

Comparability of Race-specific Mortality Data Based on 1977 Versus 1997 Reporting Standards

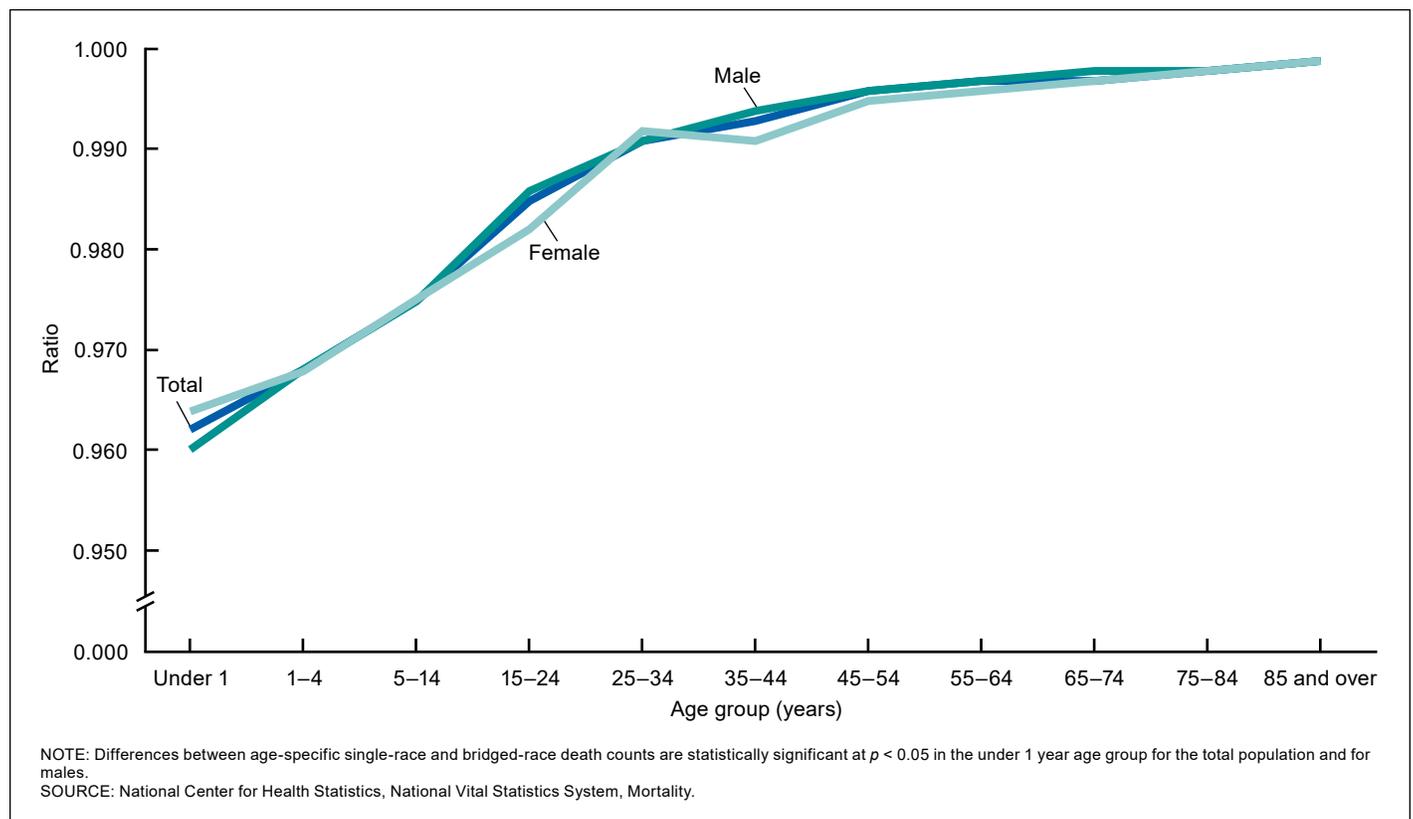
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Abstract

Objectives—This report presents findings on the effects of fully implementing the Office of Management and Budget’s 1997 standards for collecting, tabulating, and reporting race and

ethnicity in the National Vital Statistics System mortality data across all vital statistics reporting areas. It compares bridged-race death counts and rates based on the 1977 standards with single-race death counts and rates based on the 1997 standards, overall and by age (categories), sex, and state.

Figure 1. Ratios of single-race to bridged-race age-specific death counts for the non-Hispanic white population: United States, 2018



Methods—Mortality statistics in this report are based on information from all death certificates filed in the United States and the District of Columbia in 2018. Crude and age-adjusted death rates are calculated with bridged-race and single-race death counts and population estimates then compared using rate ratios.

Results—In 2018, single-race death counts were lower than bridged-race counts for all major racial and ethnic groups, overall and by age and sex. This is expected because in bridged-race data, multiple-race decedents are reassigned to single-race categories. The single-race age-adjusted death rate was higher than the bridged-race rate by 0.4% for the non-Hispanic white population (748.7 per 100,000 U.S. standard population versus 745.7) and by 1.5% for the non-Hispanic black population (892.6 versus 879.5). State-specific differences between bridged-race and single-race age-adjusted death rates were significant only for the non-Hispanic Asian or Pacific Islander (API) population in Hawaii, for whom the single-race rate (488.9) was 10.3% lower than the bridged-race rate (545.3). Generally, at the national level, the transition to single-race mortality data seems to have minimal impacts for all major racial and ethnic groups on age-adjusted death rates; however, impacts vary by state.

Keywords: comparisons • bridged-race data • single-race data • National Vital Statistics System

Introduction

The U.S. Standard Certificate of Death was revised in 2003 (1–3) and incorporated revised Office of Management and Budget (OMB) standards to maintain comparability with data from the U.S. Census Bureau, which provides the denominators for vital statistics rates. OMB issued “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” in 1997 (4), following criticism that the 1977 standards (5) for classifying, collecting, tabulating, and reporting race and ethnicity across federal agencies did not adequately reflect increasing diversity in the United States from both immigration and interracial marriages. These revised standards established a preference for self-reporting of race and ethnicity, unless impractical, and recommended the continued use of separate questions for race and ethnicity as established in the 1977 standards; however, they further specified that the question on Hispanic or Latino ethnicity should appear before the question on race.

The 1997 standard also separated the Asian or Pacific Islander (API) category into two; thus, the revised standards required the use of a minimum of five race categories instead of four: white, black or African American (black), Asian, Native Hawaiian or Other Pacific Islander (NHOP), and American Indian or Alaska Native (AIAN). In addition, the 1997 standard required that during data collection, respondents should be allowed to select multiple races from among options provided—whether the minimum categories or more detailed categories that can be aggregated to the minimum categories. OMB required that the revised standards be adopted “as soon as possible, but not later than January 1, 2003” (4).

The U.S. Census Bureau started collecting data according to the revised standards for the 2000 decennial census (6).

However, the reporting jurisdictions that comprise the National Vital Statistics System (NVSS) did not all implement the revised death certificate immediately; rather, the implementation occurred incrementally over many years (2003–2018) (see [Technical Notes Table I](#)). In the interim, race data that continued to be collected on the 1989 version of the death certificate (7) based on the 1977 OMB standards were incompatible with the U.S. Census Bureau’s official population estimates based on the revised 1997 OMB standards, as well as with mortality data from states using the 2003 version of the death certificate.

Therefore, to obtain data uniformity and comparability, the National Center for Health Statistics (NCHS) developed a procedure to convert or “bridge” multiple-race population estimates and mortality data back to the single-race categories of the 1977 standards until all reporting areas could complete the transition; details of the methodology are described elsewhere (8,9). This procedure was also applicable to natality data, for which all reporting areas had completed the transition to a 2003 revision of the birth certificate as of data year 2016 (10).

As of data year 2018, all reporting areas had completed the transition to the revised death certificate, collecting multiple-race data on this version of the certificate for the entire year for all jurisdictions. Thus, starting with 2018, bridged-race mortality data and population estimates will no longer be used for official mortality statistics, although bridged estimates will still be calculated through the 2020 data year to assist in trend analyses. The transition to data based on different OMB standards can affect how mortality trends for racial and ethnic groups, along with racial and ethnic disparities in mortality and life expectancy, are interpreted. Thus, it is important to assess the differences between the two sets of data to gain insights into the potential impacts of the change in data collection methods.

This report examines the impact on 2018 mortality patterns of switching in 2018 from bridged-race data consistent with the earlier 1977 OMB standards to unbridged data—from here on referred to as single-race data—consistent with the revised 1997 OMB standards. It compares bridged-race death counts and rates with single-race death counts and rates, overall and by age, sex, and state.

Data and Methods

Data

The mortality data in this report are based on information from all death certificates filed in all 50 states and the District of Columbia in 2018. Death certificates are generally completed by funeral directors, attending physicians, medical examiners, and coroners. Demographic data describing the decedent, including age, sex, and race and ethnicity, are usually reported by funeral directors based on information collected from an informant, usually a close family member. In this report, age is presented in 10-year groups, except at the youngest and oldest ages: Under 1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and 85 and over. These are standard age groupings used in official mortality reports. Broader age groupings, 0–14, 15–24, 25–44, 45–64, and 65

and over, are shown in supplemental tables available from: <https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-03-tables-508.pdf>.

Race and Hispanic-origin ethnicity are distinct characteristics and are collected separately on the death certificate, according to OMB guidelines. Hispanic persons may be of any race. This report presents combined race and Hispanic-origin categories consistent with both the 1977 and 1997 OMB standards. Bridged-race categories consistent with the 1977 OMB standards are: Non-Hispanic white, non-Hispanic black, non-Hispanic AIAN, non-Hispanic API, and Hispanic. Race reported according to the 1997 OMB standards includes five minimum single-race categories—that is, categories for which only one race was reported on the death certificate—and as many as 26 additional categories that reflect various combinations of those minimum categories (8). For this report, the multiple-race combinations were aggregated into a “Two or more races” category for consistency with reporting standards for official mortality reports. Therefore, the single-race categories presented are: Non-Hispanic white, non-Hispanic black, non-Hispanic AIAN, non-Hispanic Asian, non-Hispanic NHOPI, non-Hispanic two or more races, and Hispanic. Data for Hispanic persons are not tabulated by race; aggregated Hispanic data are not impacted by the change in OMB standards.

The bridged-race population data used to estimate bridged-race rates for this report were produced by the U.S. Census Bureau using the NCHS bridging methodology (8) and are available from NCHS (11). The single-race population data used to estimate single-race rates are available from the U.S. Census Bureau (12). All are postcensal estimates based on the 2010 census; see [Technical Notes](#) for population details.

For both bridged-race mortality and population data, note that the race-bridging methodology is subject to error; see [Technical Notes](#). Also, since it was developed nearly 2 decades ago, the methodology may yield results that are less reliable or precise over time.

Methods

Deaths and rates are presented based on both bridged-race and single-race data for 2018. Crude death rates are presented per 100,000 estimated population, overall or in a specified group. Age-adjusted death rates are presented per 100,000 U.S. standard population; see [Technical Notes](#). Decedents for whom age is not stated (0.005% of all decedents) are included in total categories marked “all ages” but are not distributed among age groups or included in the estimation of age-adjusted rates. Death rates for the population aged under 1 year are based on population estimates and differ from infant mortality rates, which are based on live births.

Ratios of single-race to bridged-race death counts and rates are presented to quantify differences between the two sets of data, overall and by age, sex, and state. Ratios greater than 1.000 indicate that single-race counts and rates are higher than their bridged-race counterparts; ratios less than 1.000 indicate that single-race counts and rates are lower than their bridged-race counterparts. Results in the text are presented as percentage differences based on the rate ratio. Differences between pairs of single-race and bridged-race measures were

tested for statistical significance; see [Technical Notes](#). Unless otherwise specified, reported differences between measures are statistically significant.

For comparison purposes, although death counts and rates are presented in report tables for the non-Hispanic Asian, NHOPI, and “Two or more races” categories, they were excluded from the calculation of ratios. The non-Hispanic Asian and non-Hispanic NHOPI categories were combined into a single-race non-Hispanic API category to match the bridged-race non-Hispanic API category as closely as possible. The single-race non-Hispanic “Two or more races” category has no direct comparison category in the bridged-race data, given that decedents for whom multiple races were reported were reassigned to one of four 1977 single-race categories.

Statistics for the non-Hispanic AIAN population, non-Hispanic API population, and Hispanic population should be interpreted taking into consideration the inconsistencies between how race is reported on the death certificate (by an available informant or a funeral director in the absence of an informant) and how it is reported on censuses and surveys (primarily by self-report). A recent study (13) found that deaths are underreported by 33% for the non-Hispanic AIAN population, 3% for the non-Hispanic API population, and 3% for the Hispanic population. Although those study results are based on bridged-race mortality data, this report assumes that race is still misclassified on death certificates for some decedents and that similar patterns of net misclassification are present in data tabulated using single-race categories given that the mechanism for obtaining information on race did not change.

Results

Comparison of death counts

In 2018, the racial and ethnic distribution of deaths based on single-race data differed slightly from the distribution based on bridged-race data for all groups, except the Hispanic population, whose data were not impacted by the change in OMB standards. The single-race categories of non-Hispanic white, non-Hispanic black, non-Hispanic AIAN, and aggregated non-Hispanic API groups each accounted for a slightly smaller percentage of deaths (76.9%, 12.0%, 0.6%, and 2.5%, respectively) than their bridged-race counterparts (77.1%, 12.1%, 0.7%, and 2.7%, respectively) ([Table A](#)). This is to be expected as 0.4% of decedents in the single-race distribution were identified as belonging to two or more races using the 1997 standard and presented in a separate “Two or more races” category, whereas multiple-race decedents were reassigned to one of the 1977 minimum race categories using the bridging methodology. This slightly inflated the overall counts and proportion of deaths in each bridged-race category. Of the decedents in the single-race non-Hispanic API group, 95.5% (2.4% of total deaths) were reported to be Asian and 4.5% (0.1% of total deaths) NHOPI. Generally, the NHOPI and AIAN groups are smaller and more likely to be multiracial than the white and black groups, so race bridging has a greater impact on them than on the latter groups (8).

Table A. Number of deaths and percentage of total deaths according to bridged-race and single-race status, and ratio of single-race to bridged-race death counts, by race and Hispanic origin: United States, 2018

[Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys]

Bridged-race deaths ¹			Single-race deaths ²			Ratio of single-race to bridged-race death counts
Race and Hispanic origin	Number of deaths	Percent of total deaths	Race and Hispanic origin	Number of deaths	Percent of total deaths	
All races and origins	2,839,205	100.0	All races and origins	2,839,205	100.0	1.000
Non-Hispanic:			Non-Hispanic:			
White	2,188,349	77.1	White	2,182,552	76.9	†0.997
Black	343,393	12.1	Black	341,408	12.0	†0.994
American Indian or Alaska Native ³	19,491	0.7	American Indian or Alaska Native ³	17,790	0.6	†0.913
Asian or Pacific Islander ⁴	75,266	2.7	Asian or Pacific Islander ⁵	72,045	2.5	†0.957
...	...	...	Asian	68,768	2.4	...
...	...	...	Native Hawaiian or Other Pacific Islander	3,277	0.1	...
...	...	...	Two or more races	12,704	0.4	...
Hispanic	204,719	7.2	Hispanic	204,719	7.2	1.000
Origin not stated	7,987	0.3	Origin not stated	7,987	0.3	1.000

† Differences between numbers are statistically significant at $p < 0.05$.

... Category not applicable.

¹Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards.

²Data reported according to 1997 OMB standards. For race-specific categories, only one race was reported on the death certificate. For the "Two or more races" category, multiple races were reported on the death certificate, and various multiple-race combinations were aggregated to create this category.

³Includes Aleut and Eskimo persons.

⁴Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.

⁵Includes Asian and Native Hawaiian or Other Pacific Islander categories; replicates the bridged-race Asian or Pacific Islander category for comparison purposes.

NOTE: Numbers may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Non-Hispanic white by age and sex

For the total non-Hispanic white population, the single-race death count (2,182,552) was 0.3% lower than the bridged-race death count (2,188,349) in 2018 (Table A). Single-race age-specific death counts were 0.1% to 3.8% lower than their bridged-race counterparts (Figure 1, Table 1). Generally, the largest differences were observed in the youngest age groups and declined with age, likely reflecting the larger proportion of multiple-race persons in the younger age groups. However, age-specific differences were statistically significant only for those aged under 1 year (3.8%, based on 8,893 single-race versus 9,244 bridged-race deaths).

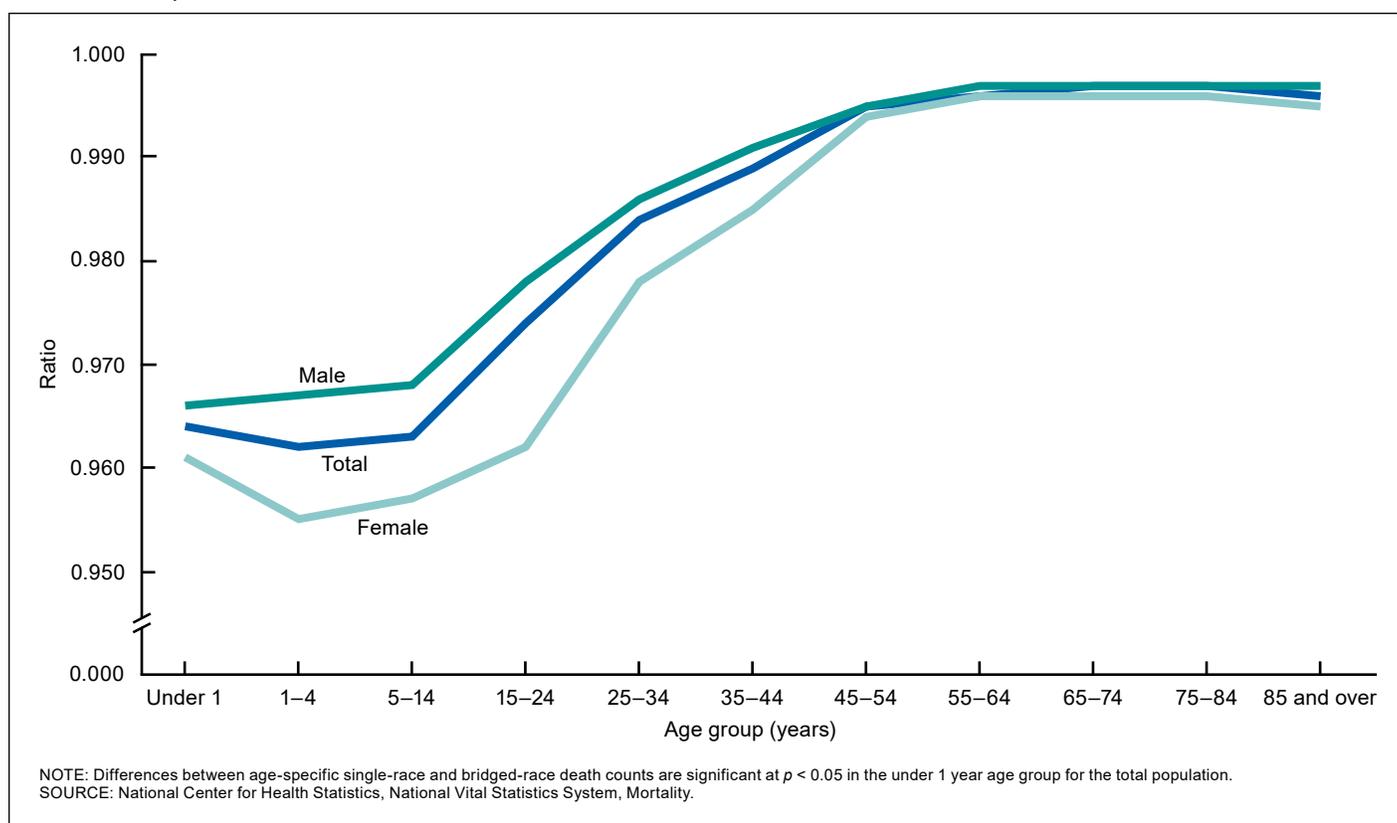
Similar patterns were observed for non-Hispanic white males and females. The single-race death count was 0.3% lower than the bridged-race death count for males (1,108,848 versus 1,111,840, respectively) and females (1,073,704 versus 1,076,509, respectively), but the difference was significant only for males (Table 1), likely reflecting the larger number of deaths among males. The differences between age-specific death counts generally declined with age for both sexes. The difference was significant only for non-Hispanic white males aged under 1 year (4,991 single-race deaths were 4.0% lower than 5,197 bridged-race deaths).

Non-Hispanic black by age and sex

For the total non-Hispanic black population, the single-race death count (341,408) was 0.6% lower than the bridged-race death count (343,393) in 2018 (Table A). Single-race age-specific death counts were lower than bridged-race death counts by 0.3% to 3.8% (Figure 2, Table 1). Generally, the largest differences were observed in the youngest age groups and declined with age starting with age group 5–14, before increasing slightly for those aged 85 and over. However, age-specific differences were significant only for those aged under 1 year (6,127 single-race deaths were 3.6% lower than 6,356 bridged-race deaths).

For non-Hispanic black males, the single-race death count was 0.5% lower than the bridged-race count (177,958 versus 178,904, respectively) (Table 1). Single-race age-specific counts were 0.3% to 3.4% lower than bridged-race counts, and differences declined with age through age group 55–64 and had the same magnitude (0.3%) for those aged 55 and over (Figure 2). For non-Hispanic black females, the single-race death count was 0.6% lower (163,450 versus 164,489) than the bridged-race count. Single-race age-specific counts were 0.4% to 4.5% lower than their bridged-race counterparts, with similar patterns of difference as observed for the total and male non-Hispanic black populations. The largest differences were observed in the youngest age groups and declined with age between age groups 1–4 and 55–64, were of the same magnitude (0.4%) for those aged 55–84, then increased slightly for those aged 85 and over.

Figure 2. Ratios of single-race to bridged-race age-specific death counts for the non-Hispanic black population: United States, 2018



However, none of the overall and age-specific differences for males and females was significant.

Non-Hispanic American Indian or Alaska Native by age and sex

For the total non-Hispanic AIAN population, the single-race death count was lower than the bridged-race death count by 8.7% (17,790 versus 19,491, respectively) in 2018 (Table A). Single-race age-specific counts were 6.7% to 15.2% lower than bridged-race counts (Figure 3, Table 1). Generally, differences decreased with age through age group 25–34, with an exception for age group 15–24, and then increased for those aged 45 and over. The smallest differences were observed for those aged 25–54, and the largest differences for age groups under 1, 1–4, 15–24, and 85 and over. However, age-specific differences were significant only for age groups 45 and over (range 6.7% to 10.8%).

For non-Hispanic AIAN males, the single-race death count (9,678) was 11.0% lower than the bridged-race count (10,875) in 2018 (Table 1). Single-race age-specific counts were 7.8% to 21.2% lower than their bridged-race counterparts; differences had an inverted U-shaped pattern similar to that observed for the total population, with the smallest differences in the 25–54 age range (Figure 3). Significant differences occurred in the under 1 (21.2%) and 45 and over (7.8% to 14.7%) age ranges. For non-Hispanic AIAN females in 2018, the single-race death count was 5.8% lower than the bridged-race count (8,112 versus 8,616,

respectively). Single-race age-specific counts were 3.6% to 8.8% lower than bridged-race counts; the differences fluctuated but were most similar to the pattern for the total non-Hispanic AIAN population, decreasing from age groups under 1 through 5–14, then increasing from age groups 25–34 through 85 and over, with an exception for age group 65–74. Only the difference for those aged 85 and over (8.4%) was significant.

Non-Hispanic Asian or Pacific Islander by age and sex

For the total non-Hispanic API population, the single-race death count (72,045) was 4.3% lower than the bridged-race count (75,266) in 2018 (Table A). Single-race age-specific counts were 2.3% to 12.6% lower than bridged-race counts, and differences were significant for all age groups, except 1–4 and 5–14 (Figure 4, Table 1). The largest differences were observed in age groups under 1, 5–14, and 25–34, and differences declined with age, starting with age group 25–34.

For non-Hispanic API males, the single-race death count (36,875) was 4.9% lower than the bridged-race count (38,760) in 2018 (Table 1). Single-race age-specific counts were 2.5% to 14.7% lower than bridged-race counts; significant differences were observed for age groups under 1 (14.7%) and 25–84 (3.4% to 11.5%). Patterns of difference for males were similar to those observed for the total non-Hispanic API population (Figure 4). For non-Hispanic API females, the single-race death count (35,170) was 3.7% lower than the bridged-race count (36,506). Single-race age-specific counts were 2.2% to 12.8%

Figure 3. Ratios of single-race to bridged-race age-specific death counts for the non-Hispanic American Indian or Alaska Native population: United States, 2018

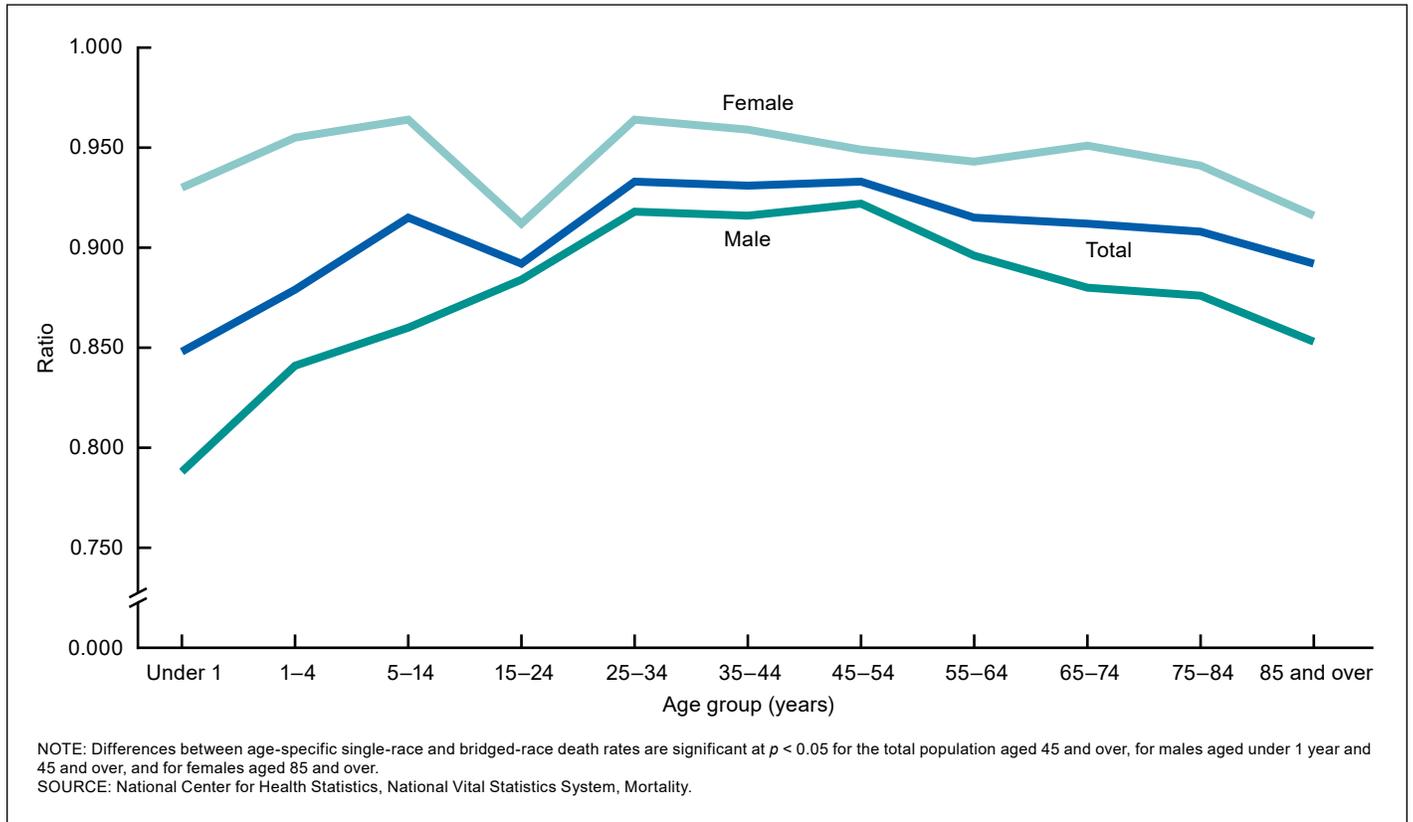
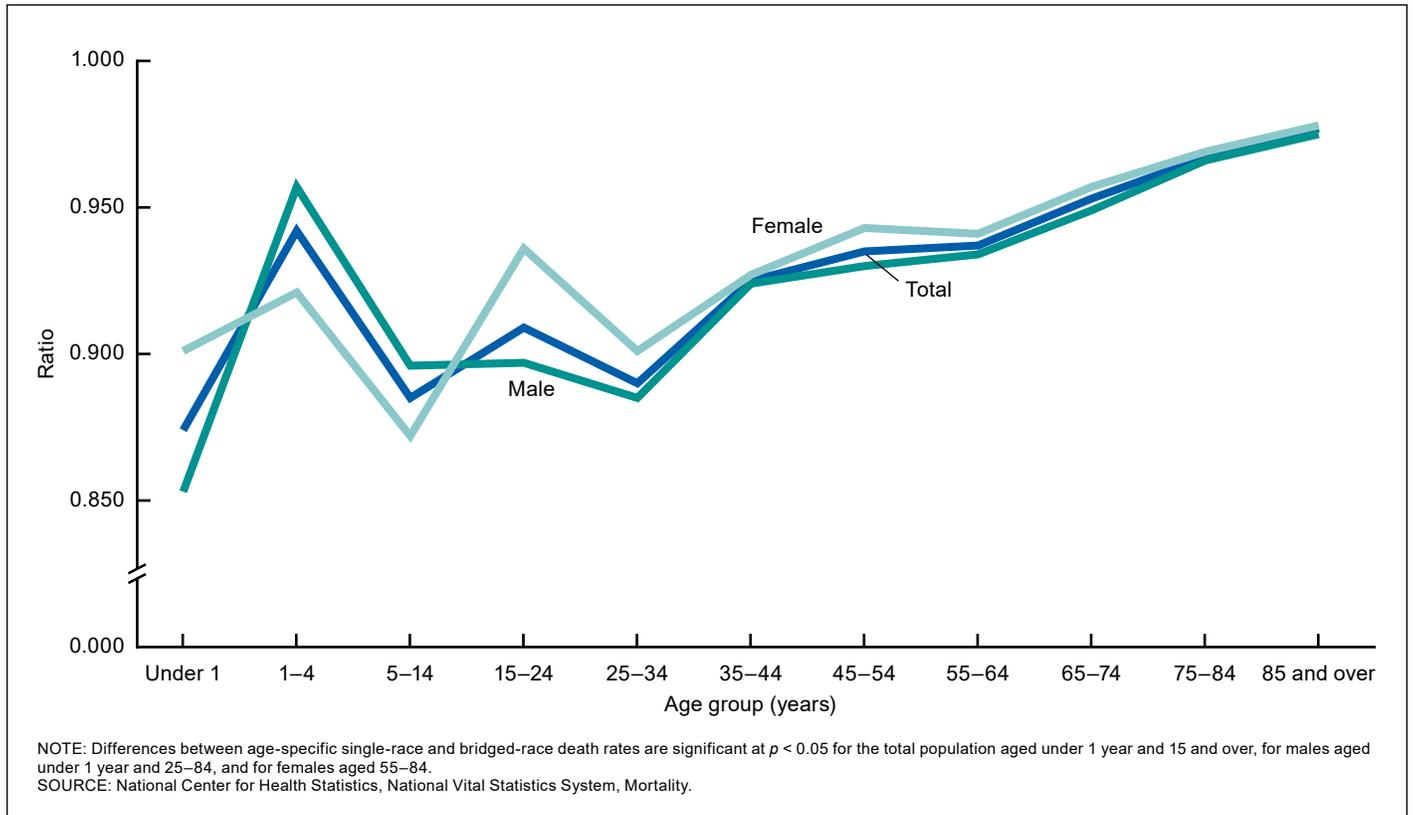


Figure 4. Ratios of single-race to bridged-race age-specific death counts for the non-Hispanic Asian or Pacific Islander population: United States, 2018



lower than bridged-race counts, with significant differences for age groups 55–84 (3.1% to 5.9%). Patterns of difference for females were similar to those observed for the total and male non-Hispanic API populations.

Summary of death-count comparisons

Overall, as expected, single-race death counts were lower than bridged-race death counts for all demographic groups compared. The extent of the difference between the two sets of counts varied by race for the non-Hispanic population, age, and sex. The smallest differences were observed for the non-Hispanic white and black populations, which have higher numbers of deaths, and the largest differences were observed for the non-Hispanic AIAN and API populations, which have smaller numbers of deaths but are more likely to report more than one race. For the non-Hispanic AIAN and API populations, males generally had larger overall and age-specific differences than females. The non-Hispanic AIAN population was the only group to experience increases in the difference between bridged-race and single-race counts among older ages. Counts for the non-Hispanic AIAN and API populations were sparse in age groups 1–4 and 5–14, which may not have provided sufficient power for significance tests. Supplemental results with larger age groupings are shown in Internet [Table I–1](#).

Comparison of crude and age-adjusted death rates

Unlike death counts, death rates tended to be higher based on single-race compared with bridged-race data (i.e., ratios were greater than 1.000). This is because single-race population estimates were lower than bridged-race population estimates, again due to the fact that the bridged-race classification reallocates those reporting two or more races, resulting in smaller denominators and higher rates for the single-race categories than for the bridged-race categories where this reallocation does not occur. Differences between bridged-race and single-race death counts were often smaller than those for population counts reflecting the difference in the age distribution of deaths and the age distribution of the population, and age differences in reporting more than one race.

Non-Hispanic white by age and sex

The single-race crude death rate (1,104.8 deaths per 100,000 population) for the non-Hispanic white population was higher than the bridged-race crude rate (1,088.4) by 1.5% in 2018 ([Table B](#)). Single-race age-specific death rates were 0.3% to 1.8% higher than their bridged-race counterparts, with the smallest differences at the oldest ages. Differences decreased with age from age groups 1–4 through 65–74 then had the same magnitude (0.3%) for age groups 65 and over. None of the differences was significant ([Figure 5](#), [Table 2](#)). Patterns of difference for non-Hispanic white males and females were similar to those for the overall non-Hispanic white population,

Table B. Crude death rates according to bridged-race and single-race status, and ratio of single-race to bridged-race rates, by race and Hispanic origin and sex: United States, 2018

[Bridged-race data are consistent with 1977 Office of Management and Budget (OMB) standards; single-race data are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes in this report]

Race and Hispanic origin and sex	Bridged-race crude death rates ¹	Single-race crude death rates ²	Ratio of single-race to bridged-race rates
Non-Hispanic:			
White	1,088.4	1,104.8	†1.015
Male	1,121.4	1,138.2	†1.015
Female	1,056.2	1,072.3	†1.015
Black	799.8	834.7	†1.044
Male	869.6	909.8	†1.046
Female	735.6	765.9	†1.041
American Indian or Alaska Native ³	709.8	735.9	†1.037
Male	807.7	813.5	1.007
Female	615.6	660.8	†1.073
Asian or Pacific Islander ⁴	366.3	373.0	†1.018
Male	394.4	400.2	†1.015
Female	340.5	348.2	†1.023
Hispanic	341.9	341.9	1.000
Male	373.9	373.9	1.000
Female	309.3	309.3	1.000

† Differences between rates are statistically significant at $p < 0.05$.

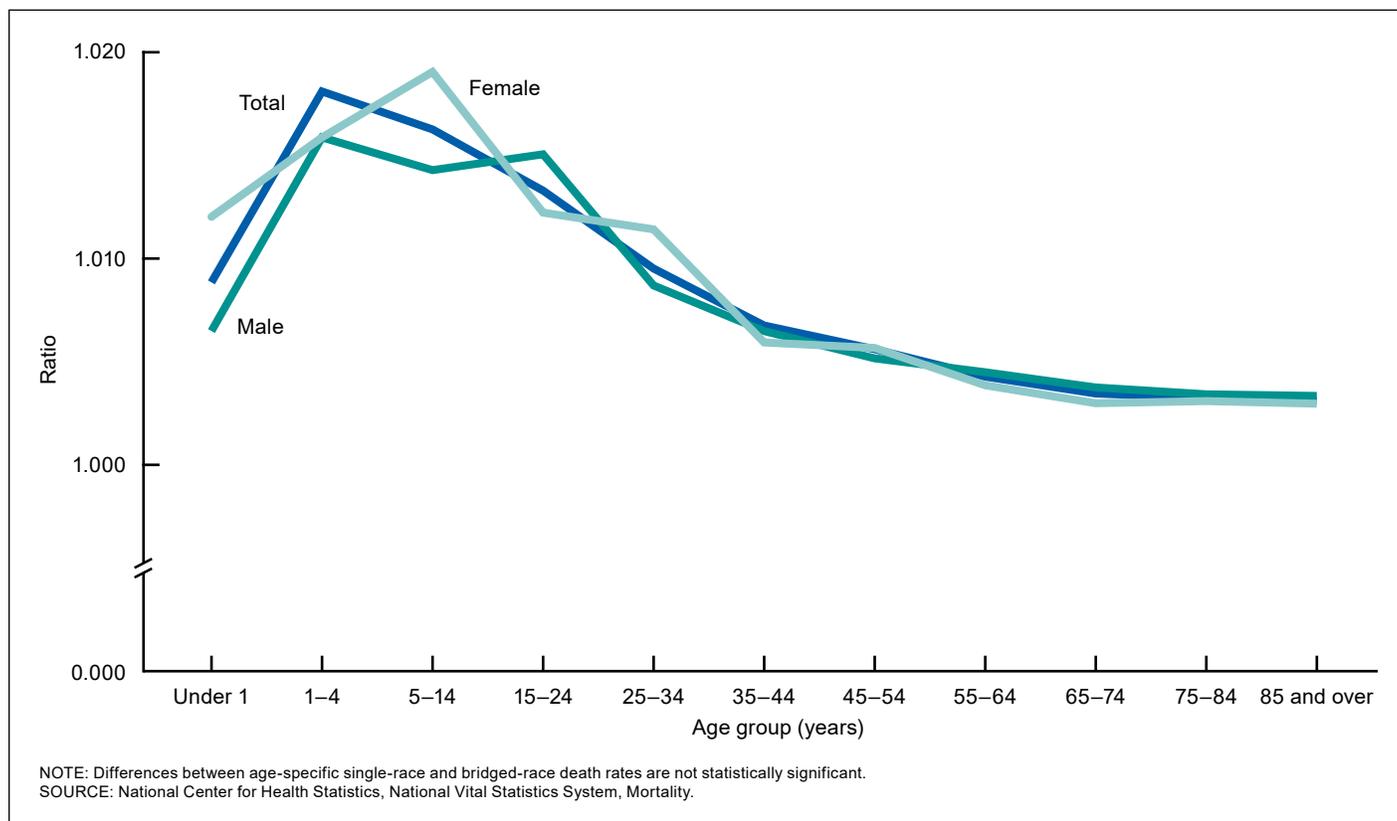
¹Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards.

²Data reported according to 1997 OMB standards. For race-specific categories, only one race was reported on the death certificate.

³Includes Aleut and Eskimo persons.

⁴Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons. For single-race estimates, Asian and Native Hawaiian or Other Pacific Islander categories were combined to replicate the bridged-race Asian or Pacific Islander category for comparison purposes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Figure 5. Ratios of single-race to bridged-race age-specific death rates for the non-Hispanic white population: United States, 2018

but the decrease in differences was not monotonic and started later (at age group 5–14) for females.

The single-race age-adjusted death rate (748.7 deaths per 100,000 U.S. standard population) for the non-Hispanic white population was 0.4% higher than the bridged-race rate (745.7) (Figure 6, Table 2). The same magnitude of difference was observed for non-Hispanic white males (878.0 versus 874.3, respectively) and females (636.5 versus 634.1, respectively).

Non-Hispanic black by age and sex

The single-race crude death rate (834.7) for the non-Hispanic black population was higher than the bridged-race crude rate (799.8) by 4.4% in 2018 (Table B). Single-race age-specific death rates were 1.1% to 8.0% higher than bridged-race age-specific rates. Differences were largest in the youngest age groups and declined steeply through age group 25–34, then more moderately through age group 85 and over; age groups 55–64 and 65–74 shared the same magnitude of difference (1.3%), as did age groups 75–84 and 85 and over (1.1%) (Figure 7, Table 2). Age-specific rate differences were significant only for age groups under 1 year (the single-race rate was 8.0% higher than the bridged-race rate), 15–24 (4.5%), and 55–84 (1.1% to 1.3%). For non-Hispanic black males, the single-race crude rate was 4.6% higher than the bridged-race rate (909.8 versus 869.6, respectively), and for non-Hispanic black females, it was 4.1% higher (765.9 versus 735.6) (Table B). Patterns of age-specific rate differences for non-Hispanic black males and

females were similar to those for the total non-Hispanic black population (Figure 7, Table 2) but were significant only for the under 1 (8.5%) and 15–24 (5.1%) age groups among non-Hispanic black males, and for the under 1 (7.4%) age group among non-Hispanic black females.

The single-race age-adjusted death rate was higher than the bridged-race rate by 1.5% (892.6 versus 879.5, respectively) for the total non-Hispanic black population (Figure 6, Table 2), 1.6% (1,102.8 versus 1,085.2, respectively) for non-Hispanic black males, and 1.3% (733.7 versus 724.2, respectively) for non-Hispanic black females.

Non-Hispanic American Indian or Alaska Native by age and sex

The single-race crude death rate (735.9) for the non-Hispanic AIAN population was higher than the bridged-race crude rate (709.8) by 3.7% in 2018 (Table B). Single-race age-specific death rates were 1.0% lower to 7.3% higher than bridged-race age-specific rates (Figure 8, Table 2). Differences were generally larger in younger age groups and smaller in the oldest age groups, increasing steeply from age groups under 1 through 5–14, steadily declining from age groups 25–34 through 75–84, then increasing for age group 85 and over; age-specific rate differences were not significant. For non-Hispanic AIAN males, the crude death rate (813.5) was 0.7% higher than the bridged-race crude rate (807.7) (Table B). Single-race age-specific rates were 5.5% lower to 3.0% higher than bridged-race rates, and

Figure 6. Ratios of single-race to bridged-race age-adjusted death rates, by race and Hispanic origin and sex: United States, 2018

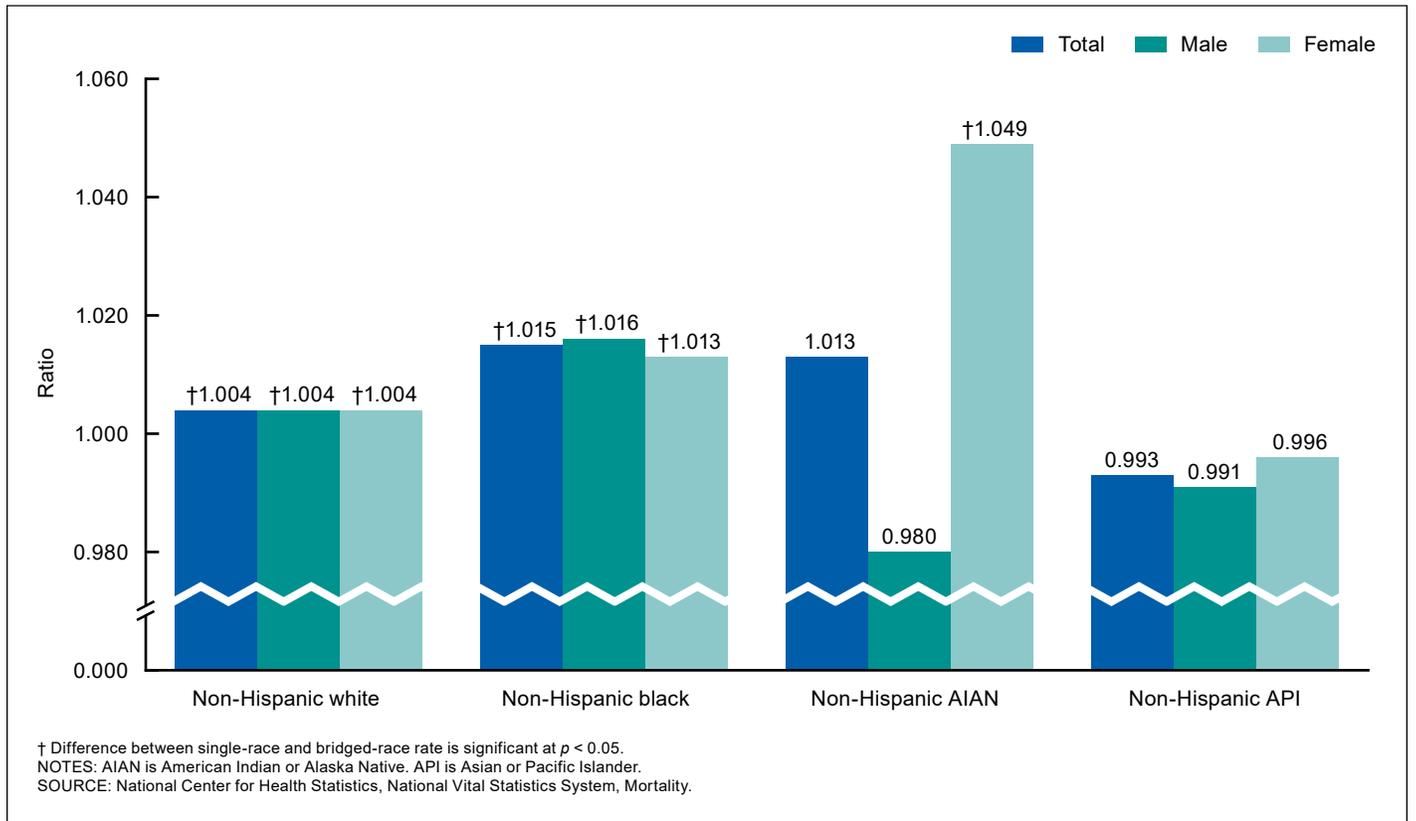


Figure 7. Ratios of single-race to bridged-race age-specific death rates for the non-Hispanic black population: United States, 2018

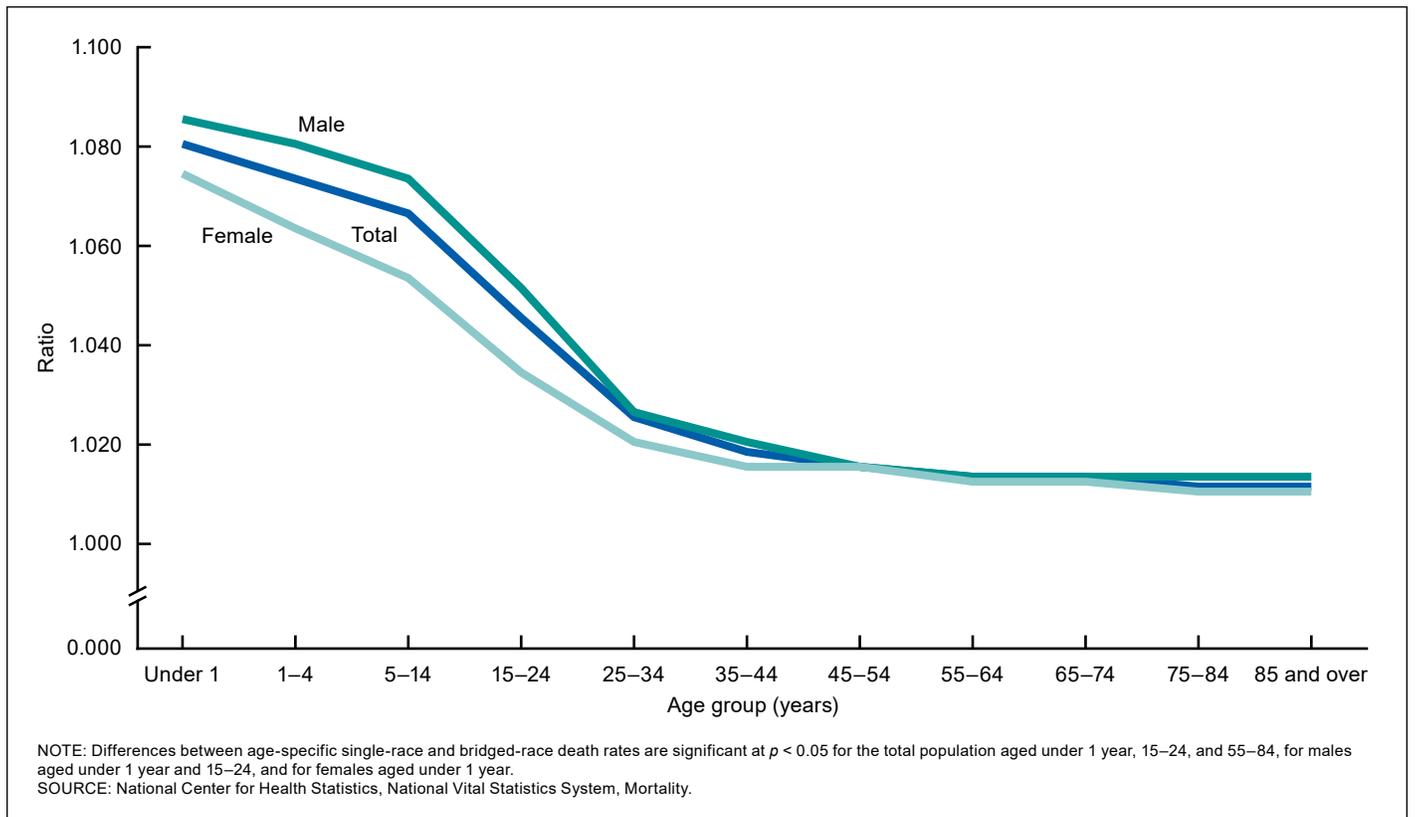
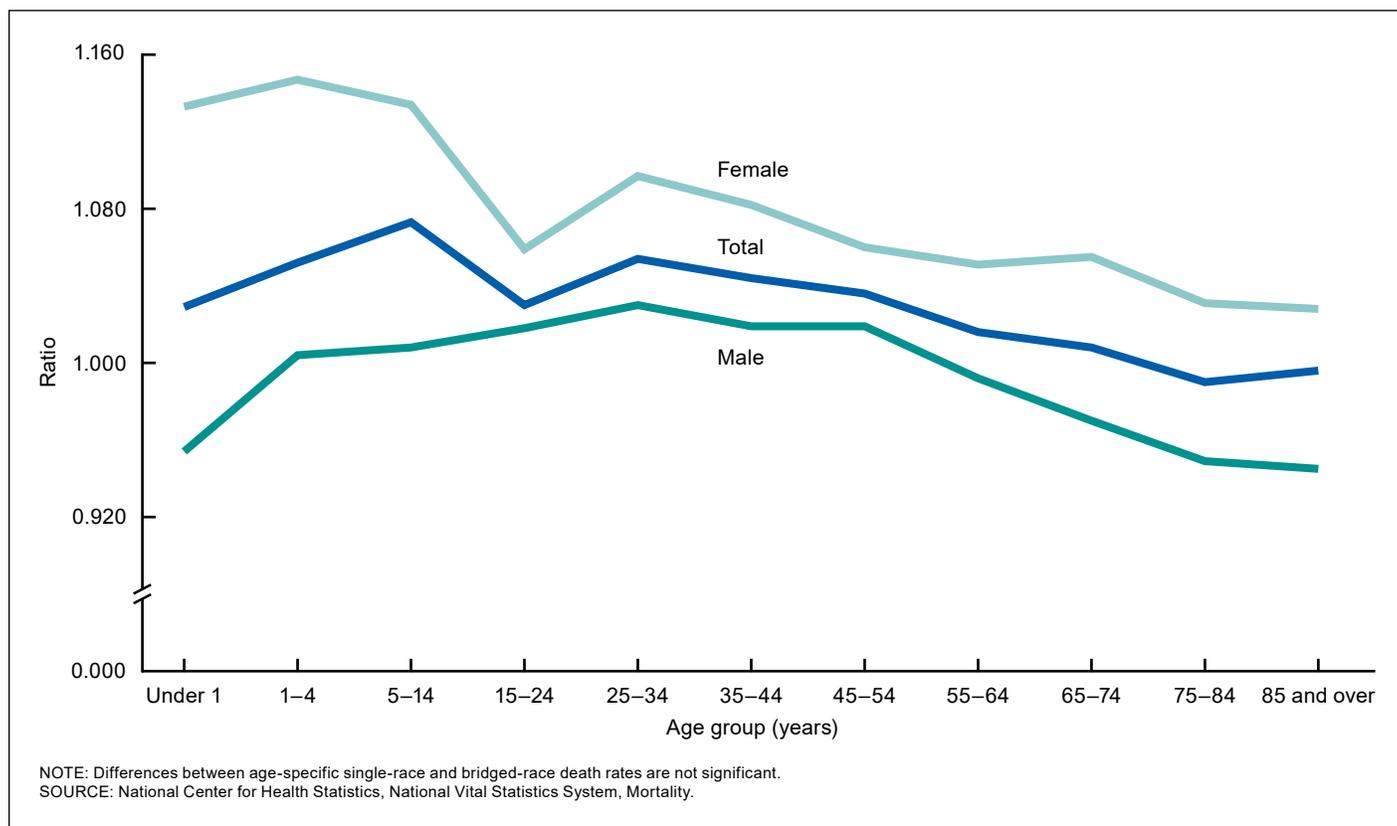


Figure 8. Ratios of single-race to bridged-race age-specific death rates for the non-Hispanic American Indian or Alaska Native population: United States, 2018

differences had an inverted U-shaped pattern with the largest differences observed in the youngest and oldest age groups (Figure 8, Table 2). No significant differences were observed in the overall or age-specific death rates for non-Hispanic AIAN males. For non-Hispanic AIAN females, the overall single-race crude death rate (660.8) was higher than the bridged-race crude rate (615.6) by 7.3% (Table B). Single-race age-specific rates were 2.8% to 14.7% higher than bridged-race rates, with patterns of differences similar to those in the total non-Hispanic AIAN population; however, age-specific rate differences were not significant for non-Hispanic AIAN females (Figure 8, Table 2).

The single-race age-adjusted death rate (790.8) for the non-Hispanic AIAN population was 1.3% higher than the bridged-race rate (780.8) (Figure 6, Table 2). For non-Hispanic AIAN males, it was 2.0% lower (918.7 versus 937.4, respectively). However, neither difference was significant. For non-Hispanic AIAN females, the single-race age-adjusted death rate was significantly higher than the bridged-race rate by 4.9% (673.1 versus 641.7, respectively).

Non-Hispanic Asian or Pacific Islander by age and sex

The single-race crude death rate (373.0) for the non-Hispanic API population was higher than the bridged-race rate (366.3) by 1.8% in 2018 (Table B). Single-race age-specific death rates were 5.8% lower to 6.1% higher than bridged-race rates (Figure 9, Table 2); differences increased sharply from age groups under 1 through 1-4, then had a U-shaped pattern

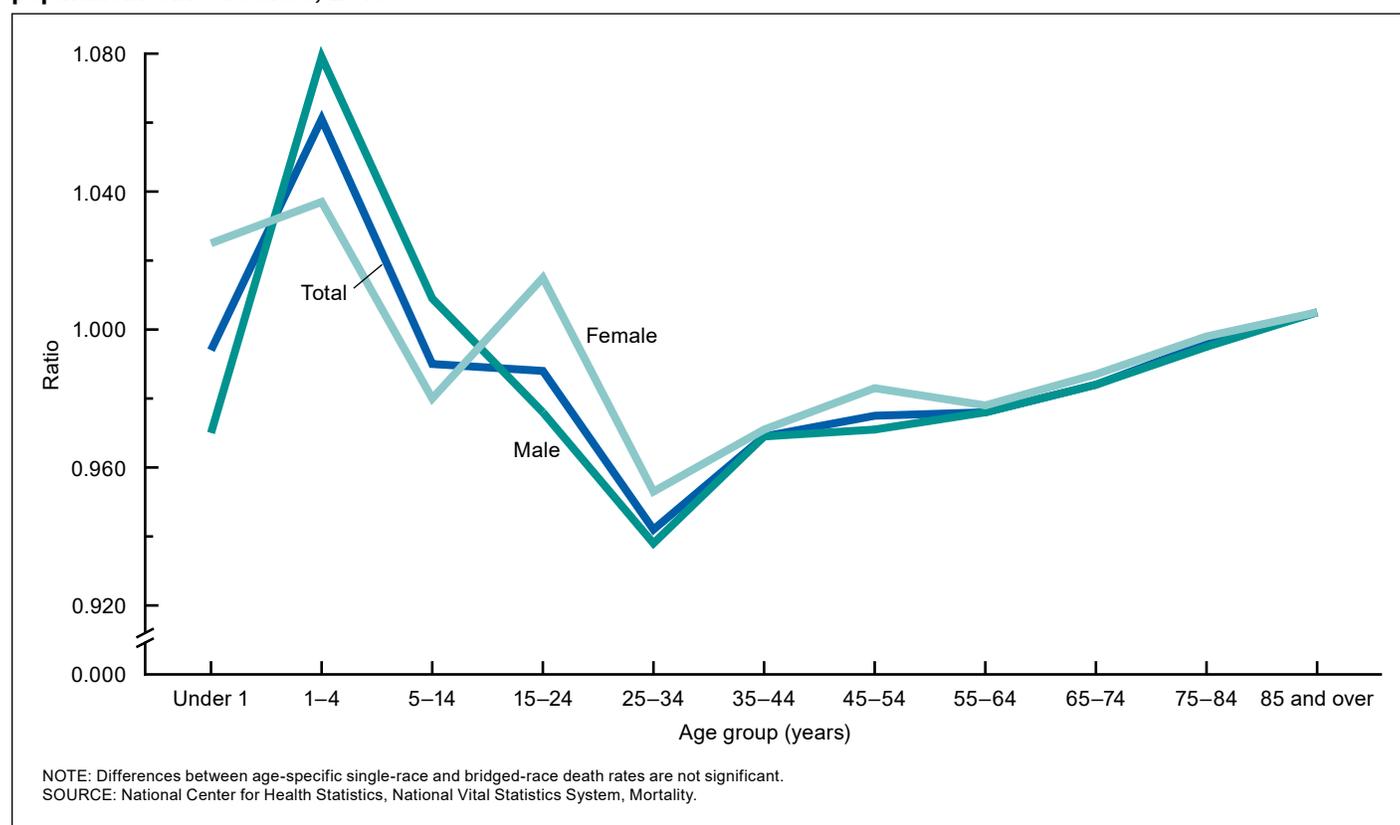
thereafter, decreasing steeply from age groups 1-4 through 25-34, then increasing through age 85 and over. The smallest absolute differences occurred at the youngest and two oldest age groups. Age-specific differences in rates were not significant. The single-race crude death rate was 1.5% higher than the bridged-race crude rate (400.2 versus 394.4, respectively) for non-Hispanic API males and 2.3% higher (348.2 versus 340.5, respectively) for non-Hispanic API females (Table B). Single-race age-specific rates were 6.2% lower to 7.9% higher than bridged-race rates for males and 4.7% lower to 3.7% higher for females; however, these differences were not significant (Figure 9, Table 2). Patterns of difference for males and females were similar to those in the total population.

The single-race age-adjusted death rate (389.3) was lower than the bridged-race rate (392.2) by 0.7% for the non-Hispanic API population (Figure 6, Table 2). However, this difference was not significant, nor was the difference in rates for non-Hispanic API males (463.2 versus 467.6, respectively) and females (331.0 versus 332.4, respectively).

Summary of rate comparisons

Overall, the nature and extent of differences between single-race and bridged-race crude and age-adjusted death rates varied by race for the non-Hispanic population, age (for crude rates), and sex. The overall single-race crude death rate was higher than the bridged-race crude death rate for all demographic groups. The non-Hispanic white population (total, males, and females) had the smallest differences, whereas the

Figure 9. Ratios of single-race to bridged-race age-specific death rates for the non-Hispanic Asian or Pacific Islander population: United States, 2018



non-Hispanic AIAN population (total and females) and the non-Hispanic black population (total, males, and females) had the largest. Differences in age-specific crude death rates were larger and had wider ranges for the non-Hispanic black, AIAN, and API populations than for the non-Hispanic white population; in the non-Hispanic AIAN population, differences were much larger for females than for males. With a couple exceptions, age-specific differences were larger in younger age groups and smaller in older age groups. However, significant age-specific differences in crude rates were observed only for the non-Hispanic black population. Supplemental results with larger age groupings are shown in Internet [Table 1-2](#).

Single-race age-adjusted death rates were higher than bridged-race rates for the non-Hispanic white (total, male, female) and non-Hispanic black (total, male, female) populations, as well as for non-Hispanic AIAN females. The latter group had the largest difference, whereas the non-Hispanic white groups had the smallest.

Comparison of state-specific rates

Differences between bridged-race and single-race age-adjusted death rates for the non-Hispanic race groups also varied by state. In 2018, single-race age-adjusted death rates for the non-Hispanic white population ranged from 1.7% lower than bridged-race rates (Hawaii) to 0.9% higher (Oklahoma) ([Table 3](#)). For the non-Hispanic black population, single-race age-adjusted death rates were higher than bridged-race rates by a range of

0.8% (Alabama) to 45.5% (Montana). For the non-Hispanic AIAN population, single-race age-adjusted death rates were 14.9% lower (Kansas) to 14.3% higher (New York) than bridged-race rates. However, none of the state-specific differences in age-adjusted death rates for these groups was significant.

Single-race age-adjusted death rates for the non-Hispanic API population were 10.3% lower (Hawaii) to 2.9% higher (Minnesota) than their bridged-race counterparts. Only the difference in age-adjusted rates for Hawaii (488.9 deaths per 100,000 U.S. standard population versus 545.3) was significant. In 2018, 67.2% of decedents in Hawaii were classified as non-Hispanic API based on bridged-race data compared with 54.0% based on single-race data (data not shown). Since the non-Hispanic API population generally has lower all-cause death rates relative to other racial and ethnic groups, this compositional change may partially explain the result observed for Hawaii.

Discussion

This report presents findings on the comparability of race-specific mortality statistics based on the 1997 versus 1977 OMB standards. In general, single-race death counts were lower than bridged-race death counts for all major race and Hispanic-origin groups, overall and by sex and age group, though the magnitude of the differences varied. The largest differences were observed for the non-Hispanic AIAN and non-Hispanic API populations, the groups with the largest percentage reporting more than one race.

Since single-race population estimates were also lower than bridged-race population estimates—with differences that were often much larger than for associated death counts, likely reflecting the difference in the age distribution of deaths and the age distribution of the population, and age differences in reporting more than one race—the majority of the single-race crude death rates, age-specific death rates, and age-adjusted death rates were higher than their bridged-race counterparts. The non-Hispanic black, non-Hispanic AIAN, and non-Hispanic API populations had larger ratios of the differences between bridged-race and single-race crude death rates than the non-Hispanic white population, overall and by sex and age, especially at younger ages.

With one exception, significant differences between bridged-race and single-race age-adjusted death rates were fairly small: 0.4% for the non-Hispanic white population and for non-Hispanic white males and females, 1.5% for the non-Hispanic black population, 1.6% for non-Hispanic black females, 1.3% for non-Hispanic black males, and 4.9% for non-Hispanic AIAN females. The differences for other populations that did not reach significance were also small. State-specific differences between bridged-race and single-race age-adjusted death rates were significant only for the non-Hispanic API population in Hawaii, for whom the single-race rate was 10.3% lower than the bridged-race rate.

Generally, at the national level, the transition to single-race mortality data seems to have minimal impacts for all major racial and ethnic groups on age-adjusted death rates; however, impacts may vary by state. The impacts on crude death rates vary by racial and ethnic group, age, and sex and are smallest for the non-Hispanic white population and largest for non-Hispanic AIAN females. The transition to single-race mortality data also seems to have small impacts on the magnitude and significance of racial and ethnic and sex disparities in death rates. For example, Internet [Table I-3](#) shows that with single-race data, there are significantly smaller disparities in the overall crude death rate between the non-Hispanic black and non-Hispanic white populations (total, males, females); larger disparities in all age-specific rates, which are significant in the under 1 age group (total, males); and significantly larger disparities in age-adjusted rates (total, males, females) versus when bridged-race data are used. All disparities between the non-Hispanic white and Hispanic populations are larger with single-race versus bridged-race data, though changes in disparities (14) are significant only for the overall crude death rate (total, males, females). Additionally, the transition to single-race mortality data has small impacts on life expectancy for the non-Hispanic white and non-Hispanic black populations, on disparities in life expectancy between the two populations, and on disparities in life expectancy between non-Hispanic black males and females; see “United States Life Tables: 2018” (15).

Single-race and bridged-race data are not considered to be directly comparable, and increases or decreases in trends between 2017 and 2018 will be conflated by the transition to single-race data. Studies that utilize crude death rates, such as studies focused on children, adolescents, or young adults, could experience larger effects of the transition to the single-race categories on trends for the non-Hispanic black, non-

Hispanic AIAN, and non-Hispanic API populations than for the non-Hispanic white population in light of the larger differences between bridged-race and single-race rates for these groups, and the larger differences at younger ages for most groups. Patterns of disparity among groups may also be impacted. Since single-race crude and age-adjusted rates will be generally larger than bridged-race rates for the non-Hispanic white, non-Hispanic black, and non-Hispanic AIAN populations, trends that appear to be increasing may be reflecting the change in classification. For the non-Hispanic API population, on the other hand, any downward trend may be reflecting the transition to single-race data. However, the impacts for age-adjusted rates are expected to be minimal. At the state level, larger impacts on trends may be observed, especially in Hawaii for the non-Hispanic API population.

The single-race estimates will be the basis for official mortality reports as of data year 2018; however, to facilitate trend analyses, bridged-race data will continue to be provided in supplemental tables through data year 2020. Major reports for the 2018 data year, such as the annual final, life table, and leading-cause reports (15–17), include more information on how results may differ if bridged-race data were used compared with single-race data. For example, comparing bridged-race 2017 data to single-race 2018 data versus bridged-race 2018 data (16), the non-Hispanic white population experienced a smaller percentage decrease in the age-adjusted death rate between 2017 and 2018 based on single-race versus bridged-race data (–0.8% versus –1.2%) as did the non-Hispanic AIAN population (–1.2% versus –2.4%); for the non-Hispanic black population, the rate increased between years based on single-race data (1.3%) but did not increase based on bridged-race data (–0.2%).

Results for the non-Hispanic AIAN and non-Hispanic API populations should be interpreted taking into account the racial misclassification on the death certificate. Additionally, mortality estimates for these groups are based on fewer deaths and are thus less robust than mortality estimates for the non-Hispanic white and black populations, especially in age groups 1–4 and 5–14.

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Table 1. Number of bridged-race deaths and single-race deaths, and ratio of single-race to bridged-race deaths, by 10-year age group, race and Hispanic origin, and sex: United States, 2018

[Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes in this report]

Race and Hispanic origin and sex	All ages	Age group (years)											Age not stated
		Under 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
		Bridged-race deaths ¹											
All races and origins	2,839,205	21,467	3,830	5,450	30,154	58,844	80,380	164,837	374,836	543,778	675,205	880,280	144
Male	1,458,469	12,068	2,243	3,081	22,008	40,864	51,376	101,030	228,273	312,911	347,188	337,318	109
Female	1,380,736	9,399	1,587	2,369	8,146	17,980	29,004	63,807	146,563	230,867	328,017	542,962	35
Non-Hispanic:													
White	2,188,349	9,244	1,825	2,637	15,929	35,036	49,137	107,646	265,292	414,203	543,365	743,988	47
Male	1,111,840	5,197	1,067	1,537	11,236	23,973	31,260	65,864	162,308	239,733	281,994	287,637	34
Female	1,076,509	4,047	758	1,100	4,693	11,063	17,877	41,782	102,984	174,470	261,371	456,351	13
Black	343,393	6,356	975	1,321	7,005	12,310	16,163	31,049	65,200	74,709	67,137	61,155	13
Male	178,904	3,580	574	740	5,380	8,591	9,976	18,216	38,054	41,474	32,147	20,161	11
Female	164,489	2,776	401	581	1,625	3,719	6,187	12,833	27,146	33,235	34,990	40,994	2
American Indian or Alaska Native ²	19,491	270	66	106	526	1,211	1,423	2,230	3,655	3,987	3,531	2,486	0
Male	10,875	156	44	50	389	818	912	1,363	2,188	2,225	1,777	953	0
Female	8,616	114	22	56	137	393	511	867	1,467	1,762	1,754	1,533	0
Asian or Pacific Islander ³	75,266	891	156	252	888	1,527	2,305	4,622	8,988	13,440	18,208	23,985	4
Male	38,760	498	93	135	621	1,032	1,424	2,832	5,412	7,639	9,471	9,599	4
Female	36,506	393	63	117	267	495	881	1,790	3,576	5,801	8,737	14,386	0
Hispanic	204,719	4,487	794	1,117	5,740	8,611	11,130	18,657	30,007	35,433	41,404	47,327	12
Male	113,045	2,502	455	607	4,333	6,356	7,660	12,311	19,083	20,454	20,873	18,403	8
Female	91,674	1,985	339	510	1,407	2,255	3,470	6,346	10,924	14,979	20,531	28,924	4
Origin not stated	7,987	219	14	17	66	149	222	633	1,694	2,006	1,560	1,339	68
Male	5,045	135	10	12	49	94	144	444	1,228	1,386	926	565	52
Female	2,942	84	4	5	17	55	78	189	466	620	634	774	16

See footnotes at end of table.

Table 1. Number of bridged-race deaths and single-race deaths, and ratio of single-race to bridged-race deaths, by 10-year age group, race and Hispanic origin, and sex: United States, 2018—Con.

[Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes in this report]

Race and Hispanic origin and sex	All ages	Age group (years)											Age not stated
		Under 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
		Single-race deaths ⁴											
All races and origins	2,839,205	21,467	3,830	5,450	30,154	58,844	80,380	164,837	374,836	543,778	675,205	880,280	144
Male	1,458,469	12,068	2,243	3,081	22,008	40,864	51,376	101,030	228,273	312,911	347,188	337,318	109
Female	1,380,736	9,399	1,587	2,369	8,146	17,980	29,004	63,807	146,563	230,867	328,017	542,962	35
Non-Hispanic:													
White	2,182,552	8,893	1,767	2,571	15,692	34,729	48,784	107,174	264,392	413,115	542,277	743,111	47
Male	1,108,848	4,991	1,033	1,499	11,084	23,760	31,062	65,593	161,818	239,182	281,466	287,326	34
Female	1,073,704	3,902	734	1,072	4,608	10,969	17,722	41,581	102,574	173,933	260,811	455,785	13
Black	341,408	6,127	938	1,272	6,823	12,113	15,983	30,882	64,967	74,478	66,907	60,905	13
Male	177,958	3,458	555	716	5,260	8,475	9,889	18,127	37,943	41,369	32,058	20,097	11
Female	163,450	2,669	383	556	1,563	3,638	6,094	12,755	27,024	33,109	34,849	40,808	2
American Indian or Alaska Native ²	17,790	229	58	97	469	1,130	1,325	2,080	3,344	3,635	3,206	2,217	0
Male	9,678	123	37	43	344	751	835	1,257	1,960	1,959	1,556	813	0
Female	8,112	106	21	54	125	379	490	823	1,384	1,676	1,650	1,404	0
Asian or Pacific Islander ⁵	72,045	779	147	223	807	1,359	2,133	4,321	8,420	12,803	17,616	23,433	4
Male	36,875	425	89	121	557	913	1,316	2,633	5,054	7,252	9,149	9,362	4
Female	35,170	354	58	102	250	446	817	1,688	3,366	5,551	8,467	14,071	0
Asian	68,768	700	137	207	728	1,219	1,933	3,908	7,763	12,061	17,012	23,096	4
Male	35,089	380	82	114	497	823	1,185	2,390	4,673	6,858	8,860	9,223	4
Female	33,679	320	55	93	231	396	748	1,518	3,090	5,203	8,152	13,873	0
Native Hawaiian or Other Pacific Islander	3,277	79	10	16	79	140	200	413	657	742	604	337	0
Male	1,786	45	7	7	60	90	131	243	381	394	289	139	0
Female	1,491	34	3	9	19	50	69	170	276	348	315	198	0
Two or more races	12,704	733	112	153	557	753	803	1,090	2,012	2,308	2,235	1,948	0
Male	7,020	434	64	83	381	515	470	665	1,187	1,309	1,160	752	0
Female	5,684	299	48	70	176	238	333	425	825	999	1,075	1,196	0
Hispanic	204,719	4,487	794	1,117	5,740	8,611	11,130	18,657	30,007	35,433	41,404	47,327	12
Male	113,045	2,502	455	607	4,333	6,356	7,660	12,311	19,083	20,454	20,873	18,403	8
Female	91,674	1,985	339	510	1,407	2,255	3,470	6,346	10,924	14,979	20,531	28,924	4
Origin not stated	7,987	219	14	17	66	149	222	633	1,694	2,006	1,560	1,339	68
Female	5,045	135	10	12	49	94	144	444	1,228	1,386	926	565	52
Male	2,942	84	4	5	17	55	78	189	466	620	634	774	16

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Race and Hispanic origin and sex	All ages	Age group (years)											Age not stated	
		Under 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over		
		Ratio of single-race to bridged-race deaths												
All races and origins	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	...
Male	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	...
Female	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	...
Non-Hispanic:														
White	†0.997	†0.962	0.968	0.975	0.985	0.991	0.993	0.996	0.997	0.997	0.998	0.999	0.999	...
Male	†0.997	†0.960	0.968	0.975	0.986	0.991	0.994	0.996	0.997	0.998	0.998	0.999	0.999	...
Female	0.997	0.964	0.968	0.975	0.982	0.992	0.991	0.995	0.996	0.997	0.998	0.999	0.999	...
Black	†0.994	†0.964	0.962	0.963	0.974	0.984	0.989	0.995	0.996	0.997	0.997	0.996	0.997	...
Male	0.995	0.966	0.967	0.968	0.978	0.986	0.991	0.995	0.997	0.997	0.997	0.997	0.997	...
Female	0.994	0.961	0.955	0.957	0.962	0.978	0.985	0.994	0.996	0.996	0.996	0.996	0.995	...
American Indian or Alaska Native ²	†0.913	0.848	0.879	0.915	0.892	0.933	0.931	†0.933	†0.915	†0.912	†0.908	†0.892	...	
Male	†0.890	†0.788	0.841	0.860	0.884	0.918	0.916	†0.922	†0.896	†0.880	†0.876	†0.853	...	
Female	†0.942	0.930	0.955	0.964	0.912	0.964	0.959	0.949	0.943	0.951	0.941	†0.916	...	
Asian or Pacific Islander ⁵	†0.957	†0.874	0.942	0.885	†0.909	†0.890	†0.925	†0.935	†0.937	†0.953	†0.967	†0.977	...	
Male	†0.951	†0.853	0.957	0.896	0.897	†0.885	†0.924	†0.930	†0.934	†0.949	†0.966	0.975	...	
Female	†0.963	0.901	0.921	0.872	0.936	0.901	0.927	0.943	†0.941	†0.957	†0.969	0.978	...	
Hispanic	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	...
Male	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	...
Female	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	...

... Category not applicable.

† Difference between numbers is statistically significant at $p < 0.05$.

¹Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards.

²Includes Aleut and Eskimo persons.

³Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Other Pacific Islander persons.

⁴Data reported according to 1997 OMB standards. For race-specific categories, only one race was reported on the death certificate. For the "Two or more races" category, multiple races were reported on the death certificate, and various multiple-race combinations were aggregated to create this category.

⁵Includes Asian and Native Hawaiian or Other Pacific Islander categories; replicates the bridged-race Asian or Pacific Islander category for comparison purposes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Table 2. Age-specific and age-adjusted death rates based on bridged-race versus single-race deaths and population estimates, and ratio of single-race to bridged-race rates, by race and Hispanic origin and sex: United States, 2018

[Rates are on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Race and Hispanic origin and sex	All ages ¹	Age group (years)											Age-adjusted rate
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Based on bridged-race deaths and population estimates ³													
All races and origins ⁴	867.8	557.8	24.0	13.3	70.2	128.8	194.7	395.9	886.7	1,783.3	4,386.1	13,450.7	723.6
Male	905.2	613.1	27.5	14.7	100.1	176.1	249.5	491.8	1,119.0	2,196.5	5,155.0	14,504.0	855.5
Female	831.6	500.0	20.4	11.8	38.8	80.0	140.2	302.5	670.0	1,421.0	3,788.0	12,870.0	611.3
Non-Hispanic:													
White	1,088.4	463.5	22.1	12.3	67.7	136.6	207.2	410.3	888.7	1,793.7	4,515.2	14,243.2	745.7
Male	1,121.4	508.8	25.2	14.0	93.0	184.0	262.2	503.6	1,113.6	2,185.3	5,262.3	15,348.9	874.3
Female	1,056.2	415.9	18.9	10.5	40.9	87.6	151.7	317.6	674.1	1,439.4	3,915.4	13,624.6	634.1
Black	799.8	1,074.1	39.8	21.2	107.8	184.9	298.5	587.2	1,310.8	2,484.8	5,048.1	12,050.1	879.5
Male	869.6	1,184.8	46.2	23.4	163.1	260.5	388.9	735.8	1,672.6	3,213.1	6,258.9	13,138.2	1,085.2
Female	735.6	958.6	33.3	19.0	50.7	110.7	217.2	456.4	1,005.7	1,936.9	4,286.2	11,578.5	724.2
American Indian or Alaska Native ⁵	709.8	705.7	42.2	25.9	125.5	289.2	426.8	683.2	1,116.2	1,969.0	4,153.1	8,587.2	780.8
Male	807.7	800.5	55.3	24.1	183.1	387.6	556.4	863.8	1,426.3	2,376.9	4,760.5	9,031.5	937.4
Female	615.6	607.3	28.6	27.7	66.2	189.2	301.5	514.2	842.9	1,618.2	3,677.8	8,332.4	641.7
Asian or Pacific Islander ⁶	366.3	412.2	16.4	10.4	33.0	43.2	71.3	167.5	403.4	890.8	2,568.8	8,398.9	392.2
Male	394.4	449.4	19.1	10.9	45.8	59.6	93.8	219.9	533.0	1,145.4	3,049.8	9,062.0	467.6
Female	340.5	373.0	13.6	9.8	20.0	27.4	51.4	121.6	294.8	689.1	2,193.7	8,008.0	332.4
Hispanic	341.9	445.3	19.1	10.6	58.5	91.3	129.6	265.6	613.6	1,320.8	3,348.8	9,483.8	524.1
Male	373.9	486.1	21.4	11.3	86.2	128.7	173.4	347.7	801.9	1,670.5	4,054.5	10,124.4	633.1
Female	309.3	402.7	16.6	9.9	29.4	50.2	83.2	182.1	435.1	1,027.2	2,845.4	9,116.8	431.7

See footnotes at end of table.

Table 2. Age-specific and age-adjusted death rates based on bridged-race versus single-race deaths and population estimates, and ratio of single-race to bridged-race rates, by race and Hispanic origin and sex: United States, 2018—Con.

[Rates are on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Race and Hispanic origin and sex	All ages ¹	Age group (years)											Age-adjusted rate
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Based on single-race deaths and population estimates ⁷													
All races and origins ⁴	867.8	557.8	24.0	13.3	70.2	128.8	194.7	395.9	886.7	1,783.3	4,386.1	13,450.7	723.6
Male	905.2	613.1	27.5	14.7	100.1	176.1	249.5	491.8	1,119.0	2,196.5	5,155.0	14,504.0	855.5
Female	831.6	500.0	20.4	11.8	38.8	80.0	140.2	302.5	670.0	1,421.0	3,788.0	12,870.0	611.3
Non-Hispanic:													
White	1,104.8	467.6	22.5	12.5	68.6	137.9	208.6	412.6	892.5	1,799.9	4,529.9	14,287.4	748.7
Male	1,138.2	512.1	25.6	14.2	94.4	185.6	263.9	506.2	1,118.6	2,193.5	5,280.3	15,400.2	878.0
Female	1,072.3	420.9	19.2	10.7	41.4	88.6	152.6	319.4	676.7	1,443.7	3,927.5	13,665.0	636.5
Black	834.7	1,159.5	42.7	22.6	112.7	189.5	304.0	596.0	1,327.5	2,515.9	5,105.5	12,180.9	892.6
Male	909.8	1,285.0	49.9	25.1	171.4	267.3	396.7	746.7	1,694.2	3,255.2	6,339.3	13,310.2	1,102.8
Female	765.9	1,029.2	35.4	20.0	52.4	112.9	220.4	463.2	1,018.2	1,959.7	4,330.2	11,692.3	733.7
American Indian or Alaska Native ⁵	735.9	726.4	44.4	27.8	129.3	304.9	445.4	708.0	1,134.4	1,985.5	4,111.4	8,552.6	790.8
Male	813.5	763.3	55.5	24.3	186.4	399.4	566.7	880.6	1,415.2	2,306.3	4,515.9	8,534.5	918.7
Female	660.8	687.8	32.8	31.4	70.1	207.6	326.3	544.9	885.6	1,707.8	3,791.2	8,563.1	673.1
Asian or Pacific Islander ⁸	373.0	409.7	17.4	10.3	32.6	40.7	69.1	163.3	393.6	876.8	2,559.5	8,439.4	389.3
Male	400.2	435.7	20.6	11.0	44.7	55.9	90.9	213.5	520.1	1,126.6	3,035.9	9,104.0	463.2
Female	348.2	382.3	14.1	9.6	20.3	26.1	49.9	119.5	288.3	679.8	2,188.4	8,048.5	331.0
Asian	367.2	384.0	16.9	9.9	30.5	37.6	64.5	151.8	373.6	847.3	2,526.0	8,476.4	381.2
Male	393.4	406.3	19.7	10.8	41.3	52.0	84.5	199.6	496.1	1,095.5	3,007.9	9,149.3	454.1
Female	343.3	360.5	14.0	9.1	19.5	23.9	46.9	110.3	272.0	652.5	2,151.5	8,081.2	324.1
Native Hawaiian or Other Pacific Islander	558.9	1,005.6	*	*	93.2	137.3	229.8	576.1	1,074.8	2,015.8	4,081.9	6,495.8	675.7
Male	605.4	1,120.2	*	*	137.9	171.4	293.9	682.0	1,284.1	2,222.6	4,252.5	6,850.7	758.1
Female	511.8	885.6	*	*	*	101.1	162.5	471.5	877.4	1,823.7	3,937.0	6,267.8	597.3
Two or more races	178.6	388.5	14.7	8.6	40.0	77.0	121.0	214.4	468.4	908.6	2,030.3	4,782.2	338.1
Male	199.9	450.3	16.4	9.1	54.1	108.4	150.5	277.7	583.7	1,108.2	2,403.9	5,066.7	403.0
Female	157.8	323.9	12.8	8.0	25.6	47.3	94.8	158.0	364.8	735.1	1,738.7	4,619.2	283.0
Hispanic	341.9	445.3	19.1	10.6	58.5	91.3	129.6	265.6	613.6	1,320.8	3,348.8	9,483.8	524.1
Male	373.9	486.1	21.4	11.3	86.2	128.7	173.4	347.7	801.9	1,670.5	4,054.5	10,124.4	633.1
Female	309.3	402.7	16.6	9.9	29.4	50.2	83.2	182.1	435.1	1,027.2	2,845.4	9,116.8	431.7

See footnotes at end of table.

Table 2. Age-specific and age-adjusted death rates based on bridged-race versus single-race deaths and population estimates, and ratio of single-race to bridged-race rates, by race and Hispanic origin and sex: United States, 2018—Con.

[Rates are on an annual basis per 100,000 population in specified group; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Race and Hispanic origin and sex	All ages ¹	Age group (years)											Age-adjusted rate
		Under 1 ²	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	
Ratio of single-race to bridged-race rates													
All races and origins ⁴	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Male	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Female	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Non-Hispanic:													
White	†1.015	1.009	1.018	1.016	1.013	1.010	1.007	1.006	1.004	1.003	1.003	1.003	†1.004
Male	†1.015	1.006	1.016	1.014	1.015	1.009	1.006	1.005	1.004	1.004	1.003	1.003	†1.004
Female	†1.015	1.012	1.016	1.019	1.012	1.011	1.006	1.006	1.004	1.003	1.003	1.003	†1.004
Black	†1.044	†1.080	1.073	1.066	†1.045	1.025	1.018	1.015	†1.013	†1.013	†1.011	1.011	†1.015
Male	†1.046	†1.085	1.080	1.073	†1.051	1.026	1.020	1.015	1.013	1.013	1.013	1.013	†1.016
Female	†1.041	†1.074	1.063	1.053	1.034	1.020	1.015	1.015	1.012	1.012	1.010	1.010	†1.013
American Indian or Alaska Native ⁵	†1.037	1.029	1.052	1.073	1.030	1.054	1.044	1.036	1.016	1.008	0.990	0.996	1.013
Male	1.007	0.954	1.004	1.008	1.018	1.030	1.019	1.019	0.992	0.970	0.949	0.945	0.980
Female	†1.073	1.133	1.147	1.134	1.059	1.097	1.082	1.060	1.051	1.055	1.031	1.028	†1.049
Asian or Pacific Islander ⁶	†1.018	0.994	1.061	0.990	0.988	0.942	0.969	0.975	0.976	0.984	0.996	1.005	0.993
Male	†1.015	0.970	1.079	1.009	0.976	0.938	0.969	0.971	0.976	0.984	0.995	1.005	0.991
Female	†1.023	1.025	1.037	0.980	1.015	0.953	0.971	0.983	0.978	0.987	0.998	1.005	0.996
Hispanic	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Male	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Female	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

* Rate does not meet National Center for Health Statistics standards of reliability.

† Difference between rates is statistically significant at $p < 0.05$.

¹Deaths for which age was not stated are included in "All ages" but not distributed among age groups.

²Death rates for "Under 1" (based on population estimates) differ from infant mortality rates (based on live births).

³Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards.

⁴Includes deaths for origin not stated or not classifiable.

⁵Includes Aleut and Eskimo persons.

⁶Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons.

⁷Data reported according to 1997 OMB standards. For race-specific categories, only one race was reported on the death certificate. For the "Two or more races" category, multiple races were reported on the death certificate, and various multiple-race combinations were aggregated to create this category.

⁸Includes Asian and Native Hawaiian or Other Pacific Islander categories; replicates the bridged-race Asian or Pacific Islander category for comparison purposes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Table 3. Number of deaths and age-adjusted death rates according to bridged-race and single-race status, and ratio of single-race to bridged-race rates, by race and Hispanic origin and sex: Each state, 2018

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Area	Non-Hispanic white					Non-Hispanic black				
	Bridged race ¹		Single race ²		Ratio of single-race to bridged-race rate	Bridged race ¹		Single race ²		Ratio of single-race to bridged-race rate
	Number	Age-adjusted rate	Number	Age-adjusted rate		Number	Age-adjusted rate	Number	Age-adjusted rate	
Alabama	41,163	915.1	41,145	921.7	1.007	12,474	990.5	12,461	998.4	1.008
Alaska	2,956	643.8	2,881	642.0	0.997	139	751.4	127	772.9	1.029
Arizona	44,865	666.4	44,665	667.1	1.001	2,063	797.2	1,991	812.4	1.019
Arkansas	27,516	886.1	27,466	893.2	1.008	4,213	990.0	4,205	1,002.8	1.013
California	163,012	674.4	161,727	677.5	1.005	21,109	863.5	20,654	880.5	1.020
Colorado	31,231	650.1	31,155	652.7	1.004	1,516	777.4	1,489	808.9	1.041
Connecticut	26,644	661.5	26,636	663.9	1.004	2,440	703.9	2,432	722.7	1.027
Delaware	7,374	769.5	7,367	772.9	1.004	1,687	829.9	1,686	846.3	1.020
District of Columbia	926	389.3	922	390.0	1.002	3,843	1,009.6	3,833	1,022.6	1.013
Florida	151,986	703.4	151,604	705.7	1.003	23,384	765.8	23,259	774.8	1.012
Georgia	58,221	803.6	58,171	808.3	1.006	23,973	863.6	23,937	871.5	1.009
Hawaii	2,916	603.4	2,701	593.3	0.983	104	504.0	89	587.9	1.166
Idaho	13,424	741.4	13,388	745.3	1.005	43	519.7	38	609.7	1.173
Illinois	83,506	718.8	83,408	721.2	1.003	17,859	964.8	17,799	976.0	1.012
Indiana	58,699	838.2	58,673	842.1	1.005	5,439	973.8	5,419	994.9	1.022
Iowa	29,136	728.9	29,122	731.1	1.003	657	957.5	639	996.6	1.041
Kansas	24,496	771.5	24,293	770.4	0.999	1,504	1,001.7	1,476	1,026.5	1.025
Kentucky	44,996	933.7	44,963	939.0	1.006	3,168	947.8	3,154	967.0	1.020
Louisiana	30,948	846.5	30,930	851.1	1.005	13,867	992.5	13,859	1,001.6	1.009
Maine	14,412	756.9	14,400	760.7	1.005	78	630.8	75	693.9	1.100
Maryland	32,949	720.7	32,914	724.4	1.005	14,965	828.9	14,933	838.9	1.012
Massachusetts	51,893	688.5	51,821	690.4	1.003	2,860	646.2	2,818	658.9	1.020
Michigan	81,791	763.5	81,379	763.7	1.000	13,736	975.8	13,660	991.3	1.016
Minnesota	41,292	642.8	41,173	643.0	1.000	1,568	743.4	1,536	762.3	1.025
Mississippi	21,398	903.3	21,390	907.8	1.005	10,505	1,027.2	10,497	1,034.0	1.007
Missouri	54,876	812.3	54,775	816.4	1.005	7,014	1,032.0	6,969	1,047.4	1.015
Montana	9,136	693.6	9,097	696.5	1.004	36	873.9	31	1,271.2	1.455
Nebraska	15,596	721.8	15,571	723.2	1.002	666	960.9	656	987.1	1.027
Nevada	18,493	824.0	18,398	828.9	1.006	2,282	911.4	2,247	936.1	1.027
New Hampshire	12,510	728.5	12,491	731.0	1.003	75	501.3	69	548.2	1.094
New Jersey	56,830	709.8	56,759	711.6	1.003	10,329	871.4	10,275	884.5	1.015
New Mexico	10,212	736.2	10,183	740.9	1.006	371	882.8	362	934.6	1.059
New York	112,144	650.5	112,035	652.8	1.004	22,018	703.6	21,939	716.2	1.018
North Carolina	71,211	768.1	71,136	771.4	1.004	19,167	868.9	19,097	877.5	1.010
North Dakota	5,967	669.6	5,942	669.1	0.999	38	457.5	36	523.9	1.145
Ohio	107,979	836.7	107,910	840.2	1.004	14,197	968.2	14,140	987.4	1.020
Oklahoma	33,819	895.3	33,305	903.1	1.009	2,624	997.4	2,545	1,013.8	1.016
Oregon	33,227	709.0	33,078	713.0	1.006	600	872.0	581	941.4	1.080
Pennsylvania	117,128	755.1	116,994	756.7	1.002	12,837	927.0	12,728	941.6	1.016
Rhode Island	9,226	726.3	9,214	728.2	1.003	358	649.2	346	674.2	1.039
South Carolina	36,862	806.6	36,827	809.9	1.004	12,869	940.2	12,849	948.4	1.009
South Dakota	7,074	669.9	7,057	671.1	1.002	52	649.9	51	829.9	1.277
Tennessee	59,827	890.8	59,765	895.8	1.006	10,020	990.3	9,986	1,000.5	1.010
Texas	128,414	781.3	128,238	786.8	1.007	25,220	893.3	25,188	904.2	1.012
Utah	16,501	704.9	16,438	705.7	1.001	166	870.6	155	943.7	1.084
Vermont	5,942	717.3	5,934	721.7	1.006	26	423.0	25	531.8	1.257
Virginia	52,057	719.5	51,961	723.3	1.005	13,844	849.3	13,798	861.3	1.014
Washington	49,308	690.1	48,971	692.3	1.003	1,759	738.6	1,664	767.5	1.039
West Virginia	22,622	961.1	22,614	967.1	1.006	724	1,081.4	717	1,125.7	1.041
Wisconsin	48,955	711.4	48,890	712.7	1.002	2,874	1,026.7	2,858	1,052.8	1.025
Wyoming	4,683	752.5	4,675	756.3	1.005	33	597.5	30	703.4	1.177

See footnotes at end of table.

Table 3. Number of deaths and age-adjusted death rates according to bridged-race and single-race status, and ratio of single-race to bridged-race rates, by race and Hispanic origin and sex: Each state, 2018—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

Area	Non-Hispanic American Indian or Alaska Native ³					Non-Hispanic Asian or Pacific Islander ⁴				
	Bridged race ¹		Single race ²		Ratio of single-race to bridged-race rate	Bridged race ¹		Single race ²		Ratio of single-race to bridged-race rate
	Number	Age-adjusted rate	Number	Age-adjusted rate		Number	Age-adjusted rate	Number	Age-adjusted rate	
Alabama	113	332.1	112	351.6	1.059	220	413.4	214	422.5	1.022
Alaska	1,032	1,158.2	959	1,163.6	1.005	179	399.4	173	401.3	1.005
Arizona	2,405	982.2	2,250	958.4	0.976	917	402.6	818	379.5	0.943
Arkansas	63	257.3	57	248.0	0.964	150	411.4	143	406.6	0.988
California	1,685	745.9	1,332	719.8	0.965	28,915	400.0	28,374	402.2	1.006
Colorado	285	794.3	268	856.1	1.078	642	404.8	616	405.9	1.003
Connecticut	30	293.5	27	302.9	1.032	342	285.0	334	285.6	1.002
Delaware	20	382.1	19	*	...	107	332.7	105	339.6	1.021
District of Columbia	5	*	4	*	...	65	369.8	63	375.1	1.014
Florida	276	372.9	228	337.1	0.904	2,222	346.1	2,059	338.1	0.977
Georgia	53	171.9	49	174.4	1.015	1,207	381.5	1,182	385.3	1.010
Hawaii	15	*	14	*	...	7,672	545.3	6,169	488.9	†0.897
Idaho	163	803.2	154	842.3	1.049	107	426.9	100	418.4	0.980
Illinois	60	222.0	49	231.7	1.044	2,383	358.5	2,334	359.8	1.004
Indiana	49	238.3	48	268.6	1.127	338	363.3	326	365.7	1.007
Iowa	71	868.4	71	929.8	1.071	179	416.5	177	422.2	1.014
Kansas	249	1,151.7	180	980.0	0.851	234	393.4	218	381.3	0.969
Kentucky	27	236.0	24	227.4	0.964	191	420.7	187	432.0	1.027
Louisiana	137	433.5	135	449.0	1.036	312	436.5	305	446.7	1.023
Maine	92	909.2	87	972.0	1.069	56	388.8	53	381.0	0.980
Maryland	64	310.1	58	323.5	1.043	1,378	350.4	1,355	357.7	1.021
Massachusetts	74	469.0	61	460.6	0.982	1,153	322.7	1,117	318.6	0.987
Michigan	556	818.4	431	753.3	0.920	735	301.6	723	310.2	1.029
Minnesota	602	1,158.5	562	1,193.4	1.030	777	484.0	758	488.1	1.008
Mississippi	111	809.7	109	814.8	1.006	132	477.4	129	483.3	1.012
Missouri	131	385.7	109	378.1	0.980	394	416.6	373	415.2	0.997
Montana	668	1,300.5	645	1,345.8	1.035	31	352.9	30	360.4	1.021
Nebraska	121	987.8	115	1,007.7	1.020	108	401.4	101	387.8	0.966
Nevada	237	762.3	214	770.5	1.011	1,503	474.3	1,437	469.7	0.990
New Hampshire	8	*	8	*	...	56	244.3	52	234.4	0.959
New Jersey	50	251.0	41	246.2	0.981	2,459	320.9	2,402	320.6	0.999
New Mexico	1,604	954.1	1,583	965.2	1.012	140	405.7	135	411.6	1.015
New York	259	346.1	250	395.6	1.143	5,960	349.0	5,930	354.7	1.016
North Carolina	1,040	886.6	1,025	911.1	1.028	731	355.5	715	359.6	1.012
North Dakota	346	1,363.4	338	1,388.4	1.018	16	*	16	*	...
Ohio	87	250.0	78	272.0	1.088	741	368.0	712	367.8	0.999
Oklahoma	3,087	1,011.9	2,747	1,008.7	0.997	337	498.7	314	489.8	0.982
Oregon	374	692.1	320	704.4	1.018	788	428.2	762	431.3	1.007
Pennsylvania	68	266.6	58	257.8	0.967	1,238	355.1	1,212	355.1	1.000
Rhode Island	38	751.6	35	782.0	1.040	114	445.5	113	457.2	1.026
South Carolina	97	434.2	93	434.4	1.000	243	334.0	233	333.8	0.999
South Dakota	752	1,516.7	730	1,544.4	1.018	36	704.5	34	714.1	1.014
Tennessee	68	269.3	58	237.9	0.883	394	440.1	381	443.3	1.007
Texas	310	277.3	297	292.6	1.055	4,018	375.6	3,897	374.0	0.996
Utah	236	1,005.1	219	1,000.9	0.996	390	504.3	366	494.9	0.981
Vermont	12	*	8	*	...	18	*	17	*	...
Virginia	105	352.7	93	335.0	0.950	1,656	344.3	1,626	350.8	1.019
Washington	943	930.1	837	958.9	1.031	2,769	414.8	2,652	412.2	0.994
West Virginia	9	*	9	*	...	50	363.6	49	370.2	1.018
Wisconsin	498	1,088.0	490	1,154.4	1.061	450	467.6	441	470.9	1.007
Wyoming	106	1,121.6	102	1,157.7	1.032	13	*	13	*	...

See footnotes at end of table.

Table 3. Number of deaths and age-adjusted death rates according to bridged-race and single-race status, and ratio of single-race to bridged-race rates, by race and Hispanic origin and sex: Each state, 2018—Con.

[Age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Bridged-race categories are consistent with 1977 Office of Management and Budget (OMB) standards; single-race categories are consistent with 1997 OMB standards. Race and Hispanic origin are reported separately on death certificates. Hispanic persons may be of any race. Data for specified categories other than non-Hispanic white and non-Hispanic black should be interpreted with caution because of inconsistencies between reporting these items on death certificates and on censuses and surveys; see Technical Notes]

* Rate does not meet National Center for Health Statistics standards of reliability.

... Category not applicable.

† Difference between rates is statistically significant at $p < 0.05$.

¹Multiple-race data reported according to 1997 OMB standards were bridged to single-race categories of 1977 OMB standards.

²Data reported according to 1997 OMB standards. For race-specific categories, only one race was reported on the death certificate. For the "Two or more races" category, multiple races were reported on the death certificate, and various multiple-race combinations were aggregated to create this category.

³Includes Aleut and Eskimo persons.

⁴Includes Chinese, Filipino, Hawaiian, Japanese, and other Asian or Pacific Islander persons. For single-race data, Asian and Native Hawaiian or Other Pacific Islander categories were combined to replicate the bridged-race Asian or Pacific Islander category for comparison purposes.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Technical Notes

Data

Mortality data in this report are based on information from all death certificates that were filed in the 50 states and the District of Columbia and processed by the National Center for Health Statistics (NCHS) through the Vital Statistics Cooperative Program. More than 99% of deaths that occur in the United States are registered and represented in the data (18). The U.S. Standard Certificate of Death was revised in 2003 (4) to comply with 1997 Office of Management and Budget (OMB) standards for classifying, collecting, and reporting data on race and ethnicity across federal data systems (2). However, vital statistics reporting areas implemented the revised death certificate at different times over the 2003–2018 period. [Table I](#) details this gradual transition, showing which areas reported multiple-race data on unrevised death certificates prior to their transition, and the year in which each area partially or fully implemented the revised death certificate. Starting in 2018, all areas used the revised death certificate for the full year. The mortality statistics in this report include only deaths of U.S. residents.

Race and Hispanic origin

Race and Hispanic origin are different concepts with separate questions on the death certificate; responses are combined for this report. Hispanic persons may be of any race. All records coded as "Other races" (0.8% of total deaths in 2018) were assigned to the specified race of the previous (single-race) record. Records for which race was unknown, not stated, or not classifiable (0.3% of total deaths in 2018) were assigned the racial designation of the previous (single-race) record. Hispanic origin is not imputed for records with ethnicity not stated or not classifiable (0.3% in 2018). For all race-specific single-race categories in the report, only one race was reported on the death certificate; the "Two or more races" category summarizes multiple-race combinations reported on the death certificate and accounts for 0.4% of all deaths in 2018.

Population bases and computation of rates

All populations used for computing death rates are postcensal estimates based on the 2010 census for July 1, 2018; details of the methodology used to produce postcensal estimates are described elsewhere (11,19). Race data on the 2010 census were first collected according to the 1997 OMB standards then modified to reassign respondents who selected a special Census category, "Some other race," to one of the five OMB minimum categories (20) for consistency with other federal data. The bridged-race postcensal estimates were produced under a collaborative arrangement with the U.S. Census Bureau, which applied NCHS race-bridging methodology to race-modified, postcensal estimates. Note that bridged-race population estimates by race and Hispanic origin are not true counts; rather, they are special estimates based on procedures that are subject to error and may have a greater impact on smaller populations, such as the American Indian or Alaska Native (AIAN) population,

than on larger populations (8). Furthermore, the bridging methodology is based on 1997–2000 data and may be less reliable over time.

The population estimates used for this report are shown by age, sex, and combined race and Hispanic origin in [Table II](#) and by state and combined race and Hispanic origin in [Table III](#). Each table presents bridged-race and single-race population estimates. Generally, the major racial and ethnic groups each account for a slightly smaller percentage of the total population based on single-race estimates, which show a separate multiple-race category consistent with 1997 OMB standards, versus bridged-race estimates, in which multiple-race data are bridged back to one of four race categories according to 1977 OMB standards. In 2018, the non-Hispanic white, non-Hispanic black, non-Hispanic AIAN, and non-Hispanic Asian or Pacific Islander (API) populations accounted for 60.4%, 12.5%, 0.7%, and 5.9% of the total population, respectively, based on single-race estimates versus 61.5%, 13.1%, 0.8%, and 6.3%, respectively, based on bridged-race estimates ([Table II](#)). In single-race estimates, the non-Hispanic Asian and non-Hispanic Native Hawaiian or Other Pacific Islander (NHOPI) populations accounted for 97.0% and 3.0%, respectively, of the total non-Hispanic API population, with variations in composition by state ([Tables II](#) and [III](#)). Only 2.2% of the total population reported more than one race. Generally, the NHOPI and API populations are more likely to report multiple races (21) and are more impacted by race bridging than the white and black populations (8). At the state level, the percentage of the population that reported more than one race in 2018 ranged from 1.2% (Mississippi) to 19.5% (Hawaii). Generally, single-race estimates are lower than bridged-race estimates, with variations by race and ethnicity, age group, sex, and state in the magnitude of difference between the two sets of estimates.

Crude death rates are estimated as the number of deaths per 100,000 population, overall or for specified groups. Population estimates represent the population at risk of dying in a specified group. Age-adjusted death rates are the sum of age-specific death rates weighted to age-specific proportions of the year 2000 U.S. standard population; details of rate calculations are described elsewhere (16).

Random variation and significance testing

Because mortality data in this report are based on complete counts, they are not subject to sampling error. However, they may be affected by random variation, meaning "the number of deaths that actually occurred may be considered as one of a large series of possible results that could have arisen under the same circumstances" (16). When the number of deaths is fewer than 100 and the probability of a death occurring is small, caution is recommended when interpreting mortality data. Standard errors of death counts and rates, as well as tests of statistical significance between pairs of death counts and rates, were computed using formulas described elsewhere (16). Most of the mortality statistics in this report involve death counts—and rates based on counts—of 100 or more, so the z test statistic was primarily used to test whether the difference between bridged-race and single-race deaths and rates was statistically significant at the 0.05 level. For death counts—and rates based on counts—

of fewer than 100, significance testing was done by comparing 95% confidence intervals calculated with special confidence limit factors shown elsewhere (16). With this method, the difference between counts and rates with overlapping confidence intervals could still be statistically significant, so caution is advised when interpreting results (16).

Because of random variation, differences between bridged-race and single-race data for 2016 and 2017 were also examined—exclusive of West Virginia, which did not transition to the revised death certificate until late in 2017—and those results (not shown) were generally consistent with the 2018 results presented in this report.

Crude death rates based on fewer than 20 deaths, and age-adjusted death rates for which the sum of age-specific deaths is less than 20, are not considered to be reliable according to NCHS standards. Therefore, in report tables, they are suppressed and replaced by asterisks.

Table I. Reporting of multiple-race information on death certificates, by year: Each state, 2003–2018

Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alabama	Y	Y	Y
Alaska	Y	Y	Y	Y	Y
Arizona	Y	Y	Y	Y	Y	Y	Y	Y	Y
Arkansas	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
California	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Colorado	Y	Y	Y	Y
Connecticut	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Delaware	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
District of Columbia	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Florida	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Georgia	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hawaii	U	U	U	U	U	U	U	U	U	U	U	Y	Y	Y	Y	Y
Idaho	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Illinois	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Indiana	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Iowa	Y	Y	Y	Y	Y	Y	Y	Y
Kansas	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kentucky	P	Y	Y	Y	Y	Y	Y	Y	Y
Louisiana	P	Y	Y	Y	Y	Y	Y
Maine	U	U	U	U	U	U	U	P	Y	Y	Y	Y	Y	Y	Y	Y
Maryland	Y	Y	Y	Y
Massachusetts	P	Y	Y	Y	Y
Michigan	...	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Minnesota	U	U	U	U	U	U	U	U	P	Y	Y	Y	Y	Y	Y	Y
Mississippi	Y	Y	Y	Y	Y	Y	Y
Missouri	Y	Y	Y	Y	Y	Y	Y	Y	Y
Montana	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Nebraska	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Nevada	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New Hampshire	...	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New Jersey	...	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New Mexico	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New York	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Carolina	Y	Y	Y	Y	Y
North Dakota	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ohio	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oklahoma	...	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oregon	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pennsylvania	Y	Y	Y	Y	Y	Y	Y

See footnotes at end of table.

Table I. Reporting of multiple-race information on death certificates, by year: Each state, 2003–2018—Con.

Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rhode Island	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
South Carolina	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
South Dakota	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tennessee	Y	Y	Y	Y	Y	Y	Y
Texas	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Utah	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vermont	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Virginia	P	Y	Y	Y	Y
Washington	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West Virginia	P	Y
Wisconsin	U	U	U	U	U	U	U	U	U	U	P	Y	Y	Y	Y	Y
Wyoming	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

... Category not applicable; no multiple-race reporting.

NOTE: Y is multiple-race reporting on revised death certificates; P is multiple-race reporting on revised death certificates for part of the year; and U is multiple-race reporting on unrevised death certificates.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Table II. Estimated bridged-race and single-race populations, by 10-year age group, race and Hispanic origin, and sex: United States, July 1, 2018

[Populations are postcensal estimates based on the 2010 census. Bridged-race estimates are consistent with 1977 Office of Management and Budget (OMB) standards; single-race estimates are consistent with 1997 OMB standards]

Race and Hispanic origin and sex	All ages	Age group (years)										
		Under 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over
Bridged-race estimates												
All races and origins	327,167,434	3,848,208	15,962,067	41,075,169	42,970,800	45,697,774	41,277,888	41,631,699	42,272,636	30,492,316	15,394,374	6,544,503
Male	161,128,679	1,968,505	8,163,697	20,974,830	21,976,455	23,210,709	20,587,600	20,541,202	20,398,863	14,246,085	6,735,040	2,325,693
Female	166,038,755	1,879,703	7,798,370	20,100,339	20,994,345	22,487,065	20,690,288	21,090,497	21,873,773	16,246,231	8,659,334	4,218,810
Non-Hispanic:												
White	201,068,278	1,994,440	8,244,087	21,483,759	23,544,616	25,657,465	23,709,326	26,232,985	29,852,243	23,091,706	12,034,203	5,223,448
Male	99,148,256	1,021,359	4,229,223	11,006,267	12,080,192	13,030,959	11,922,768	13,079,246	14,575,176	10,970,346	5,358,726	1,873,994
Female	101,920,022	973,081	4,014,864	10,477,492	11,464,424	12,626,506	11,786,558	13,153,739	15,277,067	12,121,360	6,675,477	3,349,454
Black	42,934,826	591,754	2,447,225	6,217,144	6,500,474	6,658,091	5,414,553	5,287,236	4,974,223	3,006,666	1,329,955	507,505
Male	20,572,958	302,160	1,243,447	3,156,980	3,298,478	3,297,930	2,565,382	2,475,578	2,275,130	1,290,797	513,623	153,453
Female	22,361,868	289,594	1,203,778	3,060,164	3,201,996	3,360,161	2,849,171	2,811,658	2,699,093	1,715,869	816,332	354,052
American Indian or Alaska Native	2,745,839	38,260	156,473	409,393	419,255	418,797	333,378	326,384	327,436	202,493	85,020	28,950
Male	1,346,333	19,487	79,585	207,156	212,446	211,068	163,918	157,783	153,401	93,609	37,328	10,552
Female	1,399,506	18,773	76,888	202,237	206,809	207,729	169,460	168,601	174,035	108,884	47,692	18,398
Asian or Pacific Islander	20,546,745	216,177	949,886	2,429,718	2,692,199	3,534,255	3,233,519	2,759,529	2,228,301	1,508,767	708,822	285,572
Male	9,826,947	110,822	487,717	1,235,748	1,357,311	1,730,295	1,518,221	1,287,947	1,015,474	666,937	310,549	105,926
Female	10,719,798	105,355	462,169	1,193,970	1,334,888	1,803,960	1,715,298	1,471,582	1,212,827	841,830	398,273	179,646
Hispanic	59,871,746	1,007,577	4,164,396	10,535,155	9,814,256	9,429,166	8,587,112	7,025,565	4,890,433	2,682,684	1,236,374	499,028
Male	30,234,185	514,677	2,123,725	5,368,679	5,028,028	4,940,457	4,417,311	3,540,648	2,379,682	1,224,396	514,814	181,768
Female	29,637,561	492,900	2,040,671	5,166,476	4,786,228	4,488,709	4,169,801	3,484,917	2,510,751	1,458,288	721,560	317,260
Single-race estimates												
All races and origins	327,167,434	3,848,208	15,962,067	41,075,169	42,970,800	45,697,774	41,277,888	41,631,699	42,272,636	30,492,316	15,394,374	6,544,503
Male	161,128,679	1,968,505	8,163,697	20,974,830	21,976,455	23,210,709	20,587,600	20,541,202	20,398,863	14,246,085	6,735,040	2,325,693
Female	166,038,755	1,879,703	7,798,370	20,100,339	20,994,345	22,487,065	20,690,288	21,090,497	21,873,773	16,246,231	8,659,334	4,218,810
Non-Hispanic:												
White	197,546,407	1,901,862	7,864,666	20,608,534	22,872,782	25,186,043	23,386,184	25,977,116	29,624,945	22,951,945	11,971,178	5,201,152
Male	97,418,608	974,706	4,037,757	10,565,756	11,743,757	12,802,402	11,770,322	12,957,676	14,465,977	10,904,064	5,330,458	1,865,733
Female	100,127,799	927,156	3,826,909	10,042,778	11,129,025	12,383,641	11,615,862	13,019,440	15,158,968	12,047,881	6,640,720	3,335,419
Black	40,902,223	528,430	2,195,577	5,627,826	6,054,544	6,392,622	5,257,441	5,181,135	4,893,807	2,960,341	1,310,495	500,005
Male	19,560,023	269,097	1,112,581	2,851,371	3,069,222	3,170,104	2,492,970	2,427,503	2,239,638	1,270,848	505,699	150,990
Female	21,342,200	259,333	1,082,996	2,776,455	2,985,322	3,222,518	2,764,471	2,753,632	2,654,169	1,689,493	804,796	349,015
American Indian or Alaska Native	2,417,371	31,525	130,716	348,695	362,772	370,626	297,509	293,774	294,774	183,080	77,978	25,922
Male	1,189,703	16,114	66,670	176,864	184,518	188,029	147,350	142,738	138,496	84,942	34,456	9,526
Female	1,227,668	15,411	64,046	171,831	178,254	182,597	150,159	151,036	156,278	98,138	43,522	16,396
Asian or Pacific Islander ¹	19,315,021	190,131	842,922	2,168,107	2,475,204	3,341,475	3,086,205	2,645,645	2,139,158	1,460,246	688,266	277,662
Male	9,213,918	97,533	432,837	1,102,125	1,246,672	1,634,711	1,447,298	1,233,138	971,697	643,715	301,358	102,834
Female	10,101,103	92,598	410,085	1,065,982	1,228,532	1,706,764	1,638,907	1,412,507	1,167,461	816,531	386,908	174,828
Asian	18,728,675	182,275	810,104	2,085,864	2,390,400	3,239,492	2,999,169	2,573,959	2,078,032	1,423,437	673,469	272,474
Male	8,918,924	93,516	416,108	1,060,349	1,203,148	1,582,188	1,402,726	1,197,507	942,027	625,988	294,562	100,805
Female	9,809,751	88,759	393,996	1,025,515	1,187,252	1,657,304	1,596,443	1,376,452	1,136,005	797,449	378,907	171,669

See footnotes at end of table.

Table II. Estimated bridged-race and single-race populations, by 10-year age group, race and Hispanic origin, and sex: United States, July 1, 2018—Con.

[Populations are postcensal estimates based on the 2010 census. Bridged-race estimates are consistent with 1977 Office of Management and Budget (OMB) standards; single-race estimates are consistent with 1997 OMB standards]

Race and Hispanic origin and sex	All ages	Age group (years)										
		Under 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over
Non-Hispanic—Con.:		Single-race estimates—Con.										
Native Hawaiian or Other												
Pacific Islander	586,346	7,856	32,818	82,243	84,804	101,983	87,036	71,686	61,126	36,809	14,797	5,188
Male	294,994	4,017	16,729	41,776	43,524	52,523	44,572	35,631	29,670	17,727	6,796	2,029
Female	291,352	3,839	16,089	40,467	41,280	49,460	42,464	36,055	31,456	19,082	8,001	3,159
Two or more races ²												
Male	3,512,242	96,378	390,127	910,035	704,258	475,006	312,349	239,499	203,373	118,120	48,255	14,842
Female	3,602,424	92,305	373,663	876,817	686,984	502,836	351,088	268,965	226,146	135,900	61,828	25,892
Hispanic												
Male	30,234,185	514,677	2,123,725	5,368,679	5,028,028	4,940,457	4,417,311	3,540,648	2,379,682	1,224,396	514,814	181,768
Female	29,637,561	492,900	2,040,671	5,166,476	4,786,228	4,488,709	4,169,801	3,484,917	2,510,751	1,458,288	721,560	317,260

¹Includes Asian and Native Hawaiian or Other Pacific Islander categories; replicates the bridged-race Asian or Pacific Islander category for comparison purposes.

²Two or more races were reported on the death certificate; various multiple-race combinations were aggregated to create this category.

SOURCE: U.S. Census Bureau.

Table III. Estimated bridged-race and single-race populations, by race and Hispanic origin: Each state, July 1, 2018

[Populations are postcensal estimates based on the 2010 census. Bridged-race estimates are consistent with 1977 Office of Management and Budget (OMB) standards; single-race estimates are consistent with 1997 OMB standards]

Area	Bridged-race estimates, non-Hispanic					Single-race estimates, non-Hispanic							
	Total population ^{2,3}	White	Black	American Indian or Alaska Native	Asian or Pacific Islander	White	Black	American Indian or Alaska Native	Asian or Pacific Islander ¹			Two or more races ⁴	Hispanic ³
									Total	Asian	Native Hawaiian or Other Pacific Islander		
Alabama	4,887,871	3,239,940	1,321,149	30,144	79,457	3,197,324	1,295,175	27,464	73,946	71,388	2,558	76,781	217,181
Alaska	737,438	468,607	32,613	120,338	62,592	444,411	24,861	107,674	57,506	47,799	9,707	49,698	53,288
Arizona	7,171,646	3,977,245	353,248	296,309	278,501	3,902,867	313,875	283,832	257,884	244,348	13,536	146,845	2,266,343
Arkansas	3,013,825	2,212,187	481,001	25,616	61,834	2,176,611	464,640	22,911	58,213	48,509	9,704	58,263	233,187
California	39,557,045	15,115,515	2,446,372	207,399	6,247,617	14,568,608	2,223,274	163,273	5,963,810	5,818,319	145,491	1,097,938	15,540,142
Colorado	5,695,564	3,936,434	264,591	43,571	215,851	3,868,329	229,085	36,614	195,264	187,668	7,596	131,155	1,235,117
Connecticut	3,572,665	2,408,190	387,134	9,566	177,966	2,376,351	364,858	7,758	170,839	169,570	1,269	63,050	589,809
Delaware	967,171	609,191	221,211	3,497	41,298	599,061	211,504	3,009	39,264	38,921	343	22,359	91,974
District of Columbia	702,455	264,915	323,515	1,829	32,947	260,268	315,337	1,407	30,411	30,064	347	15,783	79,249
Florida	21,299,325	11,585,030	3,415,924	60,736	675,218	11,399,170	3,309,386	53,689	620,576	607,001	13,575	354,087	5,562,417
Georgia	10,519,475	5,600,547	3,391,353	27,617	473,221	5,511,319	3,313,815	24,102	450,259	443,813	6,446	193,243	1,026,737
Hawaii	1,420,491	361,718	37,734	3,564	866,118	309,043	27,934	3,037	651,925	517,717	134,208	277,195	151,357
Idaho	1,754,208	1,457,146	18,483	22,408	33,263	1,433,895	13,050	19,385	29,179	26,026	3,153	35,791	222,908
Illinois	12,741,080	7,873,521	1,859,338	25,620	768,459	7,773,275	1,791,197	19,233	735,945	732,320	3,625	207,288	2,214,142
Indiana	6,691,878	5,337,503	685,156	18,836	175,146	5,276,640	635,087	15,474	164,344	161,831	2,513	125,096	475,237
Iowa	3,156,145	2,719,596	139,612	10,768	91,737	2,691,471	119,189	9,533	87,698	84,180	3,518	53,822	194,432
Kansas	2,911,505	2,240,984	192,670	28,678	97,993	2,202,954	167,341	23,119	91,566	88,851	2,715	75,345	351,180
Kentucky	4,468,402	3,814,014	393,469	9,987	78,999	3,766,333	365,332	9,421	73,862	71,014	2,848	81,521	171,933
Louisiana	4,659,978	2,762,802	1,531,233	32,545	89,587	2,729,264	1,503,104	30,109	83,452	81,667	1,785	70,238	243,811
Maine	1,338,404	1,261,754	25,099	10,543	18,158	1,246,689	20,708	8,870	16,722	16,343	379	22,565	22,850
Maryland	6,042,718	3,113,950	1,856,783	18,020	425,532	3,050,812	1,801,327	14,681	401,070	397,998	3,072	146,395	628,433
Massachusetts	6,902,149	4,996,466	536,502	15,575	506,383	4,928,183	500,276	12,281	488,025	485,158	2,867	126,161	847,223
Michigan	9,995,915	7,590,482	1,455,796	71,261	359,354	7,485,441	1,375,622	57,011	336,017	333,280	2,737	222,802	519,022
Minnesota	5,611,179	4,524,531	406,460	68,556	302,349	4,459,268	367,582	59,933	287,834	284,976	2,858	127,279	309,283
Mississippi	2,986,530	1,702,813	1,133,243	15,486	34,820	1,686,128	1,118,103	14,887	32,372	31,319	1,053	34,872	100,168
Missouri	6,126,452	4,925,557	755,269	33,980	148,381	4,858,302	710,969	26,659	136,404	128,422	7,982	130,853	263,265
Montana	1,062,305	928,767	9,233	70,336	11,466	912,905	5,612	64,710	10,145	9,408	737	26,430	42,503
Nebraska	1,929,268	1,534,344	106,038	17,816	55,198	1,515,603	92,902	16,133	51,854	50,669	1,185	36,904	215,872
Nevada	3,034,392	1,525,308	305,687	30,010	292,239	1,476,377	276,929	26,067	269,934	250,856	19,078	103,937	881,148
New Hampshire	1,356,458	1,233,891	23,340	3,850	42,714	1,220,322	19,146	2,903	40,337	39,954	383	21,087	52,663

See footnotes at end of table.

Table III. Estimated bridged-race and single-race populations, by race and Hispanic origin: Each state, July 1, 2018—Con.

[Populations are postcensal estimates based on the 2010 census. Bridged-race estimates are consistent with 1977 Office of Management and Budget (OMB) standards; single-race estimates are consistent with 1997 OMB standards]

Area	Bridged-race estimates, non-Hispanic					Single-race estimates, non-Hispanic							
	Total population ^{2,3}	White	Black	American Indian or Alaska Native	Asian or Pacific Islander	Asian or Pacific Islander ¹							Hispanic ³
						White	Black	American Indian or Alaska Native	Total	Asian	Native Hawaiian or Other Pacific Islander	Two or more races ⁴	
New Jersey	8,908,520	4,955,960	1,194,816	16,706	901,679	4,892,895	1,150,141	12,720	876,308	873,183	3,125	137,097	1,839,359
New Mexico	2,095,428	793,157	46,199	189,915	36,924	777,525	38,590	184,643	33,695	32,311	1,384	31,742	1,029,233
New York	19,542,209	10,984,149	2,954,965	70,498	1,778,467	10,830,524	2,833,908	56,891	1,719,087	1,710,183	8,904	347,669	3,754,130
North Carolina	10,383,620	6,623,807	2,296,309	123,402	342,753	6,525,505	2,219,512	116,180	324,518	317,710	6,808	200,556	997,349
North Dakota	760,077	646,691	27,766	41,564	14,527	638,189	24,620	38,871	13,544	13,079	465	15,324	29,529
Ohio	11,689,442	9,311,015	1,578,864	30,662	308,024	9,195,982	1,474,401	22,767	287,726	283,111	4,615	247,689	460,877
Oklahoma	3,943,079	2,698,315	335,441	376,424	103,821	2,576,177	292,842	328,310	95,385	89,289	6,096	221,287	429,078
Oregon	4,190,713	3,234,115	106,362	57,802	236,038	3,155,276	82,107	46,704	213,280	196,426	16,854	136,950	556,396
Pennsylvania	12,807,060	9,849,470	1,470,863	23,161	487,423	9,741,631	1,388,544	18,556	467,871	463,785	4,086	214,315	976,143
Rhode Island	1,057,315	772,215	71,866	5,341	39,551	761,439	63,323	4,570	37,498	36,822	676	22,143	168,342
South Carolina	5,084,127	3,281,366	1,388,472	20,642	97,601	3,238,535	1,353,188	18,732	90,360	87,197	3,163	87,266	296,046
South Dakota	882,235	728,077	24,214	77,360	16,182	718,383	20,162	73,084	15,267	14,776	491	18,937	36,402
Tennessee	6,770,010	5,057,258	1,173,407	20,790	137,783	4,989,758	1,133,558	19,148	128,092	124,526	3,566	118,682	380,772
Texas	28,701,845	12,155,230	3,546,013	105,968	1,525,785	11,912,849	3,441,644	92,644	1,458,859	1,433,736	25,123	427,000	11,368,849
Utah	3,161,105	2,505,385	46,815	33,271	125,416	2,466,025	36,307	29,910	112,180	81,356	30,824	66,465	450,218
Vermont	626,299	587,242	10,491	2,758	13,274	579,588	8,155	2,072	12,619	12,423	196	11,331	12,534
Virginia	8,517,685	5,343,168	1,700,311	25,851	627,481	5,234,514	1,627,434	22,696	584,666	578,201	6,465	227,501	820,874
Washington	7,535,591	5,283,453	365,856	114,201	801,723	5,124,948	295,631	95,666	740,635	687,325	53,310	308,353	970,358
West Virginia	1,805,832	1,681,682	73,131	3,945	16,873	1,662,293	63,429	3,829	15,417	15,014	403	30,663	30,201
Wisconsin	5,813,568	4,763,040	404,595	57,784	184,194	4,712,894	370,909	51,937	175,201	173,071	2,130	98,672	403,955
Wyoming	577,737	490,535	8,814	13,333	6,828	484,253	6,598	12,262	6,156	5,762	394	10,241	58,227

¹For single-race estimates, Asian and Native Hawaiian or Other Pacific Islander categories were combined to replicate the bridged-race Asian or Pacific Islander (API) category for comparison purposes. Both the aggregated API category and its component categories are shown.

²Includes counts for origin not stated or classifiable.

³These categories are not impacted by the change in OMB race-reporting standards, so bridged-race and single-race estimates are the same.

⁴Two or more races were reported on the death certificate; various multiple-race combinations were aggregated to create this category.

SOURCE: U.S. Census Bureau.

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