

# Child Health USA 2010



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U.S. Department of Health and Human Services  
Health Resources and Services Administration



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<b>PREFACE</b>	<b>4</b>
<b>INTRODUCTION</b>	<b>5</b>
<b>POPULATION CHARACTERISTICS</b>	<b>9</b>
Population of Children	10
Children in Poverty	11
Children of Foreign-Born Parents	12
Adopted Children	13
Rural and Urban Children	14
School Engagement	15
Perceived Neighborhood Safety	16
Child-Family Connectedness	17
Maternal Age	18
Working Mothers and Child Care	19
<b>HEALTH STATUS</b>	<b>21</b>
<i>Health Status-Infants</i>	
Breastfeeding	23
Low Birth Weight	24
Very Low Birth Weight	25
Preterm Birth	26
Maternal Mortality	27
Infant Mortality	28
Neonatal and Postneonatal Mortality	29
International Infant Mortality	30

### *Health Status-Children*

Vaccine-Preventable Diseases	32
Pediatric HIV and AIDS	33
Hospitalization	34
Autism Spectrum Disorder	35
Abuse and Neglect	36
Child Mortality	37

### *Health Status-Adolescents*

Sexual Activity	39
Adolescent Childbearing	40
Sexually Transmitted Infections	41
Adolescent and Young Adult HIV and AIDS	42
Overweight and Obesity	43
Physical Activity	44
Mental Health	46
Cigarette Smoking	47
Substance Abuse	48
Violence	49
Bullying	50
Adolescent Mortality	51

### HEALTH SERVICES FINANCING

<b>AND UTILIZATION</b>	<b>53</b>
Health Care Financing	54
Adequacy of Insurance	55
Vaccination Coverage	56
Vaccination Schedule	57
Mental Health Treatment	58
Dental Care	59
Preventive Health Care Visits	60
Lack of Health Care	61
Usual Place for Sick Care	62
Medical Home	63
Emergency Department Utilization	64
Prenatal Care	65
<b>STATE DATA</b>	<b>67</b>
<b>CITY DATA</b>	<b>75</b>
<b>REFERENCES</b>	<b>78</b>
<b>CONTRIBUTORS</b>	<b>80</b>

## PREFACE AND READER'S GUIDE

The Health Resources and Services Administration's Maternal and Child Health Bureau (MCHB) is pleased to present *Child Health USA 2010*, the 20<sup>th</sup> annual report on the health status and service needs of America's children. MCHB envisions a Nation in which the right to grow to one's full potential is universally assured through attention to the comprehensive physical, psychological, and social needs of the maternal and child population. To assess the progress toward achieving this vision, MCHB has compiled this book of secondary data for more than 50 health status and health care indicators. It provides both graphical and textual summaries of relevant data, and addresses long-term trends where applicable and feasible.

All of the data discussed within the text of *Child Health USA* are from the same sources as the information in the corresponding graphs, unless otherwise noted. Data are presented for the target population of the Title V Maternal and Child Health Block Grant: infants, children, adolescents, children with special health care needs, and women of childbearing age. *Child Health USA 2010* addresses health status and health services utilization within this population, and offers insight into the Nation's progress toward the goals set out in the MCHB's strategic plan—to assure quality of care, elimi-

nate barriers and health disparities, and improve the health infrastructure and system of care for women, infants, children, and families.

*Child Health USA* is designed to provide the most current data available for public health professionals and other individuals in the public and private sectors. The book's succinct format is intended to facilitate the use of the information as a snapshot of children's health in the United States.

**Population Characteristics** is the first section and presents statistics on factors that influence the well-being of children, including poverty, education, and child care. The second section, entitled **Health Status**, contains vital statistics and health behavior data for the maternal and child population. **Health Services Financing and Utilization**, the third section, includes data regarding health care financing and utilization of selected health services. The final sections, **State Data** and **City Data**, contain information on selected indicators at those levels.

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## INTRODUCTION

The health of the child population is reflective of the overall health of a Nation, and has many implications for the Nation's future as these children grow into adults. Physical, mental, and emotional health affect virtually every facet of life, such as learning, participation in leisure activities, and employment. Health habits established in childhood often continue throughout the lifespan, and many health problems in childhood, such as obesity and poor oral health, influence health into adulthood. Effective policies and programs are important to the establishment of healthy habits and the mitigation of risk factors for disease. However, the health and health care needs of children change over time, and current data on these issues is critically important as policy makers and program planners seek to maximize the health of children, now and into the future.

In 2009, nearly 25 percent of the U.S. population was under 18 years of age. The racial and ethnic composition of the child population is shifting, with a growing population of Hispanics and Asian/Pacific Islanders and a decline in the representation of non-Hispanic Whites. In addition to race and ethnicity, the demographic composition of a population can also be characterized by factors such as nativity and poverty. In 2008, 22 percent of children in the United

States had at least one foreign-born parent. Of all children, 18.6 percent were U.S.-born with a foreign-born parent or parents, and 3.4 percent were themselves foreign-born. In the same year, over 14 million children under 18 years of age lived in households with incomes below 100 percent of the U.S. Census Bureau's poverty threshold (\$22,025 for a family of four in 2008), representing 19 percent of all children in the United States.

Good health begins before birth. Timely prenatal care is an important preventive strategy that can help protect the health of both mother and child. In 2007, 70.8 percent of women began prenatal care during the first trimester (according to data from areas using the "revised" birth certificate — for more information, please see page 65). A small proportion of women (7.1 percent) did not receive prenatal care until the third trimester, or did not receive any at all. This was more common among non-Hispanic Black and Hispanic women, as well as those who were younger, unmarried, and less educated.

Following birth, there are a variety of preventive or protective factors that can affect a child's health. Vaccination is a preventive health measure that begins immediately after birth and protects into adulthood. Vaccines are available for a number of public health threats, including measles, mumps, rubella (German measles),

polio, diphtheria, tetanus, pertussis (whooping cough), hepatitis B, and *H. Influenzae* type b (a meningitis bacterium). In 2008, 78.2 percent of children aged 19-35 months had received this recommended series of vaccines; 68.4 percent had received this series plus the varicella (chicken pox) and pneumococcal conjugate vaccines. Breastfeeding is also an important protective factor, and rates have increased steadily since the beginning of the last decade. In 2007, 75.5 percent of children through age 5 had been breastfed for some period of time. Although recommended by the American Academy of pediatrics, only 12.4 percent of children were breastfed exclusively (without supplemental food or liquids) for the first 6 months of life.

Family and neighborhood characteristics can also play a role in the health and well-being of children. In 2008, 71.4 percent of women with children under 18 years of age were in the labor force (either employed or looking for work). Mothers with children under 6 years of age were less likely to be in the labor force (64.0 percent). In 2007, 54.2 percent of children from birth through age 5 were in child care for 10 or more hours per week. Frequency of family activities and bonding can affect health and well-being, and in 2007, 45.8 percent of children under 18 years of age ate a meal every day with all other members of their household. The rate of sharing

meals decreased with age, from 57.7 percent of children from birth through age 5 to 32.9 percent of children 12–17 years of age. In addition, 47.8 percent of children from birth to age five were read to every day by family members.

Physical activity is another factor that can affect health through the lifespan. Results from the Youth Risk Behavior Surveillance System show that 18.4 percent of high school students met currently recommended levels of physical activity in 2009 (one hour or more of physical activity every day, most of which should be moderate- to vigorous-intensity aerobic activity). Nearly one-quarter of students did not participate in 60 or more minutes of physical activity on any day in the preceding week. Physical activity can be affected by a number of factors, including a child's surroundings. In 2007, the parents of 2.6 percent of children reported that their child was never safe in their neighborhood or community, while an additional 11.4 percent of children had parents who felt that their child was only sometimes safe. The remaining 86.1 percent of children had parents who felt that their child was usually or always safe in their neighborhood.

*Child Health USA* also presents information on risk factors for adverse health outcomes. 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 2008, and 1.5 percent of infants were born very low birth weight (less than 1,500 grams, or 3 pounds 4 ounces). Children born underweight are more likely to suffer from long-term disability and have higher rates of mortality than children born of normal weight.

Violence and neglect are also risk factors for poor health, and in 2007, investigations determined that an estimated 794,000 children were victims of abuse or neglect, equaling a victimization rate of 10.6 per 1,000 children in the population. Victimization rates were highest among young children. Among older children, peer violence is also of concern. In 2007, the parents of 12.9 percent of children aged 6–17 years reported that their child “sometimes” bullied or was cruel to others in the past month, while the parents of 2.3 percent of children reported that their child “usually/always” bullied or was cruel to others. According to the Youth Risk Behavior Surveillance System, in 2009, 5.0 percent of high school students reported that they did not go to school on at least one day during the past month because they felt unsafe at school or on their way to or from school.

Information on the prevalence of various diseases and conditions in childhood is also important in the effort to improve health in the child population. For instance, obesity is a serious

health concern for children—obese children are more likely to have risk factors for cardiovascular disease, such as high blood pressure, high cholesterol, and Type 2 diabetes. Obese children are also at increased risk of obesity in adulthood, which is associated with a host of serious health consequences. In 2007, 15.3 percent of children aged 10–17 years were overweight and 16.4 percent were obese, based on parent-reported height and weight.

HIV/AIDS and other sexually transmitted infections (STIs) are also of concern. In 2008, an estimated 182 children younger than 13 years of age and an estimated 6,524 people aged 13–24 years were diagnosed with HIV. Chlamydia continues to be the most common STI among adolescents and young adults. Based on the number of cases reported to the Centers for Disease Control and Prevention, there were 1,956 chlamydial infections per 100,000 adolescents and 2,084 infections per 100,000 young adults in 2008. Rates of gonorrhea were 453 and 518 per 100,000 adolescents and young adults, respectively.

In 2006, there were nearly 3.5 million hospital discharges among people aged 1–21 years. While injuries are the leading cause of death among this age group, they were not the most common cause of hospitalization. In 2005–2006, diseases of the respiratory system

were the most common cause of hospitalization among children aged 1–4 and 5–9 years, while mental disorders were the most common cause of hospitalization among children aged 10–14 years, and pregnancy and childbirth was the most common cause of hospitalization for adolescents aged 15–19 years and young adults aged 20–21 years.

The health status and health services utilization indicators reported in *Child Health USA*

can help policymakers and public health officials better understand current trends in pediatric health and wellness and determine what programs might be needed to further improve the public's health. These indicators can also help identify positive health outcomes which may allow public health professionals to draw upon the experiences of programs that have achieved success. The health of our children and adolescents relies on effective public health efforts that

include providing access to knowledge, skills, and tools; providing drug-free alternative activities; identifying risk factors and linking people to appropriate services; building community supports; and supporting approaches that promote policy change, as needed. Such preventive efforts and health promotion activities are vital to the continued improvement of the health and well-being of America's children and families.









## POPULATION CHARACTERISTICS

The increasing diversity of the United States population is reflected in the sociodemographic characteristics of children and their families. The percentage of children who are Hispanic or Asian/Pacific Islander has more than doubled since 1980, while the percentage who are non-Hispanic White has declined. The percentage of children who are Black has remained relatively stable. This reflects the changes in the racial and ethnic makeup of the population as a whole.

At the national, State, and local levels, policymakers use population information to address health-related issues that affect mothers, children, and families. By carefully analyzing and comparing available data, public health professionals can often identify high-risk populations that could benefit from specific interventions.

This section presents data on several population characteristics that influence maternal and child health program development and evaluation. Included are data on the age and racial and ethnic distribution of the U.S. population, as well as data on the poverty status of children and their families, child care arrangements, and school engagement.

### POPULATION OF CHILDREN

In 2008, there were nearly 74 million children under 18 years of age in the United States, representing nearly 25 percent of the population. Young adults aged 18–24 years made up another 9.8 percent of the population, while adults aged 25–64 years composed 53.1 percent of the population, and adults aged 65 years and older composed 12.8 percent.

The age distribution of the population has shifted significantly in the past several decades. The percentage of the population that is under 18 fell from 28.2 percent in 1980 to 24.3 percent in 2008. The representation of young

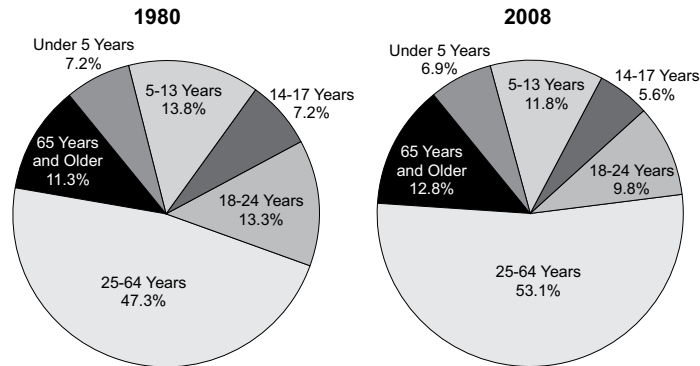
adults (aged 18–24 years) has also fallen, from 13.3 percent to 9.8 percent. During this time period, the percentage of the population that is aged 25–64 years has increased from 47.3 percent to 53.1 percent, and the percentage that is over 65 years has increased from 11.3 percent to 12.8 percent. The median age in the United States has increased from 30.0 years in 1980 to 36.8 years in 2008.

The shifting racial/ethnic makeup of the child population (under 18 years) reflects the increasing diversity of the population as a whole. Hispanic children represented fewer than 9 percent of children in 1980, compared to nearly 22

percent in 2008, and the proportion of children who are Asian/Pacific Islander increased from less than 2 percent to 4.4 percent during the same period. The percentage of children who are Black has remained relatively steady over the same period, around 15 percent. However, the percentage of children who are non-Hispanic White has fallen significantly, from 74.3 percent in 1980 to 56.2 percent in 2008.

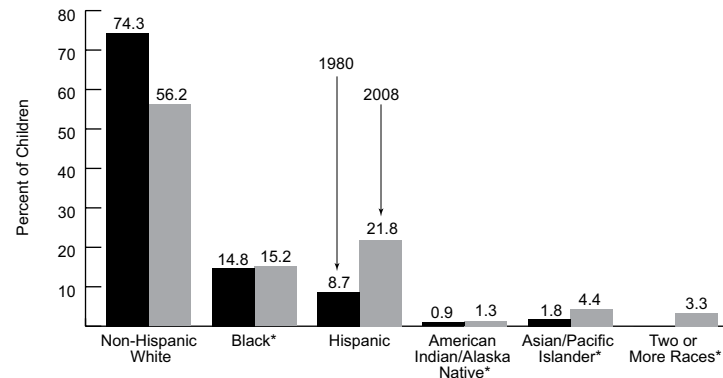
### U.S. Population, by Age Group, 1980 and 2008

Source (I.1): U.S. Census Bureau, Annual Population Estimates



### Population of Children Under Age 18, by Race/Ethnicity, 1980 and 2008

Source (I.1): U.S. Census Bureau, Annual Population Estimates



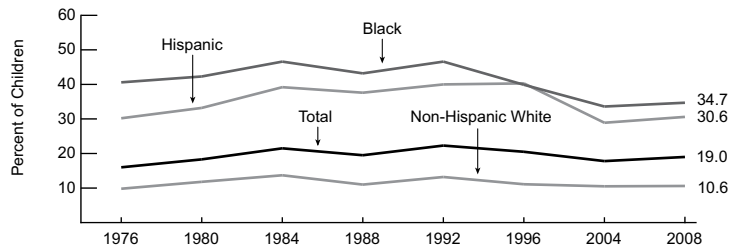
\*May include Hispanics; 1980 data is not available for two or more races.

## CHILDREN IN POVERTY

In 2008, more than 14 million children under 18 years of age lived in households with incomes below 100 percent of the U.S. Census Bureau's poverty threshold (\$22,025 for a family of four in 2008); this represents 19.0 percent of all children in the United States. Poverty affects many aspects of a child's life, including living conditions, nutrition, and access to health care. A number of factors affect poverty status, and a significant racial/ethnic disparity exists. In 2008, 34.7 percent of Black children and 30.6 percent of Hispanic children lived in households with incomes below 100 percent of the poverty threshold, compared to 10.6 percent of non-Hispanic White children.

### Children Under Age 18 Living in Households with Incomes Below 100 Percent of the Poverty Threshold,\* by Race/Ethnicity,\*\* 1976–2008

Source (I.2): U.S. Census Bureau, Current Population Survey



\*The U.S. Census Bureau uses a set of money income thresholds to determine who is in poverty; the poverty threshold for a family of four was \$22,025 in 2008. \*\*The Current Population Survey currently allows respondents to choose more than one race; however, prior to 2002, only one race was reported. For consistency, figures reported here are only for respondents who chose one race.

Single-parent families are particularly vulnerable to poverty. In 2008, 43.4 percent of children living in a female-headed household experienced poverty, as did 20.5 percent of children living in a male-headed household. Only 9.9 percent of children living in married-couple families lived in poverty (data not shown). Also, younger children are more likely than older children to experience poverty. In 2008, 21.8 percent of children under 5 years of age lived in households with incomes below 100 percent of the poverty threshold, while the same was true of 17.2 percent of children aged 5–17 years.

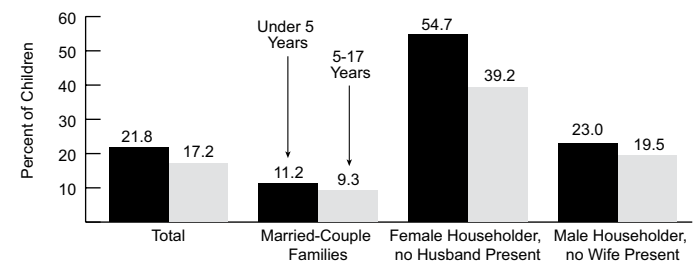
A number of Federal programs work to protect the health and well-being of children living in low-income families. One of these is the

National School Lunch Program, administered by the U.S. Department of Agriculture's Food and Nutrition Service. The program provides nutritionally-balanced low-cost or free lunches to children based on household poverty level. In 2008, the program served free lunch to 15.4 million children and reduced-price lunch to another 3.1 million children. This represents 60.1 percent of all lunches served in participating schools.<sup>1</sup>

1. United States Department of Agriculture, Food and Nutrition Service. Child nutrition tables: National-level annual summary tables. Available online: <http://www.fns.usda.gov/pd/cnpmain>. Accessed November, 2009.

### Children Under Age 18 Living in Families\* with Incomes Below 100 Percent of the Poverty Threshold,\*\* by Age and Family Type, 2008

Source (I.2): U.S. Census Bureau, Current Population Survey



\*Includes only children who are related to the head of household by birth, marriage, or adoption. \*\*The U.S. Census Bureau uses a set of money income thresholds to determine who is in poverty; the poverty threshold for a family of four was \$22,025 in 2008.

## CHILDREN OF FOREIGN-BORN PARENTS

The foreign-born population in the United States has increased substantially since the 1970s, largely due to immigration from Asia and Latin America. In 2008, 22.0 percent of children in the United States had at least one foreign-born parent. Of all children, 18.6 percent were U.S.-born with a foreign-born parent or parents, and 3.4 percent were themselves foreign-born. Most children (73.9 percent) were native-born with native-born parents.

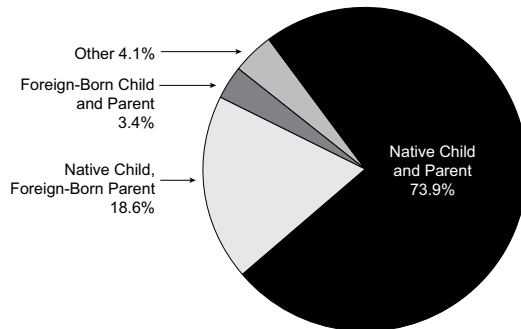
Children's poverty status varies with their nativity. In 2008, foreign-born children with

foreign-born parents were most likely to live in poverty, with 30.1 percent living in households with incomes below 100 percent of the U.S. Census Bureau's poverty threshold (\$22, 025 for a family of four in 2008). Another 27.8 percent of these children lived in households with family incomes of 100–199 percent of the poverty threshold. Native-born children with native parents were the least likely to experience poverty, with 15.9 percent living in households with incomes below 100 percent of the poverty threshold, and another 18.7 percent living in households with incomes of 100–199 percent of the poverty threshold.

A number of other sociodemographic factors vary by the nativity of children and their parents. For instance, native-born children with native parents were most likely to have health insurance in 2008 (92.2 percent), while foreign-born children with foreign-born parents were least likely (68.7 percent). Almost 85 percent of native-born children with foreign-born parents had health insurance in 2008 (data not shown).

### Children Under Age 18, by Nativity of Child and Parent(s),\* 2008

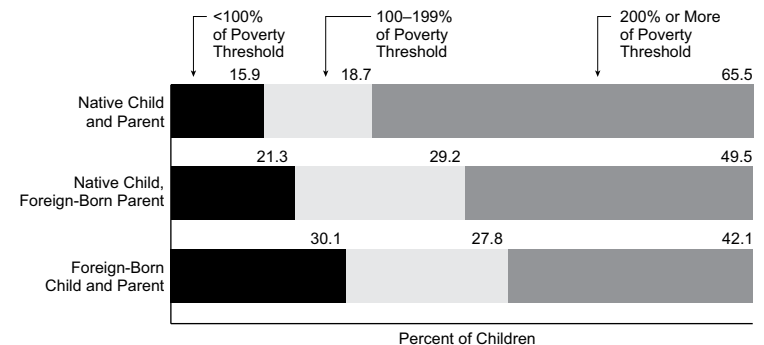
Source (I.3): U.S. Census Bureau, Current Population Survey



\*\*Native parent" indicates that both of the child's parents were U.S. citizens at birth, "foreign-born parent" indicates that one or both parents were born outside of the United States, and "other" includes children with parents whose native status is unknown and foreign-born children with native parents.

### Children Under Age 18, by Poverty Status\* and Nativity of Child and Parent(s),\*\* 2008

Source (I.3): U.S. Census Bureau, Current Population Survey



\*The U.S. Census Bureau poverty threshold for a family of four was \$22,025 in 2008. \*\*\*Native parent" indicates that both of the child's parents were U.S. citizens at birth, "foreign-born parent" indicates that one or both parents were born outside of the U.S.

## ADOPTED CHILDREN

In 2007, there were approximately 1.8 million adopted children living in the United States. Of all adopted children, 38 percent were placed with families through private domestic adoption, meaning the child was voluntarily placed for adoption by his or her biological parents. Another 37 percent of adopted children were placed with their families through foster care adoption, and the remaining 25 percent of adopted children came to their families through international adoption.

The racial/ethnic distribution of adopted children differs from that of the general child population. While non-Hispanic White children represented 56 percent of the overall child population in 2007, they represented only 37

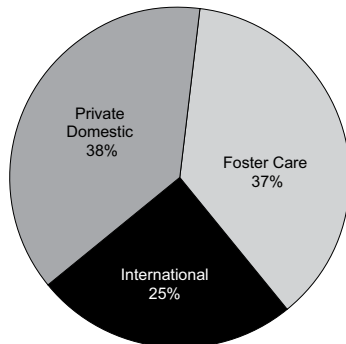
percent of adopted children. Conversely, non-Hispanic Black children composed 14 percent of the overall child population but 23 percent of the adopted child population, and Asian children composed 4 percent of the overall population but 15 percent of the adopted child population. Hispanic children represented 20 percent of the overall child population and 15 percent of the adopted child population (data not shown). The racial/ethnic distribution of adopted children also varies across adoption types, with private adoptions most likely to involve non-Hispanic White children and international adoptions most likely to involve Asian children. The racial/ethnic profile of children placed through foster care adoptions is less disparate: in 2007, 37 percent were non-Hispanic

White, 35 percent were non-Hispanic Black, and 16 percent were Hispanic.

The population of adopted children is older than the general child population. In 2007, 16 percent of the general child population was 0–2 years of age, but only 6 percent of adopted children were in that age group. Conversely, 23 percent of the adopted child population was 15–17 years of age, while only 17 percent of the general child population was in that age group. Adopted children were more likely than children in the general population to have at least one parent with more than a high school diploma, to live in a household with income above 400 percent of the Federal poverty threshold, to live in a safe neighborhood, and to have consistent insurance coverage (data not shown).

### Adopted Children, by Adoption Type, 2007\*

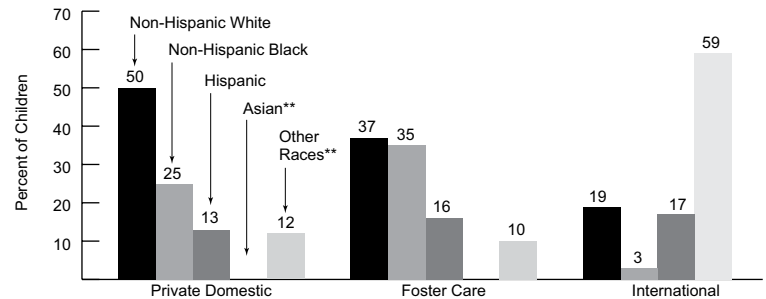
Source (I.4): Office of the Assistant Secretary for Planning and Evaluation and the Administration for Children and Families, National Survey of Adoptive Parents



\*Published analyses of this data source round all estimates to the nearest whole number.

### Adopted Children, by Race/Ethnicity and Adoption Type, 2007\*

Source (I.4): Office of the Assistant Secretary for Planning and Evaluation and the Administration for Children and Families, National Survey of Adoptive Parents



\*Published analyses of this data source round all estimates to the nearest whole number. \*\*The number of Asian children adopted through private domestic adoption and foster care, and the number of children of other races adopted through international adoption, is too small to produce reliable estimates.

## RURAL AND URBAN CHILDREN

The health risks facing children often vary by the child's geographic location. Children living in rural areas are more likely to live in poor families,<sup>1</sup> are more vulnerable to death from injuries,<sup>2</sup> and are more likely to use tobacco than their counterparts in urban areas.<sup>3</sup> Rural families also face particular challenges in gaining access to health care, as they often have to travel greater distances to use health services.<sup>4</sup> These discrepancies in health status and health risks are not necessarily attributable to children's geographic location, but rather are related to the demographic characteristics of the children and families who live in rural areas. Understanding these health risks provides program planners and policymakers important information with which to target services and interventions.

In 2007, more than 81 percent of children lived in urban areas, 9 percent lived in large rural areas, and another 9 percent lived in small or isolated rural areas (data not shown). For the National Survey of Children's Health, these areas were classified based on zip code, the size of the city or town, and the commuting pattern in the area. Urban areas include metropolitan areas and surrounding towns from which commuters flow into an urban area. Large rural areas include large towns with populations of 10,000 to 49,999 persons and their surrounding areas. Small or isolated rural areas include small towns with populations of 2,500 to 9,999 persons and their surrounding areas.

In 2007, approximately 35 percent of children aged 10–17 years living in small rural areas were overweight or obese, compared to 30.9 percent of children living in urban areas. Children were

defined as overweight if their Body Mass Index (BMI), based on parent-reported height and weight, fell between the 85<sup>th</sup> and 95<sup>th</sup> percentiles for their age and sex. Those with a BMI at or above the 95<sup>th</sup> percentile were considered obese. Children living in small rural areas were also more likely to live with a smoker than their urban counterparts (35.0 percent versus 24.4 percent).

1 U.S. Census Bureau, 2008 American Community Survey, Table C17001, accessed through American Factfinder.

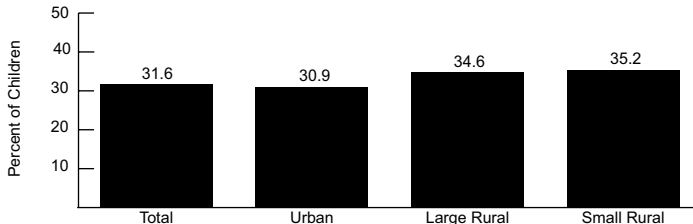
2 Cherry DC, Huggins B, Gilmore K. Children's health in the rural environment. *Pediatric Clinics of North America* 54 (2007):121-133.

3 Johnston LD, O'Malley PM, Bachman JG, Schulenberg JE. (2009) *Monitoring the Future: National Survey Results on Drug Use, 1975-2008*. (NIH Publication No. 09-7402.) Bethesda, MD: National Institute on Drug Abuse.

4 Probst JC, Laditka SH, Wang J-Y, Johnson AO. Effects of residence and race on burden of travel for care: cross sectional analysis of the 2001 US National Household Travel Survey. *BMC Health Serv Res* 2007 Mar 9;7-40.

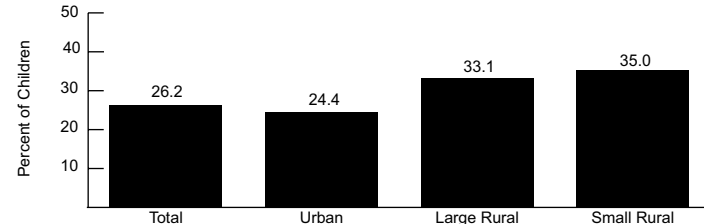
### Overweight and Obesity among Children Aged 10-17, by Location, 2007

Source (I.5): 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



### Children Under Age 18 Who Live in Households with a Smoker, by Location, 2007

Source (I.5): 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



## SCHOOL ENGAGEMENT

In 2007, there were nearly 3.6 million high school status dropouts<sup>1</sup> in the United States, representing a status dropout rate of 8.7 percent. This rate has declined steadily over the past several decades, with a decrease of 38 percent since 1980 (when the rate was 14.1 percent).

Historically, Hispanic students have had the highest dropout rates among youth of all racial/ethnic groups. In 2007, 21.4 percent of Hispanics 16–24 years of age were status dropouts, compared to 8.4 percent of non-Hispanic

Blacks and 5.3 percent of non-Hispanic Whites. Nativity is one factor in this disparity: the status dropout rate among Hispanics born in the United States (11.2 percent) was much lower than the overall rate for this ethnic group (data not shown).

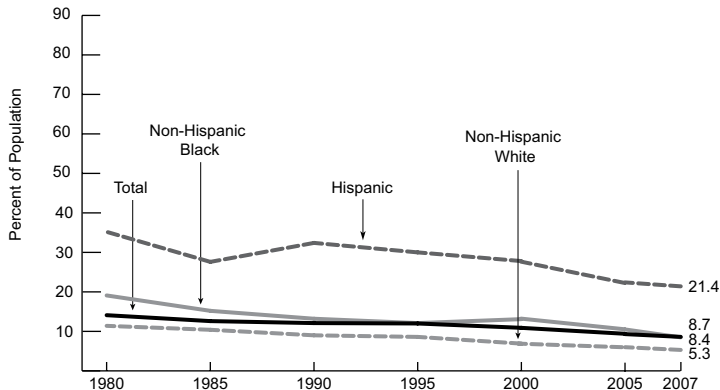
The 2007 National Survey of Children's Health measured youth engagement in school. For this measure, parents were asked how often the child cared about doing well in school and how often the child completed all required homework assignments. Children were consid-

ered engaged in school if the parent answered "usually" or "always" to both of these questions. Overall, 75.4 percent of children were considered engaged in school. This varied by race/ethnicity, with non-Hispanic White children having the highest level of school engagement (82.6 percent), and non-Hispanic Black children having the lowest level of engagement (71.6 percent).

*1 Status dropout refers to those 16–24 years of age who are not enrolled in school and have not earned high school credentials (diploma or equivalent).*

### School Status Dropout\* Rates Among Persons Aged 16-24 Years, by Race/Ethnicity, 1980-2007

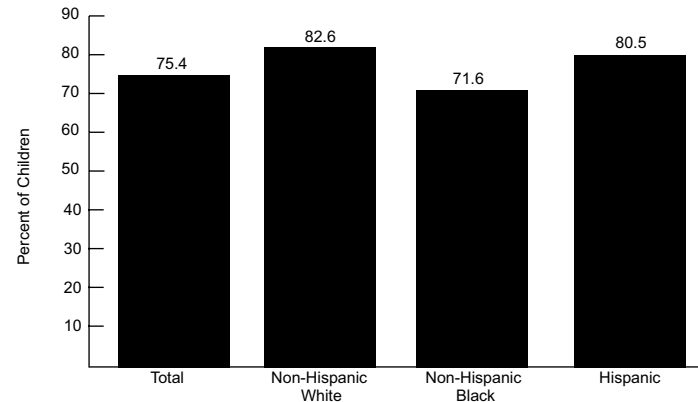
Source (I.6): U.S. Department of Education, National Center for Education Statistics



*\*\*Status dropout\* refers to those 16-24 years of age who are not enrolled in school and have not earned high school credentials (diploma or equivalent).*

### Children Aged 6-17 Years Engaged in School,\* by Race/Ethnicity, 2007

Source (I.7): 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



*\*Children are considered engaged in school if they "usually" or "always" care about doing well in school and do all required homework, according to parent report.*

## PERCEIVED NEIGHBORHOOD SAFETY

An unsafe neighborhood can have negative effects on a child's health, from limiting physical activity to risking injury. In 2007, the parents of 2.6 percent of children reported that their child was never safe in their neighborhood or community, while an additional 11.4 percent of children had parents who felt that they were only sometimes safe. The parents of the remaining 86.1 percent of children felt that their child was usually or always safe in their neighborhood.

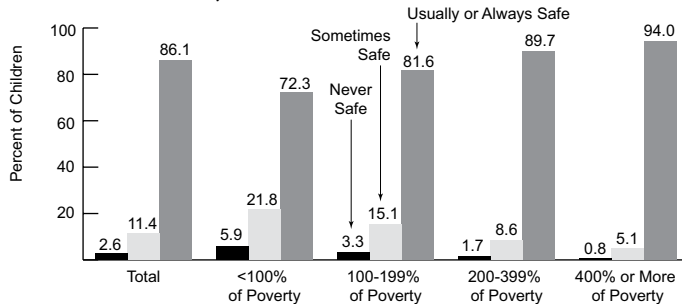
Perceived neighborhood safety varies by a number of factors. Children living in households with incomes of 400 percent or more of the Federal poverty level (\$20,650 for a family of four in 2007) were significantly more likely than children living in households with incomes below 100 percent of the Federal poverty level to have parents report that their child was usually or always safe in their neighborhood (94.0 versus 72.3 percent).

Neighborhood safety, as reported by parents, varies by the geographic setting of the neighborhood or community. In 2007, the parents of 84.1 percent of children who lived in urban

areas reported that their child was usually or always safe, compared to 93.0 of children who lived in suburban areas. Perceived safety also varies by race/ethnicity and family structure: the parents of non-Hispanic White children were most likely to report that they are usually or always safe, while non-Hispanic Black children were least likely, and children living in households with two biological or adoptive parents were most likely to be usually or always safe while children living in single-mother households were least likely to be usually or always safe (data not shown).

### Neighborhood Safety\* Among Children Under 18 Years, by Poverty Level,\*\* 2007

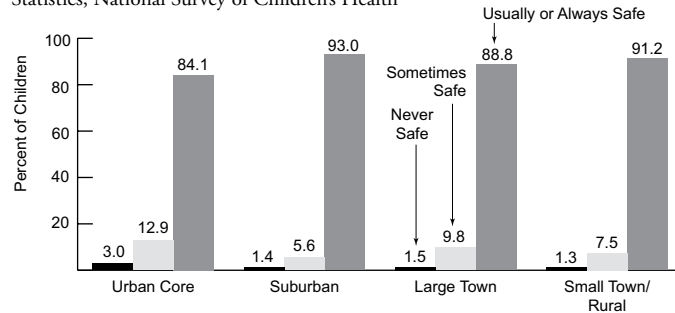
Source (1.7): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*As determined by asking parents, "How often do you feel [child] is safe in your community or neighborhood?" \*\*The U.S. Department of Health and Human Services establishes poverty guidelines for determining financial eligibility for Federal programs; the poverty level for a family of four was \$20,650 in 2007.

### Neighborhood Safety\* Among Children Under 18 Years, by Rural-Urban Area,\*\* 2007

Source (1.7): 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



\*As determined by asking parents, "How often do you feel [child] is safe in your community or neighborhood?" \*\*Rural-Urban areas are determined using the Rural-Urban Commuting Area (RUCA) system, which uses a combination of Census Bureau place definitions and work commuting information to determine the rural-urban status of an area.



## CHILD-FAMILY CONNECTEDNESS

There are a number of family activities that can promote family bonding and help children lay the groundwork for future health and well-being. Sharing meals is a bonding activity that can also encourage good nutritional habits. In 2007, 45.8 percent of children under 18 years of age ate a meal every day with all other members of their household. The rate of sharing meals decreased with age, from 57.7 percent of children from birth through age 5 to 32.9 percent of children 12–17 years of age. Sharing a meal every day was more common among

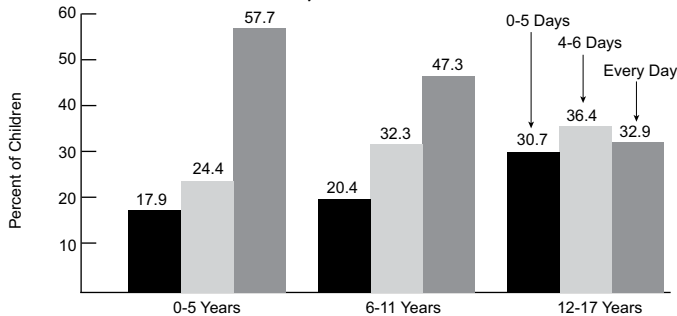
Hispanic children (53.8 percent) than non-Hispanic White and non-Hispanic Black children (42.0 and 42.6 percent, respectively). Sharing of meals also varied by family income, with 58.3 percent of children living in households with incomes below 100 percent of the Federal poverty level (\$20,650 for a family of four in 2007) sharing meals daily, while the same was true for only 38.8 percent of children with household incomes of 400 percent or more of the Federal poverty level (data not shown).

In 2007, 47.8 percent of children from birth to age five were read to every day by family members. This varied by household income,

with 36.1 percent of children living in households with incomes below 100 percent of the Federal poverty level (\$20,650 for a family of four in 2007) being read to every day, compared to 60.0 percent of children with household incomes of 400 percent or more of the Federal poverty level. Fewer than 10 percent of children with household incomes of 400 percent or more of the Federal poverty level were read to on two or fewer days in the past week, compared to nearly one-third of children with household incomes below 100 percent of the Federal poverty level.

### Frequency of Family Meals\* Among Children, by Age, 2007

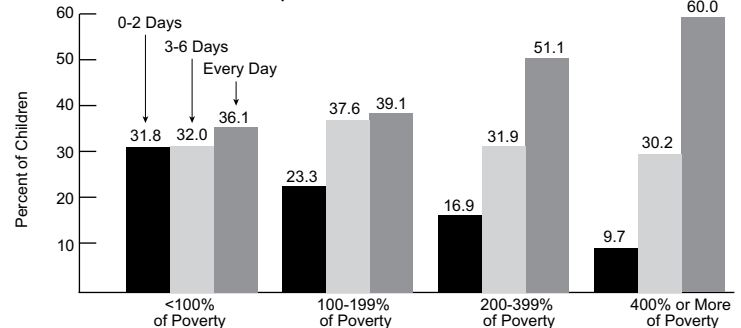
Source (1.7): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Number of days that the child ate a meal with all other family members living in the household.

### Frequency of Being Read to by a Family Member\* Among Children Aged 0–5 Years, by Poverty Level,\*\* 2007

Source (1.7): 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



\*Number of days that the child was read aloud to during the past week. \*\*The U.S. Department of Health and Human Services establishes poverty guidelines for determining financial eligibility for Federal programs; the poverty level for a family of four was \$20,650 in 2007.

## MATERNAL AGE

According to preliminary data, the general fertility rate fell slightly to 68.7 live births per 1,000 women aged 15–44 years in 2008 (from a rate of 69.5 in 2007). Birth rates for nearly every age and racial/ethnic group also declined. The rate for teenagers aged 15–19 years decreased to 41.5 per 1,000 females in this age group, which continues the general decline in teenage birthrates since 1991, when the rate was 61.8 births per 1,000. Although the birth rate for women aged 25–29 years fell in 2008, this group still experienced the highest birth rate of all age groups (115.1 births per 1,000). This was followed by women aged 20–24 years (103.1 births per 1,000). Birth rates for women aged 30–34 (99.3 births per 1,000) and 35–39 years

(46.9 births per 1,000) also declined slightly; the previous year saw the highest reported rates in over four decades for these age groups. Birth rates for women aged 40–44 years (9.9 births per 1,000) and 45–49 years (0.7 births per 1,000) increased slightly over the previous year.

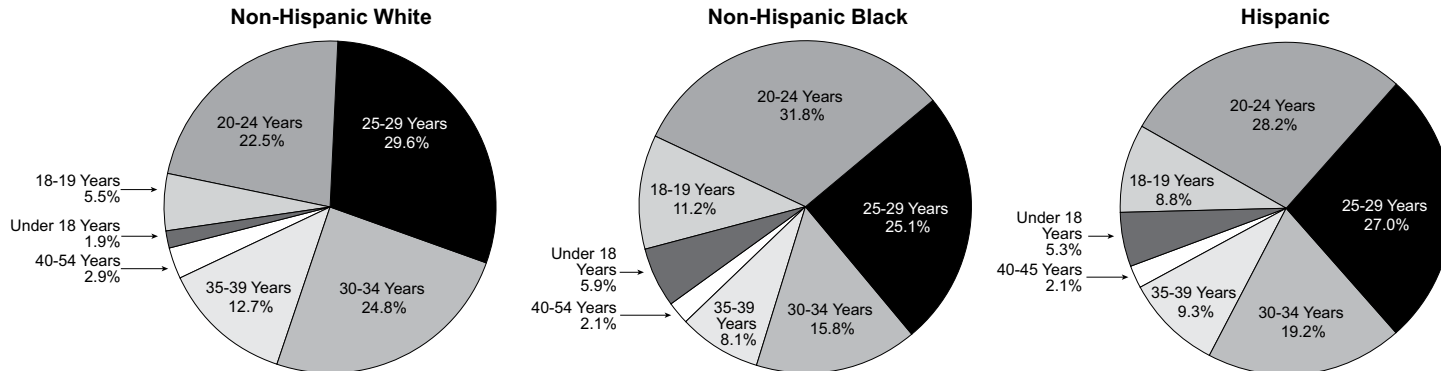
In 2008, 3.3 percent of births were to females under 18 years of age, and another 7.0 percent were to teens aged 18–19 years. Just under one-quarter (24.8 percent) of births occurred among young adults aged 20–24 years, while 28.2 percent were to women aged 25–29 years and 22.5 percent were to women aged 30–34 years. Another 11.5 percent of births were to women aged 35–39 years, and the remaining 2.7 percent of births were to women aged 40 and over. Average age at first birth fell to 25.0

years in 2006 (the latest year for which data are available), the first such decline since the measure became available in 1968 (data not shown).

The age distribution of births varies by race/ethnicity. Among non-Hispanic Black and Hispanic women, 17.1 percent and 14.1 percent of births, respectively, were to teenagers, compared to 7.4 percent of births to non-Hispanic White females. The percentage of births to young adults aged 20–24 years was higher among non-Hispanic Black and Hispanic women (31.8 percent and 28.2 percent, respectively) than among non-Hispanic White women (22.5 percent). However, births to women aged 35 and older represented a higher proportion of births among non-Hispanic White women than among non-Hispanic Black and Hispanic women.

## Distribution of Births, by Race/Ethnicity and Maternal Age, 2008\*

Source (1.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Preliminary data

## WORKING MOTHERS AND CHILD CARE

In 2008, 71.4 percent of women with children under 18 years of age were in the labor force (either employed or looking for work), and 67.5 percent were employed. Employment varied by a number of factors, including the age of the youngest child. Of mothers with children from birth through age 5, 64.0 percent were in the labor force and 59.5 percent were employed. Of women whose youngest child was aged 6–17 years, 77.3 percent were in the labor force and 73.8 percent were employed. Employed mothers with children birth to age five were more likely to be employed part time than mothers with older children (27.9 versus 22.2 percent, data not

shown). Employment also varied by marital status: 69.5 percent of married mothers were in the labor force, compared to 76.0 percent of mothers of other marital statuses (data not shown).

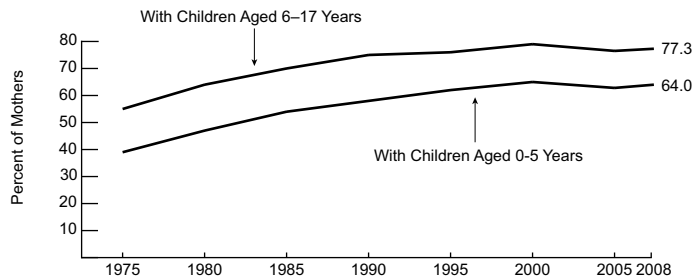
In 2007, 54.2 percent of children from birth through age 5 were in childcare for 10 or more hours per week. Overall, 29.1 percent of children were in the care of a non-relative, while 14.7 percent were cared for by a relative and 10.4 percent received both relative and non-relative care. Childcare arrangements varied by household income: 32.4 percent of children living in households with incomes of 400 percent or more of the Federal poverty level (\$20,650 for a family of four in 2007) did not receive 10 or more hours of childcare per week while the same was true of

57.8 percent of children with household incomes under 100 percent of the Federal poverty level.

Difficulty with childcare can affect the ability of parents to maintain steady employment. In 2007, approximately 37 percent of parents who needed child care in the past month reported that they had to change their arrangements because of circumstances beyond their control (such as a sick child or change in their provider's schedule). Among all parents with children from birth through age five, 12.4 percent reported that childcare issues caused them to quit their job, pass a job offer, or greatly change their job because of problems with childcare (data not shown).

### Mothers in the Labor Force,\* by Age of Child,\*\* 1975-2008

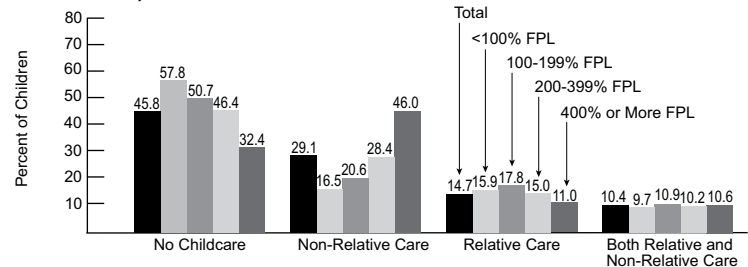
Source (1.9): U.S. Department of Labor, Bureau of Labor Statistics



\*The labor force comprises people who are employed and people who are actively seeking employment. \*\*Women with two or more children are categorized by the age of their youngest child.

### Childcare Arrangements\* for Children Aged 0-5 Years, by Poverty Level,\*\* 2007

Source (1.7): 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



\*10 or more hours of childcare per week. \*\*The U.S. Department of Health and Human Services establishes poverty guidelines for determining financial eligibility for Federal programs; the poverty level for a family of four was \$20,650 in 2007.





## 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 regular 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. It also confers a number of maternal, societal, and even environmental benefits.<sup>1</sup> 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.<sup>2</sup>

Breastfeeding initiation rates have increased steadily since the early 1990s. In 2007, the parents of 75.5 percent of children from birth to 5 years of age reported that the child had ever

been breastfed (including being fed expressed breast milk). Children living in households with incomes of 400 percent or more of the Federal poverty level (\$20,650 for a family of four in 2007) were most likely to have been breastfed (83.2 percent), while children living in households with incomes below 100 percent of the Federal poverty level were least likely to have been breastfed (65.7 percent). Initiation of breastfeeding also varies by race/ethnicity, and maternal age and educational achievement.

The percentage of children who are exclusively breastfed for six months is considerably lower than the percent who are ever breastfed. In 2007, the parents of only 12.4 percent of

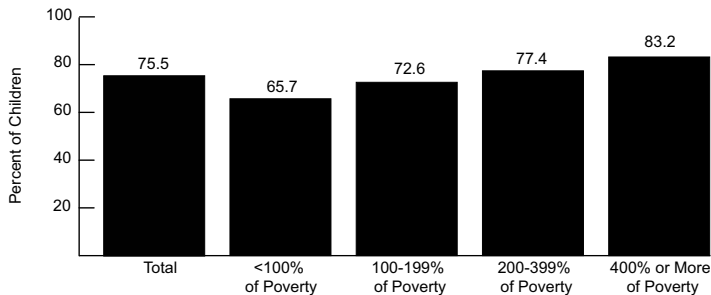
children aged 6 months to 5 years reported that their child was exclusively breastfed for at least the first 6 months of life. The rate of exclusive breastfeeding also varied by family income, with 10.6 percent of children with family incomes below 100 percent of the Federal poverty level being exclusively breastfed through 6 months, compared to 14.7 percent of children with family incomes of 400 percent or more of the Federal poverty level.

*1 U.S. Department of Health and Human Services. Benefits of breastfeeding. Available online: <http://www.womenshealth.gov/breastfeeding/benefits/>; accessed July, 2010.*

*2 American Academy of Pediatrics. Breastfeeding and the use of human milk. Pediatrics 2005 Feb;115(2):496-506.*

### Breastfeeding\* Among Children Aged 0–5 Years, by Poverty Level,\*\* 2007

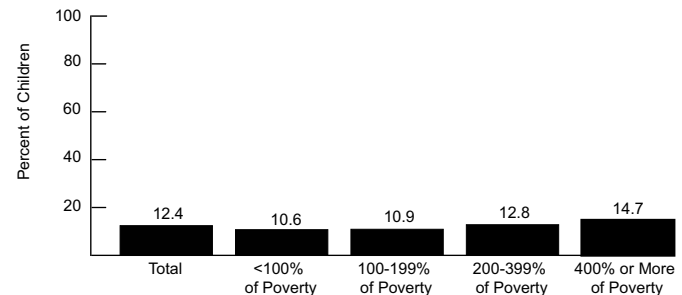
Source (I.7): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Ever fed breast milk. \*\* The U.S. Department of Health and Human Services establishes poverty guidelines for determining financial eligibility for Federal programs; the poverty level for a family of four was \$20,650 in 2007.

### Exclusive\* Breastfeeding Among Children Aged 6 Months to 5 Years, by Poverty Level,\*\* 2007

Source (I.7): 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 U.S. Department of Health and Human Services establishes poverty guidelines for determining financial eligibility for Federal programs; the poverty level for a family of four was \$20,650 in 2007.

## LOW BIRTH WEIGHT

Low birth weight is a leading cause of neonatal mortality (death before 28 days of age). Low birth weight infants are more likely to experience long-term disability or 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 2008; this rate was unchanged from the previous year. In 2006, the rate of low birth weight was the highest recorded in four decades (8.3 percent). The increase in multiple births, which are at high risk of low birth weight, strongly influenced this increase; however, rates of low birth weight also rose for singleton births.

In 2008, the rate of low birth weight was much higher among infants born to non-Hispanic Black women (13.7 percent) than infants born to mothers of other racial/ethnic groups. The second highest rate, which occurred among Asian/Pacific Islanders, was 8.2 percent, followed by a rate of 7.4 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 (7.0 percent). The low birth weight rate remained unchanged over the previous year for infants born to non-Hispanic White mothers, while the rate declined for infants born to non-

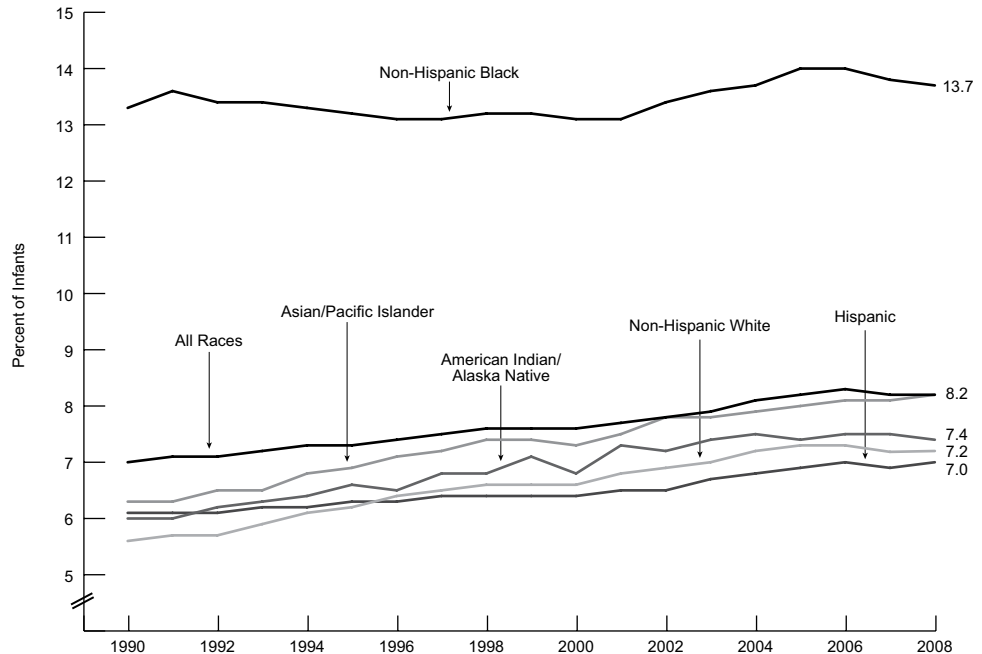
Hispanic Black and American Indian/Alaska Native mothers and increased for infants born to Hispanic and Asian/Pacific Islander mothers.

Low birth weight also varied by maternal age. In 2007 (the latest year for which data are available), the rate of low birth weight was highest among babies born to women younger than 15

years of age (12.4 percent), followed by babies born to women aged 40–54 years (11.5 percent). The lowest rates occurred among babies born to mothers aged 25–29 years and 30–34 years (7.4 and 7.6 percent, respectively; data not shown).

### Low Birth Weight Among Infants, by Maternal Race/Ethnicity, 1990–2008\*

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



\*Data for 2008 are preliminary.



## VERY LOW BIRTH WEIGHT

According to preliminary data, 1.5 percent of infants were born very low birth weight (less than 1,500 grams, or 3 pounds 4 ounces) in 2008. The proportion of very low birth weight infants has slowly climbed from just over 1 percent in 1980.

Infants born at such low weight 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 times more likely than infants born to mothers of other racial/ethnic groups to be very low birth weight. Among infants born to non-Hispanic Black women, 3.0 percent were very low birth weight in 2008, compared to 1.2 percent of infants born to non-Hispanic White, Hispanic, and Asian/Pacific Islander women and 1.3 percent of American Indian/Alaska Native women. This difference is a major contributor to the disparity in infant mortality rates between non-Hispanic Black infants and infants of other racial/ethnic groups. However, non-Hispanic Black infants were the

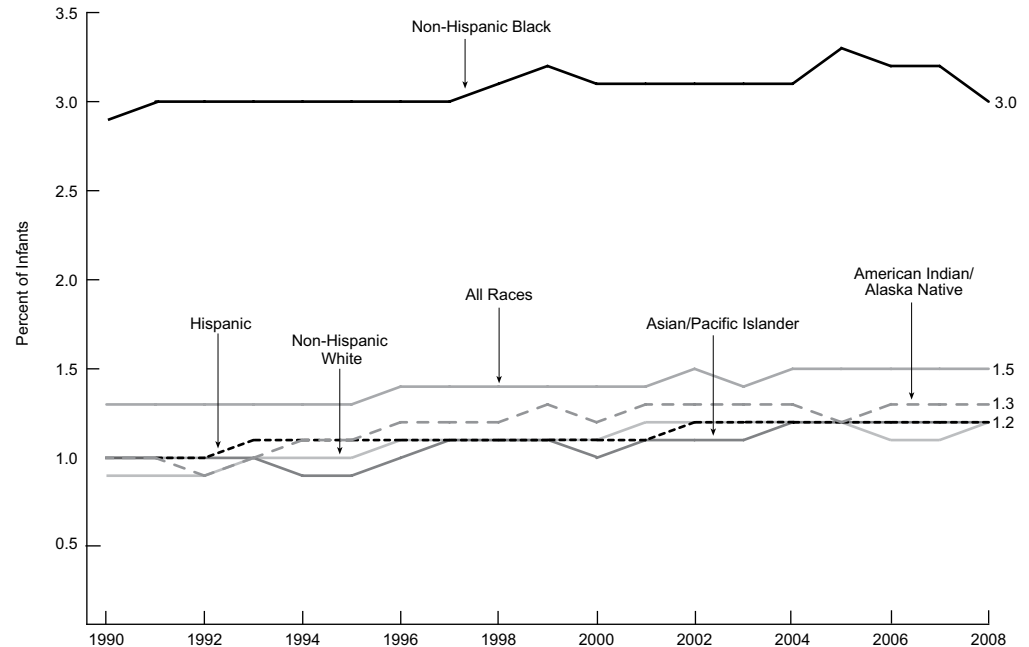
only racial/ethnic group to see a drop in very low birth weight between 2007 and 2008; the rates for all other racial/ethnic groups remained largely unchanged.

In 2007 (the latest year for which data are available), the rate of very low birth weight was

highest among babies born to mothers under 15 years of age (2.8 percent), followed by mothers aged 45–54 years (2.2 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, 1990–2008\*

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



\*Data for 2008 are preliminary.

## PRETERM BIRTH

Babies born preterm, before 37 completed weeks of gestation, are at increased risk of immediate and long-term complications, as well as mortality. Complications that occur during the newborn period can include respiratory distress, jaundice, anemia, and infection, while long-term complications can include learning and behavioral problems, cerebral palsy, lung problems, and vision and hearing loss. Although the risk of complications is greatest among those babies who are born the earliest, even those babies born “late preterm” (34 to 36 weeks’ ges-

tation) are more likely than full-term babies to experience complications.<sup>1</sup>

According to preliminary data, 12.3 percent of infants were born preterm in 2008. Overall, 8.8 percent of babies were born at 34 to 36 weeks’ gestation, 1.6 percent were born at 32–33 weeks, and 2.0 percent were “very preterm” (less than 32 weeks). The preterm birth rate increased more than 20 percent from 1990 to 2006, and has declined in the two years since (data not shown).

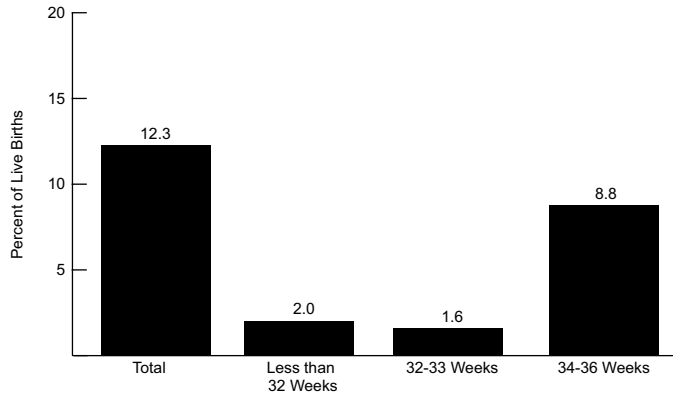
The preterm birth rate varies by race/ethnicity. In 2008, 17.5 percent of babies born to

non-Hispanic Black women were born preterm, compared to 10.7 percent of babies born to Asian/Pacific Islander women. Among babies born to non-Hispanic White women, 11.1 percent were born preterm, while the same was true of 12.1 percent of babies born to Hispanic women and 13.6 percent of babies born to American Indian/Alaska native women.

*1 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Reproductive Health. Prematurity. November 2009. Available online: <http://www.cdc.gov/Features/PrematureBirth/>; accessed September 2010.*

### Preterm Birth Among Infants, by Completed Weeks of Gestation, 2008\*

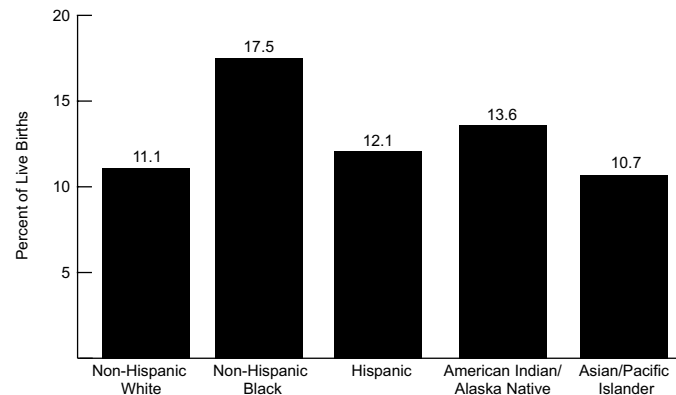
Source (I.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Preliminary data.

### Preterm Birth Among Infants, by Maternal Race/Ethnicity, 2008\*

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



\*Preliminary data.

## MATERNAL MORTALITY

The rate of maternal mortality in the United States declined dramatically over the last century; however, there has been some reversal of this trend in the last several decades. In 2007, the maternal mortality rate was 12.7 deaths per 100,000 live births, compared to a low of 6.6 per 100,000 in 1987. Some of this increase may be due to changes in the coding and classification of maternal deaths.

In 2007, a total of 548 women were reported to have died of maternal causes. This includes

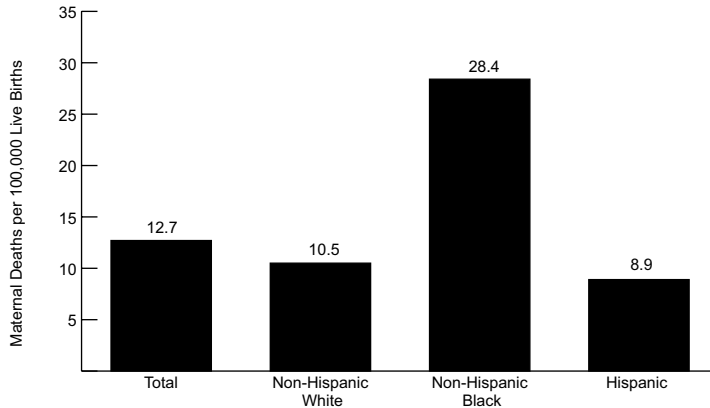
only those deaths due to causes related to or aggravated by pregnancy or pregnancy management, and excludes deaths occurring more than 42 days after the end of the pregnancy and deaths of pregnant women due to external causes (such as injury). The maternal mortality rate among non-Hispanic Black women was 2.7 times the rate for non-Hispanic White women (28.4 versus 10.5 per 100,000).

Causes of maternal death are classified as direct, indirect, or unspecified. Some of the most common direct causes are complications

related to the puerperium, or period immediately after delivery (2.2 per 100,000), eclampsia and pre-eclampsia (1.5 per 100,000), hemorrhage of pregnancy, childbirth, and placenta previa (0.9 per 100,000), and pregnancy with abortive outcome (0.5 per 100,000). Indirect causes occurred at a rate of 3.1 per 100,000, and comprised deaths from pre-existing conditions complicated by pregnancy. The rate of maternal deaths from unspecified causes was 0.5 per 100,000.

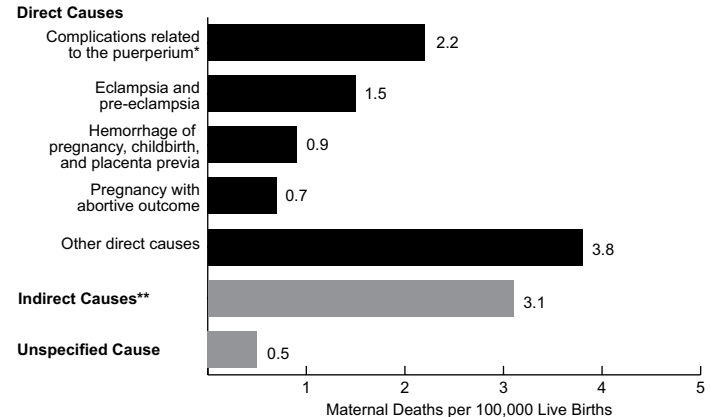
### Maternal Mortality Rates, by Race/Ethnicity, 2007

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



### Leading Causes of Maternal Mortality, 2007

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



\*Deaths occurring in the period immediately after delivery. \*\*Deaths from pre-existing conditions complicated by pregnancy.

## INFANT MORTALITY

In 2007, 29,138 infants died before their first birthday, representing an infant mortality rate of 6.8 deaths per 1,000 live births; this is essentially unchanged from the previous year. The leading cause of infant mortality was congenital malformations, which accounted for approximately 20 percent of deaths, followed by disorders related to short gestation and low birth weight, which accounted for almost 17 percent of deaths (data not shown).

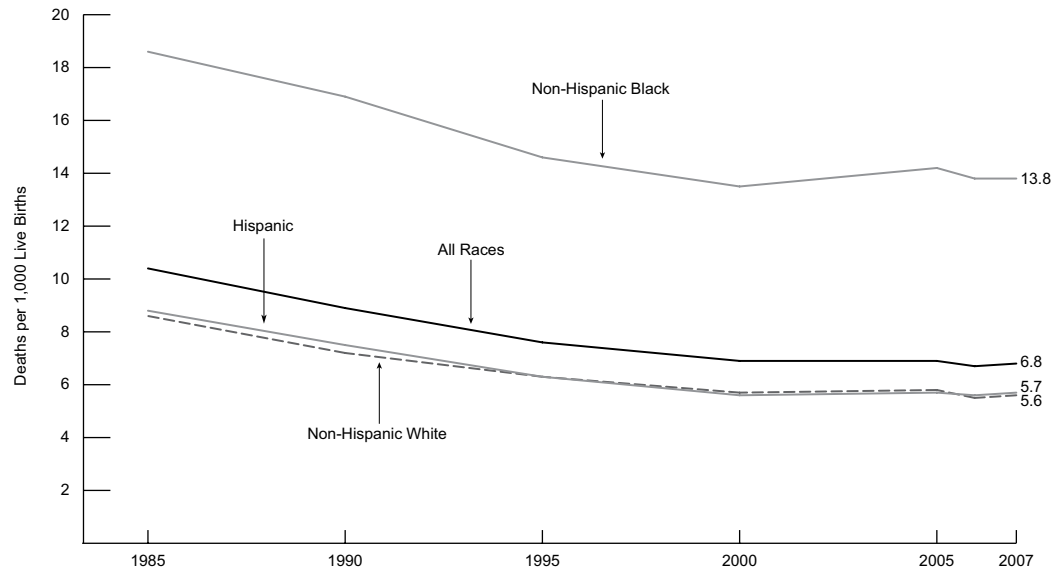
The infant mortality rate began a substantial decline in the late 19th and early 20th century. Some factors in this early decline included economic growth, improved nutrition, new sanitary measures, and advances in knowledge about infant care. More recent advances in knowledge that contributed to a continued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

In 2007, the mortality rate among infants born to non-Hispanic Black women was 13.8 deaths per 1,000 live births. This is nearly two and one-half times the rate among infants born to non-Hispanic White and Hispanic women (5.6 and 5.7 per 1,000, respectively). Although the infant mortality rates among both non-Hispanic 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 Health 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, 1985–2007

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



\*Under 1 year of age.

## NEONATAL AND POSTNEONATAL MORTALITY

**Neonatal.** In 2007, 19,058 infants died before reaching 28 days of age, representing a neonatal mortality rate of 4.4 deaths per 1,000 live births. Although this is a slightly lower rate than the previous year (4.5 per 1,000), the change was not statistically significant.

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.

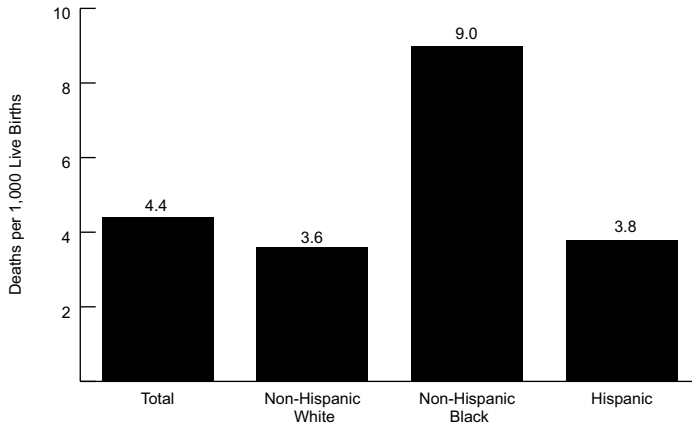
Neonatal mortality rates vary by race and ethnicity. In 2007, the neonatal mortality rate among infants born to non-Hispanic Black women was 9.0 per 1,000 live births, more than twice the rate among infants born to non-Hispanic White and Hispanic women (3.6 and 3.8 per 1,000, respectively).

**Postneonatal.** In 2007, 10,080 infants died between the ages of 28 days and 1 year, representing a postneonatal mortality rate of 2.3 deaths per 1,000 live births. This is slightly higher than the rate of 2.2 deaths per 1,000 reported in 2006.

Postneonatal mortality is generally related to Sudden Infant Death Syndrome (SIDS), congenital malformations, and unintentional injuries. Postneonatal mortality varies by race and ethnicity. In 2007, the highest rate of postneonatal mortality was reported among infants born to non-Hispanic Black women (4.8 per 1,000). Rates for infants born to non-Hispanic White and Hispanic women were 2.0 and 1.9 per 1,000, respectively.

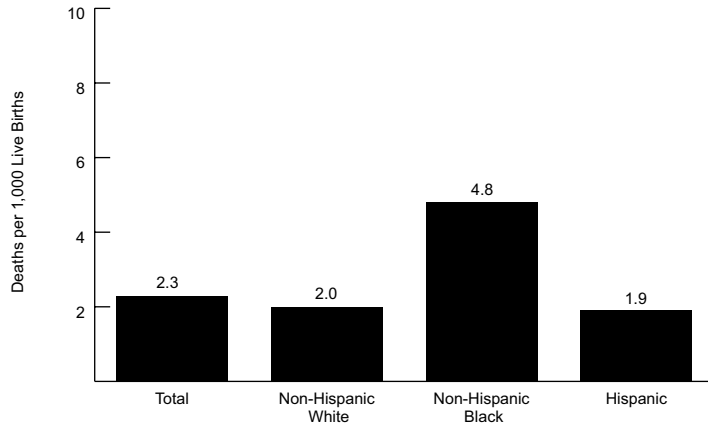
### Neonatal Mortality Rates, by Maternal Race/Ethnicity, 2007

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



### Postneonatal Mortality Rates, by Maternal Race/Ethnicity, 2007

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



## INTERNATIONAL INFANT MORTALITY

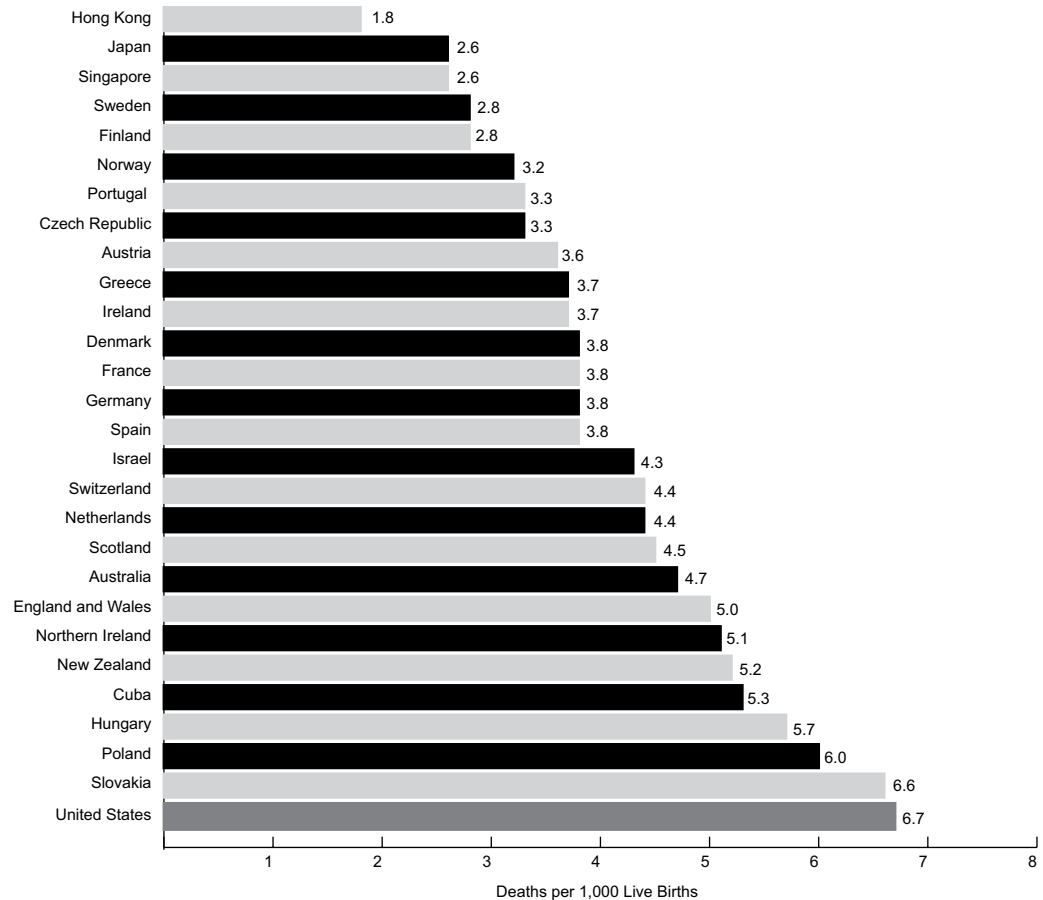
In 2006, the U.S. infant mortality rate (6.7 infant deaths per 1,000 live births) was higher than that of many other industrialized nations. This represents a slight decrease from the rate of 6.9 per 1,000 in 2005, and is considerably less than the rate of 26.0 per 1,000 reported in 1960.

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 and the medical technology available to infants after birth. However, some of these differences may be due, in part, to the international variation in the definition, reporting, and measurement of fetal and infant deaths.

In 2006, the U.S. infant mortality rate was more than twice that of eight other industrialized countries (Hong Kong, Japan, Singapore, Sweden, Finland, Norway, Portugal, and Czech Republic). Hong Kong had the lowest rate (1.8 per 1,000), followed by Japan and Singapore (2.6 per 1,000).

## International Infant Mortality Rates, Selected Countries, 2006

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





**HEALTH STATUS - CHILDREN**



## VACCINE-PREVENTABLE DISEASES

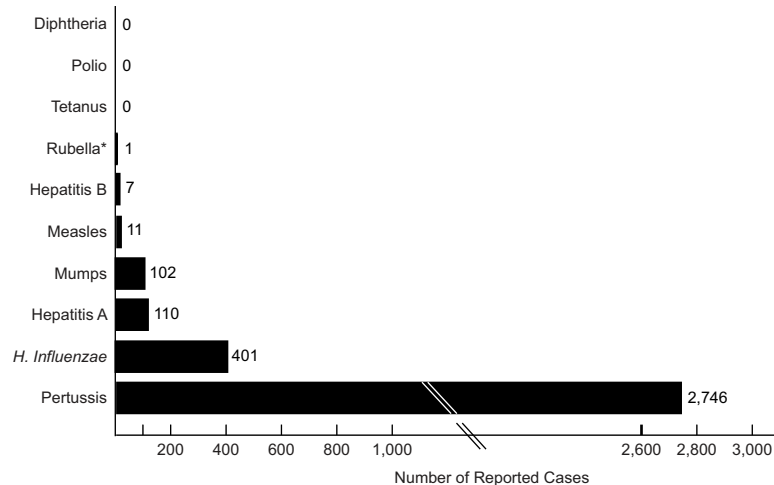
The number of reported cases of vaccine-preventable diseases has generally decreased over the past several decades. In 2007, there were no reported cases of diphtheria or polio in the United States, and no cases of tetanus among children under 5 years of age. Among children in this age group, there were no reported cases of acquired rubella and only one case of congenital rubella.

From 2006 to 2007, the number of reported cases of hepatitis A, pertussis, and mumps 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 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. With regard to pertussis, the number of cases among young children decreased nearly 50 percent from 2005 to 2006, with a smaller increase of 18 percent from 2006 to 2007. According to the CDC, pertussis occurs cyclically and decreases in the incidence of the disease may not be due to increases in

immunization rates. The highest reported rate occurred among infants under 6 months of age, a population that is too young to be fully vaccinated. Following a 2006 outbreak in Midwestern states — the largest in more than 20 years — reported cases of mumps decreased 72 percent. In response to the outbreak, the CDC updated criteria for mumps immunity and vaccination recommendations. Reported cases of hepatitis B and *H. Influenzae* remained relatively unchanged from 2006 to 2007.

### Reported Cases of Selected Vaccine-Preventable Diseases Among Children Aged 0–4 Years, 2007

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



\*Congenital Rubella



## PEDIATRIC HIV AND AIDS

Human immunodeficiency virus (HIV) is a disease that destroys cells that are critical to a healthy immune system. Acquired immunodeficiency syndrome (AIDS) is diagnosed when HIV has weakened the immune system enough that the body has difficulty fighting disease and infections. In 2008, an estimated 182 children younger than 13 years of age were diagnosed with HIV<sup>1</sup>, and 41 were reported to have AIDS.

Racial and ethnic minorities are disproportionately affected by HIV. In 2008, four times as many HIV cases were reported among non-

Hispanic Black children as among non-Hispanic White Children (121 and 32 cases, respectively). Non-Hispanic Black children accounted for over 65 percent of cases, but represent only about 15 percent of the total U.S. population in this age group.

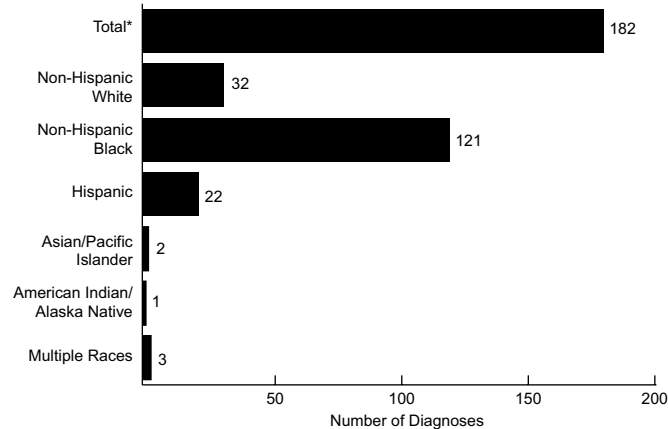
The number of new pediatric AIDS cases has declined substantially since 1992, when an estimated 894 new cases were reported. A major factor in this decline is the increasing use of antiretroviral therapy before, during, and after pregnancy to reduce perinatal transmission of HIV. In addition, the Centers for Disease Con-

trol and Prevention released new educational materials and other resources in 2004 to promote universal prenatal HIV testing. Through 2008, an estimated 9,349 AIDS cases have occurred in children younger than 13 years of age in the United States. Pediatric AIDS cases represent less than one percent of the more than one million U.S. cases ever reported.

*1 Includes persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis; therefore, this includes persons who are first diagnosed with HIV at the same time they are diagnosed with AIDS.*

### Estimated Number of Diagnoses of HIV Among Children Under Age 13, by Race/Ethnicity, 2008

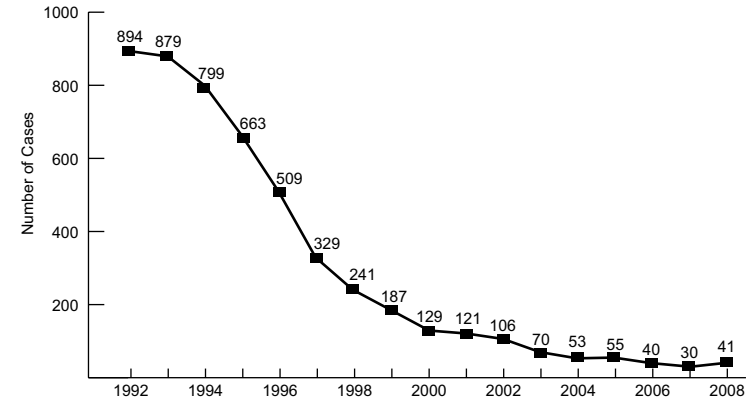
Source (II.5): Centers for Disease Control and Prevention, HIV/AIDS Surveillance System



\*The total was estimated independently of the values for each subpopulation; therefore, the sum of all races/ethnicities does not equal the overall total.

### Estimated Number of AIDS Cases in Children Under Age 13, by Year of Diagnosis, 1992–2008

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



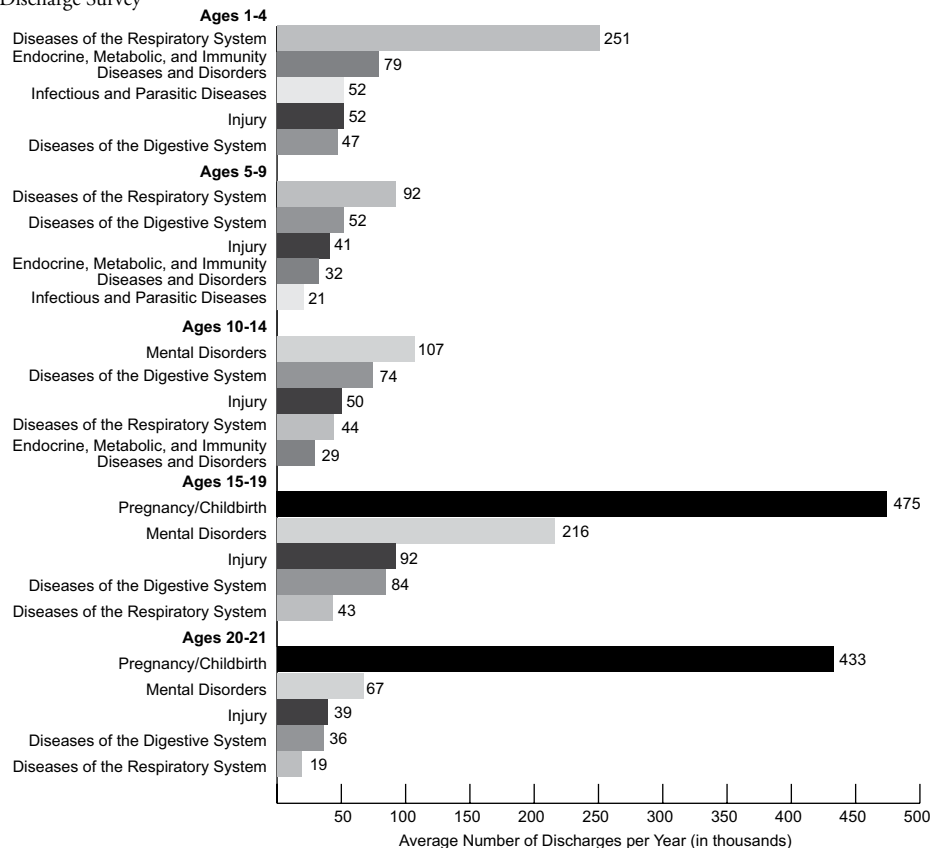
## HOSPITALIZATION

In 2006, there were nearly 3.5 million hospital discharges among people aged 1–21 years, equaling 4.0 hospital discharges per 100 children. While injuries are the leading cause of death among this age group, they were not the most common cause of hospitalization. In 2005–2006, diseases of the respiratory system were the most common cause of hospitalization among 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 (24 percent of discharges), and pregnancy and childbirth was the most common cause of hospitalization for adolescents aged 15–19 years and young adults aged 20–21 years (42 and 64 percent of discharges, respectively).

Between 1990 and 2006, hospital discharge rates for children aged 1–14 years declined by almost 14 percent, which reflects decreases in several of the most common causes of hospitalization. Discharge rates for diseases of the respiratory system declined 26.4 percent, discharges due to injury declined 34.2 percent, and discharges for diseases of the digestive system declined 19.0 percent. The rate of discharges due to endocrine, metabolic, and immunity diseases and disorders, however, increased 36.8 percent. This category of diseases and conditions includes thyroid gland disorders, diabetes, nutritional deficiencies, and overweight and obesity (data not shown).

### 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



## AUTISM SPECTRUM DISORDER

In 2007, the parents of 1.0 percent of children reported that their child had been diagnosed with an autism spectrum disorder (ASD) and that they currently had the disorder. ASD includes a range of diagnoses, including Asperger's Syndrome, autism, and Pervasive Developmental Disorder (PDD). Children with autism have delays in language, communication, and social skills, while children with Asperger's disorder have impaired social skills but do not have speech or language delays. They often have an intense interest in a single subject or topic as well. Children with PDD have severe and per-

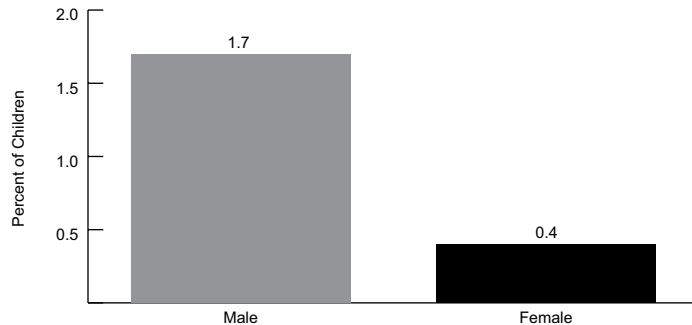
sistent delays in language, communication, and social skills.

Autism spectrum disorders are four times more common among males than females. In 2007, 1.7 percent of male children were reported by parents to have an ASD, compared to 0.4 percent of female children. There is also a racial/ethnic disparity in the prevalence of ASD. The parents of 1.2 percent of non-Hispanic White children reported that their child had an ASD in 2007, compared to 1.0 percent of Hispanic children, and 0.6 percent of non-Hispanic Black children.

In 2007, the parents of 0.6 percent of children reported that their child had been diagnosed with an ASD in the past but that the child did not currently have the condition. This varied by race/ethnicity, with 0.3 percent of Hispanic children, 0.6 percent of non-Hispanic White children, and 1.2 percent of non-Hispanic Black children having a previous, but not current, ASD diagnosis (data not shown).

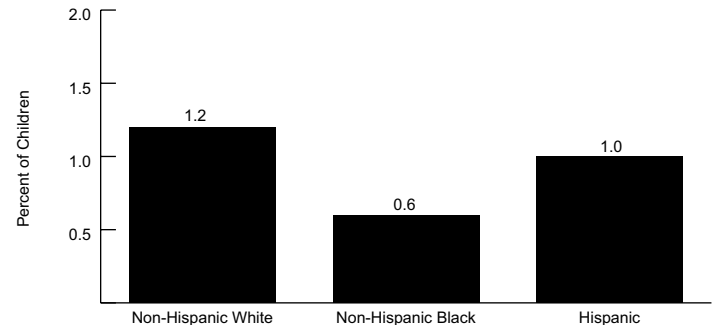
### Prevalence of Autism Spectrum Disorders Among Children Aged 2-17 Years, by Sex, 2007

Source (I.7): 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



### Prevalence of Autism Spectrum Disorders Among Children Aged 2-17 Years, by Race/Ethnicity, 2007

Source (I.7): 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



## ABUSE AND NEGLECT

State child protective services (CPS) agencies received approximately 3.2 million referrals, involving an estimated 5.8 million children, alleging abuse or neglect in 2007. More than half of these reports were made by community professionals, such as teachers and other educational personnel, police officers, medical personnel, and childcare providers.

Investigations determined that an estimated 794,000 children were victims of abuse or neglect in 2007, equaling a victimization rate of 10.6 per 1,000 children in the population. Neglect was the most common type of maltreatment

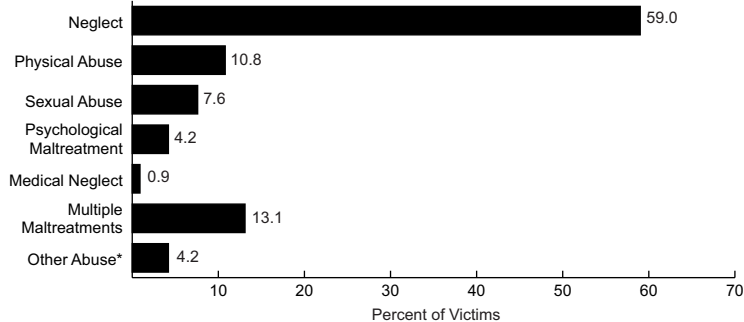
(experienced by 59.0 percent of victims), followed by physical abuse (10.8 percent), and sexual abuse (7.6 percent). Less common types of documented abuse included psychological maltreatment, medical neglect, and categories of abuse defined by specific State laws and policies. Multiple types of maltreatment were suffered by 13.1 percent of victims.

Victimization rates were highest among young children. In 2007, the rate of victimization among children under 1 year of age was 22.2 per 1,000 among boys and 21.5 per 1,000 among girls; the rate declined steadily with increasing age (data not shown). Younger chil-

dren were more likely than older children to be victims of neglect, while older children were more likely to be physically or sexually abused. Overall, 80 percent of perpetrators of abuse or neglect were parents of the victim (either alone or in conjunction with another person). Additional categories of perpetrators included other relatives (4.8 percent), unmarried partners of parents (2.6 percent), and professionals such as childcare workers and residential facility staff (0.8 percent). Other types of perpetrators included foster parents, friends and neighbors, and legal guardians.

### Abuse and Neglect Among Children Under Age 18, by Type of Maltreatment, 2007

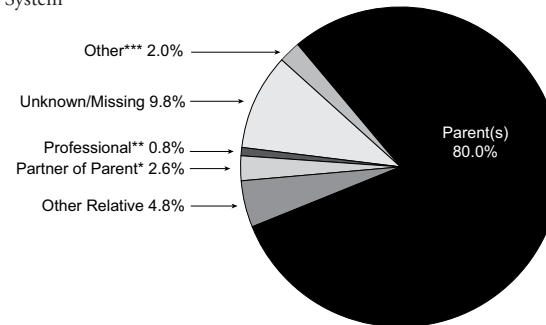
Source (II.7): Administration for Children and Families, National Child Abuse and Neglect Data System



\*Any maltreatment type that does not fall into one of the first five categories; can include abandonment, threats of harm, and congenital drug addiction.

### Perpetrators of Child Abuse and Neglect, by Relationship to Victim, 2007

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



\*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. \*\*\*Includes foster parents, friends or neighbors, legal guardians, and multiple nonparental perpetrators.

## CHILD MORTALITY

In 2007, 10,850 children aged 1 to 14 years died of various causes, which was an increase of 70 cases over the previous year. The overall mortality rate among children aged 1 to 4 years was 28.6 per 100,000 children in that age group, and the rate among children aged 5 to 14 years was 15.3 per 100,000 (data not shown).

Unintentional injury continued to be the leading cause of death among children in both age groups, accounting for 34 percent of all deaths among 1- to 4-year-olds and 36 percent of deaths among 5- to 14-year-olds. Among 1- to 4-year-olds, drowning was the leading cause of unintentional injury death (accounting for 29 percent), followed by motor vehicle traffic (27 percent), fires or burns (13 percent), suffocation (9 percent), and pedestrian injuries (8 percent; data not shown). Among 5- to 14-year-olds, motor vehicle traffic was the leading cause of unintentional injury death (53 percent), followed by drowning (10 percent), fires or burns (10 percent), land transport crashes (such as off-road vehicles, 6 percent), and suffocation (5 percent; data not shown). Congenital anomalies (birth defects), homicide, malignant neoplasms (cancer), and heart disease rounded out the top five leading causes of death for each age group, though in a different order for each.

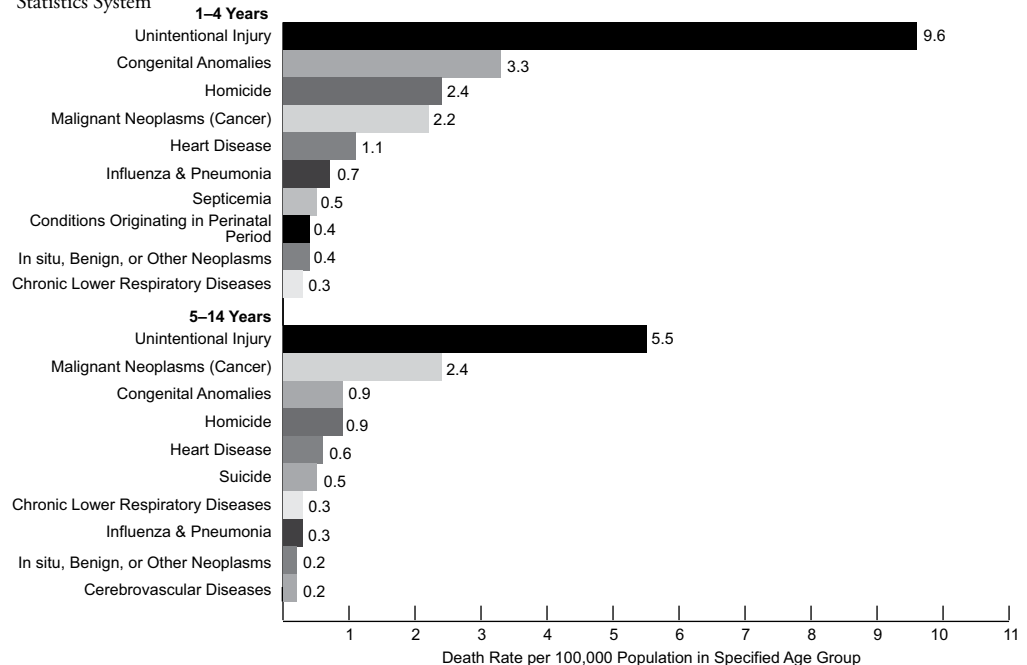
Mortality rates were higher among males than females in each age group. There are also

racial/ethnic disparities in child mortality, with non-Hispanic Black children experiencing higher mortality rates than children of other racial/ethnic groups. Among children aged 1 to 4 years, the rate was 43.7 per 100,000 for non-Hispanic Blacks, compared to rates of 26.0 and 25.5 per 100,000 for Hispanics and non-

Hispanic Whites, respectively. Among children aged 5 to 9 years, rates were 18.6 per 100,000 for non-Hispanic Blacks, 13.4 per 100,000 for Hispanics, and 12.7 for non-Hispanic Whites. Among children aged 10 to 14 years, rates were 24.6, 14.9, and 15.7 per 100,000, respectively (data not shown).

## Leading Causes of Death Among Children Aged 1–14, 2007

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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## SEXUAL ACTIVITY

In 2009, 46.0 percent of high school students reported ever having had sexual intercourse, while the remaining 54.0 percent were abstinent. Overall, 34.2 percent of students reported that they were currently sexually active (had intercourse during the three months preceding the survey): 20.9 percent of students were currently sexually active and used a condom during their last intercourse, while 13.3 percent of students were sexually active and did not use a condom during their last encounter. Sexual activity and condom use vary by race and ethnicity. In 2009, non-Hispanic Black students were most likely to report ever having sexual intercourse (65.2 percent), followed by

Hispanic students (46.0 percent). Non-Hispanic White students were most likely to report using a condom during their last sexual encounter (63.3 percent of those currently sexually active), followed by non-Hispanic Black students (62.4 percent; data not shown).

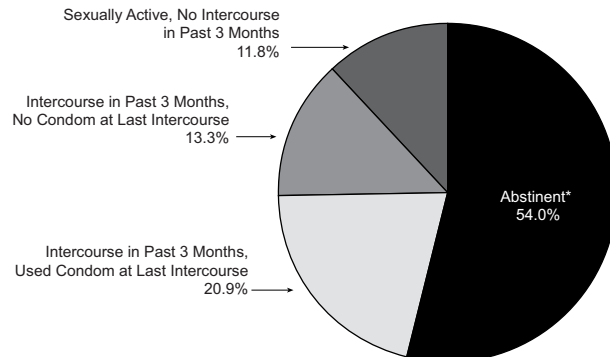
Sexual activity increases with grade level while condom use decreases. In 2009, 49.1 percent of 12th grade students reported being currently sexually active: 27.0 percent of students were sexually active and used a condom during their last intercourse, while 22.1 percent were sexually active and did not use a condom. In contrast, 13.7 percent of 9th grade students were currently sexually active and used a condom during last intercourse, while 7.7 percent

of students were sexually active and did not use a condom during their last encounter.

According to the School Health Policies and Programs Study, 58.8 percent of states required middle schools and 58.0 percent of states required high school to teach about pregnancy prevention in 2006. Of all schools, 75.8 percent of middle schools and 86.6 percent of high schools taught abstinence as the most effective method to avoid pregnancy, HIV, and other STDS, while 42.0 percent of middle schools and 65.4 percent of high schools taught about the efficacy of condoms. Only 21.0 percent of middle schools and 38.5 percent of high schools taught students about the correct use of a condom (data not shown).

### Sexual Activity Among High School Students, 2009

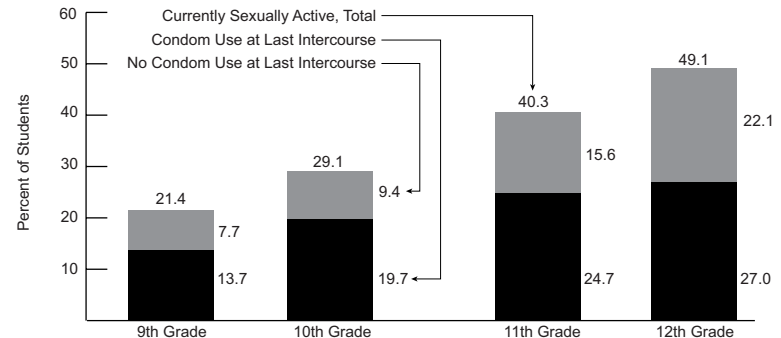
Source (II.9): Centers for Disease Control and Prevention, Youth Risk Behavior Surveillance System



\*Have never had sexual intercourse.

### Condom Use Among Currently Sexually Active\* High School Students, by Grade, 2009

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



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

## ADOLESCENT CHILDBEARING

According to preliminary data, the birth rate among adolescent females aged 15–19 years decreased to 41.5 per 1,000 females in this age group in 2008. This continues the general decline in teen birth rates since the most recent peak in 1991, when the rate was 61.8 per 1,000 females, and represents a decline of nearly 33 percent over that period. The birth rate among adolescents aged 10–14 years was 0.6 births per 1,000 females in this age group, representing a decrease of 57 percent since 1991. Teenage birth rates were highest among adolescents aged 18–19 years (70.7 per 1,000), and this age group

experienced the smallest decline since 1991 (25 percent; data not shown).

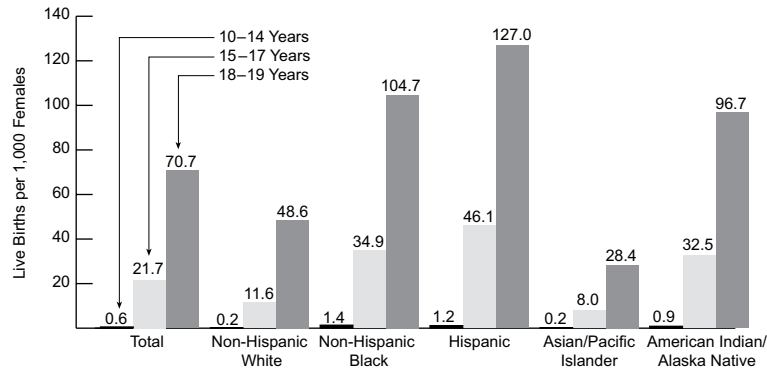
Teenage birth rates have historically varied considerably by race/ethnicity. Among adolescents aged 15–19 years, Asian/Pacific Islander females had the lowest birth rate in 2008 (16.2 per 1,000), followed by non-Hispanic White females (26.7 per 1,000). Birth rates for these groups have decreased 41 percent and 38 percent, respectively, since 1991. Hispanic females had the highest birth rate in this age group (77.4 per 1,000) in 2008, and the smallest decline since 1991 (26 percent). Non-Hispanic Black females had the second highest birth rate among

those aged 15–19 years (62.9 per 1,000), but the greatest decline since 1991 (47 percent).

Among adolescents aged 10–14 years, non-Hispanic Black females had the highest birth rate in 2008 (1.4 per 1,000), followed by Hispanic females (1.2 per 1,000). Non-Hispanic White and Asian/Pacific Islander females had the lowest birth rates among those aged 10–14 years (both 0.2 per 1,000).

### Birth Rates Among Adolescent Females Aged 10-19, by Age and Race/Ethnicity, 2008\*

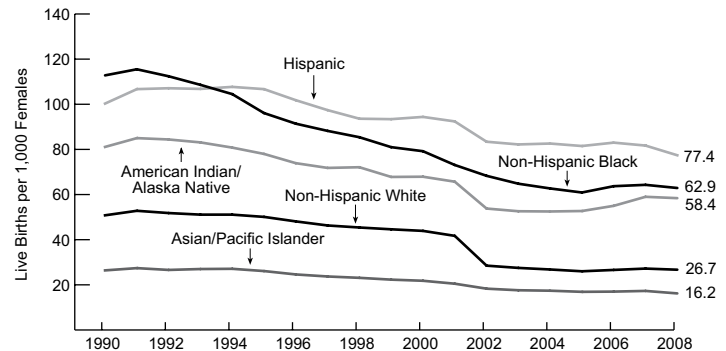
Source (I.8): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Preliminary data

### Birth Rates Among Adolescent Females Aged 15-19, by Race/Ethnicity, 1990-2008\*

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



\*Preliminary data



## 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 reportable STI among adolescents and young adults. Based on the number of cases reported to the Centers for Disease Control and Prevention (CDC), there were 1,956 chlamydial infections per 100,000 adolescents and 2,084 infections per 100,000 young adults in 2008. Rates were highest among non-Hispanic Blacks, followed by American Indian/Alaska

Natives. Rates of gonorrhea were 453 and 518 per 100,000 adolescents and young adults, respectively, and were also highest among non-Hispanic Black 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 approximately one-quarter of females aged 14–19 years and nearly 45 percent of those aged 20–24 years are infected with HPV.<sup>1</sup> There are many types of HPV, some of which can cause cancer. Although cervical cancer in women is the most serious health problem caused by HPV, routine Pap tests and follow-up care have greatly reduced the incidence of and mortality

rate from cervical cancer. 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 2008, 37.2 percent of females aged 13–17 years had received at least one dose of the three-dose series.<sup>3</sup>

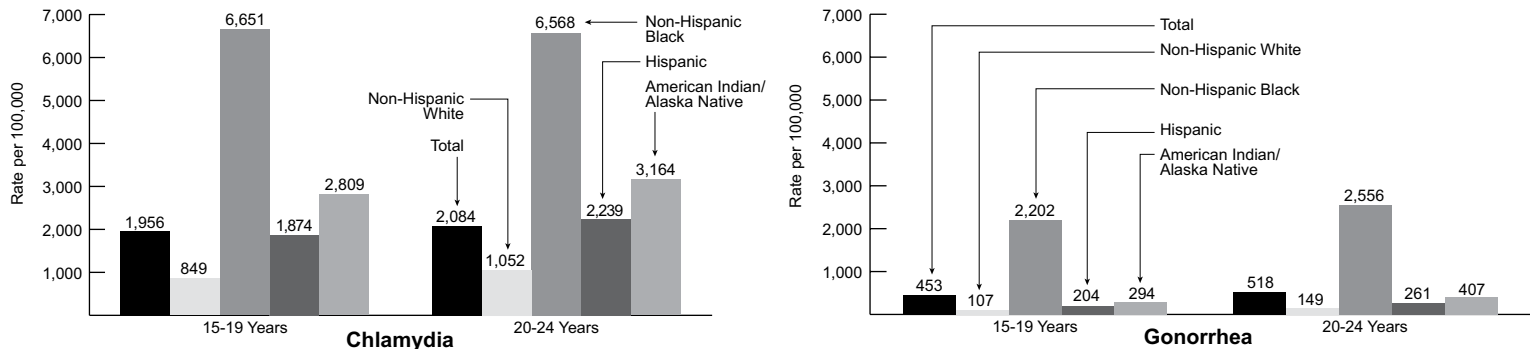
1 Dunne EF, Unger ER, Sternberg M, McQuillan G, Swan DC, Patel SS, Markowitz LE. Prevalence of HPV infection among females in the United States. *JAMA*. 2007 Feb;297(8):876-8.

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>, accessed 12/09.

3 Centers for Disease Control and Prevention. National, state, and local area vaccination coverage among adolescents aged 13–17 years—United States, 2008. *MMWR* 2009;58:997-8.

### Reported Sexually Transmitted Infections Among Adolescents and Young Adults, by Age and Race/Ethnicity, 2008

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



## ADOLESCENT AND YOUNG ADULT HIV AND AIDS

Human immunodeficiency virus (HIV) is a disease that destroys cells that are critical to a healthy immune system. Acquired immunodeficiency syndrome (AIDS) is diagnosed when HIV has weakened the immune system enough that the body has difficulty fighting disease and infections. In 2007, an estimated 6,524 people aged 13–24 years were diagnosed with HIV,<sup>1</sup> representing 16 percent of all cases. While the number of HIV diagnoses among children aged 13–14 years fluctuates from year to year, the number of diagnoses in the older age groups has increased steadily over the past several years. Between 2005 and 2007, estimated cases among adolescents aged 15–19 years increased by 35 percent and cases among young adults aged 20–24 years increased 18 percent.

In 2007, an estimated 226 adolescents and young adults died with an AIDS diagnosis, representing 1.3 percent of all deaths among persons with AIDS. Since the beginning of the epidemic, an estimated 10,450 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.

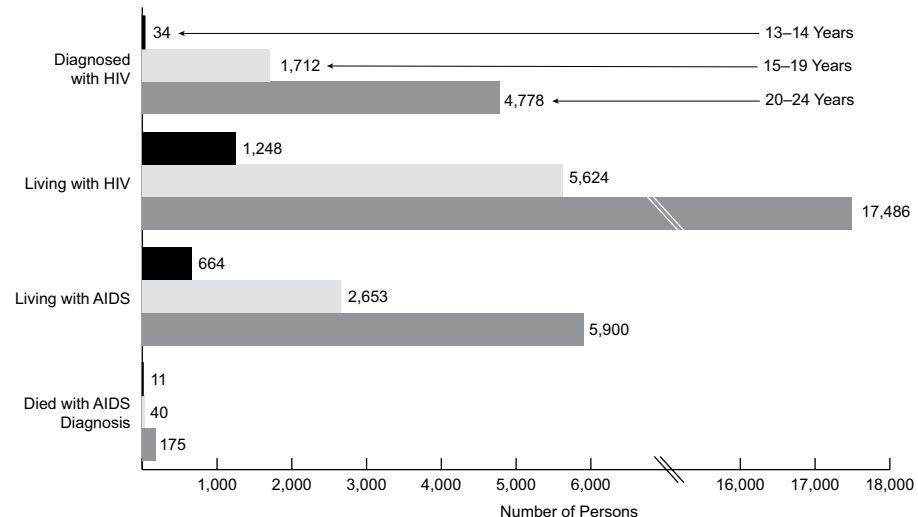
Given the increase in diagnoses of HIV and the decrease in deaths, the number of people

living with HIV has increased. In 2007, an estimated 24,358 people aged 13–24 years were living with HIV, representing 4.2 percent of all cases. Overall, the number of adolescents and young adults living with HIV has increased 15 percent since 2005.

*1 Includes persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis; therefore, this includes persons who are first diagnosed with HIV at the same time they are diagnosed with AIDS.*

### Selected Data on HIV and AIDS among Adolescents and Young Adults, by Age, 2007

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



## OVERWEIGHT AND OBESITY

Body mass index (BMI) is the ratio of weight to height, which is used to define overweight and obesity. In children, BMI is used in conjunction with age and sex, since both of these factors affect body composition. Children who fall between the 85th and 94th percentile of BMI-for-age are considered overweight, while children who are in the 95th percentile or above are considered obese. In 2007, 15.3 percent of children aged 10–17 years were overweight and 16.4 percent were obese, based on parent-reported height and weight. Obesity is a serious health concern for children—obese children are more likely to have risk factors for cardiovascular disease, such as high blood pressure,

high cholesterol, and Type 2 diabetes. Obese children are also at increased risk of obesity in adulthood, which is associated with a host of serious health consequences.<sup>1</sup>

Overweight and obesity among children varies by a number of factors. Non-Hispanic White children experience obesity at almost half the rate of non-Hispanic Black and Hispanic children. In 2007, 12.9 percent of non-Hispanic White children aged 10–17 years were obese, compared to 23.4 percent of Hispanic children and 23.8 percent of non-Hispanic Black children. Rates of overweight were more comparable among the three groups, between 14 and 18 percent.

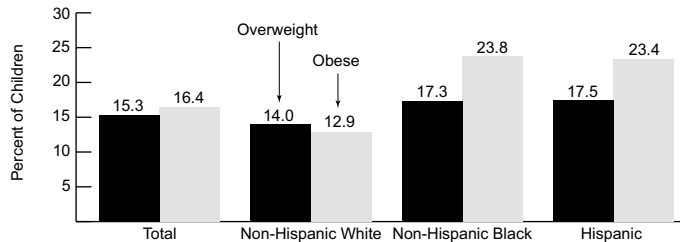
Low family income is also strongly associated

with overweight and obesity. In 2007, 27.2 percent of children living with household incomes below 100 percent of the Federal poverty level (\$20,650 for a family of four in 2007) were obese, compared to only 9.8 percent of children living in households with incomes of 400 percent or more of the Federal poverty level. The pattern was similar, though not as dramatic, for overweight: 17.6 percent of children living in households with incomes below 100 percent of poverty were overweight, compared to 12.3 percent of children living in households with incomes of 400 percent of poverty or above.

*1 Centers for Disease Control and Prevention. Childhood overweight and obesity. Available online: <http://www.cdc.gov/obesity/childhood/index.html>; accessed February 2010.*

### Overweight and Obesity\* Among Children Aged 10–17 Years, by Race/Ethnicity, 2007

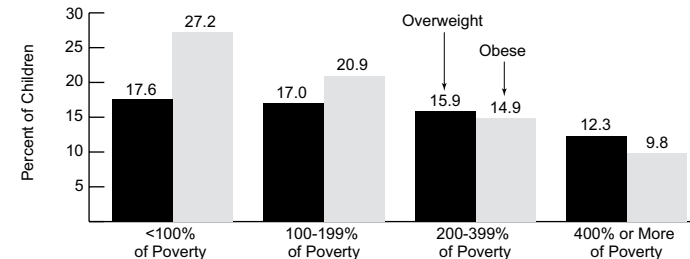
Source (1.7): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Overweight is a BMI-for-age between the 85th and 94th percentile, and obesity is a BMI-for-age in the 95th percentile or above; based on parent-reported height and weight.

### Overweight and Obesity\* Among Children Aged 10–17 Years, by Poverty Level,\*\* 2007

Source (1.7): 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



\*Overweight is a BMI-for-age between the 85th and 94th percentile, and obesity is a BMI-for-age in the 95th percentile or above; based on parent-reported height and weight. \*\*The U.S. Department of Health and Human Services establishes poverty guidelines for determining financial eligibility for Federal programs; the poverty level for a family of four was \$20,650 in 2007.

## PHYSICAL ACTIVITY

Results from the Youth Risk Behavior Surveillance System show that 18.4 percent of high school students met currently recommended levels of physical activity in 2009. The U.S. Department of Health and Human Services updated its physical activity guidelines in 2008, recommending that children and adolescents get one hour or more of physical activity every day, most of which should be moderate- to vigorous-intensity aerobic activity. Non-Hispanic White students were the most likely to report 60 minutes of physical activity that increased heart rate and made them breathe hard on each of the previous 7 days (19.7 percent), followed by non-Hispanic Black students (17.2 percent); Hispanic students were least likely to meet recommended levels (15.6 percent). Students were more likely to report being active on five or more days in the past week (39.9 percent). Overall, 23.1 percent of students did not participate in 60 or more minutes of physical activity on any day in the preceding week.

Nationwide, 56.4 percent of high school students attended physical education (PE) classes at least one day per week in 2009. The rate drops dramatically with increasing grade: 72.4 percent of 9th grade students attended PE class, compared to 43.8 percent of 12th grade students. The percentage of students attending daily PE classes has dropped from 42.0 percent in 1991

to 33.3 percent in 2009. Hispanic students were most likely to attend daily PE classes (40.5 percent), followed by non-Hispanic Black students (37.0 percent); non-Hispanic White students were least likely to attend daily PE classes (30.6 percent; data not shown).

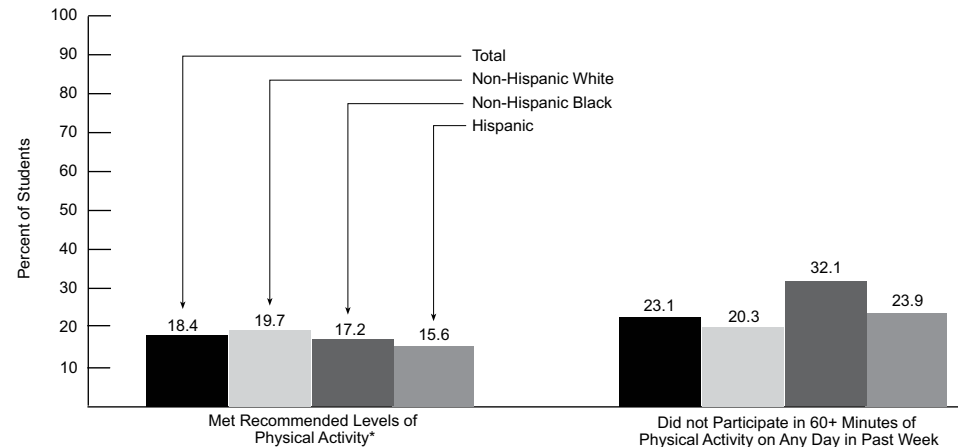
In 2009, 58.3 percent of high school students reported playing on at least one sports team in the past year. This was also more common among younger children than older children (61.6 percent of 9th graders compared to 51.1 percent of 12th graders). High school students were also asked about sedentary 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 32.8 percent reported watching television for 3 or more hours on an average school day (data not shown).

The *Let's Move!* campaign is working to combat childhood obesity through a comprehensive approach that provides schools, families and communities with simple tools to help kids be more active, eat better, and get healthy (<http://www.letsmove.gov>).

### Physical Activity Among High School Students, by Race/Ethnicity, 2009

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 each of the preceding 7 days.



## MENTAL HEALTH

In 2008, 8.3 percent of adolescents aged 12–17 years experienced at least one major depressive episode (MDE), which is defined as having at least 2 weeks of a depressed mood or loss of interest or 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 MDE (12.4 percent versus 4.3 percent). For both sexes, occurrence of MDE generally increased with age,

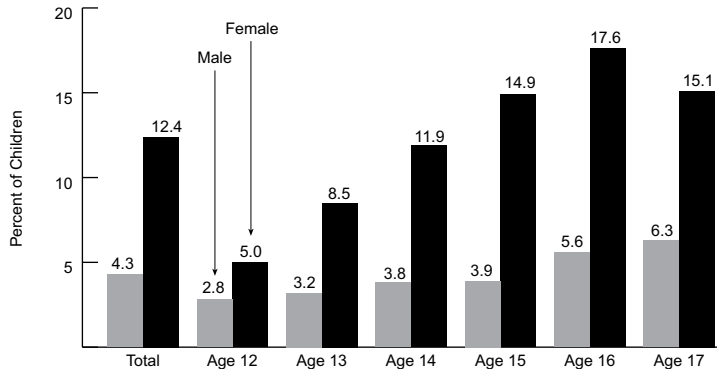
with the rate for males peaking at 17 years of age (6.3 percent), and the rate for females peaking at 16 years of age (17.6 percent). Adolescents of two or more races were most likely to experience MDE (12.0 percent), followed by American Indian/Alaska Natives (10.1 percent). Among adolescents with MDE in the past year, 37.7 percent received treatment (data not shown).

In 2008, 12.7 percent of adolescents aged 12–17 years received treatment or counseling for an emotional or behavioral problem (not including drug or alcohol use). Among those who

received treatment, depression was the most commonly reported problem (48.6 percent). Adolescents also commonly reported receiving treatment for problems with home or family (28.9 percent), breaking rules or acting out (25.7 percent), and feeling very afraid or tense (20.4 percent).

### Experience of at Least One Major Depressive Episode (MDE)\* in the Past Year Among Adolescents Aged 12–17 Years, by Age and Gender, 2008

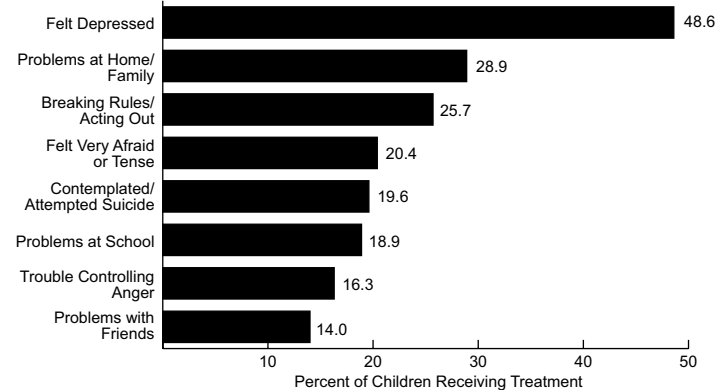
Source (II.11): Substance Abuse and Mental Health Service Administration, National Survey of Drug Use and Health



\*MDE is defined as at least 2 weeks of depressed mood or loss of interest in daily activities, plus a majority of specified depression symptoms.

### Commonly Reported Reasons for Receiving Mental Health Treatment\* Among Adolescents Aged 12–17 Years Who Received Treatment, 2008

Source (II.11): 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

Cigarette smoking among adolescents declined between 2007 and 2008, according to the annual Monitoring the Future study. The largest decrease occurred among students in 10th grade, with the percentage of students who had smoked any cigarettes in the past 30 days falling from 14.0 in 2007 to 12.3 percent in 2008. Cigarette smoking in the past 30 days also decreased among 12th grade students, falling from 21.6 to 20.4 percent, and among 8th grade students, falling from 7.1 to 6.8 percent.

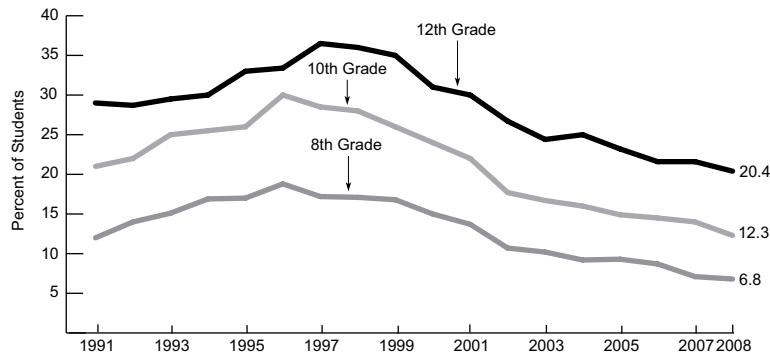
The percent of teens reporting smoking in the past month began a rapid increase in the

early 1990s, with the rates among 8th and 10th grade students reaching a peak in 1996 (at 21.0 and 30.4 percent, respectively), and the rate among 12th grade students peaking a year later at 36.5 percent. These increases occurred in virtually every sociodemographic group: male and female, those with and without plans for college attendance, those living in all four regions of the country, and those of different racial and ethnic groups. Since peaking in the mid-1990s, overall rates of smoking in the past month have dropped 68 percent among 8th grade students, 60 percent among 10th grade students, and 44 percent among 12th grade students.

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).

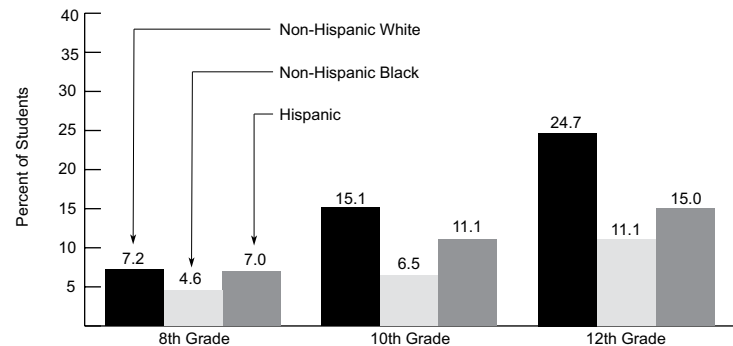
### Any Cigarette Use Among Students in the Past 30 Days, by Grade, 1991–2008

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, 2008

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



## SUBSTANCE ABUSE

In 2008, 9.3 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 drug use in the past month, compared to 8.6 percent of youth aged 14–15 years and 15.2 percent of youth aged 16–17 years. There was also variation by race/ethnicity, with rates ranging from 2.7 percent among Asian youth to 18.2 percent among American Indian/Alaska Native youth. Rates for non-Hispanic White, non-Hispanic Black, and Hispanic youth were 9.8 percent, 8.2 percent, and 8.9 percent, respectively (data not shown).

Marijuana is consistently the most commonly used illicit drug among adolescents, with 6.7 percent reporting past-month use in 2008. This was followed by nonmedical use of prescription-type psychotherapeutics, such as pain relievers, tranquilizers, and stimulants (2.9 percent). Adolescent males were slightly more likely than females to report using illicit drugs in the past month (9.5 versus 9.1 percent; data not shown).

Illicit drug use is associated with other health risk behaviors. In 2008, 49.0 percent of adolescents who reported cigarette use in the past month also reported illicit drug use, compared to only 5.3 percent of adolescents who did not report smoking. Adolescents who reported alco-

hol use in the past month were also more likely to use illicit drugs than adolescents who did not report alcohol use, with rates rising with the amount of alcohol used (data not shown).

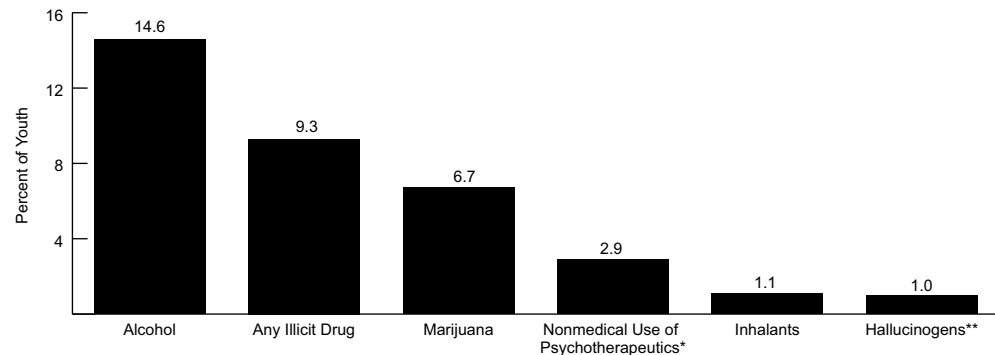
Alcohol continues to be the most commonly used drug among adolescents, with 14.6 percent reporting past-month use in 2008. There was little difference in alcohol use among males and females (14.2 versus 15.0 percent, respectively). Greater variation was evident by race/ethnicity, with rates ranging from 5.7 percent among Asian youth to 17.2 percent among American Indian/Alaska Native youth; the rate for non-Hispanic White youth was 16.3 percent (data not shown).

In 2008, 33.9 percent of adolescents perceived smoking marijuana once a month to be a great risk, while 49.7 percent perceived the same risk regarding cocaine use. Smoking one or more packs of cigarettes a day was considered a great risk by 69.7 percent of adolescents. Drinking five or more drinks once or twice per week was considered a great risk by 40.5 percent of adolescents (data not shown).

While 13.7 percent of adolescents were approached by someone selling drugs in the past month, nearly 50 percent reported that marijuana would be fairly or very easy to obtain; 23.2 percent reported the same for crack, 22.1 percent for cocaine, 13.8 percent for LSD, and 13.0 percent for heroin (data not shown).

### Past Month Drug Use Among Adolescents Aged 12–17 Years, by Drug Type, 2008

Source (II.11): 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 2007 (the latest year for which data are available), homicide was the second leading cause of death among persons aged 15–24 years.

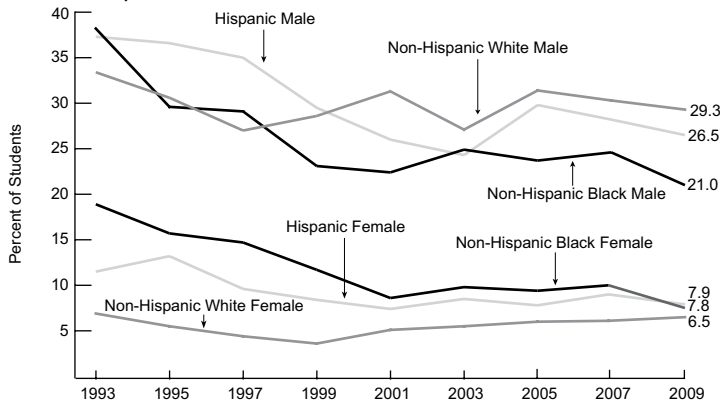
Results from the Youth Risk Behavior Surveillance System show that, in 2009, 17.5 percent of high school students had carried a weapon (such as a gun, knife, or club) at some point during the preceding 30 days. Males were nearly four times as likely as females to carry a weapon

(27.1 versus 7.1 percent). Among male students, non-Hispanic Whites were the most likely to carry a weapon (29.3 percent), followed by Hispanics (26.5 percent), while non-Hispanic Blacks were least likely to carry a weapon (21.0 percent). Among females, non-Hispanic Whites were least likely to carry a weapon (6.5 percent) while Hispanics were most likely (7.9 percent). Nearly 6 percent of students reported carrying a gun in the preceding 7 days, and males were nearly six times more likely than females to do so (data not shown).

In 2009, 11.1 percent of high school students reported being in a physical fight on school property during the preceding 12 months. Males were more than 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 most likely to be in a physical fight on school property (17.4 percent), followed by Hispanic students (13.5 percent); Asian students were least likely to be in a fight (7.7 percent).

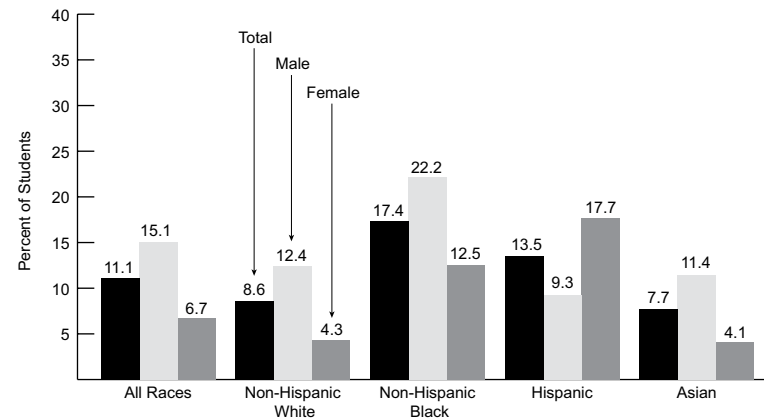
### High School Students Who Carried a Weapon in the Past 30 Days, by Sex and Race/Ethnicity, 1993–2009

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



### High School Students in a Physical Fight on School Property in the Past 12 Months, by Sex and Race/Ethnicity,\* 2009

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



\*Data for American Indian/Alaska Natives and Native Hawaiian/Other Pacific Islanders do not meet standards for reliability or precision.

## BULLYING

Bullying is defined as aggressive behavior that is intentional, repeated over time, and involves an imbalance of power or strength. Bullying may damage children's self-esteem, cause higher rates of loneliness and depression, and affect academic success. Bullying can also have physical effects, such as an increase in headaches, sleeping problems, and stomach ailments. Children who engage in bullying may be more likely to get into physical altercations, use drugs and alcohol, and get into trouble with the law. Even children who witness bullying can be negatively affected.<sup>1</sup> In 2007, the parents of 12.9 percent of children aged 6–17 years reported that their child “sometimes” bullied or was cruel to others

in the past month, while the parents of 2.3 percent of children reported that their child “usually or always” bullied or was cruel to others.

The likelihood of a child engaging in bullying or cruelty to others varied by a number of factors. Non-Hispanic Black children were most likely to bully others sometimes (18.1 percent) and usually or always (4.6 percent) in the past month. Non-Hispanic White children were the least likely to sometimes (10.8 percent) and usually or always (1.5 percent) bully others, as reported by their parents. Bullying also varied by poverty level, with parent-reported bullying decreasing with increased income. It also varied by family structure, with children living with

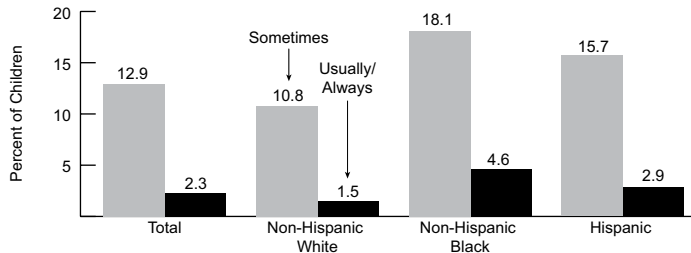
both of their parents being least likely to engage in bullying (data not shown).

Violence, such as bullying, can prevent children from attending school, for fear of their safety. In 2009, 5.0 percent of high school students reported that they did not go to school on at least one day during the past month because they felt unsafe at school or on their way to or from school. Hispanic students were more than twice as likely to miss school because of safety concerns as non-Hispanic White children (8.1 percent versus 3.5 percent).

*1 Health Resources and Services Administration, Maternal and Child Health Bureau. Stop bullying now—all about bullying. Available online: <http://www.stopbullyingnow.hrsa.gov/adults/why-should-adults-care.aspx>; accessed February 2010.*

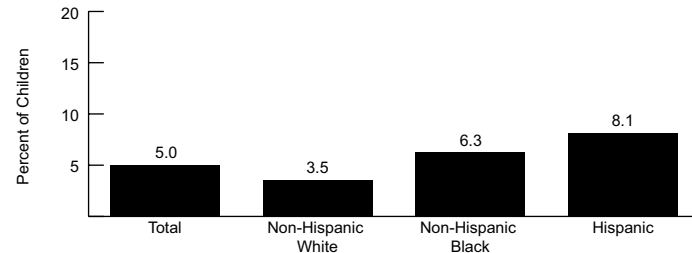
### Children Aged 6-17 Years Who Bullied or Were Cruel to Others During the Past Month, by Frequency and Race/Ethnicity, 2007

Source (I.7): 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



### High School Students Who Felt Unsafe at School,\* by Race/Ethnicity, 2009

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



\*Did not go to school on at least 1 day during the preceding 30 days because he/she felt unsafe at school or on the way to or from school.

## ADOLESCENT MORTALITY

In 2007, 13,299 adolescents aged 15 to 19 years died of various causes, representing a rate of 61.9 per 100,000. Unintentional injury remains the leading cause of death among this age group, accounting for nearly half of all deaths among adolescents. The mortality rate for unintentional injury was 30.3 per 100,000. Homicide was the second leading cause of death, with a rate of 10.4 per 100,000, followed by suicide, with a rate of 6.9 per 100,000. The mortality rate of males in this age group was notably higher than that of females (86.9 versus 35.7 per 100,000, respectively). Racial and ethnic disparities also exist, with non-Hispanic

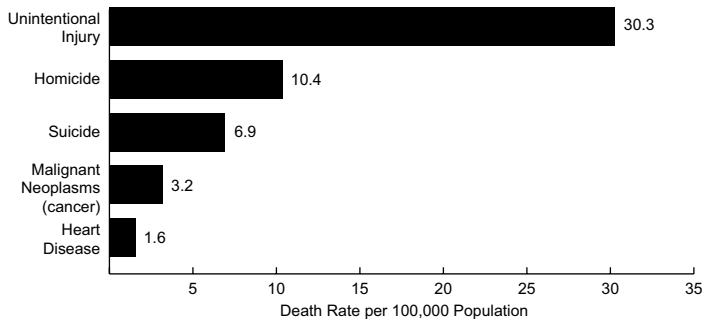
Black adolescents experiencing a mortality rate of 85.7 per 100,000, compared to rates of 58.0 and 57.9 per 100,000 among non-Hispanic Whites and Hispanics, respectively (data not shown).

Motor vehicle traffic was the leading cause of unintentional injury death among adolescents in 2007. Nearly half of deaths due to motor vehicle accidents occurred among vehicle occupants, while in 40 percent of the deaths the situation was not specified; a small percentage of motor vehicle deaths occurred among motorcyclists, pedestrians, and bicyclists. The second leading cause of unintentional injury death among adolescents was poisoning, followed by

drowning, other land transport (such as all-terrain vehicle crashes), and fires/burns. However, when intentional injuries such as homicide and suicide are included, firearms becomes the second leading cause of injury death. Nearly three-quarters (71 percent) of firearm deaths were homicides, while 23 percent were suicides (the remainder were unintentional, unknown, or due to legal intervention). Firearms accounted for 85 percent of homicide deaths and 43 percent of suicide deaths (suffocation, such as hanging, was the second leading cause of suicide death, accounting for another 42 percent; data not shown).

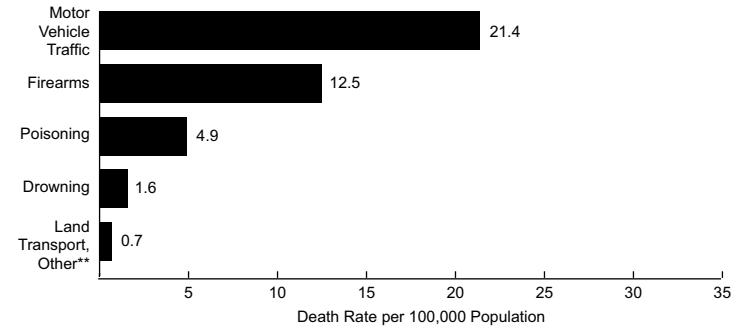
### Leading Causes of Death Among Adolescents Aged 15–19, 2007

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, 2007

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, and injury deaths of undetermined intent.

\*\*Includes off-road vehicles crashes and incidents where the motor vehicle was not classified.





## HEALTH SERVICES FINANCING AND UTILIZATION

The availability of and access to quality health care directly affects the health of the population. This is especially true of those at high risk due to low socioeconomic status or chronic medical conditions.

Children may receive health coverage through a number of sources, including private insurance, either employer-based or purchased directly, and public programs, such as Medicaid or the Children's Health Insurance Program (CHIP). Eligibility for public programs is based on a family's income compared to the Federal poverty level. Nearly every state has CHIP programs that help to expand coverage to children who would otherwise be uninsured. Despite the progress achieved through public programs, approximately 7.4 million children remain uninsured in the United States.

This section presents data on the health insurance status and utilization of health services within the maternal and child population. Data are summarized by source of payment, type of care, and place of service delivery.

## HEALTH CARE FINANCING

In 2008, approximately 7.4 million U.S. children under 18 years of age had no health insurance coverage, representing 9.9 percent of the population. This was a decrease from the previous year, when the rate was 11.0 percent. One-third of children were insured through public programs such as Medicaid and the Children's Health Insurance Program, and 63.5 percent were covered by private insurance. The percentage of children covered by public insurance increased over the previous year, while the percentage of children with private insurance decreased.

Children's insurance status varies by race and ethnicity. In 2008, 76.5 percent of non-

Hispanic White children had private coverage, while the same was true of only 47.2 percent of non-Hispanic Black children and 40.6 percent of Hispanic children. Non-Hispanic Black children were the most likely to have public coverage (50.7 percent), and Hispanic children were the most likely to be uninsured (17.2 percent).

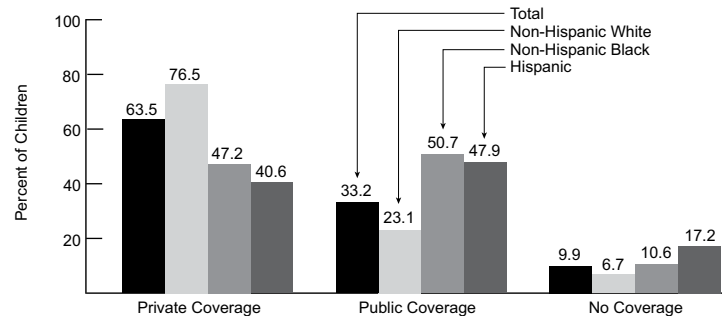
As family income increases, private health insurance coverage among children rises and the proportions of children with public coverage and no coverage decrease. In 2008, children living in households with incomes below 100 percent of the U.S. Census Bureau's poverty threshold (\$22,025 for a family of four in 2008) were most likely to have public coverage (71.5 percent) and to be uninsured (15.7 percent).

Children with family incomes of 300 percent or more of the poverty threshold were most likely to have private coverage (90.5 percent), and least likely to have public coverage (10.8 percent) or to be uninsured (4.3 percent).

In 1997, the Children's Health Insurance Program was created in response to the growing number of uninsured children in low-income working families. Although designed to cover children with family incomes below 200 percent of the poverty level, many States have expanded eligibility to children with higher family incomes.

### Health Insurance Coverage Among Children Under Age 18, by Race/Ethnicity and Type of Coverage,\* 2008

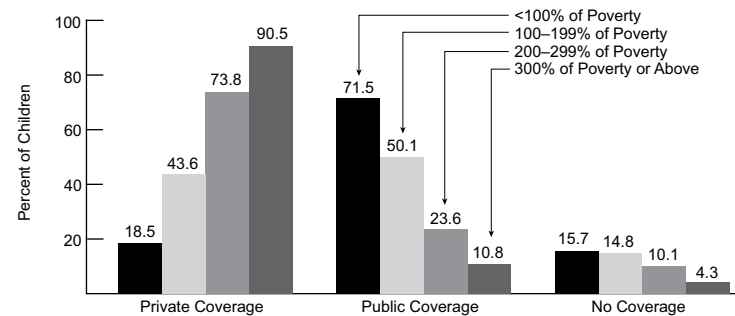
Source (III.1): U.S. Census Bureau, Current Population Survey



\*Totals equal more than 100 percent because children may have more than one type of coverage.

### Health Insurance Coverage Among Children Under Age 18, by Poverty Status\* and Type of Coverage,\*\* 2008

Source (III.1): U.S. Census Bureau, Current Population Survey



\*The U.S. Census Bureau uses a set of money income thresholds to determine who is in poverty; the poverty threshold for a family of four was \$22,025 in 2008. \*\*Totals equal more than 100 percent because children may have more than one type of coverage.

## ADEQUACY OF INSURANCE

While most children have some type of health insurance, it may not always be adequate to meet their needs. The 2007 National Survey of Children's Health asked parents of insured children three questions regarding the services and costs associated with their child's health insurance. Insurance was considered adequate if parents answered that it "usually" or "always" met the following criteria: 1) out-of-pocket costs are reasonable; 2) the benefits that are included and the services that are covered meet

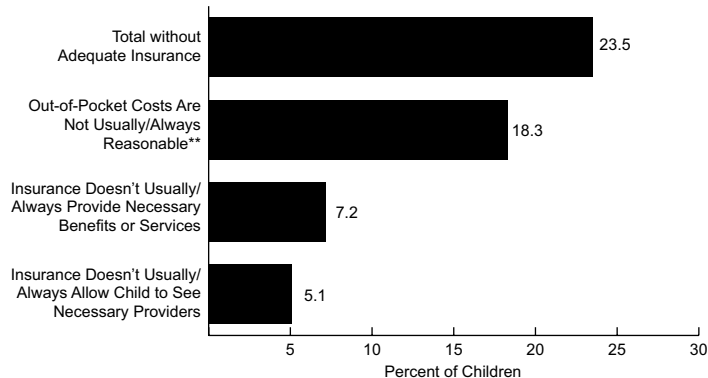
the child's needs; and 3) the family's preferred providers are covered. Overall, 23.5 percent of insured children had insurance that did not meet at least one of these three criteria, and therefore were determined to have insurance that was not adequate.

The frequency with which parents reported problems with insurance adequacy differed for the three criteria. Problems with out-of-pocket costs were most commonly cited, with the parents of 18.3 percent of children reporting that out-of-pocket costs were not usually or always

reasonable. The parents of 7.2 percent of children reported that insurance does not usually or always include benefits and services that meet the child's needs, and the parents of 5.1 percent of children reported that insurance did not usually or always allow the child to see necessary providers. Older children were more likely than younger children to lack adequate coverage, with 26.3 percent of children aged 12–17 years and 25.1 percent of children aged 6–11 years lacking adequate coverage, compared to 19.2 percent of children aged 0–5 years.

### Children Lacking Adequate Health Insurance,\* by Individual Adequacy Criteria, 2007

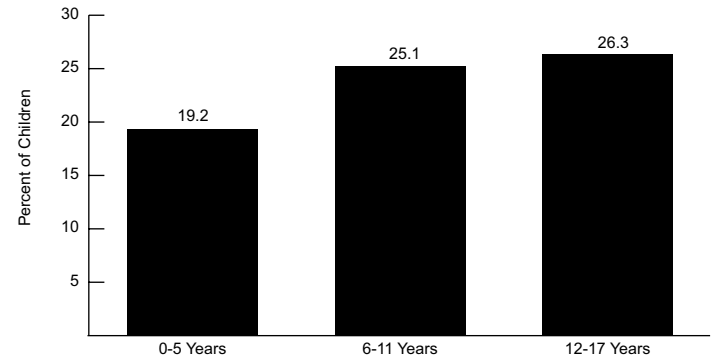
Source (I.7): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Insurance was considered adequate if parents reported that it "usually" or "always" met each of the three criteria. \*\*Among those who reported having out-of-pocket expenses.

### Children Lacking Adequate Insurance Coverage,\* by Age, 2007

Source (I.7): 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



\*Insurance was considered adequate if parents reported that it "usually" or "always" had reasonable out-of-pocket costs, included benefits and services that met the child's needs, and allowed the child to see necessary providers.

## VACCINATION COVERAGE

The Healthy People 2010 objective for childhood immunization is to achieve 90 percent coverage for each of the universally recommended vaccines among young children. In 2008, 68.4 percent of children 19–35 months of age received each of the vaccines in the recommended 4:3:1:3:3:1:4 series. This series includes four doses of diphtheria, tetanus, and pertussis vaccine; three doses of poliovirus vaccine; one dose of measles, mumps, and rubella vaccine; three doses of *Haemophilus influenzae* type b vaccine; three doses of the Hepatitis B vaccine; one dose of the varicella (chicken pox) vaccine; and four doses of the pneumococcal conjugate vaccine. Overall, 76.1 percent of young children received the 4:3:1:3:3:1 series (which does not include the pneumococcal vaccine), and 78.2 percent received the 4:3:1:3:3 series (which does not include the pneumococcal or varicella vaccines).

In recent years, the greatest increases in vaccination rates have occurred with the pneumococcal and varicella vaccines. Pneumococcal conjugate vaccine was added to the immunization schedule in 2001, and vaccination coverage was first measured in 2005. Since 2005, coverage among young children has increased 50 percent. Varicella vaccine was added to the schedule in the mid-1990s, and since 2000 coverage has increased by 34 percent.

Racial/ethnic differences in coverage are apparent for most vaccine types. Non-Hispanic Blacks have the lowest rate of coverage with the complete 4:3:1:3:3:1:4 series, as well as the lowest rates of vaccination with each of the individual vaccines, except for the varicella and measles, mumps, and rubella vaccines.

Each year, the Centers for Disease Control and Prevention publishes an update of the childhood immunization schedule (see next page). No new vaccines were added to the 2010 schedule.

### Vaccination Rates Among Children Aged 19-35 Months, by Race/Ethnicity, 2008

Source (III.2): Centers for Disease Control and Prevention, National Immunization Survey

	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Asian
<b>Complete Series 4:3:1:3:3:1:4</b>	68.4	68.2	65.9	68.5	73.5
<b>Series 4:3:1:3:3:1</b>	76.1	75.3	72.7	77.7	82.2
<b>Series 4:3:1:3:3</b>	78.2	77.8	74.2	79.4	84.2
<b>4+DTaP</b>	84.6	85.0	80.1	84.9	92.3
<b>3+ Polio</b>	93.6	93.6	91.5	94.3	96.5
<b>1+ MMR</b>	92.1	91.3	92.0	92.8	94.7
<b>3+ Hib</b>	90.9	90.8	88.6	91.9	92.6
<b>3+ HepB</b>	93.5	93.4	92.1	93.7	97.5
<b>1+ Varicella</b>	90.7	89.8	90.4	91.8	94.2
<b>4+ PCV</b>	80.1	81.4	76.4	78.6	82.3



## Recommended Immunization Schedule for Children Aged 0-6 Years, United States, 2010

Source (III.3): Department of Health and Human Services, Centers for Disease Control and Prevention

	BIRTH	1MO	2MO	4MO	6MO	12MO	15MO	18MO	19-23MO	2-3YR	4-6YR
Hepatitis B <sup>1</sup>	HepB	HepB									
Rotavirus <sup>2</sup>			RV	RV	RV <sup>2</sup>						
Diphtheria, Tetanus, Pertussis <sup>3</sup>			DTaP	DTaP	DTaP	see footnote 3		DTaP			DTaP
Haemophilus influenzae type b <sup>4</sup>			Hib	Hib	Hib <sup>4</sup>		Hib				
Pneumococcal <sup>5</sup>			PCV	PCV	PCV		PCV				PPSV
Inactivated Poliovirus <sup>6</sup>			IPV	IPV			IPV				IPV
Influenza <sup>7</sup>								Influenza (yearly)			
Measles, Mumps, Rubella <sup>8</sup>							MMR		see footnote 8		MMR
Varicella <sup>9</sup>							Varicella		see footnote 9		Varicella
Hepatitis A <sup>10</sup>							HepA (2 doses)				HepA Series
Meningococcal <sup>11</sup>											MCV

□ Range of recommended ages

■ Certain high-risk groups

This schedule includes recommendations in effect as of December 15, 2009. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory Committee on Immunization Practices

statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.

### 1. Hepatitis B vaccine (HepB). (Minimum age: birth)

#### At birth:

- Administer monovalent HepB to all newborns before hospital discharge.
- If mother is hepatitis B surface antigen (HBsAg)-positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.
- If mother's HBsAg status is unknown, administer HepB within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG (no later than age 1 week).

#### After the birth dose:

- The HepB series should be completed with either monovalent HepB or a combination vaccine containing HepB. The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks. The final dose should be administered no earlier than age 24 weeks.
- Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg 1 to 2 months after completion of at least 3 doses of the HepB series, at age 9 through 18 months (generally at the next well-child visit).
- Administration of 4 doses of HepB to infants is permissible when a combination vaccine containing HepB is administered after the birth dose. The fourth dose should be administered no earlier than age 24 weeks.

### 2. Rotavirus vaccine (RV). (Minimum age: 6 weeks)

- Administer the first dose at age 6 through 14 weeks (maximum age: 14 weeks 6 days). Vaccination should not be initiated for infants aged 15 weeks 0 days or older.
- The maximum age for the final dose in the series is 8 months 0 days
- If Rotarix is administered at ages 2 and 4 months, a dose at 6 months is not indicated.

### 3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP). (Minimum age: 6 weeks)

- The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.
- Administer the final dose in the series at age 4 through 6 years.

### 4. Haemophilus influenzae type b conjugate vaccine (Hib). (Minimum age: 6 weeks)

- If PRP-OMP (PedvaxHIB or Comvax [HepB-Hib]) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.
- TRIHIB (DTaP-Hib) and Hiberix (PRP-T) should not be used for doses at ages 2, 4, or 6 months for the primary series but can be used as the final dose in children aged 12 months through 4 years.

### 5. Pneumococcal vaccine. (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])

- PCV is recommended for all children aged younger than 5 years. Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.

- Administer PPSV 2 or more months after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant. See MMWR 1997;46(No. RR-8).

### 6. Inactivated poliovirus vaccine (IPV). (Minimum age: 6 weeks)

- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
- If 4 doses are administered prior to age 4 years a fifth dose should be administered at age 4 through 6 years. See MMWR 2009;58(30):829-30.

### 7. Influenza vaccine (seasonal). (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])

- Administer annually to children aged 6 months through 18 years.
- For healthy children aged 2 through 6 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used, except LAIV should not be given to children aged 2 through 4 years who have had wheezing in the past 12 months.
- Children receiving TIV should receive 0.25 mL if aged 6 through 35 months or 0.5 mL if aged 3 years or older.
- Administer 2 doses (separated by at least 4 weeks) to children aged younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.

- For recommendations for use of influenza A (H1N1) 2009 monovalent vaccine see MMWR 2009;58(No. RR-10).

### 8. Measles, mumps, and rubella vaccine (MMR). (Minimum age: 12 months)

- Administer the second dose routinely at age 4 through 6 years. However, the second dose may be administered before age 4, provided at least 28 days have elapsed since the first dose.

### 9. Varicella vaccine. (Minimum age: 12 months)

- Administer the second dose routinely at age 4 through 6 years. However, the second dose may be administered before age 4, provided at least 3 months have elapsed since the first dose.
- For children aged 12 months through 12 years the minimum interval between doses is 3 months. However, if the second dose was administered at least 28 days after the first dose, it can be accepted as valid.

### 10. Hepatitis A vaccine (HepA). (Minimum age: 12 months)

- Administer to all children aged 1 year (i.e., aged 12 through 23 months). Administer 2 doses at least 6 months apart.
- Children not fully vaccinated by age 2 years can be vaccinated at subsequent visits
- HepA also is recommended for older children who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.

### 11. Meningococcal vaccine. (Minimum age: 2 years for meningococcal conjugate vaccine [MCV4] and for meningococcal polysaccharide vaccine [MPSV4])

- Administer MCV4 to children aged 2 through 10 years with persistent complement component deficiency, anatomic or functional asplenia, and certain other conditions placing them at high risk.
- Administer MCV4 to children previously vaccinated with MCV4 or MPSV4 after 3 years if first dose administered at age 2 through 6 years. See MMWR 2009; 58:1042-3.

The Recommended Immunization Schedules for Persons Aged 0 through 18 Years are approved by the Advisory Committee on Immunization Practices (<http://www.cdc.gov/vaccines/recs/acip>), the American Academy of Pediatrics (<http://www.aap.org>), and the American Academy of Family Physicians (<http://www.aafp.org>).

## MENTAL HEALTH TREATMENT

Some children rely on medication for the treatment of mental or emotional health problems. However, these services may not be accessible to all children who need them. In 2007, the parents of 40 percent of children who needed treatment reported that it was not received.

Unmet need for mental health treatment varied by age, with younger children having higher rates of unmet needs. In 2007, 57.8 percent of children aged 2–5 years who needed mental health care did not receive it, compared to 42.2 percent of children aged 6–11 years and 33.7 percent of children aged 12–17 years. Hispanic

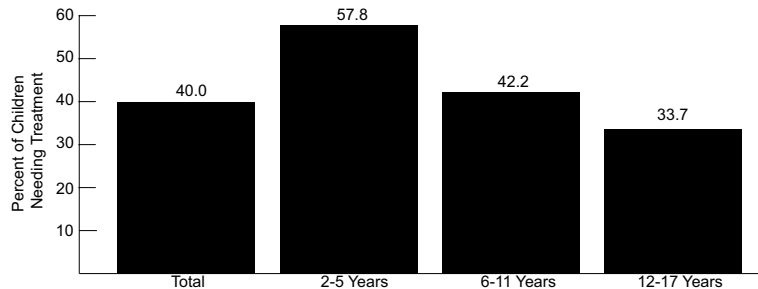
children who needed treatment had the highest rates of unmet need (49.4 percent), followed by non-Hispanic Black children (46.0 percent). More than half of uninsured children who needed treatment did not receive it, compared to 36.6 percent of children with private insurance who needed treatment (data not shown).

Some children rely on medication for mental or emotional health problems. In 2007, 6.2 percent of children received medication for Attention Deficit Hyperactivity Disorder (ADHD) or other problems with emotions, concentration, or behavior. Multiracial children were most likely to receive medication (8.3 percent),

followed by non-Hispanic White children (7.3 percent); children of other races, such as Asian/Pacific Islanders and American Indian/Alaska Natives, were least likely to receive medication (2.5 percent). The use of medication also varies by insurance status. Children with public insurance were two times more likely than children with private insurance and almost four times more likely than children with no insurance to receive medication for ADHD, emotions, concentration, or behavior (data not shown).

### Children Aged 2–17 Years Who Needed but Did Not Receive\* Mental Healthcare/Counseling in the Past Year, by Age, 2007

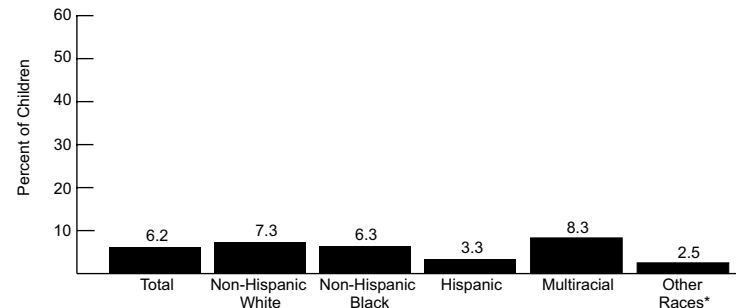
Source (I.7): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Both need for treatment and receipt of treatment are based on parent report.

### Children Aged 2–17 Years Currently Taking Medication for Attention Deficit Hyperactivity Disorder (ADHD), Emotions, Concentration, or Behavior, by Race/Ethnicity, 2007

Source (I.7): 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 Islanders and American Indian/Alaska Natives.

## DENTAL CARE

According to the Centers for Disease Control and Prevention, dental caries (tooth decay) is the most common chronic disease among children in the United States. Untreated tooth decay causes pain and infections, which may affect children's ability to eat, speak, play, and learn.<sup>1</sup> Dental caries, however, is preventable with proper dental care. For this reason, the American Dental Association recommends that children have their first dental checkup within 6 months of the eruption of the first tooth or at 12 months of age, whichever comes first.

In 2008, only 31.7 percent of children eligible for services under the Medicaid Early and

Periodic Screening, Diagnosis, and Treatment (EPSDT) program received preventive dental services. This is similar to the previous year's rate, but an improvement over the rate of 27.7 percent in 2006.

In 2008, 73.9 percent of children aged 1–18 years received dental care, including care from dental specialists and dental hygienists, in the past year. Receipt of dental care varied by a number of factors, including race/ethnicity and poverty level. Children living in households with incomes above 200 percent of the U.S. Census Bureau's poverty threshold (\$22,025 for a family of four in 2008) were more likely than children living in households with incomes

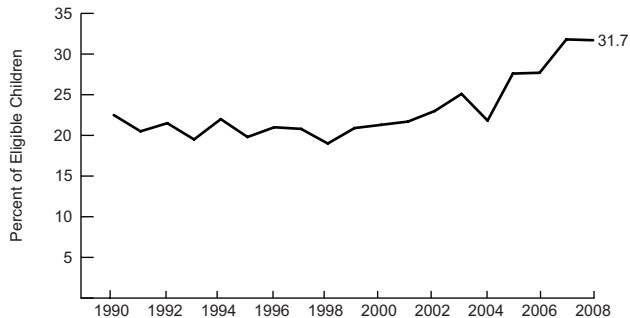
below 200 percent of the poverty threshold to have received dental care in the past year (78.9 percent versus 66.8 percent).

Non-Hispanic White children were more likely than children of other racial/ethnic groups to have received dental care in the past year (76.4 percent), followed by non-Hispanic Black children (73.9 percent) and Hispanic children (66.7 percent; data not shown).

*1 Centers for Disease Control and Prevention, Division of Oral Health. Children's Oral Health. <http://www.cdc.gov/OralHealth/topics/child.htm>; accessed February 2010.*

### Receipt of EPSDT Preventive Dental Service Among Eligible Children,\* Aged Birth–20 Years, 1990–2008

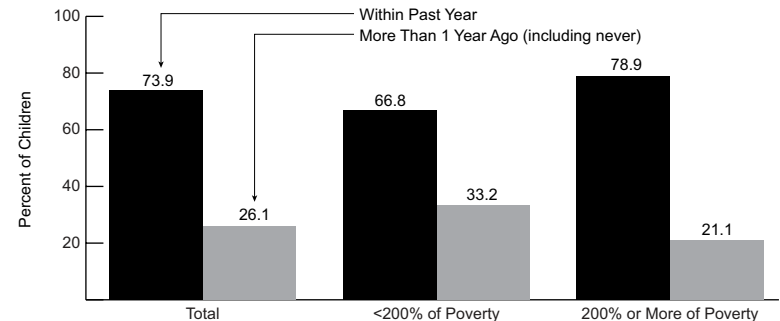
Source (III.4): Centers for Medicare and Medicaid Services, Annual EPSDT Report



\*All children on Medicaid are eligible for EPSDT services.

### Receipt of Dental Care\* Among Children Aged 1–18 Years, by Poverty Level,\*\* 2008

Source (III.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



\*Includes visits to specialists and dental hygienists. \*\*The U.S. Census Bureau uses a set of money income thresholds to determine who is in poverty; the poverty threshold for a family of four was \$22,025 in 2008.

## PREVENTIVE HEALTH CARE VISITS

In 2008, 75.8 percent of children under 18 years of age were reported by their parents to have had a preventive, or “well-child”, medical visit in the past year. The American Academy of Pediatrics recommends that children have eight preventive health care visits in their first year, three in their second year, and at least one per year from middle childhood through adolescence. Well-child visits offer an opportunity not only to monitor children’s health and provide

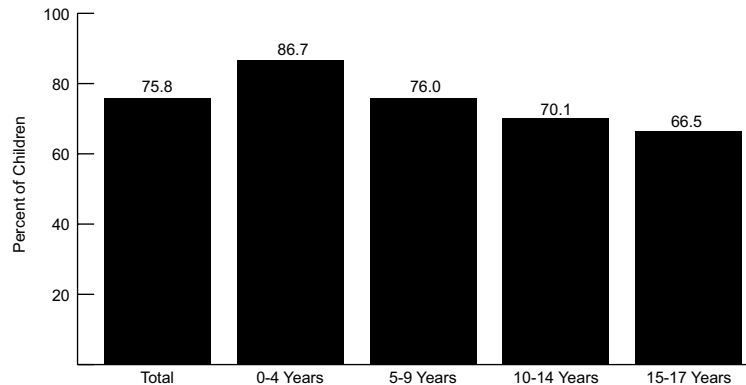
immunizations, but also to assess a child’s behavior and development, discuss nutrition, and answer parents’ questions.

The proportion of children receiving well-child visits declines with age. In 2008, 86.7 percent of children 4 years of age and younger received a preventive visit in the past year, compared to 76.0 percent of children 5–9 years of age, 70.1 percent of children 10–14 years of age, and 66.5 percent of children 15–17 years of age.

Receipt of preventive medical care also varies by race and ethnicity. In 2008, non-Hispanic Black children were the most likely to have received a well-child visit in the past year (81.1 percent), followed by non-Hispanic White children (75.7 percent). Hispanic children were least likely to have received preventive care in the past year (72.6 percent).

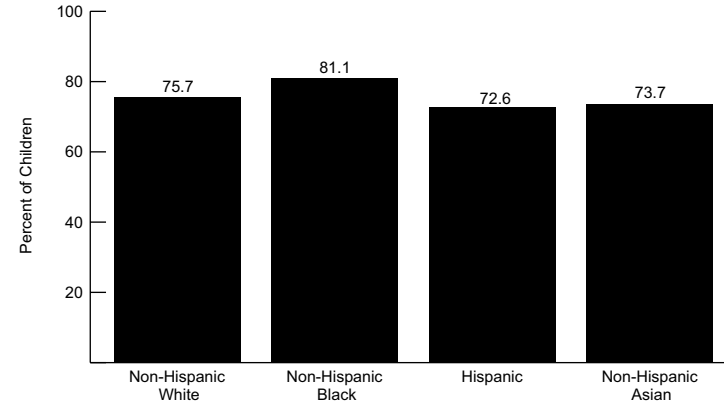
### Receipt of Preventive Health Care in the Past Year Among Children Under Age 18, by Age, 2008

Source (III.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



### Receipt of Preventive Health Care in the Past Year Among Children Under Age 18, by Race/Ethnicity, 2008

Source (III.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



## LACK OF HEALTH CARE

The American Academy of Pediatrics recommends that children have eight preventive health care visits in their first year, three in their second year, and at least one per year from middle childhood through adolescence. In 2008, 10.9 percent of children under 18 years of age had not seen a physician or other health care professional in the past year for either sick or routine care (not including overnight hospitalization, emergency department visits, home health care, or dental care). Older children were more likely than younger children to go 12 months without seeing a health care provider. More than 15 percent of children aged 15–17 years had not seen a health care provider in the past year, compared to 5.0 percent of children under 5 years of age.

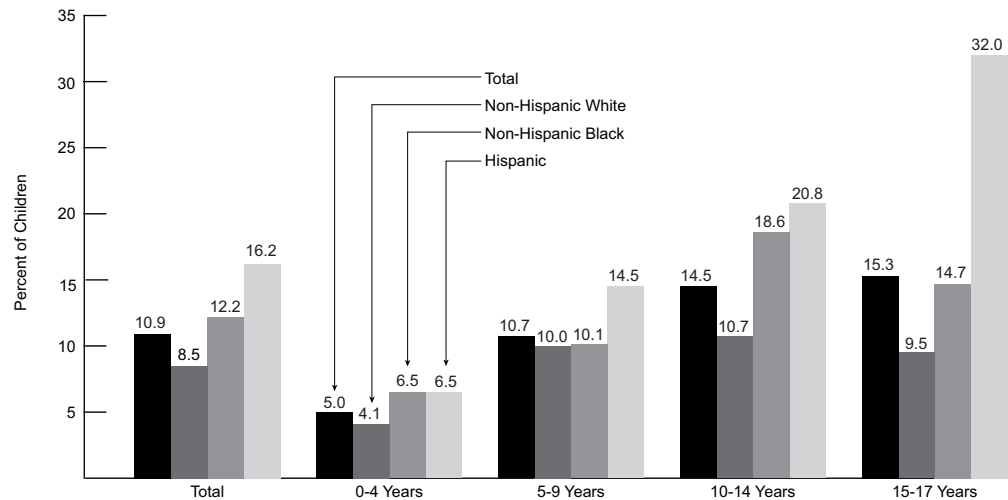
Health care visits also varied by race/ethnicity. In 2008, over 16 percent of Hispanic children had not seen a physician or other health care professional in the past year, compared to 8.5 percent of non-Hispanic White children and 12.2 percent of non-Hispanic Black children. Within every age group, Hispanic children were the least likely to have seen a health care provider, and non-Hispanic White children were the most likely to have seen one.

The proportion of children going without health care also varied by poverty level. In 2008, 13.3 percent of children living in households with incomes below 100 percent

of the U.S. Census Bureau's poverty threshold (\$22,025 for a family of four in 2008) had not seen a physician or other health professional in the past year, compared to 5.1 percent of children living in households with incomes of 400 percent or more of the poverty threshold (data not shown).

### Child Reported to Have Not Seen a Physician or Other Health Care Professional\* in the Past 12 Months, by Age and Race/Ethnicity, 2008

Source (III.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



\*Does not include overnight hospitalizations, emergency department visits, home health care, and dental care.

## USUAL PLACE FOR SICK CARE

In 2008, a doctor's office or health maintenance organization (HMO) was the usual place for sick care (not including routine or preventive care) for 72.7 percent of children in the United States, a proportion that varies by poverty status and race/ethnicity. Children living in households with incomes above the U.S. Census Bureau's poverty threshold (\$22,025 for a family of four in 2008) were more likely to visit a doctor's office or HMO for sick care than children living in households with incomes below the poverty threshold (78.3 percent versus 55.6 percent). Children living in households with incomes below the poverty threshold were more likely than children living in households with

higher incomes to go to a clinic or health center (40.8 percent versus 20.3 percent).

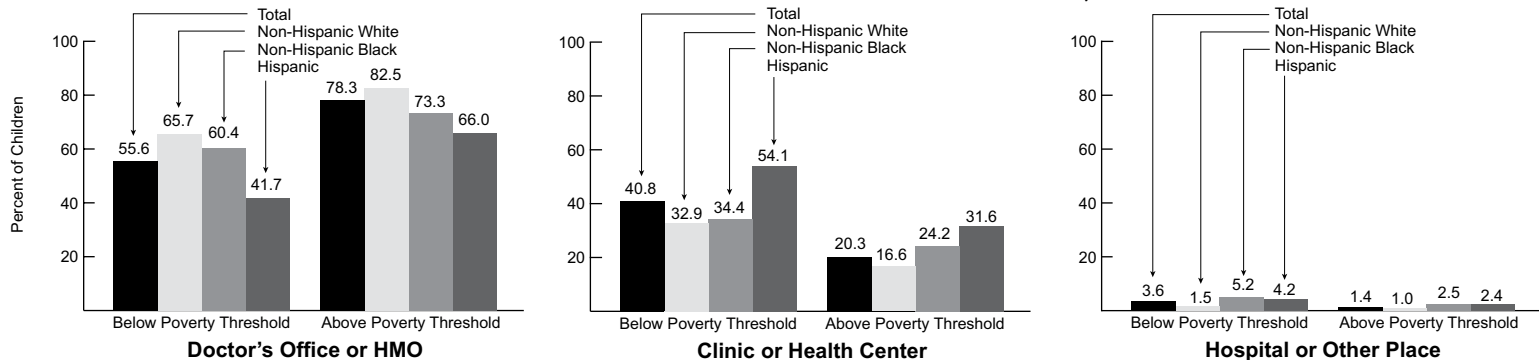
Among children living in poverty, 65.7 percent of non-Hispanic White children received sick care at a doctor's office or HMO, compared to 60.4 of non-Hispanic Black children and 41.7 percent of Hispanic children. Regardless of income, Hispanic children were more likely than non-Hispanic children to receive sick care at a clinic or health center. Among Hispanic children living in poverty, 54.1 percent received care at a clinic or health center, compared to 34.4 percent of their non-Hispanic Black counterparts and 32.9 percent of their non-Hispanic White counterparts. Among children living in families with incomes above the poverty thresh-

old, 31.6 percent of Hispanics, 24.2 percent of non-Hispanic Blacks, and 16.6 percent of non-Hispanic Whites received sick care at a clinic or health center.

Although only a small proportion of children used a hospital emergency room, hospital outpatient department, or other place as their primary source of sick care, it was more common among children living in families with incomes below the poverty threshold than among children with family incomes above the poverty threshold (3.6 percent versus 1.4 percent). Regardless of income, this was generally more common among non-Hispanic Black and Hispanic children than among non-Hispanic Whites.

## Place of Physician Contact,\* by Poverty Status\*\* and Race/Ethnicity, 2008

Source (III.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



\*The place where the child usually goes when sick; does not include routine or preventive care visits. \*\*The U.S. Census Bureau uses a set of money income thresholds to determine who is in poverty; the poverty threshold for a family of four was \$22,025 in 2008.

## MEDICAL HOME

According to the American Academy of Pediatrics, children's medical care should be accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally effective. These characteristics of high-quality health care can be combined into the concept of the medical home. The 2007 National Survey of Children's Health made an effort to measure whether children's health care is meeting the medical home standard. For this purpose, the survey included questions on the following: 1) whether the child has at least one personal doctor or nurse and a usual source of sick care; 2) whether the child has no problems gaining referrals to specialty care and access to therapies

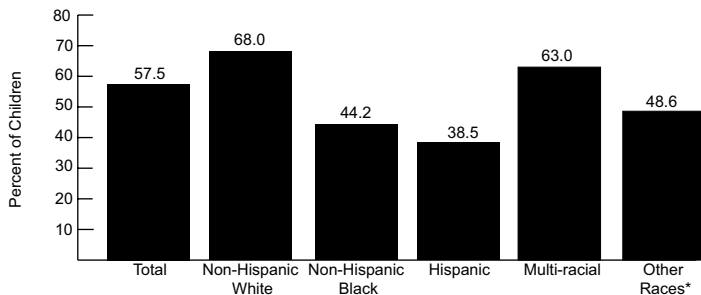
or other services or equipment; 3) whether the family is very satisfied with the level of communication among their child's doctors and other programs; 4) whether the family usually or always gets sufficient help coordinating care when needed, and receives effective care coordination; 5) whether the child's providers usually or always spend enough time with the family, listen carefully to concerns, are sensitive to values and customs, provide needed information, and make the family feel like a partner in the child's care; and 6) whether an interpreter is usually or always available when needed. If a child's care met all of these criteria, according to the parent, then the child was defined as having a medical home.

Overall, the care received by 57.5 percent of children met this medical home standard. This varied substantially by race and ethnicity: 68.0 percent of non-Hispanic White children received care from a medical home, compared to 63.0 percent of multiracial children, 44.2 percent of non-Hispanic Black children, 38.5 percent of Hispanic children, and 48.6 percent of children of other races.

Receipt of care from a medical home also varied by insurance status. Children with private insurance were most likely to receive care from a medical home (66.5 percent), followed by children with public insurance (45.4 percent). Children who were not currently insured were least likely to have a medical home (35.7 percent).

### Children with a Medical Home, by Race/Ethnicity, 2007

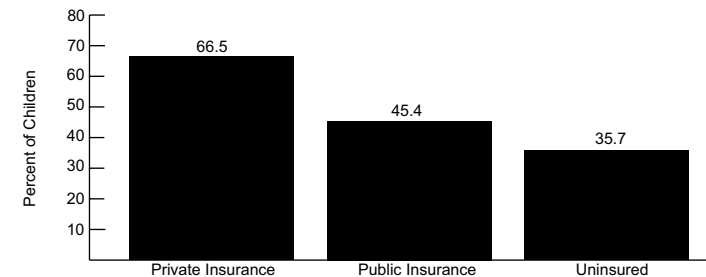
Source (III.5): Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health



\*Includes Asian/Pacific Islanders and American Indian/Alaska Natives.

### Children with a Medical Home, by Type of Insurance, 2007

Source (III.5): 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



## EMERGENCY DEPARTMENT UTILIZATION

In 2008, more than 20 percent of children had at least one visit to a hospital emergency department (ED). Children living in households with incomes below the U.S. Census Bureau's poverty threshold (\$22,025 for a family of four in 2008) were more likely than children living in households with incomes above the poverty threshold to have visited the ED. Just over one-quarter of children living in poverty made one to three ED visits during the year, compared to fewer than 20 percent of children living in households with incomes above poverty. Similarly, 3.0 percent of children from lower-income

households made four or more visits to the ED, compared to 1.0 percent of children from higher-income households.

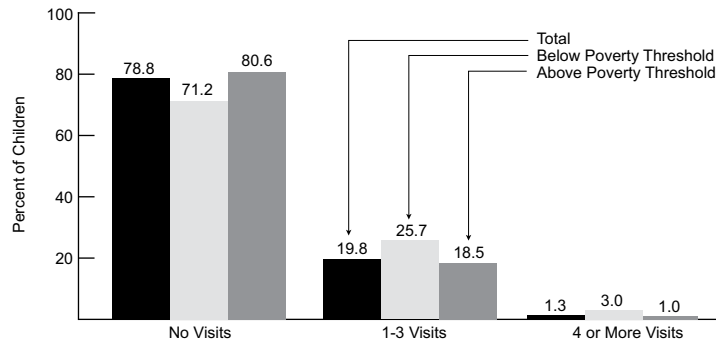
Emergency department utilization also varies by age: 26.6 percent of children under 5 years of age made 1–3 visits to the ED in 2008, compared to 15.4 percent of children aged 10–14 years. Children under 5 years of age were also the most likely to make four or more ED visits (2.1 percent). There were also racial/ethnic differences in ED utilization: 23.3 percent of non-Hispanic Black children made 1–3 visits to the ED in 2008, compared to 19.8 percent of Hispanic children and 18.9 percent of non-Hispanic White children (data not shown).

According to the 2006 National Hospital Ambulatory Medical Care Survey, the most common reason for a visit to the emergency department among children under 15 years of age was fever (15.1 percent), followed by cough (6.6 percent), and vomiting (5.5 percent). The most common primary diagnoses treated in ED visits were acute upper respiratory infections (9.2 percent), otitis media (middle ear infection) and Eustachian tube disorders (6.6 percent), and fever of unknown origin (5.8 percent; data not shown).<sup>1</sup>

*1 Pitts SR, Niska RW, Xu J, Burt CW. National Hospital Ambulatory Medical Care Survey: 2006 emergency department summary. National Health Statistics Reports, No. 7; 2008 Aug.*

### Visits to the Emergency Department Among Children Under Age 18, by Poverty Status,\* 2008

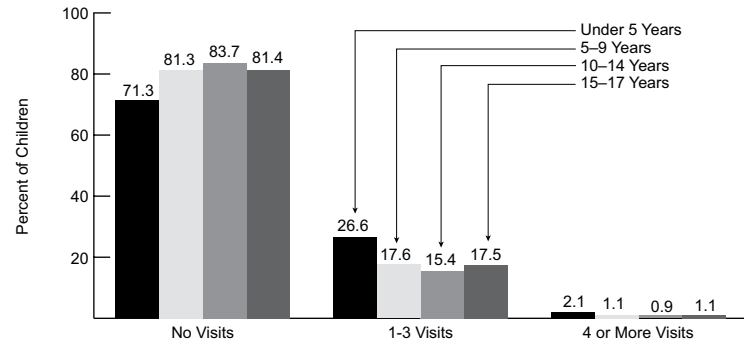
Source (1.7): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



\*The U.S. Census Bureau uses a set of money income thresholds to determine who is in poverty; the poverty threshold for a family of four was \$22,025 in 2008.

### Visits to the Emergency Department Among Children Under Age 18, by Age, 2008

Source (1.7): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey





## PRENATAL CARE

Prenatal care—especially care beginning in the first trimester—allows health care providers to identify and manage a woman’s risk factors and health conditions and to provide expectant parents with relevant health care advice. The reported rate of first trimester prenatal care utilization has been increasing fairly steadily since the early 1990s; however, changes made to the standard birth certificate, which are gradually being adopted by the states, make comparisons over time impossible.

In 2007, in the 23 reporting areas (States and territories) that used the revised birth certificate, 70.8 percent of women giving birth were determined to have received prenatal care in the first trimester. In the areas using the unrevised birth certificate, 82.0 percent of women were reported to have entered prenatal care in the first trimester.

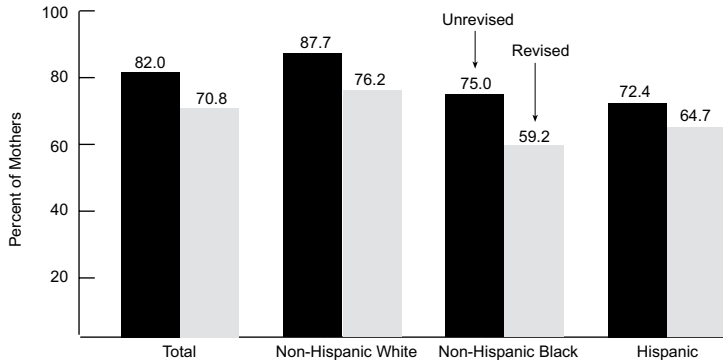
Early prenatal care utilization differs by race/ethnicity. In 2007, non-Hispanic White women were most likely to receive first trimester prenatal care—this is the case using both revised and

unrevised birth certificate data (76.2 percent and 87.7 percent, respectively). Non-Hispanic Black and Hispanic women are less likely to receive first trimester prenatal care.

In 2007, 7.1 percent of women in the areas using the revised birth certificate began prenatal care in the third trimester or did not receive any prenatal care; in areas using the unrevised birth certificate, the rate was 3.9 percent. In both the unrevised and revised reporting areas, non-Hispanic Black and Hispanic women were more likely than non-Hispanic White women to receive late or no prenatal care.

### Receipt of First Trimester Prenatal Care, by Race/Ethnicity and Birth Certificate Revision\*, 2007

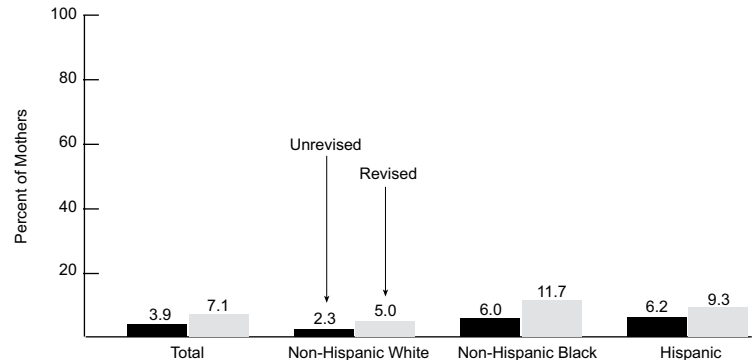
Source (II.2): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*“Unrevised” data are for all reporting areas that had not implemented the 2003 Revision of the U.S. Certificate of Live Birth as of January 1, 2007; “Revised” data are for the 23 reporting areas that had implemented the 2003 Revision.

### Receipt of Late\* or No Prenatal Care, by Race/Ethnicity and Birth Certificate Revision\*\*, 2007

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



\*Care beginning in the third trimester of pregnancy. \*\*“Unrevised” data are for all reporting areas that had not implemented the 2003 Revision of the U.S. Certificate of Live Birth as of January 1, 2007; “Revised” data are for the 23 reporting areas that had implemented the 2003 Revision.





## STATE DATA

While the indicators presented in the previous sections are representative of the U.S. population as a whole, the following section presents data at the State level. Geographic differences in health status and health care utilization play an important role in tailoring health programs and interventions to specific populations. Included are data on infant, neonatal, and perinatal mortality, low birth weight, preterm birth, health care financing, Medicaid enrollment and expenditures, and CHIP enrollment.

The following pages reveal important disparities in these measures across States. For instance, the proportion of infants born low birth weight (less than 2,500 grams, or 5 pounds 8 ounces) was highest in Mississippi, followed by Louisiana and several other southern States. Births to unmarried women tended to be highest in these States, as well.

All of the issues presented here have geographic program and policy implications. State and local leaders can use this information to better serve their maternal and child populations in need.

## Children's Health Insurance Program (CHIP) Program Design and Aggregate Enrollment, FY 2008

Source (IV.1): Centers for Medicare and Medicaid Services

State	Type of CHIP Program*	Upper Eligibility	Total CHIP Enrollment	Presumptive Eligibility?***
Alabama	Separate	200%	110,821	N
Alaska	Medicaid	175%	18,707	N
Arizona	Separate	200%	112,072	N
Arkansas	Combo	200%	93,446	N/N
California	Combo	300%	1,692,087	Y/Y
Colorado	Separate	200%	99,555	Y
Connecticut	Separate	300%	22,270	N
Delaware	Combo	200%	11,192	N/N
District of Columbia	Medicaid	300%	8,746	N
Florida	Combo	200%	354,385	Y/N
Georgia***	Separate	235%	311,234	N
Hawaii	Medicaid	300%	28,803	N
Idaho	Combo	185%	43,526	N/N
Illinois	Combo	200%	356,460	Y/Y
Indiana	Combo	200%	124,954	N/N
Iowa	Combo	200%	50,390	N/N
Kansas	Separate	200%	51,162	Y
Kentucky	Combo	200%	67,717	N/N
Louisiana	Combo	250%	147,863	N/N
Maine	Combo	200%	30,947	N/N
Maryland***	Medicaid	200%	132,864	N
Massachusetts	Combo	300%	200,950	Y/Y
Michigan	Combo	200%	67,763	Y/Y
Minnesota	Combo	280%	5,621	N/N
Mississippi	Separate	200%	84,370	N
Missouri	Combo	200%	136,135	Y/N

State	Type of CHIP Program*	Upper Eligibility	Total CHIP Enrollment	Presumptive Eligibility?***
Montana	Separate	175%	22,679	N
Nebraska	Medicaid	185%	48,827	N
Nevada	Separate	200%	38,592	N
New Hampshire	Combo	300%	12,236	Y/N
New Jersey	Combo	350%	151,805	Y/Y
New Mexico	Medicaid	234%	14,944	Y
New York	Separate	250%	517,256	Y
North Carolina***	Combo	200%	251,653	N/N
North Dakota***	Combo	140%	7,617	N/N
Ohio	Medicaid	200%	251,278	N
Oklahoma	Combo	185%	117,507	N/N
Oregon	Separate	184%	73,686	N
Pennsylvania	Separate	300%	256,627	N
Rhode Island	Combo	250%	26,031	N/N
South Carolina	Combo	200%	73,620	N/N
South Dakota	Combo	200%	15,277	N/N
Tennessee***	Combo	250%	63,619	Y/Y
Texas	Separate	200%	731,916	N
Utah	Separate	200%	51,092	N
Vermont	Separate	300%	6,496	N
Virginia	Combo	200%	155,289	N/N
Washington	Separate	250%	16,831	N
West Virginia	Separate	220%	37,645	N
Wisconsin	Combo	250%	52,940	Y/N
Wyoming	Separate	200%	8,976	N

\*Programs may be an expansion of Medicaid, a separate CHIP program, or a combination of the two. \*\*Presumptive eligibility provides immediate but temporary benefits for applicants who appear to meet eligibility requirements but have not yet been officially approved; in some States, this is only available for certain population (e.g., infants). For States with a combination plan, information for the Medicaid plan is listed first, followed by information for the separate CHIP plan.

\*\*\*Eligibility information is from FY 2007.

## Medicaid Enrollment and EPSDT Utilization for Children under 21, FY 2008

Source (III.4, IV.2): Centers for Medicare and Medicaid Services

State	Medicaid Enrollees*	EPSDT Participation Ratio**	Medicaid Expenditures (per enrollee)***
Alabama♦	489,049	52%	\$1,880
Alaska	83,617	53%	\$4,767
Arizona♦	681,537	76%	\$2,280
Arkansas♦	415,411	38%	\$2,131
California	4,665,571	78%	\$1,761
Colorado	343,032	56%	\$2,372
Connecticut	285,538	68%	\$1,629
Delaware	90,731	90%	\$3,815
District of Columbia♦	98,550	70%	\$3,494
Florida	1,654,843	70%	\$2,183
Georgia	1,059,612	60%	\$2,303
Hawaii♦	132,459	72%	\$1,842
Idaho	163,765	45%	\$2,726
Illinois	1,472,021	67%	\$1,747
Indiana	679,769	100%	\$1,987
Iowa	255,061	72%	\$2,811
Kansas	219,175	61%	\$2,990
Kentucky	491,961	57%	\$3,186
Louisiana	753,992	67%	\$1,977
Maine◊	136,617	59%	\$5,275
Maryland	523,789	59%	\$3,154
Massachusetts♦	543,090	78%	\$3,459
Michigan♦	1,126,951	54%	\$1,838
Minnesota	416,629	68%	\$4,439
Mississippi♦	391,852	41%	\$1,601

State	Medicaid Enrollees*	EPSDT Participation Ratio**	Medicaid Expenditures (per enrollee)***
Missouri	643,125	70%	\$2,456
Montana	64,071	61%	\$3,214
Nebraska	163,672	52%	\$3,119
Nevada♦	163,407	59%	\$1,618
New Hampshire	92,694	63%	\$2,872
New Jersey	605,041	61%	\$2,769
New Mexico	331,109	67%	\$3,164
New York	2,006,098	63%	\$3,323
North Carolina♦	1,010,922	78%	\$2,349
North Dakota♦	45,755	48%	\$2,145
Ohio♦	1,250,115	51%	\$2,005
Oklahoma	517,679	52%	\$2,407
Oregon	271,889	61%	\$2,610
Pennsylvania♦	1,137,248	52%	\$2,604
Rhode Island♦	110,354	55%	\$4,034
South Carolina	529,255	57%	\$2,479
South Dakota	94,157	44%	\$2,557
Tennessee	824,415	59%	\$2,259
Texas♦	2,943,128	60%	\$1,876
Utah♦	169,498	61%	\$1,987
Vermont♦	59,170	51%	\$2,993
Virginia	563,092	66%	\$2,527
Washington	663,501	59%	\$2,245
West Virginia◊	206,729	44%	\$1,917
Wisconsin◊	499,965	68%	\$1,586
Wyoming	53,211	42%	\$3,074

\*Unduplicated number of individuals under age 21 determined to be eligible for EPSDT services.

\*\*The ratio of Medicaid eligibles receiving any EPSDT services to the number of eligibles who should have received such services.

\*\*\*Represents total Medicaid vendor payments divided by Medicaid eligibles under 21 (Medicaid Statistical Information System Report)

◊All data are from FY 2007.

♦Expenditure data are from FY 2007.

## Health Insurance Status of Children Under 18,\* 2009

Source (III.1): U.S. Census Bureau, Current Population Survey

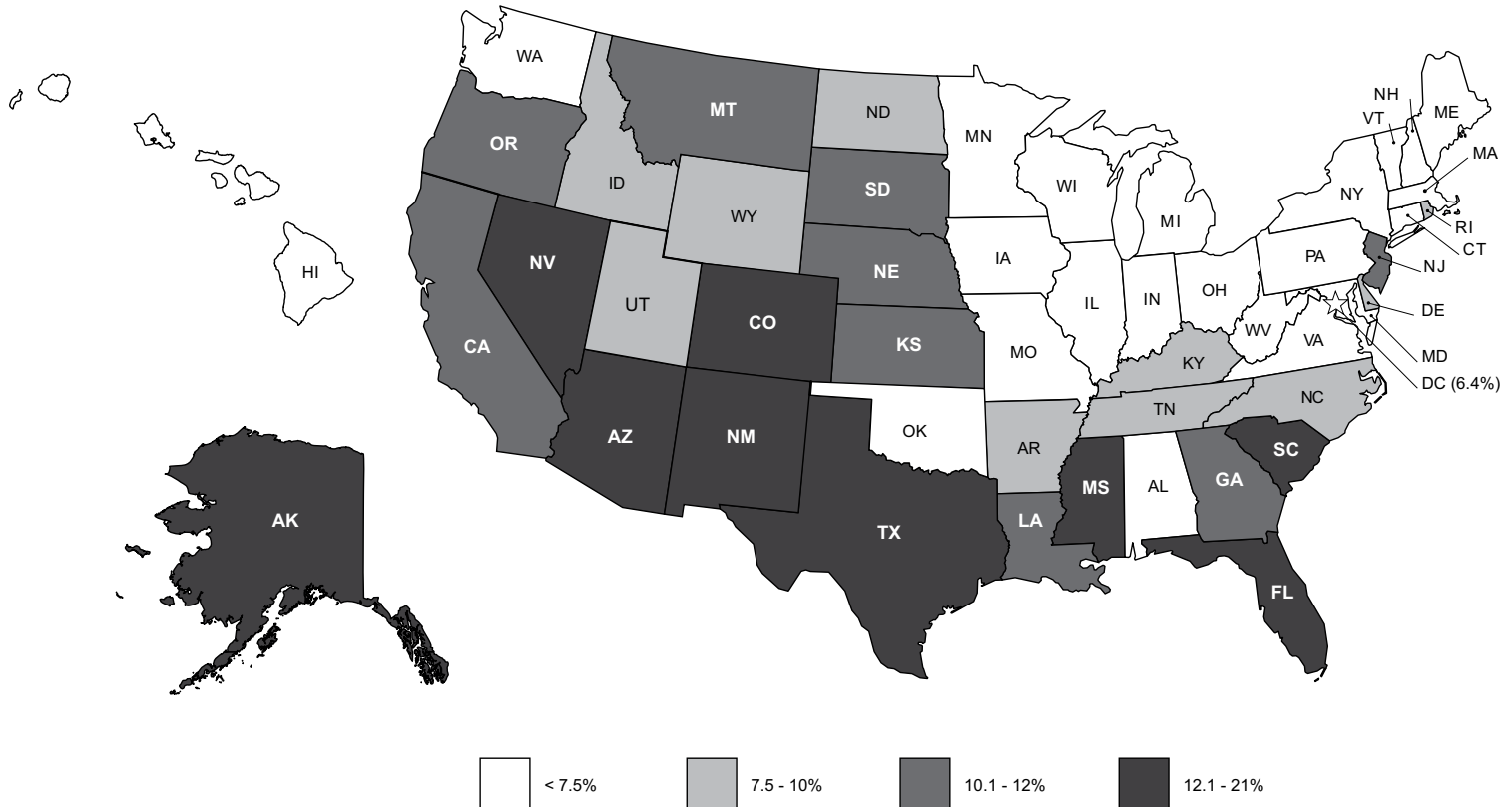
State	Percent with Private Insurance	Percent with Public Insurance**	Percent Uninsured
Alabama	63.7%	37.3%	3.7%
Alaska	60.0%	36.7%	14.4%
Arizona	49.2%	38.1%	16.0%
Arkansas	49.2%	47.2%	9.2%
California	58.7%	36.6%	10.5%
Colorado	68.5%	22.6%	12.3%
Connecticut	74.8%	26.9%	5.4%
Delaware	70.8%	27.3%	9.1%
District of Columbia	57.3%	45.5%	6.4%
Florida	60.5%	28.3%	16.7%
Georgia	61.0%	35.3%	10.5%
Hawaii	64.2%	42.7%	5.2%
Idaho	69.5%	28.9%	8.8%
Illinois	67.8%	32.6%	6.4%
Indiana	64.7%	34.7%	6.0%
Iowa	75.1%	28.1%	5.3%
Kansas	63.4%	30.1%	11.0%
Kentucky	59.2%	37.1%	10.0%
Louisiana	58.9%	35.6%	11.3%
Maine	66.2%	36.4%	5.8%
Maryland	74.0%	27.6%	6.0%
Massachusetts	75.5%	27.1%	3.4%
Michigan	71.3%	31.8%	4.7%
Minnesota	73.5%	24.7%	6.6%
Mississippi	49.4%	43.8%	13.3%
Missouri	69.9%	31.3%	6.8%

State	Percent with Private Insurance	Percent with Public Insurance**	Percent Uninsured
Montana	63.9%	31.5%	10.5%
Nebraska	67.4%	29.7%	10.1%
Nevada	65.3%	19.1%	19.1%
New Hampshire	79.5%	23.6%	3.7%
New Jersey	69.8%	22.3%	11.3%
New Mexico	49.1%	39.7%	16.1%
New York	63.3%	37.2%	7.1%
North Carolina	60.9%	36.8%	9.3%
North Dakota	73.3%	24.0%	8.2%
Ohio	69.7%	31.1%	5.8%
Oklahoma	59.9%	43.2%	7.2%
Oregon	66.2%	29.5%	11.6%
Pennsylvania	69.9%	29.9%	6.7%
Rhode Island	66.9%	33.5%	8.1%
South Carolina	61.4%	30.9%	12.8%
South Dakota	64.3%	33.2%	10.1%
Tennessee	56.1%	42.7%	9.4%
Texas	50.8%	37.5%	17.9%
Utah	83.3%	13.4%	9.6%
Vermont	69.0%	41.9%	3.9%
Virginia	73.3%	29.1%	6.9%
Washington	64.3%	36.7%	6.9%
West Virginia	62.0%	41.3%	6.2%
Wisconsin	74.7%	28.8%	5.8%
Wyoming	70.7%	29.3%	9.0%

\*Children may have more than one type of coverage. \*\*Includes children covered by Medicaid, CHIP, Medicare, military health insurance, and the Indian Health Service.

## Health Insurance Status: Percent of Children Under 18 Who Are Uninsured, by State, 2009

Source (III.1): U.S. Census Bureau, Current Population Survey



## Low Birth Weight, Preterm Birth, and Births to Unmarried Women (Percent), by State and Maternal Race/Ethnicity, 2007

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

State	Low Birth Weight*				Preterm Birth*				Births to Unmarried Women			
	Total*	Non-Hispanic White	Black	Hispanic	Total*	Non-Hispanic White	Black	Hispanic	Total*	Non-Hispanic White	Black	Hispanic
United States	8.2	7.3	13.9	6.9	12.7	11.5	18.3	12.3	39.7	27.8	71.6	51.3
Alabama	10.4	8.4	15.4	7.0	16.6	14.6	21.3	14.4	38.3	23.9	71.4	24.5
Alaska	5.7	5.6	11.3	6.2	10.4	9.2	14.2	11.2	37.3	23.4	46.0	34.7
Arizona	7.1	7.0	13.1	6.6	12.7	11.8	18.4	12.8	45.2	28.7	62.0	56.8
Arkansas	9.1	8.0	14.8	6.6	13.9	12.7	19.1	12.9	43.4	32.6	78.9	49.7
California	6.9	6.4	11.9	6.3	10.9	9.9	15.2	11.0	38.9	23.5	67.1	49.8
Colorado	9.0	8.7	14.8	8.6	12.2	11.3	18.4	12.9	25.4	17.3	49.4	38.2
Connecticut	8.1	7.1	12.2	8.3	10.5	9.6	14.3	10.9	35.1	20.9	68.1	63.5
Delaware	9.3	7.3	13.9	8.2	14.3	12.0	18.3	15.7	46.8	32.9	71.5	63.7
D.C.	11.1	6.2	14.6	7.3	15.6	9.6	18.8	15.2	58.5	6.9	80.0	72.0
Florida	8.7	7.4	13.6	7.1	13.8	11.8	19.0	13.1	46.1	34.5	69.8	49.6
Georgia	9.5	7.5	14.3	6.0	13.9	12.0	18.4	10.7	43.6	25.7	68.9	49.6
Hawaii	8.0	5.6	10.4	8.4	12.4	9.6	12.8	11.3	36.9	26.3	24.7	49.3
Idaho	6.5	6.5	N/A	6.3	10.5	10.3	N/A	10.9	25.5	21.8	33.1	42.0
Illinois	8.5	7.3	14.6	6.8	13.0	11.8	18.6	12.5	40.1	25.3	79.6	50.8
Indiana	8.5	7.9	14.1	7.2	12.9	12.1	19.5	12.3	42.4	36.0	78.5	56.2
Iowa	6.8	6.6	11.9	5.8	11.6	11.3	15.8	12.4	34.3	30.8	77.3	50.1
Kansas	7.1	6.8	13.2	5.6	11.6	11.1	16.6	11.4	36.5	30.2	72.2	51.6
Kentucky	9.3	8.8	15.4	7.1	15.2	14.6	21.2	14.8	39.3	34.9	76.3	51.8
Louisiana	11.2	8.5	15.8	6.6	16.6	13.7	21.4	12.4	51.4	32.8	78.5	53.6
Maine	6.3	6.2	9.5	N/A	10.6	10.4	16.3	14.4	39.1	39.1	36.8	41.6
Maryland	9.1	7.0	12.9	7.3	13.4	11.1	17.5	12.8	40.9	25.5	62.9	54.8
Massachusetts	7.9	7.3	10.8	8.0	11.2	10.9	13.9	11.4	33.4	25.1	58.4	66.9
Michigan	8.4	7.3	13.6	7.2	12.5	11.3	18.3	11.4	39.4	29.7	78.1	50.0
Minnesota	6.7	6.2	10.8	5.7	10.4	10.1	13.1	9.9	32.7	25.5	61.2	56.9
Mississippi	12.3	9.1	16.4	7.2	18.3	14.8	22.7	14.9	53.7	30.6	79.6	56.0

State	Low Birth Weight*				Preterm Birth*				Births to Unmarried Women			
	Total*	Non-Hispanic White	Black	Hispanic	Total*	Non-Hispanic White	Black	Hispanic	Total*	Non-Hispanic White	Black	Hispanic
Missouri	7.9	6.9	13.5	5.7	12.5	11.4	18.6	11.4	40.5	32.5	79.0	52.6
Montana	7.2	6.7	N/A	8.9	11.9	11.0	N/A	12.1	35.9	29.1	45.2	43.9
Nebraska	7.0	6.5	13.6	6.4	11.9	11.5	17.1	11.8	33.4	26.3	72.1	49.5
Nevada	8.2	7.9	14.5	6.6	14.3	13.2	20.1	13.8	42.0	30.1	70.0	50.1
New Hampshire	6.3	6.3	N/A	6.1	9.4	9.4	15.2	9.6	31.4	31.5	38.7	47.7
New Jersey	8.5	7.4	13.4	7.5	12.7	11.2	17.9	13.2	34.4	16.8	68.1	58.6
New Mexico	8.7	8.7	14.9	8.7	12.8	12.2	17.7	12.8	51.8	31.6	67.4	57.8
New York	8.1	6.9	12.6	7.7	12.3	10.8	16.8	13.1	40.7	23.7	69.5	64.7
North Carolina	9.2	7.8	14.6	6.5	13.3	11.6	18.2	12.4	41.2	25.6	71.2	53.7
North Dakota	6.3	6.2	N/A	N/A	11.6	10.8	N/A	10.1	32.6	26.3	30.2	42.1
Ohio	8.8	7.6	14.2	8.2	13.2	12.0	18.6	14.1	42.2	34.4	78.5	58.9
Oklahoma	8.2	7.9	14.7	6.2	13.5	13.0	19.2	12.2	41.3	33.6	74.3	48.0
Oregon	6.1	5.9	9.8	5.9	10.3	10.1	13.5	10.2	35.1	31.0	65.2	47.7
Pennsylvania	8.4	7.1	13.8	8.9	11.8	10.5	17.2	13.1	39.7	30.1	77.7	64.1
Rhode Island	8.0	7.5	10.9	7.7	12.0	11.2	16.6	12.9	44.0	33.0	71.9	64.6
South Carolina	10.1	7.8	15.2	6.7	15.5	13.3	20.1	13.1	46.6	29.3	76.5	48.1
South Dakota	7.0	6.7	10.8	6.6	12.6	11.2	18.9	12.7	38.4	27.8	48.6	56.3
Tennessee	9.4	8.3	14.6	6.3	14.2	13.2	18.5	12.7	42.8	31.7	77.1	53.2
Texas	8.4	7.7	14.3	7.5	13.6	12.5	18.2	13.6	40.7	26.3	65.8	47.3
Utah	6.7	6.4	10.7	7.3	10.9	10.2	19.6	12.5	19.7	13.4	50.4	44.1
Vermont	6.2	6.1	N/A	N/A	9.1	9.0	N/A	N/A	36.6	36.6	46.3	32.5
Virginia	8.6	7.2	13.7	6.4	12.1	10.5	17.3	11.2	35.2	22.9	65.4	52.1
Washington	6.3	6.0	9.8	5.7	10.6	10.0	13.8	11.0	33.2	27.7	56.3	49.4
West Virginia	9.5	9.4	15.0	N/A	13.9	13.8	18.0	12.3	40.3	39.2	73.5	47.0
Wisconsin	7.0	6.1	13.5	6.4	11.1	10.3	17.2	11.2	35.4	26.8	84.3	53.6
Wyoming	9.1	9.3	N/A	7.1	12.7	12.4	N/A	12.2	34.7	29.7	57.0	54.3

\*Low birth weight is less than 2,500 grams or 5 pounds 8 ounces; preterm birth is less than 37 completed weeks of gestation.  
N/A: Figure does not meet standards of reliability or precision; based on fewer than 20 births in the numerator.



## Infant and Neonatal Mortality,\* by State and Maternal Race, 2007

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

State	Infant Deaths			Neonatal Deaths		
	Total**	White***	Black***	Total**	White***	Black***
Alabama	9.89	7.98	14.35	6.27	4.90	9.5
Alaska	6.51	5.20	n/a	3.17	3.03	n/a
Arizona	6.83	6.49	14.95	4.69	4.53	10.12
Arkansas	7.66	6.47	13.17	4.33	3.38	8.61
California	5.20	4.89	12.35	3.55	3.34	7.98
Colorado	6.12	5.85	13.16	4.17	4.01	8.19
Connecticut	6.63	5.90	12.07	5.06	4.46	9.41
Delaware	7.48	6.12	11.84	5.34	4.32	8.80
District of Columbia	13.09	8.52	16.61	9.70	5.87	12.60
Florida	7.05	5.52	12.21	4.42	3.53	7.47
Georgia	7.98	5.56	12.77	5.07	3.58	7.90
Hawaii	6.48	6.11	n/a	4.23	3.59	n/a
Idaho	6.75	6.59	n/a	4.52	4.46	n/a
Illinois	6.73	5.22	14.16	4.78	3.84	9.46
Indiana	7.58	6.61	15.99	4.79	4.13	10.40
Iowa	5.50	5.34	11.58	3.30	3.27	n/a
Kansas	7.93	7.03	18.98	5.00	4.49	11.63
Kentucky	6.69	6.01	12.69	4.06	3.73	7.58
Louisiana	9.17	6.14	14.08	5.35	3.49	8.37
Maine	6.30	6.33	n/a	4.46	4.54	n/a
Maryland	8.00	4.79	13.63	5.80	3.54	9.67
Massachusetts	4.93	4.54	8.76	3.42	3.11	6.12
Michigan	7.94	6.11	16.39	5.56	4.37	11.12
Minnesota	5.55	4.69	11.70	3.80	3.28	7.13
Mississippi	10.04	6.65	13.87	5.89	3.83	8.37
Missouri	7.48	5.89	16.48	4.99	3.77	11.69

State	Infant Deaths			Neonatal Deaths		
	Total**	White***	Black***	Total**	White***	Black***
Montana	6.35	5.94	n/a	3.62	3.49	n/a
Nebraska	6.76	6.12	14.04	4.86	4.38	10.53
Nevada	6.36	6.03	12.35	4.03	3.81	8.15
New Hampshire	5.36	5.34	n/a	3.25	3.31	n/a
New Jersey	5.18	4.13	11.02	3.44	2.86	6.87
New Mexico	6.27	5.99	n/a	3.89	3.88	n/a
New York	5.57	4.95	8.82	3.70	3.27	5.95
North Carolina	8.49	6.35	15.14	5.70	4.24	10.28
North Dakota	7.47	6.80	n/a	4.86	5.07	n/a
Ohio	7.69	6.34	14.81	5.18	4.21	10.20
Oklahoma	8.52	7.25	18.03	4.78	4.16	10.82
Oregon	5.75	5.70	n/a	3.95	3.93	n/a
Pennsylvania	7.56	6.12	15.07	4.98	4.12	9.45
Rhode Island	7.35	6.52	16.00	5.41	4.79	n/a
South Carolina	8.57	6.03	13.69	5.66	3.93	9.13
South Dakota	6.44	5.55	n/a	4.16	4.01	n/a
Tennessee	8.31	6.44	15.74	5.19	3.91	10.19
Texas	6.29	5.68	11.51	3.86	3.43	7.37
Utah	5.08	4.98	n/a	3.39	3.35	n/a
Vermont	5.07	4.76	n/a	3.07	n/a	n/a
Virginia	7.79	5.80	15.41	5.35	3.76	11.26
Washington	4.82	4.33	10.28	2.85	2.63	5.55
West Virginia	7.46	6.95	n/a	4.68	4.33	n/a
Wisconsin	6.46	5.37	15.18	4.03	3.56	8.34
Wyoming	7.35	6.65	n/a	3.67	3.66	n/a

\*Mortality figures are presented as number of deaths per 1,000 live births. Infant mortality is defined as death during the first year of life; neonatal mortality is death during the first 28 days of life.

\*\*Includes all races. \*\*\*Includes Hispanics. N/A: Figure does not meet the standards of reliability or precision.





## CITY DATA

The following section compares urban health to the national average for several indicators. Included are data on low and very low birth weight for infants born in U.S. cities with over 100,000 residents, and infant mortality among infants born in cities with more than 250,000 residents.

These comparisons indicate that the health status of infants living in large U.S. cities is generally poorer than that of infants in the Nation as a whole. In 2007, 8.7 percent of infants living in cities were born at low birth weight, compared to a national average of 8.2 percent. The infant mortality rate showed a similar disparity, with a rate of 7.2 per 1,000 live births among infants in cities compared to a national average of 6.7 per 1,000 in 2006.

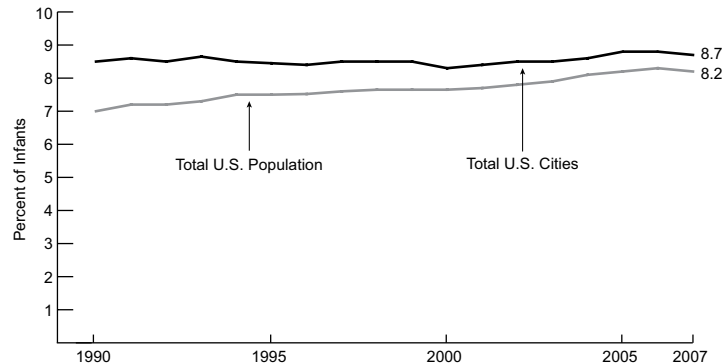
## BIRTH WEIGHT

**Low Birth Weight.** Disorders related to short gestation and low birth weight are the second leading cause of neonatal mortality in the United States. In 2007, 122,299 babies born to residents of U.S. cities with populations over 100,000 were low birth weight (weighing less than 2,500 grams, or 5 pounds 8 ounces); this represents 8.7 percent of infants in U.S. cities. The rate of low birth weight among urban infants was 6 percent higher than the rate nationwide (8.2 percent). Although this has been a persistent disparity, the gap has decreased somewhat since 1990.

**Very Low Birth Weight.** Infants born very low birth weight (less than 1,500 grams, or 3 pounds 4 ounces) are at highest risk for poor health outcomes. In 2007, 1.6 percent of live births in cities with populations over 100,000 were very low birth weight. This exceeded the rate of very low birth weight nationwide (1.5 percent) by 7 percent.

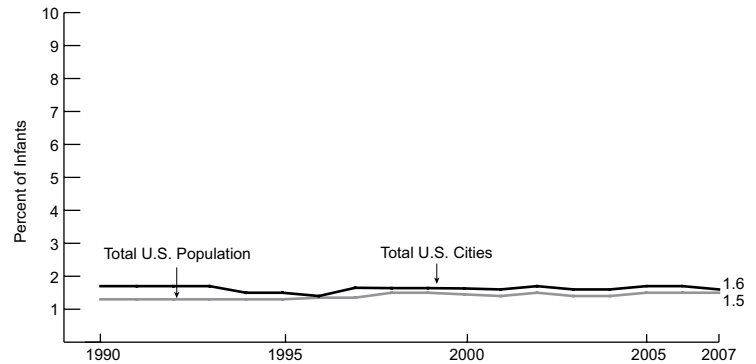
### Infants Born Low Birth Weight in U.S. Cities with Populations over 100,000, 1990–2007

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



### Infants Born Very Low Birth Weight in U.S. Cities with Populations over 100,000, 1990–2007

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

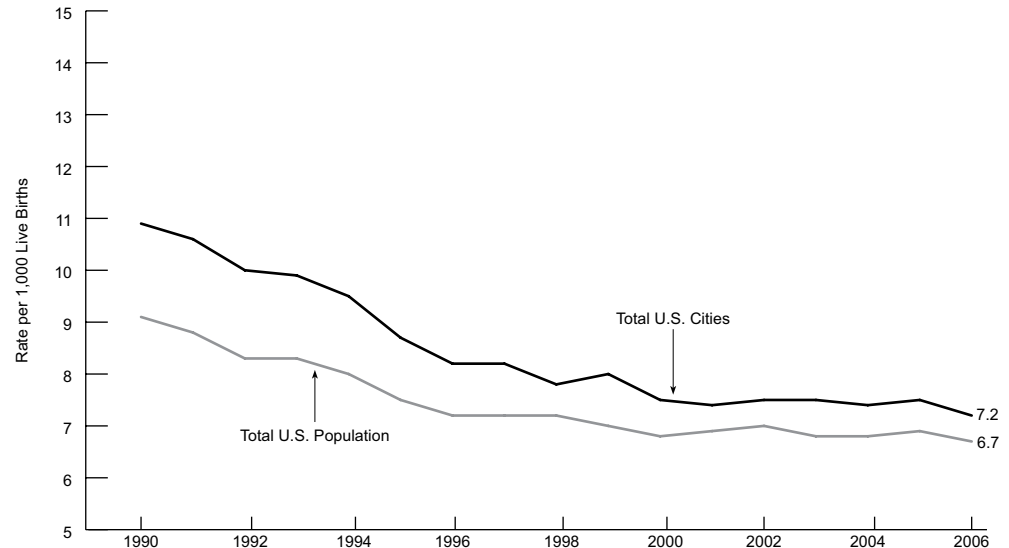


## INFANT MORTALITY

In 2006, 6,582 infants born to residents of cities in the United States with populations over 250,000 died in the first year of life. The infant mortality rate in U.S. cities was 7.2 deaths per 1,000 live births, which was higher than the rate for the Nation as a whole (6.7 per 1,000). Although the infant mortality rate in cities has consistently been higher than the rate nationwide, it declined over the past decade, and the disparity in infant mortality rates between infants in cities and the Nation as a whole decreased by 50 percent. Between 1990 and 2006, the infant mortality rate in cities declined by one-third, while the nationwide decline during the same period was approximately 25 percent. Declines in infant mortality rates since 2000, however, have been relatively small for both cities and the population as a whole.

### Infant Mortality Rates in U.S. Cities,\* 1990–2006

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



\*Data for 1990–2002 were for cities with populations over 100,000; data after 2002 reflect cities with populations over 250,000.

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