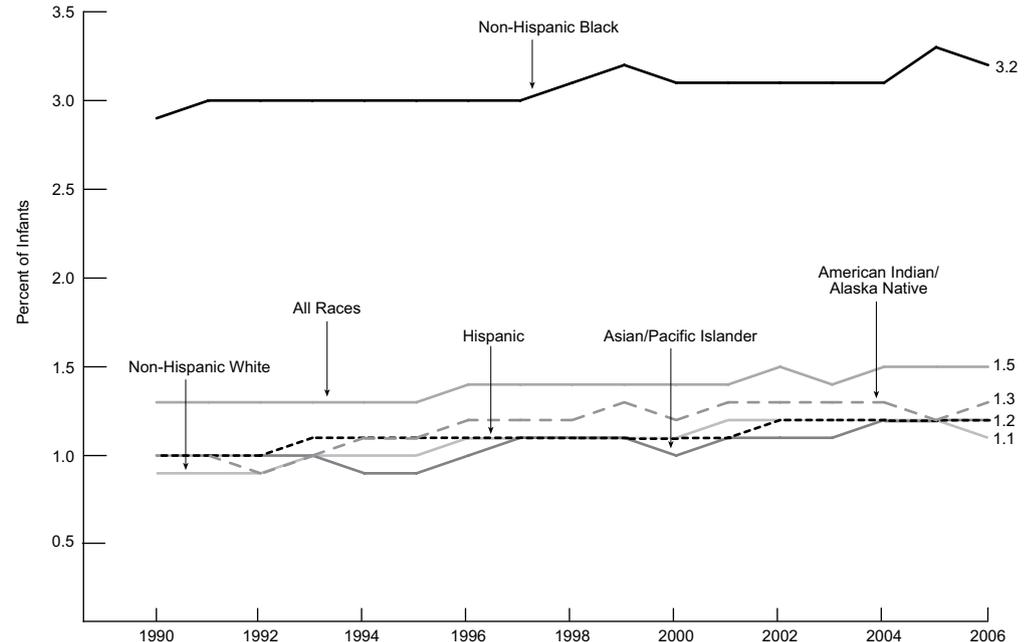
tality rates between non-Hispanic Black infants and infants of other racial/ethnic groups.

In 2006 (the latest year for which data are available), the rate of very low birth weight was highest among babies born to mothers aged 45-

54 years (3.5 percent). Mothers under 15 years of age also had high rates of very low birth weight (3.1 percent.) The rate was lowest among mothers aged 25-29 years (1.3 percent; data not shown).

### Very Low Birth Weight Among Infants, by Race/Ethnicity, 1990-2007\*

Source (I.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Data for 2007 are preliminary.

## MATERNAL MORTALITY

The rate of maternal mortality in the United States declined dramatically over the last century; however, an increase in the rate has become evident in the past several decades. In 2006, the maternal mortality rate was 13.3 deaths per 100,000 live births, compared to a low of 6.6 in 1987. Some of this increase may be due to changes in the coding and classification of maternal deaths.

In 2006, there were a total of 569 maternal deaths (those resulting from complications during pregnancy, childbirth, or direct or indirect

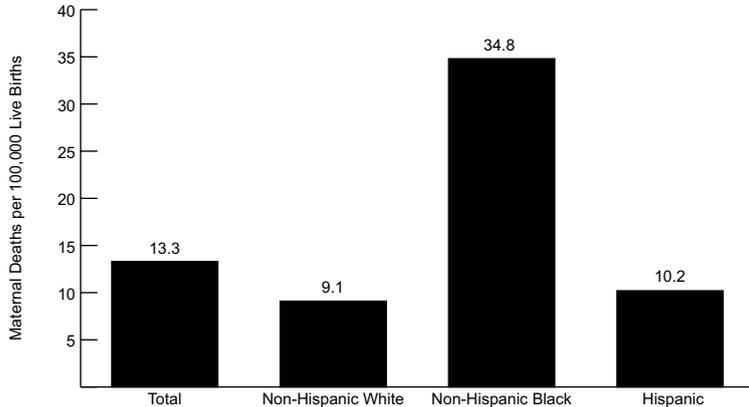
obstetric causes up to 42 days after delivery or termination of pregnancy). The maternal mortality rate among non-Hispanic Black women was more than 3 times the rate among non-Hispanic White women (34.8 versus 9.1 per 100,000).

The risk of maternal death increases with age, regardless of race or ethnicity. In 2006, the maternal mortality rate of women aged 35 years and over (29.3 per 100,000) was nearly 3 times the rate of women aged 20-24 years (10.2 per 100,000) and nearly 6 times the rate of women under 20 years of age (5.0 per 100,000).

Causes of maternal death are classified as direct, indirect, or unspecified. Some of the most common direct causes include complications related to the puerperium, or period immediately after delivery (2.6 per 100,000), eclampsia and preclampsia (1.3 per 100,000), and hemorrhage (0.9 per 100,000). Indirect causes occurred at a rate of 3.0 per 100,000 in 2006, and comprised deaths from pre-existing conditions complicated by pregnancy.

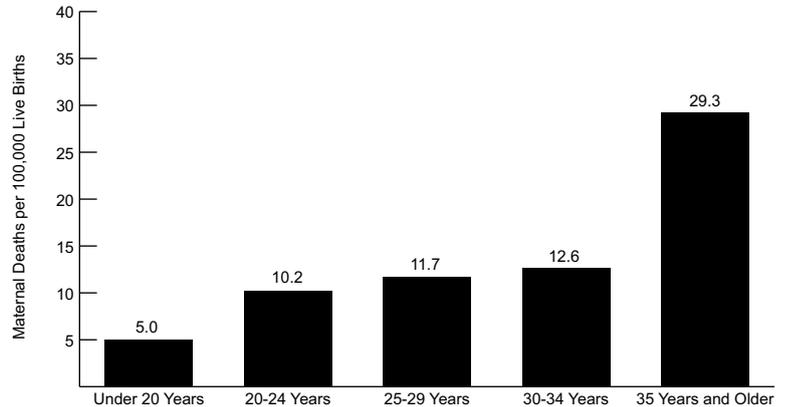
### Maternal Mortality Rates, by Race/Ethnicity, 2006

Source (II.2): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



### Maternal Mortality Rates, by Age, 2006

Source (II.1): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



## NEONATAL AND POSTNEONATAL MORTALITY

**Neonatal.** In 2006, 18,989 infants died before reaching 28 days of age, representing a neonatal mortality rate of 4.5 deaths per 1,000 live births. This rate remains unchanged from the previous year.

Neonatal mortality is generally related to short gestation and low birth weight, congenital malformations, and conditions originating in the perinatal period, such as birth trauma or infection.

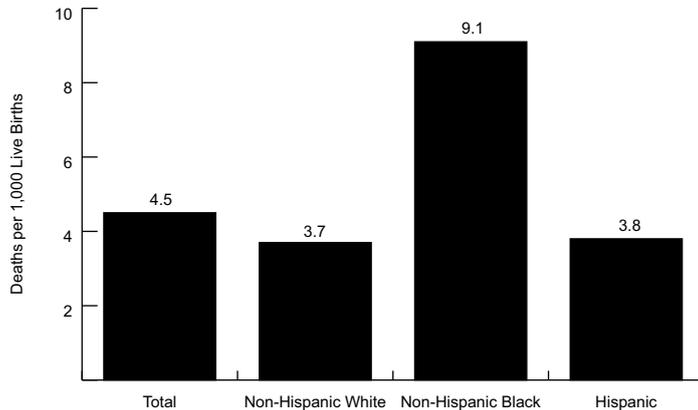
Neonatal mortality rates vary by race and ethnicity. In 2006, the neonatal mortality rate among non-Hispanic Black infants was 9.1 per 1,000 live births, more than twice the rate among non-Hispanic White and Hispanic infants (3.7 and 3.8 per 1,000, respectively).

**Postneonatal.** In 2006, 9,538 infants died between the ages of 28 days and 1 year, representing a postneonatal mortality rate of 2.2 deaths per 1,000 live births. This rate is slightly lower than the rate of 2.3 deaths per 1,000 live births reported in 2005.

Postneonatal mortality is generally related to Sudden Infant Death Syndrome (SIDS), congenital malformations, and unintentional injuries. Postneonatal mortality varies by race and ethnicity. In 2006, the highest rate of postneonatal mortality was reported among non-Hispanic Black infants (4.7 per 1,000). Non-Hispanic White and Hispanic infants had rates of 1.9 and 1.7 per 1,000, respectively.

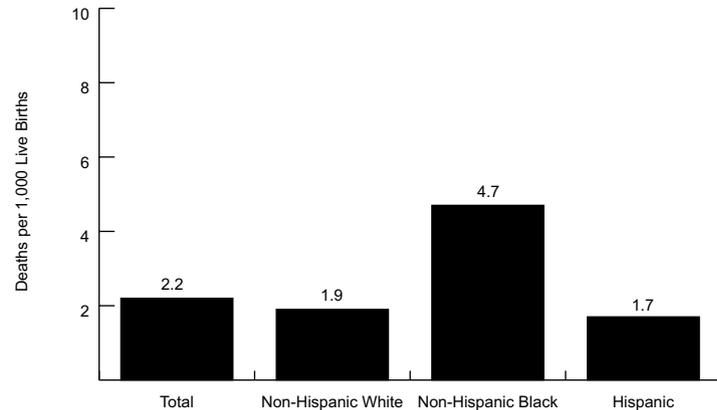
### Neonatal Mortality Rates, by Maternal Race/Ethnicity, 2006

Source (II.1): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



### Postneonatal Mortality Rates, by Maternal Race/Ethnicity, 2006

Source (II.1): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



## INFANT MORTALITY

In 2006, 28,527 infants died before their first birthday, representing an infant mortality rate of 6.7 deaths per 1,000 live births. The leading cause of infant mortality was congenital anomalies, which accounted for 20 percent of deaths, followed by disorders related to short gestation, which accounted for another 17 percent of deaths.

The infant mortality rate began a substantial decline in the late 19th and early 20th century. Some factors in this early decline included economic growth, improved nutrition, new sanitary measures, and advances in knowledge about infant care. More recent advances in knowledge that contributed to a continued decline included the approval of synthetic surfactants and the recommendation that infants be placed on their backs to sleep. However, the decades-long decline in infant mortality began to level off in 2000, and the rate has remained relatively steady in the years since.

In 2006, the mortality rate among non-Hispanic Black infants was 13.8 deaths per 1,000 live births. This is two and one-half times the rate among non-Hispanic White and Hispanic infants (5.6 and 5.5 per 1,000, respectively). Although the infant mortality rates among both non-His-

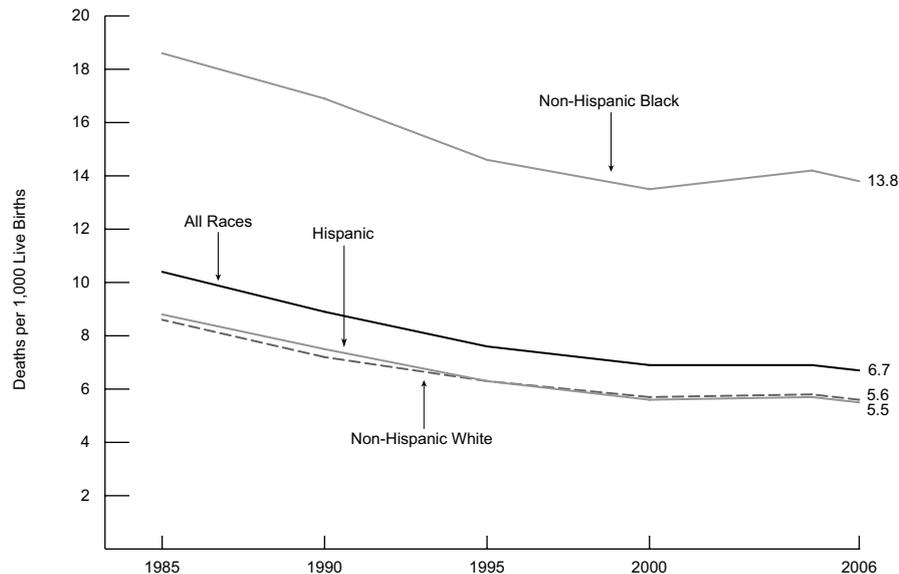
panic Whites and non-Hispanic Blacks have declined over the last century, the disparity between the two races remains largely unchanged.

The Maternal and Child Health Block Grant and MCHB's Healthy Start program provide

health and support services to pregnant women and infants with the goal of improving children's health outcomes and reducing infant and child mortality.

### Infant Mortality Rates,\* by Maternal Race/Ethnicity, 1985–2006

Source (II.1): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Under 1 year of age.

## INTERNATIONAL INFANT MORTALITY

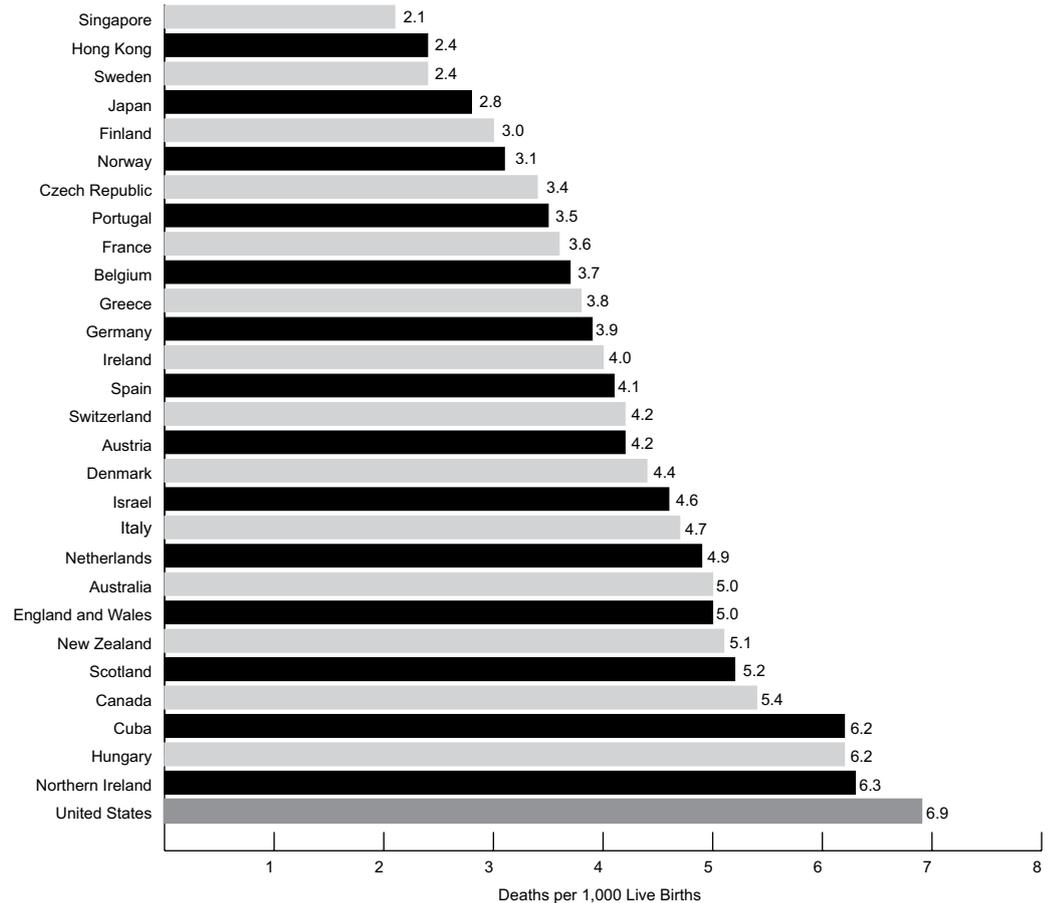
In 2005, the United States infant mortality rate ranked below that of many other industrialized nations, with a rate of 6.9 deaths per 1,000 live births. This represents a slight increase from the rate of 6.8 per 1,000 in 2004, but is still considerably less than the rate of 26.0 per 1,000 reported in 1960.

Differences in infant mortality rates among industrialized nations may reflect disparities in the health status of women before and during pregnancy, as well as the quality and accessibility of primary care for pregnant women and infants. However, some of these differences may be due, in part, to the international variation in the definition, reporting, and measurement of infant mortality.

In 2005, the U.S. infant mortality rate was more than twice that of seven other industrialized countries, including Singapore, Hong Kong, Sweden, Japan, Finland, Norway, and the Czech Republic. Singapore had the lowest rate (2.1 per 1,000), followed by Hong Kong and Sweden (2.4 per 1,000).

### International Infant Mortality Rates, Selected Countries, 2005

Source (II.3): Centers for Disease Control and Prevention, National Center for Health Statistics







## **Health Status - Children**



## HEALTH STATUS

The general state of a child's health as perceived by their parents is a useful measure of the child's overall health and ability to function. The 2007 National Survey of Children's Health asked parents to rate their child's health status as excellent, very good, good, fair, or poor. Overall, the parents of 84.4 percent of children under 18 years of age reported that their child's health was excellent or very good. This varied, however, by the child's race and ethnicity.

Non-Hispanic White children and non-Hispanic children of multiple races were most likely

to be reported in excellent or very good health (91.0 and 87.9 percent, respectively), followed by non-Hispanic children of other races (85.3 percent). Hispanic children were least likely to be reported in excellent or very good health (68.4 percent). Slightly more than 80 percent of non-Hispanic Black children were reported in excellent or very good health.

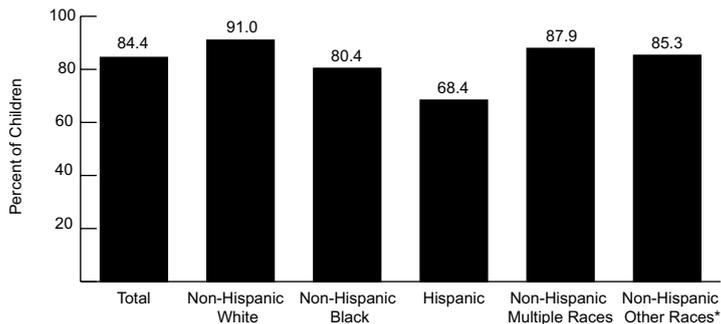
Parents were also asked to rate the condition of their child's teeth as excellent, very good, good, fair, or poor. Overall, the parents of 70.7 percent of children aged 1-17 reported that their child's teeth were in excellent or very good condition

(the question was not asked of children under 1 year of age).

The child's oral health status also varied with race and ethnicity. More than 80 percent of non-Hispanic White children and 76.9 percent of non-Hispanic children of multiple races were reported to have excellent or very good oral health, compared to 62.5 percent of non-Hispanic Black children and 49.3 percent of Hispanic children.

### Children Under Age 18 in Excellent or Very Good Health, by Race/Ethnicity, 2007

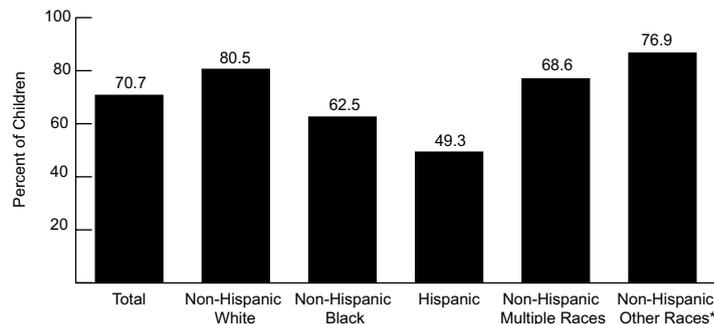
Source (I.8): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Includes Asian/Pacific Islander, American Indian/Alaska Natives, and children of other races.

### Children Under Age 18 in Excellent or Very Good Oral Health, by Race/Ethnicity, 2007

Source (I.8): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Includes Asian/Pacific Islander, American Indian/Alaska Natives, and children of other races.

## VACCINE-PREVENTABLE DISEASES

The number of reported cases of vaccine-preventable diseases has generally decreased over the past several decades. In 2006, there were no reported cases of diphtheria or polio in the United States population, and no cases of tetanus among children under 5 years of age. Among children in this age group, there were also no reported cases of acquired rubella and only one case of congenital rubella.

From 2005 to 2006, the number of reported cases of hepatitis A and pertussis decreased among children under 5 years of age. The overall incidence of hepatitis A began dropping dramatically once routine vaccination for children living in high-risk areas was recommended beginning in 1996, and in October of 2005, the Centers for Disease Control and Prevention (CDC) instituted the recommendation that all children be immunized for hepatitis A starting at 1 year of age. The latter recommendation was made because two-thirds of cases were occurring in States where the vaccine was not currently recommended for children. With regard to pertussis, the number of cases among young children decreased by nearly 50 percent over the previous year, although the CDC reports that this is likely due to the cyclical

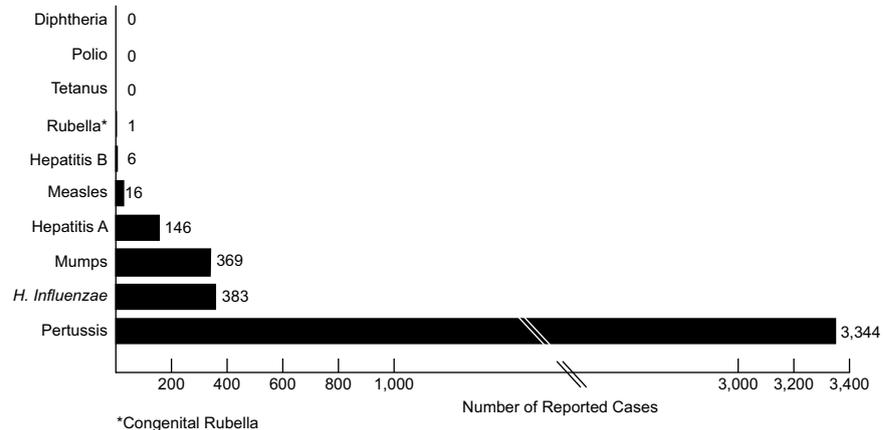
nature of the disease and not an increase in immunization. The highest reported rate occurred among infants under 6 months of age, a population that is too young to be fully vaccinated.

While the number of reported cases of several vaccine-preventable diseases decreased between 2005 and 2006, the number of reported cases of measles and *H. Influenzae* increased slightly. The number of reported cases of mumps increased by a factor of 17 due to an outbreak, which was largely focused in six contiguous Midwestern

States. In response, the CDC updated criteria for mumps immunity and vaccination recommendations. Reported cases of hepatitis B remained virtually unchanged.

### Reported Cases of Selected Vaccine-Preventable Diseases Among Children Under Age 5, 2006

Source (II.4): Centers for Disease Control and Prevention, National Notifiable Diseases Surveillance System



## PEDIATRIC AIDS

Acquired immunodeficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV), which damages or kills the cells that are responsible for fighting infection. AIDS is diagnosed when HIV has weakened the immune system enough that the body has a difficult time fighting infections. Through 2007, an estimated 9,209 AIDS cases in children younger than 13 had ever been reported in the United States. Pediatric AIDS cases represent less than one percent of all AIDS cases ever reported.

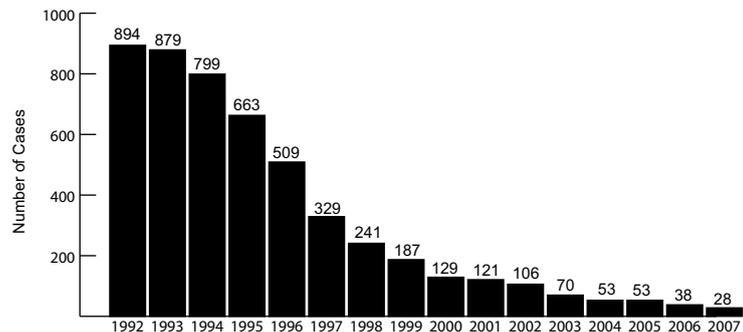
In 2007, an estimated 28 new AIDS cases were diagnosed among children under age 13. The number of new pediatric AIDS cases has declined substantially since 1992, when an estimated 894 new cases were reported. A major factor in this decline is the increasing use of antiretroviral therapy before, during, and after pregnancy to reduce perinatal transmission of HIV. In addition, the Centers for Disease Control and Prevention released new and updated materials in 2004 to further promote universal prenatal HIV testing. It is expected that the perinatal transmission rate

will continue to decline with increased use of treatments and obstetric procedures.

Racial and ethnic minorities are disproportionately represented among pediatric AIDS cases. Non-Hispanic Black children account for over 60 percent of all pediatric AIDS cases ever reported, but compose only about 15 percent of the total U.S. population in this age group.

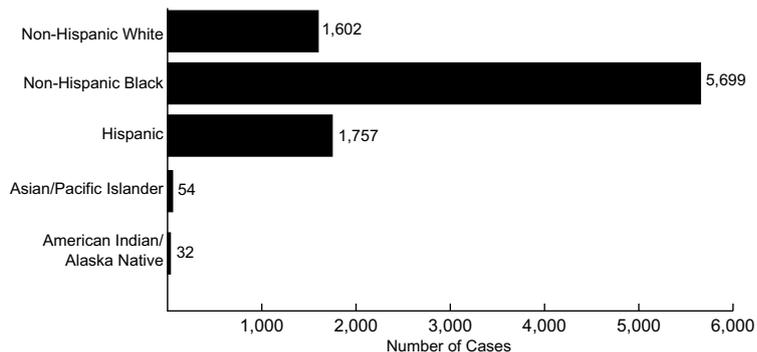
### Estimated Numbers of AIDS Cases in Children Under Age 13, by Year of Diagnosis, 1992–2007

Source (II.5): Centers for Disease Control and Prevention, HIV/AIDS Surveillance System



### Estimated Numbers of AIDS Cases Ever Reported in Children Under Age 13, by Race/Ethnicity, Through 2007\*

Source (II.5): Centers for Disease Control and Prevention, HIV/AIDS Surveillance System



\*Includes children with a diagnosis of AIDS from the beginning of the epidemic through 2007, but does not include 58 children of unknown or multiple races.

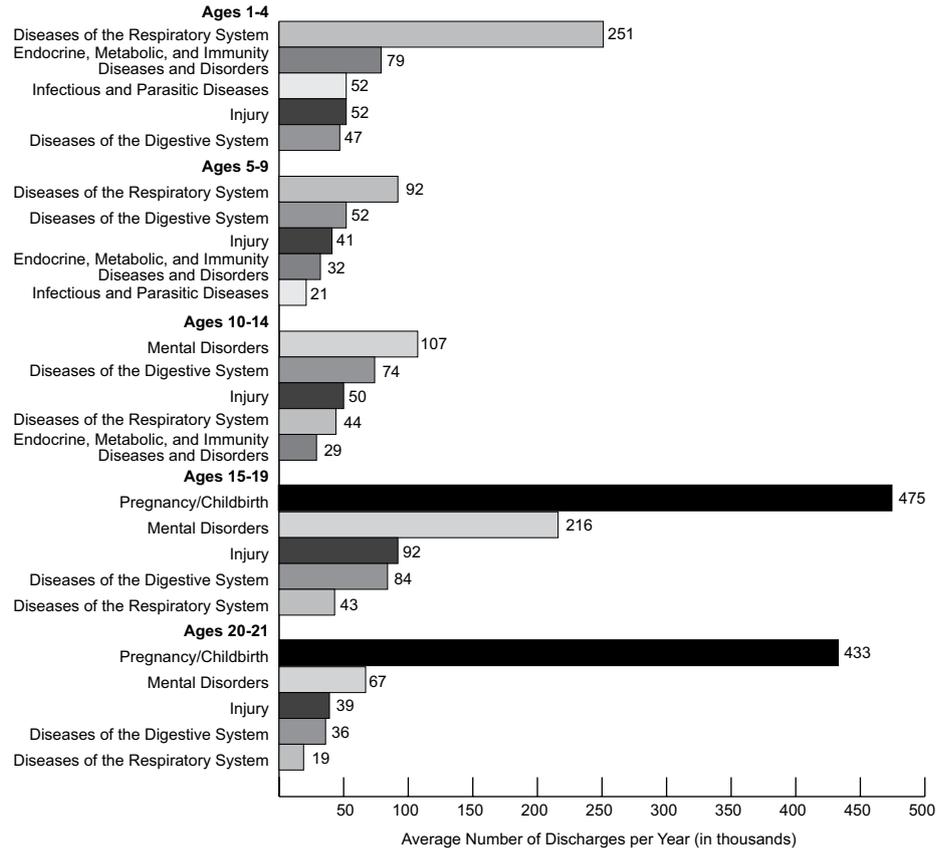
## HOSPITALIZATION

In 2006, there were nearly 3.5 million hospital discharges among youth aged 1–21 years, equaling 4.0 hospital discharges per 100 children. Hospital discharge rates generally decrease with age until early adolescence, and then begin to increase.

While injuries are the leading cause of death among children and adolescents older than 1 year of age, they were not the most common cause of hospitalization for any age group of children. In 2005-2006, diseases of the respiratory system were the most common cause of hospitalization for children aged 1-4 and 5-9 years, accounting for 39 and 24 percent of discharges, respectively. Mental disorders were the most common cause of hospitalization among children aged 10-14 years, accounting for 24 percent of discharges. Among adolescents and young adults aged 15-19 and 20-21 years, pregnancy and childbirth was the most common cause of hospitalization, accounting for 42 and 64 percent of discharges, respectively.

### Major Causes of Hospitalization, by Age, 2005-2006

Source (II.6): Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Discharge Survey



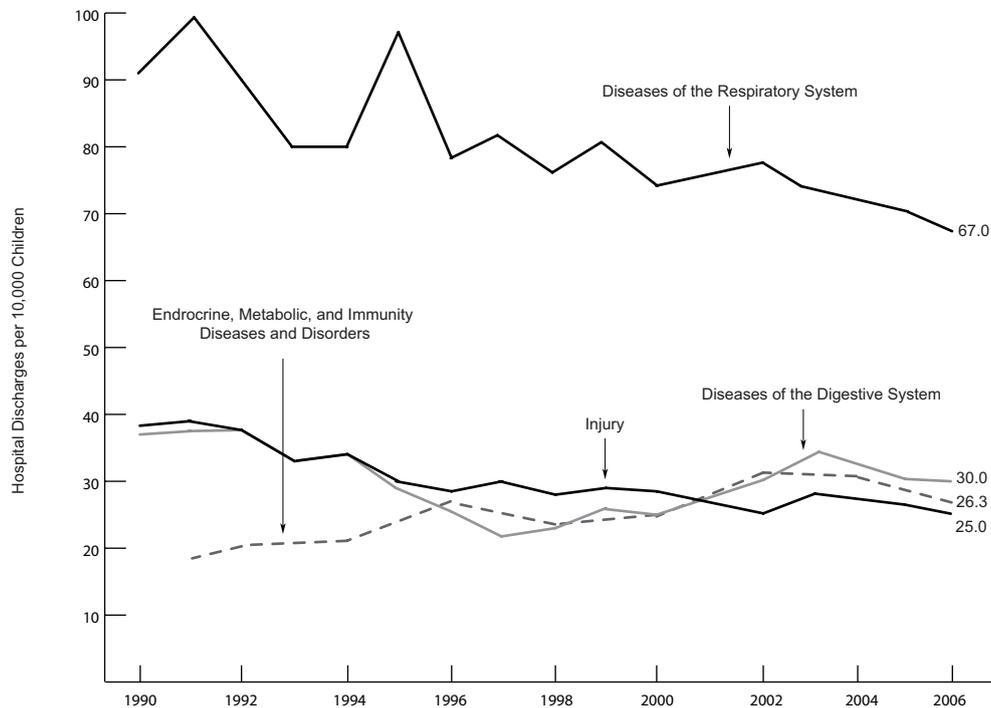
## HOSPITALIZATION TRENDS

Four types of health problems—respiratory diseases, digestive diseases, injuries, and endrocrine, metabolic, and immunity diseases and disorders—accounted for 51 percent of hospital discharges among children aged 1-14 years in 2006. Since 1985, overall hospital discharge rates for children in this age group have declined by 38 percent, which is reflected in decreases in discharge rates for each of those three categories.

Between 1990 and 2006, hospital discharge rates for diseases of the respiratory system declined 26.4 percent for children aged 1-14 years (from 91 per 10,000 to a low of 67 per 10,000). During this period, the rate of discharges due to injury also declined, from 38 to 25 per 10,000, or 34.2 percent. Similarly, the hospital discharge rate among children for diseases of the digestive system dropped from 37 to 30 per 10,000, or 19.0 percent. The rate of discharges due to endrocrine, metabolic, and immunity diseases and disorders, however, increased 36.8 percent, from 19 to 26 per 10,000. This category of diseases and conditions includes thyroid gland disorders, diabetes, nutritional deficiencies, and overweight and obesity.

### Hospitalization Rates Among Children Aged 1–14, by Selected Diagnosis, 1990–2006

Source (II.6): Centers for Disease Control and Prevention, National Center for Health Statistics, National Hospital Discharge Survey



## ABUSE AND NEGLECT

State child protective services (CPS) agencies received approximately 3.3 million referrals, involving an estimated 6.0 million children, alleging abuse or neglect in 2006. More than half of these reports were made by community professionals, such as teachers and other educational personnel, police officers, medical personnel, and daycare providers.

Investigations determined that an estimated 905,000 children were victims of abuse or neglect in 2006, equaling a victimization rate of 12.1 per 1,000 children in the population. Neglect was the

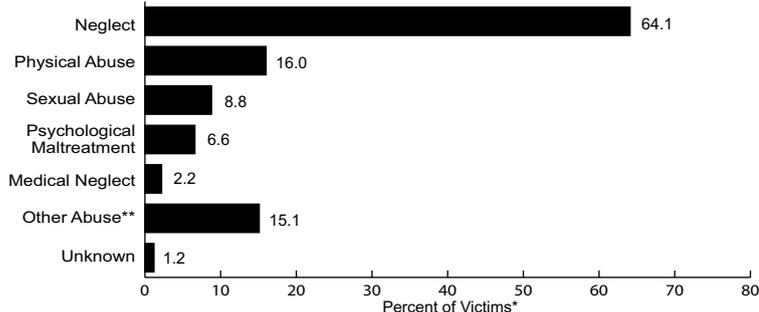
most common type of maltreatment (experienced by 64.1 percent of victims), followed by physical abuse (16.0 percent). Other types of abuse included sexual abuse, psychological maltreatment, medical neglect, and categories of abuse based on specific State laws and policies. Some children suffered multiple types of maltreatment.

Victimization rates were highest among young children. In 2006, the rate of victimization among children under 1 year of age was 24.4 per 1,000 children of the same age; the rate declined steadily as age increased (data not shown). Younger children were more likely than older children

to be victims of neglect, while older children were more likely to be physically or sexually abused. Almost 80 percent of perpetrators of abuse or neglect were parents of the victim. Remaining types of perpetrators included other relatives (6.7 percent), unmarried partners of parents (3.8 percent), and professionals such as daycare workers and residential facility staff (0.9 percent). Foster parents accounted for 0.4 percent of perpetrators, while friends and neighbors accounted for 0.5 percent.

### Abuse and Neglect Among Children Under Age 18, by Type of Maltreatment, 2006

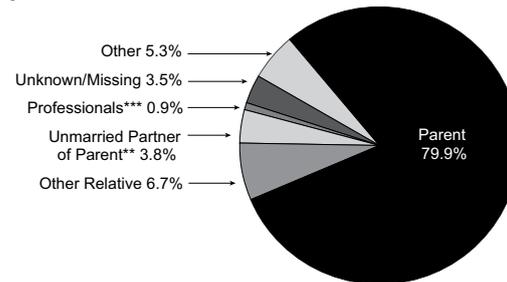
Source (II.7): Administration for Children and Families, National Child Abuse and Neglect Data System



\*Percentages equal more than 100 because some children were victims of more than one type of abuse or neglect. \*\*Includes abandonment, threats of harm, and congenital drug addiction.

### Perpetrators of Child Abuse and Neglect, by Relationship to Victim, 2006\*

Source (II.7): Administration for Children and Families, National Child Abuse and Neglect Data System



\*Based on 47 states reporting. \*\*Defined as someone who has a relationship with the parent and lives in the household with the parent and maltreated child. \*\*\*Includes residential facility staff, child daycare providers, and other professionals.

## CHILD MORTALITY

In 2006, 10,780 children between the ages of 1 and 14 years died of various causes; this was nearly 600 fewer than the previous year. The overall mortality rate among 1- to 4-year-olds was 28.4 per 100,000 children in that age group, and the rate among 5- to 14-year-old children was 15.2 per 100,000. Each of these rates is approximately one percentage point lower than the previous year.

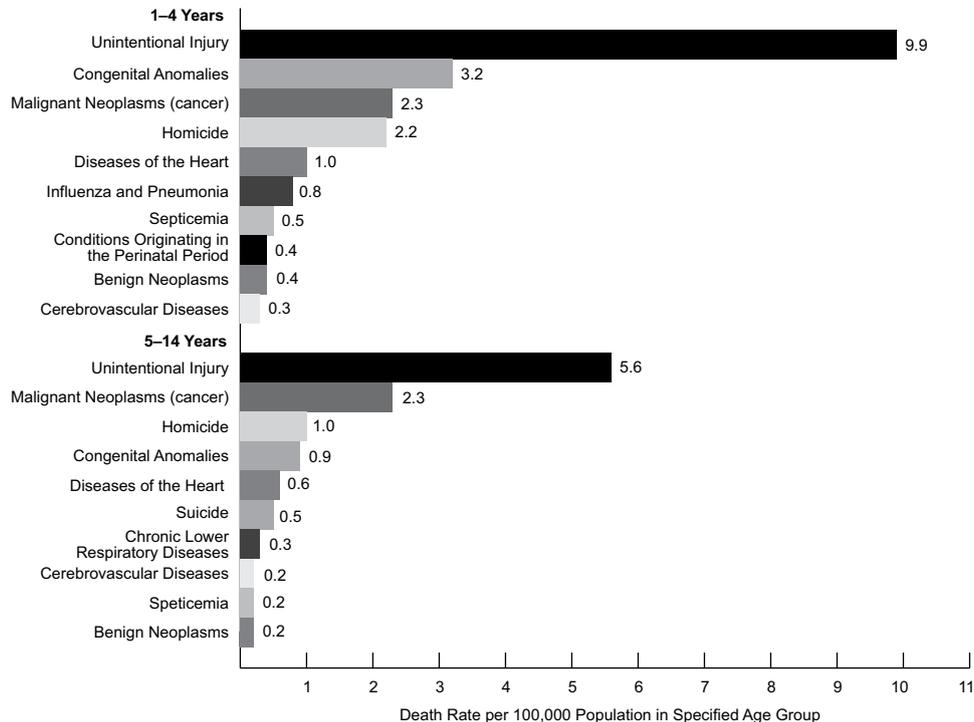
Unintentional injury continued to be the leading cause of death among both 1- to 4-year-olds and 5- to 14-year-olds, accounting for 35 percent and 37 percent of all deaths, respectively. Among the younger group, the next leading cause of death was congenital anomalies (birth defects), followed by malignant neoplasms (cancer), homicide, and diseases of the heart. Among the older group, the second leading cause of death was malignant neoplasms, followed by homicide and congenital anomalies.

Mortality rates were higher among males than females for both the 1- to 4-year-old and 5- to 14-year-old age groups (30.5 versus 26.3 and 17.6 versus 12.8 per 100,000, respectively, in 2006; data not shown). For both age groups, non-Hispanic Black children had the highest mortality rates (44.3 per 100,000 for 1- to 4-year-olds and 21.9 for 5- to 14-year-olds). Non-Hispanic

White and Hispanic children had much lower mortality rates. Among Hispanics, rates were 26.4 per 100,000 for 1- to 4-year olds and 14.2 per 100,000 for 5- to 14-year-olds. Among non-Hispanic Whites, rates were 25.0 and 14.0 per 100,000, respectively (data not shown).

### Leading Causes of Death Among Children Aged 1–14, 2006

Source (II.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



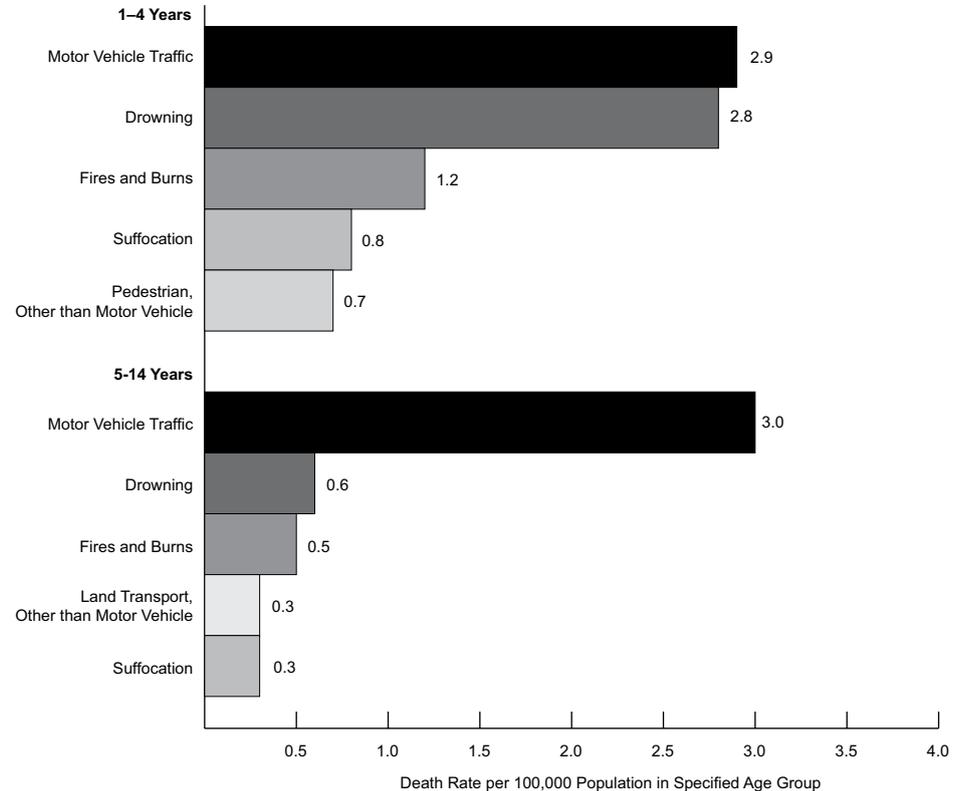
## CHILD MORTALITY DUE TO INJURY

In 2006, unintentional injuries were the cause of death for 1,610 children aged 1-4 years and 2,258 children aged 5-14 years. Motor vehicle traffic, drowning, and fires and burns were the most common causes of unintentional injury death among children in both age groups. Unintentional injury due to motor vehicle traffic caused 2.9 and 3.0 deaths per 100,000 children aged 1-4 and 5-14 years, respectively.

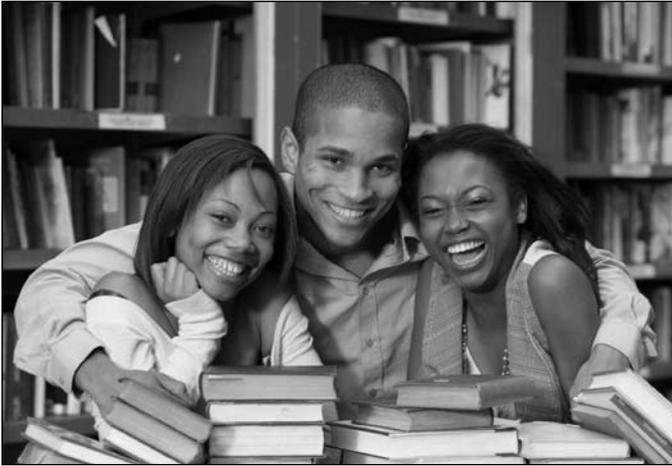
In addition, 366 children aged 1-4 years were victims of homicide in 2006, while 609 children aged 5-14 years were victims of homicide or suicide (data not shown).

### Deaths Due to Unintentional Injury Among Children Aged 1-14, 2006

Source (II.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System







## **Health Status - Adolescents**

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## ADOLESCENT CHILDBEARING

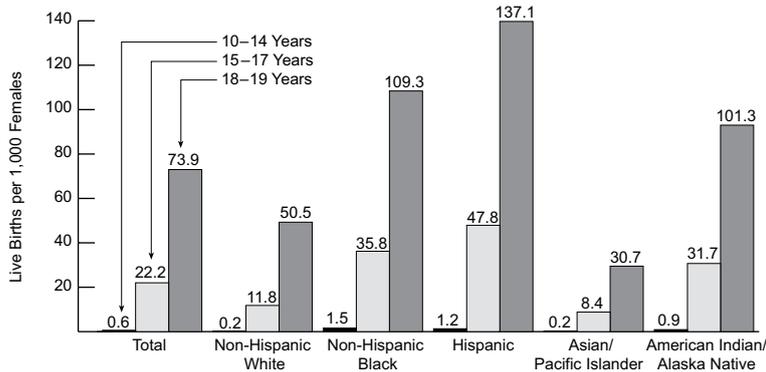
According to preliminary data, the birth rate among adolescents aged 15-19 years increased to 42.5 births per 1,000 females in 2007, from 41.9 per 1,000 the previous year. This was the first increase since the most recent peak in 1991 (61.8 births per 1,000), but still represents an overall decrease of 31 percent since that year. The birth rate among adolescents aged 10-14 years decreased to 0.6 per 1,000, which represents a decline of more than 50 percent since 1991. Teenage birth rates were highest among older adolescents, aged 18-19 years, at 73.9 per 1,000.

Teenage birth rates have historically varied considerably by race/ethnicity. Among adolescents aged 15-19 years, Asian/Pacific Islanders had the lowest birth rate in 2006 (17.3 per 1,000), followed by non-Hispanic Whites (27.2 per 1,000). Hispanic females had the highest birth rate in this age group (81.7 per 1,000), and also the lowest percentage decline since 1991 (21.9 percent). Non-Hispanic Black females had the second highest birth rate among those aged 15-19 years (64.3 per 1,000), but the highest percentage decline since 1991 (45.8 percent).

Among adolescents aged 10-14 years, non-Hispanic Black females had the highest birth rate (1.5 per 1,000), followed by Hispanic females (1.2 per 1,000) and American Indian/Alaska Native females (0.9 per 1,000). Non-Hispanic White and Asian/Pacific Islander females had the lowest birth rates among those aged 10-14 years (0.2 per 1,000).

### Birth Rates Among Adolescent Females Aged 10-19, by Age and Race/Ethnicity, 2007\*

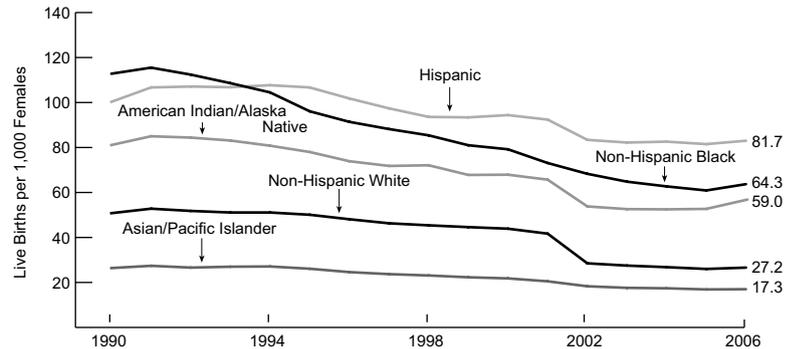
Source (1.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Preliminary data

### Birth Rates Among Adolescent Females Aged 15-19, by Race/Ethnicity, 1990-2007\*

Source (1.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Preliminary data

## SEXUAL ACTIVITY

In 2007, 47.8 percent of high school students reported ever having had sexual intercourse, representing a slight increase from the previous year, while the remaining 52.2 percent were abstinent. Overall, 35 percent of students reported that they were currently sexually active (had intercourse at least once in the 3 months before the survey): 21.5 percent were currently sexually active and reported using a condom during their last sexual intercourse, while 13.5 percent were currently sexually active and reported not using a condom during their last encounter (i.e., 61 percent of

sexually active students used a condom during their last encounter).

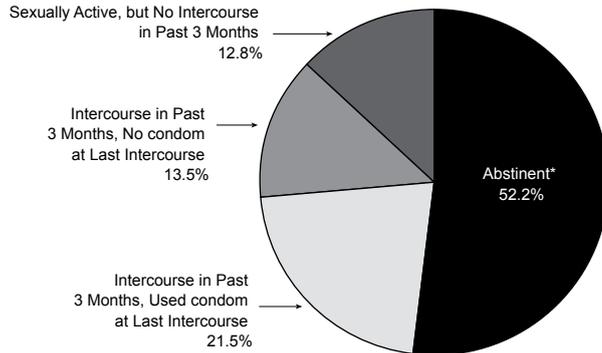
Sexual activity and condom use vary by race and ethnicity. In 2007, non-Hispanic Black students were most likely to report ever having sexual intercourse (66.5 percent), and most likely to report using a condom during their last sexual encounter (67.3 percent of currently sexually active students). Hispanic students were second most likely to report ever having had sexual intercourse (52.0 percent), followed by non-Hispanic White students (43.7 percent; data not shown).

In 2007, sexual activity increased with grade level, while condom use decreased. Among 12<sup>th</sup>

grade students, 52.6 percent reported being currently sexually active: 28.5 percent were currently sexually active and used a condom during their last intercourse, while 24.1 percent were sexually active and did not use a condom (i.e., just over half of sexually active 12<sup>th</sup> graders used a condom during their last encounter). In contrast, 20.1 percent of 9<sup>th</sup> graders were sexually active: 6.2 percent of 9<sup>th</sup> graders were sexually active and not using a condom, while 13.9 percent were sexually active and used a condom during their last sexual encounter (i.e., almost 70 percent of sexually active 9<sup>th</sup> graders used a condom during their last encounter).

### Sexual Activity Among High School Students, 2007

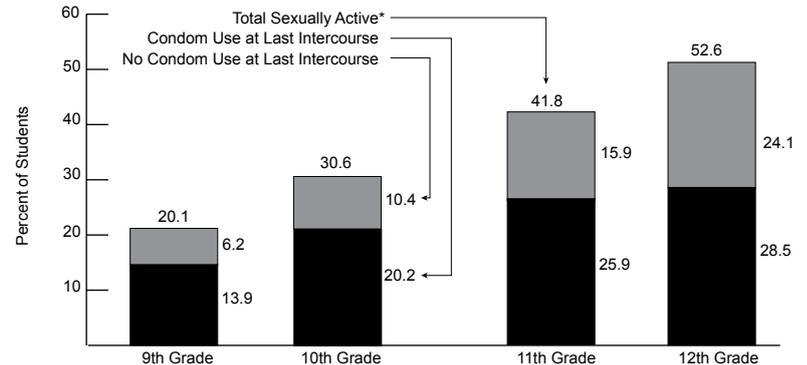
Source (II.9): Centers for Disease Control and Prevention, Youth Risk Behavior Survey



\*Have never had sexual intercourse.

### Condom Use Among Sexually Active High School Students, by Grade, 2007

Source (II.9): Centers for Disease Control and Prevention, Youth Risk Behavior Survey



\*Had sexual intercourse during the three months preceding the survey.

## SEXUALLY TRANSMITTED INFECTIONS

In general, adolescents (aged 15-19 years) and young adults (aged 20-24 years) are at much higher risk than older adults of contracting sexually transmitted infections (STIs), such as chlamydia, gonorrhea, and genital human papillomavirus (HPV).

Chlamydia continues to be the most common STI among adolescents and young adults, with rates of 1,674 and 1,796 cases per 100,000, respectively, in 2006. Rates were highest among non-Hispanic Blacks, followed by American Indian/Alaska Natives. Rates of gonorrhea were 459 and 528 per 100,000 adolescents and young

adults, respectively, and were also highest among non-Hispanic Blacks and American Indian/Alaska Natives.

HPV is the most common STI in the United States. Unlike chlamydia and gonorrhea, cases of HPV are not required to be reported to the CDC. However, a recent study indicated that 24.5 percent of females aged 14-19 years and 44.8 percent of those aged 20-24 years had an HPV infection in 2003-2004.<sup>1</sup> There are many different types of HPV, some of which can cause cancer. Although cervical cancer in women is the most serious health problem caused by HPV, it is highly preventable with routine Pap tests and follow-up care. A vaccine for certain types of HPV was first

approved in 2006 by the Food and Drug Administration (FDA) for use in females aged 9-26 years.<sup>2</sup> In 2007, 25 percent of females aged 13-17 years initiated the three-dose series.<sup>3</sup>

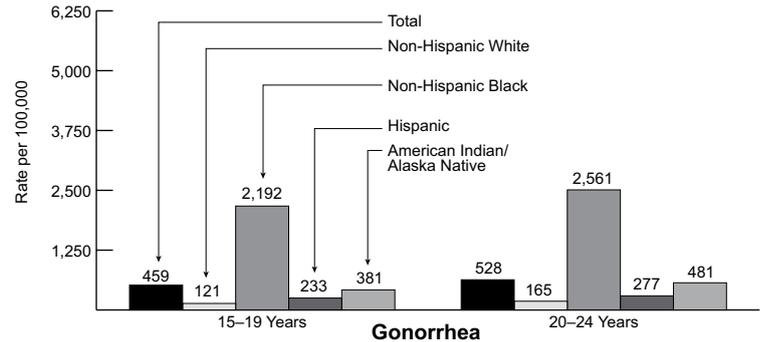
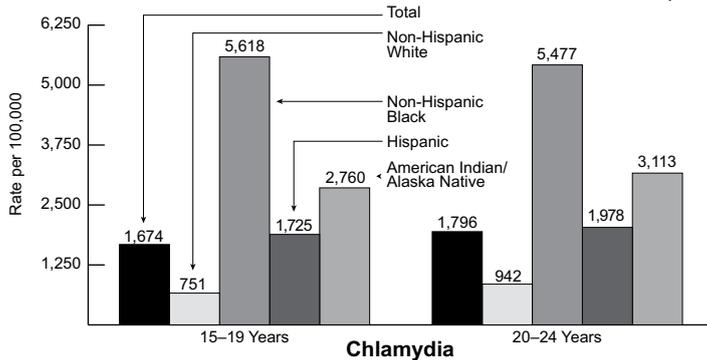
1 Dunne EF, Unger ER, Sternberg M, McQuillan G, Swan DC, Patel SS, Markowitz LE. Prevalence of HPV infection among females in the United States. *JAMA*. 2007 Feb;297(8):876-8.

2 Centers for Disease Control and Prevention, Division of STD Prevention. HPV and HPV vaccines: information for healthcare providers. June 2006. Available from: <http://www.cdc.gov/std/hpv/STDFact-HPV-vaccine-hcp.htm>, viewed 9/3/08.

3 Centers for Disease Control and Prevention. Vaccination coverage among adolescents aged 13-17 years - limited states, 2007. *MMWR* 2008; 57:1100.

### Reported Rates of Sexually Transmitted Infections Among Adolescents and Young Adults, by Age and Race/Ethnicity, 2006

Source (II.10): Centers for Disease Control and Prevention, STD Surveillance System



## ADOLESCENT AND YOUNG ADULT HIV/AIDS

Acquired immunodeficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV), which damages or kills the cells that are responsible for fighting infection. AIDS is diagnosed when HIV has weakened the immune system enough that the body has a difficult time fighting infections.

An estimated 5,259 people aged 13-24 years were diagnosed with HIV/AIDS<sup>1</sup> in 2006, representing 14.3 percent of all new cases. While the number of diagnoses among children aged 13-14 years fluctuates from year to year, the number of diagnoses among the older age groups have increased steadily over the past few years. Diagnoses of HIV/AIDS among adolescents aged 15-19 years and young adults aged 20-24 years have increased 34 and 23 percent, respectively, since 2003.

In 2006, there were 211 deaths of adolescents and young adults with AIDS, representing 1.4 percent of all deaths of persons with AIDS. Since the beginning of the epidemic, an estimated 10,096 persons aged 13-24 years have died with the disease. Deaths of persons with AIDS have generally decreased in recent years, due in part to the availability of effective prescription drugs to

combat the disease.

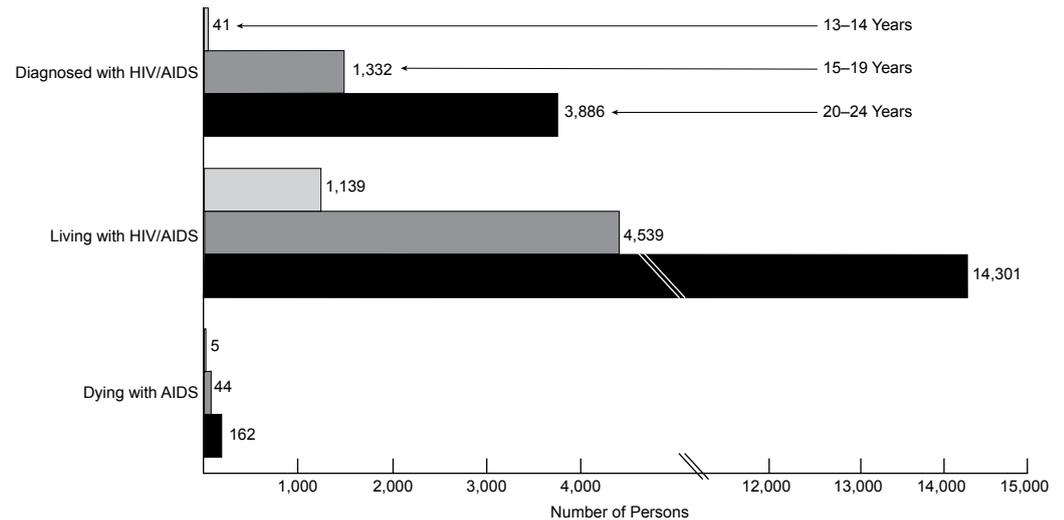
With an increase in diagnoses and a decrease in deaths, the number of people living with HIV/AIDS has increased. In 2006, there were an estimated 19,979 people aged 13-24 years living with HIV/AIDS, representing 3.9 percent of all cases. Overall, the number of adolescents and young

adults living with HIV/AIDS has increased 19 percent since 2003.

*1 Includes persons with a diagnosis of HIV infection only, a diagnosis of HIV infection and a later AIDS diagnosis, and concurrent diagnoses of HIV infection and AIDS in 33 states and 5 dependent areas with confidential name-based reporting.*

### Number of Persons Aged 13-24 Diagnosed with and Living with HIV/AIDS\* and Dying with AIDS, by Age, 2006

Source (II.5): Centers for Disease Control and Prevention, HIV/AIDS Surveillance System



*\*Includes persons with a diagnosis of HIV infection only, a diagnosis of HIV infection and a later AIDS diagnosis, and concurrent diagnoses of HIV infection and AIDS in 33 states and 5 dependent areas with confidential name-based reporting.*



## PHYSICAL ACTIVITY

Results from the Youth Risk Behavior Surveillance System show that 34.7 percent of high school students met currently recommended levels of physical activity in 2007. At that time, the recommendation for this age group was any kind of physical activity that increases heart rate and causes the child to breathe hard for some of the time for a total of at least 60 minutes per day, 5 or more days per week. Non-Hispanic White students were the most likely to meet the recommended levels of physical activity (37.0 percent), followed by non-Hispanic Black students (31.1 percent); Hispanic students were least likely to meet recommended levels (30.2 percent). Overall, 24.9 percent of students did not participate in 60 or more minutes of physical activity on any day in the week before the survey.

Nationwide, 53.6 percent of high school students attended physical education classes on 1 or more days a week in 2007. This rate drops dramatically with increasing grade: 66.8 percent of 9<sup>th</sup> grade students attended PE class, compared to 41.5 percent of 12<sup>th</sup> grade students. The percentage of students attending daily physical education classes has dropped from 42 percent in 1991 to 30.3 percent in 2007. Again, younger students were much more likely to attend daily classes

than older students (40.1 percent of 9<sup>th</sup> graders compared to 23.8 percent of 12<sup>th</sup> graders; data not shown).

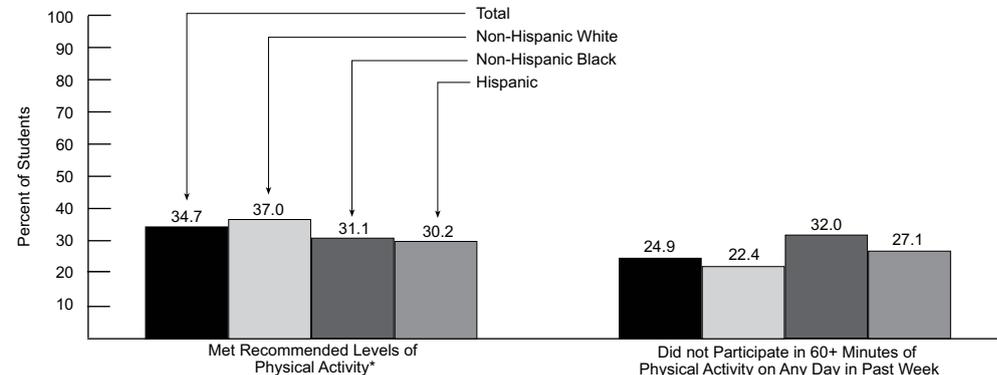
In 2007, 56.3 percent of high school students reported playing on at least one sports team in the past year. This was also more common among children in younger grades (59.2 percent of 9<sup>th</sup> graders) than in the older grades (49.0 percent of 12<sup>th</sup> graders; data not shown). High school students were also asked about sedentary activities, such as using a computer or watching television.

One-quarter of students reported using a computer for something other than school work for 3 or more hours per day on an average school day, while 35.4 percent of students reported watching television for 3 or more hours on an average school day.

The *HealthierUS* Initiative—available online at [www.healthierus.gov](http://www.healthierus.gov)—provides accurate information about physical fitness, nutrition, and disease prevention to help Americans of all ages make healthy decisions.

### Physical Activity Among High School Students, by Race/Ethnicity, 2007

Source: (II.9): Centers for Disease Control and Prevention, Youth Risk Behavior Survey



\*Any kind of physical activity that increases heart rate and makes the child breathe hard some of the time for a total of at least 60 minutes on 5 or more days during the preceding 7 days.

## MENTAL HEALTH

In 2007, 8.2 percent of adolescents aged 12 to 17 years experienced a major depressive episode (MDE), which is defined as at least 2 weeks of depressed mood or loss of pleasure in daily activities, plus a majority of specific depression symptoms, such as altered sleeping patterns, fatigue, and feelings of worthlessness. Females were more likely than males to experience an MDE (11.9 versus 4.6 percent; data not shown). For both sexes, occurrence of MDE peaked at 16 years of

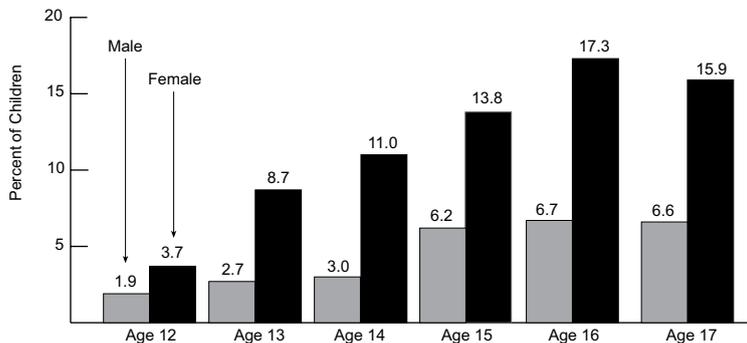
age; of females in that age group, 17.3 percent experienced at least one MDE in the past year. Adolescents of two or more races were most likely to experience an MDE (10.0 percent), followed by non-Hispanic White and non-Hispanic Black adolescents (8.7 and 7.8 percent, respectively); American Indian/Alaska Native adolescents were least likely to experience an MDE (4.6 percent; data not shown).

Among adolescents who received treatment or counseling for an emotional or behavioral prob-

lem (not including drug or alcohol use), depression was the most commonly reported problem (50.0 percent). Adolescents also commonly reported receiving treatment for problems with home or family (28.8 percent), breaking rules or acting out (25.1 percent), and contemplating or attempting suicide (20.2 percent).

### Occurrence of Major Depressive Episode (MDE)\* in the Past Year Among Adolescents Aged 12-17 Years, by Age and Gender, 2007

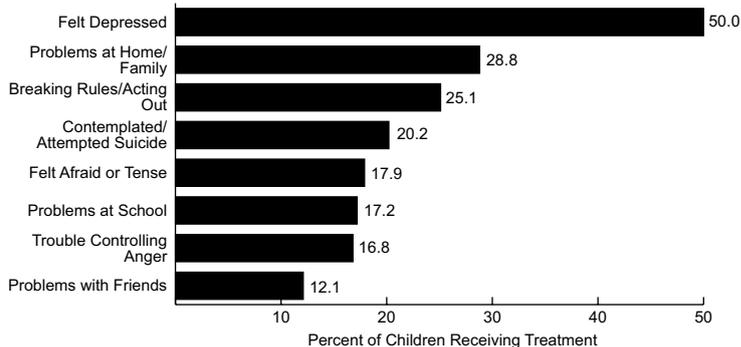
Source (II.13): Substance Abuse and Mental Health Service Administration, National Survey of Drug Use and Health



\*MDE is defined as a period of at least two weeks when a person experienced a depressed mood or loss of pleasure in daily activities and had a majority of specific depression symptoms.

### Commonly Reported Reasons for Receiving Mental Health Treatment\* in the Past Year Among Adolescents Aged 12-17 Years Who Received Treatment, 2007

Source (II.13): Substance Abuse and Mental Health Service Administration, National Survey of Drug Use and Health



\* Data are for most recent visit, and respondents could list more than one reason for treatment. Does not include treatment for problems caused by drug or alcohol use.

## CIGARETTE SMOKING

In 2007, cigarette smoking among adolescents continued to decline, according to the annual Monitoring the Future Study. The largest decrease occurred among 8<sup>th</sup> graders, with the percentage of students who had smoked any cigarettes in the past 30 days falling from 8.7 to 7.1 percent since the previous year. Cigarette smoking in the past 30 days showed a smaller decline among 10<sup>th</sup> graders, dropping from 14.5 to 14.0 percent, while smoking among 12<sup>th</sup> graders remained steady at 21.6 percent.

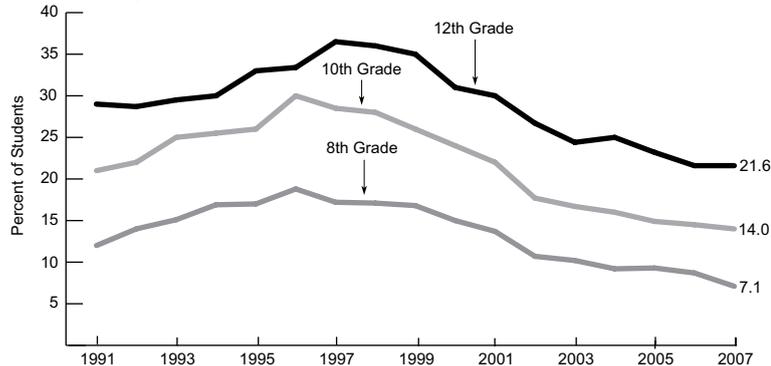
The percent of teens smoking in the past month began a rapid increase in the early 1990s, with the rates among 8<sup>th</sup> and 10<sup>th</sup> graders reaching a peak in 1996 (at 21.0 and 30.4 percent, respectively), and the rate among 12<sup>th</sup> graders peaking in 1997 at 36.5 percent. These increases occurred in virtually every sociodemographic group: male and female, those planning on attending a four-year college and those without such plans, those living in all four regions of the country, those living in rural and urban areas, and those of different racial and ethnic groups. Since the mid-1990s, overall rates

of smoking in the past month have dropped 66 percent among 8<sup>th</sup> graders, 54 percent among 10<sup>th</sup> graders, and 41 percent among 12<sup>th</sup> graders.

Despite this decline, certain subgroups of adolescents are still more likely than others to smoke. With regard to race and ethnicity, non-Hispanic White students are most likely to report smoking in the past month, followed by Hispanic students. Also, males are more likely than females to smoke, and adolescents without plans to attend a four-year college program are more likely to smoke than their college-bound peers (data not shown).

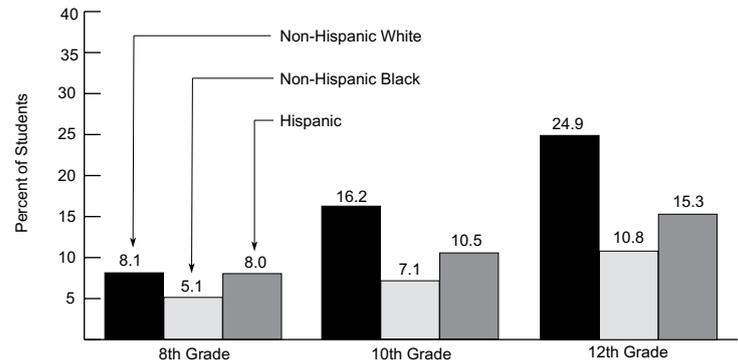
### Any Cigarette Use Among Students in the Past 30 Days, by Grade, 1991–2007

Source (II.12): National Institutes of Health, National Institute on Drug Abuse, Monitoring the Future Study



### Any Cigarette Use Among Students in the Past 30 Days, by Grade and Race/Ethnicity,\* 2007

Source (II.12): National Institutes of Health, National Institute on Drug Abuse, Monitoring the Future Study



\*Data for race represents a two-year average (2006 and 2007) to increase sample size and thus provide a more stable estimate.

## SUBSTANCE ABUSE

In 2007, 9.5 percent of adolescents aged 12-17 years reported using illicit drugs in the past month. Illicit drug use varied by age, with 3.3 percent of youth aged 12-13 years reporting use in the past month, compared to 8.9 percent of youth aged 14-15 years and 16.0 percent of youth aged 16-17 years. There was also variation by race/ethnicity, with rates ranging from 6.0 percent among Asian youth to 18.7 percent<sup>1</sup> among American Indian/Alaska Native youth. Rates for non-Hispanic White, non-Hispanic Black, and Hispanic youth were 10.2 percent, 9.4 percent, and 8.1 percent, respectively (data not shown).

Marijuana was the most commonly used illicit drug among adolescents in 2007 (6.7 percent), followed by non-medical use of prescription-type psychotherapeutics, such as pain relievers, tranquilizers, and stimulants (3.3 percent). Adolescent males were slightly more likely than their female counterparts to report using illicit drugs in the past month (10.0 versus 9.1 percent, respectively). Illicit drug use is associated with other health risk behaviors. In 2007, 47.3 percent of adolescents who reported cigarette use in the past month also reported illicit drug use, compared to only 5.4 percent of adolescents who did not report smoking. Adolescents who reported heavy<sup>2</sup> alcohol use in the past month were also more

likely to use illicit drugs than adolescents who did not report alcohol use (60.1 versus 5.0 percent, respectively; data not shown).

Alcohol continues to be the most commonly used drug among adolescents, with 15.9 percent reporting past-month use in 2007. There was little difference in alcohol use among males and females (15.9 and 16.0 percent, respectively). Greater variation was evident by race, with rates ranging from 8.1 percent among Asian youth to 20.5 percent<sup>1</sup> among American Indian/Alaska Native youth; the rate for non-Hispanic White youth was 18.2 percent.

In 2007, 34.5 percent of adolescents perceived smoking marijuana once a month to be a great risk, while 49.6 percent perceived the same level

of risk with cocaine use. Smoking one or more packs of cigarettes a day was considered a great risk by 68.8 percent of youth. Drinking five or more drinks once or twice per week was considered a great risk by 39.4 percent of adolescents.

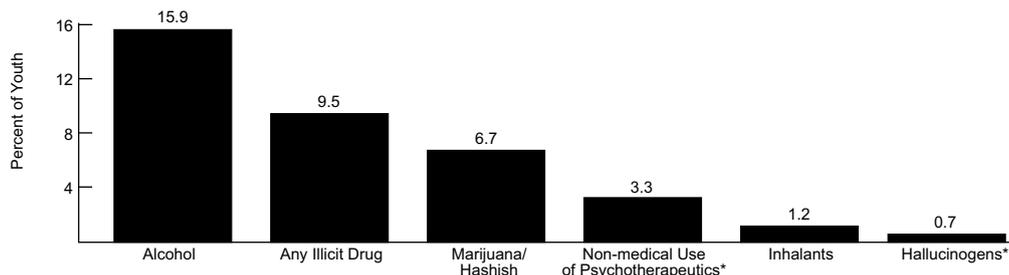
While fewer than 15 percent of adolescents reported being approached by someone selling drugs in the past month, 49.1 percent reported that marijuana would be fairly or very easy to obtain; the same was reported by 25.3 percent of youth regarding crack, 24.5 percent regarding cocaine, 14.4 percent regarding LSD, and 14.1 percent regarding heroin (data not shown).

<sup>1</sup> 2006; no estimate was reported for 2007 due to low precision.

<sup>2</sup> Heavy drinking is defined as drinking 5 or more drinks on the same occasion on each of 5 or more days in the past 30 days.

### Past Month Drug Use Among Adolescents Aged 12-17 Years, by Drug Type, 2007

Source (II.13): Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health



\*Psychotherapeutics include prescription-type pain relievers, tranquilizers, stimulants (including methamphetamine), and sedatives, but do not include over-the-counter drugs; hallucinogens include LSD, PCP, and Ecstasy.

## VIOLENCE

Violence among adolescents is a critical public health issue in the United States. In 2006, homicide was the second leading cause of death among persons aged 15-24 years.

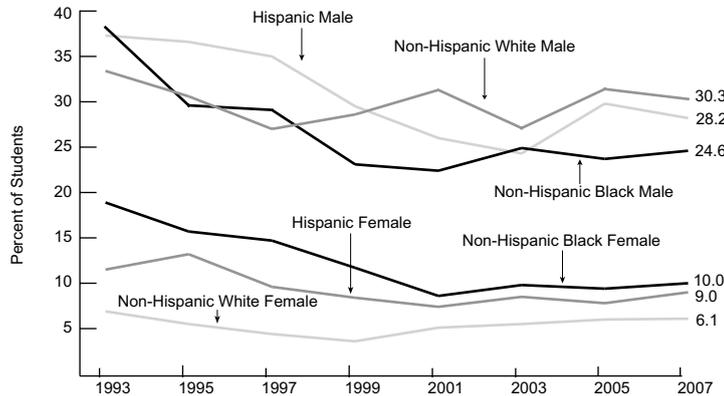
Results from the Youth Risk Behavior Surveillance System show that 18.0 percent of high school students had carried a weapon (such as a gun, club, or knife) at some point during the preceding 30 days in 2007. Males were about four times as likely as females to carry a weapon (28.5 versus 7.5 percent). Among male students, non-

Hispanic Whites were the most likely to carry a weapon (30.3 percent) followed by Hispanics (28.2 percent), while non-Hispanic Blacks were least likely to carry a weapon (24.6 percent). The opposite was true among females: non-Hispanic Blacks were the most likely to carry a weapon (10.0 percent), followed by Hispanics (9.0 percent), while non-Hispanic White females were least likely to carry a weapon (6.1 percent). Just over 5 percent of students reported carrying a gun in the preceding 30 days, and males were more than 7 times as likely as females to do so.

In 2007, 12.4 percent of high school students reported being in a physical fight on school property during the 12 months preceding the survey. Males were twice as likely as females to be in a fight; this sex disparity was most pronounced among non-Hispanic Whites, where males were almost three times as likely as females to be in a fight. Overall, non-Hispanic Black students were the most likely to be in a physical fight on school property (17.6 percent), followed by Hispanic students (15.5 percent); non-Hispanic White students were least likely to be in a fight (10.2 percent).

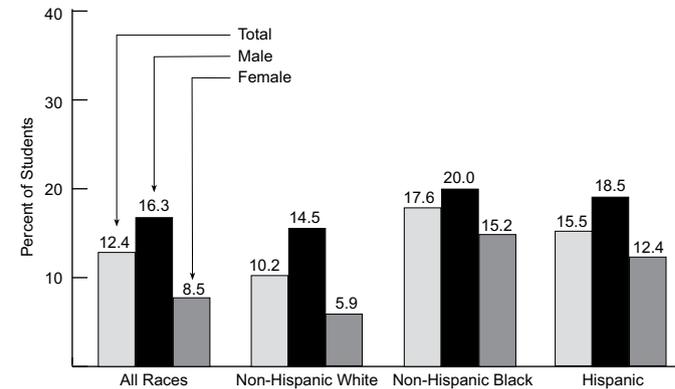
### High School Students Who Carried a Weapon in the Past 30 Days, by Sex and Race/Ethnicity, 1993–2007

Source (II.9): Centers for Disease Control and Prevention, Youth Risk Behavior Survey



### High School Students in a Physical Fight on School Property in the Past 12 Months, by Sex and Race/Ethnicity, 2007

Source (II.9): Centers for Disease Control and Prevention, Youth Risk Behavior Survey



## ADOLESCENT MORTALITY

In 2006, 13,739 deaths were reported among adolescents aged 15-19 years, representing a rate of 64.4 per 100,000. The rate for males in this age group was notably higher than that for females (90.7 versus 36.8 per 100,000; data not shown). Unintentional injury remains the leading cause of death among this age group and accounted for nearly half of all deaths among adolescents in 2006, representing a rate of 31.3 per 100,000. The second and third leading causes of death among

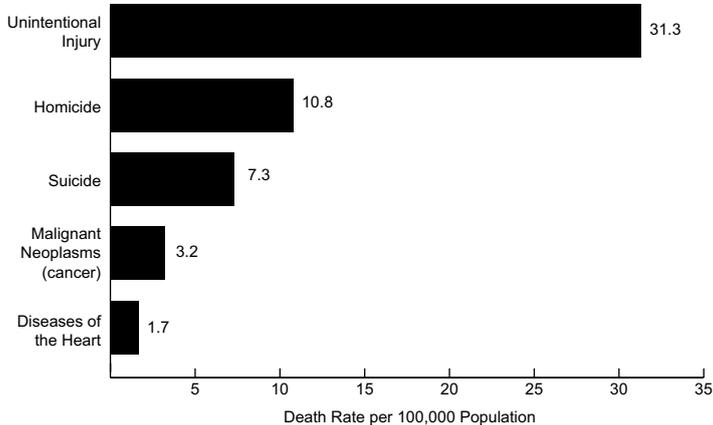
adolescents aged 15-19 years were homicide and suicide, with rates of 10.8 and 7.3 per 100,000, respectively. These causes accounted for 17 and 11 percent of deaths within this age group.

Within the general category of deaths due to injury or other external causes (including intentional injury), motor vehicle traffic was the leading cause of mortality among 15- to 19-year-olds in 2006, accounting for 45 percent of injury-related deaths among adolescents. Alcohol is a significant contributor to these deaths; recent data suggest

that nearly one-third of adolescent drivers killed in crashes had been drinking (data not shown). Firearms were the next leading cause of fatal injury, accounting for 26 percent of injury-related deaths in this age group, followed by poisoning, suffocation, and drowning. Within the category of unintentional injuries, firearm injury falls to the fifth leading cause of death (data not shown).

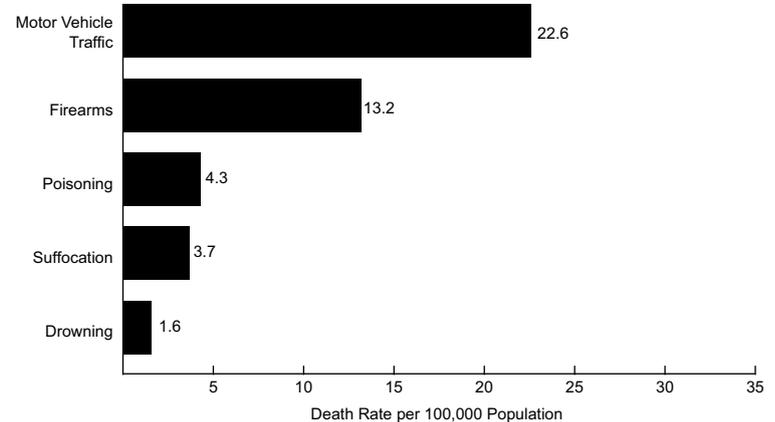
### Leading Causes of Death Among Adolescents Aged 15–19, 2006

Source (II.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



### Deaths Due to Injury\* Among Adolescents Aged 15–19, 2006

Source (II.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Includes intentional injury, such as homicide and suicide

## ADOLESCENT MORTALITY FROM TRAFFIC AND FIREARM INJURIES

The two leading mechanisms of injury death among adolescents are motor vehicle traffic and firearms. In 2006, 4,814 adolescents aged 15 to 19 years were killed by motor vehicle traffic. Most of those were either involved as driver or passenger in the vehicle, while the remaining deaths occurred among pedestrians, motorcyclists, and pedal cyclists. The 2007 Youth Risk Behavior Survey revealed that 11.1 percent of high school students had rarely or never worn seat belts when riding in a car driven by someone else. Additionally, 29.1 percent of students had ridden at least once in the 30 days preceding the survey with a driver who had been drinking (data not shown).

Firearms were the second leading mechanism of injury death among adolescents in 2006. Overall, 2,809 adolescents were killed by firearms, representing a rate of 13.2 per 100,000 adolescents. Of these, homicide accounted for 70 percent and suicide accounted for 25 percent; the remainder were unintentional or of unknown intent. The 2007 Youth Risk Behavior Survey indicated that 5.2 percent of high school students carried a gun at least once in the month preceding the survey.

### Adolescent Mortality from Traffic and Firearm Injuries, 2006

Source (II.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System

#### Traffic Mortality by Person Injured



#### Firearms Mortality by Intent

