NCHS Data Brief ■ No. 26 ■ December 2009

Death in the United States, 2007

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Key findings

Data from the National Vital Statistics System, Mortality

- In 2007, the age-adjusted death rate for the United States reached a record low of 760.3 per 100,000 population. Life expectancy at birth reached a record high of 77.9 years.
- States in the southeast region have higher death rates than those in other regions of the country.
- In 2007, the five leading causes of death were heart disease, cancer, stroke, chronic lower respiratory diseases, and accidents. These accounted for over 64 percent of all deaths in the United States.
- White females have the longest life expectancy (80.7 years), followed by black females (77.0 years).
- The gap in life expectancy between white persons and black persons declined by 35 percent between 1989 and 2007. The race differential was 4.6 years in 2007.

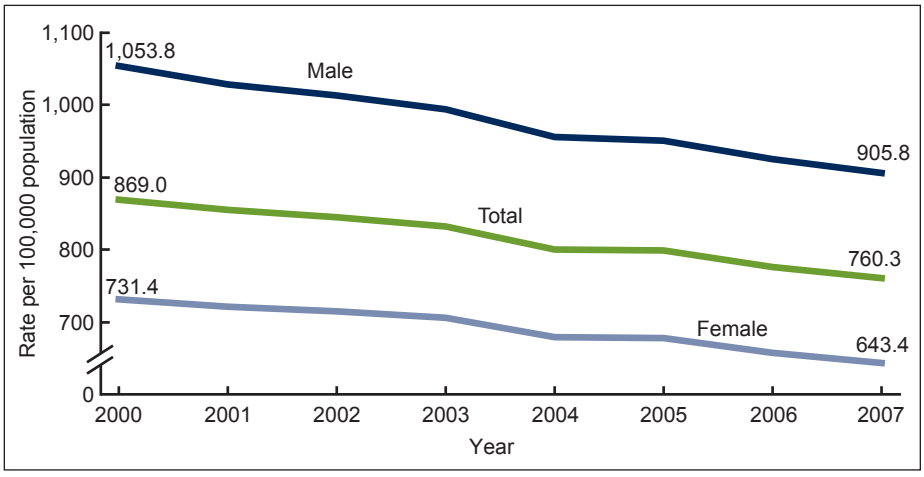
Mortality in the United States, as summarized by the age-adjusted death rate—a measure that accounts for changes in the age distribution of the population—has declined in an almost uninterrupted manner since 1960. The death rate is now 43 percent lower than in 1960 (declining from 1,339.2 per 100,000 standard population in 1960 to 760.3 in 2007) (1,2). However, not all Americans have benefited equally from this decline. While there is a decline in mortality among all groups, longstanding gaps only recently began to diminish. Much of the recent improvements in death rates and life expectancy for all population groups can be attributed to ongoing reductions in death rates from major causes of death such as heart disease, cancer, chronic lower respiratory diseases, and stroke (1).

Keywords: mortality • National Vital Statistics System • life expectancy

What is the risk of dying in the United States?

The number of deaths in the United States for 2007 was 2,423,995 (preliminary data). The age-adjusted death rate reached a record low of 760.3 per 100,000 population in 2007.

Figure 1. Age-adjusted death rates, by sex: United States, 2000–2006 and preliminary 2007



SOURCE: National Vital Statistics System, Mortality.

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From 2000–2007, age-adjusted death rates decreased by 14.0 percent for males and by 12.0 percent for females (Figure 1).

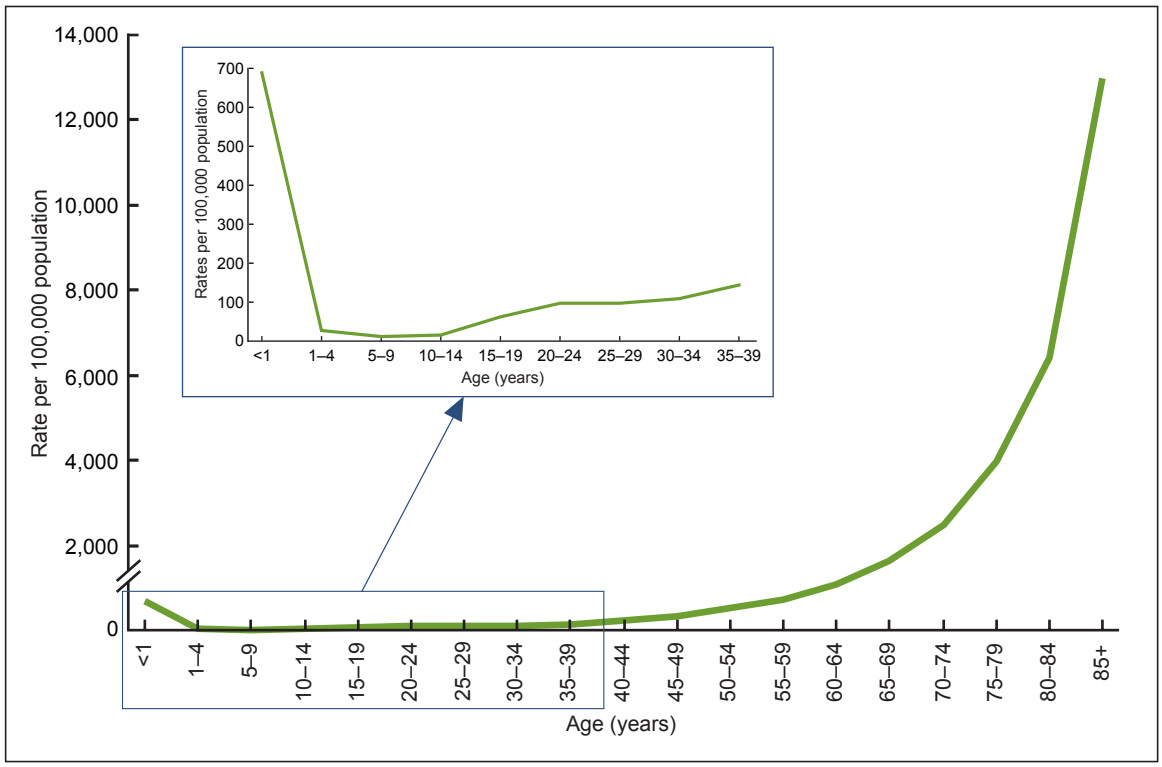
Age-adjusted death rates for males were 44.2 percent higher than for females in 1980. This declined to 40.8 percent higher in 2007.

Are there differences by age in the risk of dying?

Death rates by age are lowest among 5–9 year olds (Figure 2). In 2007, 72.5 percent of all deaths occurred among those aged 65 and over, and 29.5 percent occurred at age 85 and over.

Since 2000, most of the decreases in age-specific death rates have occurred among those under age 20 years or aged 45 years and over (2,3).

Figure 2. Age-specific death rates: United States, preliminary 2007



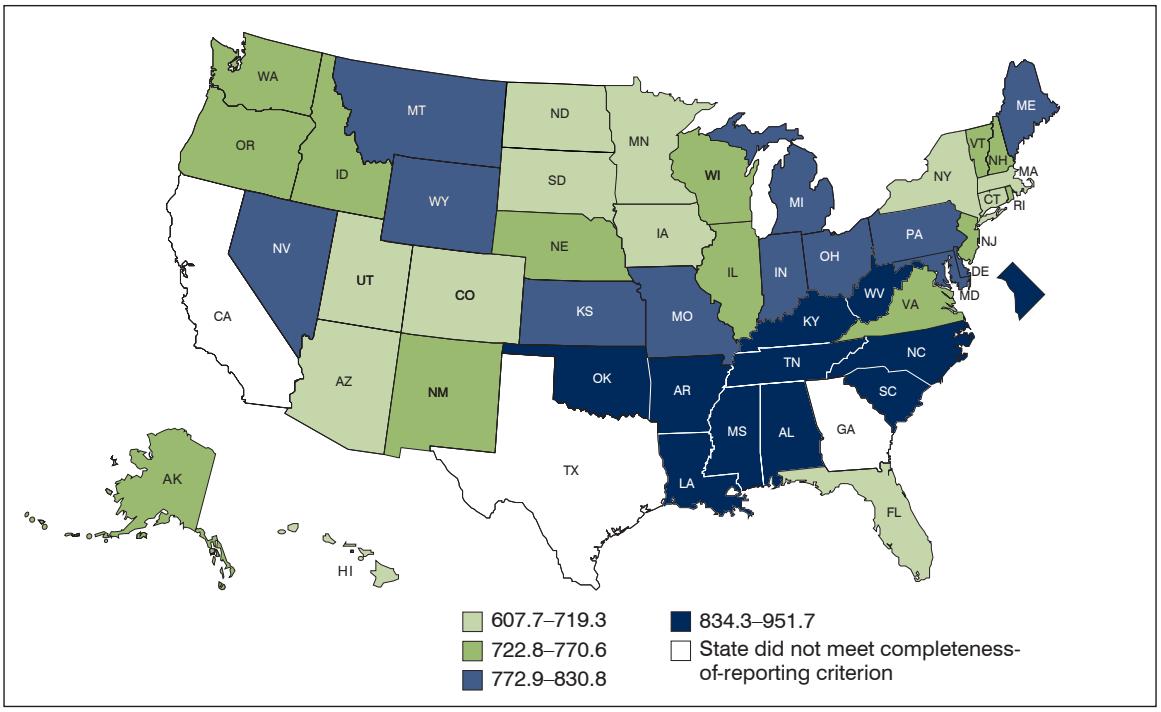
SOURCE: National Vital Statistics System, Mortality.

Do death rates vary by state?

States experience different risks of mortality. Hawaii has the lowest age-adjusted death rate of all the states at 20 percent lower than the average rate for the United States (760.3 deaths per 100,000 population). West Virginia had the highest state age-adjusted death rate in 2007, at 25 percent higher than the average U.S. rate.

In general, states in the southeast region have higher rates than those in other regions of the country (Figure 3). Kentucky, for example, has an age-adjusted death rate of 897.6 deaths per 100,000 population and Alabama has a rate of 930.3 (2). States in other regions of the country, such as Illinois (758.5 deaths per 100,000 population) and Montana (772.9 deaths per 100,000 population), have rates (2) that are more comparable to the average U.S. rate.

Figure 3. Age-adjusted death rates, by state and the District of Columbia: United States, preliminary 2007



SOURCE: National Vital Statistics System, Mortality.

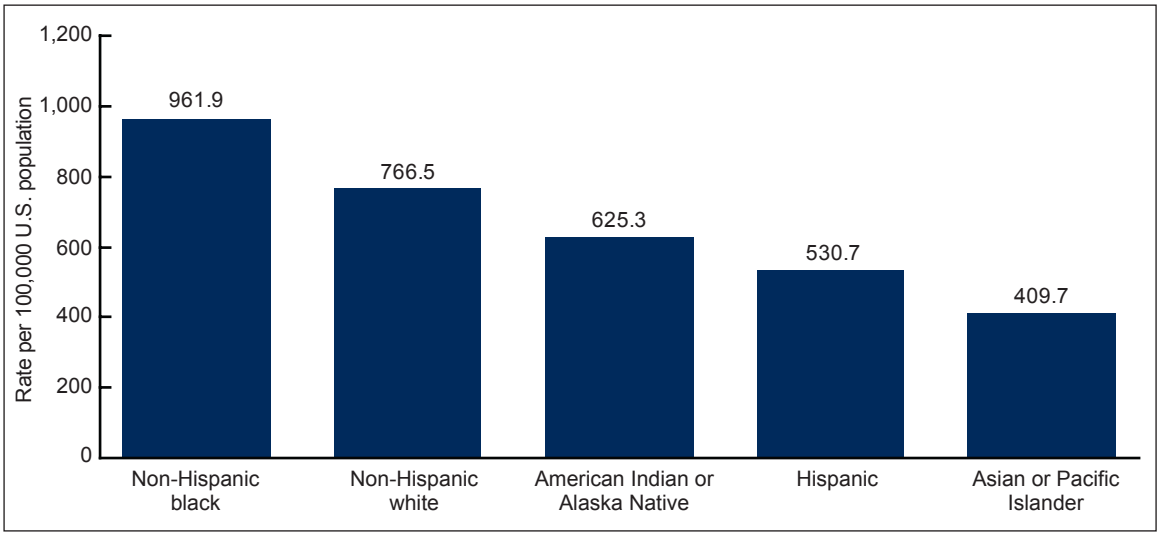
Does the risk of dying differ by race and ethnicity?

In 2007, the lowest mortality was reported for the Asian or Pacific Islander (API) population and the highest mortality was observed for the non-Hispanic black population (Figure 4).

The age-adjusted death rate for the API population was 46.5 percent lower than that for the non-Hispanic white population, while the rate for the non-Hispanic black population was 25.5 percent higher.

Death rates for all ethnic groups have decreased over time. Since 2000, the Hispanic population experienced the largest decrease in mortality (20.3 percent), and the non-Hispanic white population experienced the smallest mortality decline (10.4 percent) (1,2).

Figure 4. Age-adjusted death rates, by race and Hispanic origin: United States, preliminary 2007



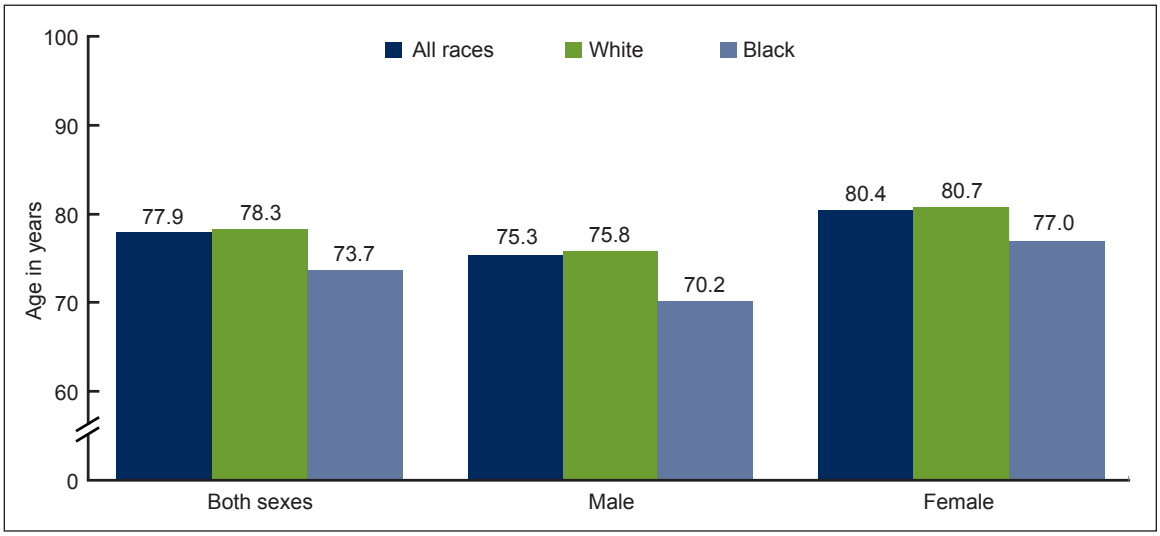
SOURCE: CDC/NCHS, National Vital Statistics System.

How long can we expect to live?

The U.S. life expectancy in 2007 was the highest in recorded history, reaching 77.9 years (or about 77 years and 11 months) (Figure 5). Since 2000, life expectancy has increased by 1.4 percent (or 1.1 years) for the general population (76.8 to 77.9 years), by 1.6 percent for males, and by 1.4 percent for females (1,2). Life expectancy at age 65 was 18.6 years in 2007, an increase of 6 percent since 2000 (2,3).

White females continue to have the longest life expectancy (80.7 years) followed by black females (77.0 years). The gap between the white and black populations declined 35 percent from 1989 to 2007. Despite this progress, the race differential stood at 4.6 years in 2007 (1,2). The gap between the white and black populations in life expectancy at age 65 declined 28 percent (1.8 to 1.3 years) since 1989, and 19 percent (1.6 to 1.3 years) from 2000 to 2007 (4).

Figure 5. Life expectancy at birth, by race and sex: United States, preliminary 2007



SOURCE: National Vital Statistics System, Mortality.

What are the leading causes of death?

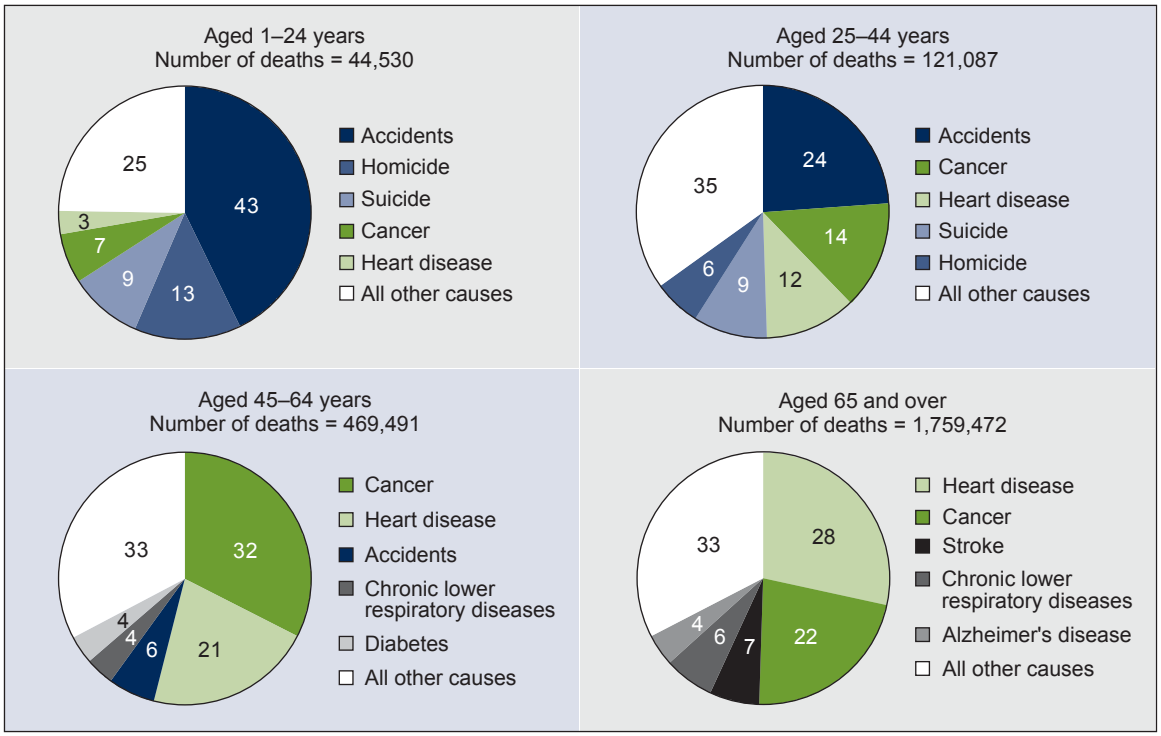
In 2007, five major causes of death (heart disease, cancer, stroke, chronic lower respiratory diseases, and accidents) accounted for over 64 percent of all deaths in the United States (2). However, this general profile changes depending on the decedent's age.

The five leading causes of death for those aged 1–24 years are external causes (i.e., accidents, homicide, suicide) followed by cancer and heart disease. This pattern (of external causes accounting for more deaths than chronic conditions) shifts noticeably as age increases. In older age groups, chronic conditions account for more deaths than do external causes of injury.

Accidents, for example, accounted for 43 percent of all deaths among persons aged 1–24 years. Heart disease, on the other hand, accounted for only 3 percent of all deaths for this same age group. For individuals aged 65 and over, heart disease is the leading cause of death, accounting for 28 percent of all deaths in this age group, whereas accidents is not one of the five leading causes of death for those aged 65 and over (Figure 6).

From 1980 to 2007, the three leading causes of death (heart disease, cancer, and stroke) have not changed in rank order. However, deaths from heart disease have tended to decrease throughout this period, whereas deaths from cancer have generally tended to increase. It is likely that, at some point in the near future, cancer will overtake heart disease as the leading cause of death in the United States.

Figure 6. Percent distribution of five leading causes of death, by age group: United States, preliminary 2007



SOURCE: National Vital Statistics System, Mortality.

Summary

Mortality in 2007 continued to decline among all groups defined by sex, age, and race and Hispanic ethnicity (1,2). With few exceptions, the trend is one of increases in life expectancy at birth for the population as a whole, and for white and black males and females in particular (1–3, 5–7). Although continuing declines in mortality are slowly reducing longstanding gaps in life expectancy between the black and white populations, disparities in mortality across ethnic and racial groups persist (1–3, 5–7). Much of these increases in life expectancy are attributed to reductions in the rates of death from the major causes of death, namely heart disease, cancer, chronic lower respiratory diseases, and stroke (1).

Data sources and methods

Data in this report (preliminary mortality data for 2007) are based on a large portion (91 percent of the demographic file and 87 percent of the medical file) of the statistical records that are continuously received by the National Center for Health Statistics from states' vital registration systems. This portion of records is inflated to better estimate final numbers, using independent record tallies as control factors. Tallies are provided by the states and registration areas.

The figures shown in this report reflect information that is collected on the death certificates that are filed in each of the independent registration areas throughout the United States.

Definitions

Cause-of-death classification: Medical information—including injury diagnoses and external causes of injury—that is entered on death certificates filed in the United States is classified and coded in accordance with the *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision* (ICD–10) (8).

Death rates: Except for data points showing rates prior to the year 2000, the rates in this report use population estimates based on the 2000 census. Population for the year 2000 is enumerated as of April 1 and, for subsequent years, populations are estimated as of July 1 of the respective year. These population estimates are available on the NCHS website (9). Age-adjusted death rates are useful when comparing different populations because they remove the potential bias that can occur when the populations being compared have different age structures. NCHS uses the "direct" method of standardization. See the "Technical Notes" of "Deaths: Preliminary data for 2007" (2) for more discussion.

Life expectancy: Data showing life expectancy for years 2000–2007 are based on a newly revised methodology and may differ from figures previously published. See the "Technical Notes" of "Deaths: Preliminary data for 2007" (2) for more discussion.

About the authors

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Suggested citation

Miniño AM, Xu J, Kochanek KD, Tejada-Vera B. Death in the United States, 2007. NCHS data brief, no 26. Hyattsville, MD: National Center for Health Statistics. 2009.

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ISSN 1941-4927 (Print ed.)
ISSN 1941-4935 (Online ed.)
CS208696
T35604 (12/2009)
DHHS Publication No. (PHS) 2010–1209