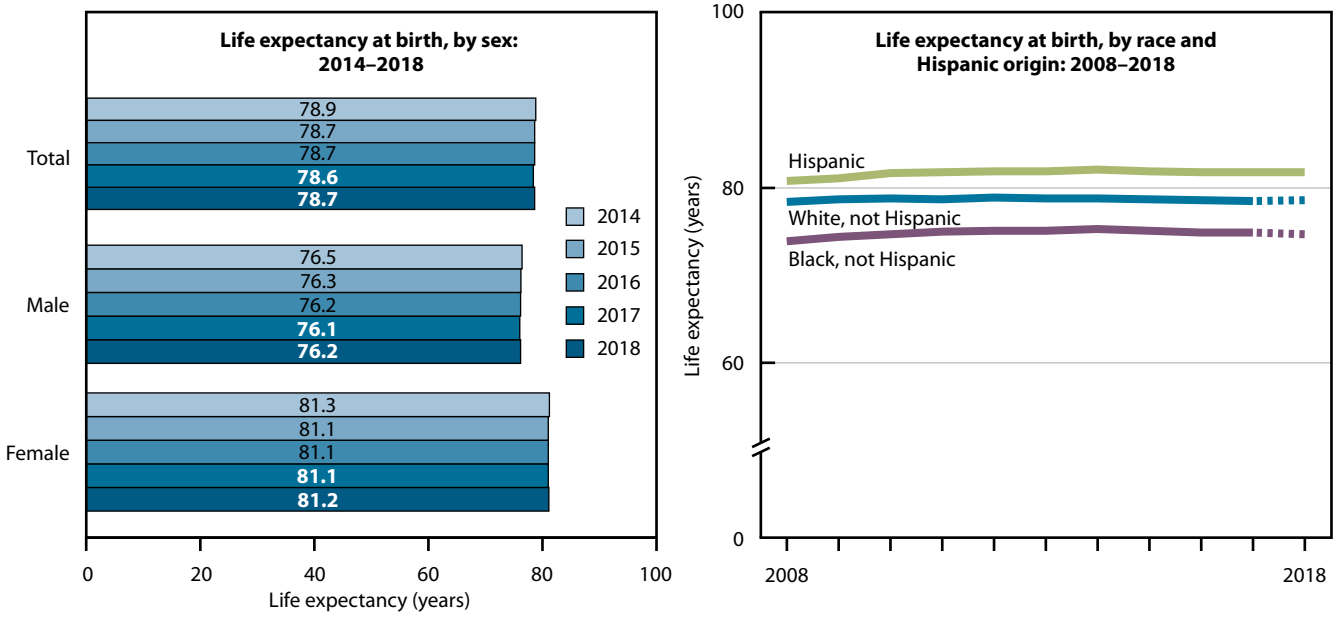
Chartbook

Health Status and Determinants

Life Expectancy at Birth

Figure 1. Life expectancy at birth, by sex and race and Hispanic origin: United States, 2008–2018



NOTES: Starting with 2018 data, race-specific estimates (dashed lines) are tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and are not completely comparable with estimates for earlier years. Persons of Hispanic origin may be of any race. See Technical Notes; Appendix II, Hispanic origin; Life expectancy; Race. See data table for Figure 1.
SOURCE: NCHS, National Vital Statistics System (NVSS), Mortality. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-001

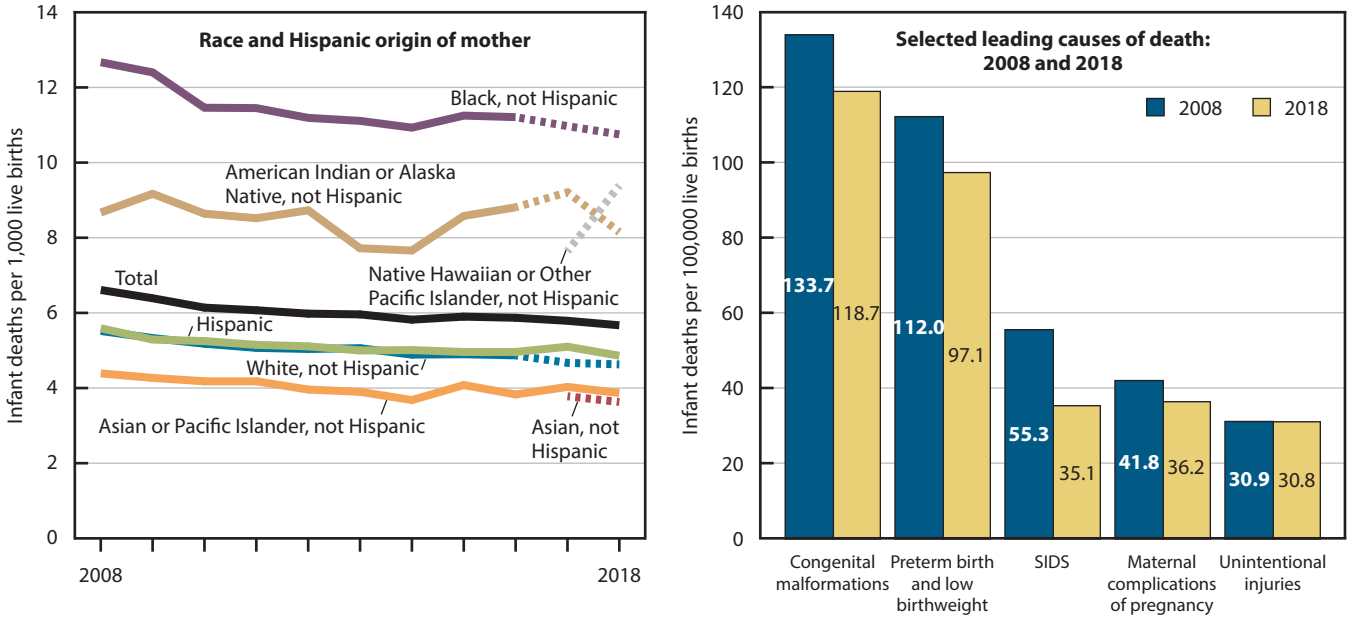
Life expectancy at birth is the age to which a newborn is expected to live given current age-specific death rates. It summarizes patterns in mortality across all age groups in a given year, demonstrating the long-term impacts of age-specific death rates (3).

In the United States, life expectancy at birth was 78.7 years in 2018, 0.5 year higher than in 2008 (data table for Figure 1). Despite the overall increase in life expectancy at birth over the period, life expectancy declined 0.2 year from 2014 to 2017, then increased 0.1 year in 2018 (data table for Figure 1). Increases in mortality from unintentional injuries, Alzheimer's disease, and suicide have contributed to the recent decreases in life expectancy (4).

Life expectancy at birth for males decreased 0.2 year from 76.5 in 2014 to 76.3 years in 2015, decreased another 0.1 year in 2016, and decreased again by 0.1 year to 76.1 years in 2017. From 2017 to 2018, life expectancy at birth for males increased 0.1 year to 76.2 years. Life expectancy at birth for females decreased 0.2 year from 81.3 in 2014 to 81.1 years in 2015, remained at 81.1 years through 2017, and then increased 0.1 year to 81.2 years in 2018. From 2008 to 2018, life expectancy for females was higher than for males, continuing a long-term pattern (5). In 2018, life expectancy at birth for females was 5.0 years higher than that for males.

From 2008 to 2018, life expectancy increased for Hispanic, non-Hispanic white, and non-Hispanic black persons. Throughout the period, life expectancy at birth was higher for Hispanic persons than for non-Hispanic white and non-Hispanic black persons. In 2008, the difference between the groups with the highest (Hispanic) and lowest (non-Hispanic black) life expectancy at birth was 6.9 years. In 2018, this difference increased to 7.1 years. However, the difference between non-Hispanic white and non-Hispanic black persons decreased over the period, from 4.5 years in 2008 to 3.9 years in 2018. In 2018, life expectancy at birth was 81.8 years for Hispanic persons, 78.6 years for non-Hispanic white persons, and 74.7 years for non-Hispanic black persons.

Figure 2. Infant mortality rates, by race and Hispanic origin of mother and selected leading causes of death: United States, 2008–2018



NOTES: Congenital malformations is congenital malformations, deformations and chromosomal abnormalities. SIDS is sudden infant death syndrome. Unintentional injuries is another term for accidents. Starting with 2017 data, race-specific estimates (dashed lines) are tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and are not completely comparable with estimates for earlier years. In 2017, the Asian or Pacific Islander group was split into two different race groups: Asian and Native Hawaiian or Other Pacific Islander. To look at longer trends, bridged-race estimates for the combined Asian or Pacific Islander group are also presented. Persons of Hispanic origin may be of any race. See Technical Notes; Appendix II, Hispanic origin; Race. See data table for Figure 2.
SOURCE: NCHS, National Vital Statistics System (NVSS), Linked Birth/Infant Death Data Set. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-002

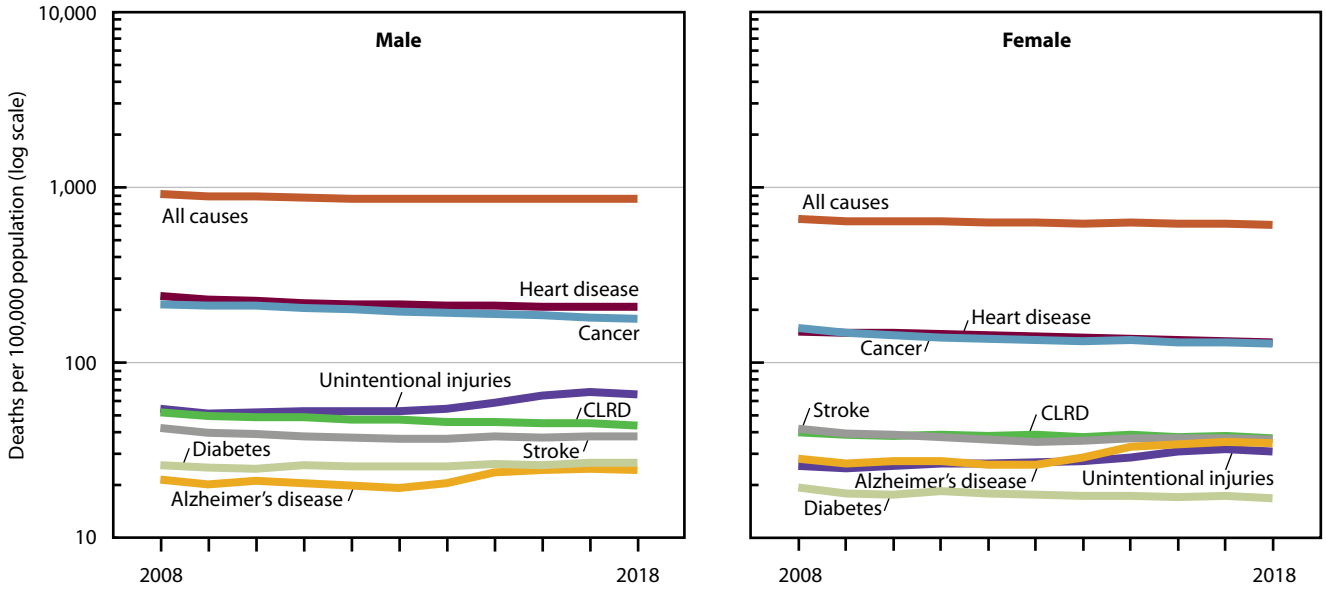
Infant mortality, the death of a baby before his or her first birthday, is a public health measure that reflects the health of the whole population, including living conditions, illness rates, access to health care, and maternal health (6,7).

From 2008 to 2010, the infant mortality rate decreased an average 3.9% per year from 6.61 to 6.14 infant deaths per 1,000 live births, and then decreased an average 0.9% per year to 5.67 in 2018. Among infants of non-Hispanic white women, the rate decreased an average 1.5% per year from 2008 to 2018. Among infants of non-Hispanic black women, the mortality rate decreased an average 5.3% per year from 2008 to 2010 and then decreased an average 0.7% per year through 2018. Among Hispanic women, the infant mortality rate decreased an average 1.0% per year from 2008 to 2018. Among infants of non-Hispanic American Indian or Alaska Native women, the mortality rate showed no clear trend from 2008 to 2018. Starting with 2017 data, estimates for non-Hispanic Asian and non-Hispanic Native Hawaiian or Other Pacific Islander groups are shown separately. It is still possible to look at longer-term trends among the combined group of non-Hispanic Asian or Pacific Islander women using bridged-race estimates. The infant mortality rate for this combined group decreased an average 1.1% per year from 2008 to 2018.

In 2018, infant deaths per 1,000 live births was 10.75 among non-Hispanic black women, 8.15 among non-Hispanic American Indian or Alaska Native women, 9.39 among non-Hispanic Native Hawaiian or Other Pacific Islander women, 4.86 among Hispanic women, 4.63 among non-Hispanic white women, and 3.63 among non-Hispanic Asian women. (See Technical Notes, Racial and Ethnic Data, for a discussion of changes in the presentation of estimates by race and Hispanic origin.)

In 2018, 56.1% of infant deaths were attributable to: congenital malformations, preterm births and low birth weight, sudden infant death syndrome (SIDS), maternal complications of pregnancy, and unintentional injuries. From 2008 to 2018, the number of infant deaths per 100,000 live births decreased for deaths due to congenital malformations (from 133.74 to 118.71), preterm births and low birth weight (from 112.00 to 97.12), SIDS (from 55.33 to 35.11), and maternal complications of pregnancy (from 41.80 to 36.17). The rates of infant deaths from unintentional injuries in 2008 and 2018 were similar (30.92 and 30.83 infant deaths per 100,000 live births, respectively).

Figure 3. Age-adjusted death rates for selected causes of death for all ages, by sex: United States, 2008–2018



NOTES: CLRD is chronic lower respiratory disease. Unintentional injuries is another term for accidents. Stroke is the major component of cerebrovascular disease. See data table for Figure 3.
SOURCE: NCHS, National Vital Statistics System (NVSS), Mortality. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-003

Death rates are an important measure of population health. In 2018, 2,839,205 deaths were registered in the United States (5). The age-adjusted all-cause death rate was 723.6 deaths per 100,000 population in 2018, down from 774.9 in 2008.

From 2008 to 2018, heart disease and cancer remained the top two leading causes of death. Throughout the period, age-adjusted death rates decreased for heart disease and cancer, although the decline slowed for heart disease from 2011 to 2018. In 2018, age-adjusted deaths per 100,000 population for heart disease were 207.5 among males and 127.9 among females, and age-adjusted death rates for cancer were 176.8 among males and 128.6 among females.

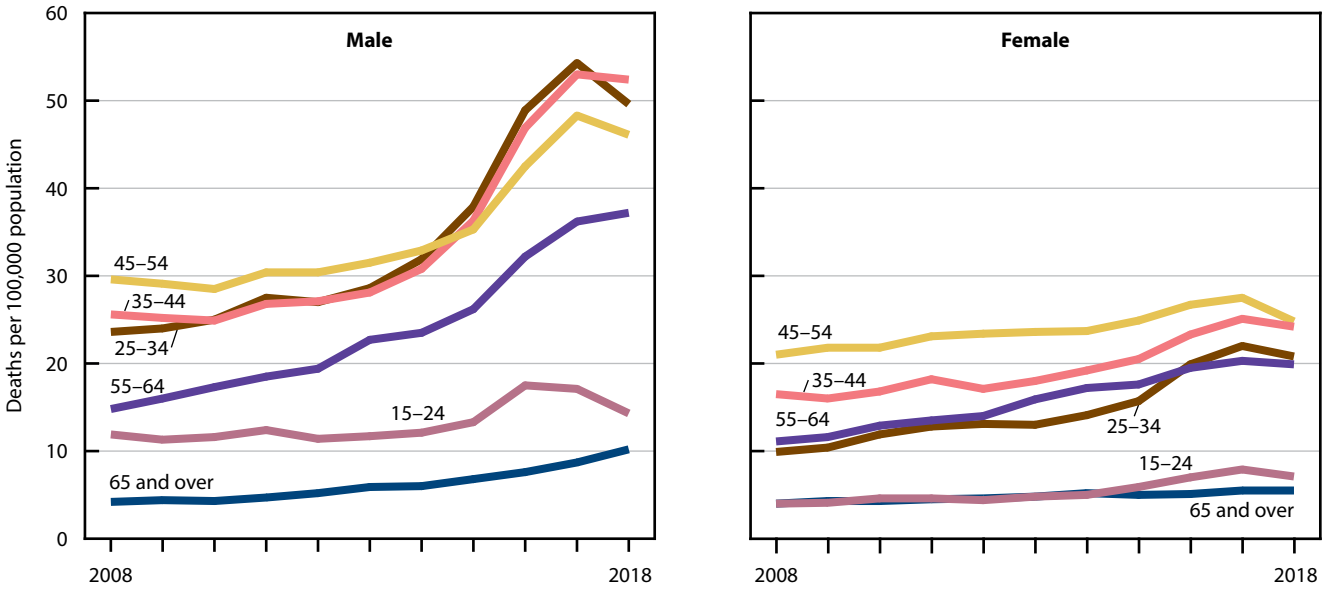
The age-adjusted death rate for unintentional injuries—which includes unintentional drug overdoses (8)—was stable among males from 2008 to 2013, and then increased an average 5.5% per year from 53.1 in 2013 to 65.9 in 2018. The rate among females increased an average 2.6% per year from 25.4 in 2008 to 31.0 in 2018.

Age-adjusted deaths per 100,000 population for chronic lower respiratory disease decreased for both males and females from 2008 to 2018, by an average 1.5% per year among males (from 52.3 in 2008 to 43.7 in 2018) and 0.4% per year among females (from 39.8 in 2008 to 36.8 in 2018). Age-adjusted death rates for stroke decreased for both males and females from 2008 to 2012—by an average 3.1% per year among males and 3.3% per year among females—and then were stable through 2018. In 2018, age-adjusted rates for stroke were 37.6 among males and 36.1 among females.

Age-adjusted death rates for Alzheimer's disease were stable from 2008 to the early 2010s among both males and females, and then increased through 2018—by an average 5.2% per year among males (from 19.3 in 2013 to 24.5 in 2018) and 5.5% per year among females (from 26.1 in 2012 to 34.2 in 2018). From 2008 to 2018, the age-adjusted death rate for diabetes decreased among females an average 1.0% per year from 19.1 in 2008 to 16.8 in 2018. The age-adjusted rate for diabetes among males increased an average 0.6% per year from 25.9 in 2008 to 26.9 in 2018.

In 2018, age-adjusted deaths per 100,000 population were higher among males than females for all selected causes of death except Alzheimer's disease, which was higher among females (34.2) than males (24.5).

Figure 4. Drug overdose death rates among persons aged 15 years and over, by sex and age: United States, 2008–2018



NOTES: Drug overdose deaths are identified using *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause of death codes X40–X44 (unintentional drug poisoning), X60–X64 (suicide by drug poisoning), X85 (homicide by drug poisoning), and Y10–Y14 (drug poisoning of undetermined intent). See data table for Figure 4.
SOURCE: NCHS, National Vital Statistics System (NVSS), Mortality. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-004

Drug overdose deaths remain a public health concern in the United States. In 2018, there were 67,367 drug overdose deaths nationwide—fewer than in 2017 (70,237 deaths) but more than in 2008 (36,450 deaths) (8). In 2018, most drug overdose deaths involved an opioid (69.5%), as this category continued its pattern of driving changes in the overall drug overdose death rate in recent years (8,9).

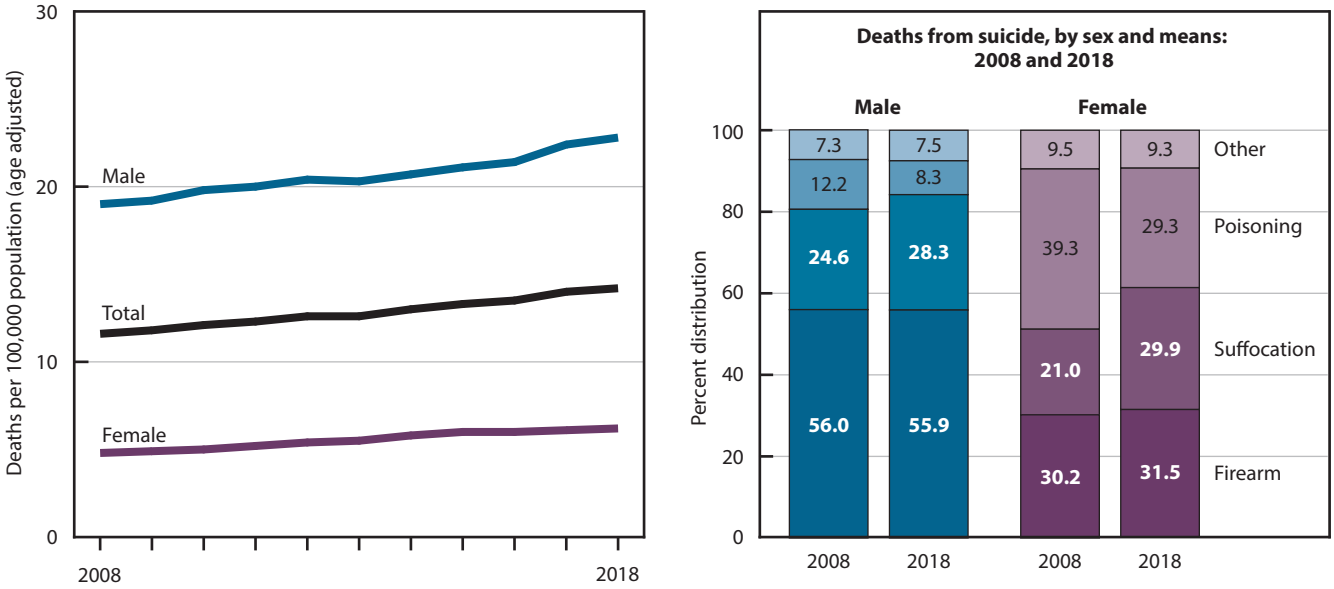
The age-adjusted drug overdose death rate was stable from 2008 (11.9 deaths per 100,000) to 2013 and then increased to 20.7 in 2018. However, from 2017 to 2018, a 4.6% decrease occurred in the drug overdose death rate (8) (data table for Figure 4).

Among males, the age-adjusted drug overdose death rate was higher in 2018 (27.9 deaths per 100,000) compared with 2008 (14.9) (data table for Figure 4). The age-adjusted drug overdose death rate remained stable from 2008 to 2013 and then increased an average 12.5% per year through 2018. Among the age groups shown, drug overdose death rates among males increased from 2008 to 2018 among those aged 15–24, 25–34, and 55–64, and increased at different rates from 2008 to 2018 among those aged 65 and over. Among males aged 35–44 and 45–54, death rates were stable from 2008 to 2013 and then increased to 2018. In 2018, drug overdose death rates among males were lowest among those aged 65 and over (10.2) and highest among those aged 35–44 (52.4).

Among females, the age-adjusted drug overdose death rate was higher in 2018 (13.6) compared with 2008 (8.9). The rate increased by an average 5.0% per year from 2008 to 2018. Drug overdose death rates among females increased from 2008 to 2018 among those aged 15–24, 25–34, 35–44, 45–54, and 65 and over. Among those aged 55–64, death rates increased from 2008 to 2016 and then were stable through 2018. In 2018, drug overdose death rates among women were lowest among those aged 65 and over (5.5) and highest among those aged 35–44 and 45–54 (24.2 and 24.8, respectively). In 2018, for all age groups shown, drug overdose death rates were higher among males than females.

Despite overall increases in drug overdose death rate trends, death rates decreased for this cause from 2017 to 2018 among males and females aged 15–24, 25–34, and 45–54. Among men and women aged 35–44 and 55–64, and women aged 65 and over, drug overdose death rates did not change from 2017 to 2018.

Figure 5. Suicide, by sex and means: United States, 2008–2018



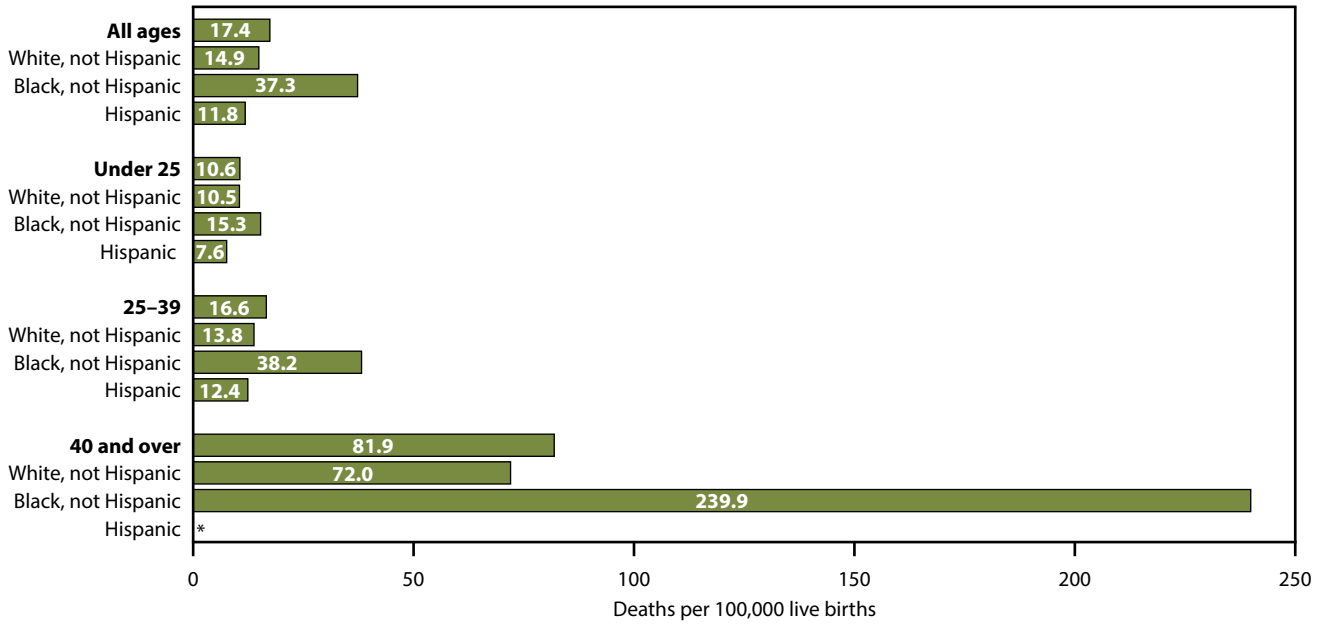
NOTES: Suicide deaths are identified using *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause of death codes U03, X60–X84, and Y87.0. Estimates may not sum to 100% due to rounding. See data table for Figure 5.
SOURCE: NCHS, National Vital Statistics System (NVSS), Mortality. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-005

The age-adjusted suicide rate in the United States has increased steadily since 1999 (10–12). Since 2008, suicide has been the 10th leading cause of death (13,14).

From 2008 to 2018, the age-adjusted suicide rate increased an average 2.0% per year from 11.6 to 14.2 deaths per 100,000 population. The age-adjusted rate among males increased an average 1.4% per year from 19.0 in 2008 to 21.4 in 2016 and then increased an average 3.5% per year to 22.8 in 2018. The age-adjusted rate among females increased an average 3.4% per year from 4.8 in 2008 to 6.0 in 2015, and then showed no clear trend through 2018 (6.2 deaths per 100,000). In each year from 2008 to 2018, the age-adjusted suicide rate was higher among males than females.

Among males, the percentage of suicides involving firearms was stable from 2008 to 2018. The percentage of suicides involving suffocation increased by 0.3 percentage point per year over the period. The percentage of suicides involving poisoning declined during the period, although at varying rates. In 2018, firearms were the most frequent means of suicide among males, accounting for more than one-half of suicides (55.9%). Suicide by suffocation was the next most common (28.3%), followed by poisoning (8.3%). Among females, the percentage of suicides involving poisoning declined during the period, although at varying rates. From 2008 to 2018, the percentage of suicides involving firearms showed no clear trend. The percentage of suicides involving suffocation increased an average 0.8 percentage point per year over the period. In 2018, firearms (31.5%), suffocation (29.9%), and poisoning (29.3%) were the most frequent means of suicide among females.

Figure 6. Maternal mortality, by age and race and Hispanic origin: United States, 2018



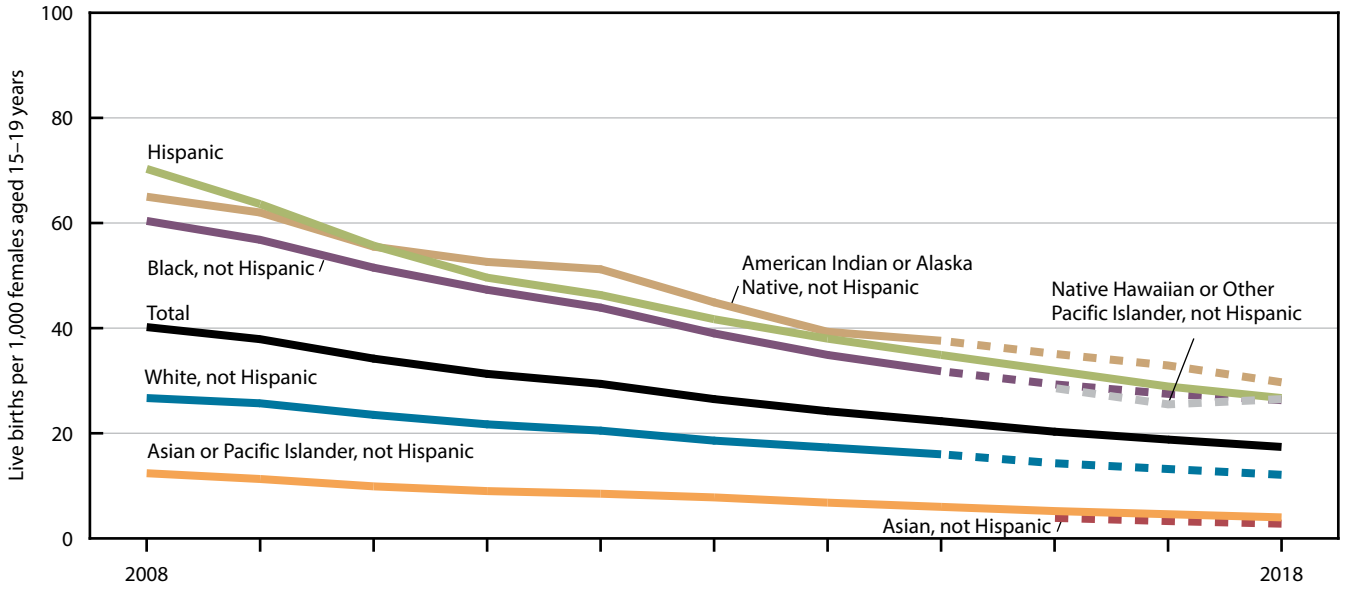
* Estimate is considered unreliable; rate not shown is based on fewer than 20 deaths in the numerator.
NOTES: Maternal deaths are defined by the World Health Organization as the death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management. Deaths resulting from accidents, homicides, and suicides are excluded. Race-specific estimates are tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity." Estimates by race may differ from other estimates based on the same data and presented elsewhere if race groups are defined differently. Persons of Hispanic origin may be of any race. For more information, see Appendix II, Hispanic origin; Maternal death; Race. See data table for Figure 6.
SOURCE: NCHS, National Vital Statistics System (NVSS), Mortality. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-006

Maternal mortality is defined by the World Health Organization as the death of a woman while pregnant or within 42 days of being pregnant from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (15). Maternal mortality estimates have not been reported since 2007 due to the staggered implementation of the 2003 U.S. Standard Certificate of Death between 2003 and 2018, which added a checkbox to determine pregnancy status at the time of death (16–18). An extensive review determined that the most accurate measurement of maternal mortality used the information from the pregnancy checkbox for women aged 44 and under and did not use this information for women aged 45 and over (16).

In 2018, the maternal mortality rate for women of all ages was 17.4 deaths per 100,000 live births (658 deaths). Women aged 40 and over (81.9 deaths per 100,000 live births) had a higher maternal mortality rate than women aged 25–39 (16.6 deaths per 100,000 live births) and women under age 25 (10.6 deaths per 100,000 live births). Among the three race and Hispanic-origin groups shown, maternal deaths per 100,000 live births among non-Hispanic black women (37.3) were more than twice the rate among non-Hispanic white women (14.9) and more than three times the rate among Hispanic women (11.8).

The disparities in maternal mortality by race and Hispanic origin found for all ages were also found within certain age groups. In 2018, among women aged 25–39 and 40 and over, non-Hispanic black women had higher maternal mortality rates than non-Hispanic white and Hispanic women. Among women under age 25, maternal deaths per 100,000 live births were 15.3 for non-Hispanic black women, 10.5 for non-Hispanic white women, and 7.6 for Hispanic women. Among women aged 25–39, maternal deaths per 100,000 live births were 38.2 for non-Hispanic black women, 13.8 for non-Hispanic white women, and 12.4 for Hispanic women. Among women aged 40 and over, maternal deaths per 100,000 live births were 239.9 for non-Hispanic black women, more than three times the rate for non-Hispanic white women (72.0).

Figure 7. Teen births among females aged 15–19 years, by race and Hispanic origin: United States, 2008–2018



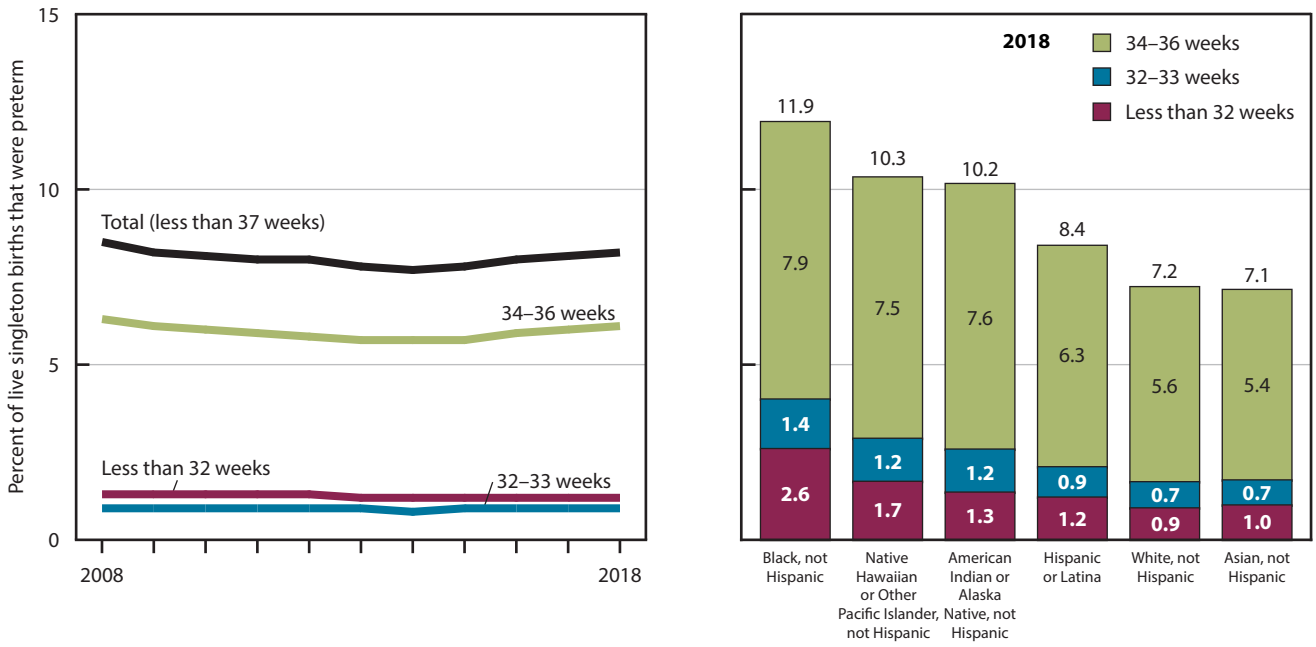
NOTES: Starting with 2016 data, race-specific estimates (dashed lines) are tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and are not completely comparable with estimates for earlier years. In 2016, the Asian or Pacific Islander group was split into two different race groups: Asian and Native Hawaiian or Other Pacific Islander. To look at longer trends, bridged-race estimates for the combined Asian or Pacific Islander group are also presented. Persons of Hispanic origin may be of any race. See Technical Notes; Appendix II, Hispanic origin; Race. See data table for Figure 7.
SOURCE: NCHS, National Vital Statistics System (NVSS), Natality. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-007

Teen births—births to females under age 20—may carry negative social and health consequences for the mother and baby (19). Infants born to teen mothers are at increased risk of low birth weight and preterm birth, which, in turn, puts them at risk of infant morbidity and mortality (20).

In 2018, a total of 179,871 babies were born to teenagers aged 15–19. From 2008 to 2018, birth rates among teenagers decreased an average 8.2% per year, from 40.2 to 17.4 live births per 1,000 females. Teen birth rates decreased among each race and Hispanic-origin group from 2008 to 2018, although the percentage decrease varied by group. Birth rates decreased an average 8.5% per year among non-Hispanic black teenagers and 7.6% per year among non-Hispanic American Indian or Alaska Native teenagers from 2008 to 2018. Among non-Hispanic white teenagers, the birth rate decreased an average 6.7% per year from 2008 to 2012, and then decreased more rapidly by an average 8.4% per year through 2018. Among Hispanic teenagers, the birth rate decreased an average 10.9% per year from 2008 to 2011, and then decreased more slowly by an average 8.6% per year through 2018. Estimates for non-Hispanic Asian and non-Hispanic Native Hawaiian or Other Pacific Islander groups are shown separately. It is still possible to look at longer-term trends among the combined group of non-Hispanic Asian or Pacific Islander women using bridged-race estimates. The birth rate for this combined group decreased an average 9.0% per year from 2008 to 2013, and then decreased more rapidly by an average 12.0% per year through 2018.

In 2018, live births per 1,000 females among non-Hispanic American Indian or Alaska Native (29.7), Hispanic (26.7), non-Hispanic Native Hawaiian or Other Pacific Islander (26.5), and non-Hispanic black (26.3) teenagers were more than twice those among non-Hispanic white teenagers (12.1). Non-Hispanic Asian teenagers had the lowest birth rate (2.8) of the race and Hispanic-origin groups in 2018. (See Technical Notes, Racial and Ethnic Data, for a discussion of changes to the presentation of estimates by race and Hispanic origin.)

Figure 8. Preterm singleton births, by gestational age and race and Hispanic origin of mother: United States, 2008–2018



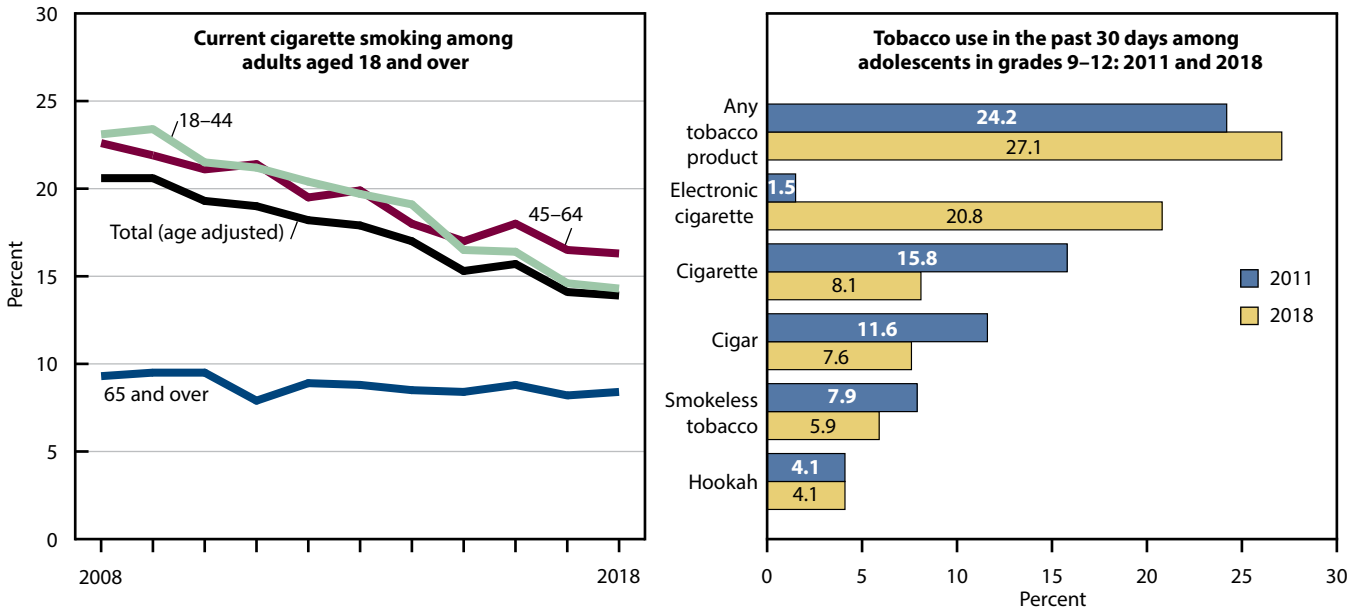
NOTES: Preterm singleton births are based on the obstetric estimate of gestational age and limited to singleton births. Singleton births refer to single births, in contrast with multiple or higher-order births, such as twins or triplets. Starting with 2016 data, race-specific estimates are tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and are not completely comparable with estimates for earlier years. In 2016, the Asian or Pacific Islander group was split into two different race groups: Asian and Native Hawaiian or Other Pacific Islander. Persons of Hispanic origin may be of any race. Estimates may not sum to total percentage due to rounding. See Appendix II, Hispanic origin; Race. See data table for Figure 8.
SOURCE: NCHS, National Vital Statistics System (NVSS), Natality. Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-008

Gestational age is an important predictor of an infant's survival and subsequent health (21–25). Preterm births, defined as births delivered at less than 37 completed weeks of gestation, is a leading cause of infant death in the United States (Figure 2). Infants delivered at less than 32 completed weeks of gestation (early preterm births) are at the greatest risk of death during infancy compared with infants born with longer gestational ages (26). Preterm births are more likely to occur in twin or higher-order pregnancies. In *Health, United States*, preterm births are examined among singleton births only.

The total percentage of singleton births that were preterm decreased an average 1.4% per year from 8.5% in 2008 to 7.7% in 2014, and then increased an average 1.8% per year to 8.2% in 2018, driven by changes in late preterm births (27). The percentage of births that were early preterm decreased an average 0.6% per year from 2008 to 2015 and then was stable through 2018. The percentage of births that were moderate preterm (32–33 weeks) decreased an average 0.7% per year from 2008 to 2014, and then increased an average 1.1% per year through 2018. The percentage of births that were late preterm (34–36 weeks) decreased an average 1.7% per year from 2008 to 2014, and then increased an average 2.3% per year through 2018.

In 2018, non-Hispanic black women had the highest percentage of preterm births (11.9%), while non-Hispanic Asian (7.1%) and non-Hispanic white (7.2%) women had the lowest. Across each of the three gestational age groups, non-Hispanic black, non-Hispanic Native Hawaiian or Other Pacific Islander, and non-Hispanic American Indian or Alaska Native women were more likely to have a preterm birth than Hispanic, non-Hispanic white, and non-Hispanic Asian women in 2018.

Figure 9. Cigarette smoking among adults aged 18 and over, by age, and tobacco use among adolescents in grades 9–12, by type of product: United States, 2008–2018



NOTES: Current cigarette smoking by adults is defined as ever smoking 100 cigarettes in their lifetime and smoking now every day or some days. Use of tobacco products by high school students in grades 9–12 is defined as having used the product on one or more days during the past 30 days. Data on pipe tobacco can be found in the data table. See data table for Figure 9. Data for the 2019 National Youth Tobacco Survey (NYTS) are available but not shown. Changes made to the 2019 NYTS could result in higher estimates of tobacco use and therefore are not directly comparable with estimates from prior years. For 2019 estimates, see https://www.cdc.gov/mmwr/volumes/68/ss/ss6812a1.htm. SOURCE: NCHS, National Health Interview Survey (NHIS) (Current cigarette smoking chart); and CDC, National Youth Tobacco Survey (NYTS) (Tobacco use chart). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-009

Cigarette smoking causes several diseases, including coronary heart disease, stroke, chronic obstructive pulmonary disease, and cancer (28). Of risk factors evaluated by the U.S. Burden of Disease Collaborators for 2016, tobacco use was the second-leading risk factor for death in the United States (29).

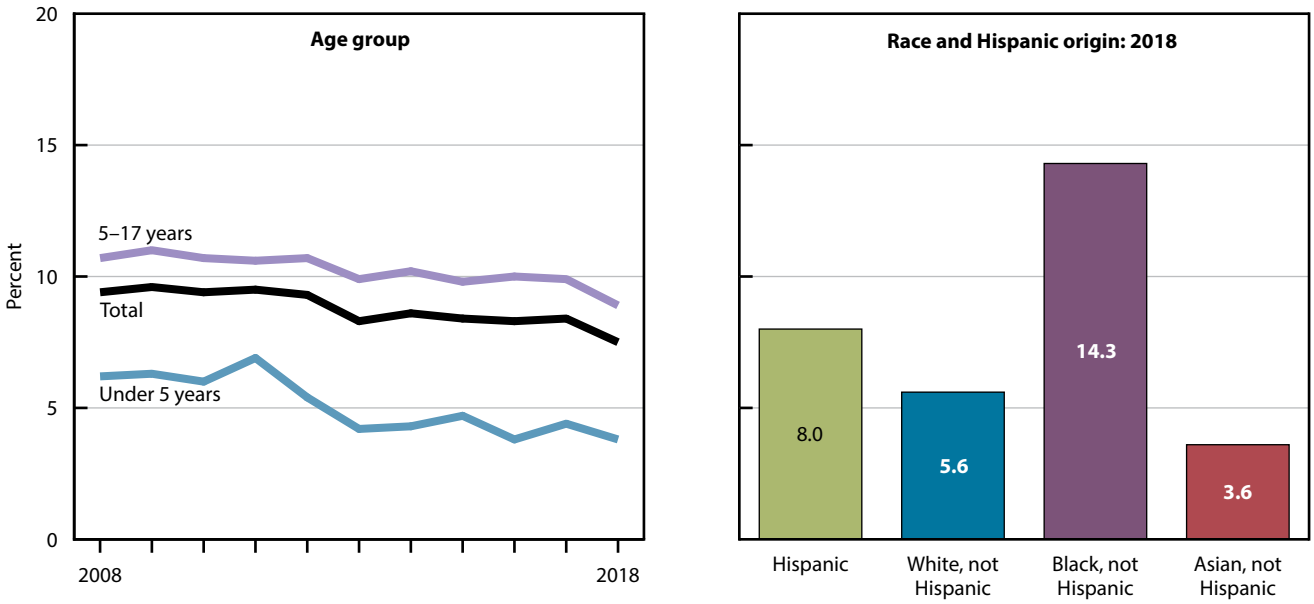
Overall, the age-adjusted percentage of adults aged 18 and over who currently smoked cigarettes decreased an average 0.7 percentage point per year from 20.6% in 2008 to 13.9% in 2018. From 2008 to 2018, the percentage of adults who currently smoked cigarettes decreased among adults aged 18–44, 45–64, and 65 and over. Among adults aged 18–44, current cigarette smoking decreased an average 1.0 percentage point per year from 23.1% in 2008 to 14.3% in 2018. Among adults aged 45–64, current cigarette smoking decreased an average 0.7 percentage point per year from 22.6% in 2008 to 16.3% in 2018. Among adults aged 65 and over, current cigarette smoking decreased an average 0.1 percentage point per year from 9.3% in 2008 to 8.4% in 2018.

From 2008 to 2015, the percentage of adults who currently smoked cigarettes did not differ among those aged 18–44 and those aged 45–64; however, from 2016 to 2018, the percentage was higher among adults aged 45–64. Current cigarette smoking remained the lowest among adults aged 65 and over throughout the period.

Electronic cigarettes (e-cigarettes) were introduced in the United States around 2007 (30). These battery-powered tobacco products typically deliver nicotine and other chemicals, such as propylene glycol and flavorings, in the form of an aerosol (31). Increases in e-cigarette use contributed to the increase in any tobacco product use among high school students during 2017–2018, erasing the decrease in any tobacco product use observed since 2011 (32,33).

The use of any tobacco product in the past 30 days among students in grades 9–12 did not differ in 2018 compared with 2011. While the use of most individual products—cigarettes, cigars, smokeless tobacco, and pipe tobacco—decreased over this period, use of e-cigarettes in the past 30 days increased from 1.5% in 2011 to 20.8% in 2018. From 2017 to 2018, e-cigarette use among students in grades 9–12 increased by 77.8%, from 11.7% to 20.8% (data table for Figure 9).

Figure 10. Current asthma among children under age 18 years, by age and race and Hispanic origin: United States, 2008–2018



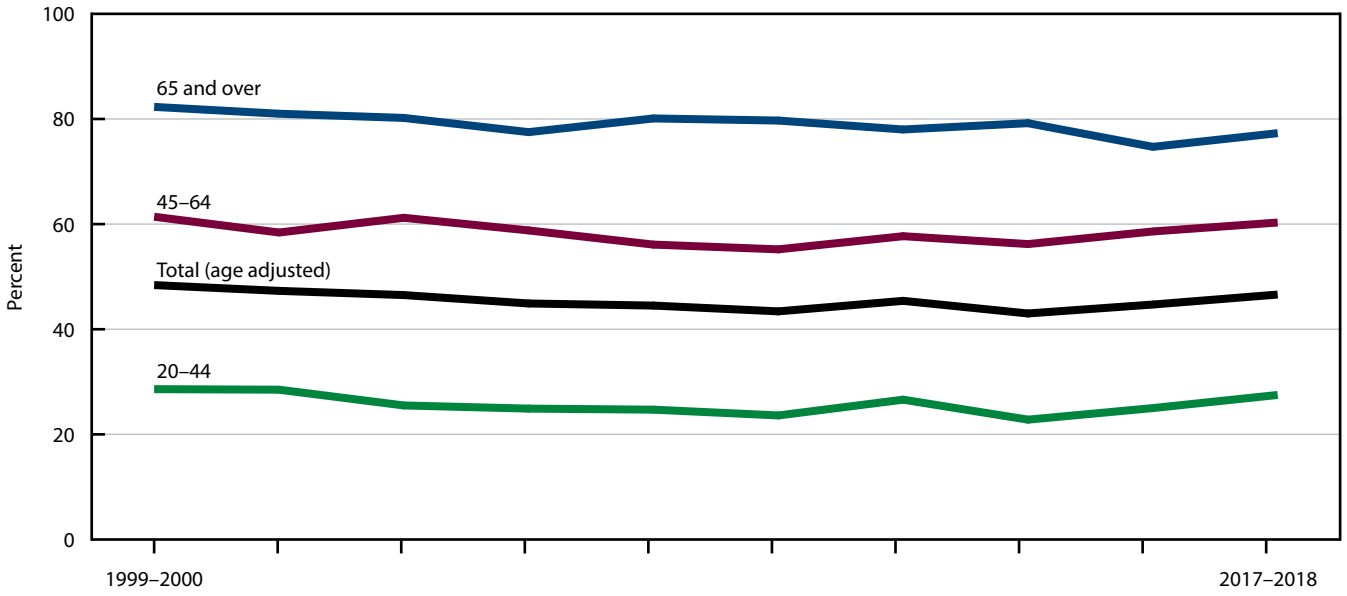
NOTES: Current asthma is based on a parent or knowledgeable adult responding yes to both questions, "Has a doctor or other health professional ever told you that your child had asthma?" and "Does your child still have asthma?" See data table for Figure 10.
SOURCE: NCHS, National Health Interview Survey (NHIS). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-010

Asthma is a chronic lung disease that inflames and narrows the airways, causing recurring periods of wheezing, chest tightness, shortness of breath, and coughing (34).

The prevalence of current asthma among children under age 18 years decreased an average 0.2 percentage point per year from 9.4% in 2008 to 7.5% in 2018. From 2008 to 2018, the prevalence of current asthma among children under age 5 years decreased an average 0.3 percentage point per year from 6.2% to 3.8%, and the prevalence among children aged 5–17 years decreased an average 0.2 percentage point per year from 10.7% to 8.9%. From 2008 to 2018, the prevalence of asthma was lower among children under age 5 years compared with children aged 5–17 years. In 2018, the prevalence of asthma among children aged 5–17 years was about twice as high as among children under age 5 years.

In 2018, the prevalence of current asthma among children under age 18 years varied across race and Hispanic-origin groups. The prevalence was highest among non-Hispanic black children (14.3%) compared with Hispanic (8.0%), non-Hispanic white (5.6%), and non-Hispanic Asian (3.6%) children.

Figure 11. Hypertension among adults aged 20 and over, by age: United States, 1999–2000 through 2017–2018



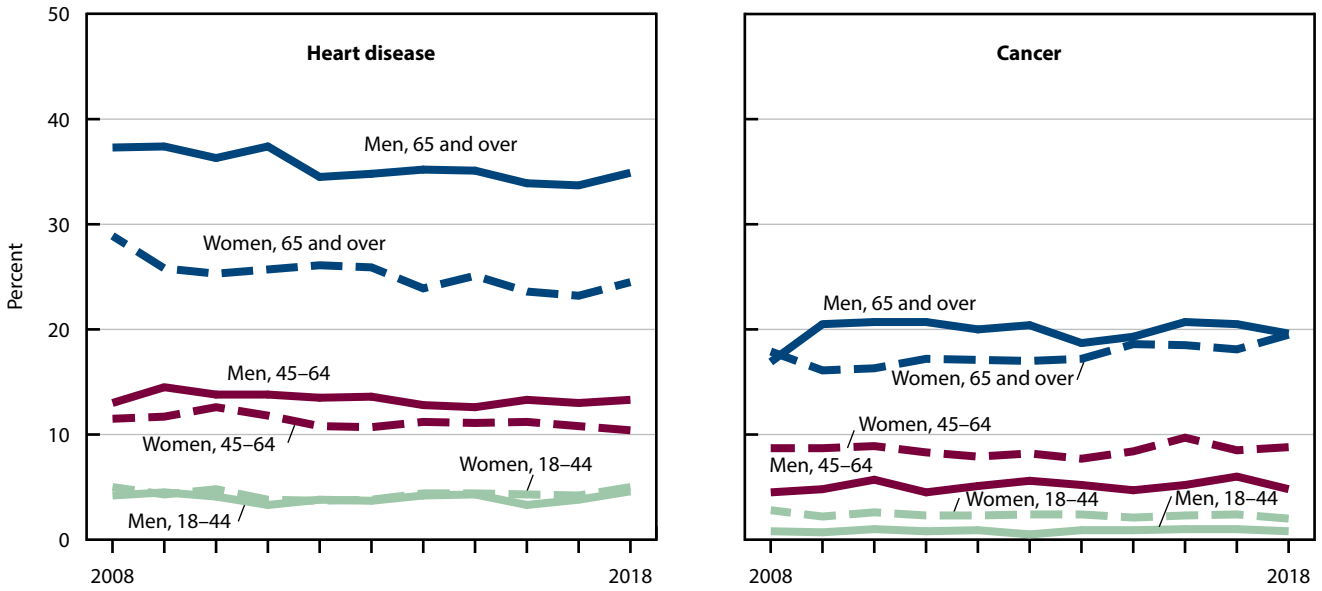
NOTES: Hypertension is defined as having measured high blood pressure (systolic pressure of at least 130 mm Hg or diastolic pressure of at least 80 mm Hg) or taking high blood pressure medication. Overall estimates are age adjusted; age-specific estimates are crude. For more information, see Appendix II, Hypertension; Table VI. See data table for Figure 11.
SOURCE: NCHS, National Health and Nutrition Examination Survey (NHANES). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-011

Hypertension is a risk factor for cardiovascular disease, stroke, and other health conditions (35,36), and a leading preventable cause of cardiovascular deaths in the United States (37–39). In 2017, the American College of Cardiology and the American Heart Association Task Force recommended adopting lower thresholds of high blood pressure. For systolic blood pressure, the threshold was lowered from 140 mm Hg to 130 mm Hg, and for diastolic blood pressure, from 90 mm Hg to 80 mm Hg (35,36).

Starting with this year's *Health, United States*, hypertension is defined as having measured high blood pressure using the 2017 guidelines (systolic blood pressure of at least 130 mm Hg or diastolic blood pressure of at least 80 mm Hg) or currently taking high blood pressure medication. Using this definition, the prevalence of age-adjusted hypertension among adults aged 20 and over decreased from 48.4% in 1999–2000 to 43.0% in 2013–2014, and then increased to 46.6% in 2017–2018. The prevalence of hypertension among adults aged 20–44 decreased from 28.6% in 1999–2000 to 22.8% in 2013–2014, and then increased to 27.5% in 2017–2018. The prevalence of hypertension among adults aged 45–64 decreased from 61.4% in 1999–2000 to 55.2% in 2009–2010, and then was stable through 2017–2018 (60.3%). From 1999–2000 to 2017–2018, the prevalence of hypertension among adults aged 65 and over decreased from 82.3% to 77.3%. Throughout the period, the prevalence of hypertension increased with age. In 2017–2018, the prevalence of hypertension among adults aged 65 and over was 2.8 times that among adults aged 20–44.

Compared with the former guidelines for hypertension (35), the 2017 revised guidelines (36) resulted in a higher percentage of the population aged 20 and over being categorized as having hypertension—46.6% instead of 31.0% (age adjusted) in 2017–2018. Implementation of the revised 2017 hypertension guidelines resulted in increases in prevalence among all adult age groups (aged 20 and over). The impact was greatest among adults aged 20–44, where the 2017–2018 prevalence more than doubled from 10.5% to 27.5% (data table for Figure 11).

Figure 12. Heart disease and cancer among adults aged 18 and over, by sex and age: United States, 2008–2018



NOTES: Heart disease is based on self-reported responses to questions about whether respondents had ever been told by a doctor or other health professional that they had coronary heart disease, angina (angina pectoris), a heart attack (myocardial infarction), or any other kind of heart disease or heart condition. Cancer is based on self-reported responses to a question about whether respondents had ever been told by a doctor or other health professional that they had cancer or a malignancy of any kind (excluding squamous cell and basal cell carcinomas). See data table for Figure 12.
SOURCE: NCHS, National Health Interview Survey (NHIS). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-012

Heart disease and cancer are the top two causes of death in the United States, accounting for 44.2% of all deaths in 2018 (Table 6). Heart disease and cancer mortality have decreased over the past several decades, although the decrease in heart disease mortality has slowed recently (14,40).

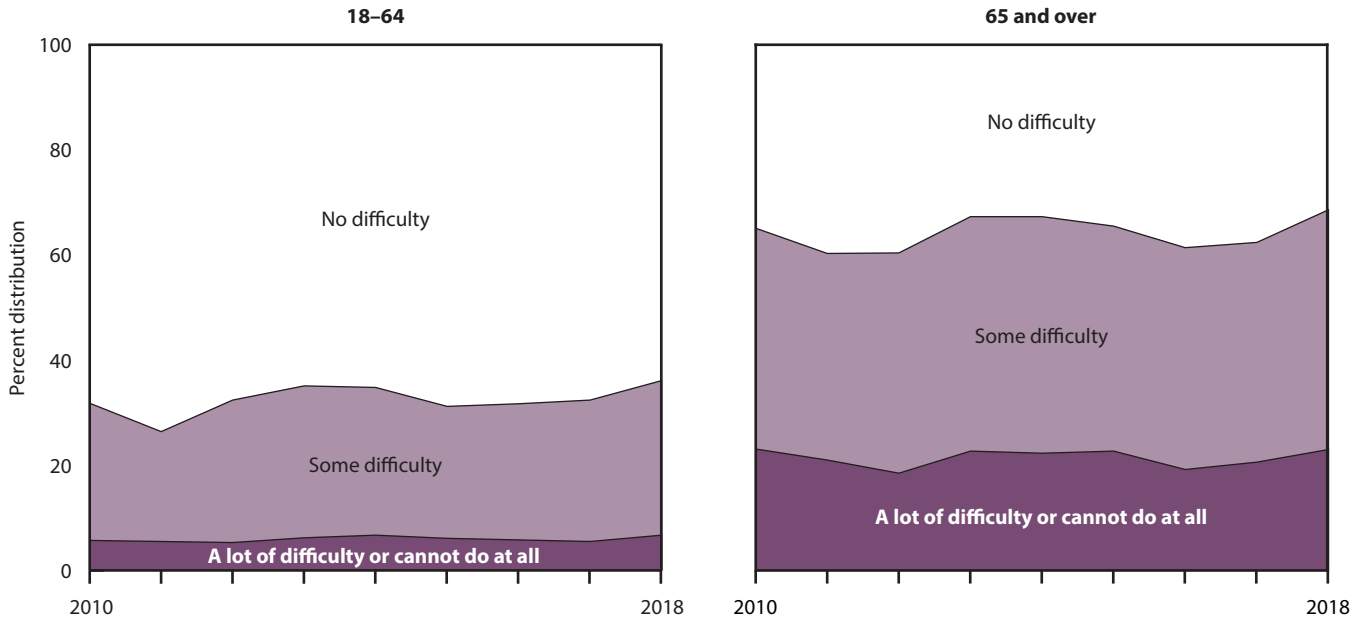
From 2008 to 2018, the self-reported prevalence of heart disease was stable among men aged 18–44 and 45–64. Among men aged 65 and over, the prevalence decreased an average 0.3 percentage point per year from 37.3% in 2008 to 34.9% in 2018. Among women aged 18–44, the prevalence of heart disease decreased an average 0.3 percentage point per year from 5.0% in 2008 to 3.7% in 2012, and then increased an average 0.1 percentage point per year to 5.0% in 2018. Among women aged 45–64, the prevalence decreased an average 0.1 percentage point per year from 11.5% in 2008 to 10.4% in 2018. Among women aged 65 and over, the prevalence decreased an average 0.4 percentage point per year from 28.9% in 2008 to 24.5% in 2018.

Among both men and women, the prevalence of heart disease was higher in the older age groups compared with the youngest age group. From 2008 to 2018, the prevalence among adults aged 18–44 was similar among men and women. Among those aged 45–64 and 65 and over, the prevalence was generally higher among men than women during the period. In 2018, 13.3% of men and 10.4% of women aged 45–64, and 34.9% of men and 24.5% of women aged 65 and over, reported having heart disease.

From 2008 to 2018, the percentage of men reporting a history of cancer was stable among all age groups. Among women, the percentage reporting a history of cancer decreased an average 0.1 percentage point per year from 2.8% in 2008 to 2.0% in 2018 among those aged 18–44, was stable for those aged 45–64, and increased an average 0.2 percentage point per year from 17.9% in 2008 to 19.5% in 2018 for those aged 65 and over.

The percentages of both men and women who reported a history of cancer was higher in the older age groups compared with the youngest age group. Among adults aged 18–44 and 45–64, women were more likely than men to report a history of cancer from 2008 to 2018. In 2018, a history of cancer was reported by 0.8% of men and 2.0% of women aged 18–44, and by 4.8% of men and 8.8% of women aged 45–64. Percentages were similar among men (19.6%) and women (19.5%) aged 65 and over.

Figure 13. Functional limitation among adults aged 18 and over, by age and level of difficulty: United States, 2010–2018



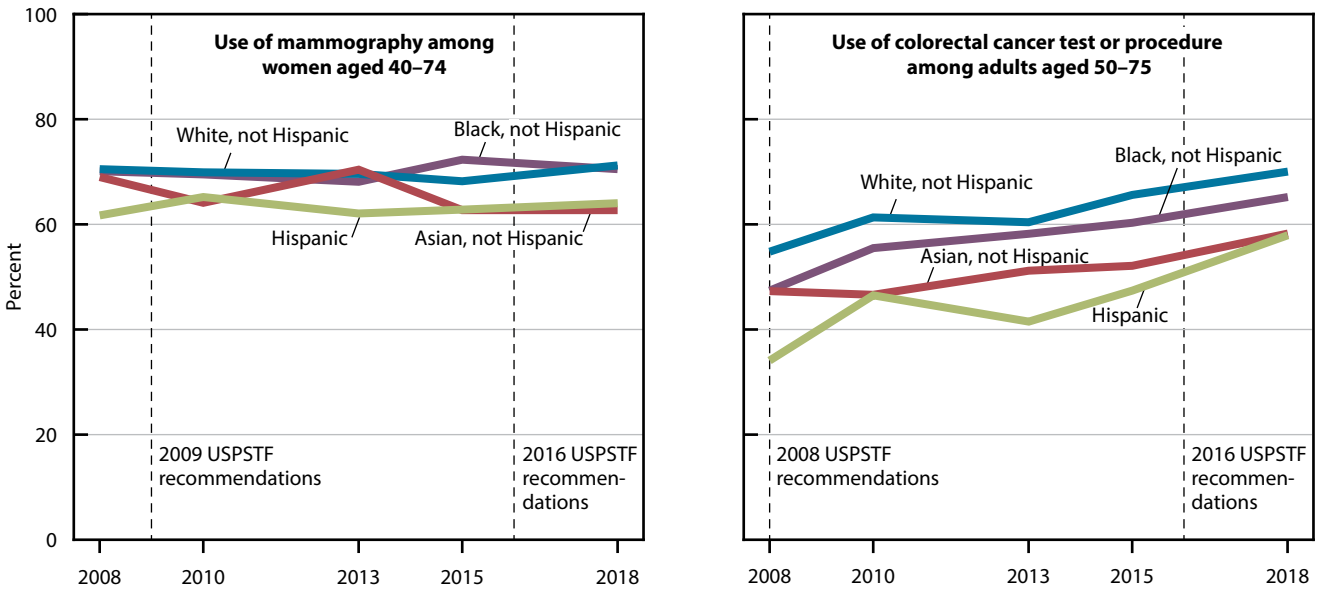
NOTES: Functional limitation is defined by the reported level of difficulty in six domains of functioning: seeing (even if wearing glasses), hearing (even if wearing hearing aids), mobility (walking or climbing stairs), communication (understanding or being understood by others), cognition (remembering or concentrating), and self-care (such as washing all over or dressing). Adults who respond "a lot of difficulty" or "cannot do at all/unable to do" to at least one question are classified in the "a lot of difficulty or cannot do at all" category. Of the remaining respondents, adults who respond "some difficulty" to at least one question are classified in the "some difficulty" category, and adults who respond "no difficulty" to all questions are classified in the "no difficulty" category. Estimates are age adjusted and may not sum to 100% due to rounding. See data table for Figure 13.
SOURCE: NCHS, National Health Interview Survey (NHIS). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-013

Limitations in functioning may be a result of physical or mental impairments and can result in lower levels of educational attainment, employment, and participation in other daily activities (41). Functional limitation is defined by the reported level of difficulty (no difficulty, some difficulty, a lot of difficulty, or cannot do at all/unable to do) in six core functioning domains: seeing, hearing, mobility, communication, cognition, and self-care. Adults who reported having "some difficulty" or "a lot of difficulty or cannot do at all" to at least one core domain were classified as having difficulty in functioning. Adults reporting "a lot of difficulty or cannot do at all" to at least one domain of functioning are considered to have disability.

The age-adjusted percentage of adults aged 18–64 who reported having "a lot of difficulty or cannot do at all" in at least one of the six functioning domains showed no clear trend from 2010 to 2018. From 2010 to 2018, the age-adjusted percentage of adults aged 18–64 who reported having "some difficulty" in at least one domain, but not reporting "a lot of difficulty or cannot do at all" in any domain, increased an average 0.4 percentage point per year. In 2018, the age-adjusted percentage of adults aged 18–64 who reported having any difficulty was 36.1%, with 29.4% reporting "some difficulty" and another 6.7% reporting "a lot of difficulty or cannot do at all."

From 2010 to 2018, adults aged 65 and over were more likely to report having any level of difficulty when compared with adults aged 18–64 (data table for Figure 13). The age-adjusted percentage of adults aged 65 and over who reported having "a lot of difficulty or cannot do at all" in at least one of the six functioning domains showed no clear trend from 2010 to 2018. From 2010 to 2018, the age-adjusted percentage of adults aged 65 and over who reported having "some difficulty" in at least one domain, but not reporting "a lot of difficulty or cannot do at all" in any domain, increased by an average 0.3 percentage point per year. In 2018, the age-adjusted percentage of adults aged 65 and over who reported having any difficulty was 68.6%, with 45.6% reporting "some difficulty" and another 23.0% reporting "a lot of difficulty or cannot do at all."

Figure 14. Use of mammography among women aged 40–74 and use of colorectal cancer testing among adults aged 50–75, by race and Hispanic origin: United States, 2008–2018



NOTES: USPSTF is U.S. Preventive Services Task Force. Data on cancer screening are collected intermittently, not annually. Use of mammography is defined as reporting a mammogram within the past 2 years. For 2008–2013 estimates, use of a colorectal cancer test was defined as reporting a fecal occult blood test (FOBT) in the past year, sigmoidoscopy in the past 5 years with FOBT in the past 3 years, or colonoscopy in the past 10 years. For 2015 estimates, fecal immunochemical test (FIT) in the past year was included in the definition of colorectal cancer testing. For 2018 estimates, use of a colorectal cancer test is defined as FOBT or FIT test in the past year, FIT-DNA test in the past 3 years, sigmoidoscopy in the past 5 years, computed tomography or CT colonography in the past 5 years, or colonoscopy in the past 10 years. Race-specific estimates are limited to those reporting only one racial group and tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity." Persons of Hispanic origin may be of any race. See data table for Figure 14.
SOURCE: NCHS, National Health Interview Survey (NHIS). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-014

Cancer screening tests aim to detect cancers at early or precancerous stages, when cancer may be easier to treat successfully (42). Although breast cancer and colorectal cancer remain among the leading causes of cancer deaths in the United States, advancements in and increased use of cancer screening tests have contributed to decreasing cancer death rates (43–45). The definitions of breast and colorectal cancer screening presented in *Health, United States* are consistent with the recommendations of the U.S. Preventive Services Task Force (46–48) at the time the data were collected (Appendix II, Colorectal tests or procedures; Mammography).

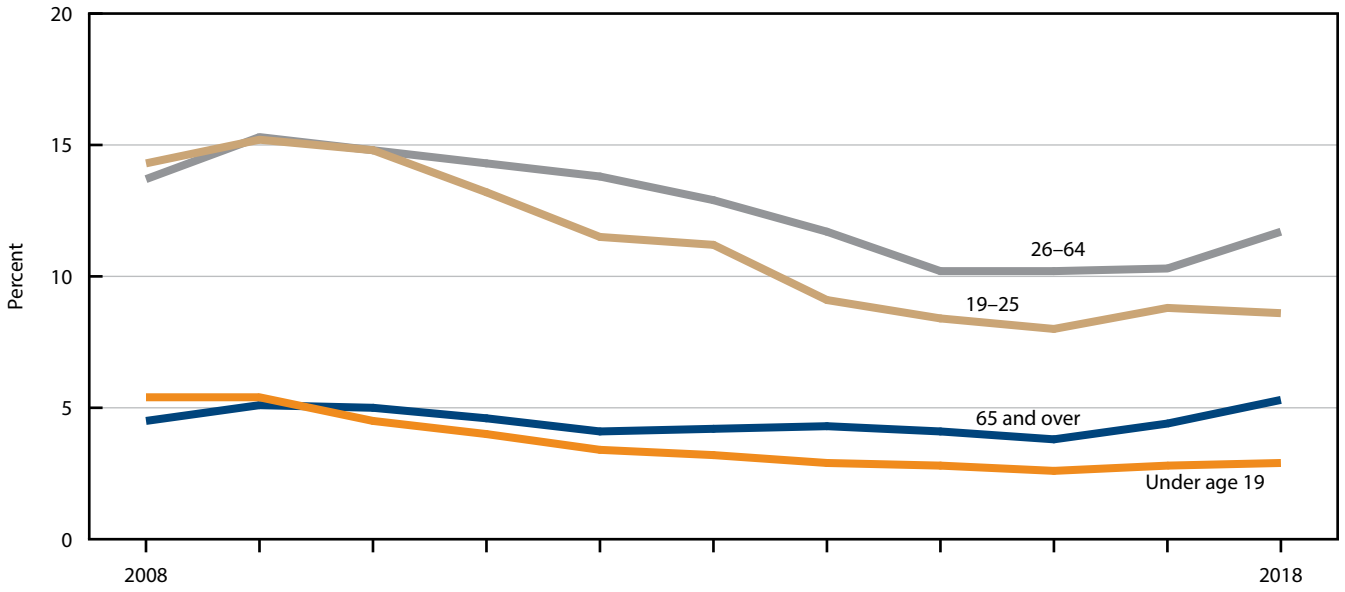
From 2008 to 2018, the percentage of women aged 40–74 who had a mammogram in the past 2 years was stable for all race and Hispanic-origin groups. In 2018, non-Hispanic white (71.2%) and non-Hispanic black (70.5%) women were more likely to have had a mammogram in the past 2 years than Hispanic (64.0%) or non-Hispanic Asian (62.6%) women.

The percentage of adults aged 50–75 who reported meeting colorectal cancer screening recommendations increased from 2008 to 2018 for all race and Hispanic-origin groups. Even with increases in all groups, screening use differed by race and Hispanic origin. In 2018, non-Hispanic white adults aged 50–75 reported the highest percentage of colorectal cancer screening (69.9%), compared with non-Hispanic black (65.2%), non-Hispanic Asian (58.2%), and Hispanic (57.9%) adults in the same age group.

Health Care Access and Utilization

Unmet Need Due to Cost

Figure 15. Delay or nonreceipt of needed medical care in the past 12 months due to cost, by age: United States, 2008–2018



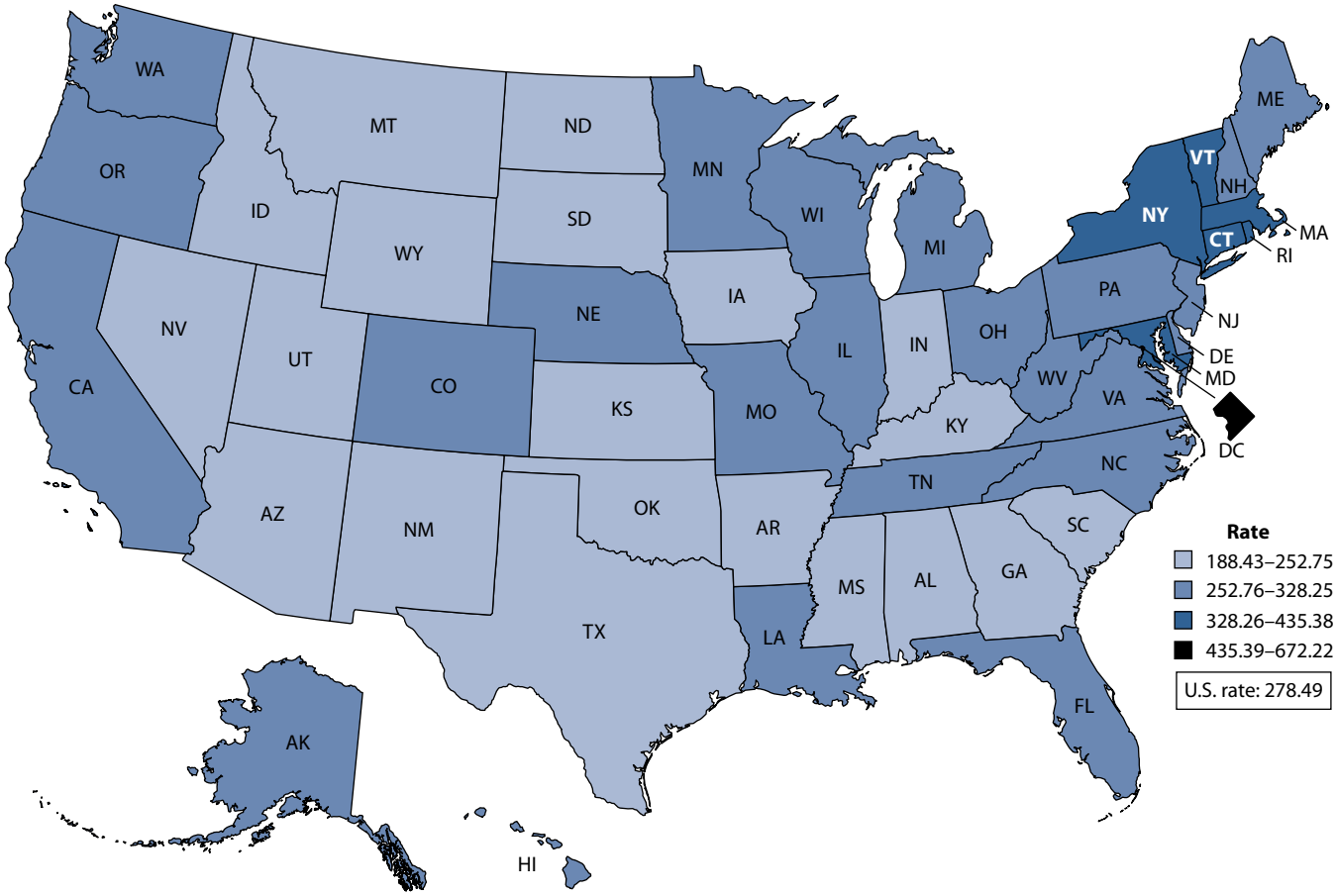
NOTES: Delay or nonreceipt of needed medical care is based on responses to the questions, "During the past 12 months, was there any time when [person] needed medical care but did not get it because [person] couldn't afford it?" and "During the past 12 months, has medical care been delayed because of worry about the cost?" See data table for Figure 15.
SOURCE: NCHS, National Health Interview Survey (NHIS). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-015

Out-of-pocket costs may be a barrier to obtaining health care (49,50). Persons without health insurance coverage are more likely to delay or forego needed medical care due to cost than are those with insurance coverage (51). In the United States, eligibility for health insurance coverage changes across a person's lifespan. For example, children and young adults may be covered by the Children's Health Insurance Program, adults aged 19–25 may be able to obtain insurance coverage under their parents' plan, and adults aged 65 and over are generally eligible for Medicare (Appendix II, Health insurance) (52–54).

Among persons under age 19, the percentage who delayed or did not receive needed medical care due to cost decreased an average 0.6 percentage point per year from 5.4% in 2008 to 3.4% in 2012, decreased an average 0.2 percentage point per year to 2.6% in 2016, and then was stable through 2018. Among adults aged 19–25, the percentage who delayed or did not receive needed medical care due to cost was stable from 2008 to 2010, decreased an average 1.3 percentage points per year from 14.8% in 2010 to 8.4% in 2015, and then was stable through 2018. Among adults aged 26–64, the percentage who had unmet need due to cost increased an average 0.7 percentage point per year from 13.7% in 2008 to 14.8% in 2010, decreased an average 0.9 percentage point per year to 10.2% in 2016, and then increased again an average 0.8 percentage point per year to 11.7% in 2018. Among adults aged 65 and over, the percentage who had unmet need decreased an average 0.1 percentage point per year from 4.5% in 2008 to 3.8% in 2016, and then increased an average 0.7 percentage point per year to 5.3% in 2018. In 2018, the percentage who reported delaying or not receiving needed medical care due to cost was highest for adults aged 26–64 (11.7%), followed by adults aged 19–25 (8.6%), adults aged 65 and over (5.3%), and persons under age 19 (2.9%).

Health Care Resources
Physicians

Figure 16. Number of physicians in patient care per 100,000 resident population, by state: United States, 2018



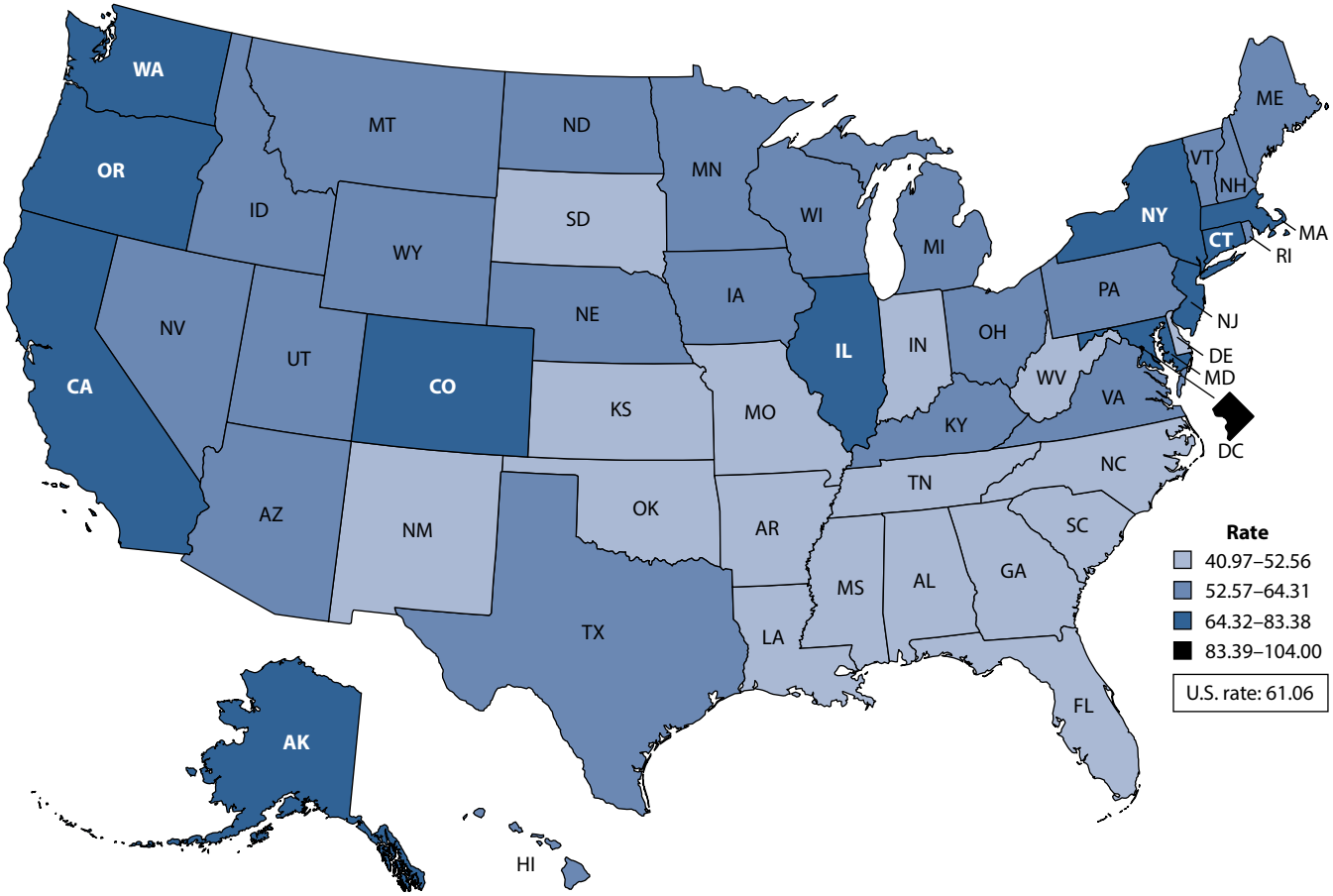
NOTES: Data on the number of physicians in patient care per 100,000 resident population are calculated using 2010-based postcensal estimates. Data include professionally active doctors of medicine (M.D.s) and doctors of osteopathy (D.O.s) only. Data are displayed by a modified Jenks classification for the 50 states and District of Columbia, which creates categories that minimize within-group variation and maximize between-group variation. See data table for Figure 16.
SOURCE: American Medical Association (AMA) Physician Masterfile. (Copyright 2020 American Medical Association. Reprinted with permission. All rights reserved.) Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-016

An adequate supply of physicians is needed to help ensure access to affordable and quality health care (55). In addition to the number of physicians, geographic distribution and specialty mix affect the adequacy of the supply (55). A shortage of physicians in a geographic area can increase travel time to see a physician and may discourage or prevent timely and appropriate health care (55,56). A shortage of physicians can also lead to higher caseloads and, consequently, increased wait times both to receive an appointment and to see the provider at the appointment time (55,56).

The supply of professionally active physicians in patient care per 100,000 resident population in the United States was 256.63 in 2008 and 278.49 in 2018 (Table 41), an increase of 8.5%. By state, the supply of professionally active physicians in patient care per 100,000 resident population in 2018 was lowest in Idaho (188.43), Mississippi (194.14), and Wyoming (196.37), and highest in the District of Columbia (672.22), Massachusetts (435.38), and Rhode Island (407.47). In general, states in the West South Central and Mountain census divisions had the fewest physicians in patient care per population, while states in the Middle Atlantic and New England census divisions had the most (Appendix II, Geographic region).

Health Care Resources
Dentists

Figure 17. Number of dentists per 100,000 resident population, by state: United States, 2019

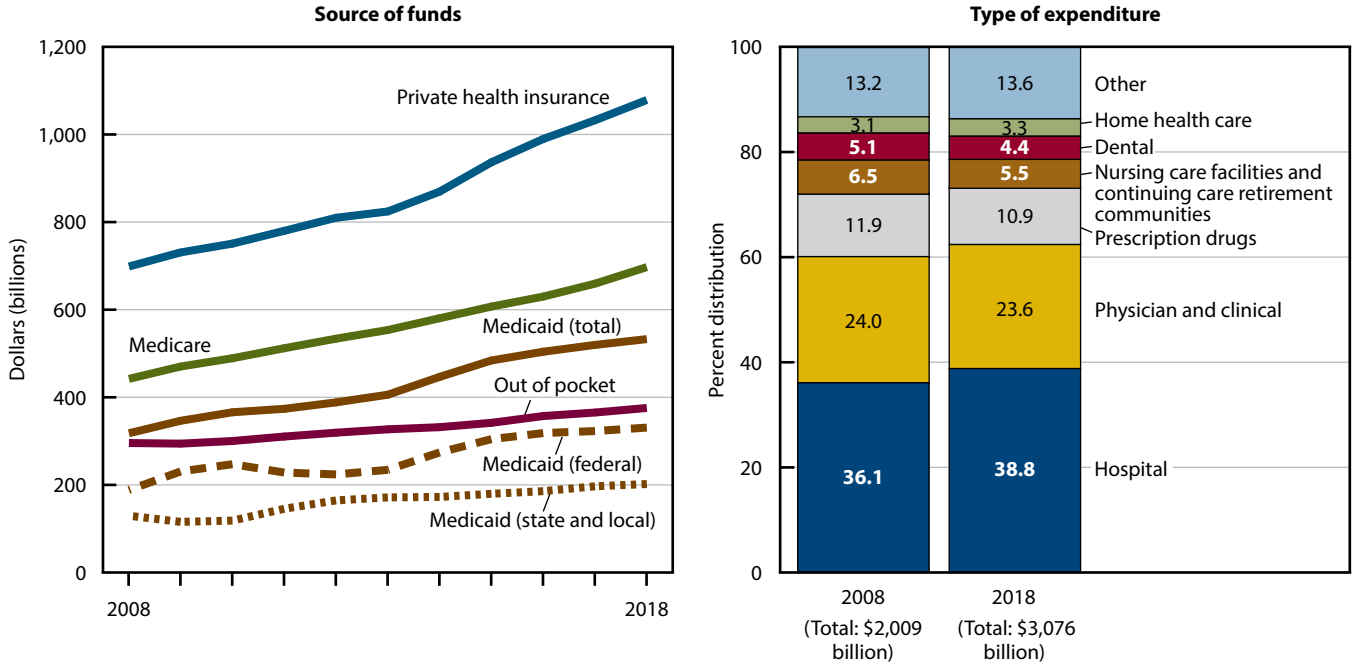


NOTES: Data on the number of dentists per 100,000 resident population are calculated using 2010-based postcensal estimates. Data include professionally active dentists only. Data are displayed by a modified Jenks classification for the 50 states and District of Columbia, which creates categories that minimize within-group variation and maximize between-group variation. See data table for Figure 17.
SOURCE: American Dental Association, Health Policy Institute. Supply of Dentists in the U.S.: 2001–2019. (Copyright 2020 American Dental Association. Reprinted with permission. All rights reserved.) Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-017

Professional dental treatment and preventive services are key to preventing and treating tooth decay, gum disease, and other oral diseases (57–59). The health of the teeth, mouth, and surrounding skull and facial structures are essential to a person's overall health and well-being (57). Despite having 200,419 professionally active dentists in the United States in 2019 (Table 42), the Health Resources and Services Administration notes that as of December 2019, more than 57 million Americans live in areas designated as having a shortage of dental health professionals (60).

The number of professionally active dentists per 100,000 resident population in the United States was 59.13 in 2009 and 61.06 in 2019 (61) (Table 42), an increase of 3.3%. By state, the supply of dentists per 100,000 resident population in 2019 was lowest in Alabama (40.97), Arkansas (41.82), and Mississippi (42.91), and highest in District of Columbia (104.00), Massachusetts (83.38), and Alaska (80.51). In general, states in the East and West South Central census divisions had the fewest professionally active dentists per population, while states in the Middle Atlantic and Pacific census divisions had the most (Appendix II, Geographic region).

Figure 18. Personal health care expenditures, by source of funds and type of expenditure: United States, 2008–2018



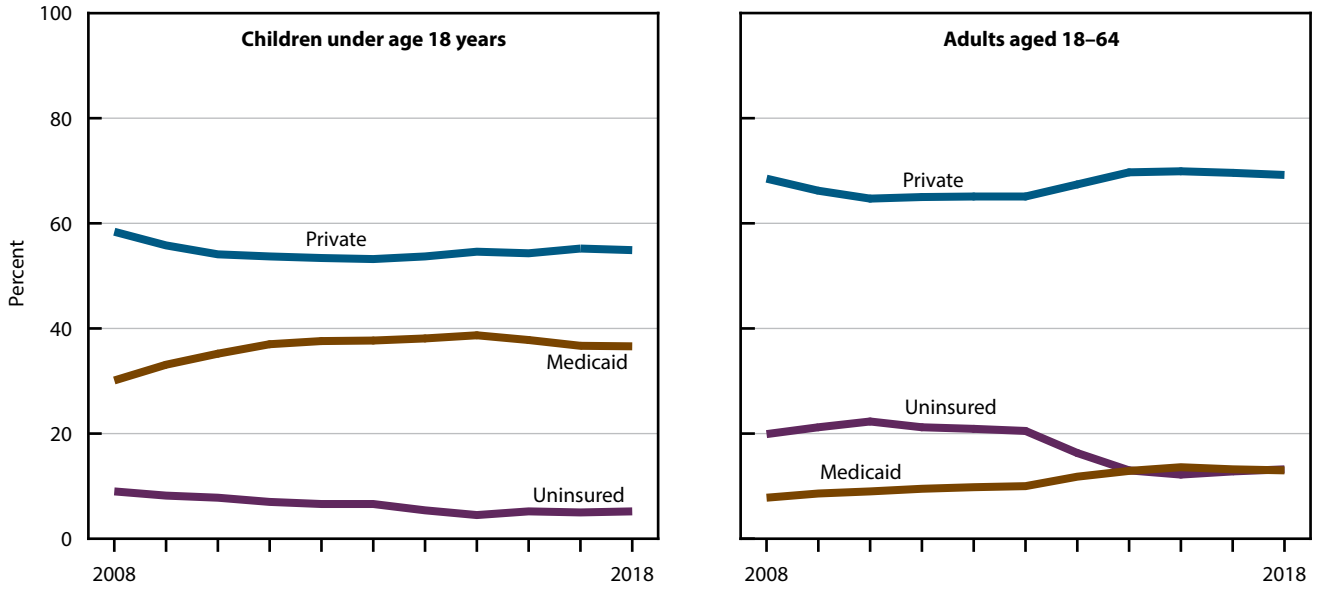
NOTES: Personal health care expenditures are outlays for goods and services relating directly to patient care. Expenditures are in current dollars and not adjusted for inflation. Numbers may not sum to total because of rounding. See data table for Figure 18.
SOURCE: Centers for Medicare & Medicaid Services, National Health Expenditure Accounts (NHEA). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-018

Health care spending accounted for almost 18% of the U.S. economy in 2018 (62). Expenditures for personal health care (PHC) include goods and services relating directly to patient care, such as hospital care, physicians' services, dentists' services, drugs, eyeglasses, and nursing home care. In 2018, PHC expenditures comprised 84% of national health care expenditures (62).

From 2008 to 2018, total PHC expenditures grew from $2.01 trillion to $3.08 trillion, an average annual growth of 4.4% (data table for Figure 18). The average annual growth in PHC expenditures by source was 5.8% for Medicaid (federal), 4.7% for Medicare, 4.5% for Medicaid (state and local), 4.4% for private health insurance, and 2.4% for out-of-pocket spending (data table for Figure 18). In 2018, private health insurance was the largest source of PHC spending at $1.08 trillion, followed by Medicare ($697.2 billion), total Medicaid ($532.8 billion), and out-of-pocket spending ($375.6 billion). All other sources of expenditures, which include the Children's Health Insurance Program (CHIP), Department of Defense and Department of Veterans Affairs insurance, and other programs, accounted for the remaining $391.1 billion in expenditures (data table for Figure 18).

In 2018, spending for hospital care was the largest proportion of PHC spending by type of expenditure (38.8%), followed by physician and clinical services (23.6%), prescription drugs (10.9%), nursing care facilities and continuing care retirement communities (5.5%), dental services (4.4%), and home health care (3.3%). All other types of expenditures, such as other health, residential, and personal care; durable medical equipment; and other nondurable medical products, accounted for the remaining 13.6% of PHC spending. From 2008 to 2018, the proportion of PHC spending decreased for prescription drugs, nursing care facilities and continuing care retirement communities, and dental and physician and clinical services, while increasing for hospitals and home health care.

Figure 19. Health insurance coverage, by age and type of coverage: United States, 2008–2018



NOTES: Health insurance categories are mutually exclusive. A small percentage of children and adults (less than 5%) are covered by Medicare, military plans, or other plans; estimates for these groups are not shown. See data table for Figure 19.
SOURCE: NCHS, National Health Interview Survey (NHIS). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-019

Health insurance eases access to the health care system. Children with health insurance are more likely to have access to health care, a usual source of care, and a recent health care visit than those who are uninsured (63,64). Research suggests that many health outcomes are better for adults with health insurance, especially among those with chronic illnesses such as congestive heart disease and hypertension (65). Historically, children have been more likely than adults to have health insurance coverage, primarily because they are more likely to be eligible for Medicaid, the Children's Health Insurance Program (CHIP), or other public programs (52,66,67).

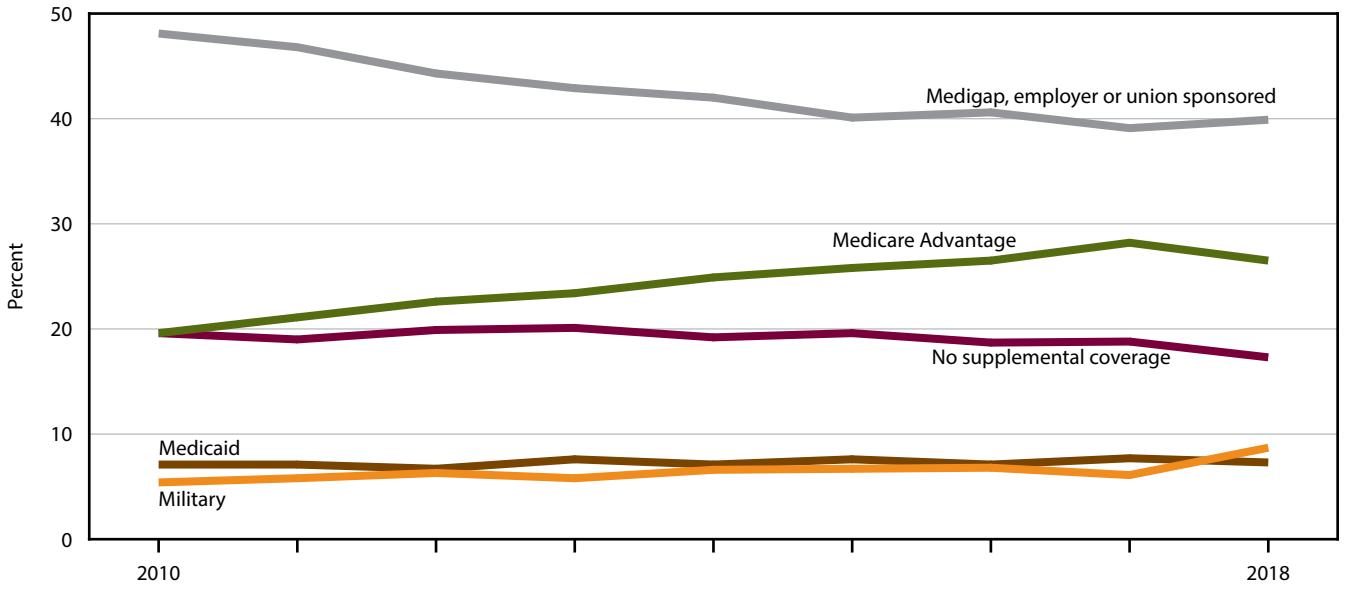
The percentage of children under age 18 years who were uninsured decreased an average 0.6 percentage point per year from 2008 to 2015, and then was stable through 2018. The percentage of children with Medicaid coverage, which includes those with CHIP or other state-sponsored health programs, increased an average 2.3 percentage points per year from 2008 to 2011, was stable to 2015, and then decreased an average 0.7 percentage point per year to 2018. The percentage of children with private health insurance coverage decreased an average 2.2 percentage points per year from 2008 to 2010, was stable to 2013, and then increased an average 0.4 percentage point per year to 2018. In 2018, the percentage of children under age 18 years who were uninsured was 5.2%, compared with 36.6% who had Medicaid coverage and 54.9% who had private health insurance.

The percentage of adults aged 18–64 who were uninsured increased an average 0.4 percentage point per year from 2008 to 2012, then decreased an average 3.0 percentage points per year to 2015, followed by no clear trend through 2018. Medicaid coverage increased from 2008 to 2016 at varying rates, and then decreased an average 0.4 percentage point per year to 2018. The percentage of adults aged 18–64 with private health insurance coverage decreased an average 0.9 percentage point per year from 2008 to 2012, then increased an average 1.9 percentage points per year to 2015 before remaining stable through 2018. In 2018, the percentage of adults aged 18–64 who were uninsured was 13.2%, compared with 13.0% who reported Medicaid coverage and 69.2% who reported private health insurance.

Health Care Expenditures and Payers

Supplemental Insurance Among Medicare Beneficiaries

Figure 20. Supplemental insurance coverage among adults aged 65 and over with Medicare coverage, by type of supplemental coverage: United States, 2010–2018



NOTES: No supplemental coverage means the beneficiaries had traditional fee-for-service Medicare only. A small percentage of Medicare beneficiaries (less than 1%) had traditional Medicare and a state or local plan; this group is not shown. Categories are mutually exclusive and hierarchical. Responses were first categorized as: Medigap, employer or union sponsored; Medicaid; military; or Medicare only. Those in either the Medigap, employer or union sponsored, or Medicare only categories were further classified as Medigap, employer or union sponsored; Medicare Advantage; or no supplemental coverage. In 2018, the percentage of military coverage increased due in part to improved collection of information on Veterans Health Administration health care. See data table for Figure 20.
SOURCE: NCHS, National Health Interview Survey (NHIS). Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-020

Medicare is a nationwide program providing health insurance coverage to selected groups, including most adults aged 65 and over. Some services, such as dental care, prescription drugs, and long-term care services, are not covered by traditional Medicare (Appendix II, Medicare) (68). While traditional Medicare often requires copayments and other cost sharing, many people with Medicare have supplemental insurance coverage that may cover Medicare cost sharing or provide additional benefits (69). For example, beneficiaries may enroll in managed-care plans known as Medicare Advantage, which can include other benefits such as dental and prescription drug benefits (68,70). Other Medicare beneficiaries with Medicaid, employer- or union-sponsored plans, private Medigap policies, or military coverage also receive additional benefits (68,69).

From 2010 to 2018, about four of every five Medicare beneficiaries aged 65 and over had some form of supplemental coverage, while one in five had traditional Medicare alone (data table for Figure 20). The percentage of Medicare beneficiaries with Medicaid coverage was stable from 2010 to 2018 (7.3%). The percentage with Medigap or employer- or union-sponsored private coverage decreased an average 1.6 percentage points per year from 48.1% in 2010 to 40.1% in 2015, and then was stable through 2018. The percentage of Medicare beneficiaries enrolled in a Medicare Advantage plan increased an average 1.2 percentage points per year from 19.6% in 2010 to 26.5% in 2016, and then was stable through 2018. The percentage of Medicare beneficiaries with military coverage increased an average 0.1 percentage point per year from 5.4% in 2010 to 6.1% in 2017. Military coverage increased to 8.7% in 2018, due in part to improved collection of information on Veterans Health Administration health care (71). The percentage with traditional Medicare only was stable from 2010 to 2015 (19.6%), and then decreased an average 0.7 percentage point per year to 17.3% in 2018. In 2018, among Medicare beneficiaries aged 65 and over, 7.3% had Medicaid coverage, 39.9% had Medigap or a union- or employer-sponsored private plan, 26.5% were enrolled in Medicare Advantage, 8.7% had military coverage, and 17.3% had no supplemental coverage.

Chartbook Data Tables

Data table for Figure 1. Life expectancy at birth, by sex and race and Hispanic origin: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-001

Life expectancy at birth, by sex: 2014–2018

Year	Total	Sex	
		Male	Female
	Life expectancy at birth (years)		
2014	78.9	76.5	81.3
2015	78.7	76.3	81.1
2016	78.7	76.2	81.1
2017[1]	78.6	76.1	81.1
2018[1]	78.7	76.2	81.2

Life expectancy at birth, by race and Hispanic origin: 2008–2018

Year	Total	Race and Hispanic origin[2]		
			Not Hispanic or Latino	
		Hispanic or Latino[3]	White	Black or African American
Both sexes		Life expectancy at birth (years)		
2008	78.2	80.8	78.4	73.9
2009	78.5	81.1	78.7	74.4
2010	78.7	81.7	78.8	74.7
2011	78.7	81.8	78.7	75.0
2012	78.8	81.9	78.9	75.1
2013	78.8	81.9	78.8	75.1
2014	78.9	82.1	78.8	75.3
2015	78.7	81.9	78.7	75.1
2016	78.7	81.8	78.6	74.9
2017[1]	78.6	81.8	78.5	74.9
2018[1]	…	…	78.7	74.9
2018[1] (single race)	78.7	81.8	78.6	74.7

… Category not applicable.

[1]Life expectancy estimates for 2017 were revised using updated Medicare data; therefore, these values may differ from previous editions of *Health, United States*. Life expectancy estimates for 2018 use final Medicare data.

[2]The race groups white and black or African American include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with 2018 data, race on death records is available based on the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and presented as single-race estimates (only one race was reported on the death certificate). Data for 2008–2017 were tabulated according to the 1977 standards and bridged to retain comparability across states as they transitioned from the 1977 standards to those of 1997. Single-race estimates for 2018 are not completely comparable with bridged-race estimates for earlier years, particularly for smaller race categories. To look at longer-term trends, bridged-race estimates are also presented. See Technical Notes; Appendix II, Hispanic origin; Race.

[3]Persons of Hispanic origin may be of any race. See Appendix II, Hispanic origin. Life expectancies for the Hispanic population are adjusted for underreporting of Hispanic ethnicity on the death certificate but are not adjusted to account for the potential effects of return migration. To address the effects of age misstatement at the oldest ages, the probability of death for Hispanic persons aged 80 and over is estimated as a function of non-Hispanic white mortality with the use of the Brass relational logit model. See Appendix II, Race, for a discussion of sources of bias in death rates by race and Hispanic origin.

NOTES: Populations for computing life expectancy for 2008 and 2009 were based on revised intercensal population estimates of the U.S. resident population. Populations for computing life expectancy for 2010 were based on 2010 census counts. Life expectancy for 2011 and beyond is computed using 2010-based postcensal estimates. See Appendix I, Population Census and Population Estimates. In 2008, the life table methodology was revised and estimates for 2001–2018 were calculated using data from Medicare to supplement vital statistics and census data. Life expectancy is not currently available for persons of other racial and ethnic groups. See Appendix II, Life expectancy.

SOURCE: NCHS, National Vital Statistics System, Mortality. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 2. Infant mortality rates, by race and Hispanic origin of mother and selected leading causes of death: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-002

Infant mortality rates, by race and Hispanic origin of mother: 2008–2018

Year	All mothers	Race and Hispanic origin of mother[1]						
			Not Hispanic or Latina					
		Hispanic or Latina	White	Black or African American	Asian or Pacific Islander	Asian	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native
				Infant deaths per 1,000 live births				
2008	6.61	5.59	5.52	12.67	4.39	…	…	8.67
2009	6.39	5.29	5.33	12.40	4.27	…	…	9.17
2010	6.14	5.25	5.18	11.46	4.18	…	…	8.64
2011	6.07	5.15	5.07	11.45	4.18	…	…	8.52
2012	5.98	5.11	5.04	11.19	3.96	…	…	8.73
2013	5.96	5.00	5.06	11.11	3.90	…	…	7.72
2014	5.82	5.01	4.89	10.93	3.68	…	…	7.66
2015	5.90	4.96	4.90	11.25	4.08	…	…	8.58
2016	5.87	4.96	4.87	11.21	3.83	…	…	8.81
2017	…	…	4.69	10.88	4.03	…	…	8.90
2017 (single race)	5.79	5.10	4.67	10.97	…	3.78	7.64	9.21
2018	…	…	4.68	10.62	3.87	…	…	8.13
2018 (single race)	5.67	4.86	4.63	10.75	…	3.63	9.39	8.15
				Standard error				
2008	0.04	0.07	0.05	0.14	0.14	…	…	0.45
2009	0.04	0.07	0.05	0.14	0.13	…	…	0.47
2010	0.04	0.07	0.05	0.14	0.13	…	…	0.47
2011	0.04	0.08	0.05	0.14	0.13	…	…	0.47
2012	0.04	0.08	0.05	0.14	0.12	…	…	0.48
2013	0.04	0.07	0.05	0.14	0.12	…	…	0.45
2014	0.04	0.07	0.05	0.14	0.12	…	…	0.45
2015	0.04	0.07	0.05	0.14	0.12	…	…	0.48
2016	0.04	0.07	0.05	0.14	0.12	…	…	0.50
2017	…	…	0.05	0.14	0.12	…	…	0.51
2017 (single race)	0.04	0.08	0.05	0.14	…	0.12	0.90	0.56
2018	…	…	0.05	0.14	0.12	…	…	0.49
2018 (single race)	0.04	0.07	0.05	0.14	…	0.12	1.00	0.53

See footnotes at end of table.

Data table for Figure 2. Infant mortality rates, by race and Hispanic origin of mother and selected leading causes of death: United States, 2008–2018—Con.

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-002

Infant mortality rates, by selected leading causes of death: 2008–2018

Year	Selected leading causes of death[2]				
	Congenital malformations	Preterm birth and low birthweight	Sudden infant death syndrome	Maternal complications of pregnancy	Unintentional injuries (accidents)
	Infant deaths per 100,000 live births				
2008	133.74	112.00	55.33	41.80	30.92
2009	129.71	109.62	54.01	39.07	28.38
2010	127.89	103.80	51.46	39.07	27.68
2011	126.87	104.08	48.18	40.42	29.51
2012	125.66	106.60	42.39	38.41	29.41
2013	121.51	107.13	39.70	40.63	29.26
2014	119.20	104.62	38.64	39.63	29.16
2015	121.84	102.73	39.39	38.37	32.39
2016	122.23	99.49	37.96	35.66	30.83
2017	119.19	97.45	35.27	37.24	34.06
2018	118.71	97.12	35.11	36.17	30.83
	Standard error				
2008	1.78	1.62	1.14	0.99	0.85
2009	1.77	1.63	1.14	0.97	0.83
2010	1.79	1.61	1.13	0.99	0.83
2011	1.79	1.62	1.10	1.01	0.86
2012	1.78	1.64	1.04	0.99	0.86
2013	1.76	1.65	1.00	1.02	0.86
2014	1.73	1.62	0.98	1.00	0.86
2015	1.75	1.61	1.00	0.98	0.90
2016	1.76	1.59	0.98	0.95	0.88
2017	1.76	1.59	0.96	0.98	0.94
2018	1.77	1.60	0.96	0.98	0.90

… Category not applicable.

[1]The race groups white, black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with 2017 data, race on birth records used to calculate infant mortality is available based on the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and presented as single-race estimates (only one race was reported on the birth certificate). These estimates include separate estimates for non-Hispanic Asian and non-Hispanic Native Hawaiian or Other Pacific Islander groups. Data for 2003–2016 were tabulated according to the 1977 standards and bridged to retain comparability across states as they transitioned from the 1977 standards to those of 1997. Single-race estimates for 2017 and beyond are not completely comparable with bridged-race estimates for earlier years, particularly for smaller race categories. To look at longer-term trends, bridged-race estimates are also presented. The combined group of non-Hispanic Asian or Pacific Islander women is also shown. See Technical Notes; Appendix II, Hispanic origin; Race.

[2]The leading causes of death were selected based on the rates in 2018. Deaths are identified using the *International Classification of Diseases, 10th Revision* (ICD–10). The codes are: Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99); Disorders related to preterm births (short gestation) and low birthweight, not elsewhere classified (P07); Sudden infant death syndrome (R95); Newborn affected by maternal complications of pregnancy (P01); and Unintentional injuries (accidents) (V01–X59). The cause of death called Newborn affected by maternal complications of pregnancy includes any of the following conditions: incompetent cervix, premature rupture of membranes, ectopic pregnancy, malpresentation before labor, amniotic fluid disorders, multiple pregnancy, maternal death, and other unspecified maternal complications. See Appendix II, Cause of death; *International Classification of Diseases* (ICD); Table IV.

NOTES: Infants are defined as under age 1 year. Rates are based on the number of deaths from the mortality file and the number of births from the natality file. Rates by race and Hispanic origin are from the Linked Birth/Infant Death data set. See Appendix II, Cause of death; Table IV; Hispanic origin; Race.

SOURCE: NCHS, National Vital Statistics System, Linked Birth/Infant Death Data Set. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 3. Age-adjusted death rates for selected causes of death for all ages, by sex: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-003

Sex and year	All causes	Cause of death[1]						
		Heart disease	Cancer	Unintentional injuries[2]	CLRD[3]	Stroke[4]	Alzheimer's disease	Diabetes[5]
All persons		Age-adjusted deaths per 100,000 population[6]						
2008	774.9	192.1	176.4	39.2	44.7	42.1	25.8	22.0
2009	749.6	182.8	173.5	37.5	42.7	39.6	24.2	21.0
2010	747.0	179.1	172.8	38.0	42.2	39.1	25.1	20.8
2011	741.3	173.7	169.0	39.1	42.5	37.9	24.7	21.6
2012	732.8	170.5	166.5	39.1	41.5	36.9	23.8	21.2
2013	731.9	169.8	163.2	39.4	42.1	36.2	23.5	21.2
2014	724.6	167.0	161.2	40.5	40.5	36.5	25.4	20.9
2015	733.1	168.5	158.5	43.2	41.6	37.6	29.4	21.3
2016	728.8	165.5	155.8	47.4	40.6	37.3	30.3	21.0
2017	731.9	165.0	152.5	49.4	40.9	37.6	31.0	21.5
2018	723.6	163.6	149.1	48.0	39.7	37.1	30.5	21.4
Male								
2008	918.8	238.5	214.9	54.3	52.3	42.2	21.3	25.9
2009	890.9	229.4	210.9	51.4	49.5	39.9	20.2	25.0
2010	887.1	225.1	209.9	51.5	48.7	39.3	21.0	24.9
2011	875.3	218.1	204.0	52.8	48.6	37.9	20.4	26.0
2012	865.1	214.7	200.3	52.6	47.2	37.1	19.8	25.5
2013	863.6	214.5	196.0	53.1	47.5	36.7	19.3	25.6
2014	855.1	210.9	192.9	54.6	45.4	36.9	20.6	25.6
2015	863.2	211.8	189.2	58.7	46.0	37.8	23.7	26.2
2016	861.0	209.1	185.4	65.0	45.1	37.5	24.3	26.0
2017	864.5	209.0	181.1	67.8	45.0	38.0	24.9	26.8
2018	855.5	207.5	176.8	65.9	43.7	37.6	24.5	26.9
Female								
2008	659.9	155.9	149.6	25.4	39.8	41.4	28.2	19.1
2009	636.8	146.6	147.4	24.8	38.3	38.8	26.3	17.9
2010	634.9	143.3	146.7	25.6	38.0	38.3	27.3	17.6
2011	632.4	138.7	144.0	26.5	38.5	37.2	27.1	18.2
2012	624.7	135.5	142.1	26.4	37.8	36.1	26.1	17.7
2013	623.5	134.3	139.5	26.6	38.5	35.2	25.9	17.6
2014	616.7	131.8	138.1	27.3	37.1	35.6	28.3	17.2
2015	624.2	133.6	135.9	28.7	38.6	36.9	32.8	17.3
2016	617.5	130.4	134.0	30.8	37.4	36.5	33.9	16.9
2017	619.7	129.6	131.4	32.0	38.1	36.6	34.8	17.1
2018	611.3	127.9	128.6	31.0	36.8	36.1	34.2	16.8

See footnotes at end of table.

Data table for Figure 3. Age-adjusted death rates for selected causes of death for all ages, by sex: United States, 2008–2018—Con.

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-003

Sex and year	All causes	Cause of death[1]						
		Heart disease	Cancer	Unintentional injuries[2]	CLRD[3]	Stroke[4]	Alzheimer's disease	Diabetes[5]
All persons				Standard error				
2008	0.50	0.25	0.24	0.11	0.12	0.12	0.09	0.08
2009	0.48	0.24	0.23	0.11	0.12	0.11	0.09	0.08
2010	0.48	0.23	0.23	0.11	0.11	0.11	0.09	0.08
2011	0.47	0.23	0.22	0.11	0.11	0.11	0.09	0.08
2012	0.46	0.22	0.22	0.11	0.11	0.10	0.08	0.08
2013	0.46	0.22	0.22	0.11	0.11	0.10	0.08	0.08
2014	0.45	0.22	0.21	0.11	0.11	0.10	0.08	0.08
2015	0.45	0.21	0.21	0.11	0.11	0.10	0.09	0.08
2016	0.45	0.21	0.20	0.12	0.10	0.10	0.09	0.08
2017	0.44	0.21	0.20	0.12	0.10	0.10	0.09	0.08
2018	0.44	0.20	0.20	0.12	0.10	0.10	0.09	0.07
Male								
2008	0.84	0.43	0.40	0.20	0.20	0.18	0.14	0.14
2009	0.82	0.42	0.39	0.19	0.20	0.18	0.13	0.14
2010	0.81	0.41	0.39	0.19	0.19	0.17	0.13	0.13
2011	0.79	0.40	0.38	0.19	0.19	0.17	0.13	0.14
2012	0.78	0.39	0.37	0.19	0.18	0.16	0.12	0.13
2013	0.77	0.38	0.36	0.19	0.18	0.16	0.12	0.13
2014	0.75	0.38	0.35	0.19	0.18	0.16	0.12	0.13
2015	0.75	0.37	0.34	0.20	0.17	0.16	0.13	0.13
2016	0.74	0.37	0.34	0.21	0.17	0.16	0.13	0.13
2017	0.73	0.36	0.33	0.21	0.17	0.16	0.13	0.13
2018	0.72	0.35	0.32	0.20	0.16	0.15	0.13	0.13
Female								
2008	0.60	0.29	0.29	0.12	0.15	0.15	0.12	0.10
2009	0.59	0.27	0.29	0.12	0.14	0.14	0.11	0.10
2010	0.58	0.27	0.28	0.12	0.14	0.14	0.11	0.10
2011	0.57	0.26	0.28	0.12	0.14	0.14	0.11	0.10
2012	0.57	0.26	0.27	0.12	0.14	0.13	0.11	0.10
2013	0.56	0.25	0.27	0.12	0.14	0.13	0.11	0.09
2014	0.55	0.25	0.27	0.13	0.14	0.13	0.11	0.09
2015	0.55	0.25	0.26	0.13	0.14	0.13	0.12	0.09
2016	0.55	0.24	0.26	0.13	0.13	0.13	0.12	0.09
2017	0.54	0.24	0.25	0.13	0.13	0.13	0.12	0.09
2018	0.53	0.24	0.25	0.13	0.13	0.13	0.12	0.09

[1]Underlying causes of death are based on the *International Classification of Diseases, 10th Revision* (ICD–10). See Appendix II, *International Classification of Diseases* (ICD), Table IV.

[2]Also known as accidents.

[3]Chronic lower respiratory disease.

[4]The major component of cerebrovascular disease.

[5]Starting with 2011 data, the rules for selecting renal failure as the underlying cause of death were changed, resulting in an increase in the number of deaths for Diabetes mellitus. Therefore, data for diabetes before and after 2011 are not directly comparable. For more information, see Technical Notes in "Deaths: Final data for 2011," available from: https://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_03.pdf.

[6]Estimates are age-adjusted to the year 2000 standard population with unrounded population numbers. See Appendix II, Age adjustment.

NOTE: See Appendix II, Cause of death; Cause-of-death ranking; Table IV.

SOURCE: NCHS, National Vital Statistics System, Mortality. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 4. Drug overdose death rates, by sex and age: United States, 2008–2018
Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-004

Sex and year	All ages		Age group (years)					
	Total (age adjusted)[1]	Total (crude)	15–24	25–34	35–44	45–54	55–64	65 and over
All persons			Deaths per 100,000 population					
2008	11.9	12.0	8.0	16.8	21.1	25.2	12.9	4.1
2009	11.9	12.1	7.7	17.2	20.5	25.4	13.7	4.3
2010	12.3	12.4	8.2	18.4	20.8	25.1	15.0	4.3
2011	13.2	13.3	8.6	20.2	22.5	26.7	15.9	4.6
2012	13.1	13.2	8.0	20.1	22.1	26.9	16.6	4.9
2013	13.8	13.9	8.3	20.9	23.0	27.5	19.2	5.2
2014	14.7	14.8	8.6	23.1	25.0	28.2	20.3	5.6
2015	16.3	16.3	9.7	26.9	28.3	30.0	21.8	5.8
2016	19.8	19.7	12.4	34.6	35.0	34.5	25.6	6.2
2017	21.7	21.6	12.6	38.4	39.0	37.7	28.0	6.9
2018	20.7	20.6	10.8	35.5	38.3	35.3	28.3	7.6
Male								
2008	14.9	15.0	11.9	23.6	25.6	29.6	14.8	4.2
2009	14.8	15.0	11.3	24.0	25.2	29.1	16.0	4.4
2010	15.0	15.2	11.6	25.0	24.9	28.5	17.3	4.3
2011	16.1	16.3	12.4	27.5	26.8	30.4	18.5	4.7
2012	16.1	16.3	11.4	27.0	27.1	30.4	19.4	5.2
2013	17.0	17.2	11.7	28.6	28.1	31.5	22.7	5.9
2014	18.3	18.4	12.1	31.9	30.8	32.9	23.5	6.0
2015	20.8	20.8	13.3	37.9	36.3	35.3	26.2	6.8
2016	26.2	26.1	17.5	48.9	46.9	42.5	32.2	7.6
2017	29.1	29.0	17.1	54.3	53.0	48.3	36.2	8.7
2018	27.9	27.9	14.3	49.6	52.4	46.1	37.2	10.2
Female								
2008	8.9	9.0	4.0	9.9	16.5	21.0	11.1	4.0
2009	9.1	9.2	4.1	10.4	16.0	21.8	11.6	4.3
2010	9.6	9.8	4.6	11.9	16.8	21.8	12.9	4.3
2011	10.2	10.3	4.6	12.8	18.2	23.1	13.5	4.5
2012	10.2	10.3	4.4	13.1	17.1	23.4	14.0	4.6
2013	10.6	10.7	4.8	13.0	18.0	23.6	15.9	4.8
2014	11.1	11.3	5.0	14.1	19.2	23.7	17.2	5.2
2015	11.8	11.9	5.9	15.7	20.5	24.9	17.6	5.0
2016	13.4	13.5	7.0	19.9	23.3	26.7	19.5	5.1
2017	14.4	14.3	7.9	22.0	25.1	27.5	20.3	5.5
2018	13.6	13.5	7.1	20.8	24.2	24.8	19.9	5.5

See footnotes at end of table.

Data table for Figure 4. Drug overdose death rates, by sex and age: United States, 2008–2018—Con.
Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-004

Sex and year	All ages		Age group (years)					
	Total (age adjusted)[1]	Total (crude)	15–24	25–34	35–44	45–54	55–64	65 and over
All persons				Standard error				
2008	0.06	0.06	0.14	0.20	0.22	0.24	0.19	0.10
2009	0.06	0.06	0.13	0.21	0.22	0.24	0.20	0.10
2010	0.06	0.06	0.14	0.21	0.23	0.24	0.20	0.10
2011	0.07	0.07	0.14	0.22	0.24	0.24	0.20	0.11
2012	0.07	0.06	0.13	0.22	0.23	0.25	0.21	0.11
2013	0.07	0.07	0.14	0.22	0.24	0.25	0.22	0.11
2014	0.07	0.07	0.14	0.23	0.25	0.25	0.22	0.11
2015	0.07	0.07	0.15	0.25	0.26	0.26	0.23	0.11
2016	0.08	0.08	0.17	0.28	0.29	0.28	0.25	0.11
2017	0.08	0.08	0.17	0.29	0.31	0.30	0.26	0.12
2018	0.08	0.08	0.16	0.28	0.30	0.29	0.26	0.12
Male								
2008	0.10	0.10	0.23	0.34	0.35	0.37	0.30	0.16
2009	0.10	0.10	0.22	0.34	0.35	0.36	0.31	0.16
2010	0.10	0.10	0.23	0.35	0.35	0.36	0.31	0.16
2011	0.10	0.10	0.23	0.36	0.36	0.37	0.32	0.16
2012	0.10	0.10	0.23	0.36	0.37	0.37	0.32	0.17
2013	0.11	0.11	0.23	0.36	0.37	0.38	0.35	0.17
2014	0.11	0.11	0.23	0.38	0.39	0.39	0.35	0.17
2015	0.12	0.11	0.24	0.41	0.42	0.41	0.36	0.18
2016	0.13	0.13	0.28	0.47	0.48	0.45	0.40	0.19
2017	0.14	0.13	0.28	0.49	0.51	0.48	0.42	0.20
2018	0.13	0.13	0.26	0.46	0.50	0.47	0.43	0.21
Female								
2008	0.08	0.08	0.14	0.22	0.28	0.31	0.25	0.13
2009	0.08	0.08	0.14	0.23	0.28	0.31	0.25	0.14
2010	0.08	0.08	0.15	0.24	0.29	0.31	0.26	0.14
2011	0.08	0.08	0.15	0.25	0.30	0.32	0.26	0.14
2012	0.08	0.08	0.14	0.25	0.29	0.32	0.27	0.14
2013	0.08	0.08	0.15	0.25	0.30	0.33	0.28	0.14
2014	0.08	0.08	0.15	0.26	0.31	0.33	0.29	0.14
2015	0.09	0.09	0.17	0.27	0.32	0.34	0.29	0.14
2016	0.09	0.09	0.18	0.30	0.34	0.35	0.30	0.14
2017	0.10	0.09	0.19	0.31	0.35	0.36	0.31	0.14
2018	0.09	0.09	0.18	0.30	0.34	0.34	0.30	0.14

[1]Estimates are age adjusted to the year 2000 standard population with unrounded population numbers. See Appendix II, Age adjustment.

NOTES: Drug overdose deaths are identified using *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause of death codes X40–X44 (unintentional drug poisoning), X60–X64 (suicide by drug poisoning), X85 (homicide by drug poisoning), and Y10–Y14 (drug poisoning of undetermined intent). See Appendix II, Cause of death; *International Classification of Diseases* (ICD); Table IV.

SOURCE: NCHS, National Vital Statistics System, Mortality. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 5. Suicide, by sex and means: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-005

Death rates for suicide, by sex: 2008–2018

Year	Total	SE	Male	SE	Female	SE
			Age-adjusted deaths per 100,000 population[1]			
2008	11.6	0.06	19.0	0.11	4.8	0.06
2009	11.8	0.06	19.2	0.11	4.9	0.06
2010	12.1	0.06	19.8	0.12	5.0	0.06
2011	12.3	0.06	20.0	0.12	5.2	0.06
2012	12.6	0.06	20.4	0.12	5.4	0.06
2013	12.6	0.06	20.3	0.11	5.5	0.06
2014	13.0	0.06	20.7	0.12	5.8	0.06
2015	13.3	0.06	21.1	0.12	6.0	0.06
2016	13.5	0.06	21.4	0.12	6.0	0.06
2017	14.0	0.07	22.4	0.12	6.1	0.06
2018	14.2	0.07	22.8	0.12	6.2	0.06

Deaths from suicide, by sex and means: 2008–2018

Sex and year	Firearm	SE	Suffocation	SE	Poisoning	SE	Other	SE
Male				Percent distribution				
2008	56.0	0.29	24.6	0.26	12.2	0.19	7.3	0.15
2009	56.1	0.29	25.1	0.25	11.8	0.19	7.0	0.15
2010	56.0	0.29	25.1	0.25	11.8	0.19	7.1	0.15
2011	55.9	0.28	25.6	0.25	11.1	0.18	7.4	0.15
2012	56.4	0.28	25.2	0.24	11.1	0.18	7.3	0.15
2013	56.9	0.28	24.7	0.24	10.8	0.17	7.6	0.15
2014	55.4	0.27	26.8	0.24	10.6	0.17	7.2	0.14
2015	55.6	0.27	26.9	0.24	10.0	0.16	7.5	0.14
2016	56.6	0.27	26.1	0.24	9.5	0.16	7.8	0.14
2017	56.0	0.26	27.7	0.23	9.0	0.15	7.3	0.14
2018	55.9	0.26	28.3	0.23	8.3	0.14	7.5	0.14
Female								
2008	30.2	0.53	21.0	0.47	39.3	0.56	9.5	0.34
2009	31.0	0.52	21.7	0.47	37.9	0.55	9.3	0.33
2010	30.0	0.51	23.5	0.47	37.4	0.54	9.0	0.32
2011	31.4	0.50	23.3	0.46	36.5	0.52	8.8	0.31
2012	31.2	0.49	23.5	0.45	36.2	0.51	9.1	0.31
2013	32.3	0.49	23.7	0.45	34.8	0.50	9.3	0.30
2014	31.1	0.47	26.2	0.45	34.1	0.48	8.6	0.29
2015	30.5	0.46	26.7	0.44	33.4	0.47	9.4	0.29
2016	32.1	0.46	25.3	0.43	33.0	0.46	9.5	0.29
2017	31.2	0.45	27.9	0.44	31.4	0.46	9.6	0.29
2018	31.5	0.45	29.9	0.44	29.3	0.44	9.3	0.28

[1]Estimates are age adjusted to the year 2000 standard population with unrounded population numbers. See Appendix II, Age adjustment.

NOTES: SE is standard error. Suicide deaths are identified using *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause of death codes U03, X60–X84, and Y87.0. Other means include such causes as cutting and piercing, falls and jumping, burns from fire and hot substances or liquids, and transportation. See Appendix II, Cause of death; *International Classification of Diseases* (ICD); Table IV.

SOURCE: NCHS, National Vital Statistics System, Mortality. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 6. Maternal mortality, by age and race and Hispanic origin: United States, 2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-006

Characteristic	Number of deaths	Deaths per 100,000 live births	
		Rate	Standard error
All women			
Total[1]	658	17.4	0.7
Age group (years)			
Under 25	96	10.6	1.1
25–39	458	16.6	0.8
40 and over	104	81.9	8.0
Race and Hispanic origin and age group (years)[2]			
White, non-Hispanic	291	14.9	0.9
Under 25	41	10.5	1.6
25–39	207	13.8	1.0
40 and over	43	72.0	11.0
Black, non-Hispanic	206	37.3	2.6
Under 25	27	15.3	2.9
25–39	137	38.2	3.3
40 and over	42	239.9	37.0
Hispanic	105	11.8	1.2
Under 25	21	7.6	1.7
25–39	72	12.4	1.5
40 and over	12	*	*

* Estimates are considered unreliable; rate not shown is based on fewer than 20 deaths in the numerator.

[1]Includes race and Hispanic-origin groups not shown separately, including persons who identify more than one race.

[2]Estimates by race and Hispanic origin are tabulated according to the Office of Management and Budget's 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity." Race categories are single race (only one race was reported on the death certificate). Due to smaller population counts for some race groups, data are shown only for maternal deaths among non-Hispanic white, non-Hispanic black, and Hispanic women. Race estimates may differ from other race estimates based on the same data and presented elsewhere if race groups are defined differently. Persons of Hispanic origin may be of any race. See Appendix II, Hispanic origin; Race.

NOTES: Maternal deaths are defined by the World Health Organization as the death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management. Deaths resulting from accidents, homicides, and suicides are excluded. Maternal deaths are identified using *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause-of-death codes A34, O00–O95, and O98–O99. Maternal causes of death were assessed using the 2018 coding method. This method, the most accurate measurement of maternal mortality, uses information from the pregnancy checkbox for women aged 44 and under. The checkbox is not used for women aged 45 and over. For more information, see: Hoyert DL, Miniño AM. Maternal mortality in the United States: Changes in coding, publication, and data release, 2018. National Vital Statistics Reports; vol 69 no 2. Hyattsville, MD: National Center for Health Statistics. 2020. Available from: https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr69-02-508.pdf. See also Appendix II, *International Classification of Diseases* (ICD); Maternal death; Rate.

SOURCE: NCHS, National Vital Statistics System, Mortality. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 7. Teen births among females aged 15–19 years, by race and Hispanic origin: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-007

Year	Total	Race and Hispanic origin of mother						
			Not Hispanic or Latina					
		Hispanic or Latina	White	Black or African American	Asian or Pacific Islander	Asian	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native
			Live births per 1,000 females aged 15–19 years					
2008	40.2	70.3	26.7	60.4	12.4	…	…	65.0
2009	37.9	63.6	25.7	56.8	11.3	…	…	62.0
2010	34.2	55.7	23.5	51.5	9.9	…	…	55.5
2011	31.3	49.6	21.7	47.3	9.0	…	…	52.6
2012	29.4	46.3	20.5	43.9	8.5	…	…	51.2
2013	26.5	41.7	18.6	39.0	7.8	…	…	44.9
2014	24.2	38.0	17.3	34.9	6.8	…	…	39.3
2015	22.3	34.9	16.0	31.8	6.0	…	…	37.6
2016	…	…	14.4	29.3	5.2	…	…	34.7
2016 (single race)	20.3	31.9	14.3	29.3	…	3.9	28.6	35.1
2017	…	…	13.4	27.6	4.6	…	…	32.2
2017 (single race)	18.8	28.9	13.2	27.5	…	3.3	25.5	32.9
2018	…	…	12.2	26.2	4.0	…	…	29.4
2018 (single race)	17.4	26.7	12.1	26.3	…	2.8	26.5	29.7
			Standard error					
2008	0.06	0.18	0.06	0.19	0.16	…	…	0.74
2009	0.06	0.17	0.06	0.18	0.15	…	…	0.73
2010	0.06	0.16	0.06	0.17	0.14	…	…	0.70
2011	0.05	0.15	0.06	0.17	0.13	…	…	0.69
2012	0.05	0.14	0.06	0.16	0.13	…	…	0.69
2013	0.05	0.14	0.06	0.16	0.12	…	…	0.65
2014	0.05	0.13	0.05	0.15	0.11	…	…	0.61
2015	0.05	0.12	0.05	0.14	0.10	…	…	0.60
2016	…	…	0.05	0.14	0.09	…	…	0.58
2016 (single race)	0.04	0.12	0.05	0.14	…	0.09	1.21	0.63
2017	…	…	0.05	0.13	0.09	…	…	0.56
2017 (single race)	0.04	0.11	0.05	0.14	…	0.08	1.13	0.61
2018	…	…	0.05	0.13	0.08	…	…	0.54
2018 (single race)	0.04	0.10	0.05	0.13	…	0.07	1.15	0.58

… Category not applicable.

NOTES: The race groups white, black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with 2016 data, race on birth records is available based on the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and presented as single-race estimates (only one race was reported on the birth certificate). These estimates include separate estimates for non-Hispanic Asian and non-Hispanic Native Hawaiian or Other Pacific Islander groups. Data for 2008–2015 were tabulated according to the 1977 standards and bridged to retain comparability across states as they transitioned from the 1977 standards to those of 1997. Single-race estimates for 2016 and beyond are not completely comparable with bridged-race estimates for earlier years, particularly for smaller race categories. To look at longer-term trends, bridged-race estimates are also presented. The combined group of non-Hispanic Asian or Pacific Islander women is also shown. See Technical Notes; Appendix II, Hispanic origin; Race.

SOURCE: NCHS, National Vital Statistics System, Natality. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 8. Preterm singleton births, by gestational age and race and Hispanic origin of mother: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-008

Preterm singleton births, by gestational age: 2008–2018

Gestational age (weeks)[1]	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
					Percent of live singleton births that were preterm						
Total (less than 37)	8.5	8.2	8.1	8.0	8.0	7.8	7.7	7.8	8.0	8.1	8.2
34–36	6.3	6.1	6.0	5.9	5.8	5.7	5.7	5.7	5.9	6.0	6.1
32–33	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9
Less than 32	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2
					Standard error						
Total (less than 37)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
34–36	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
32–33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less than 32	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Preterm singleton births, by gestational age and race and Hispanic origin of mother: 2018

		Race and Hispanic origin of mother[3]					
			Not Hispanic or Latina				
Gestational age (weeks)[1]	Total[2]	Hispanic or Latina	White	Black or African American	Asian	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native
			Percent of live singleton births that were preterm				
Total (less than 37)	8.2	8.4	7.2	11.9	7.1	10.3	10.2
34–36	6.1	6.3	5.6	7.9	5.4	7.5	7.6
32–33	0.9	0.9	0.7	1.4	0.7	1.2	1.2
Less than 32	1.2	1.2	0.9	2.6	1.0	1.7	1.3
			Standard error				
Total (less than 37)	0.01	0.03	0.02	0.04	0.05	0.32	0.18
34–36	0.01	0.03	0.02	0.04	0.05	0.27	0.16
32–33	0.00	0.01	0.01	0.02	0.02	0.11	0.07
Less than 32	0.01	0.01	0.01	0.02	0.02	0.13	0.07

0.00 Quantity more than zero but less than 0.005.

[1]Preterm births are based on the obstetric estimate of gestational age and limited to singleton births. Singleton births refer to single births, in contrast with multiple or higher-order births, such as twins or triplets. Percentages for gestational age categories may not sum to the total percentage of live singleton births that occurred less than 37 weeks of gestation due to rounding. For more information on the obstetric estimates, see Appendix II, Gestation, and: Martin JA, Osterman MJK, Kirmeyer SE, Gregory ECW. Measuring gestational age in vital statistics data: Transitioning to the obstetric estimate. National Vital Statistics Reports; vol 64 no 5. Hyattsville, MD: National Center for Health Statistics. 2015. Available from: https://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_05.pdf.

[2]Includes preterm births for mothers of all other races and Hispanic-origin groups not shown separately, including multiple-race groups.

[3]The race groups white, black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander include persons of Hispanic and non-Hispanic origin. Persons of Hispanic origin may be of any race. Starting with 2016 data, race on birth records is available based on the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" and presented as single-race estimates (only one race was reported on the birth certificate). These estimates include separate estimates for non-Hispanic Asian and non-Hispanic Native Hawaiian or Other Pacific Islander groups. Data for 2003–2015 were tabulated according to the 1977 standards and bridged to retain comparability across states as they transitioned from the 1977 standards to those of 1997. See Technical Notes; Appendix II, Hispanic origin; Race.

SOURCE: NCHS, National Vital Statistics System, Natality. See Appendix I, National Vital Statistics System (NVSS).

Data table for Figure 9. Cigarette smoking among adults aged 18 and over, by age, and tobacco use among adolescents in grades 9–12, by type of product: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-009

Current cigarette smoking among adults aged 18 and over, by age: 2008–2018

Year	18 and over				18–44		45–64		65 and over	
	Percent (age adjusted)[1]	SE	Percent (crude)	SE	Percent	SE	Percent	SE	Percent	SE
2008	20.6	0.4	20.6	0.4	23.1	0.6	22.6	0.6	9.3	0.5
2009	20.6	0.4	20.6	0.4	23.4	0.5	21.9	0.6	9.5	0.5
2010	19.3	0.3	19.3	0.3	21.5	0.5	21.1	0.5	9.5	0.5
2011	19.0	0.3	19.0	0.3	21.2	0.5	21.4	0.5	7.9	0.4
2012	18.2	0.3	18.1	0.3	20.4	0.5	19.5	0.5	8.9	0.4
2013	17.9	0.3	17.8	0.3	19.7	0.5	19.9	0.5	8.8	0.4
2014	17.0	0.3	16.8	0.3	19.1	0.5	18.0	0.5	8.5	0.4
2015	15.3	0.3	15.1	0.3	16.5	0.5	17.0	0.5	8.4	0.4
2016	15.7	0.3	15.5	0.3	16.4	0.5	18.0	0.5	8.8	0.4
2017	14.1	0.3	14.0	0.3	14.6	0.4	16.5	0.5	8.2	0.4
2018	13.9	0.3	13.7	0.3	14.3	0.5	16.3	0.5	8.4	0.4

Tobacco use in the past 30 days among adolescents in grades 9–12, by type of product: 2011–2018

Year	Any tobacco product[2,3]	Electronic cigarette[4]	Cigarette[5]	Cigar[6]	Smokeless tobacco[7]	Hookah[8]	Pipe tobacco[9]
				Percent			
2011	24.2	1.5	15.8	11.6	7.9	4.1	4.0
2012	23.3	2.8	14.0	12.6	7.3	5.4	4.5
2013	22.9	4.5	12.7	11.9	6.2	5.2	4.1
2014	24.6	13.4	9.2	8.2	6.3	9.4	1.5
2015	25.3	16.0	9.3	8.6	6.0	7.2	1.0
2016	20.2	11.3	8.0	7.7	5.8	4.8	1.4
2017	19.6	11.7	7.6	7.7	5.5	3.3	0.8
2018	27.1	20.8	8.1	7.6	5.9	4.1	1.1
				Standard error			
2011	1.2	0.2	1.1	0.6	0.8	0.4	0.3
2012	0.9	0.3	0.8	0.6	0.6	0.4	0.3
2013	0.9	0.4	0.7	0.6	0.7	0.4	0.3
2014	1.0	1.2	0.6	0.5	0.6	0.6	0.2
2015	1.1	1.0	0.8	0.5	0.7	0.5	0.2
2016	1.0	0.8	0.7	0.6	0.6	0.4	0.1
2017	1.3	1.1	0.6	0.6	0.7	0.3	0.1
2018	0.9	1.0	0.6	0.5	0.5	0.3	0.1

See footnotes at end of table.

Data table for Figure 9. Cigarette smoking among adults aged 18 and over, by age, and tobacco use among adolescents in grades 9–12, by type of product: United States, 2008–2018—Con.

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-009

---

[1]Estimates are age adjusted to the year 2000 standard population using five age groups: 18–24, 25–34, 35–44, 45–64, and 65 and over. Age-adjusted estimates may differ from other age-adjusted estimates based on the same data and presented elsewhere if different age groups are used in the adjustment procedure. See Appendix II, Age adjustment.

[2]Use of any tobacco product (electronic cigarette, cigarette, cigar/cigarillo/little cigar, smokeless tobacco [including chewing tobacco/snuff/dip, snus, or dissolvable tobacco], hookah, pipe tobacco, or bidi) on at least 1 day in the past 30 days.

[3]In 2018, bidi use was assessed by the question, "In the past 30 days, which of the following tobacco products have you used on at least one day?" and the response option, "Bidis (small brown cigarettes wrapped in a leaf)." Prevalence estimates are not provided for bidis individually; however, use of bidis is captured in the composite measure "any tobacco product."

[4]In 2018, past 30-day use of electronic cigarettes was determined by asking, "During the past 30 days, on how many days did you use electronic cigarettes or e-cigarettes?"

[5]Past 30-day use of cigarettes was determined by asking, "During the past 30 days, on how many days did you smoke cigarettes?"

[6]Past 30-day use of cigars was determined by asking, "During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?"

[7]Defined as use of chewing tobacco, snuff, dip, snus, or dissolvable tobacco products. Past 30-day use of smokeless tobacco was determined by combining the responses to two questions: "During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip?" followed by, "In the past 30 days, which of the following products did you use on at least one day?" Response options included: "Snus, such as Camel, Marlboro, or General Snus; Dissolvable tobacco products such as Ariva, Stonewall, Camel orbs, Camel sticks, Marlboro sticks, or Camel strips." Beginning in 2015, the definition of smokeless tobacco includes chewing tobacco/snuff/dip, snus, and dissolvable tobacco products, due to a limited sample size for individual products (snus, dissolvable). This definition of smokeless tobacco is applied across all years presented (2011–2018) for comparability purposes. Previously published reports using 2014 and earlier National Youth Tobacco Survey (NYTS) data used a definition of smokeless tobacco that included only chewing tobacco, snuff, and dip; therefore, estimates from those reports may not be comparable to those presented here.

[8]Past 30-day use of hookah was determined by asking, "During the past 30 days, on how many days did you smoke tobacco in a hookah or waterpipe?"

[9]Past 30-day use of pipe tobacco was determined by asking, "In the past 30 days, which of the following products have you used on at least one day?" and the response option, "Pipes filled with tobacco (not waterpipe)."

NOTES: SE is standard error. Data are for the civilian noninstitutionalized population. Current cigarette smoking by adults is defined as ever smoking 100 cigarettes in their lifetime and smoking now every day or some days. Use of tobacco products by students in grades 9–12 is defined as having used the product on one or more days during the past 30 days. Data for the 2019 NYTS are available but not shown. Changes made to the 2019 survey—shifting to electronic administration of questionnaires, inclusion of tobacco product images, and descriptions in the preamble before each product-specific section—could result in higher estimates of tobacco use. Therefore, the 2019 estimates are not directly comparable with estimates from prior years. For the 2019 estimates, see https://www.cdc.gov/mmwr/volumes/68/ss/ss6812a1.htm. See Appendix II, Tobacco use.

SOURCE: NCHS, National Health Interview Survey, and CDC, National Youth Tobacco Survey. See Appendix I, National Health Interview Survey (NHIS) and National Youth Tobacco Survey (NYTS).

Data table for Figure 10. Current asthma among children under age 18 years, by age and race and Hispanic origin: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-010

Current asthma among children under age 18 years, by age: 2008–2018

Year	Total		Under 5 years		5–17 years	
	Percent	SE	Percent	SE	Percent	SE
2008	9.4	0.4	6.2	0.6	10.7	0.5
2009	9.6	0.4	6.3	0.6	11.0	0.5
2010	9.4	0.3	6.0	0.5	10.7	0.4
2011	9.5	0.3	6.9	0.5	10.6	0.4
2012	9.3	0.3	5.4	0.5	10.7	0.4
2013	8.3	0.3	4.2	0.4	9.9	0.4
2014	8.6	0.3	4.3	0.5	10.2	0.4
2015	8.4	0.3	4.7	0.5	9.8	0.4
2016	8.3	0.3	3.8	0.5	10.0	0.4
2017	8.4	0.4	4.4	0.6	9.9	0.5
2018	7.5	0.4	3.8	0.5	8.9	0.5

Current asthma among children under age 18 years, by race and Hispanic origin: 2018

Year	Hispanic		Not Hispanic or Latino					
			White		Black		Asian	
	Percent	SE	Percent	SE	Percent	SE	Percent	SE
2018	8.0	0.8	5.6	0.4	14.3	1.5	3.6	0.9

NOTES: SE is standard error. Data are for the civilian noninstitutionalized population. Based on a parent or knowledgeable adult responding yes to both questions, "Has a doctor or other health professional ever told you that your child had asthma?" and "Does your child still have asthma?" Children of Hispanic origin may be of any race. Race-specific estimates are tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity." See Appendix II, Hispanic origin; Race.

SOURCE: NCHS, National Health Interview Survey. See Appendix I, National Health Interview Survey (NHIS).

Data table for Figure 11. Hypertension among adults aged 20 and over, by age: United States, 1999–2000 through 2017–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-011

Hypertension among adults aged 20 and over, by age: 1999–2000 through 2017–2018

Age group (years)	Hypertension[1]									
	1999–2000	2001–2002	2003–2004	2005–2006	2007–2008	2009–2010	2011–2012	2013–2014	2015–2016	2017–2018
	Percent									
20 and over, age adjusted[2]	48.4	47.3	46.5	44.9	44.5	43.4	45.4	43.0	44.7	46.6
20 and over, crude	47.2	46.7	46.7	46.0	45.6	45.1	47.4	45.4	47.4	49.6
20–44	28.6	28.5	25.5	24.9	24.7	23.6	26.6	22.8	25.0	27.5
45–64	61.4	58.4	61.2	58.8	56.1	55.2	57.7	56.2	58.6	60.3
65 and over	82.3	81.0	80.2	77.5	80.1	79.7	78.0	79.2	74.7	77.3
	Standard error									
20 and over, age adjusted[2]	1.5	1.3	1.3	1.3	0.8	1.2	0.9	0.8	1.2	1.5
20 and over, crude	1.5	1.3	1.5	0.8	1.1	1.4	1.6	0.9	1.0	1.3
20–44	1.9	1.4	1.2	1.9	1.2	0.8	1.7	0.9	1.6	1.1
45–64	2.3	2.1	2.6	1.6	1.5	2.7	1.3	1.6	1.8	2.0
65 and over	2.3	1.8	1.5	1.7	1.8	1.6	1.4	1.2	2.5	2.3

Hypertension among adults aged 20 and over based on the 2007 standard, by age: 2017–2018

Age group (years)	Hypertension[3]	
	Percent	Standard error
20 and over, age adjusted[2]	31.0	1.4
20 and over, crude	34.9	1.6
20–44	10.5	1.0
45–64	45.0	2.7
65 and over	68.4	2.0

[1]Defined as having measured high blood pressure (measured systolic blood pressure of at least 130 mm Hg or diastolic blood pressure of at least 80 mm Hg) or taking high blood pressure medication. For more information, see Appendix II, Hypertension; Table VI.
[2]Estimates are age adjusted to the year 2000 standard population using five age groups: 20–34, 35–44, 45–54, 55–64, and 65 and over. See Appendix II, Age adjustment.
[3]Formerly defined as having measured high blood pressure (measured systolic blood pressure of at least 140 mm Hg or diastolic blood pressure of at least 90 mm Hg) or taking high blood pressure medication. For more information, including a comparison of high blood pressure estimates based on the former and revised standards, see Appendix II, Hypertension; Table VI.

NOTES: Data are for the civilian noninstitutionalized population. In 2017, the American College of Cardiology and the American Heart Association Task Force recommended adopting lower thresholds of high blood pressure. For systolic blood pressure, the threshold was lowered from 140 mm Hg to 130 mm Hg and for diastolic blood pressure, from 90 mm Hg to 80 mm Hg. For more information, including a comparison of hypertension estimates based on the former and revised standards, see Appendix II, Hypertension; Table VI.

SOURCE: NCHS, National Health and Nutrition Examination Survey. See Appendix I, National Health and Nutrition Examination Survey (NHANES).

Data table for Figure 12. Heart disease and cancer among adults aged 18 and over, by sex and age: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-012

Heart disease, by sex and age: 2008–2018

Sex and year	Age group (years)					
	18–44		45–64		65 and over	
	Percent	SE	Percent	SE	Percent	SE
Men						
2008	4.2	0.4	13.0	0.7	37.3	1.3
2009	4.5	0.4	14.5	0.7	37.4	1.3
2010	4.1	0.3	13.8	0.6	36.3	1.2
2011	3.3	0.2	13.8	0.6	37.4	1.1
2012	3.8	0.3	13.5	0.6	34.5	1.1
2013	3.7	0.3	13.6	0.6	34.8	1.1
2014	4.2	0.3	12.8	0.6	35.2	1.1
2015	4.3	0.4	12.6	0.6	35.1	1.1
2016	3.3	0.3	13.3	0.6	33.9	1.0
2017	3.8	0.4	13.0	0.6	33.7	1.0
2018	4.6	0.4	13.3	0.6	34.9	1.0
Women						
2008	5.0	0.3	11.5	0.6	28.9	1.0
2009	4.3	0.3	11.7	0.6	25.8	1.0
2010	4.8	0.3	12.6	0.5	25.3	0.9
2011	3.8	0.3	11.8	0.5	25.7	0.8
2012	3.7	0.2	10.8	0.5	26.1	0.9
2013	3.8	0.3	10.7	0.5	25.9	0.9
2014	4.4	0.3	11.2	0.5	23.9	0.8
2015	4.4	0.3	11.1	0.5	25.1	0.9
2016	4.3	0.3	11.2	0.5	23.6	0.8
2017	4.2	0.3	10.8	0.6	23.2	0.8
2018	5.0	0.4	10.4	0.5	24.5	0.8

See footnotes at end of table.

Data table for Figure 12. Heart disease and cancer among adults aged 18 and over, by sex and age: United States, 2008–2018—Con.

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-012

Cancer, by sex and age: 2008–2018

Sex and year	Age group (years)					
	18–44		45–64		65 and over	
	Percent	SE	Percent	SE	Percent	SE
Men						
2008	0.8	0.2	4.5	0.4	16.9	1.0
2009	0.7	0.1	4.8	0.4	20.5	1.0
2010	1.0	0.1	5.7	0.5	20.7	1.0
2011	0.8	0.1	4.5	0.3	20.7	0.9
2012	0.9	0.1	5.1	0.4	20.0	0.9
2013	0.5	0.1	5.6	0.4	20.4	1.0
2014	0.9	0.1	5.2	0.4	18.7	0.9
2015	0.9	0.2	4.7	0.4	19.3	0.9
2016	1.0	0.1	5.2	0.4	20.7	0.9
2017	1.0	0.2	6.0	0.4	20.5	0.9
2018	0.8	0.2	4.8	0.4	19.6	0.8
Women						
2008	2.8	0.3	8.7	0.5	17.9	0.9
2009	2.2	0.2	8.7	0.5	16.1	0.8
2010	2.6	0.2	8.9	0.4	16.3	0.7
2011	2.3	0.2	8.3	0.4	17.2	0.7
2012	2.3	0.2	7.9	0.4	17.1	0.7
2013	2.4	0.2	8.2	0.4	17.0	0.7
2014	2.4	0.2	7.7	0.4	17.2	0.7
2015	2.1	0.2	8.4	0.5	18.6	0.8
2016	2.3	0.2	9.7	0.5	18.5	0.7
2017	2.4	0.2	8.5	0.5	18.1	0.7
2018	2.0	0.2	8.8	0.5	19.5	0.7

NOTES: SE is standard error. Data are for the civilian noninstitutionalized population. Heart disease is based on self-reported responses to questions about whether respondents had ever been told by a doctor or other health professional that they had coronary heart disease, angina (angina pectoris), a heart attack (myocardial infarction), or any other kind of heart disease or heart condition. Cancer is based on self-reported responses to a question about whether respondents had ever been told by a doctor or other health professional that they had cancer or a malignancy of any kind (excluding squamous cell and basal cell carcinomas).

SOURCE: NCHS, National Health Interview Survey. See Appendix I, National Health Interview Survey (NHIS).

Data table for Figure 13. Functional limitation among adults aged 18 and over, by age and level of difficulty: United States, 2010–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-013

Functional limitation among adults aged 18–64, by level of difficulty: 2010–2018

Year	Level of difficulty					
	No difficulty		Some difficulty		A lot of difficulty or cannot do at all	
	Crude	Age adjusted	Crude	Age adjusted	Crude	Age adjusted
	Percent					
2010	67.2	68.2	26.7	26.1	6.2	5.7
2011	72.5	73.6	21.5	20.9	6.0	5.5
2012	66.1	67.6	28.2	27.1	5.7	5.3
2013	63.5	64.9	29.7	28.9	6.8	6.2
2014	63.9	65.2	28.9	28.1	7.2	6.7
2015	67.3	68.7	26.1	25.1	6.6	6.1
2016	67.3	68.3	26.5	25.9	6.2	5.8
2017	66.3	67.6	27.8	26.9	5.9	5.5
2018	62.6	63.9	30.2	29.4	7.2	6.7
	Standard error					
2010	0.8	0.8	0.8	0.8	0.4	0.4
2011	0.5	0.5	0.4	0.4	0.3	0.2
2012	0.8	0.8	0.7	0.7	0.4	0.4
2013	0.6	0.6	0.6	0.5	0.3	0.3
2014	0.6	0.6	0.6	0.6	0.3	0.3
2015	0.6	0.6	0.6	0.6	0.3	0.3
2016	0.7	0.7	0.6	0.6	0.3	0.3
2017	0.7	0.6	0.6	0.6	0.3	0.3
2018	0.5	0.5	0.4	0.5	0.2	0.2

Functional limitation among adults aged 65 and over, by level of difficulty: 2010–2018

Year	Level of difficulty					
	No difficulty		Some difficulty		A lot of difficulty or cannot do at all	
	Crude	Age adjusted	Crude	Age adjusted	Crude	Age adjusted
	Percent					
2010	35.4	35.0	42.0	42.0	22.6	23.1
2011	40.3	39.8	39.1	39.3	20.7	21.0
2012	40.4	39.7	41.7	41.9	17.9	18.5
2013	33.8	32.7	44.3	44.6	21.9	22.7
2014	33.6	32.6	44.7	45.0	21.6	22.3
2015	36.1	34.5	42.4	42.8	21.6	22.7
2016	39.9	38.6	42.0	42.2	18.2	19.2
2017	38.9	37.7	41.6	41.8	19.5	20.6
2018	32.7	31.4	45.4	45.6	21.9	23.0
	Standard error					
2010	1.7	1.6	1.7	1.7	1.4	1.4
2011	1.0	1.0	1.0	1.0	0.9	0.9
2012	1.5	1.5	1.4	1.4	1.1	1.1
2013	1.0	0.9	1.1	1.1	0.9	0.9
2014	1.0	1.0	1.0	1.0	0.9	0.9
2015	1.1	1.0	1.1	1.1	0.9	1.0
2016	1.0	1.0	1.0	1.0	0.7	0.7
2017	1.0	1.0	1.0	1.0	0.8	0.9
2018	0.7	0.7	0.7	0.7	0.6	0.6

See footnotes at end of table.

Data table for Figure 13. Functional limitation among adults aged 18 and over, by age and level of difficulty: United States, 2010–2018—Con.

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-013

NOTES: Data are for the civilian noninstitutionalized population. Functional limitation is defined by the reported level of difficulty in six functioning domains: seeing (even if wearing glasses), hearing (even if wearing hearing aids), mobility (walking or climbing stairs), communication (understanding or being understood by others), cognition (remembering or concentrating), and self-care (such as washing all over or dressing). Respondents with answers to one or more of the six questions are included in one of three mutually exclusive categories. Adults who respond "a lot of difficulty" or "cannot do at all/unable to do" to at least one question are classified in the "a lot of difficulty or cannot do at all" category. Of the remaining respondents, adults who respond "some difficulty" to all questions are classified in the "some difficulty" category, and adults who respond "no difficulty" to all questions are classified in the "no difficulty" category. Adults who respond "don't know" or "refused" to all six questions are excluded. During 2010–2018, 1%–8% of respondents were missing data and excluded. Estimates are age adjusted to the year 2000 standard population using five age groups: 18–44, 45–54, and 55–64 for age group 18–64 estimates, and 65–74 and 75 and over for age group 65 and over estimates. Estimates may not sum to 100% due to rounding. See Appendix II, Age adjustment; Functional limitation.

SOURCE: NCHS, National Health Interview Survey. See Appendix I, National Health Interview Survey (NHIS).

Data table for Figure 14. Use of mammography among women aged 40–74 and use of colorectal cancer testing among adults aged 50–75, by race and Hispanic origin: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-014

Use of mammography in the past 2 years among women aged 40–74, by race and Hispanic origin: 2008–2018

	Race and Hispanic origin[1]									
					Not Hispanic or Latino					
	Total[2]		Hispanic		White		Black		Asian	
Year	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
	Percent of women having a mammogram within the past 2 years[3]									
2008	69.3	0.7	61.7	2.2	70.5	0.9	70.1	1.8	69.0	3.2
2010	68.9	0.7	65.2	1.7	69.9	0.9	69.5	1.5	64.1	2.7
2013	68.4	0.6	62.1	1.5	69.6	0.8	68.1	1.7	70.4	2.4
2015	67.5	0.7	62.8	1.7	68.2	0.8	72.3	1.6	62.7	3.0
2018	69.4	0.6	64.0	1.9	71.2	0.7	70.5	2.0	62.6	3.1

Use of colorectal cancer test or procedure among adults aged 50–75, by race and Hispanic origin: 2008–2018

	Race and Hispanic origin[1]									
					Not Hispanic or Latino					
	Total[2]		Hispanic		White		Black		Asian	
Year	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
	Percent of adults having a colorectal cancer test or procedure[4]									
2008	51.6	0.7	34.0	2.0	54.8	0.8	47.4	2.0	47.3	3.5
2010	58.7	0.7	46.5	1.9	61.3	0.8	55.3	1.6	46.6	2.9
2013	57.8	0.6	41.5	1.7	60.4	0.7	58.2	1.5	51.2	2.7
2015	62.4	0.6	47.4	1.8	65.6	0.8	60.3	1.5	52.1	2.8
2018	67.2	0.6	57.9	2.0	69.9	0.7	65.2	1.6	58.2	3.1

[1]Race-specific estimates are tabulated according to the 1997 "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity." Estimates shown are for persons who reported only one racial group. Persons of Hispanic origin may be of any race. See Appendix II, Hispanic origin; Race.

[2]Includes all other races not shown separately.

[3]Questions concerning use of mammography differ slightly on the National Health Interview Survey across survey years. Use of a mammography is defined as reporting a mammogram in the past 2 years and using current U.S. Preventive Services Task Force (USPSTF) recommendations for breast cancer screening. For more information, see https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening. See Appendix II, Mammography.

[4]Questions concerning colorectal cancer testing differ slightly on the National Health Interview Survey across survey years. For 2008–2013 estimates, use of a colorectal cancer test was defined as reporting a fecal occult blood test (FOBT) in the past year, sigmoidoscopy in the past 5 years with FOBT in the past 3 years, or colonoscopy in the past 10 years. For 2015 estimates, fecal immunochemical test (FIT) in the past year was included in the definition of colorectal cancer testing. For 2018 estimates, use of a colorectal cancer test is defined as FOBT or FIT test in the past year, FIT-DNA test in the past 3 years, sigmoidoscopy in the past 5 years, computed tomography or CT colonography in the past 5 years, or colonoscopy in the past 10 years. Use of colorectal cancer testing is defined by current USPSTF recommendations for colorectal cancer screening. For more information, see https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening#tab. See Appendix II, Colorectal tests or procedures.

NOTES: SE is standard error. Data are for the civilian noninstitutionalized population. Data on cancer screening are collected intermittently, not annually. See Appendix II, Hispanic origin; Race.

SOURCE: NCHS, National Health Interview Survey. See Appendix I, National Health Interview Survey (NHIS).

Data table for Figure 15. Delay or nonreceipt of needed medical care in the past 12 months due to cost, by age: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-015

	Age group (years)							
	Under 19		19–25		26–64		65 and over	
Year	Percent	SE	Percent	SE	Percent	SE	Percent	SE
2008	5.4	0.3	14.3	0.6	13.7	0.3	4.5	0.3
2009	5.4	0.3	15.2	0.5	15.3	0.3	5.1	0.3
2010	4.5	0.2	14.8	0.5	14.8	0.3	5.0	0.2
2011	4.0	0.2	13.2	0.4	14.3	0.2	4.6	0.2
2012	3.4	0.2	11.5	0.4	13.8	0.2	4.1	0.2
2013	3.2	0.2	11.2	0.4	12.9	0.2	4.2	0.2
2014	2.9	0.2	9.1	0.4	11.7	0.2	4.3	0.2
2015	2.8	0.2	8.4	0.4	10.2	0.2	4.1	0.2
2016	2.6	0.2	8.0	0.4	10.2	0.2	3.8	0.2
2017	2.8	0.2	8.8	0.4	10.3	0.2	4.4	0.2
2018	2.9	0.2	8.6	0.4	11.7	0.2	5.3	0.2

NOTES: SE is standard error. Data are for the civilian noninstitutionalized population. Delay or nonreceipt of needed medical care is based on responses to the questions, "During the past 12 months, was there any time when [person] needed medical care but did not get it because [person] couldn't afford it?" and "During the past 12 months, has medical care been delayed because of worry about the cost?" The age groups shown are chosen to coincide with age limits for insurance coverage, which may affect delay or nonreceipt of needed medical care. Children and young adults may be able to obtain insurance coverage under the Children's Health Insurance Program, and adults aged 19–25 may be able to obtain insurance coverage under their parents' plan. Adults aged 65 and over are generally eligible for Medicare. See Appendix II, Children's Health Insurance Program; Health insurance coverage; Medicare.

SOURCE: NCHS, National Health Interview Survey. See Appendix I, National Health Interview Survey (NHIS).

Data table for Figure 16. Number of physicians in patient care per 100,000 resident population, by state: United States, 2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-016

Area	Number per 100,000 resident population
United States	278.49
Alabama	223.32
Alaska	259.16
Arizona	245.76
Arkansas	212.61
California	273.41
Colorado	288.57
Connecticut	360.73
Delaware	257.70
District of Columbia	672.22
Florida	264.63
Georgia	226.70
Hawaii	300.92
Idaho	188.43
Illinois	287.09
Indiana	227.39
Iowa	215.30
Kansas	252.75
Kentucky	241.20
Louisiana	276.63
Maine	325.49
Maryland	363.63
Massachusetts	435.38
Michigan	303.71
Minnesota	307.13
Mississippi	194.14
Missouri	276.54
Montana	243.31
Nebraska	255.83
Nevada	203.99
New Hampshire	313.64
New Jersey	317.42
New Mexico	239.67
New York	369.76
North Carolina	257.87
North Dakota	240.53
Ohio	297.29
Oklahoma	209.56
Oregon	296.04
Pennsylvania	328.25
Rhode Island	407.47
South Carolina	234.15
South Dakota	241.50
Tennessee	263.69
Texas	228.35
Utah	226.04
Vermont	382.43
Virginia	268.53
Washington	270.70
West Virginia	261.02
Wisconsin	266.39
Wyoming	196.37

NOTES: Data on the number of physicians in patient care per 100,000 resident population are calculated using 2010-based postcensal estimates. Data include professionally active doctors of medicine (M.D.s) and doctors of osteopathy (D.O.s) only. Data exclude physicians in medical teaching, administration, research, and other nonpatient care activities but include physicians in residency. Map data are displayed by a modified Jenks classification for the 50 states and District of Columbia, which creates categories that minimize within-group variation and maximize between-group variation. See Technical Notes for more information on Jenks classification.

SOURCE: American Medical Association (AMA). Physician Masterfile.

Data table for Figure 17. Number of dentists per 100,000 resident population, by state: United States, 2019

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-017

Area	Number per 100,000 resident population
United States	61.06
Alabama	40.97
Alaska	80.51
Arizona	55.12
Arkansas	41.82
California	77.88
Colorado	68.77
Connecticut	72.64
Delaware	43.95
District of Columbia	104.00
Florida	51.88
Georgia	46.83
Hawaii	78.33
Idaho	54.22
Illinois	67.58
Indiana	47.95
Iowa	54.01
Kansas	50.66
Kentucky	57.03
Louisiana	48.72
Maine	54.83
Maryland	70.56
Massachusetts	83.38
Michigan	58.91
Minnesota	58.78
Mississippi	42.91
Missouri	50.53
Montana	60.26
Nebraska	64.31
Nevada	55.26
New Hampshire	63.47
New Jersey	79.47
New Mexico	51.51
New York	75.32
North Carolina	52.55
North Dakota	55.11
Ohio	53.20
Oklahoma	49.56
Oregon	67.22
Pennsylvania	59.44
Rhode Island	53.81
South Carolina	47.16
South Dakota	50.75
Tennessee	47.43
Texas	53.81
Utah	60.95
Vermont	59.94
Virginia	63.19
Washington	70.41
West Virginia	47.88
Wisconsin	58.07
Wyoming	55.12

NOTES: Data on the number of dentists per 100,000 resident population are calculated using 2010-based postcensal estimates. Data include professionally active dentists who are listed in the American Dental Association Masterfile as licensed, not retired, living in the 50 states or District of Columbia (D.C.), and having a primary occupation of private practice (full- or part-time), dental school/faculty staff member, armed forces, other federal services (i.e., Veterans Affairs or Public Health Service), state or local government employee, hospital staff dentist, graduate student/intern/resident, or other health or dental organization staff member. Map data are displayed by a modified Jenks classification for the 50 states and D.C., which creates categories that minimize within-group variation and maximize between-group variation. See Technical Notes for more information on Jenks classification.

SOURCE: American Dental Association, Health Policy Institute. Supply of Dentists in the U.S.: 2001–2019. (Copyright 2020 American Dental Association. Reprinted with permission. All rights reserved.)

Data table for Figure 18. Personal health care expenditures, by source of funds and type of expenditure: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-018

Personal health care expenditures, by source of funds: 2008–2018

Year	Personal health care expenditures	Source of funds						
		Private health insurance	Medicare	Medicaid (total)	Medicaid (federal)	Medicaid (state and local)	Out of pocket	All other sources[1]
		Dollars (billions)						
2008	2,008.8	698.5	442.0	317.9	188.3	129.6	295.6	254.8
2009	2,111.4	730.8	470.3	346.4	230.7	115.6	294.2	269.7
2010	2,191.4	750.8	489.1	365.8	247.3	118.5	300.2	285.6
2011	2,267.3	780.0	512.0	373.7	228.2	145.5	310.4	291.1
2012	2,361.1	809.8	533.8	388.4	223.9	164.6	319.2	309.9
2013	2,431.2	824.2	553.6	405.9	234.4	171.5	326.9	320.6
2014	2,556.0	869.5	580.5	446.6	274.1	172.5	331.8	327.7
2015	2,710.2	936.5	607.1	484.1	304.5	179.7	341.7	340.8
2016	2,838.3	989.7	629.9	504.0	318.3	185.7	357.2	357.5
2017	2,954.5	1,032.4	659.4	519.6	322.9	196.8	365.2	377.8
2018	3,075.5	1,078.7	697.2	532.8	330.8	202.0	375.6	391.1
		Average annual percent change						
2008–2018	4.4	4.4	4.7	5.3	5.8	4.5	2.4	4.4

Personal health care expenditures, by type of expenditure: 2008 and 2018

Type of expenditure	2008	2018
	Percent distribution	
All expenditure types	100.0	100.0
Hospital	36.1	38.8
Physician and clinical	24.0	23.6
Prescription drugs	11.9	10.9
Dental	5.1	4.4
Nursing care facilities and continuing care retirement communities	6.5	5.5
Home health care	3.1	3.3
All other expenditure types[2]	13.2	13.6

[1]Includes Children's Health Insurance Program (CHIP), including Medicaid CHIP expansions; other health insurance programs, including Department of Defense and Department of Veterans Affairs; and other third-party payers and programs, including worksite health care, other private revenues, Indian Health Service, Substance Abuse and Mental Health Services Administration, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, other federal programs, other state and local programs, and school health programs.

[2]Includes other professional services; other health, residential, and personal care; durable medical equipment; and other nondurable medical products.

NOTES: Personal health care expenditures are outlays for goods and services relating directly to patient care. Expenditures are in current dollars and not adjusted for inflation. Numbers may not sum to total due to rounding. See Appendix II, Health expenditures, national.

SOURCE: Centers for Medicare & Medicaid Services, National Health Expenditure Accounts. See Appendix I, National Health Expenditure Accounts (NHEA).

Data table for Figure 19. Health insurance coverage, by age and type of coverage: United States, 2008–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-019

Health insurance coverage among children under age 18 years, by type of coverage: 2008–2018

Year	Private[1]		Medicaid[2]		Uninsured[3]	
	Percent	SE	Percent	SE	Percent	SE
2008	58.4	0.7	30.1	0.7	9.0	0.4
2009	55.8	0.8	33.1	0.7	8.2	0.4
2010	54.1	0.7	35.2	0.6	7.8	0.3
2011	53.7	0.7	37.0	0.7	7.0	0.3
2012	53.4	0.6	37.6	0.6	6.6	0.3
2013	53.2	0.7	37.7	0.6	6.6	0.3
2014	53.7	0.6	38.1	0.6	5.4	0.2
2015	54.6	0.7	38.7	0.7	4.5	0.2
2016	54.3	0.7	37.8	0.7	5.2	0.3
2017	55.2	0.7	36.7	0.7	5.0	0.3
2018	54.9	0.8	36.6	0.8	5.2	0.3

Health insurance coverage among adults aged 18–64, by type of coverage: 2008–2018

Year	Private[1]		Medicaid[2]		Uninsured[3]	
	Percent	SE	Percent	SE	Percent	SE
2008	68.5	0.4	7.8	0.2	19.9	0.3
2009	66.2	0.4	8.6	0.2	21.2	0.3
2010	64.7	0.4	9.0	0.2	22.3	0.3
2011	65.0	0.4	9.5	0.2	21.2	0.3
2012	65.1	0.4	9.8	0.2	20.9	0.3
2013	65.1	0.4	10.0	0.2	20.5	0.3
2014	67.4	0.4	11.8	0.2	16.3	0.3
2015	69.7	0.4	12.9	0.3	13.0	0.2
2016	69.9	0.4	13.6	0.3	12.2	0.3
2017	69.6	0.4	13.2	0.3	12.8	0.3
2018	69.2	0.4	13.0	0.3	13.2	0.3

[1]Includes plans obtained through an employer, purchased directly, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage also includes managed care, such as health maintenance organizations (HMOs). The category excludes plans that paid for only one type of specialized service, such as accidents or dental care.

[2]Includes persons who had Medicaid or other state-sponsored health plans, including the Children's Health Insurance Program (CHIP).

[3]Persons not covered by private insurance, Medicaid, CHIP, state-sponsored or other government-sponsored health plans, Medicare, or military plans are considered to have no health insurance coverage. Persons with only Indian Health Service coverage or plans that cover only one type of service such as dental care or long-term care are also considered to have no health insurance coverage.

NOTES: SE is standard error. Data are for the civilian noninstitutionalized population. Health insurance coverage is at the time of interview. Health insurance categories are mutually exclusive. A small percentage of children and adults (less than 5%) are covered by Medicare or other public plans, military plans, or other plans; estimates for this group are not shown. See Appendix II, Health insurance coverage; Medicaid; Uninsured.

SOURCE: NCHS, National Health Interview Survey. See Appendix I, National Health Interview Survey (NHIS).

Data table for Figure 20. Supplemental insurance coverage among adults aged 65 and over with Medicare coverage, by type of supplemental coverage: United States, 2010–2018

Excel and PowerPoint: https://www.cdc.gov/nchs/hus/contents2019.htm#Figure-020

	Type of supplemental coverage									
	Medicaid		Medigap, employer or union sponsored		Medicare Advantage		Military		No supplemental coverage	
Year	Percent	SE	Percent	SE	Percent	SE	Percent	SE	Percent	SE
2010	7.1	0.3	48.1	0.8	19.6	0.6	5.4	0.3	19.6	0.6
2011	7.1	0.3	46.8	0.7	21.1	0.5	5.8	0.3	19.0	0.5
2012	6.7	0.3	44.3	0.7	22.6	0.6	6.3	0.3	19.9	0.6
2013	7.6	0.3	42.9	0.7	23.4	0.6	5.8	0.3	20.1	0.6
2014	7.1	0.3	42.0	0.7	24.9	0.6	6.6	0.3	19.2	0.5
2015	7.6	0.3	40.1	0.8	25.8	0.6	6.7	0.4	19.6	0.6
2016	7.1	0.3	40.6	0.7	26.5	0.6	6.8	0.3	18.7	0.5
2017	7.7	0.4	39.1	0.7	28.2	0.6	6.1	0.3	18.8	0.5
2018	7.3	0.3	39.9	0.7	26.5	0.6	8.7	0.4	17.3	0.5

NOTES: SE is standard error. Data are for the civilian noninstitutionalized population. Supplemental coverage is determined by NCHS insurance experts using plan information from respondents. Categories are mutually exclusive and hierarchical. Responses were first categorized as: Medigap, employer or union sponsored; Medicaid; military; or Medicare only. Those in either the Medigap, employer or union sponsored, or Medicare only categories were further classified as Medigap, employer or union sponsored; Medicare Advantage; or no supplemental coverage. No supplemental coverage means the beneficiaries had traditional fee-for-service Medicare only. Military includes Tricare, CHAMPUS, and Veterans Health Administration (VHA). In 2018, the percentage of military coverage increased due in part to improved collection of information on VHA health care. A small percentage of Medicare beneficiaries (less than 1%) had traditional Medicare and a state or local plan; this group is not shown. Adults aged 65 and over who did not have Medicare coverage (6%–7%) are excluded.

SOURCE: NCHS, National Health Interview Survey. See Appendix I, National Health Interview Survey (NHIS).

Technical Notes

Data Sources

Data in the *Health, United States, 2019* Chartbook come from many surveys and data systems and cover a broad range of years. Most figures show trends over 10 years, ending with the most recent data available. When 10 years of data are not available, the figures cover a period as close as possible to 10 years given the constraints of the data source. Some figures show estimates for the most recent data year by demographic variables of interest. Detailed descriptions of the data sources included in the Chartbook are provided in Appendix I, Data Sources. Additional information on the data is included in the data table notes and in Appendix II, Definitions and Methods.

Data Presentation

Most figures in the Chartbook show trends over time, while some focus on differences in estimates among population subgroups for the most recent period available.

Many measures in the Chartbook are shown for people in specific age groups because of the strong effect of age on most health outcomes. In some cases, age-adjusted measures are computed to eliminate differences in observed estimates that result from differences in the age structure of the population over time or across groups (see Appendix II, Age adjustment). For example, death rates are often age adjusted to remove the effects of changing age distributions over time or across groups (40). Age-adjusted rates and age-adjusted percentages are noted in the text; rates and percentages without this notation are crude rates and percentages.

For some charts, data from multiple years are combined to increase the sample size and the statistical reliability of the pooled point estimates.

Two charts show geographic differences in health resources by state. Data in the state maps are categorized using a modification of the Jenks natural breaks classification method. The Jenks method clusters data into groups that minimize the within-group variance and maximize the between-group variance (72). The modification rounds the data cut points to assist map reading by a general audience.

Trends are generally shown on a linear scale to emphasize absolute differences over time. However, when the range of rates is broad, trends may be shown on the logarithmic (log) scale so that all rates can be shown on the same chart. For example, the Selected Causes of Death chart presents rates on the log scale.

Point estimates and standard errors for Chartbook figures are available in the Chartbook data tables that follow the figures. Chartbook data tables may include additional data that are not found in the figures.

Racial and Ethnic Data

In 1997, the Office of Management and Budget (OMB) issued "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity." Starting with data year 1999, most National Center for Health Statistics (NCHS) survey estimates by race are presented based on the 1997 standards. Vital statistics systems, however, transitioned to the 1997 standards over time as states adopted the 2003 revision of the U.S. Standard Certificates of Live Birth and Death, which contained the 1997 standards. The 2003 revisions were not adopted by all states until 2016 for births and 2018 for deaths. Prior to full adoption of the 2003 standard certificates, most race data for vital statistics used the 1977 standards. During this transition, it was necessary to make vital records data by race comparable across states. This was done by bridging the race information collected under the 1997 standards to be consistent with data collected under the 1977 standards (1). For more information, see Appendix I, Population Census and Population Estimates, Bridged-race Population Estimates, and Appendix II, Race.

The 1997 standards offer respondents an opportunity to select more than one race group, leading to five single-race categories and many possible multiple-race categories. According to U.S. Census Bureau data, a small percentage of people reported two or more races (2.8% in 2019) (73). There are two basic ways of defining a race group when respondents have the option of reporting multiple races. A group such as black may be defined as those who reported black and no other race (the "race alone" or "single-race" concept) or those who reported black regardless of whether they also reported another race (the "race alone or in combination" concept). In this report, data are shown using the first approach (single race). Use of the single-race population does not imply that it is the preferred method of presenting or analyzing data.

Recent vital statistics data in this report are generally shown for the following six race and Hispanic-origin groups under the 1997 OMB standards: non-Hispanic American Indian or Alaska Native; non-Hispanic Asian; non-Hispanic black or African American; non-Hispanic Native Hawaiian or Other Pacific Islander; non-Hispanic white; and Hispanic or Latino. Life expectancy and survey estimates by race and Hispanic origin are generally shown for fewer race and Hispanic-origin groups due to sample size and reliability issues. Data on race and Hispanic origin are collected separately. Persons of Hispanic origin may be of any race. Estimates for race groups using the 1997 standard are not

completely comparable with data based on the earlier 1977 standards. To allow for analysis of longer trends, selected charts using vital statistics data may include the combined non-Hispanic Asian or Pacific Islander group.

Statistical Reliability of Estimates

Estimates for the total population generally have relatively small sampling errors and high precision, but estimates for certain population subgroups may be based on small numbers of respondents or events and have relatively large sampling errors or low precision (74). Numbers of deaths obtained from the National Vital Statistics System (NVSS) used in the Chartbook represent complete counts and are not subject to sampling error. They are, however, subject to random variation, and standard errors were calculated to account for this variation in statistical testing. When the number of events and the probability of such an event are small, estimates may be unreliable.

Estimates that are unreliable because of large sampling errors, low precision, small denominators, or small numbers of events are noted with an asterisk (*). The criteria used to designate or suppress statistically unreliable estimates are indicated in the notes of the applicable tables or charts.

For NCHS surveys, point estimates and their corresponding sampling variances were calculated using the SUDAAN software package, which takes into consideration the complex survey design (75). Standard errors for other surveys or data sets were computed using the methodology recommended by the programs providing the data or were provided directly by those programs. In *Health, United States, 2019*, the reliability of survey percentage estimates was assessed based on a minimum denominator sample size and the absolute and relative width of the Clopper–Pearson confidence interval (adapted for complex surveys by Korn and Graubard), which determines if the estimate is unreliable and should be suppressed (74).

In the online-only supplementary Trend Tables, this approach has been applied specifically to estimates from the National Health and Nutrition Examination Survey (NHANES) beginning with the 2013–2014 cycle, and to estimates from the National Health Interview Survey (NHIS) beginning with 2016. The reliability of estimates for prior years was evaluated based on relative standard errors. For more information on each approach, see Appendix II, Data presentation standards for proportions; Relative standard error (RSE).

Statistical Testing

Statistical trends can be analyzed in many ways. The approaches used in this Chartbook to analyze trends in health measures over time depend primarily on the data source (i.e., NCHS surveys, vital statistics, and other data sources) but also consider the type of dependent variable and the number of data points (2). With a sufficient number of data points, statistical analyses can detect not only whether an increase or decrease has occurred but also a change in trend. Some trends are analyzed using the weighted least squares regression method in the National Cancer Institute's Joinpoint software version 4.6.0.0, which identifies the number and location of joinpoints (i.e., inflection points) when changes in trend have occurred (76). For more information on Joinpoint, see: https://surveillance.cancer.gov/joinpoint.

Trends in NCHS survey data, including NHANES and NHIS (Figures 9, 10, 12–15, 19, and 20), are based on record-level data and generally follow the steps laid out in the NCHS trends analysis guidelines (2). The presence of a nonlinear trend is first assessed using polynomial regression (SUDAAN PROC REGRESS). Linear, quadratic, and cubic trends are tested in separate regression models covering the entire period shown in the figure. Quadratic trends are tested with both linear and quadratic terms in the model, and cubic trends are tested with linear, quadratic, and cubic terms in the model.

If a quadratic or cubic trend is statistically significant and the analysis included at least 11 time points, Joinpoint software is used to search for up to two inflection points with as few as two observed time points allowed in the beginning, middle, and ending line segments (not counting the inflection points). Although this exceeds the software default of one inflection point for analyses using 11 time points, the NCHS trends analysis guidelines state this is not a problem for the analysis of record-level survey data because appropriate survey analysis software is used as a follow-up to the Joinpoint software analysis (2, p. 18). If a quadratic trend is statistically significant and the analysis included at least seven time points, Joinpoint is used to search for one inflection point in the trend. In each case, an overall p value of 0.05 and the grid search method are used. If neither a cubic nor quadratic trend is statistically significant—that is, there is no inflection point—then Joinpoint is not used for further analysis. If a quadratic trend is statistically significant and the analysis included three to six time points, pairwise differences between percentages are tested using two-sided significance tests (z tests) to obtain additional information regarding changes in the trend.

In all Joinpoint analyses of survey data, the Bayesian information criterion (BIC) model is used because it increases the sensitivity to detect potential inflection points. Because Joinpoint is not able to fully account for the complex survey design, inflection points are verified in SUDAAN, which properly accounts for survey design. The difference in slopes between the two segments on either side of an inflection point is assessed using piecewise linear regression (SUDAAN PROC REGRESS). To conduct piecewise linear regression of age-adjusted estimates, survey weights are adjusted for age (77).

Trend analyses of birth data, infant mortality, and death rates using vital statistics data from NVSS (Figures 1–8) also follow the NCHS trends analysis guidelines (2)

and use aggregated point estimates and their standard errors rather than record-level data. Increases or decreases in the estimates during the entire time period shown are assessed using Joinpoint with an overall *p* value of 0.05 and the grid search method. In analyses with fewer than 10 time points, BIC is used to select the model. In analyses with 10 or more time points, the permutation test is used to select the model. The maximum number of joinpoints searched is limited to 1, the software default when 11 time points occur in any analysis. The NCHS trends analysis guidelines recommend against specifying a maximum number of joinpoints to search that exceeds the default for vital statistics, because this increases the likelihood of estimation issues (2, p. 18). As few as two observed time points are allowed in beginning and ending line segments (not counting the inflection points). Trend analyses using Joinpoint are carried out on the log scale for birth, infant mortality, and death rates so that results provide estimates of average annual percent change.

Note that all calculations described in this section are performed on the most accurate, actual, unrounded values available while using SAS, SUDAAN, or Joinpoint to ensure the most accurate results. Where possible, estimates and standard errors are to five or more decimal places. The final figures in the data tables have been rounded for presentation purposes. Using these rounded figures to reproduce calculations may lead to slightly different results.

For other data sources, the difference between two points is assessed for statistical significance using either *z* tests or the statistical testing methods recommended by the data systems. For analyses that show two time points, the differences between the two points are assessed for statistical significance at the 0.05 level using *z* tests without correction for multiple comparisons. For data sources with no standard errors, relative differences greater than 10% are generally discussed in the text. For life expectancy, changes of 0.1 year or greater are usually discussed.

Terms such as "similar," "no difference," stable," and "no clear trend" indicate that the statistics being compared are not significantly different or that the slope of the trend line is not significantly different from zero. Unless otherwise noted in the text, differences that are described are statistically significant at the 0.05 level. However, lack of comment regarding the difference between statistics does not necessarily suggest that the difference was tested and found not significant. Chartbook data tables include point estimates and standard errors, when available, for data users who would like to perform additional statistical tests.

Statistical significance of differences or trends is partly a function of sample size (the larger the sample, the smaller the change that can be detected), and statistical significance does not always indicate public health significance (78). Moreover, a small sample size may result in statistically nonsignificant results despite the existence of potentially meaningful differences (79).

References

1. Ingram DD, Parker JD, Schenker N, Weed JA, Hamilton B, Arias E, Madans JH. United States Census 2000 population with bridged race categories. Vital Health Stat 2(135). 2003.
2. Ingram DD, Malec DJ, Makuc DM, Kruszon-Moran D, Gindi RM, Albert M, et al. National Center for Health Statistics guidelines for analysis of trends. National Center for Health Statistics. Vital Health Stat 2(179). 2018.
3. World Health Organization. Global Health Observatory (GHO) data: Life expectancy and healthy life expectancy: Life expectancy at birth (years). Available from: https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/life-expectancy-and-healthy-life-expectancy.
4. Kochanek KD, Anderson RN, Arias E. Changes in life expectancy at birth, 2010–2018. NCHS Health E-Stat. 2020.
5. Murphy SL, Xu JQ, Kochanek KD, Arias E, Tejada-Vera B. Deaths: Final data for 2018. National Vital Statistics Reports; vol 69 no 13. Hyattsville, MD: National Center for Health Statistics. 2021. Available from: https://www.cdc.gov/nchs/products/nvsr.htm.
6. Reidpath DD, Allotey P. Infant mortality rate as an indicator of population health. J Epidemiol Community Health 57(5):344–6. 2003.
7. Ely DM, Driscoll AK. Infant mortality in the United States, 2017: Data from the period linked birth/infant death file. National Vital Statistics Reports; vol 68 no 10. Hyattsville, MD: National Center for Health Statistics. 2019.
8. Hedegaard H, Miniño AM, Warner M. Drug overdose deaths in the United States, 1999–2018. NCHS Data Brief, no 356. Hyattsville, MD: National Center for Health Statistics. 2020.
9. Wilson N, Kariisa M, Seth P, Smith H IV, Davis NL. Drug and opioid-involved overdose deaths—United States, 2017–2018. MMWR Morb Mortal Wkly Rep 69(11):290–7. 2020.
10. Hu G, Wilcox HC, Wissow L, Baker SP. Mid-life suicide: An increasing problem in U.S. whites, 1999–2005. Am J Prev Med 35(6):589–93. 2008.
11. Hedegaard H, Curtin SC, Warner M. Increase in suicide mortality in the United States, 1999–2018. NCHS Data Brief, no 362. Hyattsville, MD: National Center for Health Statistics. 2020.
12. Phillips JA, Robin AV, Nugent CN, Idler EL. Understanding recent changes in suicide rates among the middle-aged: Period or cohort effects? Public Health Rep 125(5):680–8. 2010.
13. Centers for Disease Control and Prevention. WISQARS: Leading causes of death reports, 1981–2018. Available from: https://webappa.cdc.gov/sasweb/ncipc/leadcause.html.
14. Xu JQ, Murphy SL, Kochanek KD, Arias E. Mortality in the United States, 2018. NCHS Data Brief, no 355. Hyattsville, MD: National Center for Health Statistics. 2020.
15. Maternal Mortality Estimation Inter-Agency Group, Alkema L, Zhang S, Gemmill A. Trends in maternal mortality: 1990 to 2015: Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva, Switzerland: World Health Organization. 2015.
16. Rossen LM, Womack LS, Hoyert DL, Anderson RN, Uddin SFG. The impact of the pregnancy checkbox and misclassification on maternal mortality trends in the United States, 1999–2017. National Center for Health Statistics. Vital Health Stat 3(44). 2020.
17. Hoyert DL, Miniño AM. Maternal mortality in the United States: Changes in coding, publication, and data release, 2018. National Vital Statistics Reports; vol 69 no 2. Hyattsville, MD: National Center for Health Statistics. 2020.
18. Hoyert DL, Uddin SFG, Miniño AM. Evaluation of the pregnancy status checkbox on the identification of maternal deaths. National Vital Statistics Reports; vol 69 no 1. Hyattsville, MD: National Center for Health Statistics. 2020.
19. Martinez G, Copen CE, Abma JC. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2006–2010 National Survey of Family Growth. National Center for Health Statistics. Vital Health Stat 23(31). 2011.
20. Ventura SJ, Hamilton BE, Mathews TJ. National and state patterns of teen births in the United States, 1940–2013. National Vital Statistics Reports; vol 63 no 4. Hyattsville, MD: National Center for Health Statistics. 2014.
21. Chang HH, Larson J, Blencowe H, Spong CY, Howson CP, Cairns-Smith S, et al. Preventing preterm births: Analysis of trends and potential reductions with interventions in 39 countries with very high human development index. Lancet 381(9862):223–34. 2013.
22. Ancel PY, Goffinet F, EPIPAGE-2 Writing Group, Kuhn P, Langer B, Matis J, et al. Survival and morbidity of preterm children born at 22 through 34 weeks' gestation in France in 2011: Results of the EPIPAGE-2 cohort study. JAMA Pediatr 169(3):230–8. 2015.
23. Adams JN, Feldman HM, Huffman LC, Loe IM. Sensory processing in preterm preschoolers and its association with executive function. Early Hum Dev 91(3):227–33. 2015.
24. Brown L, Burns YR, Watter P, Gibbons KS, Gray PH. Motor performance, postural stability and behaviour of non-disabled extremely preterm or extremely low birth weight children at four to five years of age. Early Hum Dev 91(5):309–15. 2015.

25. van der Pal-de Bruin KM, van der Pal SM, Verloove-Vanhorick SP, Walther FJ. Profiling the preterm or VLBW born adolescent; implications of the Dutch POPS cohort follow-up studies. Early Hum Dev 91(2):97–102. 2015.
26. MacDorman MF, Mathews TJ. Understanding racial and ethnic disparities in U.S. infant mortality rates. NCHS Data Brief, no 74. Hyattsville, MD: National Center for Health Statistics. 2011.
27. Martin JA, Hamilton BE, Osterman MJK, Driscoll AK. Births: Final data for 2018. National Vital Statistics Reports; vol 68 no 13. Hyattsville, MD: National Center for Health Statistics. 2019.
28. U.S. Department of Health and Human Services. The health consequences of smoking—50 years of progress: A report of the Surgeon General. Rockville, MD: Office of the Surgeon General. 2014.
29. Benjamin EJ, Muntner P, Alonso A, Bittencourt MS, Callaway CW, Carson AP, et al. Heart disease and stroke statistics—2019 update: A report from the American Heart Association. Circulation 139(10):e56–e528. 2019.
30. Regan AK, Promoff G, Dube SR, Arrazola R. Electronic nicotine delivery systems: Adult use and awareness of the 'e-cigarette' in the USA. Tob Control 22(1):19–23. 2013.
31. DeVito EE, Krishnan-Sarin S. E-cigarettes: Impact of e-liquid components and device characteristics on nicotine exposure. Curr Neuropharmacol 16(4):438–59. 2018.
32. Gentzke AS, Creamer M, Cullen KA, Ambrose BK, Willis G, Jamal A, King BA. Vital signs: Tobacco product use among middle and high school students—United States, 2011–2018. MMWR Morb Mortal Wkly Rep 68(6):157–64. 2019.
33. Cullen KA, Gentzke AS, Sawdey MD, Chang JT, Anic GM, Wang TW, et al. E-cigarette use among youth in the United States, 2019. JAMA 322(21):2095–103. 2019.
34. National Heart, Lung, and Blood Institute. Expert panel report 3: Guidelines for the diagnosis and management of asthma. NIH pub no 07–4051. Bethesda, MD: National Institutes of Health. 2007.
35. National Heart, Lung, and Blood Institute. The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Bethesda, MD: National Institutes of Health. 2004.
36. Whelton PK, Carey RM, Aronow WS, Casey DE Jr, Collins KJ, Dennison Himmelfarb C, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: A report of the American College of Cardiology/American Heart Association task force on clinical practice guidelines. Hypertension 71(6):e13–e115. 2018.
37. Patel SA, Winkel M, Ali MK, Narayan KM, Mehta NK. Cardiovascular mortality associated with 5 leading risk factors: National and state preventable fractions estimated from survey data. Ann Intern Med 163(4):245–53. 2015.
38. Danaei G, Ding EL, Mozaffarian D, Taylor B, Rehm J, Murray CJL, Ezzati M. The preventable causes of death in the United States: Comparative risk assessment of dietary, lifestyle, and metabolic risk factors. PLoS Med 6(4):e1000058. 2009.
39. García MC, Bastian B, Rossen LM, Anderson R, Miniño A, Yoon PW, et al. Potentially preventable deaths among the five leading causes of death—United States, 2010 and 2014. MMWR Morb Mortal Wkly Rep 65(45):1245–55. 2016.
40. Hoyert DL. 75 years of mortality in the United States, 1935–2010. NCHS Data Brief, no 88. Hyattsville, MD: National Center for Health Statistics. 2012.
41. World Health Organization. International classification of functioning, disability and health (ICF). 2001. Available from: https://www.who.int/classifications/icf/en/.
42. Pinsky PF. Principles of cancer screening. Surg Clin North Am 95(5):953–66. 2015.
43. Zauber AG. The impact of screening on colorectal cancer mortality and incidence: Has it really made a difference? Dig Dis Sci 60(3):681–91. 2015.
44. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2018. CA Cancer J Clin 68(1):7–30. 2018.
45. Nelson HD, Fu R, Cantor A, Pappas M, Daeges M, Humphrey L. Effectiveness of breast cancer screening: Systematic review and meta-analysis to update the 2009 U.S. Preventive Services Task Force recommendation. Ann Intern Med 164(4):244–55. 2016.
46. Siu AL, U.S. Preventive Services Task Force. Screening for breast cancer: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med 164(4):279–96. 2016.
47. U.S. Preventive Services Task Force, Bibbins-Domingo K, Grossman DC, Curry SJ, Davidson KW, Epling JW Jr, et al. Screening for colorectal cancer: US Preventive Services Task Force recommendation statement. JAMA 315(23):2564–75. 2016.
48. U.S. Preventive Services Task Force. Screening for colorectal cancer: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med 149(9):627–37. 2008.
49. Chernew ME, Newhouse JP. What does the RAND health insurance experiment tell us about the impact of patient cost sharing on health outcomes? Am J Manag Care 14(7):412–4. 2008.
50. Allen EM, Call KT, Beebe TJ, McAlpine DD, Johnson PJ. Barriers to care and health care utilization among the publicly insured. Med care 55(3):207–14. 2017.
51. Kaiser Commission on Medicaid and the Uninsured. The uninsured and the difference health insurance makes. Washington, DC: Kaiser Family Foundation. 2012.
52. Social Security Act. Title XXI: State Children's Health Insurance Program. 42 USC 1397aa–1397mm. 1997.
53. Patient Protection and Affordable Care Act. Pub L No 111–148, 124 Stat 119. 2010.

54. Social Security Act. Title XVIII: Health insurance for the aged and disabled. 42 USC 1395–1395lll. 1965.
55. Health Resources and Services Administration. The physician workforce: Projections and research into current issues affecting supply and demand. Rockville, MD: U.S. Department of Health and Human Services. 2008.
56. Douthit N, Kiv S, Dwolatzky T, Biswas S. Exposing some important barriers to health care access in the rural USA. Public Health 129(6):611–20. 2015.
57. U.S. Department of Health and Human Services. Oral health in America: A report of the Surgeon General. Rockville, MD: Office of the Surgeon General. 2000.
58. Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental caries and tooth loss in adults in the United States, 2011–2012. NCHS Data Brief, no 197. Hyattsville, MD: National Center for Health Statistics. 2015.
59. Fleming E, Afful J. Prevalence of total and untreated dental caries among youth: United States, 2015–2016. NCHS Data Brief, no 307. Hyattsville, MD: National Center for Health Statistics. 2018.
60. Health Resources and Services Administration. First quarter of fiscal year 2020 designated HPSA quarterly summary. Rockville, MD: U.S. Department of Health and Human Services. 2019.
61. American Dental Association. Supply and profile of dentists: Supply of dentists in the U.S.: 2001–2019. 2020. Available from: https://www.ada.org/en/science-research/health-policy-institute/data-center/supply-and-profile-of-dentists.
62. Hartman M, Martin AB, Benson J, Catlin A, National Health Expenditure Accounts Team. National health care spending in 2018: Growth driven by accelerations in Medicare and private insurance spending. Health Aff 39(1):8–17. 2019.
63. Larson K, Cull WL, Racine AD, Olson LM. Trends in access to health care services for US children: 2000–2014. Pediatrics 138(6):e20162176. 2016.
64. Dubay L, Kenney GM. Health care access and use among low-income children: Who fares best? Health Aff (Millwood) 20(1):112–21. 2001.
65. McWilliams JM. Health consequences of uninsurance among adults in the United States: Recent evidence and implications. Milbank Q 87(2):443–94. 2009.
66. Social Security Act. Title XIX: Medicaid. 42 USC 1396 et seq. 1965.
67. Institute of Medicine. America's uninsured crisis: Consequences for health and health care. Washington, DC: National Academies Press. 2009.
68. Medicare Payment Advisory Commission. Report to the Congress: Medicare payment policy. Washington, DC. 2019.
69. Meyers DJ, Trivedi AN, Mor V. Limited Medigap consumer protections are associated with higher reenrollment in Medicare advantage plans. Health Aff (Millwood) 38(5):782–7. 2019.
70. Neuman P, Jacobson GA. Medicare advantage checkup. N Engl J Med 379(22):2163–72. 2018.
71. National Center for Health Statistics. 2018 National Health Interview Survey (NHIS) public use data release: Survey description. 2019. Available from: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2018/srvydesc.pdf.
72. Brewer CA, Pickle L. Evaluation of methods for classifying epidemiological data on choropleth maps in series. Ann Assoc Am Geogr 92(4):662–81. 2002.
73. U.S. Census Bureau. Quickfacts: United States population estimates, July 1, 2019, (vintage year 2019). Available from: https://www.census.gov/quickfacts/fact/table/US/PST045219.
74. Parker JD, Talih M, Malec DJ, Beresovsky V, Carroll M, Gonzalez JF Jr, et al. National Center for Health Statistics data presentation standards for proportions. National Center for Health Statistics. Vital Health Stat 2(175). 2017.
75. RTI International. SUDAAN (Version 11.0) [computer software]. 2012.
76. National Cancer Institute. Joinpoint trend analysis (Version 4.6.0.0) [computer software]. 2018.
77. Li X, Bush MA. Approaches for performing age-adjustment in trend analysis. Proceedings of JSM 2019 of the American Statistical Association: 741–50. Denver, CO. 2019.
78. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Youth Risk Behavior Surveillance System (YRBSS). Interpretation of YRBS trend data. Atlanta, GA: Centers for Disease Control and Prevention. 2016.
79. Wasserstein RL, Lazar NA. The ASA's statement on *p*-values: Context, process, and purpose. Am Stat 70(2): 129–33. 2016.