

Child Health USA 2014

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PREFACE AND READERS GUIDE

The Health Resources and Services Administration's Maternal and Child Health Bureau (MCHB) is pleased to present *Child Health USA 2014*. Now in its 24th year, *Child Health USA* provides a centralized resource for data on the health and well-being of America's infants, children, and adolescents. 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 resource 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. In general, only statistically significant differences are commented on; however, not all significant differences

are discussed. Data are presented for the following target population groups of the Title V Maternal and Child Health Block Grant: infants, children, adolescents, and children with special health care needs. *Child Health USA 2014* 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, eliminate barriers and health disparities, promote an environment that supports maternal and child health, 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 website, available at <http://mchb.hrsa.gov/chusa14/>, has a succinct format that 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 health and well-being of children, including poverty, education, geographic location, and the presence of special health care needs. The second section, entitled **Health Status and Behaviors**, contains vital statistics and health behavior data for the maternal and child population presented by developmental stage. **Health Services Financing and Utilization**, the third section, includes data regarding health care financing and utilization of selected health services, on topics ranging from health insurance coverage to immunization. The final section, titled **Special Features**, highlights topics of special significance to children's health and well-being such as exposure to adverse childhood experiences and flourishing in childhood and adolescence.

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SUMMARY OF KEY FINDINGS

Child Health USA 2014 is the latest in the series of annual reports on the health status and service needs of America's infants, children, and adolescents. The following summary outlines the key findings pertaining to population characteristics, health status and behaviors, health services financing and utilization, and other special features impacting U.S. children.

Population Characteristics

There were approximately 74 million children under 18 years of age living in the United States in 2013, representing 23.3 percent of the population.

- More than 16.5 million children (22.3 percent) lived in households with incomes below the U.S. Census Bureau's poverty threshold (\$23,834 for a family of four in 2013).
- Racial and ethnic diversity continued to increase, particularly for Hispanic children who represented more than 24 percent of all children in 2013 (up from 8.8 percent in 1980).
- In 2011–2012, 19.8 percent of U.S. children under 18 years of age had a special health care need as defined by having a chronic medical, behavioral, or developmental condition lasting 12 months or longer and experiencing a service-related or functional consequence.

Health Status and Behaviors

Indicators of child health and well-being are essential for identifying priority areas for the development and assessment of health interventions.

- In 2012, approximately one in five adolescents had a mental disorder and the increased risk for struggles with school, use of drugs and alcohol, and the development of chronic illnesses in adulthood.
- Alcohol is the most commonly used substance among adolescents aged 12–17 years, with 12.9 percent reporting past-month use in 2012. In 2012, 9.5 percent of adolescents reported using illicit drugs, with marijuana the most commonly reported.
- In 2011, 24,001 U.S. infants died before their first birthday, representing a rate of 6.07 deaths per 1,000 live births. Conditions related to prematurity accounted for more than a third of these infant deaths.
- In 2011–2012, nearly 30 percent of children aged 2–11 years were overweight or obese, 66.9 percent were of normal weight, and 3.4 percent were underweight. The prevalence of overweight and obesity was highest among Hispanic children (40 percent).
- In 2013, 42 percent of fourth-graders and 36 percent of eighth-graders were at or above proficiency in mathematics, while 35 percent and 36 percent, respectively, were at or above proficiency in reading.
- According to preliminary data for 2013, the overall birth rate for adolescents aged 15–19 years was 26.6 births per 1,000 females, representing an 11 percent decline from 2012 (29.4 per 1,000) and an historic low for the United States.

- In 2013, only 27.1 percent of high school students reported meeting the 2008 U.S. Department of Health and Human Services guidelines for participation in physical activity.
- Nearly 20 percent of high school students reported being bullied on school property and 14.8 percent reported being bullied through e-mail, chat rooms, instant messaging, Web sites, or texting, in 2013.

Health Services Financing and Utilization

The availability of and access to health care services is important for ensuring the health and well-being of U.S. children. Without these services, children are at risk of poor health outcomes.

- In 2013, more than 6.5 million children aged 18 years and under were uninsured, representing 8.9 percent of all children in the United States.
- During the 2013–2014 flu season, 58.9 percent of children aged 6 months–17 years received the influenza vaccine, which represented a 2.3 percentage point increase in coverage as compared to the 2012–2013 flu season.
- The proportion of children aged 10–71 months receiving a standardized developmental screening increased considerably from 19.5 percent in 2007 to 30.8 percent in 2011–2012.
- In 2012, approximately 65 percent of children aged 2–17 years received dental care in the past 6 months. The proportion of children receiving dental care was highest among children aged 5–11 years (70.3 percent) and lowest among those aged 2–4 years (45.3 percent).
- A majority of children under 18 years of age (96.2 percent) had a usual source of care, such as a physician's office or health center, in 2012. The percentage of children with a usual source of care was highest among privately insured children (98.2 percent) and lowest among those who were uninsured (73.2 percent).

Special Features

Several areas of special significance to children's health are also examined in *Child Health USA 2014*, as "special features."

- In 2011, the child mortality rate was 25.7 per 100,000 among children aged 1–19, representing a decline of more than 25 percent since 1999. Non-Hispanic American Indian/Alaska Native children had the highest mortality rate (47.6 per 100,000) and Hispanic children had the lowest mortality rate (21.1 per 100,000).
- In 2011–2012, 22.6 percent of children aged 0–17 years experienced at least two adverse childhood experiences, such as experiencing economic hardship often (25.7 percent) and living with a parent who was divorced or separated after the child was born (20.1 percent).
- Among children aged 6 months–5 years, 73.2 percent were reported to usually or always exhibit four age-specific behaviors associated with flourishing (curiosity, resilience, attachment to caregivers, and positive affect). Less than half (47.7 percent) of school-aged children were reported to usually or always exhibit three age-specific flourishing behaviors (curiosity, resilience, and self-regulation).

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 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 make-up 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 selected population characteristics that can 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 children and their families, covering topics such as poverty, child care arrangements, education, and geographic location.

This section also presents the latest estimate of the proportion of U.S. children with special health care needs. Children are considered to have a special health care need if, in addition to a chronic medical, behavioral, or developmental condition that has lasted or is expected to last 12 months or longer, they experience either service-related or functional consequences, including the need for or use of prescription medications and/or specialized therapies.



POPULATION OF CHILDREN

In 2013, there were nearly 74 million children under 18 years of age in the United States, representing 23.3 percent of the population. Adults aged 18–64 years comprised 62.6 percent of the population, while 14.1 percent of Americans were aged 65 years or older. Approximately 6 million Americans were 85 and older.

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 28.1 percent in 1980 to 23.3 percent in 2013. The representation of adolescents and young adults (aged 15–19 and 20–24 years) has also fallen, from 9.3 and 9.4 percent to 6.7 and 7.2 percent, respectively (figure 1). During this period, the percentage of the population aged 25–64 years increased from 47.3 to 52.6 percent, and the percentage aged 65 years or older increased from 11.3 to 14.1 percent. The median age in the United States has increased from 30.0 years in 1980 to 37.6 years in 2013.

The distribution of males and females within the U.S. population varies with age. In 2013, there were slightly more males than females under age 18 in the United States: 37.6 million and 36.0 million, re-

spectively. The trend is reversed among individuals aged 65 years and older, however. In 2013, there were 19.6 million males aged 65 years and older, comprising 12.6 percent of the overall male population, compared to 25.1 million females of the same age, who comprised 15.6 percent of the overall female population. This distribution has remained relatively stable over the past several decades.

The shifting racial and ethnic makeup of the child population (under age 18) reflects the increasing diversity of the population as a whole. Hispanic children represented fewer than 9 percent of children in 1980, compared to more than 24 percent in 2013 (figure 2). The percentage of children who are non-Hispanic 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 74.2 percent in 1980 to 52.4 percent in 2013. After 2000, changes in the way that racial and ethnic data were collected limit comparison over time for some groups, including Asians and individuals of more than one race.

Figure 1. U.S. Population, by Age Group, 1980 and 2013

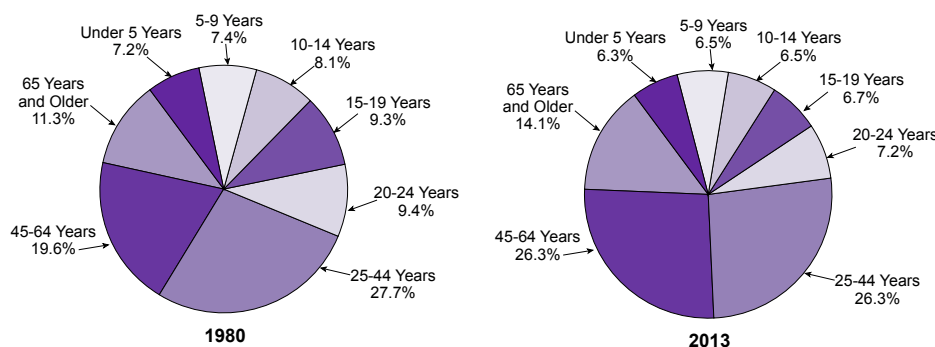
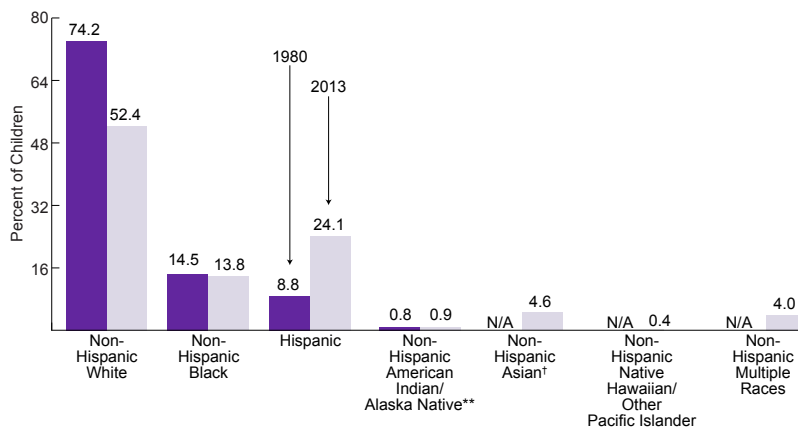


Figure 2. Population of Children Under Age 18, by Race/Ethnicity,* 1980 and 2013



*Separate estimates for all race groups not available in 1980. Estimates may not sum to 100 due to rounding.

**Data for 1980 include Hispanics. †Data for 1980 include Hispanics and Native Hawaiian/Other Pacific Islanders.

Data Sources

Figure 1. [1980] U.S. Census Bureau, Current Population Estimates. Table US-EST90INT-04 : intercensal estimates of the United States resident population by age groups and sex, 1990–2000: selected months. In: *Statistical Abstract of the United States: 2012*. Available at: <http://www.census.gov/prod/2011pubs/12statab/pop.pdf>. Accessed July 14, 2014.

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Figure 2. [1980] U.S. Census Bureau. *Statistical abstract of the United States 1996*. Available at: <https://www.census.gov/prod/2/gen/96statab/pop.pdf>. Accessed July 14, 2014. Analyses conducted by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

[2013] U.S. Census Bureau, Population Division. *Annual estimates of the resident population by sex, age, race, and Hispanic origin for the United States and States: April 1, 2010 to July 1, 2013*. Available at: <http://www.census.gov/popest/data/national/asrh/2013/index.html>. Accessed July 14, 2014. Analyses conducted by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

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CHILDREN IN POVERTY

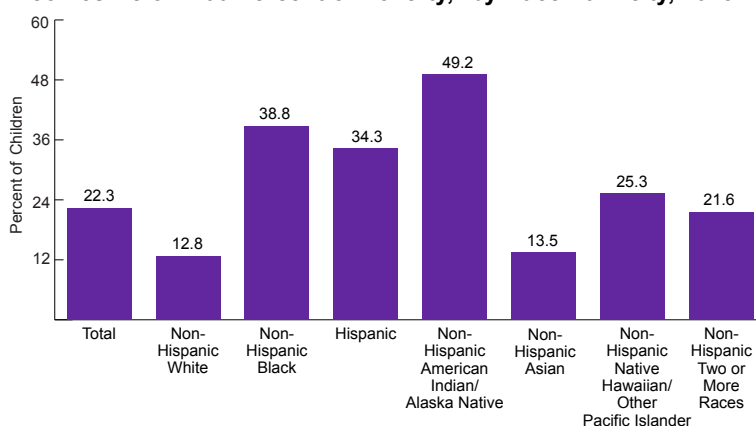
In 2013, more than 16.5 million U.S. children under 18 years of age lived in households with incomes below the U.S. Census Bureau's poverty threshold (\$23,834 for a family of four in 2013). This represents 22.3 percent of all children in the United States. Poverty affects many aspects of a child's life, including living conditions, nutrition, and access to health care. In addition, significant racial and ethnic disparities exist. In 2013, nearly 50 percent of non-Hispanic American Indian/Alaska Native children, 38.8 percent of non-Hispanic Black children, and 34.3 percent of Hispanic children lived in households with incomes below 100 percent of poverty, compared to 12.8 percent of non-Hispanic White children (figure 1).

Single-parent families are particularly vulnerable to poverty. In 2013, 44.7 percent of children living in a mother-headed household experienced poverty, as did 21.3 percent of children living in a father-headed

household. Only 13.2 percent of children living in two-parent families lived in households with incomes below 100 percent of poverty. The proportion of children in single- and two-parent families living in poverty also varies by age. In 2013, 52.3 percent of children less than 5 years of age and 42.1 percent of children aged 5–17 years living in mother-only households were living in poverty (figure 2).

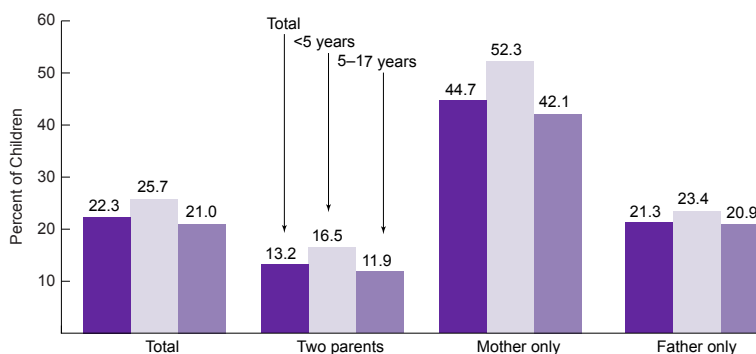
A number of federal programs work to protect the health and well-being of children living in low-income families (see page on Federal Programs to Promote Child Health). One of these is the National School Lunch Program, administered by the U.S. Department of Agriculture's Food and Nutrition Service. The program provides nutritionally balanced low-cost or free lunches to children based on household poverty level. In 2013, the average daily participation in low-cost or free lunches was about 30 million children.¹

Figure 1. Children Under Age 18 Living in Households with Incomes Below 100 Percent of Poverty,* by Race/Ethnicity, 2013



*The average U.S. Census Bureau poverty threshold for a family of four was \$23,834 in 2013.

Figure 2. Children Under Age 18 Living in Households with Incomes Below 100 Percent of Poverty,* by Family Type and Age, 2013



*The average U.S. Census Bureau poverty threshold for a family of four was \$23,834 in 2013.

Data Sources

Figure 1 and 2. U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey, Annual Social and Economic Supplement. Analyses conducted by the Maternal and Child Health Epidemiology and Statistics Program.

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CHILDREN OF IMMIGRANT PARENTS

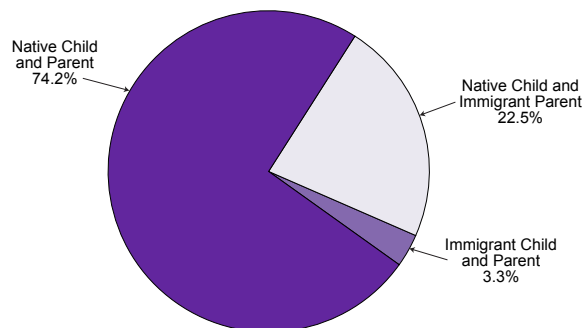
The immigrant population in the United States has increased substantially since the 1970s, largely due to immigration from Asia and Latin America. In 2013, 25.8 percent of children in the United States had at least one immigrant parent. Of all children, 22.5 percent were born in the United States with an immigrant parent or parents, and 3.3 percent were themselves immigrants, with or without an immigrant parent. Most children (74.2 percent) were native born with native-born parents (figure 1).

Children's poverty status varies with nativity. In 2013, immigrant children with immigrant parents and native children with immigrant parents were most likely to live in poverty, with 30.8 and 28.4 percent respectively, living in households with incomes below 100 percent of poverty (\$23,834 for a family of four in 2013; figure 2). More than a quarter of immigrant children with immigrant parents and native chil-

dren with immigrant parents lived in households with family incomes of 100–199 percent of poverty. Native-born children with native parents were the least likely to experience poverty, with 20.1 percent living in households with incomes below 100 percent of poverty and another 20.1 percent living in households with incomes of 100–199 percent of poverty.

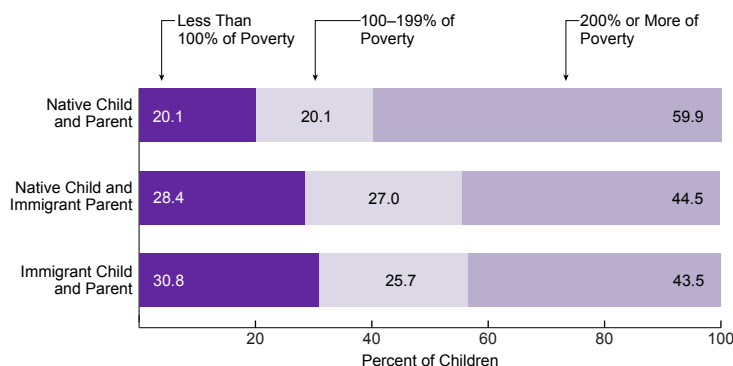
A number of other factors vary by the nativity of children and their parents. For example, immigrant and native children with immigrant parents were more likely to live in two-parent households (77.9 and 73.3 percent, respectively) compared to children with native parents (66.6 percent). Immigrant and native children with immigrant parents were also more likely to live in metropolitan areas (93.7 and 94.9 percent, respectively) than children with native parents (82.1 percent).

Figure 1. Children Under Age 18, by Nativity of Child and Parent(s)*, 2013



*"Native parent" indicates that both of the child's parents were U.S. citizens at birth. "Immigrant parent" indicates that one or both parents were born outside the United States. Children could be living with one or both parents.

Figure 2. Children Under Age 18, by Nativity of Child and Parent(s)* and Poverty Status, 2013**



*"Native parent" indicates that both of the child's parents were U.S. citizens at birth. "Immigrant parent" indicates that one or both parents were born outside of the United States. Children could be living with one or both parents.

**The average U.S. Census Bureau poverty threshold for a family of four was \$23,834 in 2013.

Data Sources

Figure 1 and 2. U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey, Annual Social and Economic Supplement. Analyses conducted by the Maternal and Child Health Epidemiology and Statistics Program.

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RURAL AND URBAN CHILDREN

Urban and rural children differ in their demographic characteristics, which, in combination with geographic factors, can affect their health status and access to health care. For instance, children living in rural areas are more vulnerable to death from injuries,¹ are more likely to use tobacco and other substances,^{2,3} and are more likely to be obese than their urban counterparts.⁴ Rural families may also not have the same access to health care because health services are not always located nearby.⁵ Understanding these potential risks can provide program planners and policymakers with information that can be used to design and target services.

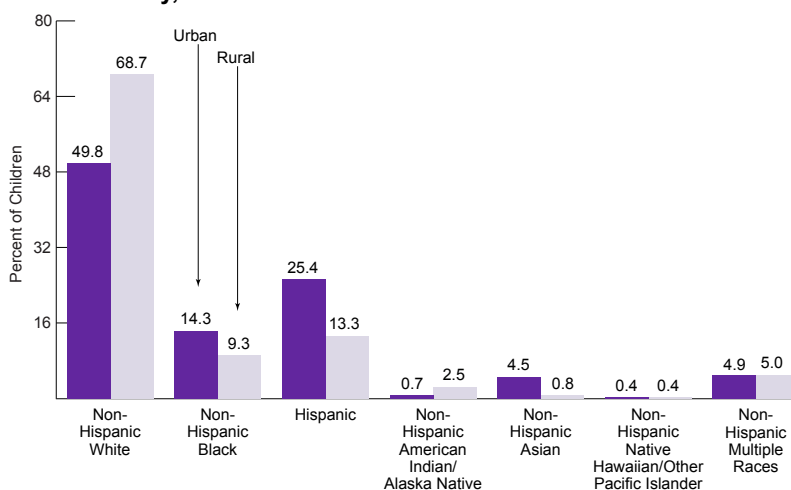
In 2011–2012, 84.5 percent of children lived in urban areas, while about 15.5 percent lived in rural areas. These areas were classified based on ZIP code, the size of the city or town, and the commuting pattern in the area. Urban areas include metropolitan areas and surrounding towns with populations of 50,000 and above.

The demographic distribution of the population of children in rural areas differs from that of urban children in terms of race, ethnicity, and nativity. Among urban children, 49.8 percent were non-Hispanic

White, compared to 68.7 percent of children in rural areas (figure 1). Children living in urban areas were more likely to be non-Hispanic Black and Hispanic than those living in rural areas, with more than one-quarter (25.4 percent) of urban children being of Hispanic origin compared to 13.3 percent of those living in rural communities. In contrast, non-Hispanic American Indian/Alaska Native children accounted for a greater proportion of children in rural areas, where they represent 2.5 percent of the population, compared to less than 1 percent in urban areas. Children living in rural areas were slightly more likely to have been born in the United States (98.2 percent) compared to those living in urban areas (95.2 percent).

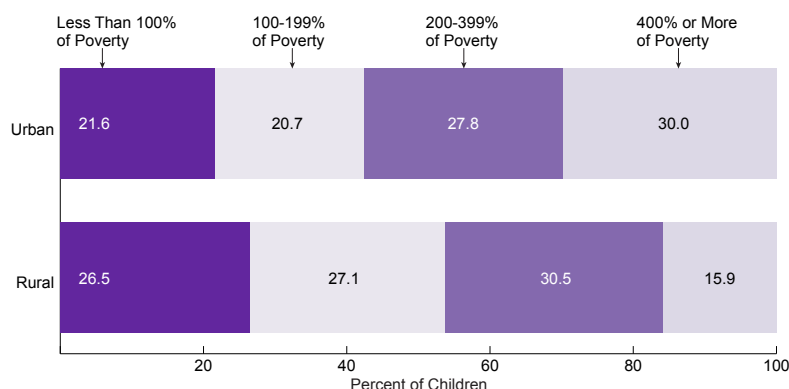
Children in rural areas were more likely than urban children to be living in low-income families. More than one-quarter (26.5 percent) of children in rural areas had household incomes below 100 percent of poverty, compared to 21.6 percent of urban children (figure 2). In contrast, nearly one-third (30.0 percent) of urban children had household incomes of 400 percent or more of poverty, compared to 15.9 percent of children in rural areas.

Figure 1. Children Residing in Rural and Urban Areas,* by Race/Ethnicity, 2011–2012



*Urban areas include metropolitan areas and surrounding towns from which commuters flow into an urban area, including suburban and less densely populated areas. Rural areas are composed of all other areas not classified as urban.

Figure 2. Children Residing in Rural and Urban Areas,* by Poverty Status, 2011–2012**



*Urban areas include metropolitan areas and surrounding towns from which commuters flow into an urban area, including suburban and less densely populated areas. Rural areas are composed of all other areas not classified as urban. **Based on the U.S. Department of Health and Human Services poverty guidelines, poverty was \$23,050 for a family of four in 2012.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau and Centers for Disease Control and Prevention, National Center for Health Statistics. 2011–2012 *National Survey of Children's Health*. Analyses conducted by the Maternal and Child Health Bureau.

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FAMILY STRUCTURE

The number of parents in the household plays an important role in the growth and development of children. Previous studies found that two-parent households were generally associated with better health outcomes than single-parent households. For example, children in two-parent, married households were less likely than children in single-parent households to be in fair or poor health. Children in single-parent households were more likely to have a learning disability or attention deficit hyperactivity disorder (ADHD) and certain chronic health conditions than children in two-parent, biological households.¹

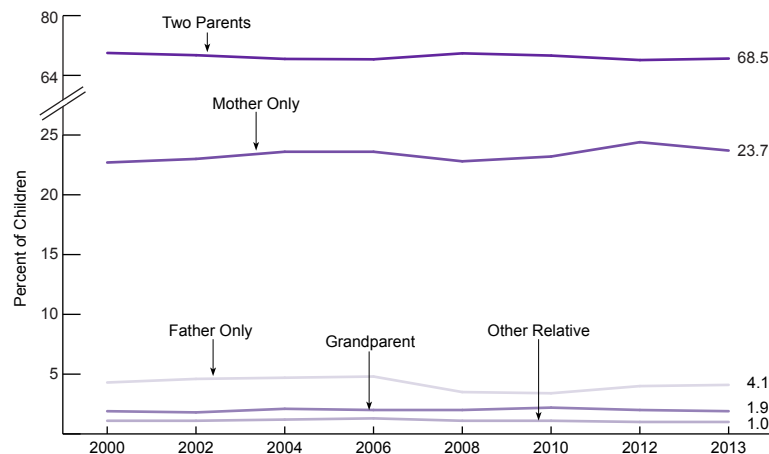
In 2013, more than two-thirds of all U.S. children less than 18 years of age lived in households with two parents (includes biological, adopted, or stepparents), nearly a quarter lived in a mother-only household, and 4.1 percent lived in a father-only household (figure 1). A small proportion of children (1.9 percent) lived with a grandparent.

Between 2000 and 2013, the percentages of children under 18 years of age living in two-parent and single-parent households remained relatively stable.

Family structure differs with race and ethnicity. In 2013, less than half of non-Hispanic Black and non-Hispanic American Indian/Alaska Native children lived in two-parent households, compared to 77.4 percent of non-Hispanic White children (figure 2). The majority of non-Hispanic Asian (86.0 percent), non-Hispanic Native Hawaiian/other Pacific Islander (70.0 percent), non-Hispanic White (77.4 percent), and Hispanic (65.0 percent) children lived in two-parent households.

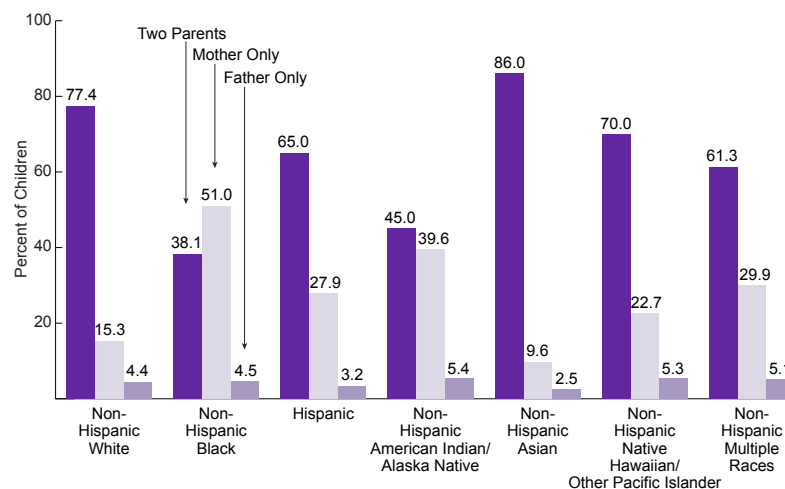
Household income as a percent of poverty is also related to family structure. In 2013, children in single-parent households were most likely to live in poverty, with 41.2 percent living in households with incomes below 100 percent of poverty (\$23,834 for a family of four in 2013), compared to 13.2 percent of two-parent households.

Figure 1. Family Structure* of Children Under Age 18, 2000–2013



*A small percentage of children less than 18 years of age (less than 1 percent) lived with only nonrelatives in 2008, 2010, 2012, and 2013; none of the children were living with only nonrelatives in 2000, 2002, 2004, and 2006.

Figure 2. Family Structure of Children Under Age 18 Residing with at Least One Parent, by Race/Ethnicity, 2013



Data Sources

Figure 1 and 2. U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey, Annual Social and Economic Supplement. Analyses conducted by the Maternal and Child Health Epidemiology and Statistics Program.

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PARENTAL EMPLOYMENT AND CHILD CARE

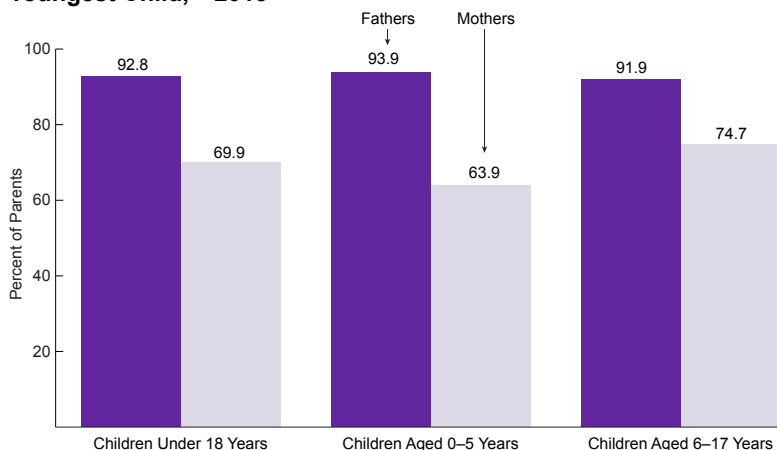
In 2013, 69.9 percent of women with children under 18 years of age were in the labor force (either employed or looking for work), and 64.8 percent of all women were employed. Among men with children, 92.8 percent were in the labor force and 88.2 percent were employed. Labor force participation and employment among women with children varied by the age of their youngest child (figure 1). Of mothers with children from birth through age 5, 63.9 percent were in the labor force and 58.2 percent were employed. In comparison, 74.7 percent of women whose youngest child was aged 6–17 years were in the labor force and 70.1 percent were employed. Mothers of infants less than 1 year of age were least likely to be employed (51.9 percent); this rate increased to 55.0 percent at 1 year and 59.9 percent at 3 years. Employed mothers with children aged 0–5 years were more likely to be employed part-time than mothers with older children (27.8 versus 23.6 percent, respectively).

The proportion of mothers with children under the age of 18 who were employed was similar regardless of marital status: 64.5 percent of married women with a spouse present versus 65.3 percent of those who were never married, separated, widowed, or divorced.

Unemployment — calculated as the proportion of adults in the labor force who are not employed — among mothers who were married with a spouse present was lower than among mothers of other marital statuses (4.8 versus 12.0 percent, respectively). This is partly due to the significantly higher proportion of mothers of other marital statuses in the labor force. Among mothers, unemployment rates were highest among those who were never married, separated, widowed, or divorced and with children under 3 years of age: Nearly one-fifth (19.0 percent) of these mothers who had a child under the age of 1 year were unemployed, while the same was true of 17.5 percent of those with a 1-year-old child and 14.5 percent of those with a 2-year-old child (data not shown).

In 2011, 12.5 million or 61.3 percent of pre-school aged children (less than 5 years of age) were in some form of child care for at least 1 day each week on a regular basis (figure 2). The most common source of care was a parent or relative. More than 40 percent of children (42.1 percent) were cared for by their mother, father, grandparent, or other relative, with grandparents providing care to nearly one-quarter of children (23.7 percent). Approximately one-third of children in this age group (32.9 percent) received care from a nonrelative, including 23.5 percent who received care in a center-based setting (e.g., day-

Figure 1. Parent's Labor Force* Participation Rate, by Age of Youngest Child, 2013**



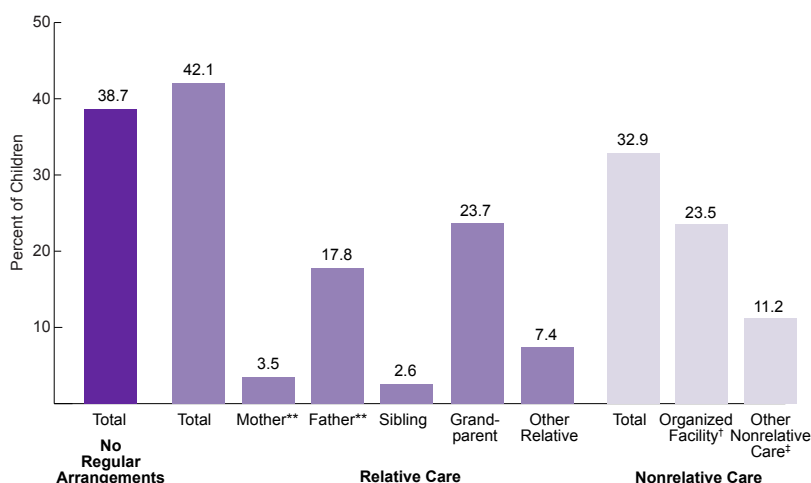
*Includes people who are employed and those who are actively seeking work. **Children include sons, daughters, stepchildren, and adopted children.

care center, nursery school) and 11.2 percent who were cared for by a nonrelative in a home-based setting (e.g., family daycare provider, nanny). Nearly 40 percent of preschool aged children had no regular child care arrangement.

Child care arrangements for pre-school aged children living with their mother varied primarily by maternal employment status. Only 12.3 percent of children of employed mothers did not have a regular child care arrangement compared to 71.8 percent of those whose mother was unemployed. Children of employed mothers were more

likely to have multiple arrangements, however, compared to unemployed mothers (26.7 versus 8.0 percent, respectively.) One-third of children of employed mothers received care in an organized facility such as a daycare center. The same was true for 12.4 percent of children of unemployed mothers. Grandparents were a key source of care for employed mothers, as well, providing regular care for nearly one-third of preschoolers. Among children of unemployed mothers, grandparents provided care for 13.3 percent of children.

Figure 2. Child Care Arrangements* for Children Aged 0–4 Years, 2011



*The arrangement used for care at least 1 day a week on a regular basis; no regular arrangement indicates that the reference parent provides care. Estimates for specific types of care may not equal totals as children may have more than one type of regular care. **Only asked for the time during which the reference parent was working or in school. †Includes daycare centers, nurseries, and preschools. ‡Includes care provided by a nonrelative in a home-based setting, such as a family daycare provider or nanny.

Data Sources

Figure 1. U.S. Department of Labor, Bureau of Labor Statistics. *Employment characteristics of families, 2013*. Available at: <http://www.bls.gov/news.release/famee.nr0.htm>. Accessed July 17, 2014.

Figure 2. U.S. Census Bureau. *Who's minding the kids? Child care arrangements: spring 2011*. Available at: <http://www.census.gov/prod/2013pubs/p70-135.pdf>. Accessed July 17, 2014.

Suggested Citation

U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *Child Health USA 2014*. Rockville, Maryland: U.S. Department of Health and Human Services, 2015. Online at <http://mchb.hrsa.gov/chusa14/>

CHILDREN WITH SPECIAL HEALTH CARE NEEDS

Children are considered to have a special health care need if, in addition to a chronic medical, behavioral, or developmental condition that has lasted or is expected to last 12 months or longer, they experience either service-related or functional consequences, including the need for or use of prescription medications and/or specialized therapies.¹ In 2011–2012, 19.8 percent of U.S. children under the age of 18 had a special health care need, representing 14.6 million children.² Previous research indicates that among households with children under the age of 18 years, nearly one-quarter (23.0 percent) include at least one child with special health care needs.³

The prevalence of special health care needs in 2011–2012 varied by sociodemographic characteristics. Significantly more males than females were reported to have such needs (22.5 versus 17.0 percent, respectively), as were school-aged children compared to children aged 0–5 years: Approximately one-quarter of children aged 6–11 and 12–17 years were reported to have a special health care need (22.7 and 25.1 percent, respectively) compared to 11.4 percent of those aged 0–5 years (figure 1).

The proportion of children with reported special health care needs also varied by race and ethnicity, and primary language spoken in the home. Non-Hispanic Black children had the highest rate (24.2 percent), followed by non-Hispanic White children (21.6 percent), while

Hispanic children had the lowest rate of special health care needs (14.7 percent). The prevalence of special health care needs was higher among children living in households where the primary language spoken was English (21.9 percent) compared to households where the primary language spoken was something else (8.7 percent).

Although the presence of special health care needs did not vary by economic status, children living in households where at least one adult had a high school diploma or higher were more likely to have such needs reported (approximately 20.5 percent) than those that lived in a household where no adult had completed high school (15.9 percent). The proportion of children with special health care needs was also lower for those living in a household with two biological or adoptive parents (16.4 percent) compared to children in other types of family arrangements (approximately 26 percent).

The complexity and severity of health impacts among children with special health care needs can vary greatly.⁴ Among children with such a need in 2011–2012, more than one-third (34.7 percent) had a condition that was managed with prescription medication only, while 16.6 percent had conditions that resulted in above-routine use of medical, mental health, or other services (figure 2). Approximately one-quarter of this population needed or used both prescription medication(s) and greater levels of health services. Another 24.0 percent were the most severely affected children that had conditions resulting in functional limitations.

Figure 1. Children Under Age 18 with Special Health Care Needs, by Age and Sex, 2011–2012

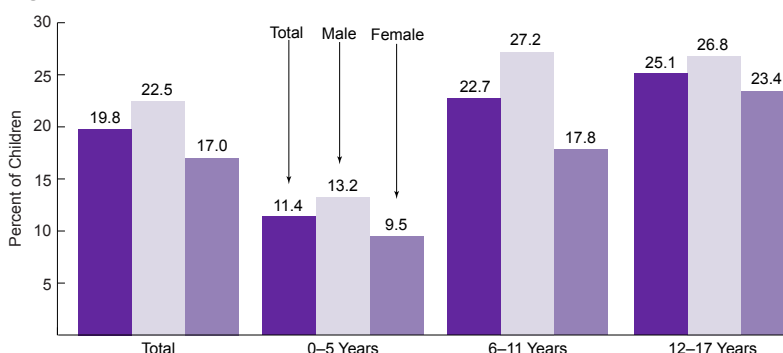
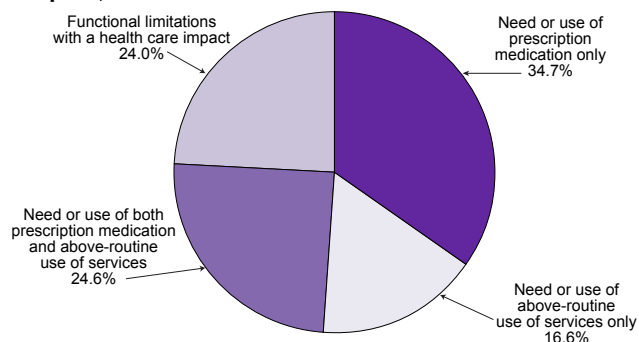


Figure 2. Children Under Age 18 With Special Health Care Needs, by Type of Impact, 2011–2012*



*Estimates do not sum to 100 percent due to rounding.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, 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. Unpublished data. Analyzed by the Maternal and Child Health Bureau.

Endnotes

1. McPherson M, Arango P, Fox H, et al. A new definition of children with special health care needs. *Pediatrics*. 1998;102(1):137–139.
2. Note: Published estimates of the prevalence of special health care needs may vary depending by data source. The 2009–2010 National Survey of Children With Special Health Care Needs found the prevalence of such needs to be 15.1 percent among U.S. children.
3. Child and Adolescent Measurement Initiative. *Data Resource Center*. Available at: <http://www.childhealthdata.org/browse/survey/results?q=1813&r=1>. Accessed July 21, 2014.
4. Bramlett MD, Read D, Bethell C, Blumberg SJ. Differentiating subgroups of children with special health care needs by health status and complexity of health care needs. *Maternal Child Health J*. 2009 Mar;13(2):151–63.

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HEALTH STATUS AND BEHAVIORS

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 interventions 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, 4, or 5 years. Trends can be identified by examining and comparing data from one data collection period to the next when multiple years of data are available.

In the following section, mortality, disease, and health behavior indicators are presented by age group: infants, children, and adolescents. 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.



FETAL MORTALITY

Fetal mortality is defined as the death of a fetus before birth, regardless of gestational age. Based on survey data, more than a million fetal losses are estimated to occur annually in the United States, most of which are early fetal losses, which are also called miscarriages.¹ Only fetal deaths at 20 or more weeks' gestation—often called stillbirths—are generally reported by states in the National Vital Statistics System.² In 2012, there were 24,073 fetal deaths at 20 or more weeks' gestation, for a rate of 6.05 fetal deaths per 1,000 live births plus fetal deaths. The number of fetal deaths is as high as the number of infant deaths (24,001 in 2011), which doubles the health and emotional toll when fetal and infant mortality are considered together. Causes of fetal death are similar to causes of infant death in the first month of life, including placental problems and preterm labor, birth defects, infection, umbilical cord accidents, and chronic conditions such as hypertension and diabetes.^{3,4}

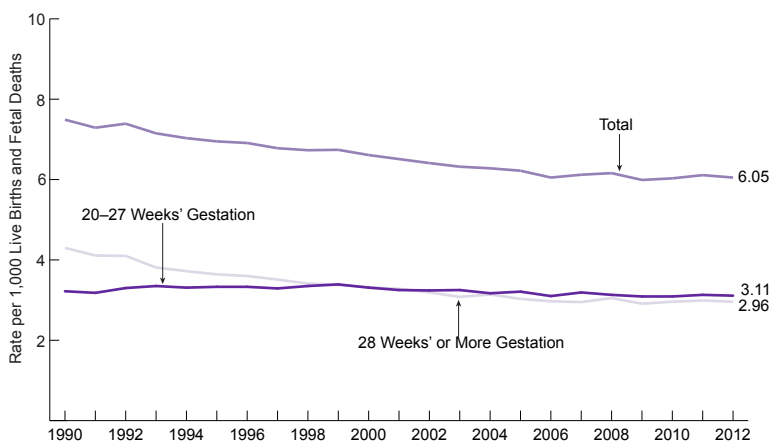
Fetal mortality rates at 20 weeks or more have declined from 7.49 to 6.05 per 1,000 between 1990 and 2006 (figure 1). Most of this decline is attributed to reductions in fetal mortality at 28 weeks or more gestation, which declined from 4.30 to 2.97 per 1,000 between 1990 and 2006. However, there has been no change in fetal mortality from 2006 to 2012, a period during which infant mortality declined (see page on infant mortality).

As with infant mortality, there are large differences in fetal mortality rates by race and ethnicity. In 2012, fetal mortality rates at 20 or more weeks' gestation were more than twice as high among non-Hispanic Black women as among non-Hispanic White women (10.67 versus 4.91 per 1,000; figure 2). Relative to non-Hispanic Whites, fetal mortality rates were also higher for American Indian/Alaska Native and Puerto Rican women (6.64 and 6.62 per 1,000, respectively).

Fetal mortality also varies by maternal age, with higher rates observed among younger and older women. In 2012, fetal mortality was highest among women aged 35 years and older (7.65 per 1,000), followed by those under 20 years of age (6.90 per 1,000). Women aged 25–34 years had the lowest fetal mortality rates, at about 5.50 per 1,000.

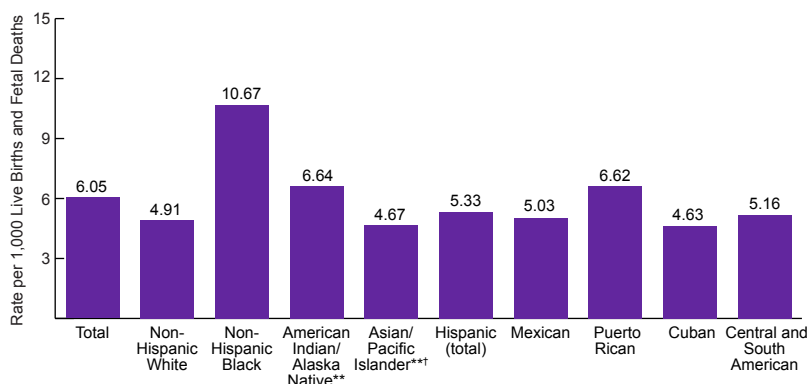
Prevention opportunities that may reduce the risk of stillbirth include avoiding smoking, substance use, and certain prescription and over-the-counter medications; maintaining a healthy weight; and preventing and managing chronic conditions before and during pregnancy through preconception and prenatal care.⁴ Careful clinical monitoring for women with high-risk conditions or vaginal bleeding may also avert fetal deaths, as early cesarean delivery can be lifesaving when medically necessary.

Figure 1. Fetal Mortality Rates per 1,000 Live Births and Fetal Deaths,* 1990–2012



*Fetal deaths with a stated or presumed period of gestation of 20 weeks or more. Cases of unknown gestational age are proportionally assigned according to the known gestational age distribution. Rates do not sum to the total due to slight differences in the denominator.

Figure 2. Fetal Mortality Rates per 1,000 Live Births and Fetal Deaths,* by Maternal Race/Ethnicity, 2012



*Fetal deaths with a stated or presumed period of gestation of 20 weeks or more. Cases of unknown gestational age are proportionally assigned according to the known gestational age distribution. **May include Hispanics. †Separate data for Asians, Native Hawaiians, and other Pacific Islanders are not available.

Data Sources

Figure 1. MacDorman MF, Kirmeyer SE, Wilson EC. Fetal and perinatal mortality, United States, 2006. *National Vital Statistics Reports*, vol. 60, no. 8. Hyattsville, MD: National Center for Health Statistics; 2012.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. User Guide to the 2012 Fetal Death Public Use File. Available at: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm. Accessed October 7, 2014.

Martin JA, Hamilton BE, Osterman JK, et al. Births: final data for 2012. *National Vital Statistics Reports*, vol. 62, no. 9. Hyattsville, MD: National Center for Health Statistics; 2013.

Figure 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. User Guide to the 2012 Fetal Death Public Use File. Available at: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm. Accessed October 7, 2014.

Martin JA, Hamilton BE, Osterman JK, et al. Births: final data for 2012. *National Vital Statistics Reports*, vol. 62, no. 9. Hyattsville, MD: National Center for Health Statistics; 2013.

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2. MacDorman MF, Kirmeyer SE, Wilson EC. Fetal and perinatal mortality, United States, 2006. *National Vital Statistics Reports*, vol. 60, no. 8. Hyattsville, MD: National Center for Health Statistics; 2012.
3. Stillbirth Collaborative Research Network Writing Group. Causes of death among stillbirths. *Journal of the American Medical Association*. December 14, 2011;306(22):2459–2468.
4. March of Dimes Foundation. Stillbirth. Available at: <http://www.marchofdimes.com/loss/stillbirth.aspx>. Accessed September 24, 2014.

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INFANT MORTALITY

Infant mortality, or the death of a child within the first year of life, is a sentinel measure of population health that reflects the underlying well-being of mothers and families, as well as the broader community and social environment that cultivate health and access to health-promoting resources. In 2011, 24,001 infants died before their first birthday in the United States, representing an infant mortality rate of 6.07 deaths per 1,000 live births (table 1). Among grouped summary causes of death, preterm-related conditions accounted for 35.4 percent of all infant deaths, followed by congenital anomalies (20.9 percent; see page on birth defects), other perinatal conditions not directly related to prematurity (14.5 percent), and sudden unexpected infant death (SUID, 14.2 percent; see page on sleep-related SUID). About two-thirds of infant deaths occur in the neonatal period or within the first month of life (4.06 per 1,000 live births), with the remaining third occurring in the postneonatal period from 1 month to less than 1 year (2.01 per 1,000 live births). Neonatal mortality is predominantly relat-

ed to prematurity, congenital anomalies, and other perinatal conditions; postneonatal mortality is mostly attributable to SUID, congenital anomalies, infection, and injury.

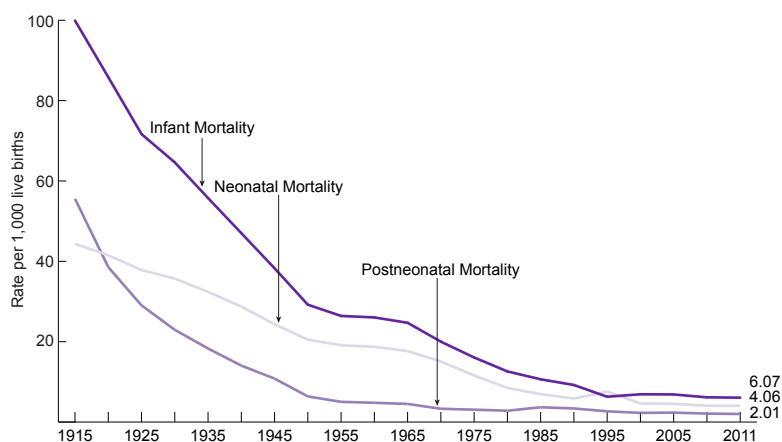
With the exception of 2000–2005, the U.S. infant mortality rate had been consistently declining at least every few years since it was first assessed in 1915 (figure 1). The substantial infant mortality decline over the 20th century has been attributed to economic growth, improved nutrition, new sanitary measures, and advances in clinical medicine and access to care.^{1,2} Infant mortality declines in the 1990s were aided particularly by the approval of synthetic surfactants to reduce the severity of respiratory distress syndrome (a common affliction of preterm infants) and the recommendation that infants be placed on their backs to sleep to prevent sudden infant death syndrome. The lack of progress between 2000 and 2005 has been attributed to increases in preterm birth and obstetric interventions such as inductions and cesareans,³ which have begun to decline in the last several years along with the infant mortality rate.^{4,5}

Table 1: Infant, Neonatal, and Postneonatal Mortality Rates per 1,000 Live Births,* by Summary Cause of Death, 2011**

| Summary Cause of Death | Infant Mortality | | | Neonatal Mortality | | | Postneonatal Mortality | | |
|----------------------------|------------------|----------------------------|-------------------|--------------------|----------------------------|-------------------|------------------------|----------------------------|-------------------|
| | Number | Rate per 1,000 Live Births | Percent of Deaths | Number | Rate per 1,000 Live Births | Percent of Deaths | Number | Rate per 1,000 Live Births | Percent of Deaths |
| All causes | 24,001 | 6.07 | 100.0% | 16,065 | 4.06 | 100.0% | 7,936 | 2.01 | 100.0% |
| Preterm-related conditions | 8,500 | 2.15 | 35.4% | 8,188 | 2.07 | 51.0% | 312 | 0.08 | 3.9% |
| Congenital anomalies | 5,016 | 1.27 | 20.9% | 3,569 | 0.90 | 22.2% | 1,447 | 0.05 | 18.2% |
| Other perinatal conditions | 3,478 | 0.88 | 14.5% | 3,292 | 0.83 | 20.5% | 186 | 0.37 | 2.3% |
| SUID | 3,399 | 0.86 | 14.2% | 398 | 0.10 | 2.5% | 3,001 | 0.76 | 37.8% |
| Infection | 906 | 0.23 | 3.8% | 64 | 0.02 | 0.4% | 842 | 0.21 | 10.6% |
| Injury | 904 | 0.23 | 3.8% | 85 | 0.02 | 0.5% | 819 | 0.21 | 10.3% |
| All other causes | 1,797 | 0.45 | 7.5% | 468 | 0.12 | 2.9% | 1,329 | 0.34 | 16.7% |

*Infant deaths are of those less than 1 year old; neonatal deaths are of those less than 28 days old; postneonatal deaths are of those at least 28 days old and less than 1 year old. **Preterm-related conditions: infant born preterm (<37 weeks) and an ICD-10 underlying cause-of-death code of K550, P000, P010, P011, P015, P020, P021, P027, P070–P073, P102, P220–229, P250–279, P280, P281, P360–369, P520–523, or P77. Developed by: Callaghan WM, MacDorman MF, Rasmussen SA, Qin C, Lackritz EM. The contribution of preterm birth to infant mortality rates in the United States. *Pediatrics*. October 2006;118(4):1566–1573. Other perinatal conditions: All other codes in P00–P96, regardless of prematurity. Congenital anomalies: Q00–Q99. SUID: R95–R99 and W75. Infections: A00–B99, G00, G03, I30, I33, I40, and J00–J42. Injury: J69, U01, V01–W74, and W76–Y36.

Figure 1. Infant, Neonatal, and Postneonatal Mortality Rates per 1,000 Live Births,* 1915–2011**



*Infant deaths are of those less than 1 year old; neonatal deaths are of those less than 28 days old; postneonatal deaths are of those at least 28 days old and less than 1 year old. **Data from 1915–1932 are a subset from states with birth registration, which became 100 percent by 1933.

In 2011, the U.S. infant mortality rate ranked 27th among industrialized nations, behind most European countries, Australia, Canada, Israel, and South Korea (table 2). Sweden had the lowest infant mortality rate, 2.1 per 1,000 live births, followed by Japan and Finland with infant mortality rates of 2.3 and 2.4 deaths per 1,000 live births, respectively. The United States did not always rank this low; in 1960, it ranked 11th, with Norway, the Netherlands, and Sweden reporting the three lowest rates among industrialized nations that year. Differences in infant mortality rates among industrialized nations may reflect variation in the definition, measurement, and reporting of fetal and infant deaths. However, analyses by gestational age indicate that this disparity is most likely related to the high rate of preterm birth in the United States.⁶ Although the United States compares favorably with European countries with respect to the survival of preterm infants, the higher rate of preterm birth in the United States significantly affects the infant mortality rate. Mortality among infants born at term (37 or more weeks' gestation) is also higher in the United States.

Large and persistent disparities by race and ethnicity and educational attainment may also contribute to higher rates of infant mortality in the United States relative to other countries. With respect to maternal education, infant mortality decreases with increasing levels of education. In 2011, among the 33 states and the District of Columbia that had implemented the 2003 U.S. Standard Certificate of Live Birth as of January 1, 2010, infants born to mothers with less than a high school degree were more than twice as likely to die in their first year of life than infants born to mothers with a bachelor's degree or higher (7.54 versus 3.63 per 1,000). Educational disparities in both neonatal and postneonatal mortality were present; however, the postneonatal disparity was higher, with infants of mothers with less than a high school diploma 1.69 times as likely to die in the first month of life and 3.26 times as likely to die between 1 month and 1 year of life as infants of mothers with a college degree or higher. If all infants in the United States had the same risk of death as those born to mothers with a college degree or higher, the United States would climb from 27th to 16th in international infant mortality rankings and tie with Austria, Germany, and the Netherlands.

Table 2: International Infant Mortality Rates and Rankings,* Selected Countries, 1960 and 2011**

| Country | 1960 | | 2011 | |
|-----------------|----------------------------|------|----------------------------|------|
| | Rate per 1,000 Live Births | Rank | Rate per 1,000 Live Births | Rank |
| Australia | 20.2 | 5 | 3.8 | 19 |
| Austria | 37.5 | 19 | 3.6 | 16 |
| Belgium | 31.4 | 17 | 3.4 | 10 |
| Canada | 27.3 | 12 | 4.8 | 23 |
| Chile | 120.3 | 27 | 7.7 | 28 |
| Czech Republic | 20.0 | 4 | 2.7 | 5 |
| Denmark | 21.5 | 8 | 3.5 | 12 |
| Finland | 21.0 | 6 | 2.4 | 3 |
| France | 27.7 | 13 | 3.5 | 12 |
| Germany | 35.0 | 18 | 3.6 | 16 |
| Greece | 40.1 | 20 | 3.4 | 10 |
| Hungary | 47.6 | 23 | 4.9 | 24 |
| Ireland | 29.3 | 15 | 3.5 | 12 |
| Israel | NA | NA | 3.5 | 12 |
| Italy | 43.9 | 22 | 2.9 | 6 |
| Japan | 30.7 | 16 | 2.3 | 2 |
| South Korea | NA | NA | 3.0 | 7 |
| Mexico | 92.3 | 26 | 13.7 | 30 |
| Netherlands | 16.5 | 2 | 3.6 | 16 |
| New Zealand | 22.6 | 10 | 5.2 | 26 |
| Norway | 16.0 | 1 | 2.4 | 3 |
| Poland | 56.1 | 24 | 4.7 | 22 |
| Portugal | 77.5 | 25 | 3.1 | 8 |
| Slovak Republic | 28.6 | 14 | 4.9 | 24 |
| Spain | 43.7 | 21 | 3.2 | 9 |
| Sweden | 16.6 | 3 | 2.1 | 1 |
| Switzerland | 21.1 | 7 | 3.8 | 19 |
| Turkey | 189.5 | 28 | 7.7 | 28 |
| United Kingdom | 22.5 | 9 | 4.3 | 21 |
| United States | 26.0 | 11 | 6.1 | 27 |

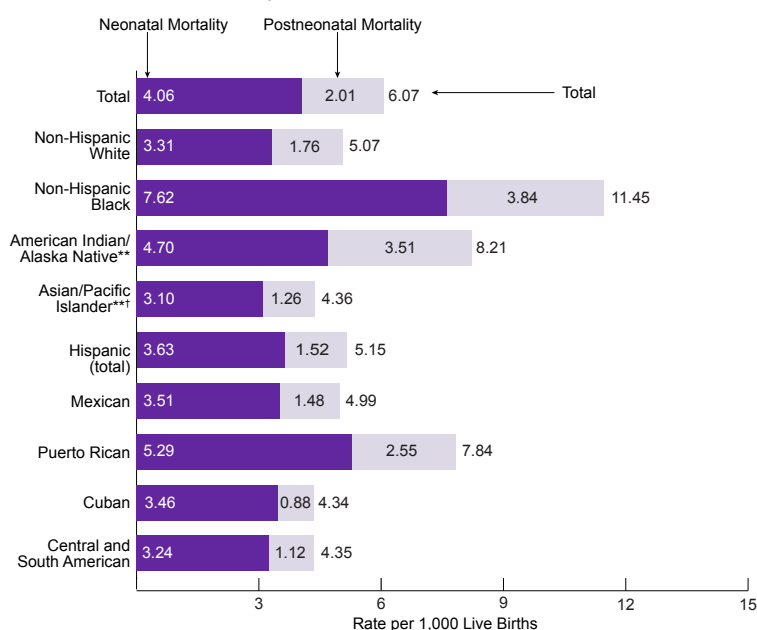
*Rankings are from lowest to highest infant mortality rates (IMRs). Countries with the same IMR receive the same rank. Relative rankings may be affected if not all countries have reported data.
 **Countries with at least 2.5 million people and listed in the Organisation for Economic Co-operation and Development database. NA = data not available.

In 2011, the infant mortality rate was highest for infants of non-Hispanic Black mothers (11.45 per 1,000 live births)—a rate 2.3 times that of non-Hispanic Whites (5.07 per 1,000; figure 2). Infant mortality was also higher among infants born to American Indian/Alaska Native and Puerto Rican mothers (8.21 and 7.84 per 1,000, respectively). Infant mortality was lowest among Cubans, Central and South Americans, and Asian/Pacific Islanders (~4.35 per 1,000); however, there is considerable variability within the Asian/Pacific Islander population, and higher infant mortality has been shown among Native Hawaiians.⁷ Excess prematurity and SUID tend to be the largest proximate causes of racial and ethnic disparities in infant mortality.⁸ If all U.S. infants had the same risk of dying as non-Hispanic Whites, the U.S. ranking among industrialized countries would move from 27th to 26th.

Infant mortality prevention strategies include clinical and population-based efforts to promote the health of women before and between pregnancies to prevent and manage chronic conditions and risk factors, such as diabetes, hypertension, smoking, unintended

pregnancy, and short birth intervals, which may lead to prematurity, low birth weight, and congenital anomalies.⁹ Improving access to risk-appropriate prenatal and newborn care, such as progesterone therapy, antenatal steroids, and regionalized perinatal systems, can also reduce prematurity or morbidity among preterm infants.¹⁰ In addition, efforts to promote positive postpartum behaviors, such as breastfeeding, smoking cessation, and safe sleep practices, can help reduce the risk of SUID.¹¹ Finally, programmatic and policy interventions to address the fundamental social determinants of health, such as education and housing, would reduce virtually all causes of infant death.¹² Many of these prevention opportunities are being addressed through various state and community-based initiatives such as the Collaborative Improvement and Innovation Network (CollIN) to reduce infant mortality, the Healthy Babies Initiative, the Strong Start Initiative, Healthy Start,¹² Best Babies Zones,¹³ and the Institute for Equity in Birth Outcomes,¹⁴ with support from multiple prevention components of the Affordable Care Act.¹⁵

Figure 2. Infant, Neonatal, and Postneonatal Mortality Rates,* by Maternal Race/Ethnicity, 2011



*Infant deaths are of those less than 1 year old; neonatal deaths are of those less than 28 days old; postneonatal deaths are of those at least 28 days old and less than 1 year old. **May include Hispanics. †Separate data for Asians, Native Hawaiians, and other Pacific Islanders are not available.

Data Sources

Table 1. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. 2011 Linked Birth/Infant Death File. Analyzed by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

Figure 1. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Natality. *Vital Statistics of the United States*, 1993, vol. I. Hyattsville, MD: National Center for Health Statistics; 1999.

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U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Compressed mortality file 1999–2011. CDC WONDER Online Database. July 2014. Available at: <http://wonder.cdc.gov/cmf-icd10.html>. Accessed August 11, 2014.

Table 2. Organisation for Economic Co-operation and Development. OECD.StatExtracts: Maternal and Infant Mortality. Available at: http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT. Accessed August 11, 2014.

Figure 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. 2011 Linked Birth/Infant Death File. Analyzed by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

Endnotes

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PRETERM BIRTH AND LOW BIRTH WEIGHT

Babies born preterm (before 37 completed weeks of gestation) or at low birth weight (less than 2,500 grams or 5.5 pounds) are at increased risk of immediate life-threatening health problems as well as long-term complications and developmental delays. Complications that can occur during the newborn period include respiratory distress, jaundice, anemia, and infection. Long-term complications can include learning and behavioral problems, cerebral palsy, lung problems, and vision and hearing loss.^{1,2}

As a result of these risks, preterm birth and low birth weight are leading causes of infant death and childhood disability. Babies who are born the earliest and smallest have the highest risks of morbidity and mortality. For example, infants born very preterm (less than 32 weeks' gestation) or at a very low birth weight (less than 1,500 grams) have 89 and 110 times the risk of dying in the first year of life as their full-term and non-low birth weight counterparts, respectively (see page on infant mortality). In other words, more than half of all infant deaths occur among the less than 2 percent of infants born very preterm or at low birth weight. However, even babies born "late preterm" (34–36 weeks' gestation) or at moderately low birth weight (1,500–2,499 grams) are more likely than full-term and normal birth weight babies to experience morbidity and mortality. Preterm birth and low birth weight exact a heavy societal toll with the annual economic burden related to preterm birth estimated to exceed \$26 billion, including costs for medical care and early intervention as well as lost productivity due to disabling conditions.³

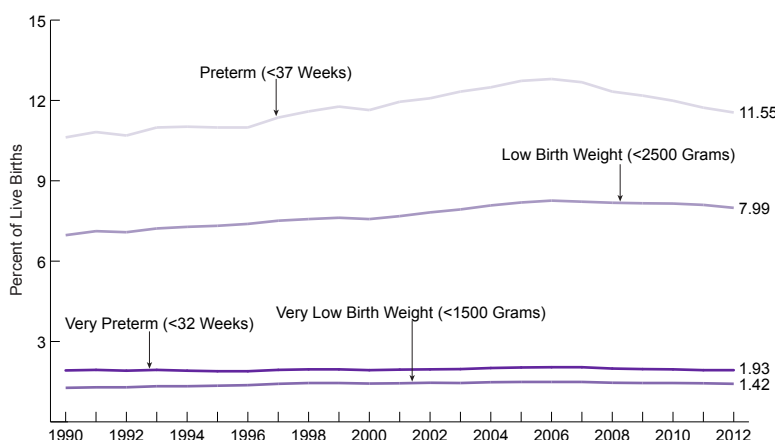
The causes of preterm birth are not well understood but are linked to infection and vascular disease as well as medical conditions, such

as diabetes and hypertension, which may necessitate labor induction or cesarean delivery.^{3,4} The majority of very low birth weight infants are born prematurely, whereas those born at moderately low birth weight include a mix of prematurity as well as fetal growth restriction that may be related to factors such as maternal hypertension, tobacco smoke exposure, and inadequate weight gain during pregnancy.²

In 2012, 11.55 percent of infants were born preterm and 7.99 percent were born at low birth weight. Less than 2 percent were born very preterm (1.93 percent) or at very low birth weight (1.42 percent). Between 1990 and 2006, the preterm birth rate increased more than 20 percent, from 10.62 to 12.80 percent; and the rate of very preterm birth increased by 6 percent, from 1.92 to 2.04 percent (figure 1). Rates of low and very low birth weight also peaked in 2006 at 8.26 and 1.49 percent, respectively, with 19 and 17 percent respective increases over 1990 levels. Reasons for the rise in preterm birth and low birth weight include increases in obstetric interventions, maternal age, and fertility treatments, which are more likely to result in multiple births.^{4,5} Since the 2006 peak, preterm birth declined by 10 percent and very preterm birth declined by 6 percent, while declines in low and very low birth weight were more modest at 3 and 4 percent, respectively. Reasons for these recent declines are not fully known but may be associated with declines in nonmarital childbearing⁶ and obstetric interventions, such as "elective" or non-medically indicated deliveries at less than 39 weeks.⁷

Preterm birth and low birth weight vary by race and ethnicity, with rates typically highest among infants born to non-Hispanic Black women. In 2012, 16.53 percent of babies born to non-Hispanic Black women were preterm and 13.18 percent were low birth weight, rates

Figure 1. Very Preterm, Preterm, Very Low Birth Weight, and Low Birth Weight Rates, 1990–2012

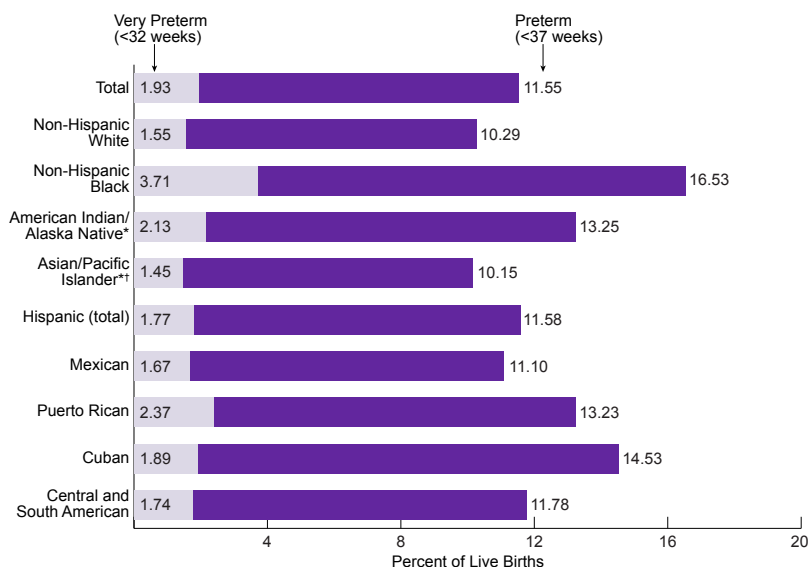


that were respectively 1.6 and 1.9 times that of non-Hispanic White infants (10.29 and 6.97 percent, respectively; figures 2 and 3). The disparity in very preterm and very low birth weight is even greater, with non-Hispanic Black infants being 2.4 and 2.6 times more likely than non-Hispanic White infants to be born very preterm (3.71 versus 1.55 percent, respectively) and very low birth weight (2.94 versus 1.13 percent, respectively). Compared to non-Hispanic White infants, Puerto Rican infants also had higher rates of preterm birth and low

birth weight (13.23 and 9.40 percent, respectively), while Asian/Pacific Islander infants had a higher rate of low birth weight (8.21 percent). Racial and ethnic disparities in birth outcomes may be explained by differences in a variety of socioeconomic, psychosocial, behavioral, and medical risk factors.⁸

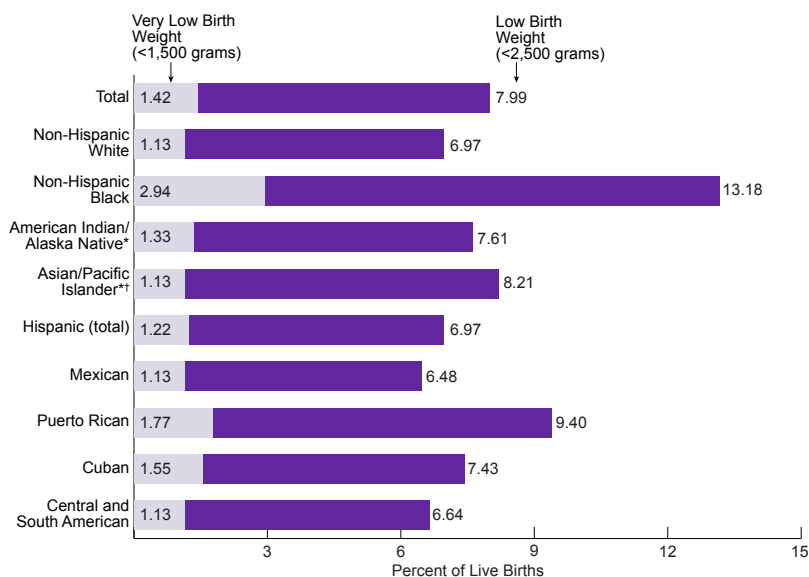
Rates of adverse birth outcomes also vary by maternal age. In 2012, very preterm, preterm, very low birth weight, and low birth weight rates were all highest among mothers less than 20 years of

Figure 2. Very Preterm and Preterm Birth Rates, by Maternal Race/Ethnicity, 2012



*May include Hispanics. †Separate data for Asians, Native Hawaiians, and other Pacific Islanders not available.

Figure 3. Very Low and Low Birth Weight Rates, by Maternal Race/Ethnicity, 2012



*May include Hispanics. †Separate data for Asians, Native Hawaiians, and other Pacific Islanders not available.

age and aged 35 years or older (figures 4 and 5). For example, very preterm birth rates were 2.59 percent among teenaged mothers and 2.22 percent among those aged 35 years and older, compared to 1.72 among 25- to 29-year-olds and 1.75 percent among 30- to 34-year-olds. The higher rates of adverse birth outcomes among teens may be partly explained by socioeconomic disadvantage, while the higher rates among women aged 35 years and older tends to be a function of obstetric and medical complications and a greater probability of multiple births, both naturally and through fertility treatments, which have a substantially higher likelihood of preterm birth and low birth weight.⁸

Preventive interventions to reduce prematurity and low birth weight

include screening and counseling to reduce smoking, alcohol, and substance use in pregnancy; comprehensive care before, during, and between pregnancies to identify and address chronic health conditions and to prevent unintended and rapid repeat pregnancies; place-based initiatives and care models that address social determinants such as housing and employment; and progesterone therapy to help sustain pregnancies among women with prior spontaneous preterm birth or with short cervical lengths.⁸ Other tertiary prevention efforts can reduce morbidity and mortality among infants born prematurely, such as improving access to risk-appropriate neonatal intensive care at delivery and antenatal corticosteroids that can promote fetal lung development prior to imminent premature delivery.⁸

Figure 4. Very Preterm and Preterm Birth Rates, by Maternal Age, 2012

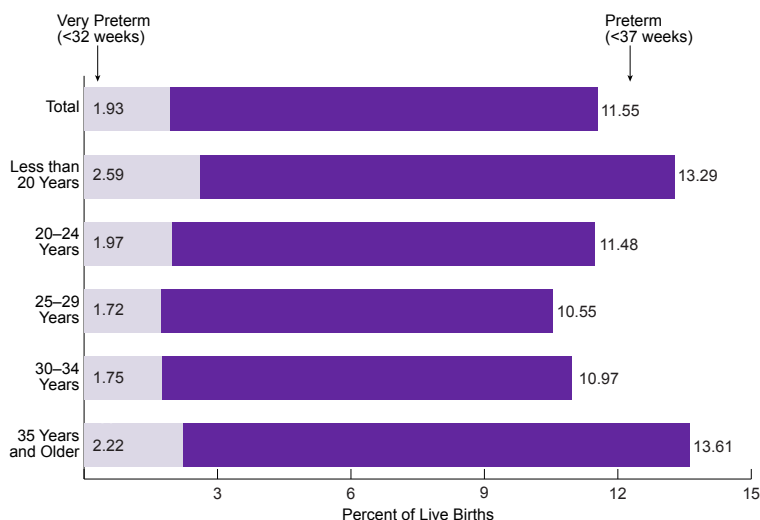
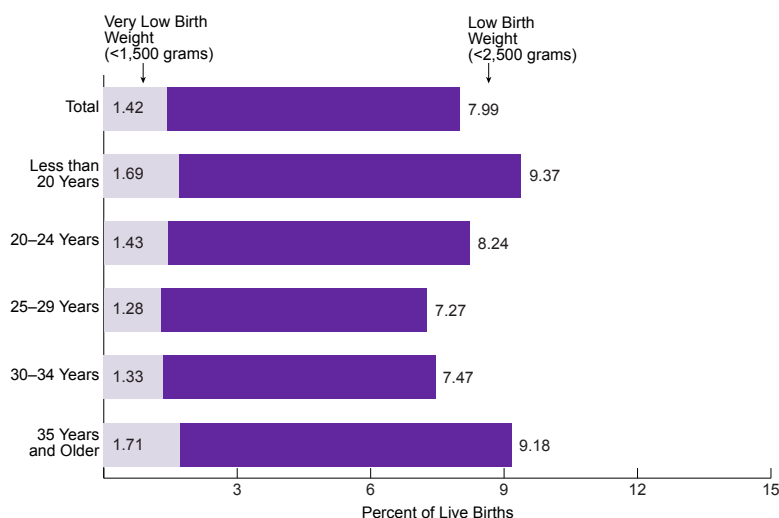


Figure 5. Very Low and Low Birth Weight Rates, by Maternal Age, 2012



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BIRTH DEFECTS

Birth defects, also known as congenital anomalies, occur in approximately 3 percent of all live births¹ and are the second leading cause of infant mortality behind prematurity, accounting for 20.9 percent of all infant deaths in the United States in 2011 (see page on infant mortality). Birth defects are conditions present at birth that most often occur during the first trimester of pregnancy and cause structural changes in one or more parts of the body.² Although most birth defects have unknown causes, they are thought to be caused by a combination of genetic, behavioral, and environmental factors. Some factors that have been linked to birth defects include tobacco, alcohol, and illicit drug use during pregnancy; obesity and uncontrolled diabetes; use of certain medications during pregnancy; a maternal age of more than 34 years; and a family history of birth defects.²

Congenital heart defects are the most common type of birth defect in the United States, affecting nearly 1 percent of—or about 40,000—births per year.³ Atrioventricular septal defects, in which there is a hole

in the wall of the heart chambers and valves, are a common type of congenital heart defect, with about 2,000 cases annually (table 1). Among the chromosomal abnormalities, trisomy 21, or Down syndrome, is the most common, with about 6,000 annual cases. Orofacial defects, including cleft lip and cleft palate, are another common type of birth defect, with approximately 7,000 cases annually.

In 2011, congenital heart defects and chromosomal abnormalities were the leading categories of infant death due to birth defects, accounting for 23.6 and 19.5 percent of deaths attributable to birth defects, respectively. Central nervous system defects, also known as neural tube defects, were the third leading category at 13.6 percent.

Infant mortality rates due to birth defects vary by several demographic characteristics, including maternal age, race/ethnicity, educational attainment, and rural/urban residence. For example, infant mortality due to birth defects generally increased with rurality, ranging from 11.21 per 10,000 live births among residents of large fringe metro

Table 1. National Prevalence Estimates of Selected Major Birth Defects,* 2004–2006

| | Estimated Annual Number of Cases | Prevalence per 10,000 Live Births |
|---|----------------------------------|-----------------------------------|
| Congenital heart defects** | | |
| Atrioventricular septal defect | 1,966 | 4.71 |
| Common truncus | 301 | 0.72 |
| Hypoplastic left heart syndrome | 960 | 2.30 |
| Tetralogy of Fallot | 1,657 | 3.97 |
| Transposition of great arteries | 1,252 | 3.00 |
| Chromosomal abnormalities† | | |
| Trisomy 13 | 528 | 1.26 |
| Trisomy 18 | 1,109 | 2.66 |
| Trisomy 21 (Down syndrome) | 6,037 | 14.47 |
| Orofacial defects** | | |
| Cleft palate without cleft lip | 2,651 | 6.35 |
| Cleft lip with or without cleft palate | 4,437 | 10.63 |
| Central nervous system defects** | | |
| Anencephaly | 859 | 2.06 |
| Encephalocele | 341 | 0.82 |
| Spina bifida without anencephaly | 1,460 | 3.50 |

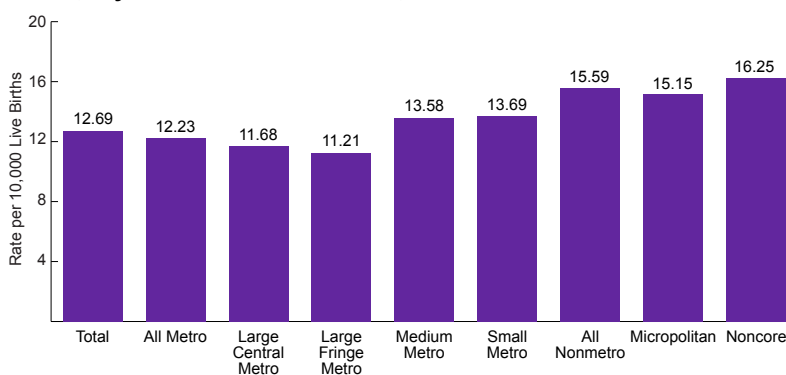
*Fourteen programs contributed data: Arkansas, Arizona, California (eight-county Central Valley), Colorado, Georgia (five-county metropolitan Atlanta), Illinois, Iowa, Kentucky, Massachusetts, North Carolina, Oklahoma, Puerto Rico, Texas, and Utah. The number of live births represented by these 14 programs from 2004 to 2006 was 4,038,506. **Estimates are adjusted for maternal race/ethnicity. †Estimates are adjusted for maternal age.

counties (suburban) to 16.25 per 10,000 live births among residents of noncore or completely rural counties (figure 1). Demographic differences in mortality rates attributable to birth defects may be due to differential exposures and the prevalence of birth defects, as well as differential access to screening and risk-appropriate care.

Certain birth defects can be prevented by maintaining a healthy weight before and during pregnancy, controlling diabetes, abstaining from substance use, talking to a doctor about which medications are safe to take during pregnancy, getting appropriate vaccinations to avoid infection, and taking a daily prenatal vitamin prior to and during

pregnancy.² In particular, taking folic acid before becoming pregnant has been shown to reduce the risk for neural tube defects by 50–70 percent.⁴ Screening tests that can identify some birth defects can be administered during both the first and second trimesters of pregnancy and may include blood tests, ultrasounds, and/or testing of the placenta or amniotic fluid.² Screening healthy newborns using pulse oximetry can be a useful, cost-effective way to identify babies born with critical congenital heart defects before they are discharged from the birth hospital.⁵

Figure 1. Infant Mortality Rates due to Birth Defects per 10,000 Live Births,* by Urban/Rural Residence, 2011**



*Infant deaths at less than 1 year of age with an underlying cause-of-death ICD-10 code of Q00–Q99. **Based on: Ingram DD, Franco SJ. 2013 NCHS urban–rural classification scheme for counties. *National Vital Health Statistics*. 2014;2(166). Available at: http://www.cdc.gov/nchs/data_access/urban_rural.htm. Accessed October 7, 2014.

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SLEEP-RELATED SUDDEN UNEXPECTED INFANT DEATH

Sleep-related sudden unexpected infant death (SUID) accounts for the most deaths in infants between 1 month and 1 year of age at 38 percent in 2011 (see page on infant mortality). SUID is defined by a *Healthy People 2020* objective to include deaths due to sudden infant death syndrome (SIDS), unknown causes, and accidental suffocation and strangulation in bed.¹ These causes of death have been grouped due to evidence that some deaths previously classified as SIDS are now being assigned to other sleep-related causes of death.² For example, SIDS rates declined from 1998 to 2001, while death rates due to other unknown causes and accidental suffocation and strangulation in bed were rising. SUID is generally believed to result from the intersection of three risks: a biological vulnerability (e.g., a dysfunctional arousal system); a critical period of development (1–6 months of age); and an environmental cofactor such as stomach or side sleep position, soft bedding, or overheating.²

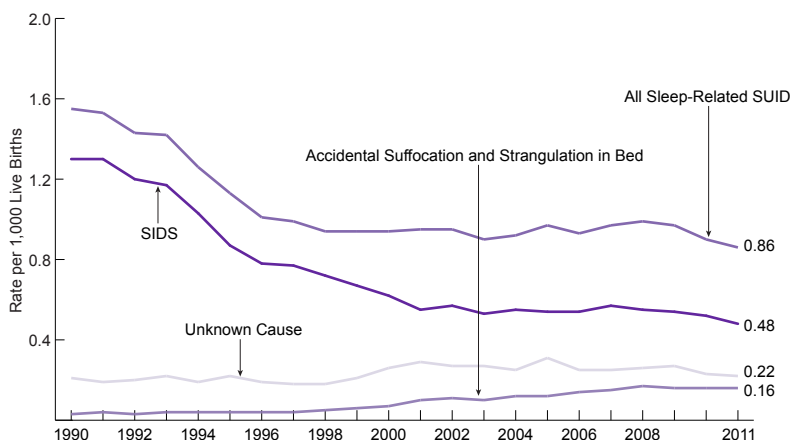
In 2011, there were a total of 3,403 cases of SUID, occurring at a rate of 0.86 per 1,000 live births (figure 1). The SUID rate generally declined from 1990 to 1998, which has been attributed to the American Academy of Pediatrics (AAP) recommendation that infants be placed to sleep on their backs, with an accompanying public awareness campaign known as “Back to Sleep.”² The SUID rate generally plateaued from 1998 to 2009 but then declined for 2 consecutive years reaching a historic low in 2011.

Despite recent progress, SUID rates vary greatly by race and ethnicity. In 2011, SUID rates were highest for infants born to American

Indian/Alaska Native and non-Hispanic Black mothers (2.01 and 1.62 per 1,000 live births, respectively); these rates were twice or more the rate among infants born to non-Hispanic Whites (0.84 per 1,000; figure 2). Compared with non-Hispanic Whites, the higher rate of SUID was the leading contributor to the higher overall infant mortality rate for American Indians/Alaska Natives, accounting for 37 percent of the disparity. SUID was the second leading cause of the higher non-Hispanic Black infant mortality rate, accounting for 12 percent of the disparity. SUID rates were generally lowest for infants born to Asian/Pacific Islander mothers (0.38 per 1,000) and Hispanic mothers (0.50 per 1,000), except for Puerto Ricans (1.19 per 1,000). However, SUID rates have been shown to be higher among infants born to Native Hawaiian mothers.³ Racial and ethnic differences in safe sleep practices may contribute to SUID disparities (see page on safe sleep behavior).

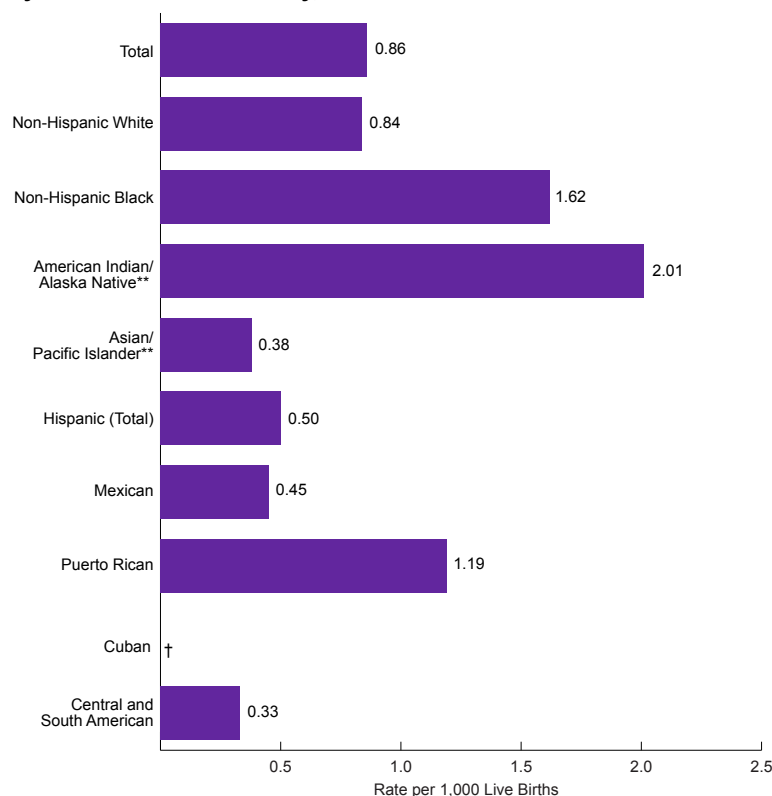
In 2011, the American Academy of Pediatrics released expanded recommendations to promote safe sleep environments and other protective factors that can reduce the risk of sleep-related infant deaths.⁴ These form the basis of the new “Safe to Sleep” campaign⁵ and include recommendations beyond the back sleep position, such as sleeping in a safety-approved crib or bassinet, removing loose bedding and soft objects from the sleep surface, room sharing without bed sharing, breastfeeding, and avoiding exposure to tobacco smoke and other drugs. In addition, a new classification system developed by the Centers for Disease Control and Prevention may help improve SUID investigation and prioritize prevention opportunities at state and local levels.⁶

Figure 1. Sleep-Related SUID* Mortality Rates per 1,000 Live Births, by Listed Cause of Death, 1990–2011



*Sudden unexpected infant deaths (SUID) include sudden infant death syndrome (SIDS; ICD-10 code of R95), unknown cause (R99), and accidental suffocation or strangulation in bed (W75).

Figure 2. Sleep-Related SUID* Mortality Rates per 1,000 Live Births, by Maternal Race/Ethnicity, 2011



*Sudden unexpected infant deaths (SUID) include sudden infant death syndrome (SIDS; ICD-10 code of R95), unknown cause (R99), and accidental suffocation or strangulation in bed (W75). **May include Hispanics. †Fewer than 20 deaths. Data did not meet standards of reliability or precision.

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SAFE SLEEP BEHAVIORS

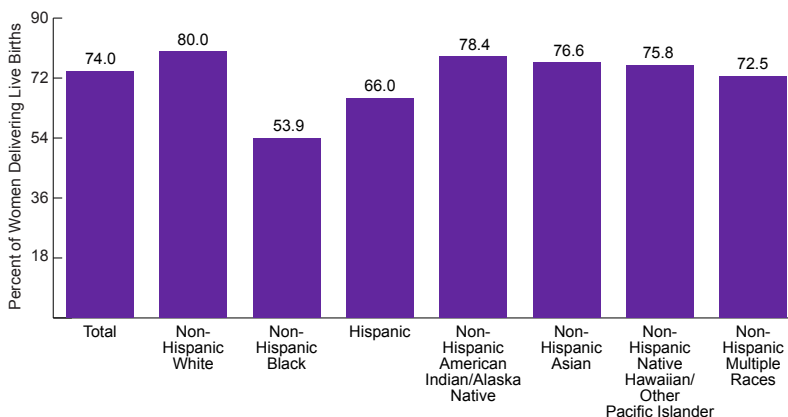
Safe sleep behaviors are practices that reduce the risk of sleep-related sudden unexpected infant death (SUID), which accounts for the most deaths among infants aged 1 month to 1 year. SUID includes sudden infant death syndrome (SIDS), unknown causes, and accidental suffocation and strangulation in bed (see page on sleep-related SUID). Safe sleep practices recommended by the American Academy of Pediatrics (AAP) include placing an infant on his or her back in a separate crib or bassinet without soft bedding both at night and during naps.¹ Additional practices with strong evidence for reducing the risk of SUID include breastfeeding, offering a pacifier before nap-time or bedtime, and avoiding smoke and alcohol exposure during and after pregnancy.¹

In 2011, 74.0 percent of recent mothers in 23 states and New York City reported that their infant was laid down to sleep on his or her back most of the time (figure 1). The proportion of mothers reporting this safe sleep behavior was between 75.8 and 80.0 percent among non-Hispanic White, non-Hispanic American Indian/Alaska Native, non-Hispanic Asian, and non-Hispanic Native Hawaiian/other Pacific Islander mothers. Use of the back sleep position was lowest among non-Hispanic Black mothers (53.9 percent), followed by Hispanic mothers (66.0 percent).

The AAP recommends room sharing without bed sharing, in which infants may be brought into bed for breastfeeding or comfort but returned to a separate in-room crib or bassinet for sleep.¹ Sharing a bed with an infant during sleep increases the risk of SUID, particularly with soft bedding and blankets, soft sleep surfaces like couches and armchairs, and parental smoking or substance use.¹ In 2011, 43.3 percent of recent mothers in 13 states reported that their infants never slept in the same bed with an adult (figure 2). The proportion of mothers who reported no infant and adult bed sharing was highest among non-Hispanic White mothers (50.6 percent), followed by Hispanic mothers (38.3 percent). About one-quarter or fewer mothers from most other racial and ethnic groups reported never bed sharing. Conversely, mothers who reported always or often bed sharing ranged from 13.8 percent of non-Hispanic White mothers to 43.2 percent of non-Hispanic Asian mothers.

Back sleep position and never bed sharing increase with maternal age and education. For example, usual practice of back sleep position ranged from 64.4 percent among mothers with less than 12 years of education to 82.4 percent among those with 16 or more years of education. Similarly, never bed sharing ranged from 27.5 percent among mothers less than 20 years old to nearly 50 percent among mothers aged 30 years and older.

Figure 1. Infants Usually Placed to Sleep on Their Backs, by Maternal Race/Ethnicity, 2011*

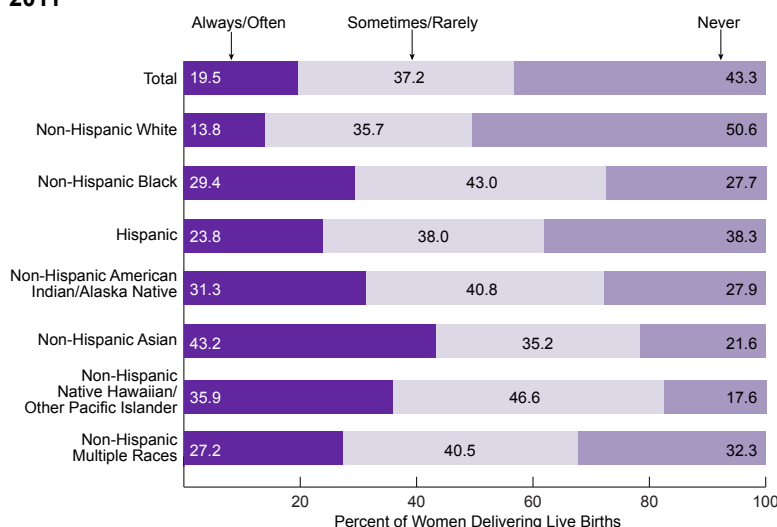


*Includes data from 23 states (AR, CO, GA, HI, ME, MD, MI, MN, MO, NE, NJ, NM, NY, OK, OR, PA, RI, UT, VT, WA, WV, WI, WY) and New York City. Mothers completed surveys between 2 and 9 months postpartum. Responses that included sleep positions other than the back (e.g., stomach, side) alone or in combination with the back are not counted as usually put to sleep on back. Multiple race data were not reported by 5 of 23 states (AR, HI, ME, NJ, WV); therefore, specific race categories may include multiple race mothers.

To reduce the risk of sleep-related SUID, the AAP also recommends removing soft bedding from infant sleep areas, such as blankets, quilts, and pillows.¹ A recent national study found that 54.7 percent of U.S. infants are placed to sleep underneath or on top of potentially hazardous bedding.⁴ Resources to educate parents, caregivers, and health care providers regarding ways to reduce the risk for SIDS and other sleep-related causes of infant death are provided by the “Safe

to Sleep” campaign (previously known as the “Back to Sleep” campaign).² This collaborative effort at the federal, state, and local levels was renamed and expanded in 2012 to reflect the AAP’s broader recommendations and to address all sleep-related infant deaths. Crib distribution programs may also be effective in providing safe sleep education and cribs to mothers and families who may not be able to afford them.³

Figure 2. Infant and Adult Bed Sharing, by Maternal Race/Ethnicity, 2011*



*Includes data from 13 states (GA, HI, MD, MN, MO, NE, NJ, NY without NY City, PA, VT, WA, WV, WI). Mothers completed surveys between 2 and 9 months postpartum. The question reflects whether the infant slept in the same bed with the mother or another adult. Percentages may not sum to 100 due to rounding. Multiple race data were not reported by 3 of 13 states (HI, NJ, WV); therefore, specific race categories may include multiple race mothers.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Pregnancy Risk Assessment Monitoring System, 2011. Analysis conducted by the CDC Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion.

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SMOKING BEFORE AND DURING PREGNANCY

After alcohol, tobacco is the most prevalent substance consumed by women of child-bearing age.¹ Smoking among nonpregnant women contributes to reduced fertility. Fetal effects of smoking during pregnancy include premature birth, fetal growth restriction/low birth weight, orofacial clefts, and heightened risk of sudden infant death syndrome.^{2,3} Notable maternal complications of smoking are placental abruption, premature rupture of membranes, and placenta previa. In addition, there is evidence of a causal relationship between maternal smoking and ectopic pregnancy.²

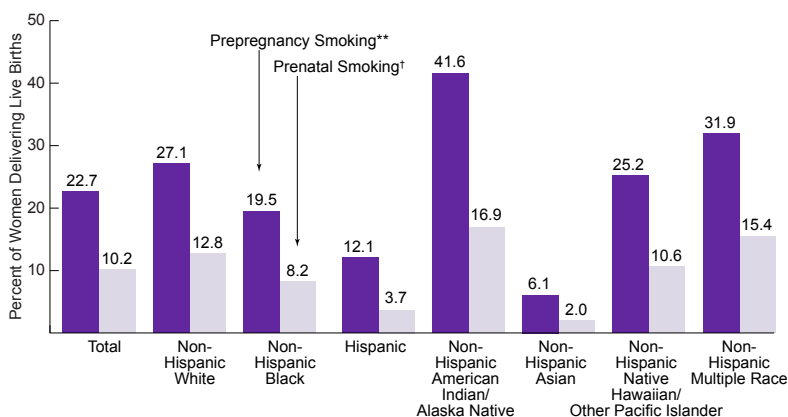
In 2011, 22.7 percent of recent mothers in 23 states and New York City reported smoking in the 3 months before pregnancy. The proportion of mothers who smoked dropped by approximately half by the last 3 months of pregnancy (10.2 percent). Smoking during both preconception and prenatal periods varied by race and ethnicity. Smoking in the 3 months prior to pregnancy ranged from 6.1 percent among non-Hispanic Asian mothers to 41.6 percent among non-Hispanic American Indian-Alaska Native mothers (figure 1). Similarly, smoking in the last 3 months of pregnancy ranged from 2.0 percent among non-Hispanic Asian mothers to 16.9 percent among non-Hispanic American Indian/Alaska Native mothers. Preconception and prenatal

smoking rates were also relatively low among Hispanic mothers (12.1 and 3.7 percent, respectively). Rates of smoking cessation, defined as not smoking in the last 3 months of pregnancy among those who smoked prior to pregnancy, were highest for Hispanic mothers (69.5 percent) and non-Hispanic Asian mothers (66.6 percent) compared to 55.3 percent overall.

The proportion of mothers who reported smoking before and during pregnancy also varied by maternal age. Compared to older mothers, preconception and prenatal smoking were more prevalent among mothers aged 20–24 years (33.1 and 16.0 percent, respectively) and under 20 years of age (32.4 and 15.5 percent, respectively; figure 2). Mothers aged 35 years or older were the least likely to smoke before conception (12.8 percent), while mothers aged 30–34 years and 35 years or older were least likely to smoke during the prenatal period (6.7 and 5.6 percent, respectively).

Smoking before and during pregnancy also varied by maternal education and marital status. Smoking before pregnancy was at least 3 times greater among mothers with 12 years of education or less (29.3 to 33.3 percent) than among those with 16 or more years of education (8.9 percent). Prenatal smoking was about 12 times greater among mothers with 12 years of education or less (17.0 to 17.2

Figure 1. Cigarette Smoking Before and During Pregnancy, by Maternal Race/Ethnicity, 2011*

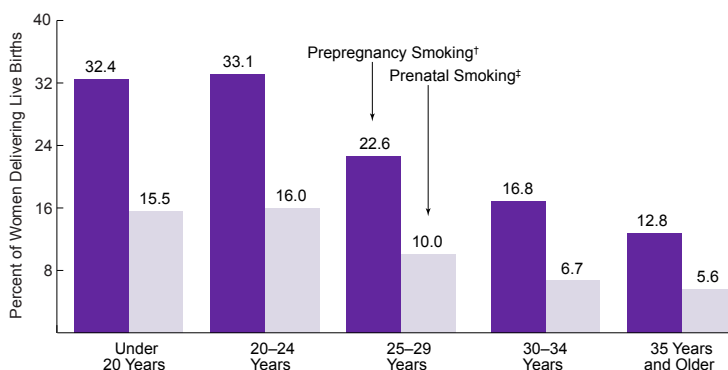


*Includes data from 23 states (AR, CO, GA, HI, ME, MD, MI, MN, MO, NE, NJ, NM, NY, OK, OR, PA, RI, UT, VT, WA, WV, WI, WY) and New York City. Mothers completed surveys between 2 and 9 months postpartum. Multiple race data were not reported by 5 of 23 states (AR, HI, ME, NJ, WV); therefore, specific race categories may include multiple race mothers. **Defined as the proportion of mothers who reported smoking in the 3 months before pregnancy. †Defined as the proportion of mothers who reported smoking in the last 3 months of pregnancy.

percent) than among those with 16 or more years of education (1.4 percent). This reflects a considerably higher cessation rate for mothers with at least 16 years of education (85.0 percent) than for those with 12 years of education or less (42.0 to 48.3 percent). Unmarried mothers were more than twice as likely as married mothers to smoke in the 3 months before pregnancy (36.3 versus 14.4 percent, respectively) and three times more likely to smoke during pregnancy (18.5 versus 5.1 percent, respectively).

In order to avoid early pregnancy complications, it is recommended that women quit smoking before they become pregnant.⁴ Due to awareness of the neonatal health consequences of smoking, pregnancy may be a time of heightened motivation to quit. The U.S. Preventive Services Task Force (USPSTF) recommends that clinicians ask all pregnant women about tobacco use and provide augmented, pregnancy-tailored counseling for those who smoke.⁵

Figure 2. Cigarette Smoking Before and During Pregnancy, by Maternal Age, 2011*



*Includes data from 23 states (AR, CO, GA, HI, ME, MD, MI, MN, MO, NE, NJ, NM, NY, OK, OR, PA, RI, UT, VT, WA, WV, WI, WY) and New York City. Mothers completed surveys between 2 and 9 months postpartum. †Defined as the proportion of mothers who reported smoking in the 3 months before pregnancy. ‡Defined as the proportion of mothers who reported smoking in the last 3 months of pregnancy.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Pregnancy Risk Assessment Monitoring System, 2011–2012. Analysis conducted by the CDC Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion.

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BINGE DRINKING BEFORE AND DURING PREGNANCY

Both preconception and prenatal alcohol consumption are associated with significant maternal and fetal health risks, particularly when that drinking is excessive. Binge drinking for women is defined as consuming four or more alcohol drinks (beer, wine, or liquor) on an occasion.¹ Among non-pregnant women, binge drinking is more likely to lead to unprotected sex and multiple sex partners which in turn increases the risks of unintended pregnancy.² Women who become pregnant without realizing it may continue alcohol use during the early first trimester when fetal organ systems are being formed, posing serious risk to fetal development throughout gestation.³ Prenatal drinking is associated with spontaneous abortion, prenatal and postnatal growth restriction, sudden infant death syndrome (SIDS), birth defects, and neurodevelopmental deficits such as Fetal Alcohol Syndrome (FAS).^{4,5}

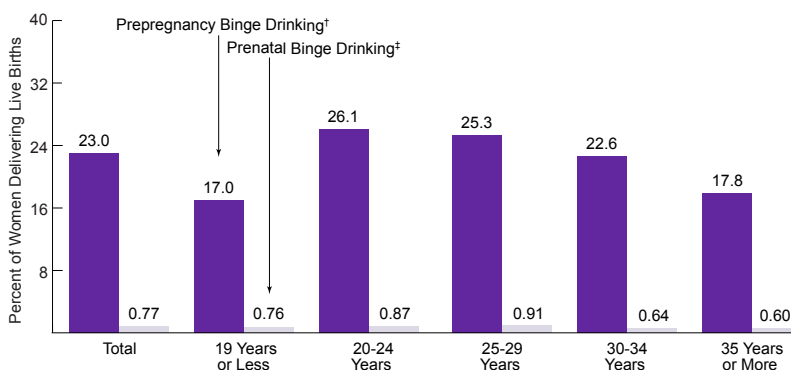
In 2011, approximately one quarter (23.0 percent) of recent mothers in 23 states and New York City reported binge drinking in the 3 months prior to pregnancy (figure 1). The overwhelming majority of mothers discontinued binge drinking by the last 3 months of pregnancy (97.4 percent) and less than 1 percent (0.77 percent) reported binge drinking during the final 3 months of pregnancy. Binge drinking varied by maternal age prior to pregnancy but not during pregnancy. Pre-pregnancy binge drinking was most common among women

aged 20–29 years (25–26 percent) and least common among women age 19 years or less (17.0 percent) and those age 35 years or older (17.8 percent). Quit rates for binge drinking did not vary by maternal age.

Both pre-pregnancy and prenatal binge drinking varied by race and ethnicity. Pre-pregnancy binge drinking was most common among non-Hispanic American Indian/Alaska Native, non-Hispanic White, non-Hispanic Native Hawaiian/Other Pacific Islander, and non-Hispanic mothers of multiple races (25–30 percent; figure 2). These women were approximately 2.5 to 3.0 times more likely to binge drink during the 3 months before pregnancy as non-Hispanic Asian mothers (9.1 percent). Prenatal binge drinking varied across race and ethnicity: compared to non-Hispanic White mothers (0.5 percent), binge drinking in the last 3 months of pregnancy was higher among Hispanic, non-Hispanic American Indian/Alaska Native, and non-Hispanic Black mothers (1.5, 1.4, and 0.9 percent, respectively). Binge drinking cessation rates were lower for non-Hispanic Asian, Hispanic, non-Hispanic Black, and non-Hispanic American Indian/Alaska Native mothers (89.8, 90.7, 95.1, and 95.7 percent, respectively) compared with non-Hispanic White mothers (98.7 percent).

Binge drinking before and during pregnancy also varied by maternal education and marital status. Pre-pregnancy binge drinking was lowest among those with less than a high school education

Figure 1. Binge Drinking Before and During Pregnancy, by Maternal Age, 2011*



*Includes data from 23 states (AR, CO, GA, HI, ME, MD, MI, MN, MO, NE, NJ, NM, NY, OK, OR, PA, RI, UT, VT, WA, WV, WI, WY) and New York City. Mothers completed surveys between 2 and 9 months postpartum.

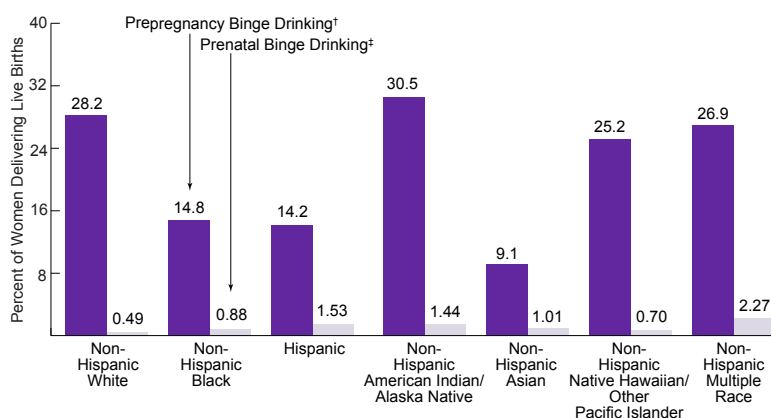
†Reported binge drinking (≥ 4 drinks on an occasion) in the 3 months before pregnancy.

‡Reported binge drinking (≥ 4 drinks on an occasion) in the last 3 months of pregnancy.

(12.5 percent) and above 20 percent for women with higher levels of education. The highest rate of pre-pregnancy binge drinking was among women with some college education (28.0 percent). However, binge drinking during the last 3 months of pregnancy was lowest among women with a college degree (0.49 percent) compared with 0.89-0.95 percent of women with less education. Binge drinking was greater among unmarried mothers versus married mothers both before pregnancy (26.2 versus 21.1 percent, respectively) and during the last 3 months of pregnancy (1.1 versus 0.58 percent, respectively).

Drinking before and during pregnancy continues to be an important public health concern. Screening for alcohol problems is recommended for adults by the U.S. Preventive Services Task Force and is recommended for adolescents by the American Academy of Pediatrics. Screening coupled with brief intervention strategies such as physician advice or counseling have proved effective in decreasing alcohol abuse and binge drinking in primary care settings in general and among women of childbearing age in particular.^{6,7}

Figure 2. Binge Drinking Before and During Pregnancy, by Maternal Race/Ethnicity, 2011*



*Includes data from 23 states (AR, CO, GA, HI, ME, MD, MI, MN, MO, NE, NJ, NM, NY, OK, OR, PA, RI, UT, VT, WA, WV, WI, WY) and New York City. Mothers completed surveys between 2 and 9 months postpartum. Multiple race data were not reported by 5 of 23 states (AR, HI, ME, NJ, WV); therefore, specific race categories may include multiple race mothers. [†]Reported binge drinking (≥ 4 drinks on an occasion) in the 3 months before pregnancy. [‡]Reported binge drinking (≥ 4 drinks on an occasion) in the last 3 months of pregnancy.

Data Sources

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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 health benefits, such as a decreased risk of breast and ovarian cancers and other chronic conditions, including cardiovascular disease.^{1,2} The American Academy of Pediatrics Section on Breastfeeding recommends exclusive breastfeeding—with no supplemental food or liquids—through the first 6 months of life and continued breastfeeding through at least the first year.³ One study indicated that suboptimal breastfeeding rates in the United States add an estimated \$2.2 billion dollars annually to direct medical costs.⁴

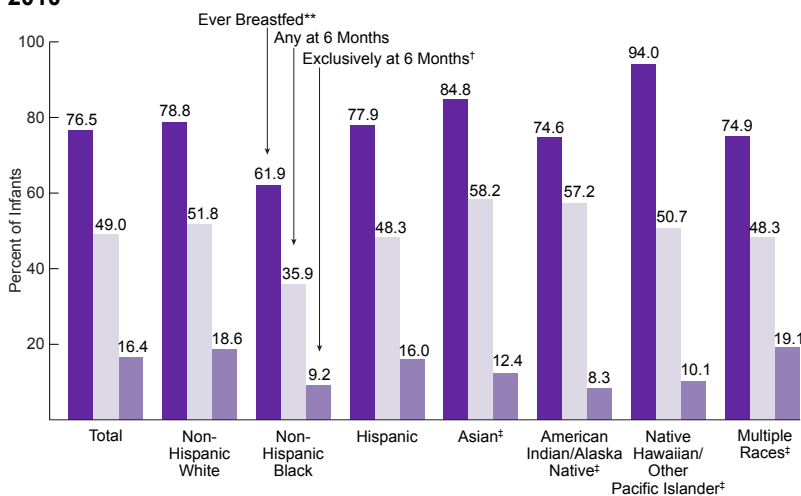
While three-quarters of infants born in 2010 were ever breastfed (76.5 percent), slightly less than half (49.0 percent) were fed breast milk for the first 6 months of life, and 16.4 percent were exclusively breastfed for that duration. Breastfeeding practices vary considerably by maternal race and ethnicity, age, and education. With respect to race and ethnicity, the proportion of infants to have ever been breastfed was higher among Asian, Hispanic, and non-Hispanic White in-

fants (84.8, 77.9, and 78.8 percent, respectively) than non-Hispanic Black infants (61.9 percent; figure 1).

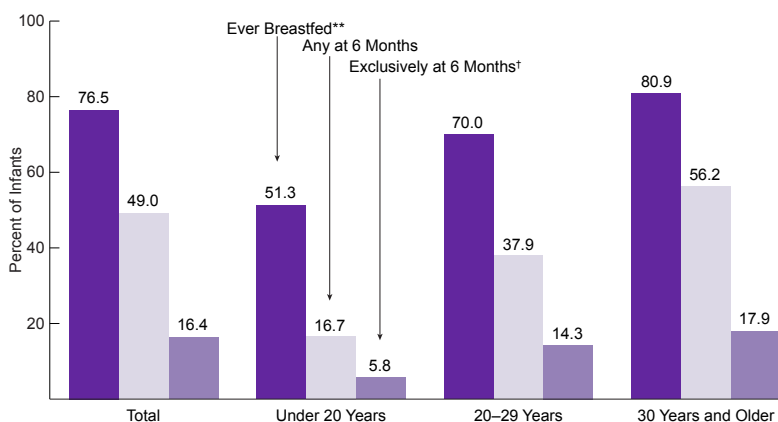
Infants born to mothers aged 30 years or older were most likely to have been breastfed (80.9 percent), while children born to mothers under 20 years of age were least likely to have ever been breastfed (51.3 percent; figure 2). Similarly, 17.9 percent of infants born to mothers aged 30 years or older breastfed exclusively at 6 months, compared to 5.8 percent of infants born to mothers younger than age 20.

With regard to maternal education, the proportion of infants to have ever been breastfed and to have been breastfed exclusively at 6 months was highest among those born to mothers with at least a college education (88.7 and 21.8 percent, respectively). Common barriers to exclusive breastfeeding include maternal employment, pain related to breastfeeding, and unsupportive hospital policies.⁵ The Affordable Care Act requires most health insurance plans to provide breastfeeding support, counseling, and equipment to pregnant and nursing women.⁶

Figure 1. Infants* Who Are Breastfed, by Race/Ethnicity and Duration, 2010



*Includes only infants born in 2010; data are provisional. **Reported that the child was ever breastfed or fed human breast milk. †Exclusive breastfeeding is defined as only human breast milk—no solids, water, or other liquids. ‡Includes Hispanics.

Figure 2. Infants* Who Are Breastfed, by Maternal Age and Duration, 2010

*Includes only infants born in 2010; data are provisional. **Reported that the child was ever breastfed or fed human breast milk. †Exclusive breastfeeding is defined as only human breast milk—no solids, water, or other liquids.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. National Immunization Survey (NIS). Unpublished data. The 2010 provisional rates are based on the landline telephone sample in NIS to maintain comparability with previous years in the decade when only a landline sample was available.

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CHILD OVERWEIGHT AND OBESITY

Childhood overweight and obesity is a significant public health issue, affecting nearly a third of all children in the United States.¹ Obese children are at increased risk of several adverse health outcomes, including high blood pressure and cholesterol, asthma, and many other chronic physiologic and psychosocial health conditions.² Childhood obesity is also associated with obesity in adulthood and children who are overweight are more likely to have severe obesity in adulthood.⁵

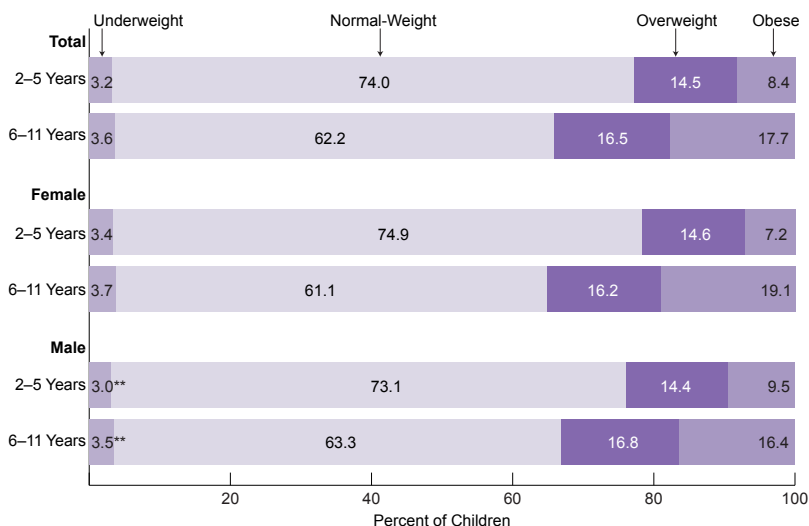
Body mass index (BMI) is the ratio of weight to height squared that is used to define overweight and obesity. In children, BMI is categorized as a function of age and sex, since both of these factors affect body composition. Children below the 5th percentile of BMI for age are considered underweight, those between the 5th and 84th percentiles are considered to have a normal weight, those between the 85th and 94th percentiles are considered overweight, and those in the 95th percentile or above are considered obese. In 2011–2012, nearly 30 percent of children aged 2–11 years were overweight or obese, 66.9 percent were of normal weight, and 3.4 percent were underweight based on measured height and weight.

Children's weight status varies by a number of factors, including age, sex, and race and ethnicity. For example, school-aged children are more likely to be obese than preschool-aged children. In 2011–2012, 17.7 percent of children aged 6–11 years were obese, compared to 8.4 percent of children aged 2–5 years (figure 1). The percent of children who were overweight was similar by age: 14.5 percent of 2- to 5-year-olds and 16.5 percent of 6- to 11-year-olds.

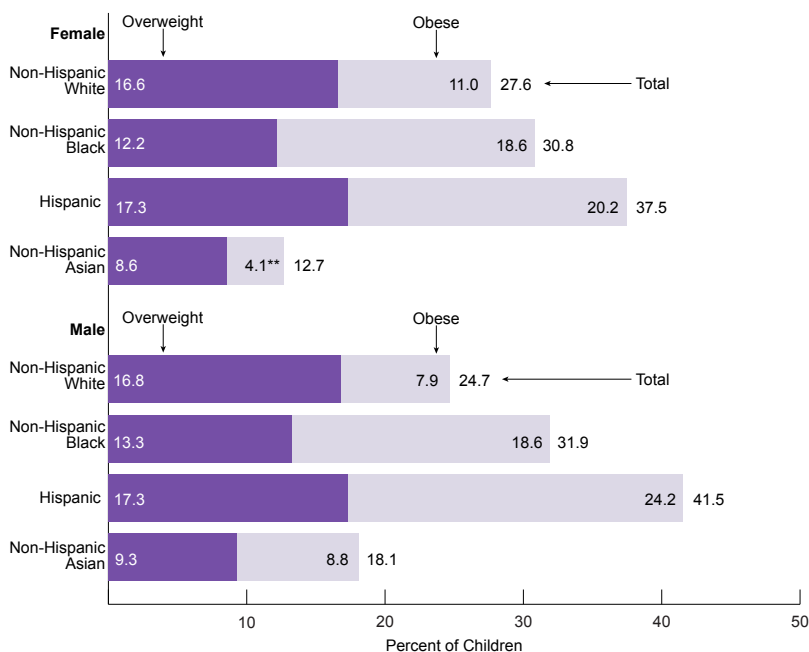
With regard to race and ethnicity, nearly 40 percent of Hispanic children and 31.4 percent of non-Hispanic Black children aged 6–11 years were overweight or obese overall. By comparison, 26.1 percent of non-Hispanic White children and 15.5 percent of non-Hispanic Asian children were overweight or obese. Racial and ethnic differences in obesity were particularly pronounced among males: 18.6 percent of non-Hispanic Black males and 24.2 percent of Hispanic males were obese, compared to 7.9 percent of their non-Hispanic White counterparts (figure 2).

Several strategies may prevent childhood obesity, such as increasing physical activity, eating right, and reducing screen time. Dietary strategies for preventing childhood obesity include limiting access calories from fats and sugars, consuming smaller portions, and increasing intake of whole grains, vegetables, and fruits.⁶ The 2008 Physical Activity Guidelines for Americans recommend that children aged 6–11 years participate in 60 minutes or more per day of aerobic activity.³ The recommended amount of fruits and vegetables is 1–1.5 cups of each for children aged 2–8 years.⁴ Recommendations for children aged 9 years and older vary depending on their age, sex, and activity level. The Community Preventive Services Task Force also recommends behavioral interventions for reducing screen time (e.g., time spent watching television, playing computer games, or browsing the Internet) to improve physical activity, diet, and weight-related outcomes.⁷

Figure 1. Weight Status* of Children Aged 2–11 Years, by Sex and Age, 2011–2012



*Based on Body Mass Index (BMI, ratio of height to weight squared) growth charts for age and sex from measured height and weight: underweight is a BMI under the 5th percentile, normal weight is a BMI between the 5th and 84th percentile, overweight is a BMI between the 85th and 94th percentile, and obesity is a BMI in the 95th percentile or above. **Estimate is not reliable; relative standard error > 30 percent.

Figure 2. Weight Status* of Children Aged 2–11 Years, by Sex and Race/Ethnicity, 2011–2012

*Based on Body Mass Index (BMI, ratio of height to weight squared) growth charts for age and sex from measured height and weight: underweight is a BMI under the 5th percentile, normal weight is a BMI between the 5th and 84th percentile, overweight is a BMI between the 85th and 94th percentile, and obesity is a BMI in the 95th percentile or above. **Estimate is not reliable; relative standard error > 30 percent.

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Figure 1 and 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Health and Nutrition Examination Survey, 2011–2012. Unpublished estimates. Analyses conducted by the National Center for Health Statistics.

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CHILD NUTRITION

Healthy eating habits begin in childhood and can affect a person's health throughout their lifetime. Poor dietary habits adopted during childhood may have lifelong consequences, as children and adolescents who are overweight and obese are at substantially increased risk of being overweight and obese as adults. Additionally, poor diet quality is associated with an increased risk of osteoporosis, hypertension, type 2 diabetes, cardiovascular disease, and dental caries.¹

The Healthy Eating Index-2010 (HEI-2010) is designed to measure dietary quality² and can be used to assess how well a population eats on average, compared to the recommendations outlined in the 2010 Dietary Guidelines for Americans. Nine of the 12 HEI-2010 components address adequate consumption of healthy foods. The remaining three components assess intake of foods that should be consumed in moderation: refined grains, sodium, and empty calories. In the table below, the HEI-2010 total and component scores are averages across all children, based on a 24-hour dietary recall.

In 2009–2010, the overall composite score for the HEI-2010 among children aged 2–11 years was 53 out of 100 points, where 100 points indicates a diet that aligns with the 2010 Dietary Guidelines for Americans. With regard to the nine components of dietary adequacy, children received 100 percent of the possible points for whole fruit intake and 96 percent for dairy. Children were least likely to consume adequate amounts of greens and beans and whole grains with 18 and 22 percent, respectively, of possible points obtained (table

1). However, consumption of greens and beans was higher among female than male children (on average 20 versus 16 percent of points, respectively).

With regard to race and ethnicity, scores for individual HEI-2010 components varied, although the total HEI scores varied little between groups. Non-Hispanic White children were less likely than all other racial and ethnic groups to consume adequate amounts of greens and beans, meeting only 13 percent of possible points on average compared to about 25 percent for all other children (table 1). Conversely, non-Hispanic White and non-Hispanic children of other races were closer to consuming adequate amounts of seafood and plant proteins (48 and 62 percent of possible points, respectively) than non-Hispanic Black and Hispanic children (37 and 41 percent, respectively).

Similar differences in the consumption of seafood and plant proteins exist with regard to household income. Children in households with incomes of 200 percent or more of poverty consumed 55 percent of possible points, compared to 39 percent among children in households with incomes of less than 100 percent of poverty.

The overconsumption of refined grains, sodium, and empty calories was present across all racial and ethnic groups. Overall, the diet quality of children would be improved by increasing the consumption of whole grains, vegetables, seafood, and plant proteins; decreasing the consumption of sodium and empty calories; and increasing the relative proportions of mono- and poly-unsaturated to saturated fatty acids.

Table 1. Diet Quality Among Children Aged 2–11 as Measured by Healthy Eating Index (HEI-2010) Scores,* by Dietary Component and Race/Ethnicity, 2009–2010

| Dietary Component | Overall Average | Non-Hispanic White | Non-Hispanic Black | Hispanic | Non-Hispanic Other Race |
|--|-----------------|--------------------|--------------------|----------|-------------------------|
| Total HEI-2010 | 53 | 52 | 52 | 54 | 53 |
| Adequacy (higher score indicates higher consumption) | | | | | |
| Total fruit | 91 | 86 | 88 | 98 | 97 |
| Whole fruit | 100 | 99 | 90 | 100 | 100 |
| Total vegetables | 40 | 38 | 38 | 44 | 41 |
| Greens and beans | 18 | 13 | 25 | 25 | 26 |
| Whole grains | 22 | 24 | 22 | 18 | 19 |
| Dairy | 96 | 100 | 74 | 94 | 89 |
| Total protein foods | 81 | 75 | 90 | 86 | 85 |
| Seafood and plant proteins | 46 | 48 | 37 | 41 | 62 |
| Fatty acids | 28 | 24 | 38 | 29 | 33 |
| Moderation (higher score indicates lower consumption) | | | | | |
| Refined grains | 44 | 45 | 47 | 40 | 35 |
| Sodium | 49 | 50 | 48 | 52 | 35 |
| Empty calories | 51 | 48 | 51 | 57 | 56 |

*In this table, all scores are shown as a percentage of possible points. Total HEI-2010 scores reflect overall dietary quality. For the adequacy components, higher scores reflect higher intakes and a score corresponding to 100 indicates that the standard was met or exceeded on average. For the moderation components, higher scores reflect lower intakes because lower intakes are more desirable and a score corresponding to 100 indicates that the standard was met. For all components, a higher score indicates a higher quality diet.

Data Sources

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CHILD ABUSE AND NEGLECT

Child abuse and neglect has been defined as “any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act, which presents an imminent risk of serious harm.”¹

In 2012, state child protective services agencies received approximately 3.4 million referrals, involving an estimated 6.3 million children, alleging abuse or neglect. Based on investigation, states reported that an estimated 678,810 unique children were victims of abuse or neglect in 2012, resulting in a national victimization rate of 9.2 per 1,000 children in the population.

Neglect was the most common type of maltreatment (experienced by 78.3 percent of victims), followed by physical abuse (18.3 percent), sexual abuse (9.3 percent), psychological maltreatment (8.5 percent), and medical neglect (2.3 percent; figure 1). About 10 percent of victims experienced other types of maltreatment including abandonment, threats of harm, or congenital drug addiction. Children may have experienced more than one type of maltreatment. In 2012, an estimated 1,640 children died as a result of abuse or neglect.

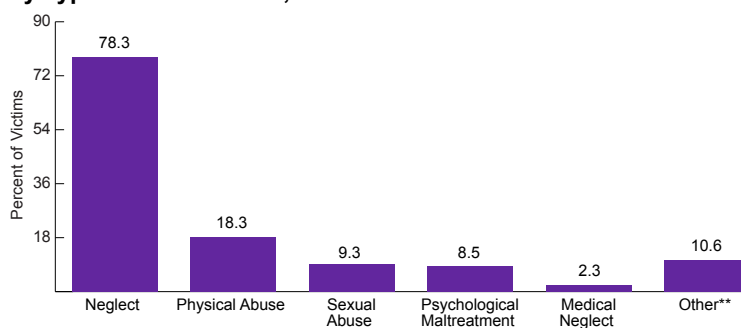
In 2012, children aged 0–3 years accounted for 33.6 percent of all victims, with 12.8 percent younger than 1 year of age. About one-quarter of victims were between the ages of 4 and 7 years, 18.7 percent were aged 8–11 years, 16.8 percent were aged 12–15 years, and 5.8 percent were aged 16–17 years (figure 2). With the exception of sexual abuse, children aged 0–2 years represented the largest proportion of victims in each maltreatment category. For example, 33.2 percent of those who experienced medical neglect were in this age group, as were 24.6 percent of those who experienced physical abuse.

Although the percentage of child victims by sex was similar for boys and girls (48.7 and 50.9 percent, respectively) the rate of abuse was higher among girls: 9.5 per 1,000 girls compared to 8.7 per 1,000 boys. Similarly, although 44.0 percent of victims were non-Hispanic White, rates of victimization were highest among non-Hispanic Black and American Indian and Alaska Native children: 14.2 and 12.4 per 1,000 children, respectively, compared to 8.0 per 1,000 among non-Hispanic White children.

Overall, 81.5 percent of perpetrators of abuse or neglect were parents of the victim (either alone or in conjunction with another person). Male relatives and male partners of the child’s parent were the perpetrators in another 3.0 and 2.3 percent of victimizations, respectively. Other types of perpetrators included foster parents, friends and neighbors, and legal guardians.

A variety of risk factors have been associated with child maltreatment, including child health and disability status, caregiver substance abuse, intimate partner or domestic violence, and poverty.² The effects of child maltreatment can be serious and long lasting, ranging from increased risk of chronic emotional, behavioral, and physical illness³ to delinquency and criminality⁴ to lower levels of socioeconomic achievement.⁵ Taken together, the lifetime cost per victim of nonfatal child maltreatment has been estimated at \$210,012, while the lifetime cost associated with one year of all confirmed cases has been estimated at \$124 billion.⁶ Early childhood home visitation programs, where trained personnel visit the home during the child’s first two years of life, are recommended as an evidence-based way to prevent child maltreatment.⁷

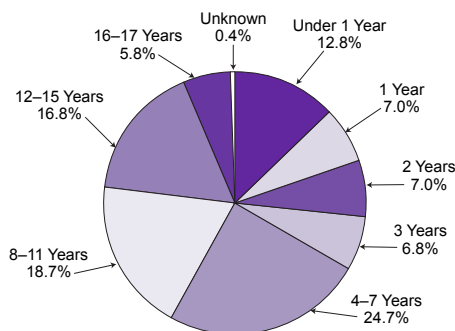
Figure 1. Reported Abuse and Neglect Among Children Under Age 18, by Type of Maltreatment, 2012*



*Estimates do not total 100 percent, as children may experience more than one type of maltreatment.

**Includes other types of maltreatment not mentioned above such as threats of abuse or congenital drug addiction.

Figure 2. Reported Abuse and Neglect Among Children Under Age 18, by Age, 2012



Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. *Child maltreatment 2012*. Available at: <http://www.acf.hhs.gov/sites/default/files/cb/cm2012.pdf#page=31>. Accessed July 24, 2014.

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SCHOOL READINESS

Early childhood is a critical period for learning and development. From birth to 5 years of age, children acquire language, develop learning and problem-solving skills, and obtain knowledge that is essential for helping them succeed in school and life. Children who begin kindergarten with early skills, such as early math, literacy, and attention-related skills, are more likely to have later academic achievement,¹ while those with fewer or less developed skills are more likely to attain lower levels of education and be unemployed as adults.²

School readiness can be defined as when a child possesses the skills, knowledge, and attitudes necessary for school and for later learning and life. It is suggested that school readiness is composed of five dimensions: physical well-being and motor development, social and emotional development, approaches to learning, language development and early literacy, and cognition and general knowledge.³ Although there is no standard measure of school readiness, there are several skills that can be assessed to indicate a child's readiness for school. For example, skills pertaining to early literacy and cognitive development include a child's ability to recognize the beginning sound of a word, recognize letters of the alphabet, clearly explain things that he or she has seen or done, write his or her first name, count to 20, recognize basic shapes, and use a pencil or crayon.

In 2007, the latest year for which data are available, approximately 93 percent of children aged 3–6 years not yet enrolled in kindergarten were reportedly understandable to strangers when speaking to them; 87 percent used their fingers when holding a pencil; 63 percent counted to 20 or higher; 60 percent wrote their first name; 32 percent recognized all letters; and 8 percent could read the words written in books.

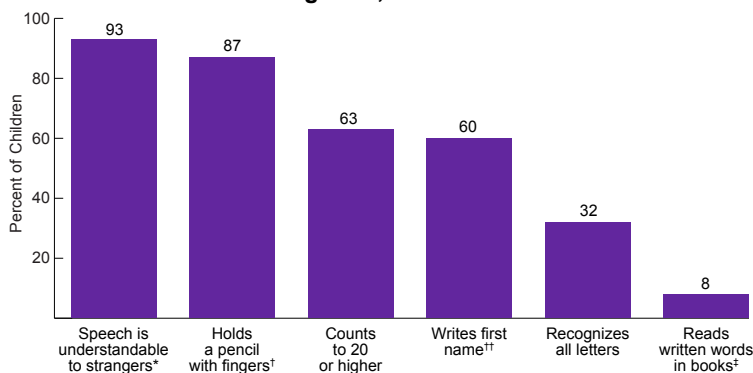
ed to 20 or higher; 60 percent could write their first name; 32 percent recognized all letters; and 8 percent could read the words written in books (figure 1).

School readiness varied widely by children's race and ethnicity. Among children aged 3–6 years, a lower percentage of Hispanics demonstrated each of the six skills compared to their non-Hispanic counterparts. For example, in 2007, a lower percentage of Hispanic children could read written words in a book (3 percent) compared to non-Hispanic White (8 percent), non-Hispanic Black (16 percent), and non-Hispanic Asian or Pacific Islander children (8 percent; figure 2).

School readiness also varied by household income as a percent of poverty. Children living in households with incomes below 100 percent of poverty were less likely than those in households with higher incomes to recognize all letters (21 versus 35 percent, respectively), count to 20 or higher (49 versus 67 percent, respectively), and write his or her first name (46 versus 64 percent, respectively). The percentage of children who could hold a pencil with his or her fingers, read written words in books, and speak understandably to strangers did not vary as widely by poverty status.

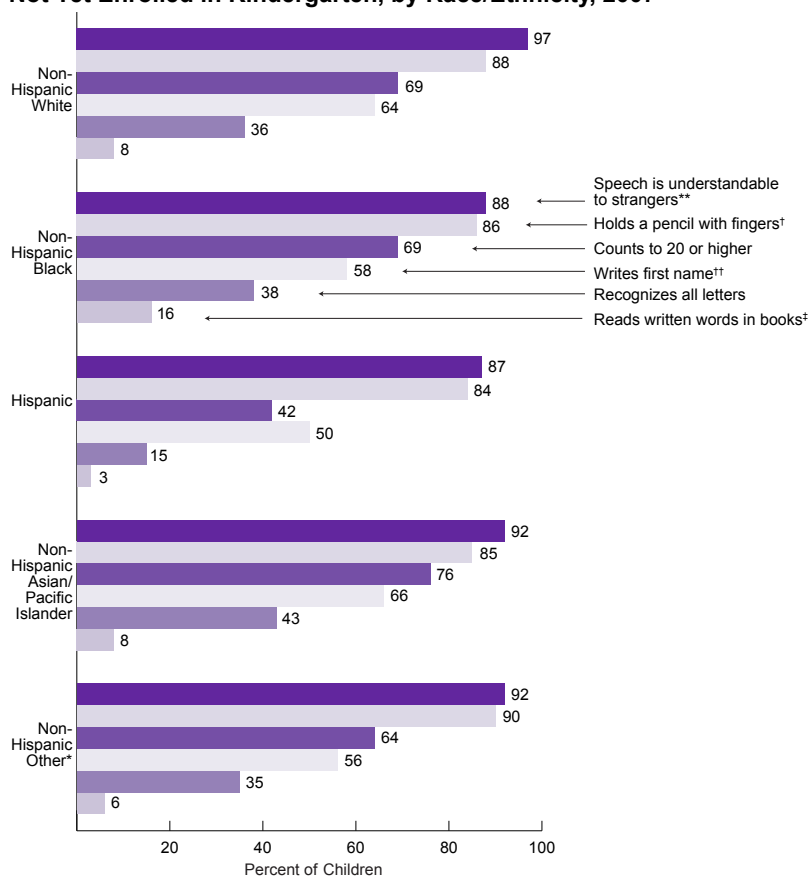
A number of federal programs work to ensure that children are ready for school. Two of these are the Head Start and Early Head Start programs, administered by the Administration on Children and Families in the U.S. Department of Health and Human Services. These programs provide early education, health, nutrition, and social services to low-income children and families.⁴

Figure 1. School Readiness Skills Among Children Aged 3–6 Years Not Yet Enrolled in Kindergarten, 2007



*Sometimes, often, or very often understandable to a stranger when speaking to them. †Use their fingers when holding a pencil as opposed to those who grip a pencil in their fists or cannot hold a pencil. ††Can write their first name, even if some letters are not quite right (e.g., backwards). ‡Children who read the words written in books as opposed to pretending to read.

Figure 2. School Readiness Skills Among Children Aged 3–6 Years Not Yet Enrolled in Kindergarten, by Race/Ethnicity, 2007



*Includes non-Hispanic American Indian or Alaska Natives, other races not specified, and children of two or more races. **Sometimes, often, or very often understandable to a stranger when speaking to them. †Use their fingers when holding a pencil as opposed to those who grip a pencil in their fists or cannot hold a pencil. ††Can write their first name, even if some letters are not quite right (e.g., backwards). ‡Children who read the words written in books as opposed to pretending to read.

Data Sources

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MATH AND READING ACHIEVEMENT

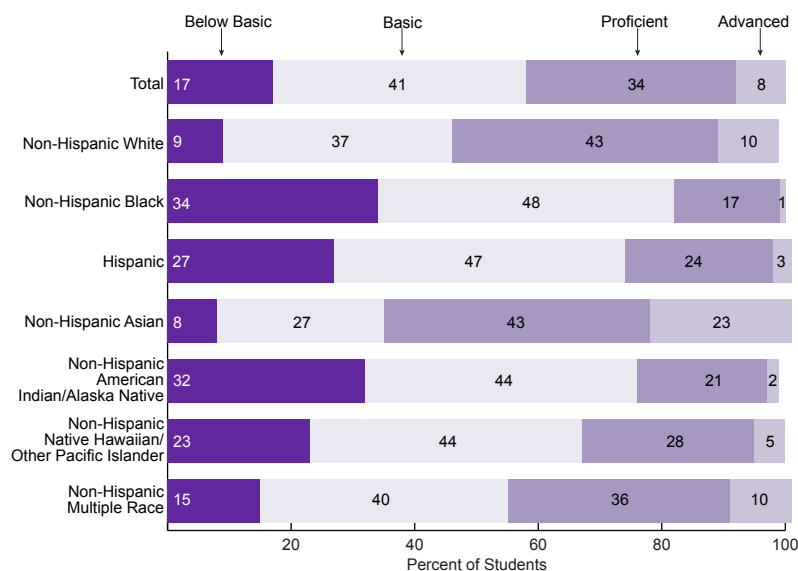
Students' achievement scores across school subjects are important indicators of their overall academic performance. The National Assessment of Educational Progress (NAEP) conducts periodic assessments to measure students' knowledge and skills and provides results on subject matter achievement.¹ For mathematics, the NAEP assessment measures students' knowledge in number properties and operations, measurement, geometry, data analysis and statistics, and algebra. The NAEP reading assessment measures students' comprehension of both literary and informational texts. For all subjects, the National Assessment Governing Board sets three achievement levels—basic, proficient, and advanced—based on what students should know and be able to do at each grade assessed.²

In 2013, 42 percent of fourth-graders and 36 percent of eighth-graders were at or above proficiency in mathematics. Math achievement levels varied widely by students' race and ethnicity. Among fourth-graders, the highest percentage of students performing at the advanced level were non-Hispanic Asians (23 percent), followed by non-Hispanic Whites (10 percent) and non-Hispanics of multiple

racess (10 percent; figure 1). Less than 6 percent of students from each of the other racial and ethnic groups performed at the advanced level. The highest percentage of fourth-grade students performing below the basic proficiency level were non-Hispanic Black students (34 percent), followed by non-Hispanic American Indians/Alaska Natives (32 percent) and Hispanics (27 percent). Fewer than 10 percent of non-Hispanic White and non-Hispanic Asian students performed below the basic proficiency level. Overall, similar patterns were observed among eighth-graders.

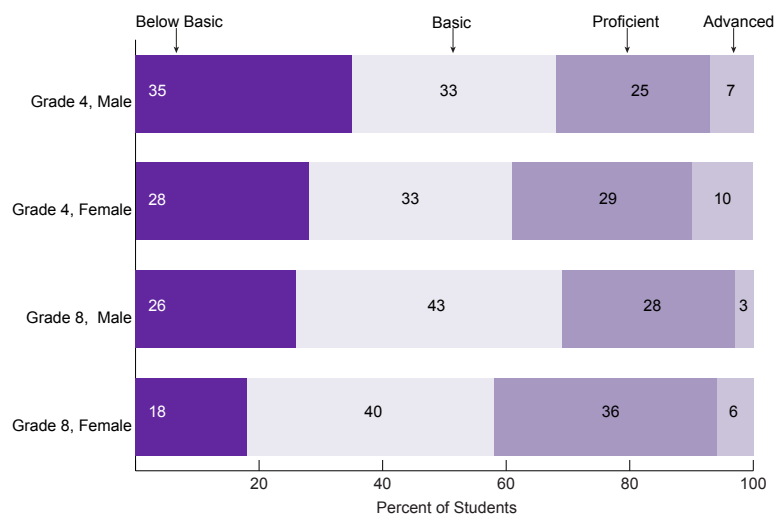
Reading achievement varies by grade level and sex. In 2013, 35 percent of fourth-graders and 36 percent of eighth-graders were at or above proficiency in reading. Among both fourth- and eighth-graders, a higher percentage of females performed at the proficient (29 and 36 percent, respectively) and advanced (10 and 6 percent, respectively) levels compared to their male counterparts (proficient: 25 and 28 percent, respectively; advanced: 7 and 3 percent, respectively). At both grade levels, a higher percentage of males performed below the basic proficiency level (figure 2).

Figure 1. Proficiency* in NAEP Mathematics Among Students in Grade 4, by Race/Ethnicity, 2013**



*Performance standards are set by the National Assessment Governing Board. Basic, proficient, and advanced levels measure what students should know and be able to do at each grade assessed. "Basic" denotes partial mastery of prerequisite knowledge and skills. "Proficient" reflects solid academic performance. "Advanced" denotes superior performance. Examples of knowledge and skills demonstrated by students at each achievement level are available in the Nation's Report Cards in Mathematics and Reading at <http://nces.ed.gov/nationsreportcard/subjectareas.asp>. **Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin.

Figure 2. Proficiency* in NAEP Reading Among Students, by Grade Level and Sex, 2013



*Performance standards are set by the National Assessment Governing Board. Basic, proficient, and advanced levels measure what students should know and be able to do at each grade assessed. "Basic" denotes partial mastery of prerequisite knowledge and skills. "Proficient" reflects solid academic performance. "Advanced" denotes superior performance. Examples of knowledge and skills demonstrated by students at each achievement level are available in the Nation's Report Cards in Mathematics and Reading at <http://nces.ed.gov/nationsreportcard/subjectareas.asp>.

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SEXUAL ACTIVITY AND CONTRACEPTIVE USE

In 2013, 46.8 percent of students in grades 9–12 reported having had sexual intercourse at least once during their lifetime. While this self-reported prevalence among high school students has not changed significantly from 2011 (47.4 percent), there has been a sustained decrease since 1991, when 54.1 percent of high school students reported ever having had sexual intercourse.¹

Among all students, a similar number of male and female high school students reported having ever had sex (47.5 and 46.0 percent, respectively). With respect to race and ethnicity, 60.6 percent of non-Hispanic Black high school students reported having ever had sexual intercourse, compared to 49.2 percent of Hispanic, 43.7 percent of non-Hispanic White, and 22.6 percent of non-Hispanic Asian high school students (figure 1). The proportion of students who reported having had sexual intercourse increased with grade level: 30.0 percent of 9th-grade students had done so, compared to 41.4 percent of 10th-graders, 54.1 percent of 11th-graders, and 64.1 percent of 12th-graders.

Overall, 34.0 percent of students reported current sexual activity, defined as sexual intercourse with at least one person during the

past 3 months. Among those students who reported current sexual activity, 40.9 percent reported not using a condom (whether they or their partner wore it) during their last intercourse (figure 2). With regard to sex, 46.9 percent of females reported not using a condom, compared to 34.2 percent of males. Additionally, female students were more likely than male students to report that no method to prevent pregnancy had been used (by themselves or partners) during their last intercourse (15.7 and 11.5 percent, respectively). With regard to grade level, the proportion of sexually active students to report not using a condom was highest among 12th-graders (47.0 percent).

Contraceptive use is a key component to reducing unintended pregnancies,² and the majority of pregnancies occurring to adolescents are unintended.³ The U.S. Department of Health and Human Services *Healthy People 2020* campaign includes national goals to increase the proportion of adolescents aged 17 years and younger who have never had sexual intercourse, reduce the number of pregnancies among adolescent females, increase the proportion of births that are intended, and increase contraceptive use among females who are at risk of unintended pregnancy.⁴

Figure 1. High School Students Who Have Ever Had Sexual Intercourse, by Race/Ethnicity, 2013

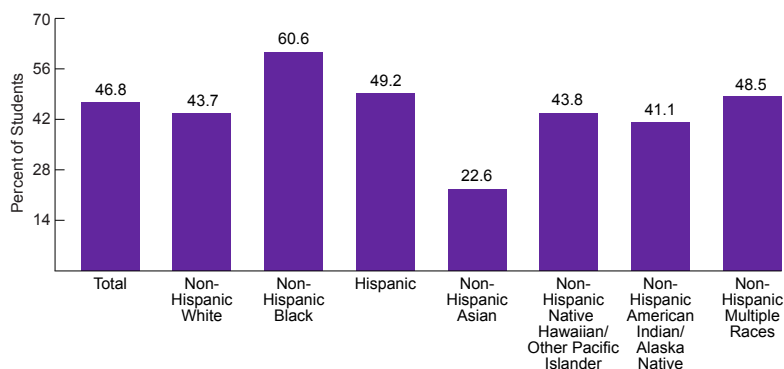
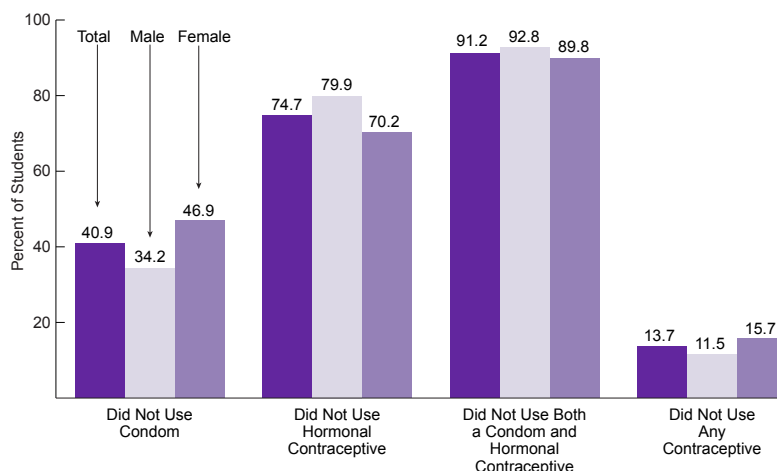


Figure 2. Lack of Contraceptive Use* During Last Sexual Intercourse Among Sexually Active High School Students, by Sex, 2013**



*By themselves or partners. **Defined as having had sexual intercourse with at least one person during the past 3 months.

Data Sources

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STIs AND HIV/AIDS

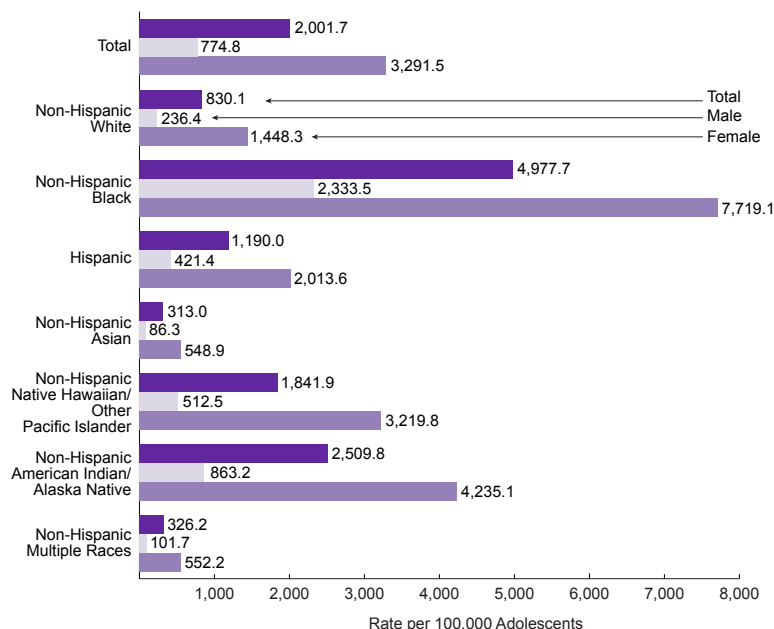
Sexually transmitted infections (STIs), such as chlamydia and gonorrhea, can pose serious, long-term health complications for adolescents and young adults.¹ Although young people aged 15–24 years represent only one-quarter of the sexually experienced population, they acquire nearly half of all new STIs.² Among adolescents and young adults, chlamydia continues to be the most common of all the STIs reported to the Centers for Disease Control and Prevention (CDC). Overall, there were 2,001.7 reported cases of chlamydia per 100,000 adolescents aged 15–19 years in 2012 (figure 1). Rates of chlamydia vary by sex, with 3,291.5 cases of chlamydia per 100,000 female adolescents and 774.8 cases per 100,000 male adolescents. Gonorrhea was less common, with rates of 376.8 per 100,000 among all adolescents, 521.2 per 100,000 female adolescents, and 239.0 per 100,000 male adolescents (figure 2).

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. Early age at sexual initiation, unprotected sex, drug use, older sex partners, and lack of awareness place adolescents at an increased risk of contracting HIV.³ By the end of 2010, an estimated 7,272 adolescents between 15 and 19 years of age were living with a diagnosed HIV infection. With regard to race and ethnicity, 148.2 per 100,000 non-Hispanic Black adolescents and 7.1 per 100,000 non-Hispanic White adolescents were living with HIV.

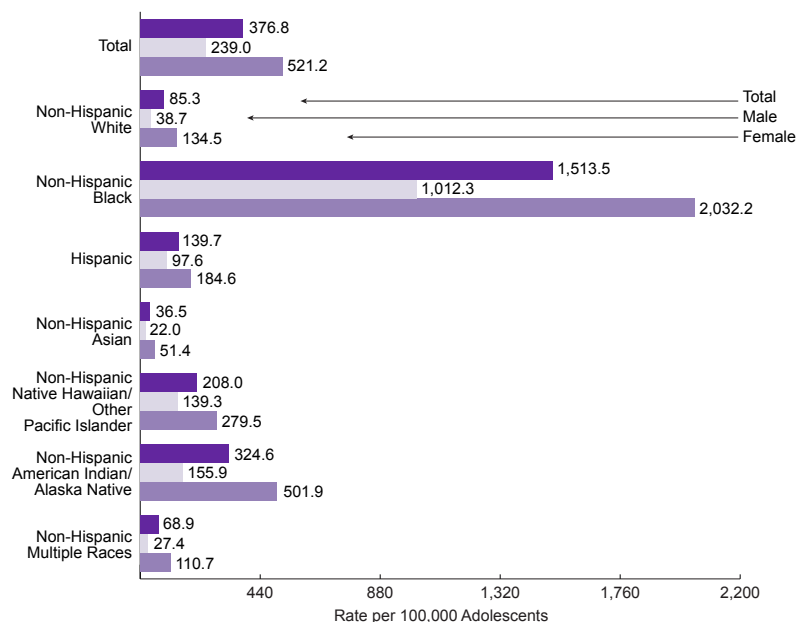
Abstaining from sex and drug use is the most effective way to avoid HIV. Adolescents and young adults can also reduce their risk by knowing where to get tested for HIV, how to negotiate safer sex, and how to use a condom correctly. CDC has developed interventions that can be carried out locally to help reduce the risk to adolescents. One such program, *Choosing Life: Empowerment! Action! Results!*, is targeted to adolescents older than 16 and living with HIV/AIDS or at high risk for HIV.⁴

Figure 1. Reported Chlamydia Infection Rates per 100,000 Adolescents Aged 15–19 Years, by Race/Ethnicity* and Sex, 2012



*Rates by race/ethnicity should be interpreted with caution: 25.8% of case reports were missing race/ethnicity.

Figure 2. Reported Gonorrhea Infection Rates per 100,000 Adolescents Aged 15–19 Years, by Race/Ethnicity* and Sex, 2012



*Rates by race/ethnicity should be interpreted with caution: 25.8% of case reports were missing race/ethnicity.

Data Sources

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ADOLESCENT CHILDBEARING

Teen pregnancy is generally unintended and has long-term negative effects on future physical, behavioral, educational, and economic development of both mothers and children.^{1,2} Adolescent mothers are less likely than older mothers to finish high school or go on to college.³ Compared with babies of mothers in their 20s and early 30s, children born to teen mothers are more likely to be premature, have a low birth weight, or die as infants.^{4,5} Children of adolescent mothers generally have poorer educational and behavioral outcomes than children born to older mothers and are more likely to initiate sex at an early age or to have a teen birth themselves.^{6,7}

According to preliminary data for 2013, the overall birth rate for adolescents aged 15–19 years was 26.6 births per 1,000 females, representing an 11 percent decline from 2012 (29.4 per 1,000) and a historic low for the nation (figure 1). Birth rates for younger adolescents 15–17 years of age (12.3 per 1,000) declined by 13 percent while the rates for older adolescents, aged 18–19 years, declined by 8 percent to 47.4 per 1,000. Record lows were reached for both younger (15–17 years) and older teens (18–19 years). The teen birth rate has fallen by more than 55 percent since 1991 (61.8 per 1,000), when the long-term decline began.⁸ The rate for teens aged 15–17 years has fallen 67 percent and the rate for those aged 18–19 years has declined by 47 percent.

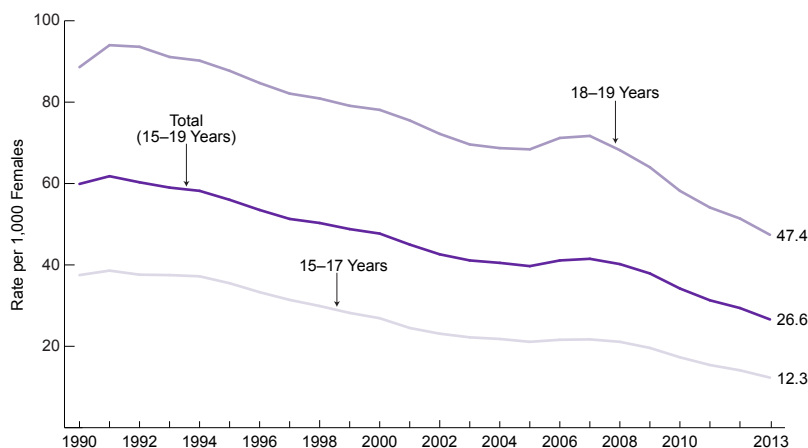
Overall, birth rates for teenagers aged 15–19 years decreased for all racial and ethnic groups from 2011 to 2012, with declines ranging from 3 percent for American Indian/Alaska Native teens to 5 percent for Asian/Pacific Islander teens and 6–7 percent for non-Hispanic

White, non-Hispanic Black, and Hispanic teens (figure 2). Birth rates for younger teens aged 15–17 years decreased for all race and ethnic groups in 2012, while rates for older teens aged 18–19 years decreased for all but American Indian/Alaska Native and Asian/Pacific Islander adolescents.

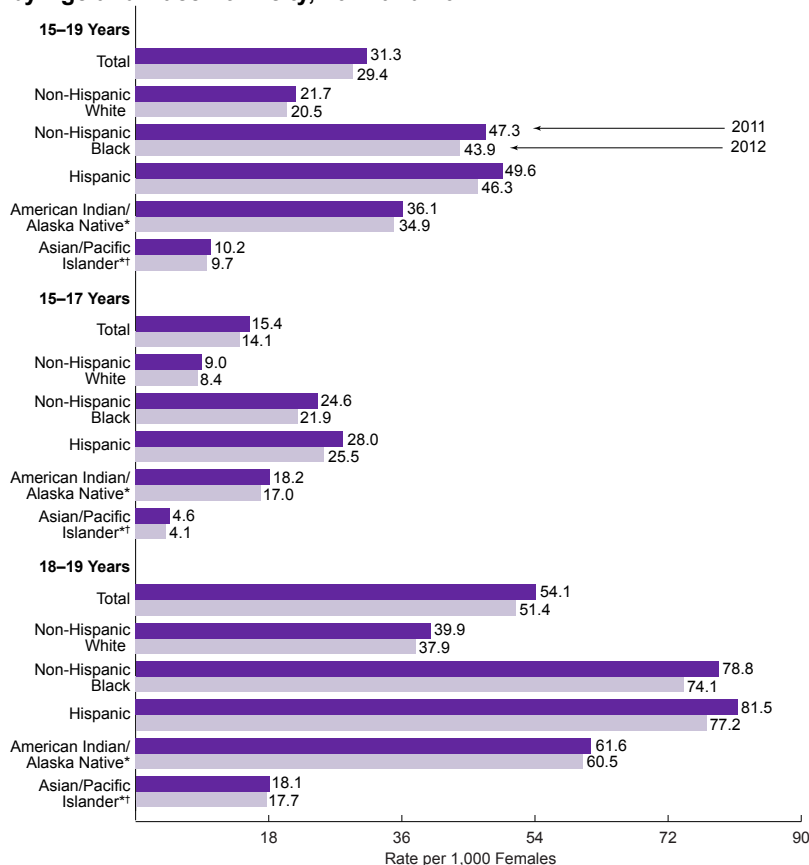
Despite observed decreases, profound disparities continue to persist in adolescent childbearing rates across racial and ethnic groups. Among teens aged 15–19 years, birth rates ranged from a low of 9.7 per 1,000 females for Asian/Pacific Islander teens to a high of 46.3 per 1,000 females for Hispanic teens, an approximately fivefold difference. The birth rate among non-Hispanic White 15- to 19-year-olds was more than twice as low as those of both Hispanic and non-Hispanic Black teens of the same age.

The Community Preventive Services Task Force recommends both group-based and youth development behavioral interventions to protect against the risk of HIV/AIDS, other sexually transmitted diseases, and teen pregnancy.⁹ Group-based interventions, referred to as Comprehensive Risk Reduction Interventions for Adolescents, have shown results in reducing sexual activity, unprotected sex, and sexually transmitted infections and are applicable across a variety of populations and settings. Youth development behavioral interventions in these programs are coordinated with community service. Social, emotional, or cognitive competence training promotes prosocial norms, improved decisionmaking, self-determination, and positive peer or role model bonding, while community service provides opportunities to gain membership in groups with explicit rules and responsibilities.⁹

Figure 1. Birth Rates Among Adolescent Females Aged 15–19 Years, by Age, 1990–2013*



*Data for 2013 are preliminary.

Figure 2. Birth Rates Among Adolescent Females Aged 15–19 Years, by Age and Race/Ethnicity, 2011 and 2012

*May include individuals of Hispanic origin. **Separate estimates for Asians, Native Hawaiians, and other Pacific Islanders were not available.

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ADOLESCENT OVERWEIGHT AND OBESITY

Over the past 30 years, the prevalence of obesity has quadrupled among adolescents in the United States.¹ In 2011–2012, 20.5 percent of youth aged 12–19 years were obese, 14.0 percent were overweight, 61.9 percent were of normal weight, and 3.6 percent were underweight. Overweight and obesity in adolescence is associated with overweight and obesity in adulthood, putting obese adolescents at increased risk of several adverse health conditions, including overweight and obesity later in life, high cholesterol and blood pressure, prediabetes, bone and joint problems, cancer, and other social and psychological health outcomes.²

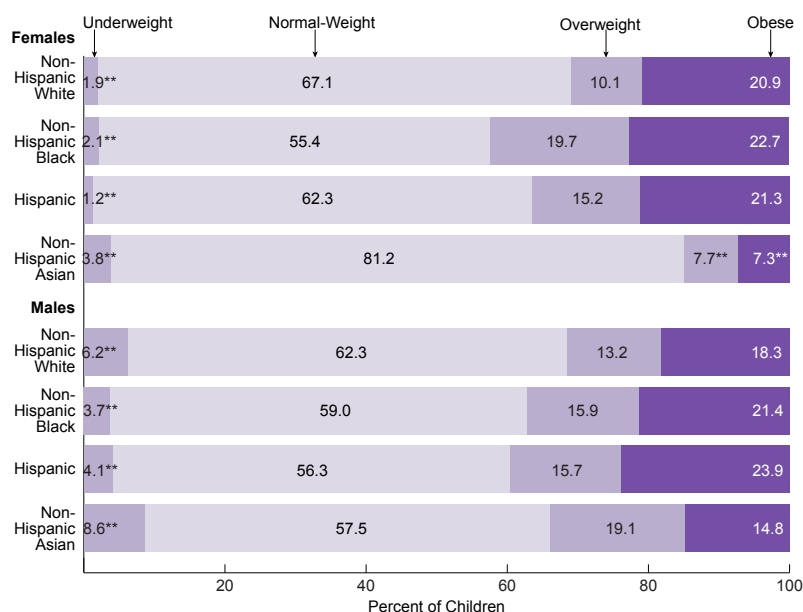
Adolescent weight status varies by several factors, including sex, race and ethnicity, and poverty status. In 2011–2012, nearly 40 percent of non-Hispanic Black and Hispanic youth were reportedly overweight or obese, compared to 31.2 percent of non-Hispanic White youth. Racial and ethnic differences varied by sex and were particularly pronounced among males, such that 21.4 percent of non-Hispanic

Black males and 23.9 percent of Hispanic males were obese, compared to 18.3 percent of non-Hispanic White males (figure 1).

The prevalence of overweight and obesity also varies by poverty status. In 2011–2012, nearly 41 percent of youth living in households with incomes below 100 percent of poverty were overweight or obese. By comparison, 28.2 percent of youth living in households with incomes of 300 percent or more of poverty were overweight or obese. These differences were only notable among females: 17.1 and 25.9 percent of females living in households with incomes below 100 percent of poverty were overweight and obese, respectively, compared to 9.0 and 10.8 percent of their female counterparts living in households with incomes of 300 percent or more of poverty (figure 2).

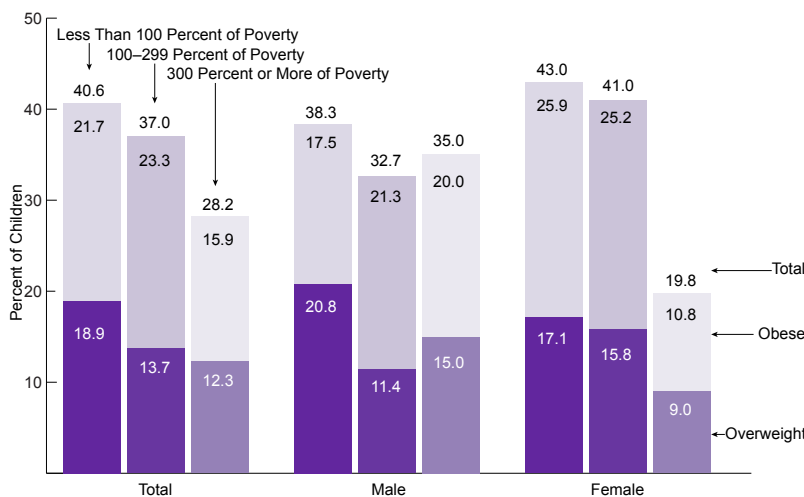
The Community Preventive Services Task Force recommends several strategies for preventing obesity in community settings. For example, behavioral interventions for reducing screen time (e.g., time spent watching television, playing computer games, or browsing the Internet) have improved weight-related outcomes among children and adolescents.

Figure 1. Weight Status* of Children Aged 12–19 Years, by Race/Ethnicity and Sex, 2011–2012



*Based on Body Mass Index (BMI, ratio of height to weight squared) growth charts for age and sex from measured height and weight: underweight is a BMI under the 5th percentile, normal weight is a BMI between the 5th and 84th percentile, overweight is a BMI between the 85th and 94th percentile, and obesity is a BMI in the 95th percentile or above. **Estimate is not reliable; based on fewer than 10 cases or relative standard error > 30 percent.

Figure 2. Overweight and Obese Children Aged 12–19 Years, by Sex and Poverty Status, 2011–2012**



*Based on Body Mass Index (BMI, ratio of height to weight squared) growth charts for age and sex from measured height and weight: underweight is a BMI under the 5th percentile, normal weight is a BMI between the 5th and 84th percentile, overweight is a BMI between the 85th and 94th percentile, and obesity is a BMI in the 95th percentile or above. **The U.S. Census Bureau weighted average poverty threshold for a family of four was \$23,492 in 2012.

Data Sources

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PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOR

The U.S. Department of Health and Human Services recommends that children and adolescents get 1 hour or more of physical activity every day, most of which should be moderate- to vigorous-intensity aerobic activity.¹ Data from the 2013 Youth Risk Behavior Surveillance System showed that 27.1 percent of high school students were physically active for at least 60 minutes on each of the 7 previous days (figure 1).

Achievement of recommended levels of physical activity varied by both sex and grade level. Among high school students in all grades, a smaller proportion of females reported 60 minutes of physical activity on each of the previous 7 days than males (17.7 versus 36.6 percent, respectively). Students in the 9th grade were more likely to achieve the recommended level of physical activity than those in the 12th grade (30.4 versus 24.3 percent, respectively). With regard to race and ethnicity, 21.8 percent of non-Hispanic Asian students reported recommended levels of physical activity, compared to 28.2 percent of non-Hispanic Whites.

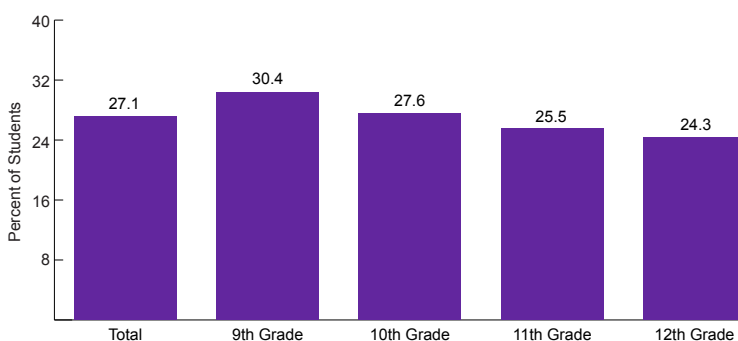
In conjunction with physical activity, experts recommend limiting sedentary behaviors. Specifically, the American Academy of Pediatrics recommends that parents limit children's media time to 1–2 hours per day.² This includes time spent watching TV or videos as well as time spent playing video or computer games. In 2013, 32.5 percent of

high school students reported watching 3 or more hours of television per day on an average school day. There was no difference in the proportion of males and females who reported this level of television watching. However, students in 9th grade were slightly more likely to watch 3 or more hours of television than students in 12th grade (34.9 versus 31.3 percent, respectively).

The proportion of students who reported 3 or more hours of television watching varied significantly by race and ethnicity (figure 2). More than half of non-Hispanic Black students (53.7 percent) reported this level of television viewing, while the same was true for about one-quarter of non-Hispanic White and Asian students (25.0 and 24.5 percent, respectively) and more than one-third of Hispanic students (37.8 percent).

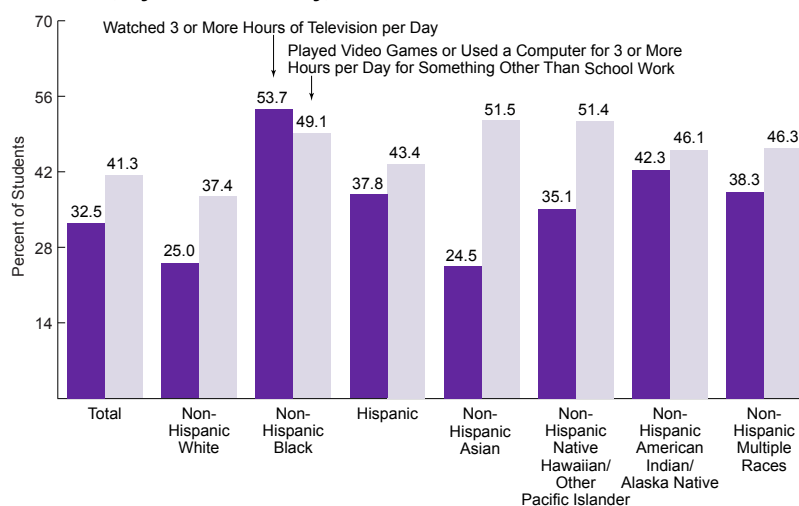
In the same year, 41.3 percent of high school students reported playing video games or using computers for something other than school work, such as computer games, for 3 or more hours per day on an average school day. The proportion varied by grade level, as 9th-grade students were more likely to engage in this behavior than those in 12th grade (44.8 versus 36.9 percent, respectively). These activities varied by race and ethnicity, with non-Hispanic Asian (51.5 percent) and non-Hispanic Black students (49.1 percent) more likely to report this level of video game and computer use than non-Hispanic White students (37.4 percent).

Figure 1. Physical Activity* Among High School Students, by Grade, 2013



*Defined as physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes on each of the last 7 days.

Figure 2. Sedentary Behavior in the Past Week Among High School Students, by Race/Ethnicity, 2013



Data Sources

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ADOLESCENT NUTRITION

Adolescents face unique challenges to healthy eating as they become more independent from their families. Improving diet quality among this population is a key public health concern, as approximately one out of every five adolescents aged 12–19 years was obese in 2011–2012.¹ Inadequate consumption of essential nutrients can have a negative impact on adult health. Adequate calcium intake in adolescence is essential to attainment of peak bone mass.⁴ In addition, poor diet quality can increase the risk of chronic diseases such as cardiovascular disease, cancer, and type 2 diabetes.²

The Healthy Eating Index-2010 (HEI-2010) is designed to measure dietary quality³ and can be used to assess how well a population eats on average compared to the recommendations outlined in the 2010 Dietary Guidelines for Americans. Nine of the 12 HEI-2010 components address dietary adequacy of healthy foods. The remaining three components assess intake of foods that should be consumed in moderation: refined grains, sodium, and empty calories. In the table below, the HEI-2010 total and component scores are averages across all children, based on a 24-hour dietary recall.

In 2009–2010, the overall composite score for the HEI-2010 among adolescents aged 12–19 years was 46 out of 100 possible points, where 100 points indicates a diet that aligns with the 2010 Dietary Guidelines for Americans. With regard to the nine components of dietary adequacy, adolescents received 96 percent of the possible points for protein intake and 63 percent of the possible points for

whole fruit intake. Adolescents were least likely to consume adequate amounts of greens and beans and whole grains, with 17 and 14 percent, respectively, of possible points obtained (table 1).

HEI-2010 scores for individual components varied with sex. Female adolescents consumed 50 percent of the possible points for vegetables compared to 43 percent for males. Female adolescents were also more likely to consume recommended levels of sodium than were male adolescents, with 42 and 38 percent, respectively, consuming moderate levels. Non-Hispanic White adolescents were closer to meeting recommended levels of dairy consumption (78 percent) than non-Hispanic Black and Hispanic adolescents (59 and 64 percent, respectively). Overconsumption of refined grains, sodium, and empty calories was prevalent across all racial and ethnic groups.

Overall composite scores for diet quality did not vary by household poverty level; however, these scores mask differences in consumption of individual components (table 1). With regard to seafood and plant proteins, adolescents in households with incomes of 200 percent or more of poverty consumed about 57 percent of possible points compared to 36 percent among those in households with incomes of less than 100 percent of poverty. Conversely, adolescents living in households with incomes of 200 percent or more of poverty had lower scores for optimal consumption of sodium compared to adolescents in households with incomes less than 100 percent of poverty (35 versus 43 percent, respectively).

Table 1. Diet Quality Among Adolescents Aged 12–19 as Measured by Healthy Eating Index (HEI-2010) Scores,* by Poverty Status, 2009–2010**

| Dietary Component | Overall Average | Less Than 100% of Poverty | 100–199% of Poverty | 200% or More of Poverty |
|--|-----------------|---------------------------|---------------------|-------------------------|
| Total HEI-2010 | 46 | 45 | 45 | 46 |
| Adequacy (higher score indicates higher consumption) | | | | |
| Total fruit | 56 | 59 | 52 | 56 |
| Whole fruit | 63 | 60 | 46 | 72 |
| Total vegetables | 46 | 42 | 42 | 49 |
| Greens and beans | 17 | 19 | 19 | 16 |
| Whole grains | 14 | 12 | 17 | 14 |
| Dairy | 71 | 71 | 67 | 73 |
| Total protein foods | 96 | 94 | 93 | 97 |
| Seafood and plant proteins | 50 | 36 | 48 | 57 |
| Fatty acids | 36 | 39 | 40 | 34 |
| Moderation (higher score indicates lower consumption) | | | | |
| Refined grains | 39 | 41 | 44 | 35 |
| Sodium | 39 | 43 | 44 | 35 |
| Empty calories | 47 | 46 | 43 | 49 |

*In this table, all scores are shown as a percentage of possible points. Total HEI-2010 scores reflect overall dietary quality. For the adequacy components, higher scores reflect higher intakes and a score corresponding to 100 indicates that the standard was met or exceeded on average. For the moderation components, higher scores reflect lower intakes because lower intakes are more desirable and a score corresponding to 100 indicates that the standard was met. For all components, a higher score indicates a higher quality diet. "Empty calories" refers to calories from solid fats (i.e., sources of saturated fats and trans fats) and added sugars (i.e., sugars not naturally occurring). Total fruit includes 100 percent fruit juice. **The U.S. Census Bureau weighted average poverty threshold for a family of four was \$23,492 in 2012.

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MENTAL HEALTH

An individual is considered to have a mental disorder when he or she experiences changes in thinking, mood, or behavior as a result of distress or impairment.¹ Approximately one in five adolescents has a mental disorder, of which mood disorders such as depression are among the most common.² The American Psychiatric Association defines major depressive disorder as severe symptoms that interfere with an individual's ability to work, sleep, study, eat, and enjoy life.³ Individuals who experience a major depressive episode (MDE) report at least 2 weeks of a depressed or irritated mood or loss of interest or pleasure in daily activities and have at least four of seven additional symptoms, such as altered sleeping patterns, fatigue, and feelings of worthlessness.^{4,5} Mental disorders in adolescents may lead to struggles with school, drugs and alcohol, and family. Mental disorders, especially depression, are also a risk factor for suicide and have also been shown to be associated with the development of mood disorders in adulthood as well as chronic illnesses, such as diabetes, hypertension, stroke, cardiovascular disease, and cancer.^{6,7,8}

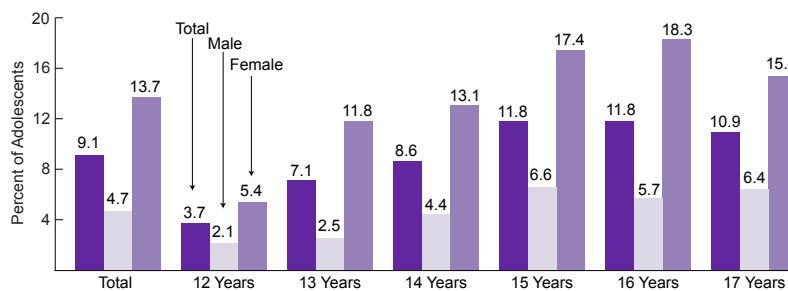
According to the Substance Abuse and Mental Health Services Administration (SAMHSA), in 2012, 2.2 million adolescents aged 12–17 years (9.1 percent) had an MDE in the past year. Adolescent females were nearly three times as likely as adolescent males to have experi-

enced a past-year MDE (13.7 versus 4.7 percent, respectively; figure 1). The occurrence of past-year MDEs was greater among older adolescents of both sexes. For example, among female adolescents, 5.4 percent of those aged 12 years and more than 15 percent of those aged 15–17 years experienced past-year MDE. Substance dependence or abuse commonly co-occurs with an MDE. Among youth who experienced a past-year MDE, 16.0 percent had a substance use disorder compared to 5.1 percent of adolescents without a past-year MDE (figure 2).

The occurrence of an MDE in the past year among adolescents was higher among those who reported being in poor health. Among adolescents in fair or poor health, nearly one-fifth (17.8 percent) reported experiencing a past-year MDE compared to 12.4 percent of those in good health, 9.2 percent of those in very good health, and 6.2 percent of those in excellent health. With respect to race and ethnicity, past-year occurrence of an MDE ranged from 4.2 percent among non-Hispanic Asian youth to 11.3 percent of non-Hispanic adolescents of multiple races.

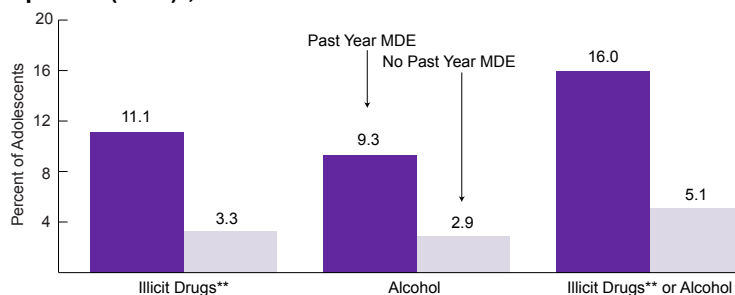
Risk factors for depression include stress, experiencing a significant loss, and having an existing emotional or behavioral disorder.⁹ Primary care providers can screen for depression in adolescents when

Figure 1. Occurrence of Major Depressive Episode (MDE)* in the Past Year Among Adolescents Aged 12–17 Years, by Age and Sex, 2012



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

Figure 2. Past Year Substance Dependence or Abuse Among Adolescents Aged 12–17 Years, by Past Year Major Depressive Episode (MDE)*, 2012



*MDE is defined as a period of at least two weeks when a person experienced a depressed mood or loss of pleasure in daily activities and had a majority of specific depression symptoms. **Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.

systems following a collaborative care model are in place. By connecting primary care providers, case managers, and mental health specialists to each other and patients, systems can efficiently improve symptoms, adherence and response to treatment, remission, and recovery.^{10,11} Other mental health interventions can be found at SAMHSA's National Registry of Evidence-based Programs and Practices

(NREPP), which is a database of interventions that have met minimum requirements for review and have been independently assessed and rated for quality and readiness for dissemination. NREPP is available to help the public learn more about evidence-based programs and practices to help determine which may best meet their needs.¹²

Data Sources

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VIOLENCE

Violence among adolescents occurs in multiple forms and is a critical public health issue in the United States. Instances of violence include physical fighting, dating violence, and homicide, which was the third leading cause of death among all persons aged 10–24 years in 2010 (the latest year for which data are available).¹

Data from the Youth Risk Behavior Surveillance System show that in 2013, 8.1 percent of high school students reported being in a physical fight on school property during the preceding 12 months. This represents a decrease since 2011, when 12.0 percent of students reported such violence. The proportion of students to report fighting at school also varied by grade level, with 10.9 percent of 9th-graders reporting fighting compared to 4.9 percent of 12th-graders (figure 1).

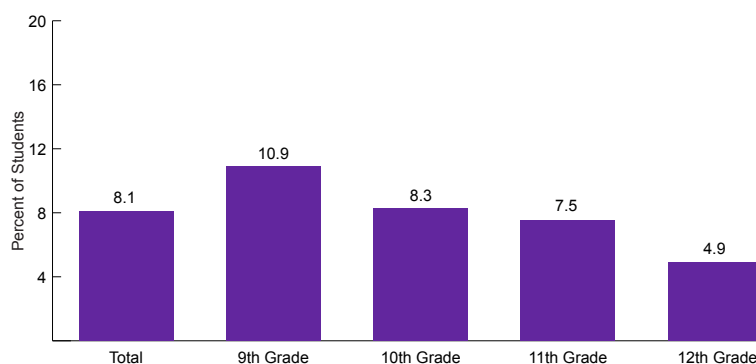
In 2013, male students were more than twice as likely to report having been in a fight as female students (10.7 versus 5.6 percent, respectively). With regard to race and ethnicity, 12.8 percent of all non-Hispanic Black students reported fighting at school, compared to 9.4 percent of Hispanic students and 6.4 percent of non-Hispanic

White students.

In addition to a physical fight, high school students may experience dating violence in the form of either physical violence or unwanted sexual advances. Approximately 1 of every 10 high school students who had been in a relationship during the past 12 months reported that they were hit, slapped, or otherwise physically hurt on purpose by their boyfriend or girlfriend at least once. The proportion of students who reported that they had experienced physical dating violence was higher among 12th-graders compared to 9th-graders (11.7 versus 8.8 percent, respectively) and higher among female students than male students (13.0 versus 7.4 percent, respectively).

Sexual dating violence is any unwanted kissing, unwanted touching, or being forced to have sexual intercourse by the person they are dating. In 2013, approximately 1 of every 10 high school students who had been in a relationship during the past 12 months reported this form of violence. Females were more than twice as likely as males to experience sexual dating violence (14.4 versus 6.2 percent, respec-

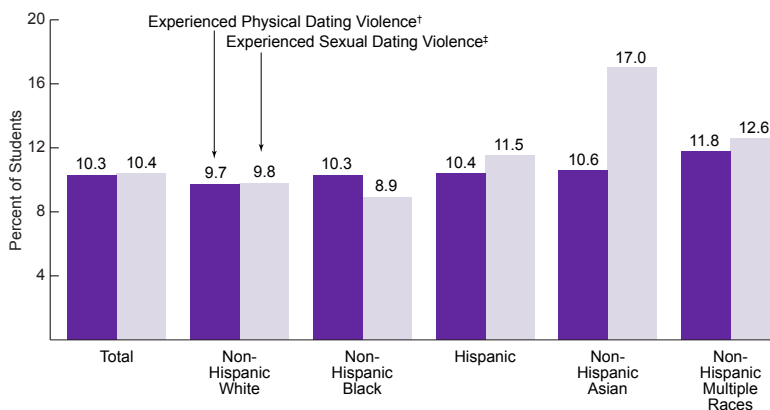
Figure 1. High School Students in a Physical Fight on School Property in the Past 12 Months, by Grade, 2013



tively). With regard to race and ethnicity, non-Hispanic Asian students (17.0 percent) were more likely to experience sexual dating violence than non-Hispanic White students (9.8 percent) and non-Hispanic Black students (8.9 percent; figure 2). School-based programs where

students are taught about violence prevention are recommended as an evidence-based way to reduce youth violence. Both individual and group cognitive-behavioral therapy are also recommended.^{2,3}

Figure 2. High School Students* Experiencing Dating Violence in the Past 12 Months, by Race/Ethnicity, 2013**



*Includes students who dated someone during the 12 months before the survey. **Data for Native Hawaiians, Other Pacific Islanders, American Indians, and Alaska Natives do not meet standards for reliability or precision. †Defined as being hit, slammed into something, or injured with an object or weapon on purpose by someone whom they were dating. ‡Defined as unwanted kissing, unwanted touching, or being physically forced to have sexual intercourse by someone whom they were dating.

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BULLYING

Bullying is defined as unwanted, aggressive behavior that may be repeated and involves a real or perceived imbalance of power. Making threats, spreading rumors, attacking someone physically or verbally, and excluding someone from a group on purpose are all examples of bullying. Cyberbullying, or bullying that uses electronic technology, is different from other types of bullying in that it can happen at any time, messages and images can be posted anonymously and distributed quickly via the Internet, and they can be very difficult to delete after posting.¹

There is no specific factor that puts children at risk of being bullied or bullying others, although some groups, such as lesbian, gay, bisexual, or transgendered youth; youth with disabilities; and socially isolated youth may be at higher risk.² Being bullied has been associated with a wide range of short- and long-term emotional, physical, and developmental consequences, including depression, anxiety, headaches, sleeping problems, stomach ailments, and decreased academic achievement. Children who bully are also more likely to engage in violent and risky behaviors, such as drug and alcohol use and early sexual activity. Even children who witness bullying can be negatively affected.³

In 2013, 19.6 percent of high school students reported that they had been bullied on school property in the past year and approximately one in six high school students (14.8 percent) reported having been electronically bullied through e-mail, chat rooms, instant messaging, Web sites, or texting (figure 1). The likelihood of being bullied varied by a number of factors, including sex, grade level, and race and ethnicity. Females were more likely than males to have been bullied on school property (23.7 versus 15.6 percent, respectively) and more than twice as likely as males to have been electronically bullied (21.0 versus 8.5 percent, respectively).

Younger high school students were also more likely to report being bullied than older students: 25.0 percent of 9th-graders reported being bullied at school compared to 13.3 percent of 12th-graders (figure 1). Similarly, 9th-graders were slightly more likely than 12th-graders to report being bullied electronically (16.1 versus 13.5 percent, respectively).

Non-Hispanic Black students were less likely to report being bullied on school property or bullied electronically (12.7 and 8.7 percent, respectively) than all other racial and ethnic groups (figure 2). In comparison, non-Hispanic White students were significantly more likely

Figure 1. High School Students Who Were Bullied in the Past Year, by Grade and Location of Bullying, 2013

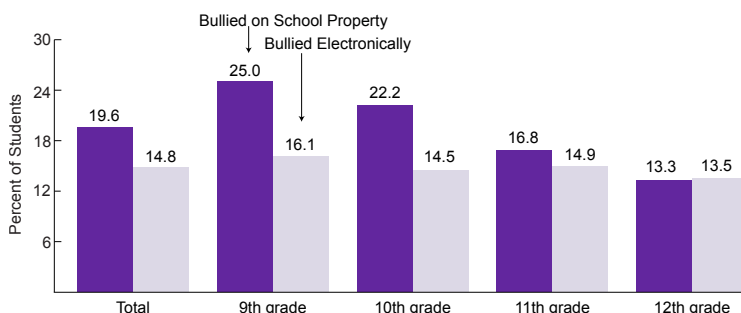
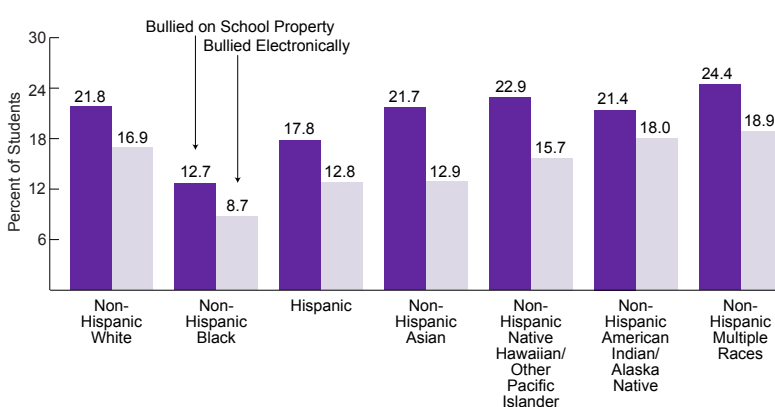


Figure 2. High School Students Who Were Bullied in the Past Year, by Race/Ethnicity and Location of Bullying, 2013



to report electronic bullying (16.9 percent) than non-Hispanic Asian, Hispanic, and non-Hispanic Black high school students (12.9, 12.8, and 8.7 percent, respectively). Evidence-based recommendations to

reduce bullying and its associated risks include both school-based programs that teach students about violence prevention and individual and group cognitive-behavioral therapy interventions for students exposed to violence.^{4,5}

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CIGARETTE SMOKING

The use of tobacco products, such as cigarettes, can lead to a variety of illnesses and conditions, including cancer, heart disease, and lung disease.¹ Smoking is the leading preventable cause of death and disease in the United States, accounting for more than 1,200 deaths each day. Cigarette smoking among adolescents can result in both immediate and long-term damage. Adolescents who smoke face reduced lung function and slowed lung growth, which may increase their risk for chronic obstructive pulmonary disease. The earlier the age of initiation, the more likely individuals will develop nicotine addiction, which prolongs cigarette use. Almost 9 out of 10 cigarette users started smoking by age 18.²

The rate of past month cigarette use among adolescents aged 12–17 years declined by nearly half, from 13.0 to 6.6 percent, between 2002 and 2012 (figure 1). Current cigarette use in 2012 varied by age, with rates of 13.6 percent among youth aged 16–17 years, compared to 4.6 percent of youth aged 14–15 years and 1.2 percent of youth aged 12–13 years.

While cigarette use rates were similar for adolescent males and females (6.8 and 6.3 percent, respectively), past-month use varied by race and ethnicity. Rates were highest among non-Hispanic American Indian/Alaska Native (11.8 percent), non-Hispanic White (8.2 percent),

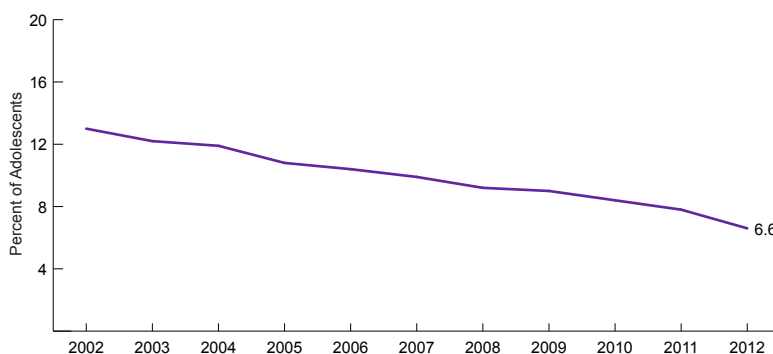
and non-Hispanic youth of multiple races (7.5 percent) while lowest among non-Hispanic Asian youth (1.7 percent).

The rate of past-month cigarette use was greater in nonmetro counties (9.0 percent) than in both large metro (5.6 percent) and small metro counties (7.1 percent; figure 2).

The rate of past year initiation of cigarette use among adolescents was 4.1 percent. Rates of past year initiation have only recently started to decline, with rates falling from 4.9 percent in 2010 to 4.1 percent in 2012.

Prevention strategies must focus on reducing initiation and continuation of cigarette use as well as promoting cessation. More than 80 percent of smokers under 18 years of age used cigarettes from the top three most advertised brands.³ Health communication interventions have been shown to effectively decrease tobacco use initiation and prevalence as well as increase cessation, especially as part of a set of comprehensive tobacco control measures.² Successful messages used emotional appeal through personal testimonials or graphic images of harms caused by tobacco and also provided cessation services information.⁶ Smoke-free policies have been shown to effectively reduce tobacco-related morbidity and mortality,⁷ in addition to reducing tobacco use initiation and prevalence and increasing

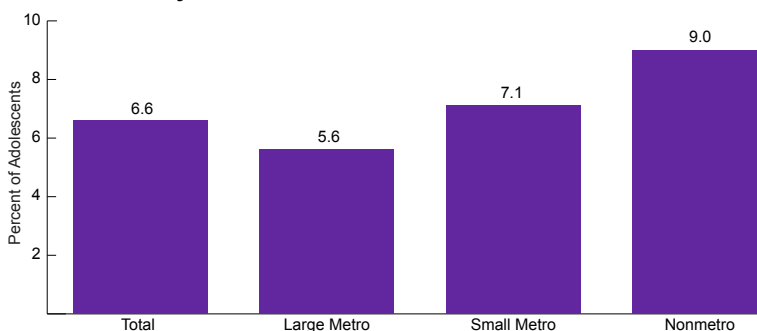
Figure 1. Past Month Cigarette Use Among Adolescents Aged 12–17 Years, 2002–2012



cessation. Smoking may be restricted to designated outdoor locations or even completely banned. Initiation, prevalence, and intensity of cigarette smoking can be reduced by increasing tobacco prices.⁴ In addition, clinicians can play a role in promoting cessation as part

of comprehensive pediatric care. Adolescents should be screened for tobacco use at every clinical encounter, and receive appropriate guidance regarding the risks of tobacco use and benefits of tobacco cessation.⁵

Figure 2. Past Month Cigarette Use Among Adolescents Aged 12–17 Years, by Urban/Rural Residence,* 2012



*Urban/rural residence is determined based on metropolitan statistical area (MSA), which is defined by having at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. Large Metro includes persons living in an MSA of 1 million or more population; Small Metro areas have a population of less than 1 million. Nonmetro consists of persons not living in an MSA.

Data Sources

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SUBSTANCE USE

Drugs alter brain functioning, and early substance use is especially dangerous, as it increases an individual's risk for drug abuse and addiction as well as teenage pregnancy, HIV/AIDS, other sexually transmitted diseases, motor vehicle accidents, crime, homicide, and suicide.^{1,2} Substance use includes the use of alcohol, as well as the use of illicit drugs including cocaine, hallucinogens, heroin, inhalants, marijuana, and nonmedical use of prescription-type psychotherapeutic drugs, such as pain relievers and stimulants.

Alcohol continues to be the most commonly used substance among adolescents aged 12–17 years, with 12.9 percent reporting past-month use in 2012 (figure 1). This reflects a decrease from 17.6 percent in 2002. Alcohol use varied greatly by age, with only 2.2 percent of youth aged 12–13 years reporting past-month use, compared to 11.1 percent of youth aged 14–15 years and 24.8 percent of youth aged 16–17 years. Past-month alcohol use also varied by race and ethnicity, with rates ranging from 4.9 percent among non-Hispanic Asian youth to 14.6 percent of non-Hispanic White youth (figure 1).

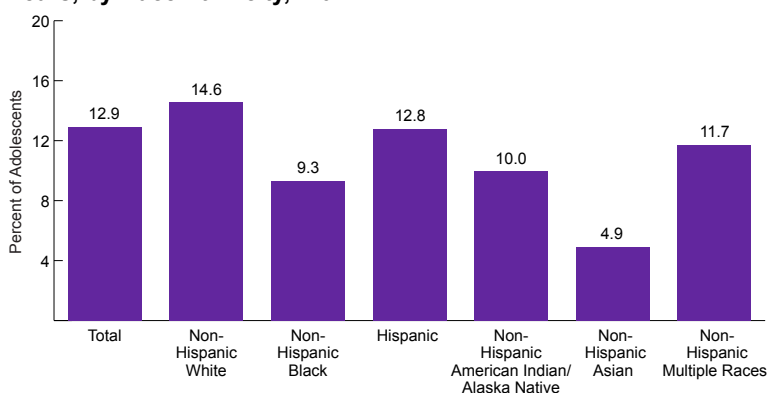
In 2012, 9.5 percent of adolescents reported using illicit drugs in the past month compared to 11.5 percent in 2002. In contrast to alcohol use, illicit drug use among adolescents has not consistently declined over the past decade and has remained between 9 and 10 percent since 2005. The rate of current illicit drug use was greater among older adolescents, ranging from 3.5 percent of those aged 12–13 years to 16.6 percent of those aged 16–17 years (figure 2).

Non-Hispanic Asian youth reported the lowest rates of past month illicit drug use (2.6 percent), while the highest rates were among non-Hispanic youth of multiple races (14.7 percent). Rates of past-month illicit drug use among non-Hispanic White, Hispanic, non-Hispanic Black, and non-Hispanic American Indian/Alaska Native youth were 9.6, 9.7, 10.2, and 12.1 percent, respectively.

Marijuana is consistently the most commonly used illicit drug among adolescents, with 7.2 percent reporting past-month use in 2012. This was followed by nonmedical use of prescription-type psychotherapeutics (2.8 percent; figure 2). There were no differences in past-month alcohol or illicit drug use between male and female adolescents.

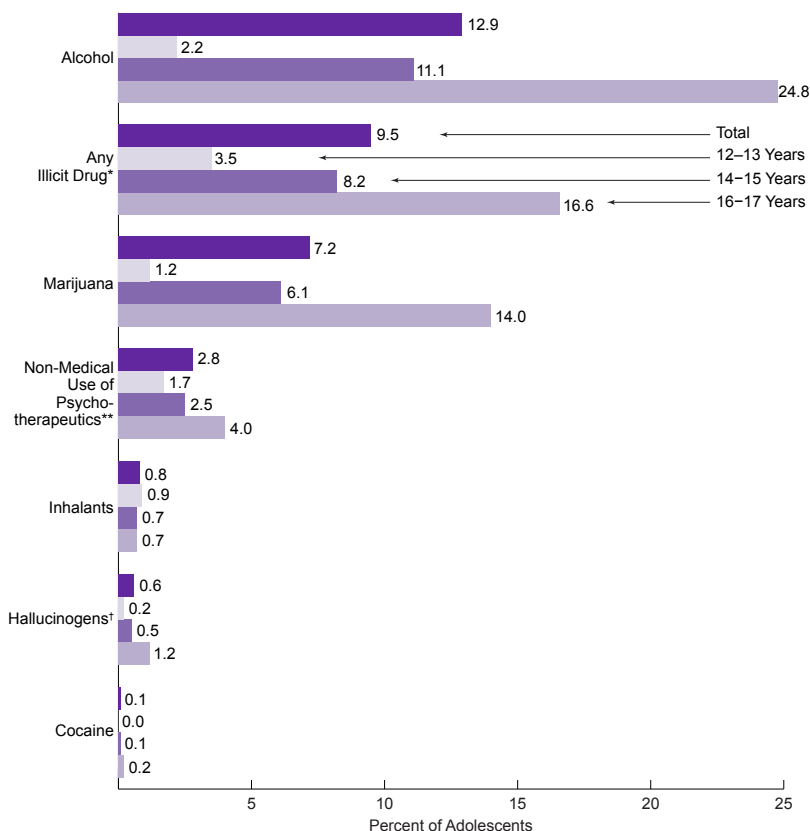
Adolescence is an especially critical time for substance use prevention.² Evidence-based prevention programs that focus on increasing protective factors and reducing risk factors for drug use can significantly reduce substance use among adolescents. Some risk factors include early aggressive behavior, lack of parental supervision, drug availability, and poverty. Protective factors include self-control, parental monitoring, academic competence, anti-drug use policies, and strong neighborhood attachment.^{3,4} The Community Preventive Services Task Force also recommends several school and community-based strategies to reduce underage drinking and alcohol-impaired driving.^{5,6}

Figure 1. Past Month Alcohol Use Among Adolescents Aged 12–17 Years, by Race/Ethnicity,* 2012



*Estimates for non-Hispanic Native Hawaiian/Other Pacific Islanders did not meet standards of reliability.

Figure 2. Past Month Substance Use Among Adolescents Aged 12–17 Years, by Drug Type and Age, 2012



*Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically. **Includes nonmedical use of pain relievers, sedatives, stimulants, and tranquilizers; does not include over-the-counter substances. †Includes LSD, PCP, and ecstasy.

Data Sources

Figure 1 and 2. Substance Abuse and Mental Health Services Administration. *Results From the 2012 National Survey on Drug Use and Health: detailed tables*, NSDUH Series H-46, HHS Publication No. (SMA) 13-4795. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013. Available at: <http://www.samhsa.gov/data/nsduh/2012summnatfinddetables/dettabs/nsduh-dettabstoc2012.htm>. Accessed February 25, 2014.

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HIGH SCHOOL COMPLETION

Education plays a critical role in the health and well-being of young adults in the United States. Previous studies have found that education is associated with better health outcomes. For example, those who graduate from high school have lower death rates and an average life expectancy 6–9 years greater than those who do not graduate from high school.^{1,2} Individuals who do not complete high school have higher rates of illness and earlier deaths.

In 2013, more than 90 percent of 18- to 24-year-olds not enrolled in high school had received a high school diploma or equivalent credential (e.g., General Educational Development certificate). High school completion was highest among non-Hispanic Asians (95.8 percent), non-Hispanic Native Hawaiians and other Pacific Islanders (95.3 percent), and non-Hispanic Whites (93.7 percent; figure 1). High school completion was lower among other racial and ethnic groups, including

non-Hispanic persons of multiple races (92.5 percent), non-Hispanic Blacks (89.3 percent), non-Hispanic American Indians and Alaska Natives (86.2 percent), and Hispanics (81.8 percent).

High school completion also varies by age and sex. In 2013, a higher percentage of females had a high school degree or equivalent than their male counterparts (91.9 versus 89.4 percent, respectively; figure 2). These differences were also evident at specific ages. High school completion was highest among females who were 23 years of age (94.5 percent), and lowest among 18-year-old males and females (76.5 and 83.6 percent, respectively). High school completion programs for students at high risk of non-completion show strong evidence of effectiveness for all students and for the subset of students at risk for non-completion because they are pregnant or have children.³

Figure 1. Young Adults Aged 18–24 Years Not Currently Enrolled in High School With a High School Degree or Equivalent, by Race/Ethnicity, 2013

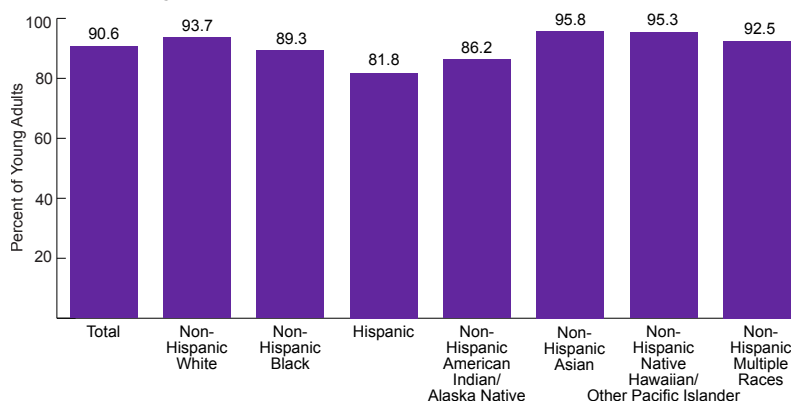
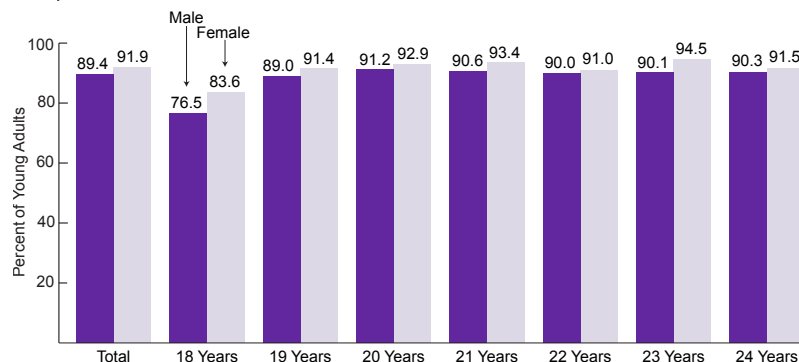


Figure 2. Young Adults Aged 18–24 Years Not Currently Enrolled in High School With a High School Degree or Equivalent, by Age and Sex, 2013



Data Sources

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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 through employers or purchased directly, or through public programs, such as Medicaid or the Children's Health Insurance Program (CHIP). Eligibility for public programs is based on a family's income, size and other requirements, such as citizenship or immigrant status. Every state has a CHIP program that helps to expand coverage to children who would otherwise be uninsured. Despite the progress achieved through public programs, approximately 6.5 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 including prenatal care, well-child visits and developmental screening for young children, and mental health care for adolescents. Data are summarized by source of payment, type of care, and place of service delivery where appropriate and feasible.



HEALTH INSURANCE

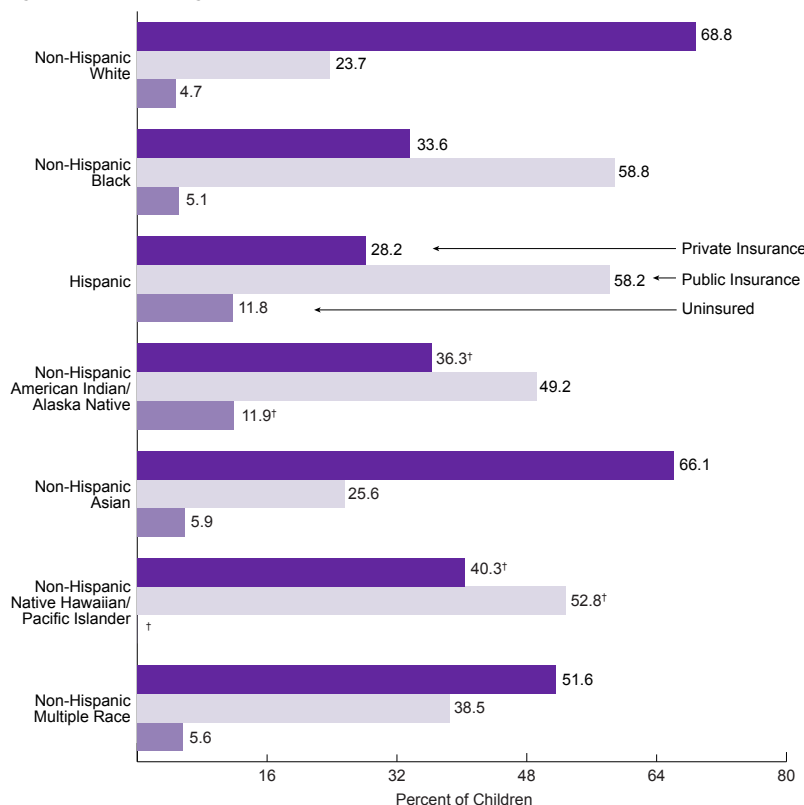
Health insurance is critical for ensuring the health and well-being of children in the United States. Without health insurance coverage, children are less likely to receive medical care and more likely to have poor health status.¹ In 2013, more than 4.8 million children under age 18 did not have health insurance. This represents 6.6 percent of all children in the United States. More than half of children (53.2 percent) were covered by private insurance, and 37.7 percent were covered by public insurance (e.g., Medicaid or other state-sponsored health plans including Children's Health Insurance Program [CHIP]).

Children's health insurance status varies by several factors, including race, ethnicity, and income. In 2013, nearly 70 percent of non-Hispanic White and non-Hispanic Asian children and more than half of non-Hispanic children of multiple races had private coverage (figure 1). In comparison, less than half of non-Hispanic Native Hawaiian/Pacific Islander (40.3 percent), non-Hispanic Black (33.6 percent), Hispanic (28.2 percent), and non-Hispanic American Indian/Alaska Native (36.3 percent) children had private coverage. Children with the highest per-

centage of public insurance were non-Hispanic Blacks (58.8 percent), Hispanics (58.2 percent), non-Hispanic Native Hawaiians/other Pacific Islanders (52.8 percent), and non-Hispanic American Indians/Alaska Natives (49.2 percent). The highest proportions of uninsured children were among non-Hispanic American Indians/Alaska Natives (11.9 percent) and Hispanics (11.8 percent).

In 2013, households with incomes below 100 percent of poverty had the highest percentage of children with public health insurance (82.3 percent) and the lowest percentage of children with private health insurance (8.4 percent). The highest percent of children who were uninsured in 2013 were children living in households with incomes of 100–199 percent of poverty (11.1 percent), followed by children from households with incomes below 100 percent of poverty (8.2 percent). Children in households with incomes of 200 percent or more of poverty were more likely to have private coverage (81.7 percent) and less likely to have public coverage (11.1 percent) or to be uninsured (4.2 percent), as compared to those in households with lower incomes.

Figure 1. Health Insurance Coverage* Among Children Under Age 18, by Race/Ethnicity, 2013

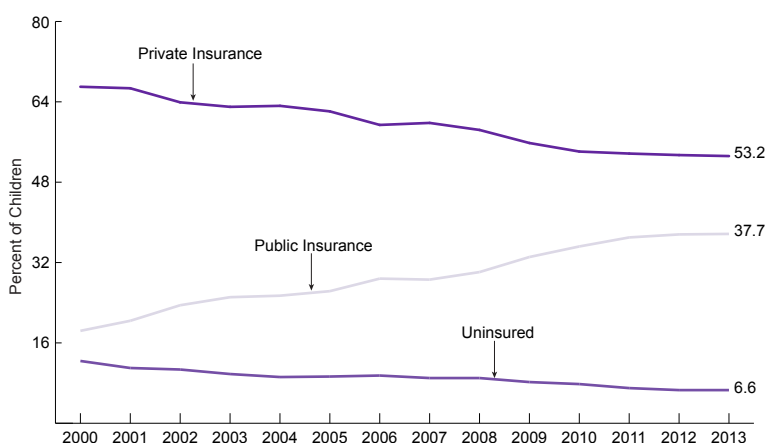


*Private coverage includes children with any private insurance; Public includes children who do not have private coverage, but who have Medicaid or other state-sponsored health plans, including CHIP; A child was considered uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A child was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service such as accidents or dental care. Estimates do not sum to 100 because children who are covered by military plans, Medicare, or other government-sponsored health plans are not shown. †Estimates are considered unreliable. Data followed by a dagger have a relative standard error (RSE) greater than 30% and less than or equal to 50% and should be used with caution. Data not shown have an RSE greater than 50%.

Between 2000 and 2013 there were shifts in the proportion of children in each of the three types of insurance categories (private insurance, public insurance and uninsured). Private health insurance coverage for children is lower in 2013 (53.2 percent) than it was in 2000 (67.0 percent; figure 2). A larger difference is seen in public health insurance coverage for children which is higher in 2013 (37.7 percent) than it was in 2000 (18.4 percent). The percentage of children who were uninsured in 2013 is nearly half as much as it was in 2000

(6.6 versus 12.4 percent, respectively). Implementation of the Affordable Care Act may further support reductions in uninsurance among children through new electronic data systems that will streamline the eligibility and application process for programs such as Medicaid and CHIP, and by increasing insurance coverage among adults.² Research has shown that children's Medicaid and CHIP coverage increases when their parents applied for Medicaid.³

Figure 2. Health Insurance Coverage* Among Children Under Age 18, by Year, 2000–2013



*Private coverage includes children with any private insurance; Public includes children who do not have private coverage, but who have Medicaid or other state-sponsored health plans, including CHIP; Children were considered uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A child was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service such as accidents or dental care. Estimates do not sum to 100 because children who are covered by military plans, Medicare, or other government-sponsored health plans are not shown.

Data Source

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PRENATAL CARE

Early and adequate prenatal care helps to promote healthy pregnancies through screening and management of a woman's risk factors and health conditions as well as education and counseling on healthy behaviors during and after pregnancy, including nutrition, physical activity, and breastfeeding.¹ Women should schedule a prenatal visit as soon as they know or suspect that they are pregnant, ideally within the first trimester of pregnancy (12 weeks).² Monthly visits are recommended thereafter that increase to biweekly visits at 28 weeks and weekly visits after 36 weeks.^{1,3} More frequent care may be necessary for women with certain conditions and risk factors.¹

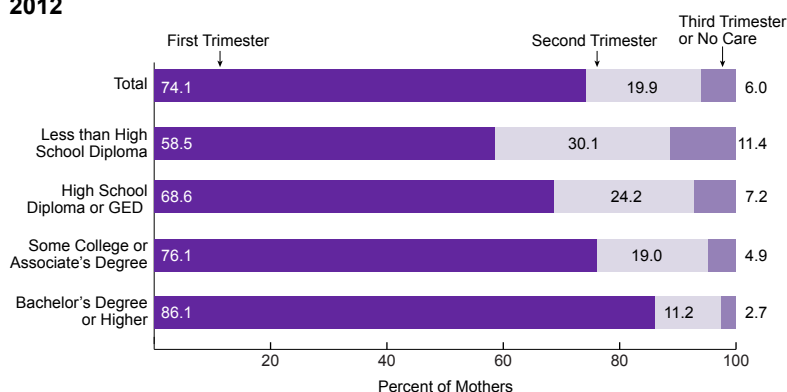
In 2012, in the District of Columbia and the 38 states that had implemented the 2003 revision to the standard birth certificate as of January 1 and collected prenatal care information in the same format, 74.1 percent of women giving birth were determined to have received early prenatal care in the first trimester, while 6.0 percent of women began prenatal care in the third trimester or did not receive any prenatal care. Rates of first-trimester prenatal care increased greatly with educational attainment, from 58.5 percent of mothers with less than a high school diploma to 86.1 percent of mothers with a bachelor's degree or higher (figure 1). Conversely, late or no prenatal care declined

sharply with educational attainment, from 11.4 percent of mothers with less than a high school diploma to 2.7 percent of mothers with a bachelor's degree or higher.

Timing of prenatal care entry also varied greatly by race and ethnicity and delivery payment source. First trimester prenatal care initiation was highest for non-Hispanic White and non-Hispanic Asian women (79.0 and 78.0 percent, respectively), followed by non-Hispanic multiple race and Hispanic women (70.7 and 69.0 percent, respectively), and was lowest for non-Hispanic Black, non-Hispanic American Indian/Alaska Native, and non-Hispanic Native Hawaiian/other Pacific Islander women (63.6, 59.4, and 54.7 percent, respectively). With respect to delivery payment source, privately insured women had the highest rate of early prenatal care entry (85.0 percent), followed by women with Medicaid insurance (65.2 percent), while uninsured women were least likely to receive early prenatal care (51.4 percent).

In 2012, 84.9 percent of women in the District of Columbia and the 38-state reporting area received adequate prenatal care, defined as receiving 80 percent or more of expected visits given the timing of prenatal care entry and gestational age at delivery. Regardless of when care was initiated, privately insured women were most likely to

Figure 1. Timing of Prenatal Care Initiation,* by Maternal Education, 2012



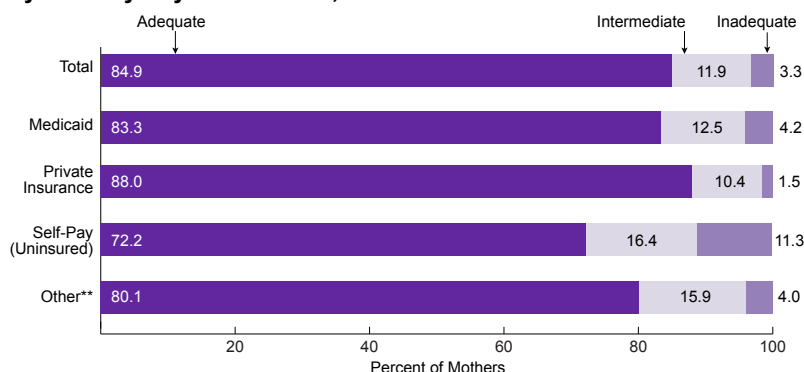
*Data are from the District of Columbia and 38 states that implemented the 2003 revision of the birth certificate as of January 1, 2012, representing 86 percent of all U.S. births. Percentages may not total 100 due to rounding.

have received adequate care (88.0 percent), followed by those with Medicaid (83.3 percent) and other forms of insurance (80.1 percent; figure 2). Uninsured women were least likely to receive adequate care (72.2 percent). Receipt of adequate care by race and ethnicity and education were similar to those for timing of prenatal care entry.

The Affordable Care Act improves access to early and adequate prenatal care by expanding health insurance and requiring Medicaid expansions and Marketplace plans (and other small and individual

group plans) to cover pregnancy and maternity care as part of essential health benefits.⁴ The Affordable Care Act also requires new private plans to cover, without cost sharing, prenatal visits and many preventive services routinely provided in prenatal care, such as vaccinations; screening for gestational diabetes, anemia, sexually transmitted infections, and depression; screening and counseling for obesity, tobacco and alcohol use, and interpersonal and domestic violence; and breastfeeding counseling and support.⁴

Figure 2. Adequacy of Prenatal Care Utilization Upon Initiation,* by Delivery Payment Source, 2012



*Based on a ratio of observed to expected prenatal care visits given the timing of prenatal care entry and gestational age at delivery (Kotelchuck Index), adequate prenatal care is defined as receiving 80 percent or more of expected visits, intermediate is receipt of 50–79.9 percent of expected visits, and inadequate is receipt of less than 50 percent of expected visits. Data are from the District of Columbia and 38 states that implemented the 2003 revision of the birth certificate as of January 1, 2012, representing 86 percent of all U.S. births. Percentages may not total to 100 due to rounding. **Includes CHAMPUS/TRICARE; the Indian Health Service; and other federal, state, or local government payment sources.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. 2012 Natality File. Analysis conducted by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau.

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IMMUNIZATIONS: EARLY CHILDHOOD

Vaccination is one of the greatest public health achievements of the 20th century, resulting in dramatic declines in morbidity and mortality for many infectious diseases.¹ Childhood vaccination in particular is considered among the most cost-effective preventive services available, as it averts a potential lifetime lost to death and disability.² *Healthy People 2020* has set a target of 80 percent coverage for a full vaccine series to be received by young children aged 19–35 months: four doses of diphtheria, tetanus, and acellular pertussis vaccine (DTaP/DT/DTP); three doses of poliovirus vaccine; one dose of measles-containing vaccine (MMR); three (or four, depending on vaccine type) doses of *Haemophilus influenzae* type b (Hib); three doses of the hepatitis B vaccine (HepB); one dose of the varicella (chicken pox) vaccine; and four doses of the pneumococcal conjugate vaccine (PCV).³

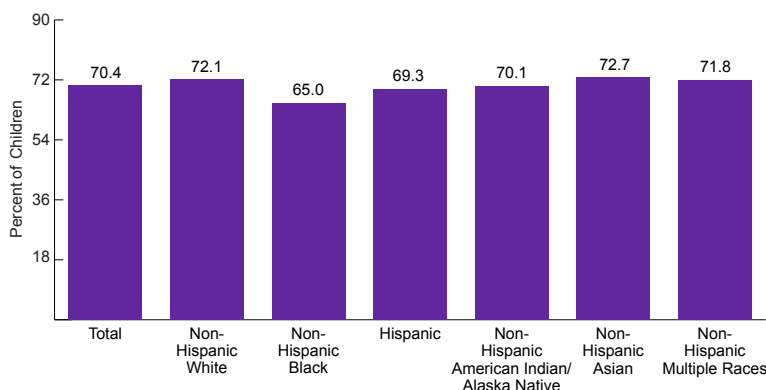
In 2013, 70.4 percent of children aged 19–35 months received the full recommended series, which was similar to the 2012 rate of 68.4 percent. Non-Hispanic Black 19- to 35-month-olds were less likely than non-Hispanic White children to receive the full recommended series (65.0 and 72.1 percent, respectively; figure 1). Similarly, the vaccination rate was lower for those with household incomes below 100 percent of poverty compared to their counterparts living at or above the poverty level (64.4 versus 73.8 percent, respectively). Differences in vaccination rates by race and ethnicity vary within categorical poverty levels. Among children in households with incomes below

100 percent of poverty, Hispanic children were more likely to be fully vaccinated than non-Hispanic White children (68.6 versus 61.3 percent, respectively), however, within this income category there was no difference between rates of vaccination between non-Hispanic White and non-Hispanic Black children (61.3 and 60.4 percent, respectively). Among children with household incomes of 100 percent or more of poverty, Hispanic and non-Hispanic Black children had lower rates of vaccination than non-Hispanic White children (70.2 and 69.1 versus 74.9 percent, respectively).

The proportion of children receiving the full series of recommended vaccinations also varied by provider facility type (figure 2). Compared to private provider facilities (e.g., private clinics, health maintenance organizations, group practices), lower rates of full series coverage were reported by public provider facilities (e.g., public health clinics, community health centers) and other (e.g., hospitals, military facilities) types of provider facilities (72.2, 63.3, and 67.4 percent, respectively). The vaccination rate at mixed provider facilities (76.0 percent) was similar to the private provider facility rate.

Children who never participated in WIC, but were eligible, had the lowest vaccination coverage. Current WIC participants had vaccination coverage comparable to more affluent children, and higher coverage than previous WIC participants.⁶ Finally, the vaccination rate among 19- to 35-month-olds living in metropolitan statistical area

Figure 1. Receipt of Recommended Vaccinations* Among Children Aged 19–35 Months, by Race/Ethnicity,† 2013



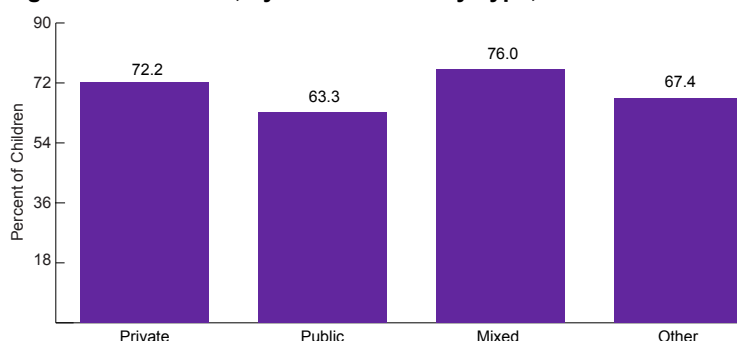
*Recommended Full Series: ≥ 4 DTaP, ≥ 3 Polio, ≥ 1 MMR, 3 (4) Hib, ≥ 3 HepB, ≥ 1 Varicella, ≥ 4 PCV. †Estimates for Native Hawaiian/other Pacific Islander children were not available.

(MSA) noncentral cities (72.5 percent) was greater than for those living in MSA central cities (68.8 percent) and non-MSA central cities (69.1 percent).

Immunization levels for the recommended full series of vaccinations for 19- to 35-month-olds in the United States remained at similar levels from 2012 to 2013, and disparities in vulnerable populations continue to exist. A variety of strategies can be used to help address coverage gaps. These include the Vaccine for Children (VFC) program, an important and effective way to help increase immunization rates

in children who might otherwise have difficulty in paying for vaccines by providing vaccines at no cost to qualifying children.⁷ Some proven strategies (e.g., reducing costs, linking immunization to WIC services, home visiting) are well suited to increasing rates among specific populations, such as infants living in low-income families and families with limited access to immunization services.⁴ State and local health department use of Immunization Information Systems can aid in identifying pockets of undervaccinated children to ensure that they are adequately protected.⁵

Figure 2. Receipt of Recommended Vaccinations* Among Children Aged 19–35 Months, by Provider Facility Type, 2013**



*Recommended Full Series: ≥ 4 DTaP, ≥ 3 Polio, ≥ 1 MMR, 3 (4) Hib, ≥ 3 HepB, ≥ 1 Varicella, ≥ 4 PCV.
 **Self-reported by provider. Public provider includes public health clinics and community health centers. Private provider includes private clinics, HMOs, and group practices. Mixed provider includes more than one type of provider. Other provider includes all other types of providers such as hospitals, military facilities, and unknown responses.

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IMMUNIZATIONS: INFLUENZA

Influenza is a contagious respiratory illness that can have mild to severe effects. Older people, young children, pregnant women, and people with certain health conditions are at higher risk for serious flu complications, possibly resulting in hospitalization or death. To avoid potentially serious complications, the Advisory Committee on Immunization Practices (ACIP) recommends seasonal flu vaccination for everyone 6 months of age and older.¹ In 2014, ACIP voted to recommend a preference for using the nasal spray flu vaccine instead of the flu shot in healthy children 2–8 years of age when it is available.⁵ The *Healthy People 2020* target vaccination rate for children aged 6 months through 17 years is 70 percent.²

The overall proportion of children aged 6 months to 17 years who were vaccinated during the 2013–2014 flu season was 58.9 percent, which represented a 2.3 percentage point increase in coverage over the previous year. Vaccination rates held steady at around 75 percent during this timeframe, however, for children aged 6 to 23 months, representing a successful achievement of the *Healthy People 2020* goal for that age group. In contrast, children aged 2–17 years did not meet the *Healthy People 2020* goal. The proportion of children vaccinated for seasonal influenza decreased with age, falling to 46.4 percent among children aged 13–17 years (figure 1).

During the 2013–2014 flu season, the proportion of children aged 6 months to 17 years who received influenza vaccination varied by race and ethnicity, ranging from 55.2 percent of non-Hispanic White children to 70.6 percent of non-Hispanic Asian children (figure 2). The proportion of children vaccinated was higher among all races and eth-

nicities compared to non-Hispanic White children, with the exception of non-Hispanic Black children (57.2 percent). In the 2013–2014 flu season, non-Hispanic American Indian/Alaska Native, Hispanic, and non-Hispanic White children showed increases in vaccination rates compared to the previous flu season.

Children in families with household incomes above 100 percent of poverty but below \$75,000 had the lowest rate of vaccination (54.0 percent) in the 2013–2014 flu season. Children in families with incomes less than 100 percent of poverty or above \$75,000 had similar rates of vaccination (62.8 and 60.8 percent, respectively).

The 2013–2014 vaccination rates among children living in nonmetropolitan statistical areas (MSA) were lower (52.6 percent) than those in MSAs (62.6 and 58.9 percent for central city and non-central city, respectively). Children living in MSAs showed an increase in vaccination rates over the previous flu season, while children in non-MSAs did not.

Flu vaccination is the most effective strategy against the flu and serious flu-related complications. Multifaceted strategies are required to increase vaccination rates: (1) use of evidence-based practices (e.g., reducing client costs for vaccination; provision of immunizations at schools and Women, Infants, and Children programs; home visits; client reminder/recall; standing orders; provider reminders),³ (2) nontraditional settings for vaccination (e.g., pharmacy, workplace, school venues),⁴ and (3) utilizing immunization information systems at the point of clinical care and to guide clinical/public health vaccination decisions.⁴

Figure 1. Seasonal Flu Vaccinations Among Children Aged 6 Months–17 Years, by Selected Age Group, 2012–2014

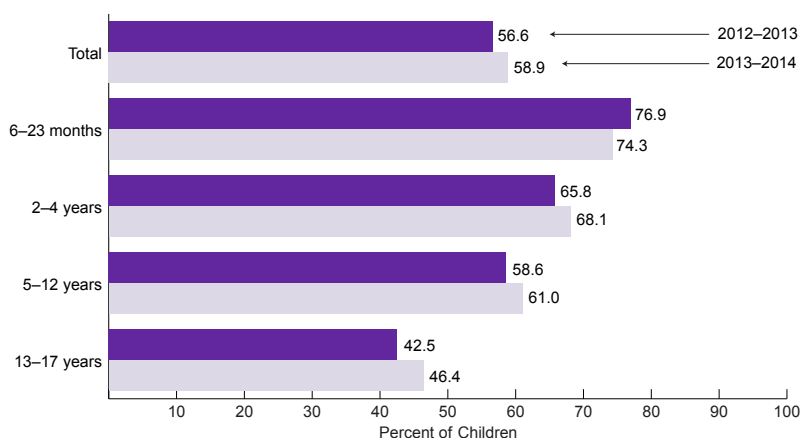
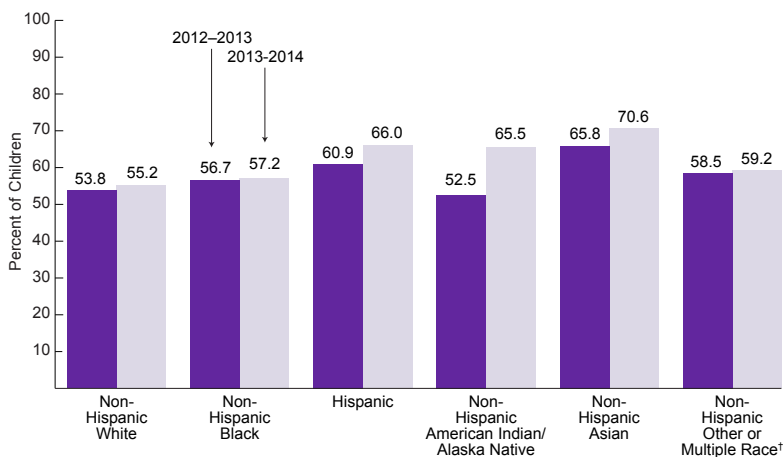


Figure 2. Seasonal Flu Vaccinations Among Children Aged 6 Months–17 Years, by Race/Ethnicity, 2012–2014



†Includes Native Hawaiian or other Pacific Islanders, and children of multiple and other races.

Data Sources

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IMMUNIZATIONS: ADOLESCENTS

The U.S. immunization program, with its strong emphasis on infant and early childhood immunizations, has been a remarkable success. However, past-year preventive care doctor visits decline from infancy and early childhood to middle childhood and adolescence,¹ providing fewer opportunities for older children and teens to receive immunizations. *The Healthy People 2020* (HP2020) targets for vaccination coverage among adolescents aged 13–15 years are 80 percent coverage for one dose of tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine; one dose of meningococcal conjugate (MenACWY) vaccine; and for females, three doses of human papilloma virus (HPV) vaccine.² Tdap and MenACWY vaccines protect against bacterial infections that can cause breathing problems, paralysis, brain damage, and death, while the HPV vaccine protects against several viral strains that can cause cervical and anal cancer and genital warts.³

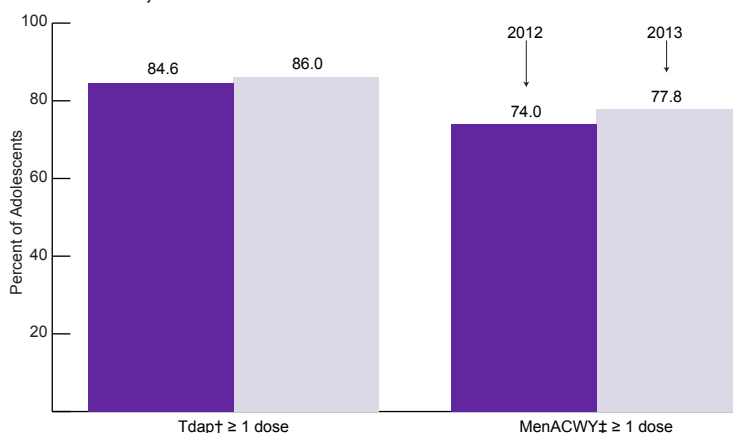
From 2012 to 2013, coverage increased from 84.6 to 86.0 percent for Tdap vaccination dose and from 74.0 to 77.8 percent for at least one MenACWY vaccination targets (figure 1). HPV vaccination coverage for adolescents was substantially lower with 37.6 percent of female adolescents and only 13.9 percent of male adolescents receiving the recommended 3 doses (figure 2). The HPV vaccine is the newest

routinely recommended vaccine for adolescents, having been recommended in 2006 for females aged 11–12 years and in 2010 for males of the same age with catch-up vaccination at later ages for females (13–26 years) and males (13–21 years) who have not completed the 3-dose series.³ Despite lower coverage, HPV vaccination has generally increased annually for both female and male adolescents for ≥ 1 , ≥ 2 , and ≥ 3 doses.

Adolescent HPV vaccination varied by age among females only, with ≥ 1 , ≥ 2 , and ≥ 3 HPV-dose coverage being higher among 15- to 17-year-old females compared with 13-year-old females in 2013. There were no differences by age or sex for Tdap or MenACWY vaccination.

In 2013, there were no racial and ethnic differences in Tdap vaccination coverage; however, MenACWY coverage was higher among Hispanic and non-Hispanic Asian adolescents compared with non-Hispanic Whites (83.4 and 83.8 percent, respectively, versus 75.6 percent). HPV vaccination also varied by race/ethnicity. For example, receipt of ≥ 1 dose of HPV vaccine was higher among Hispanic and non-Hispanic American Indian/Alaska Native females than non-Hispanic White females (67.5 and 73.3 percent, respectively, versus 53.1 percent) and higher among non-Hispanic Black and Hispanic males

Figure 1. Selected Vaccination Coverage* for Adolescents Aged 13–17 Years, 2012 and 2013**



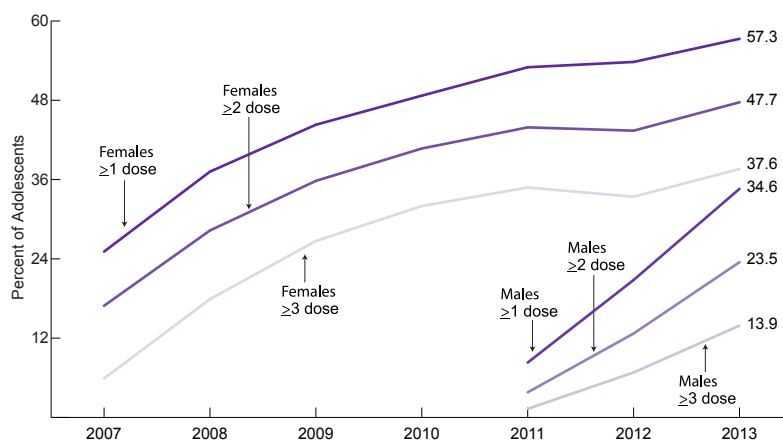
*The Advisory Committee on Immunization Practices recommends that adolescents routinely receive one dose of Tdap and two doses of MenACWY. **Adolescents (N = 18,264) in the 2013 National Immunization Survey–Teen were born January 11, 1995–February 13, 2001. †Includes percentages receiving Tdap vaccine at or after 10 years. ‡Includes percentages receiving MenACWY or meningococcal-unknown-type vaccine.

versus non-Hispanic White males (42.2 and 49.6 percent, respectively, versus 26.7 percent).

High Tdap coverage levels among adolescents aged 13–17 years indicate that similar coverage levels are attainable for other vaccines recommended for adolescents. Improved adherence of clinicians and parents to the Advisory Committee on Immunization Practices (ACIP) recommendation to administer all age-appropriate vaccines during a single visit could substantially increase lagging vaccination coverage

levels for HPV vaccination.⁴ Use of patient reminder and recall systems, immunization information systems, coverage assessment and feedback to clinicians, clinician reminders, standing orders, and other interventions can also help make use of every health care visit to ensure that adolescents are fully protected from vaccine-preventable infections and cancers, especially when such interventions are coupled with clinicians' vaccination recommendations.⁵

Figure 2. HPV Vaccination Coverage* for Adolescents Aged 13–17 Years, by Sex and Doses Received, 2007–2013



*The Advisory Committee on Immunization Practices recommends that adolescents routinely receive three doses of human papilloma virus vaccine.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Immunization Survey - Teen. Retrieved from: <http://www.cdc.gov/vaccines/imz-managers/coverage/nis/teen/index.html>. Accessed September 18, 2014.

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WELL-CHILD VISITS

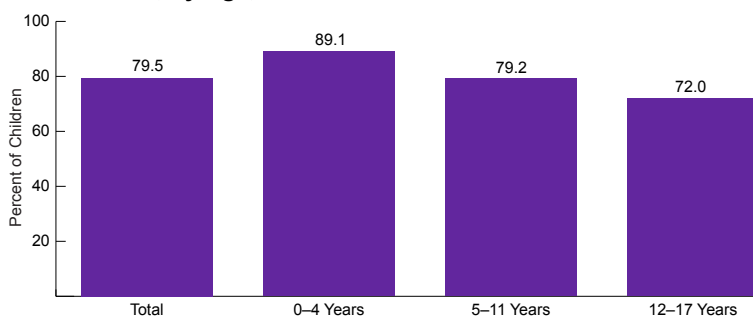
In 2012, 79.5 percent of children under 18 years of age were reported by their parents to have had a preventive or “well-child” medical visit in the past year, when they were not sick or injured. The American Academy of Pediatrics recommends that children have eight preventive health care visits in their first year, three in their second year, and at least one per year from age 3 through adolescence.¹ 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 2012, 89.1 percent of children aged 4 and younger had received a preventive visit in the past year, compared to 79.2 percent of children 5–11 years of age and 72.0 percent of those aged 12–17 years (figure 1). There was no significant difference between males and females in the proportion of children who received a well-child visit in the past year.

Receipt of preventive medical care also varies by several other factors, including health insurance status and type of insurance, parental education, race and ethnicity, and nativity. In 2012, only 54.2 percent of uninsured children had received a well-child visit in the past year, compared to more than 80 percent of those with public or private insurance (figure 2). Children with at least one parent who had attained more than a high-school level education were more likely to have received a past-year preventive medical visit (82.0 percent) compared to those for whom the highest level of parental education was a high school degree (76.0 percent) or less (72.3 percent).

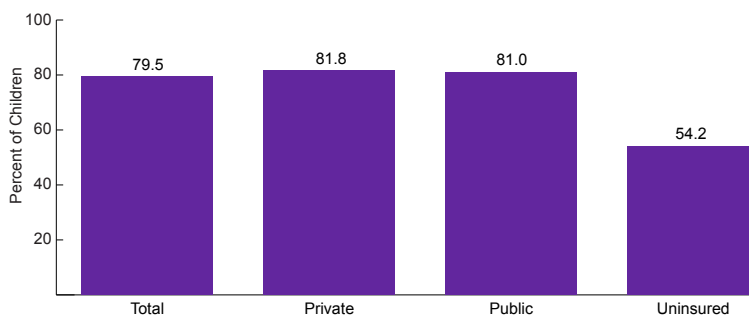
With respect to race and ethnicity, non-Hispanic Black children were more likely to have received a well-child visit in the past year (85.1 percent) compared to non-Hispanic White children (79.9 percent) and Hispanic children (75.9 percent). Finally, children who were born in the United States were more likely than those born outside the United States to have had a well-child visit in the past year: 79.9 and 71.2 percent, respectively.

Figure 1. Children Under Age 18 Who Received a Well-Child Visit* in the Past Year, by Age, 2012



*Based on the question, “During the past 12 months did [child’s name] receive a well-child checkup – that is, a general checkup when [he/she] was not sick or injured?”

Figure 2. Children Under Age 18 Who Received a Well-Child Visit* in the Past Year, by Health Insurance, 2012



*Based on the question, “During the past 12 months did [child’s name] receive a well-child checkup – that is, a general checkup when [he/she] was not sick or injured?”

Data Sources

Figure 1 and 2. Centers for Disease Control and Prevention, National Center for Health Statistics. 2012 National Health Interview Survey. Unpublished estimates. Analyzed by the National Center for Health Statistics.

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DEVELOPMENTAL SCREENING

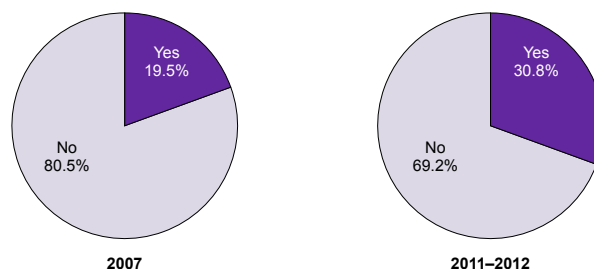
Since 2006, the American Academy of Pediatrics (AAP) has recommended that assessment for developmental problems among young children be incorporated into every preventive health visit and that formal screening occur at regular intervals, including the 9-, 18-, and either 24- or 30-month well-child visits.¹ Developmental screening is critical to the early identification of developmental delays and the provision of early intervention services and treatments that have the capacity to change both short- and long-term developmental trajectories of children who may be experiencing such delays or have a developmental disability. The importance of timely developmental screening is underscored by its inclusion as a national objective for Maternal, Infant, and Child Health in *Healthy People 2020*.²

In 2007, 1 year after the AAP recommendation, approximately one-fifth (19.5 percent) of U.S. children aged 10–71 months were reported to have received a standardized developmental screening.³ Data from the latest National Survey of Children's Health, however, show that this proportion has risen dramatically since then: In 2011–2012, nearly one-third (30.8 percent) of children aged 10–71 months had received such a screening in the previous 12 months (figure 1).

In 2011–2012, few significant differences were observed among children with respect to receipt of developmental screening and their demographic or household characteristics. Children living in households with two biological or adoptive parents were more likely than those in "other" family structures (i.e., those not living with two parents or a single mother) to have received a standardized developmental screening (31.2 versus 24.9 percent, respectively).

No differences, however, were observed with respect to the child's race and ethnicity, poverty, or health insurance status or type, as was observed in 2007. At that time, non-Hispanic Black children (24.4 percent) were more likely than non-Hispanic White and Hispanic children (18.6 and 19.1 percent, respectively) to have been assessed for developmental delay through a parent-reported standardized screening tool. Also in 2007, parents of poor children, or those living in households with incomes of less than 100 percent of poverty, were more likely to report having completed this kind of evaluation compared to those living in households with incomes of 400 percent or more of poverty (21.5 versus 17.2 percent, respectively). Finally, children with public health insurance coverage were significantly more likely to

Figure 1. Receipt of Developmental Screening* in the Past 12 Months Among Children Aged 10–71 Months, 2007 and 2011–2012



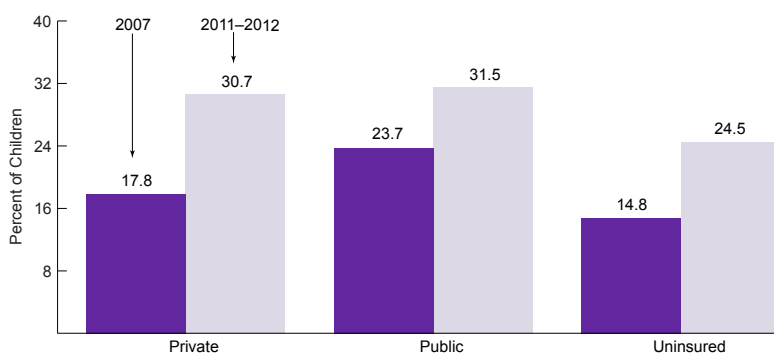
*Among children who had a preventive health visit in the past 12 months. Parents reported whether they completed a questionnaire about their child's development, communication, or social behaviors during the previous 12 months and, if so, whether the questionnaire included age-appropriate follow-up items on language or social development.

have been screened for developmental delay in 2007 (23.7 percent) than either those with private coverage (17.8 percent) or no coverage (14.8 percent); no significant difference in the rate of screening was observed at that time between those with private coverage and those without any coverage at the time of the survey (figure 2).

The overall increase in the rate of developmental screening and the reduction in some disparities in the receipt of this type of evaluation suggests that efforts such as those by the AAP and Healthy People may be raising awareness of the importance of developmental

screening. Additional analyses of data from the 2007 National Survey of Children's Health indicates that health care providers may also be using informal means to inquire about parents' and caregivers' concerns regarding their children's development. Such approaches, while potentially important to parent-provider relationships, should not be viewed as a substitute for screening using a standardized tool.⁴ Much work remains to be done, with less than one-third of children receiving this important preventive service in 2011–2012.

Figure 2. Receipt of Developmental Screening* in the Past 12 Months Among Children Aged 10–71 Months, by Health Insurance, 2007 and 2011–12



*Among children who had a preventive health visit in the past 12 months. Parents reported whether they completed a questionnaire about their child's development, communication, or social behaviors during the previous 12 months and, if so, whether the questionnaire included age-appropriate follow-up items on language or social development.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau; and U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health. Analyzed by the Health Resources and Services Administration's Maternal and Child Health Bureau.

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MENTAL HEALTH TREATMENT

Mental disorders are the most common cause of disability and are responsible for 25 percent of all years of life lost to disability and premature mortality.¹ Besides disability, untreated mental disorders may lead to unemployment, substance abuse, homelessness, incarceration, and suicide, and cost the U.S. economy \$100 billion a year. Early implementation of treatment accelerates recovery and reduces the impacts of mental disorders. Treatment can reduce symptoms and improve the quality of life.²

In 2012, 3.1 million (12.7 percent) of adolescents aged 12–17 received past-year treatment or counseling for problems with emotions or behavior (not related to drug or alcohol use) in a specialty mental health setting, including both outpatient and inpatient care (11.5 and 2.4 percent, respectively). A similar proportion of adolescents received mental health services in an educational setting (12.9 percent), 2.5 percent received services in a medical setting, and 5.5 percent received services in both a specialty mental health setting as well as either an educational or medical setting (figure 1).

The most commonly reported reason for past year receipt of mental health services was feeling depressed, reported by 44.3 percent of adolescents who accessed mental health services. Other reasons

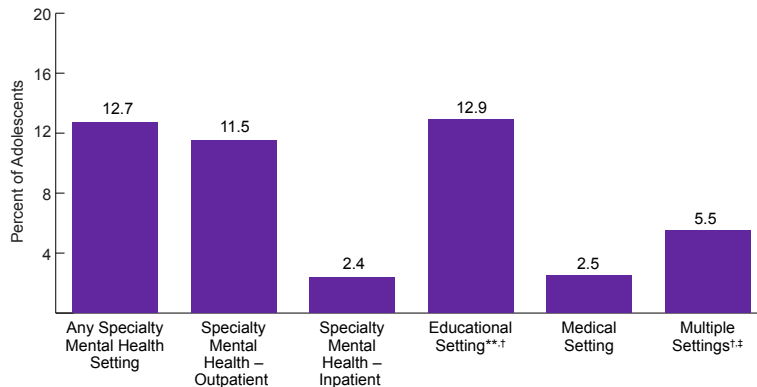
include feeling afraid and tense (16.2 percent), having thoughts of or attempting suicide (14.8 percent), breaking rules and “acting out” (14.8 percent), having problems at school (14.8 percent), and having problems with home or family (14.2 percent).

Increasing the proportion of people with mental disorders who receive treatment is a national *Healthy People 2020* objective.¹ Among adolescents who experienced a past-year major depressive episode (MDE – see definition on mental health page), 37.0 percent received treatment for their depression. Treatment included seeing or talking to a professional or using prescription medication for depression.

The rate of treatment varied by sex, race, ethnicity, geographic region, and insurance coverage. Females were more likely to receive treatment for depression than males (40.1 versus 28.3 percent, respectively; figure 2). Non-Hispanic White youth were more likely to receive treatment than Hispanic youth (40.7 versus 30.8 percent, respectively); 33.5 percent of non-Hispanic Black youth received treatment for depression.

With regard to geographic region, adolescents who experienced a past-year MDE from the Northeast and Midwest (42.2 and 41.2 percent, respectively) were more likely to receive treatment than those

Figure 1. Past Year Mental Health Service* Use Among Adolescents Aged 12–17 Years, by Service Source, 2012



*Respondents could indicate multiple service sources; thus, response categories are not mutually exclusive.

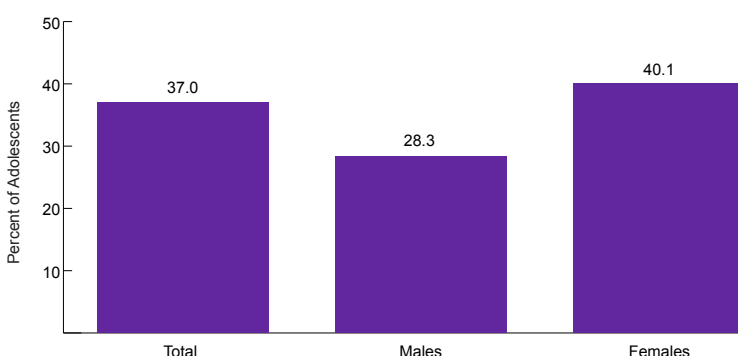
**Respondents who did not report their school enrollment status or reported being home-schooled were not asked about receipt of mental health treatment or counseling in an educational setting; however, respondents who reported not being enrolled in school in the past 12 months were classified as not having received treatment or counseling from this source. †Because of revisions to the Source of Youth Mental Health Education Services questions in 2009, these estimates are not comparable with estimates presented before 2009. ‡Includes receipt of any specialty mental health services and receipt of services from either education or medical sources.

from the South and West (34.1 and 34.9 percent, respectively). Adolescents with no insurance coverage (23.0 percent) were less likely to receive treatment for their depression compared to adolescents with Medicaid/Children's Health Insurance Program or private coverage (36.9 and 38.1 percent, respectively).

Some barriers to treatment for mental disorders include discrimination and prejudice and accessibility. Discrimination and prejudice may cause individuals to avoid talking about their illness with friends and

family and inhibit receipt of care.³ Individuals may fear that symptoms will not be taken seriously, especially those of adolescents that may be mistaken for puberty instead of a mental disorder.⁴ The Mental Health Parity Act under the Affordable Care Act requires health insurance to cover mental and physical health equally.⁵ The expansion of coverage includes preventive services, such as behavioral assessments for children, free of charge and insurance companies no longer being allowed to deny coverage or charge more for mental disorders.⁶

Figure 2. Receipt of Past Year Treatment* for Depression Among Adolescents Aged 12–17 Years with Major Depressive Disorder (MDE), by Sex, 2012**



*Treatment is defined as seeing or talking to a professional or using prescription medication for depression in the past year. Respondents with unknown treatment data were excluded. **An MDE is defined as a period of at least 2 weeks when a person experienced a depressed mood or loss of pleasure in daily activities and had a majority of specific depression symptoms.

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DENTAL CARE

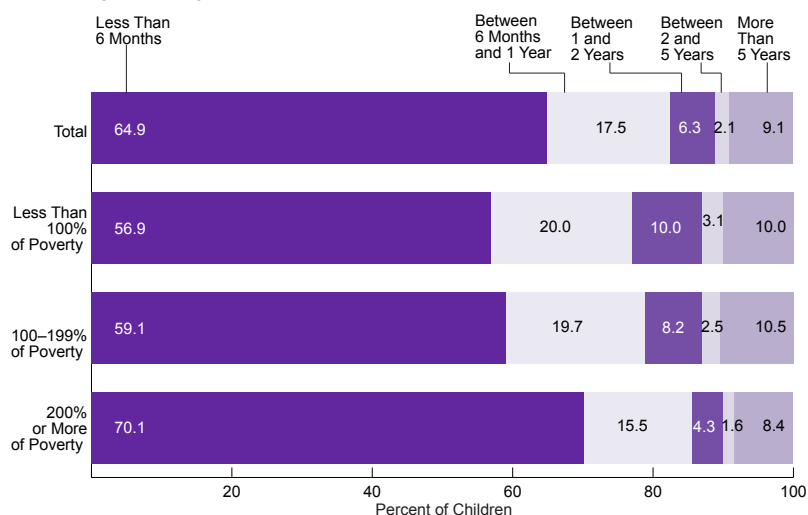
Tooth decay (dental caries) is a bacterial infection of the tooth and is estimated to be the most common chronic infectious disease in children in the United States.^{1,2} The Centers for Disease Control and Prevention estimates that more than one-quarter of children aged 2–5 years and half of youth aged 12–15 years are affected by tooth decay.³ Untreated tooth decay causes pain and infection, which may affect a child's ability to eat, speak, play, and learn. Tooth decay is preventable with proper dental care, including cleaning, brushing, and flossing, sealant application, and fluoride treatment. The American Academy of Pediatric Dentistry recommends that children have their first dental visit shortly after the eruption of their first tooth and no later than their first birthday, with two dental checkups per year thereafter.²

Approximately 65 percent of children aged 2–17 years received dental care in the past 6 months in 2012, as determined from parental report. Receipt of dental care at recommended intervals varied by age, race and ethnicity, poverty status, and insurance status and type. Children aged 5–11 years and 12–17 years were more likely to have received dental care in the past 6 months than those aged 2–4 years (70.3 and 68.0 percent compared to 45.3 percent, respective-

ly). With respect to race and ethnicity, non-Hispanic American Indian/Alaska Native children were most likely to have had a dental visit in the past 6 months (78.0 percent) compared to 61–68 percent of children from other racial and ethnic groups. Children living in households with incomes of less than 100 percent and 100–199 percent of poverty were less likely than children living in households with incomes of 200 percent or more of poverty to have received dental care in the past 6 months (56.9 and 59.1 percent, respectively, versus 70.1 percent; figure 1). Uninsured children were about half as likely to have received a dental visit in the past 6 months (34.9 percent) as those with public or private insurance (62.5 and 70.2 percent, respectively).

In 2012, parents of 5.5 percent or 4 million children reported that their child did not receive needed dental care due to cost. The rates of unmet dental need due to cost increased with age and were lowest among children aged 2–4 years (2.8 percent), but rose substantially for those aged 5–11 years and 12–17 years (4.9 and 7.6 percent, respectively). Similar to receipt of dental care, children living in households with incomes of less than 100 percent and 100–199 percent of poverty were approximately twice as likely to have unmet needs as

Figure 1. Time Since Last Dental Visit* Among Children Aged 2–17 Years, by Poverty Status, 2012**



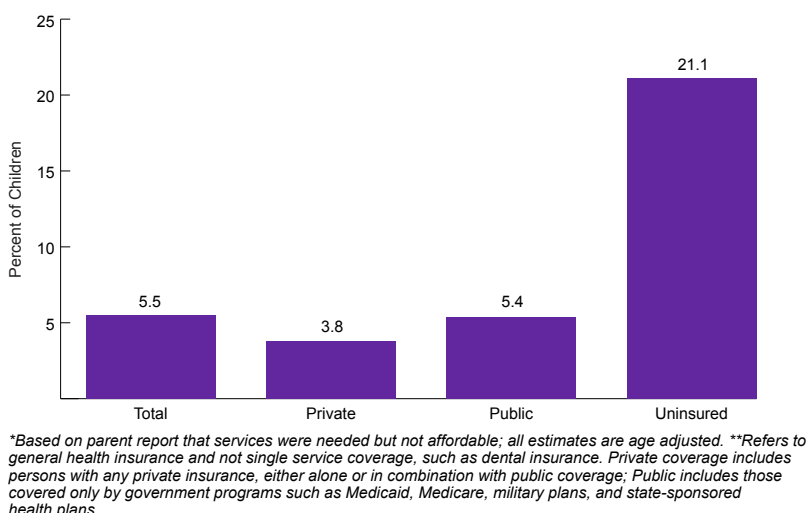
*All estimates are age adjusted and may not total 100 due to rounding. **The U.S. Census Bureau weighted average poverty threshold for a family of four was \$23,492 in 2012.

children living in households with higher incomes (7.2 and 8.4 percent compared to 3.8 percent, respectively). The proportion of children with unmet needs was much higher among those who were uninsured (21.1 percent) compared to those with either public (5.4 percent) or private (3.8 percent) health insurance (figure 2).

Limited access to oral health care and dental insurance coverage contribute to poor oral health.⁴ The Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program and Federally Qualified Health Centers (FQHCs) work to address such barriers. The EPSDT Program is the section of Medicaid that addresses child health, requiring dental services including appropriate screening, diagnostic, and treatment.⁵

Additionally, the Affordable Care Act will expand coverage and include child oral health care as a required health benefit.⁶ *Healthy People 2020* oral health objectives aim to “increase the proportion of [FQHCs] that have an oral health care program” and “increase the proportion of patients who receive oral health services at [FQHCs] each year.”⁷ All FQHCs must provide preventive services, regardless of the ability to pay. Community programs such as school based sealant programs and community water fluoridation are another way to deliver effective preventive interventions to children who may lack access to dental care.⁸

Figure 2. Unmet Dental Need* in the Past Year Among Children Aged 2–17 Years, by Type of Health Insurance, 2012**



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Figure 1 and 2. Bloom B, Jones LI, Freeman G. Summary health statistics for U.S. children: National Health Interview Survey, 2012. National Center for Health Statistics. *Vital Health Statistics*. 2013;10(258).

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USUAL SOURCE OF CARE

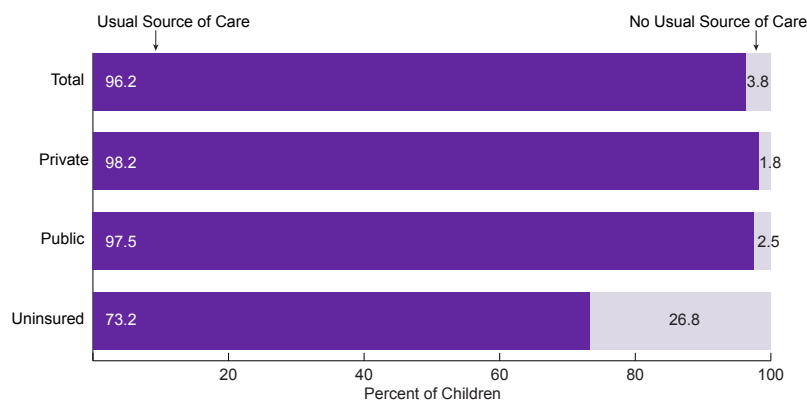
An indicator of access to health care is having a usual source of care.¹ A usual source of care is “a place where [children go] when sick, such as a physician’s office or health center but not an emergency department.”² A *Healthy People 2020* objective for access to health services is to “increase the proportion of children and youth aged 17 years and under who have a specific source of ongoing care.”³ People with a usual source of care are more likely to receive preventive health services, have better health outcomes, and have fewer disparities and costs than those without a usual source of care.^{1,3,4}

A majority of children under 18 years of age (96.2 percent) had a usual source of care in 2012. Having a usual source of care varied by age, poverty status, and insurance type. The proportion of children who had a usual source of care decreased with age: 97.9 percent of children aged 0–4 years, 96.6 percent of those aged 5–11 years, and 94.4 percent of children aged 12–17 years. The percentage of children with a usual source of care was greater for those living in households with incomes of 200 percent or more of poverty (97.3 per-

cent) than for children living in households with incomes less than 100 percent and 100–199 percent of poverty (94.8 and 95.2 percent, respectively). Uninsured children were less likely to have a usual source of care, compared to children with public or private health insurance (73.2 versus 97.5 and 98.2 percent, respectively; figure 1).

Among children with a usual source of care in 2012, 74.2 percent of children used a doctor’s office; 23.9 percent used a clinic; and 1.9 percent used the hospital and other places, including emergency rooms and hospital outpatient departments. Usual source of care location varied by race and ethnicity, poverty status, and insurance type. American Indian/Alaska Native and Hispanic children (46.9 and 38.4, respectively) were more likely to use clinics as a usual source of care than multiple-race, non-Hispanic Black, and Asian children (24.4, 24.4, and 22.4 percent, respectively). Non-Hispanic White children (17.2 percent) were the least likely to use clinics as a usual source of care.

Figure 1. Usual Source of Care* Among Children Under Age 18, by Health Insurance Type, 2012



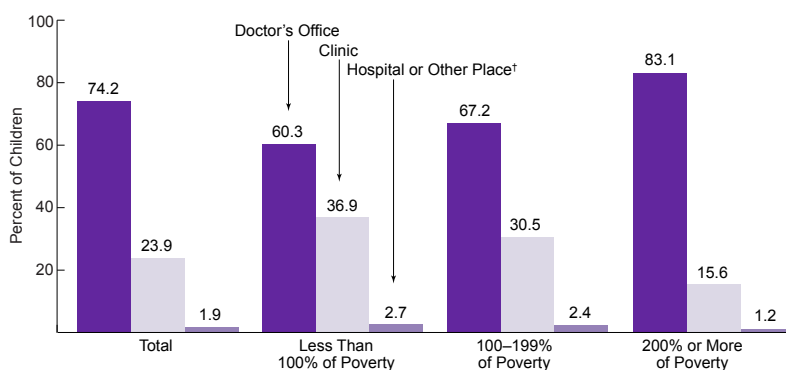
*Has a place where the child is usually taken when sick or in need of health advice. All estimates are age adjusted and may not total 100 due to rounding.

Children with household incomes of less than 100 percent and 100–199 percent of poverty (36.9 and 30.5 percent, respectively) were approximately twice as likely to use a clinic as a usual source of care than children with household incomes of 200 percent or more of poverty (15.6 percent; figure 2). Conversely, 83.1 percent of children with household incomes of 200 percent or more of poverty used a doctor's office as a usual source of care, compared to 67.2 percent of those with incomes of 100–199 percent of poverty and 60.3 percent of those with incomes below 100 percent of poverty. Uninsured children and children with public insurance (38.6 and 35.1 percent, respective-

ly) were more than two times as likely to use a clinic as a usual source of care than children with private insurance (14.1 percent).

Problems with affordability and insurance are common barriers to having a usual source of care.¹ The Affordable Care Act increases access to health benefits, expands insurance, and focuses on preventive health. Through the expansion of health center operations, including construction of new sites and expansion of preventive and primary services, having a usual source of care will be more accessible for individuals and families with lower incomes and with public or no insurance.^{5,6}

Figure 2. Location of Usual Source of Care* Among Children Under Age 18, by Poverty Status, 2012**



*Has a place where the child is usually taken when sick or in need of health advice. All estimates are age adjusted and may not total 100 due to rounding. **The U.S. Census Bureau weighted average poverty threshold for a family of four was \$23,492 in 2012. †Includes "emergency room," "hospital outpatient department," "some other place," and "not using one place most often."

Data Sources

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MEDICAL HOME

The National Center for Medical Home Implementation defines a medical home as “an approach to providing comprehensive primary care” rather than a physical space or service.¹ According to the American Academy of Pediatrics, primary care should be accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective. The Maternal and Child Health Bureau has operationalized this concept for children using five criteria: (1) having a personal doctor or nurse, (2) having a usual source for sick and well care, (3) receipt of family-centered care, (4) no problems getting needed referrals, and (5) receipt of effective care coordination when needed.² Individuals with a medical home may experience “improved health outcomes, reduced emergency room visits, and better communication [with pediatric health providers].”³

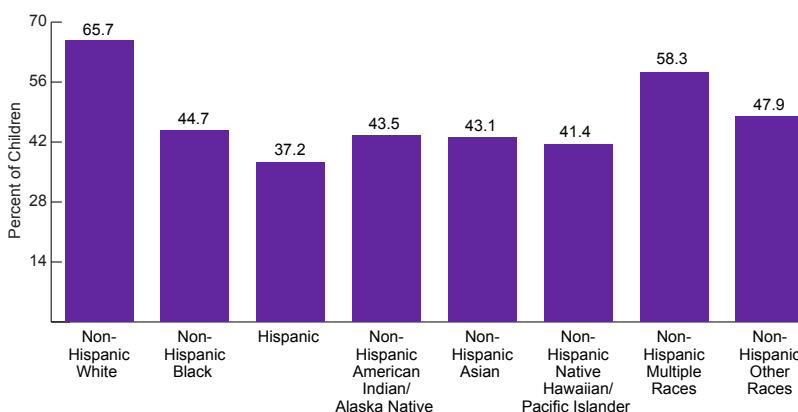
In 2011–2012, the care received by 54.4 percent of children under the age of 18 met medical home criteria. Receipt of care from a medical home varied by age, race/ethnicity, and primary household language. Receipt of care in a medical home decreased with age: 58.2 percent of children aged 0–5 years had a medical home, while 53.7 and 51.4 percent of children aged 6–11 and 12–17 years, respectively, had a medical home. Hispanic children (37.2 percent) were least likely to have a medical home, followed by non-Hispanic

Black, non-Hispanic American Indian/Alaska Native, non-Hispanic Asian, and non-Hispanic Native Hawaiian/Pacific Islander children, all of which had fewer than 45 percent of children with a medical home (figure 1). Over half of non-Hispanic White and non-Hispanic children of multiple races received care meeting the criteria for a medical home (65.7 and 58.3 percent, respectively). Children living in a household with English as the primary language were more than twice as likely to have a medical home as children living in a household with a primary language other than English (59.3 versus 26.5 percent, respectively).

Children living in a household with two parents (biological or adoptive) were more likely to have a medical home than those with two parents where at least one was a stepparent, those with only a mother, and those with all other family structures (58.6 compared to 49.6, 45.3, and 47.4 percent, respectively).

Medical home access also varied by socioeconomic status. Children of parents whose highest level of education was less than a high school diploma were nearly half as likely to have a medical home as children with at least one parent with more than a high school education (31.1 versus 61.6 percent, respectively). Similarly, receipt of care in a medical home also increased with household income: 36.5 percent of children living in households with incomes less than 100

Figure 1. Children with a Medical Home, by Race/Ethnicity, 2011–2012

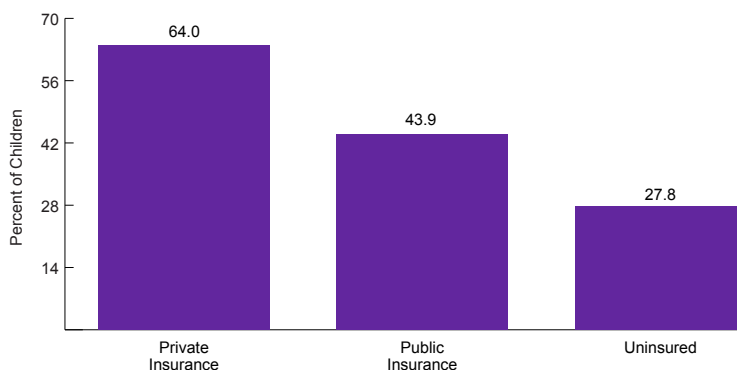


percent of poverty had a medical home compared to 67.8 percent of children living in households with incomes of 400 percent or more of poverty. Uninsured children were less likely to receive care from a medical home than children with public and private insurance (27.8 versus 43.9 and 64.0 percent, respectively; figure 2).

Barriers to having a medical home include personnel constraints, clinical practice patterns, and economic or social forces.² As an in-

creasing number of community health centers seek recognition as patient-centered medical homes, the National Association of Community Health Centers predicts that an additional 20 million Americans will have medical homes. Primary care practices are also increasingly seeking accreditation as medical homes. The Affordable Care Act authorized funding to establish community-based health teams to support these practices.^{4,5}

Figure 2. Children with a Medical Home, by Health Insurance Status and Type, 2011–2012



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Figure 1 and 2. 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. Analyzed by the Health Resources and Services Administration's Maternal and Child Health Bureau.

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QUALITY OF CARE

Quality health care can be defined as the degree to which health services increase the likelihood of desired health outcomes for individuals and populations and which are consistent with current professional knowledge.¹ Quality is reflected in numerous program aspects, including access to services, clinical effectiveness, comprehensiveness, and integration of services. High quality care can play a significant role in improving health care outcomes and decreasing overall health care costs, while impacting consumer information and choice.¹ Quality of care can be measured in a number of ways, including receipt of appropriate treatment for infections and weight counseling.²

An upper respiratory infection (URI), also referred to as the common cold, is a type of acute respiratory tract infection (ARTI)—an infection of the lining in the nose and throat that can cause symptoms including coughing, congestion, and fever that last for 1–2 weeks. Though most URIs are viral in nature, antibiotics are often inappropriately prescribed for children despite no evidence that they are helpful against viral infections.³

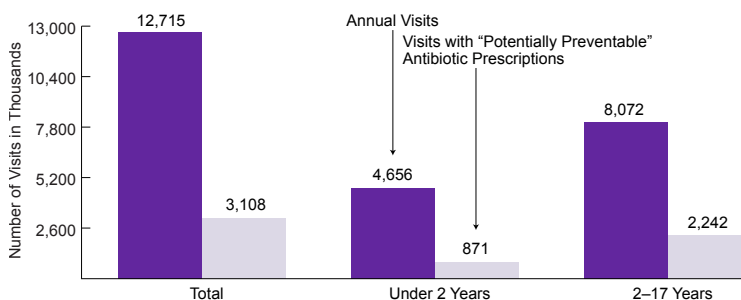
In 2012, children had 12.7 million outpatient visits for URIs, 4.7 million of which involved children under the age of 2 years, and 8.1 million for children aged 2–17 years. None of the children presenting at these visits were expected to have a bacterial pathogen; however, 3.1 million children were prescribed a “potentially preventable” antibiotic. Of these prescriptions, 871,000 were for children under the age of 2, and more than 2.2 million were for children aged 2–17 years (figure 1). This is equivalent to 11.4 million potentially avoidable antibiotic prescriptions for all ARTIs in children. This number has not decreased notably in the past decade.⁴

While the number of infection-related hospitalizations from antibiotic resistance have increased in all age groups, the greatest increase has been in children under 18 years of age (395 percent between 1997 and 2006). Antibiotic-resistant infections often lead to prolonged treatments or hospital stays and greater rates of disability and death. The use of antibiotics is the most important element leading to antibiotic resistance.⁵ Greater awareness of the dangers of antibiotic-resistant bacteria and better communication between patients and providers could improve treatment and reduce unnecessary antibiotic use.³

Since the 1980s, childhood obesity has increased more than two-fold in children and threefold in adolescents (see pages on childhood and adolescent overweight and obesity). Obesity has negative effects on children’s health including high blood pressure and cholesterol, insulin resistance, type 2 diabetes, and breathing problems, although early intervention and nutrition counseling can improve children’s overall health and lifestyle. For the second consecutive year, clinical assessments of childhood weight status have improved.

In 2012, 51.6 percent of children aged 3–17 years in commercial health maintenance organizations (HMOs), 31.2 percent of children in commercial preferred provider organizations (PPOs), and 51.8 percent of children in Medicaid HMOs had an outpatient visit with a

Figure 1. Number of Annual Visits and Visits With Potentially Preventable Antibiotic Prescriptions for Children With Upper Respiratory Infections, by Age Group, 2012

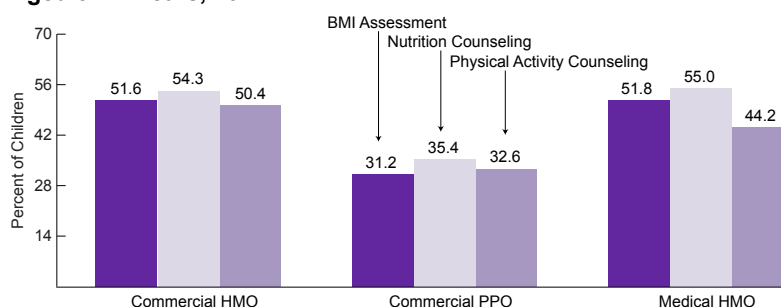


primary care practitioner during the year when BMI percentile was documented (figure 2). This translates to increases from 2011 of 15.4 percent in commercial HMOs, 26.8 percent in commercial PPOs, and 12.6 percent in Medicaid HMOs.

The percentage of providers counseling children on proper nutrition and/or physical activity also showed improvement. From 2011 to 2012, rates for counseling children on nutrition increased in commer-

cial HMOs from 46.4 to 54.3 percent, in commercial PPOs from 28.4 to 35.4 percent, and in Medicaid HMOs from 50.1 to 55.0 percent. For the same period, rates for counseling children on physical activity increased in commercial HMOs from 43.0 to 50.4 percent, in commercial PPOs from 25.7 to 32.6 percent, and in Medicaid HMOs from 40.6 to 44.2 percent.³

Figure 2. Receipt of Body Mass Index (BMI) Assessment and Counseling for Nutrition and Physical Activity Among Children Aged 3–17 Years, 2012



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SPECIAL FEATURES

This section provides information on factors associated with child health and well-being which can impact children and adolescents across the life course. Topics include adverse childhood experiences, flourishing and resiliency among youth and adolescents, and mortality

and nonfatal injury. Additional information is provided on a wide range of federal policies and programs that support women's and children's health throughout the lifespan.



CHILD MORTALITY

The death of a child is a tragedy for family and friends and a loss to the community. Along with the direct impact of a child's death to a family, the child mortality rate in a community can be an important indicator for researchers or policymakers.¹ A high rate can point to underlying problems, such as poor access to health care, violent neighborhoods, high levels of risk-taking behaviors, or inadequate child supervision.² It can also point to inequities, for example, in access to behavioral health services, safe places to play, or exposure to environmental toxins.

Since 1999, the overall mortality rate for children aged 1–19 years declined by more than 25 percent to a low of 25.7 per 100,000 in 2011 (figure 1). The decline was fairly uniform, ranging from 23 to 30 percent across age groups.

According to 2011 data, racial and ethnic disparities persisted in mortality among children. Mortality rates were highest for non-Hispanic American Indian/Alaska Native (47.6 per 100,000) and non-Hispanic Black (37.3 per 100,000) children, while the rates for Hispanic (21.1 per 100,000) and non-Hispanic Asian/Pacific Islander (13.4 per 100,000) children were lowest (figure 2).

According to 2011 data, the “All Cause” mortality rate for children aged 1–9 years was 18.3 per 100,000. Most deaths to children in that age group (10.8 per 100,000) were classified as noninjury (i.e., natural causes) followed by unintentional injury (5.9 per 100,000), homicide (1.5 per 100,000), and deaths of undetermined nature (0.2 per 100,000). For adolescents aged 10–19 years, the “All Cause” mortality rate was 75 percent greater (32.0 per 100,000) than that of

children 1–9 years of age. Most of the difference could be attributed to the higher mortality rates among 15- to 19-year-old males (68.5 per 100,000) resulting from higher rates of unintentional injury (27.4 per 100,000), homicide (13.0 per 100,000), and suicide (12.9 per 100,000) relative to younger males. The mortality rates for females in all age groups were lower than the rates for males.

Leading causes of death due specifically to intentional and unintentional injury varied by age group. Drowning, homicide, and motor vehicle accidents were predominant in the 1- to 9-year-olds, though their rank order frequency was different for 1- to 4-year-olds (drowning, homicide, and motor vehicle traffic accident) compared to 5- to 9-year-olds (motor vehicle traffic accident, homicide, and drowning). Motor vehicle traffic accidents, suicide, and homicide were the highest ranked leading causes of deaths due to injury for adolescents aged 10–19 years; however, the rates were higher for 15- to 19-year-olds (12.9, 8.3, and 7.8 per 100,000, respectively) compared to 10- to 14-year-olds (2.1, 1.4, and 0.7 per 100,000, respectively).

General societal improvements, advances in medical care, and the introduction of Medicaid have been cited as factors in the long-term decline in child mortality.³ Despite these advances, many states have disproportionately high child and adolescent mortality, and rates among some racial and ethnic groups fall far short of the *Healthy People 2020* goals.⁴ Continued research on mechanisms underlying racial and ethnic disparities and expansion of child fatality review to inform state and local prevention strategies have been suggested.^{5,6}

Figure 1. Mortality Among Children Aged 1–19 Years, by Year and Age, 1999–2011

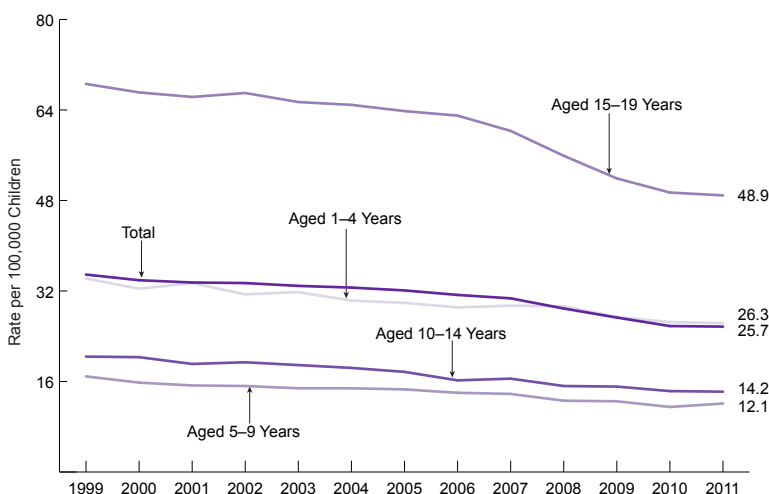
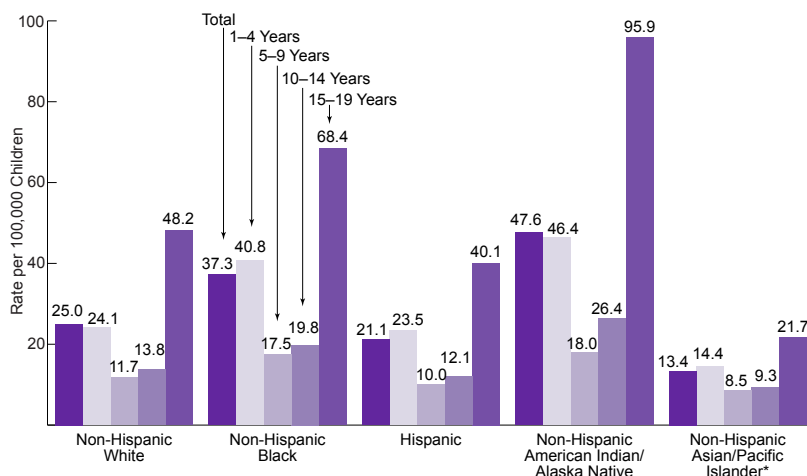


Figure 2. Mortality Among Children Aged 1–19 Years, by Age and Race/Ethnicity, 2011



*Separate estimates for Asians, Native Hawaiians, and other Pacific Islanders were not available.

Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying cause of death 1999–2011. CDC WONDER Online Database, released 2014. Data are from the Multiple Cause of Death Files, 1999–2011.

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NONFATAL INJURY

Each year, millions of children are injured and live with the consequences of those injuries. For some children, injury causes temporary pain and functional limitation; for others, injury can lead to permanent disability, traumatic stress, depression, chronic pain, and a decreased ability to perform age-appropriate activities.¹ In addition, family members must often care for the injured child, which can cause stress, time away from work, and lost income.² Communities, states, and the Nation feel the economic burden of child injuries, including medical care for the injured child and lost productivity for caregivers.³

The U.S. nonfatal injury rate among children aged 0–19 years was 11,548 per 100,000 children in 2012. While injuries were higher among children aged 0–4 years compared to 5- to 9-year-olds (12,280 and 9,087 per 100,000, respectively), those aged 15–19 years had the highest nonfatal injury rates (13,579 per 100,000; figure 1). In all age groups, rates of injuries were higher for males than for females.

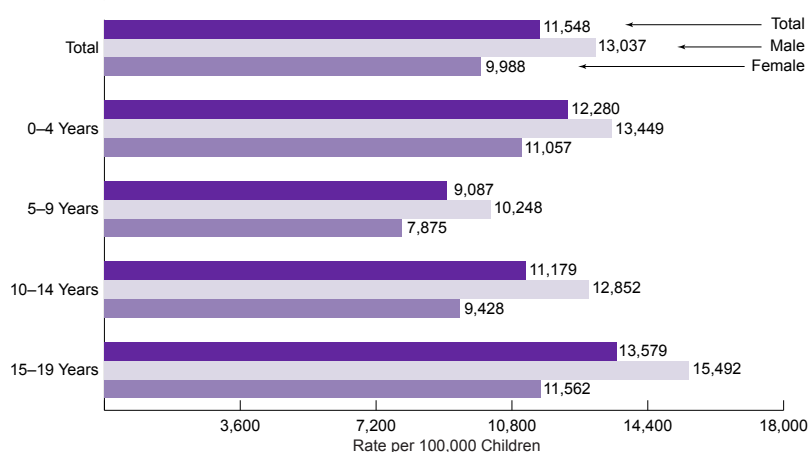
In general, nonfatal injuries trended downward for all age groups from approximately 2001 to 2007 (figure 2). After 2009, however, overall rates began trending upward. A particularly pronounced upward trend is noted for 0- to 4-year-olds beginning in 2007–2008. Although overall a 10 percent decrease in nonfatal injuries occurred between 2001 and 2012 for children: 3 percent for those aged 0–4 years, 14 percent for children aged 5–9, 13 percent for 10- to 14-year-olds, and 10 percent for 15- to 19-year-olds.

Falls were the leading cause of nonfatal injury among 0- to 4-year-

olds (43.7 percent) and 5- to 9-year-olds (36.7 percent), followed by being struck by or against an object (17.0 and 23.0 percent, respectively). For children aged 10–14 years, the most frequent causes of nonfatal injuries were also falls and being struck by or against an object (26.0 and 26.5 percent, respectively), followed by overexertion (13.8 percent). Among 15- to 19-year-olds, being struck by or against an object was ranked highest (20.8 percent), followed by falls (15.7 percent) and overexertion (13.3 percent).

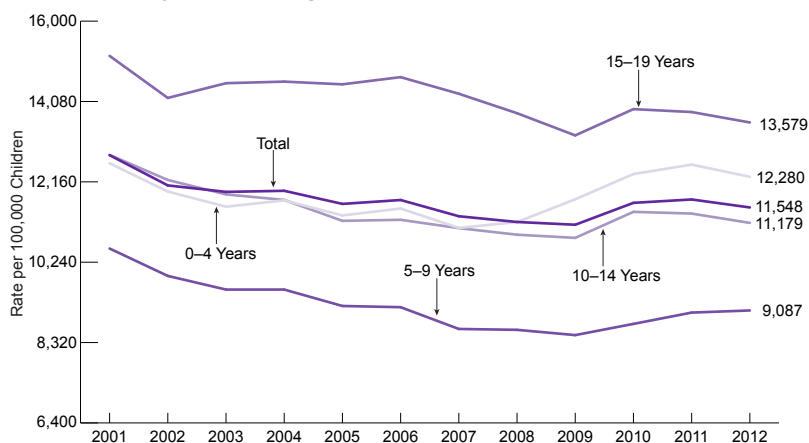
In 2012, more than 60 stakeholders and the Centers for Disease Control and Prevention collaborated to produce a National Action Plan for Child Injury Prevention. The focus of the group was to increase awareness of child injury, highlight prevention solutions through stakeholder action, and mobilize a coordinated national effort to reduce child injury. The plan is structured across six domains relevant to child injury prevention, each containing goals and specific actions: data and surveillance for planning, implementing, and evaluating injury prevention efforts; research on gaps and priorities in risk factor identification, interventions, program evaluation, and dissemination strategies; communications or messaging to promote prevention; education and training toward behavior change conducive to preventing injuries; health systems and health care for clinical and community preventive services; and policy that includes laws, regulations, incentives, administrative actions, and voluntary practices that enable safer environments and decisionmaking.⁴

Figure 1. Nonfatal Injury* Among Children Aged 0–19 Years, by Age and Sex, 2012



*Nonfatal injuries (all intents, all causes) resulting in an emergency department visit.

Figure 2. Rates of Nonfatal Injury* per 100,000 Among Children Aged 0–19 Years, by Year and Age, 2001–2012



*Nonfatal injuries (all intents, all causes) resulting in an emergency department visit.

Data Sources

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ADVERSE CHILDHOOD EXPERIENCES

Adverse childhood experiences (ACEs), such as living with someone who had problems with drugs or alcohol or witnessing violence in the home, can have significant effects on long-term health and well-being.¹ Early exposure to these types of life events has been linked to a wide range of chronic health conditions and health risk behaviors later in life.² The National Survey of Children's Health (NSCH) asks parents and caregivers about children's exposure to nine such experiences, including

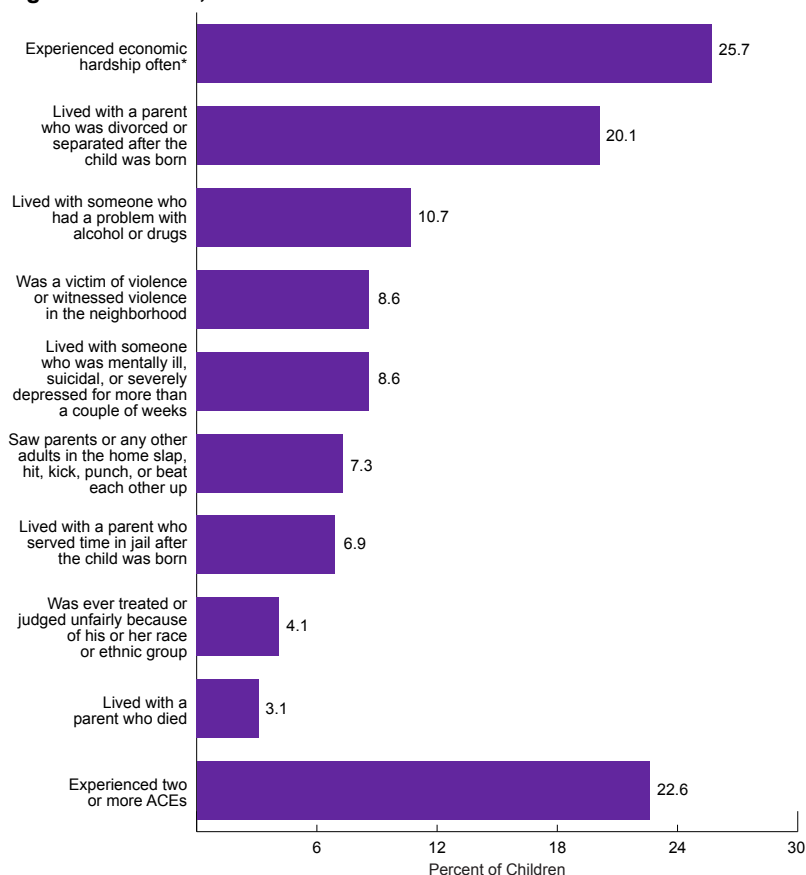
- Economic hardship (defined as living in a household that often had difficulty affording basics like housing or food);
- Living with a parent who was divorced or separated since the child's birth;
- Living with a parent who died;
- Living with a parent who served time in jail after the child was born;
- Witnessing intimate partner violence;
- Witnessing or was the victim of violence in their neighborhood;

- Living with someone who was mentally ill, suicidal, or severely depressed for more than a couple of weeks;
- Living with someone who had a problem with alcohol or drugs; and
- Having been discriminated against because of race/ethnicity.

In 2011–2012, nearly one-quarter (22.6 percent) of children aged 0–17 were reported to have experienced two or more of these nine ACEs. Economic hardship was the most commonly reported ACE (25.7 percent), followed by living with a parent who was divorced or separated after the child's birth (20.1 percent), living with someone who had a substance use or abuse problem (10.7 percent), and being a victim of or witness to neighborhood violence and living with someone who was mentally ill or suicidal for more than a couple of weeks (both 8.6 percent; figure 1).

Exposure to ACEs among children varied by sociodemographic characteristics, including race and ethnicity, parental education, and poverty. The proportion of children who had experienced two or more

Figure 1. Adverse Childhood Experiences (ACEs) Among Children Aged 0–17 Years, 2011–2012



*Reported that it was somewhat or very often hard to get by on the family's income; i.e., it was hard to cover the basics like food or housing.

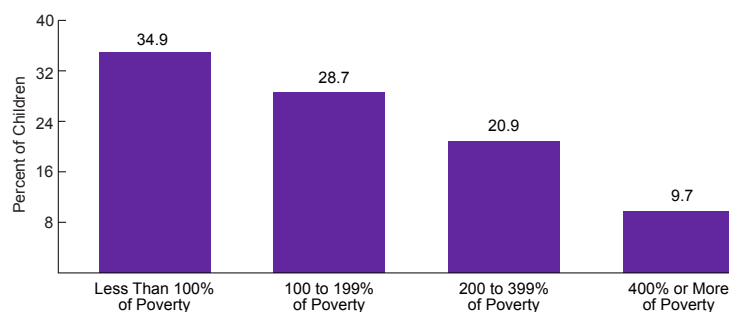
ACEs was highest among non-Hispanic American Indian/Alaska Native children, of whom two-fifths (40.3 percent) had experienced two or more of these nine life events; followed by non-Hispanic Black children and non-Hispanic children of multiple races, of whom approximately one-third had experienced such events (31.1 and 32.7 percent, respectively). About one-fifth of non-Hispanic Whites, Hispanics, and non-Hispanic Native Hawaiians/other Pacific Islanders reported experiencing two or more ACEs. Only 5.3 percent of non-Hispanic Asian children had experienced two or more ACEs since birth.

Exposure to two or more ACEs was more common among children living in poor and nearly poor families as well as those living in households where neither parent had completed college. More than

one-third of children living in households with incomes less than 100 percent of poverty (34.9 percent) had experienced two or more ACEs since birth, compared to 28.7 percent of those in households with incomes of 100–199 percent of poverty (figure 2). Less than 10 percent of children living in households with incomes of 400 percent or more of poverty had experienced two or more of these life events.

Similarly, while approximately 30 percent of children living in households where neither parent had completed college were reported to have experienced two or more ACEs, 13.1 percent of those living in households where at least one parent had completed college were reported to have done so.

Figure 2. Children Aged 0–17 Years Experiencing Two or More ACEs, by Poverty Status,* 2011–2012



*Based on the U.S. Department of Health and Human Services poverty guidelines, poverty was \$23,050 for a family of four in 2012.

Data Sources

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FLOURISHING AND RESILIENCE

In addition to traditional measures of health status and risk factors, positive health indicators can be used to help create a more complete picture of child health and well-being.¹ The 2011–2012 National Survey of Children's Health (NSCH) included several such items to contribute to a better understanding of whether U.S. children were "flourishing" or "thriving." The concept of flourishing is comprised of multiple dimensions of physical health, mental and emotional health, caring, empathy, and resilience.² Two sets of flourishing items were included in the NSCH: one for children aged 6 months to 5 years and a separate set for children aged 6–17 years based on developmentally relevant milestones and experiences. Four questions were included for younger children focused on curiosity, resilience, attachment to caregivers, and positive affect.² For parents and caregivers of school-aged children, three items were asked that focused on curiosity, resilience, and self-regulation.²

In 2011–2012, the proportion of children who were reported by their parents and caregivers to usually or always exhibit all age-specific behaviors associated with flourishing varied by age group. Among children aged 6 months to 5 years, 73.2 percent were reported to usually or always exhibit all four flourishing behaviors, while less than half (47.7 percent) of school-aged children were reported to usually or always exhibit the three flourishing behaviors (figure 1).

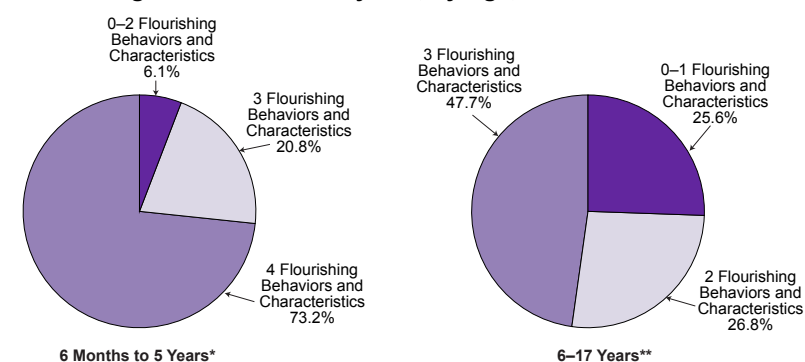
Among younger children, the most common behaviors reported were smiling and laughing a lot followed by showing interest and curiosity in new things; more than 80 percent of children aged 6 months to 5 years were reported to always exhibit these behaviors (figure 2).

About one-fifth of children in this age group were reported to never, rarely, or only sometimes bounce back quickly when things did not go their way.

Difficulties facing challenging situations were common among school-aged children, among whom more than one-third (35.3 percent) were reported to never, rarely, or only sometimes stay calm and in control when faced with a challenge. More than a third (34.8 percent) of this population also exhibited difficulties in finishing tasks and following through with what they said that they would do. The most commonly reported behavior among children in this age group was showing interest and curiosity in learning new things, with 85.0 percent reported to usually or always exhibit this characteristic.

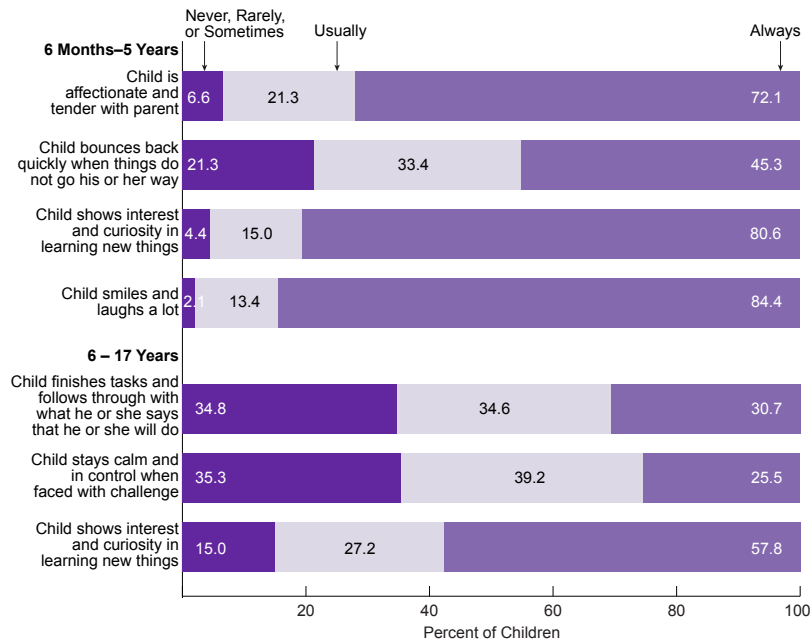
The prevalence of parent-reported flourishing behaviors and characteristics varied by both child and family characteristics. Greater proportions of children living in households with higher incomes and greater parental educational attainment were reported to usually or always exhibit all age-relevant behaviors and characteristics. For example, among children aged 6–17 years, 37.6 percent of those living in a household where neither parent had completed high school usually or always exhibited all three related behaviors compared to 54.9 percent among those living in a household where at least one parent or caregiver had completed college. Among children of all ages, girls were more likely than boys to be reported as meeting all age-specific measures of flourishing: 75.1 versus 71.3 percent, respectively, among younger children and 51.4 versus 44.1 percent, respectively, among school-aged children.

Figure 1. Overall Flourishing Behaviors and Characteristics Among Children Aged 6 months to 17 years, by Age, 2011–2012



*Parent or caregiver reported that the child usually or always exhibited: being affectionate and tender with the parent or caregiver, bouncing back quickly when things did not go their way, showing interest and curiosity in learning new things, and smiling and laughing a lot. **Parent or caregiver reported that the child usually or always exhibited: finishing tasks and following through, staying calm when faced with a challenge, and showing interest and curiosity in learning new things.

Figure 2. Detailed Flourishing Behaviors and Characteristics Among Children Aged 6 Months to 17 Years, by Age, 2011–2012



Data Sources

Figure 1 and 2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau; U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health, 2011–2012.

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AFFORDABLE CARE ACT

The Affordable Care Act, enacted on March 23, 2010, contains provisions to expand access to health insurance coverage, control health care costs, and improve health care quality for U.S. citizens and legal residents.¹ These comprehensive insurance reforms were implemented with the goal of all Americans having access to affordable health insurance options.

For children, a key provision of the Affordable Care Act is the extension of dependent coverage, allowing them to remain on their parents' insurance through age 26.² In 2011, an estimated 3.1 million young adults gained health insurance coverage as a result of this law.³ The Affordable Care Act also prevents health insurance plans from denying coverage for children aged 19 years and younger with preexisting medical conditions. In 2008, approximately 24 percent of children had a preexisting health condition that would prevent them from receiving coverage without the health reform law.⁴

The Affordable Care Act includes coverage without family co-pays for preventive health services for children (table 1).⁵ For example, preventive services for infants include screening for hearing, development, sickle cell disease, phenylketonuria, and several other health

conditions. These services are particularly important, as early detection of medical conditions during infancy can help prevent long-term disability and improve children's health and well-being. In 2007, before the enactment of the Affordable Care Act, an estimated 80 percent of children aged 10–47 months were not administered a screening test for developmental delays.⁷ In addition, 50 percent of newborns who did not pass hearing screenings did not receive further testing for the diagnosis of hearing loss between 2009 and 2010.⁸

Preventive services that are covered for adolescents include screening for sexually transmitted infections, obesity screening and counseling, immunizations, and alcohol and drug use assessments. These services are especially important for lessening the potential for adverse consequences from risky behaviors during adolescence. Before the enactment of the Affordable Care Act, more than half of sexually active females aged 15–21 years had not been screened for chlamydia between 2006 and 2010.⁶ In addition, tobacco use was not documented for 31 percent of outpatient visits among young adults aged 11–21 years during the 6-year period from 2004 to 2010.⁶

Table 1. Covered Preventive Services for Children Under the Affordable Care Act

| |
|--|
| Alcohol and drug use assessments for adolescents |
| Autism screening for children at 18 and 24 months |
| Behavioral assessments for children of all ages |
| Blood pressure screening for children |
| Cervical dysplasia screening for sexually active females |
| Congenital hypothyroidism screening for newborns |
| Depression screening for adolescents |
| Developmental screening for children under age 3 and surveillance throughout childhood |
| Dyslipidemia screening for children at higher risk of lipid disorders |
| Fluoride chemoprevention supplements for children without fluoride in their water source |
| Gonorrhea preventive medication for the eyes of all newborns |
| Hearing screening for all newborns |
| Height, weight, and body mass index measurements for children |
| Hematocrit or hemoglobin screening for children |
| Hemoglobinopathies or sickle cell screening for newborns |
| HIV screening for adolescents at higher risk |
| Immunization vaccines for children from birth to age 18 |
| Iron supplements for children aged 6–12 months at risk for anemia |
| Lead screening for children at risk of exposure |
| Medical history for all children throughout development |
| Obesity screening and counseling |
| Oral health risk assessment for young children |
| Phenylketonuria screening for this genetic disorder in newborns |
| Sexually transmitted infection prevention counseling and screening for adolescents at higher risk |
| Tuberculin testing for children at higher risk of tuberculosis |
| Vision screening for all children |

Data Sources

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FEDERAL PROGRAMS TO PROMOTE CHILD HEALTH

The U.S. Department of Health and Human Services' (HHS) Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau (MCHB) works to improve the physical and mental health, safety, and well-being of the maternal and child population, which includes all of the nation's women, infants, children, adolescents, and their families through a variety of programs.¹

Enacted in 1935, the Title V Maternal and Child Health Block Grant Program is the Nation's oldest federal-state partnership. State maternal and child health agencies apply for and receive formula grants each year that support programs designed to improve the health of women, infants, children and youth through population-based public health and preventive health care services. Some goals of the Title V program include ensuring access to quality care, especially for those households with limited incomes or limited care availability; increasing the number of children receiving health assessments and follow-up diagnostic and treatment services; providing and ensuring access to preventive and child care services and rehabilitative services for certain children; and implementing family-centered, community-based systems of coordinated care for children with special health care needs. A total of 59 states and jurisdictions receive Title V Maternal and Child Health Block Grant funding administered by MCHB. In fiscal year 2013, Title V programs served nearly 42 million individuals, including 2.3 million pregnant women, 4.0 million infants, 27.6 million children, and 2.7 million children with special health care needs.^{2,3}

The Healthy Start Program, also administered by MCHB, works to reduce the rate of infant mortality and improve perinatal outcomes through grants to communities with high infant mortality rates. In 2013, 105 Healthy Start projects were providing services in 39 states, the District of Columbia, and Puerto Rico, serving 196 different communities. These projects provide core services: direct outreach and client recruitment, health education, case management, depression screening and referral, and services between pregnancies.⁴ The life course perspective posits that birth outcomes can have long-term impacts on a child's health. Healthy Start aims to improve birth outcomes and thereby reduce the likelihood of adverse childhood health outcomes. Adverse consequences of being born preterm or with low birth weight include developmental problems, poorer health and social/emotional functioning throughout young adulthood, poorer educational achievement, lower college attendance, and higher incidence of health issues in adulthood such as high blood pressure and respiratory disorders.⁵⁻⁸

HRSA's Maternal, Infant, and Early Childhood Home Visiting Program facilitates collaboration and partnership at the federal, state, and community levels to improve health and developmental outcomes for at-risk children through evidence-based home visiting programs. The program provides grants to support programs to improve maternal and newborn health, promote school readiness and achievement, prevent family violence and child injury, and develop family economic self-sufficiency. In 2013, HRSA awarded \$109.5 million to the 52 eligible states and territories. In addition, approximately \$69.6 million was awarded to 13 states to expand existing programs.⁹ There is also a Tribal Maternal, Infant, and Early Childhood Home Visiting program for American Indian and Alaska Native communities.¹⁰

The Maternal, Infant, and Early Childhood Home Visiting Program is part of a portfolio of early learning initiatives that work together to support access to high-quality early education for all children. These initiatives focus on the early years in a child's life, since research has shown that the early years are a window of opportunity to develop a child's potential and shape academic, social, and cognitive skills that determine a child's success in school and life. This agenda includes the Preschool for All initiative to improve quality and expand access to preschool; the Child Care Development Fund initiative to subsidize the cost of child care for low-income households and increase the availability and quality of that care; Race to the Top: Early Learning Challenge, which challenges states to compete and deliver better training and education for early educators; and the reformation and expansion of Head Start. Through the American Recovery and Reinvestment Act, \$2.1 billion is invested in Head Start and Early Head Start. Efforts are underway to raise Head Start standards, promote accountability, focus on school readiness, and utilize a process to ensure only the highest quality programs receive Head Start grants.¹¹

Text messaging is a means of improving health knowledge, behaviors, and clinical outcomes, especially among hard-to-reach populations. Text4Baby is a free mobile health education service that provides evidence-based health messages regarding issues such as breastfeeding, immunizations, safe sleep, and nutrition. These text messages are intended for pregnant mothers and parents and caregivers of infants less than 1 year of age. Text4baby is a campaign of the National Healthy Mothers, Healthy Babies Coalition. TXT4Tots distributes short, evidence-based messages regarding nutrition and physical activity. These text messages are intended for parents and caregivers of children aged 1–5 years. Content for messages is derived from the American Academy of Pediatrics (AAP) Bright Futures recommendations. A 2012 environmental scan found that research has shown that health text messaging programs can bring about behavior change and improve treatment compliance to improve outcomes.¹²

Injuries are the leading public health threat facing those aged 1–44 years. More children die from injuries and violence than all diseases combined. Injuries are also the leading cause of disability and medical spending for children. Funded by MCHB, the Children's Safety Network aids states in planning, implementing, strengthening, and evaluating injury and violence prevention programs. The National Center for the Review and Prevention of Child Death strengthens state capacity to perform Child Death Reviews (CDR), develops prevention-oriented recommendations, and translates those recommendations into local policies and programs. CDR is a community-based action process intended to guide communities in identifying and solving problems that contribute to poor child and adolescent health outcomes.¹³ The CDC supports the Essentials for Childhood Framework, with evidence-based strategies for communities to promote relationships and environments that help children grow up to be healthy and productive, as well as the national Striving To Reduce Youth Violence Everywhere (STRIVE) initiative which focuses on preventing youth violence before it starts.^{14,15}

HRSA's Adolescent and Young Adult Health Program provides information and resources to assist health professionals, program ad-

ministrators, and policymakers in the development of programs and policies at the community, state, and national levels that will help adolescents and young adults thrive. This program supports the **National Adolescent Health Information and Innovation Center**, which collects and disseminates relevant information on the health, safety, development, and social and economic well-being of school-aged children in transition to adolescence.¹⁶

HRSA's **Stop Bullying Now! (SBN!)** campaign serves children and adolescents. Bullying is intentionally aggressive behavior that involves an imbalance of power. It can take many forms, and studies show that 15–25 percent of U.S. students are bullied. Bullying can affect educational success and have social and emotional consequences. The SBN! campaign connects with its audience through the Web at <http://www.stopbullying.gov>. When SBN! began in 2001, only nine states had legislation regarding bullying; today 45 states have such legislation. The SBN! campaign has more than 80 active partners, and six federal departments are working together to coordinate bullying prevention activities.¹⁷

Part of **HHS, the Administration for Children & Families (ACF)** promotes the economic and social well-being of families, children, individuals, and communities.¹⁸ Programs for children include adolescent pregnancy prevention, adoption, child abuse and neglect prevention and intervention, child care, child and family services reviews, child support, child welfare, early childhood development, foster care, Head Start, and runaway and homeless youth and unaccompanied children's services.¹⁹ The **ACF Office of Head Start** administers the Head Start program, which aims to improve school readiness of young children from low-income households through local community agencies. Head Start and **Early Head Start** programs provide comprehensive services to support emotional, social, and mental development for children aged 0–5 years. The program provides education, health, nutrition, social, and other services. Programs also support positive parent-child relationships and family well-being. Head Start services are delivered by 1,700 public and private nonprofit and for-profit agencies. More than 80 percent of the children served by Head Start in 2013 were 3–4 years old. Early Head Start serves pregnant women, infants, and toddlers and is available to families until their child turns 3 years old. More than 1 million children are served by Head Start programs annually. In 2013, with a budget of \$7.6 billion, Head Start programs served 932,164 children and their families, and Early Head Start served 150,100 children.^{20,21}

The **HHS Centers for Medicare and Medicaid Services' (CMS) Children's Health Insurance Program (CHIP)** was enacted in 1997. This program provides health care coverage to children in households whose incomes are too high to qualify for Medicaid but who cannot afford private coverage. CHIP is administered by the states and funded by both the federal government and states.²² From 1997 to 2012, the rate of uninsured children was halved, from 14 to 7 percent.²³ For 2013, \$19.1 billion was set aside for CHIP allotments, and 8.5 million children received insurance through CHIP at some time during the year.²⁴ The Affordable Care Act of 2010 extends CHIP and enhances federal funding for the program by maintaining CHIP eligibility standards through 2019 and extending funding through October 1, 2015. The CHIP federal matching rate will be increased by 23 percent,

resulting in an average federal matching rate for CHIP of 93 percent. The Affordable Care Act provided \$40 million to continue efforts to promote Medicaid and CHIP enrollment.²²

Launched by the First Lady, the **Let's Move!** program is a comprehensive initiative intended to address the challenge of childhood obesity within a generation. The program involves parents, elected officials, schools, health care professionals, community-based organizations, and private-sector companies. Components of the program include providing information for parents to foster environments that support healthy choices; providing healthier foods in schools; ensuring that all families have access to healthy, affordable food; and helping kids become more physically active.²⁵ As part of this effort, the President established the first-ever White House Task Force on Childhood Obesity to develop and implement an interagency plan to end childhood obesity.²⁵ The Let's Move! program is supported by the U.S. Department of Education, the U.S. Department of the Interior, the U.S. Department of Agriculture (USDA), HHS, the White House, and numerous other organizations.^{26,27}

The **USDA Food and Nutrition Service** administers the **Supplemental Nutrition Assistance Program (SNAP)**, which helped more than 47 million low-income Americans put food on the table in 2013. SNAP primarily serves vulnerable populations, especially households with children, elders, and disabled members. About 44 percent of all SNAP participants are children.^{28,29} Nutrition educators teach SNAP participants the importance of a healthy diet and how to prepare healthy foods and make healthy choices.³⁰ In 2013, the SNAP budget was \$79.9 billion, resulting in an average monthly benefit of \$133.07 per person.²⁹

The **USDA Special Supplemental Nutrition Program for Women, Infants and Children (WIC)** serves low-income pregnant, postpartum and breastfeeding women, and infants and children up to age 5 who are at risk for poor nutrition. Foods provided through the WIC program are designed to supplement recipients' diets with specific nutrients. Some WIC foods include iron-fortified adult cereal, vitamin C-rich fruit or vegetable juice, eggs, milk, cheese, and peanut butter. WIC served approximately 4.6 million children, 2 million infants, and 2 million women in 2013.³¹

The Food and Nutrition Service administers other programs that provide healthy food to children, including the **National School Lunch Program**, the **School Breakfast Program**, the **Child and Adult Care Food Program**, the **Summer Food Service Program**, the **Fresh Fruit and Vegetable Program**, and the **Special Milk Program**. These programs are administered by state agencies and help fight hunger and obesity by reimbursing organizations such as schools, child care centers, and afterschool programs for providing healthy meals to children.³² The National School Lunch Program operates in about 100,000 schools and child care institutions. It provided nutritionally balanced low-cost or free lunches to about 30 million children each school day in 2012.³³ The School Breakfast Program also operates in schools and child care institutions. Breakfasts served meet federal requirements, and eligible children are offered free or reduced-price breakfasts. In 2012, nearly 13 million children participated daily; of those, more than 10 million received their meals at a reduced price or for free.³⁴

Endnotes

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