National Vital Statistics System

About NCHS

The National Center for Health Statistics (NCHS) is the nation's principal health statistics agency, providing data to identify and address health issues. NCHS compiles statistical information to help guide public health and health policy decisions.

Collaborating with other public and private health partners, NCHS uses a variety of data collection mechanisms to obtain accurate information from multiple sources. This process provides a broad perspective on the population's health, influences on health, and health outcomes.

National Vital Statistics System

The National Vital Statistics System (NVSS) provides the nation's official vital statistics data, and is the oldest, most successful example of intergovernmental data sharing in public health. Through NVSS, the 57 vital registration jurisdictions (50 states, New York City, District of Columbia, and 5 U.S. territories) send NCHS information on the 6.7 million birth, death, and fetal death events occurring each year. NCHS collects, analyzes, and disseminates these data to create the nation's official vital statistics. NVSS provides the most complete and continuous data available to public health officials at the national, state, and local levels, and in the private sector. NVSS vital statistics are a critical component of the national health information system, providing data to monitor progress toward achieving important health goals.

Selected key health indicators produced by NVSS include:

- Teen births and birth rates
- Prenatal care and preterm birth
- Risk factors for adverse pregnancy outcomes
- Infant mortality rates
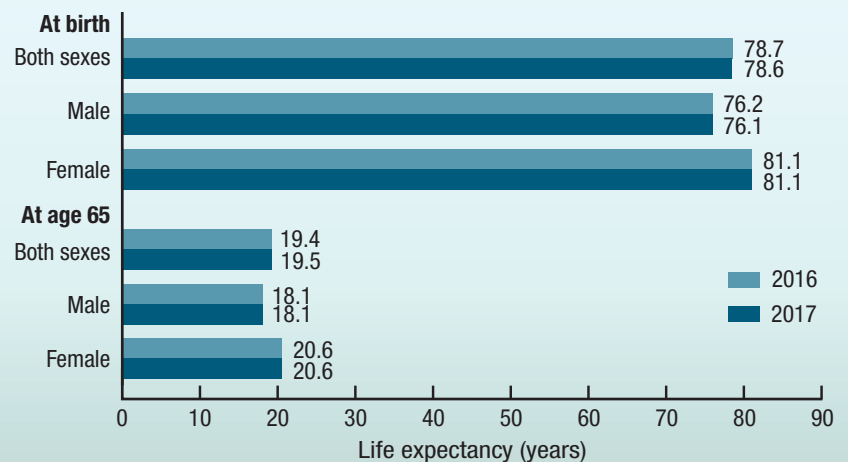- Life expectancy
- Leading causes of death

Examples of NVSS data

Life expectancy

Life expectancy at birth represents the average number of years that a group of infants would live if the group was to experience, throughout life, the age-specific death rates present in the year of birth.

- In 2017, life expectancy at birth was 78.6 years for the total U.S. population—a decrease from 78.7 years in 2016. For males, life expectancy changed from 76.2 years in 2016 to 76.1 in 2017. Life expectancy for females remained the same at 81.1. Life expectancy for females was consistently higher than it was for males. In 2017, the difference in life expectancy between females and males increased 0.1 year from 4.9 years in 2016 to 5.0 years in 2017.
- In 2017, life expectancy at age 65 for the total population was 19.5 years, an increase of 0.1 year from 2016. Life expectancy at age 65 was 20.6 years for females and 18.1 years for males, both unchanged from 2016.

Life expectancy at selected ages, by sex: United States, 2016 and 2017

At birth	2016	2017
Both sexes	78.7	78.6
Male	76.2	76.1
Female	81.1	81.1
At age 65		
Both sexes	19.4	19.5
Male	18.1	18.1
Female	20.6	20.6

Life expectancy (years)

NOTE: Life expectancies for 2016 were revised using updated Medicare data; therefore, figures may differ from those previously published.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Drug overdose deaths

Deaths from drug overdose are an increasing public health burden in the United States. The most recent data from NVSS show:

- In 2017, the age-adjusted rate of drug overdose deaths was 9.6% higher than the rate in 2016.
- In 2017, there were 70,237 drug overdose deaths.
- The age-adjusted rate of drug overdose deaths increased from 6.1 per 100,000 standard population in 1999 to 21.7 in 2017. The rate increased on average by 10% per year from 1999 to 2006, by 3% per year from 2006 through 2014, and by 16% per year from 2014 through 2017.
- For each year, rates were significantly higher for males than females. For males, the rate increased from 8.2 in 1999 to 29.1 in 2017. For females, the rate increased from 3.9 in 1999 to 14.4 in 2017.
- The rate of drug overdose deaths involving synthetic opioids other than methadone, which include drugs such as fentanyl, fentanyl analogs, and tramadol, increased from 0.3 per 100,000 in 1999 to 1.0

in 2013, 1.8 in 2014, 3.1 in 2015, 6.2 in 2016, and 9.0 in 2017. The rate increased on average by 8% per year from 1999 through 2013 and by 71% per year from 2013 through 2017.

- The rate of drug overdose deaths involving natural and semisynthetic opioids, which include drugs such as oxycodone and hydrocodone, increased from 1.0 in 1999 to 4.4 in 2016. The rate in 2017 was the same as in 2016 (4.4).
- The rate of drug overdose deaths involving heroin increased from 0.7 in 1999 to 1.0 in 2008 to 4.9 in 2016. The rate in 2017 was the same as in 2016 (4.9).

Age-adjusted drug overdose death rates: United States, 1999–2017
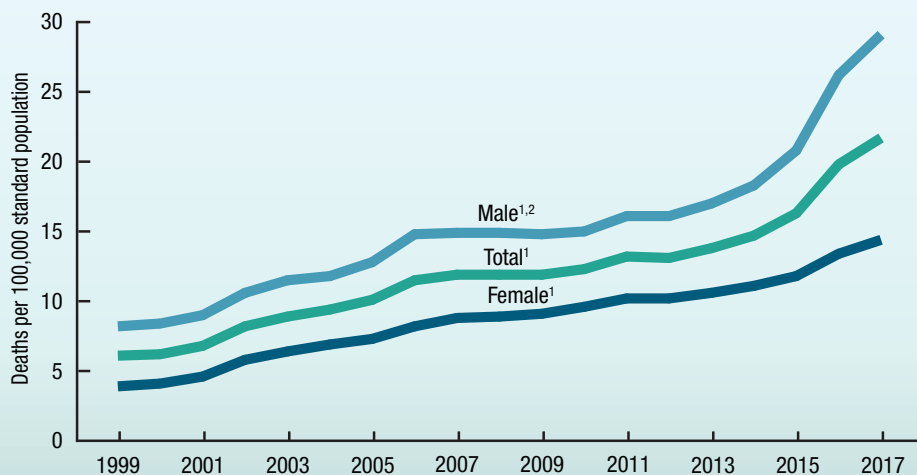
[1]Significant increasing trend from 1999 through 2017 with different rates of change over time, $p < 0.05$.
[2]Male rates were significantly higher than female rates for all years, $p < 0.05$.
NOTES: Deaths are classified using the *International Classification of Diseases, 10th Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. The number of drug overdose deaths in 2017 was 70,237.
SOURCE: NCHS, National Vital Statistics System, Mortality.

Additional findings from NVSS

Birth data

- In 2017, the cesarean delivery rate increased to 32.0% from 31.9% in 2016. This is the first increase in the cesarean delivery rate since 2009, when it peaked at 32.9% after increasing every year since 1996.
- The preterm birth rate rose to 9.93% in 2017, a 1% rise from 2016 (9.85%), and the third straight year of increases in this rate (9.57% in 2014).

Infant mortality

- The infant mortality rate changed from 587.0 infant deaths per 100,000 live births in 2016 to 579.3 in 2017, but this change was not statistically significant.

- The 10 leading causes of infant death in 2017 remained the same as in 2016, although maternal complications became the third leading cause while sudden infant death syndrome became the fourth, and diseases of the circulatory system became the eighth leading cause while respiratory distress of newborn became the ninth.

Leading causes of death

- In 2017, the 10 leading causes of death—heart disease, cancer, unintentional injuries, chronic lower respiratory diseases, stroke, Alzheimer disease, diabetes, influenza and pneumonia, kidney disease, and suicide—remained the same as in 2016.

Challenges and future opportunities

NCHS continues to work with NVSS partners to modernize the technology infrastructure of the United States vital statistics system by moving all states from outdated paper-based systems to web-based systems integrated with electronic health records and public health information systems, and by re-engineering the NCHS automated coding system. These technologies will allow for rapid compilation and use of these critical data sources, and will enable the vital statistics system to more effectively contribute to (1) the public health surveillance of disease outbreaks at the community, state, and national levels; (2) health services research; and (3) public health policy decisions at all levels of government.