



# **The Burden of Chronic Diseases and Their Risk Factors**

**National and  
State Perspectives**

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affecting  
**Life**

**2002**

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

## Background Information on Death Rates

Mortality rates in this report are presented by state, sex, race/ethnicity, and cause of death. All mortality data were obtained from the Detailed Mortality File, which contains information from death certificates filed in the 50 states and the District of Columbia for the year 1999. CDC's National Center for Health Statistics (NCHS) prepared the Detailed Mortality File in accordance with regulations from the World Health Organization. These regulations specify that member nations use the current *Manual of the International Statistical Classification of Diseases (ICD)* to classify causes of death. Death rates are based on the decedent's state of residence and exclude the deaths of nonresidents of the United States. Population data (denominators for death rates) were obtained from postcensal estimates for 1999 published by the Census Bureau. Death rates for a particular racial/ethnic group are not presented if there were 20 or fewer deaths in that group.

In this publication, race and ethnicity are defined as five mutually exclusive categories: white, black, Asian/Pacific Islander, American Indian/Alaska Native, and Hispanic. The category for Hispanics includes persons of any race.

Effective with 1999 mortality data, causes of death are classified by the Tenth Revision of the ICD codes (ICD-10), which replaces the Ninth Revision used for 1979-1998 data. Under the new revision, titles and content of some cause-of-death categories have changed because of an increase in the number of categories and changes in coding rules used to select the underlying cause of death. As a result, mortality rates in this publication may differ from rates reported in previous publications. For example, deaths from stroke increased by an estimated 5% and deaths from chronic obstructive pulmonary disease (COPD) increased by an estimated 6% because of coding changes under ICD-10. More information on the comparability of causes of death between ICD-9 and ICD-10 may be obtained from the NCHS Web site: [www/cdc.gov/nchs/](http://www/cdc.gov/nchs/).

All death rates in this publication are age-adjusted using the direct method as described in the NCHS report *Age Standardization of Death Rates: Implementation of the Year 2000 Standard*. Age-adjusted rates allow death rates among different populations to be compared because, unlike crude rates, they take into account the effect of different age distributions in different populations. Direct age-adjustment is calculated by weighting the annual age-specific rates by the

population distribution in the standard population. Age-adjusted rates should not be compared with crude rates.

In this report, death rates are age-adjusted to a new standard, the 2000 U.S. standard population, in accordance with the 1998 Health and Human Services (HHS) policy for changing the standard population. The new standard replaces the 1970 U.S. standard population, which was previously used to adjust death rates. Rates adjusted to the 1970 U.S. standard population should not be compared with rates adjusted to the 2000 U.S. standard population. Because of the new standard, mortality rates in this publication are generally higher than those in previous publications. More information on the HHS policy may be obtained from the HHS Data Council's Web site: [aspe.hhs.gov/datacncl/](http://aspe.hhs.gov/datacncl/). Additional information on age-adjusted death rates and the new standard population may be found at the NCHS Web site: [www/cdc.gov/nchs/](http://www/cdc.gov/nchs/).

In section II of this report, the total number of deaths reported for diseases of the heart, stroke, cancer, and diabetes does not include deaths of decedents whose age was unknown. Death certificates without an age were excluded to compute age-adjusted death rates reported in this section.

## Differences in Death Rates in Different Publications

The state-specific numbers of deaths and the mortality rates due to a specific cause in this publication may differ from those published by the states or by other groups for the following reasons:

- The cut-off dates for accepting vital statistics records into the annual file for producing statistics may differ between states.
- The interstate exchange program, through which states receive data on events that involved residents but occurred in other states, might not include all records.
- The international rules for selecting the underlying cause of death are interpreted and applied differently in some states.
- The standard U.S. population used for age-adjustment may not have been the 2000 standard population used here.

## Surveillance of Behavioral Risk Factors and Preventive Services Among Adults

The prevalences of behavioral risk factors and use of preventive services among adults are state-based estimates from CDC's 2000 Behavioral Risk Factor Surveillance System (BRFSS) with the exception of the estimates for colorectal cancer screening. These estimates are based on 1999 BRFSS data because survey items about the fecal occult blood test and sigmoidoscopy or colonoscopy are included only in odd-numbered years.

The BRFSS is an annual, state-based, random-digit-dialed telephone survey of health-related behavior. Initiated in 1981 and developed in conjunction with the states, the BRFSS now enables all states to gather information on the prevalence of behavioral risk factors and other health-related measures in their individual jurisdictions. Each participating state selects a probability sample of its noninstitutionalized civilian adult population (aged  $\geq 18$  years) who have telephones. The data are reported by sex and race/ethnicity (white, black, Asian/Pacific Islander, American Indian/Alaska Native, and Hispanic origin). The design of the BRFSS allows for comparisons both among states and between individual states and the nation.

Missing responses and nonresponses from people who refused to answer or who said they did not know the answer are excluded from the denominator in the prevalence calculations. Estimates are not provided if the denominator had fewer than 50 respondents because the estimate would be unreliable. The *average value* for a risk factor or a preventive service is used as a prevalence estimate for the United States as a whole; in addition, it is used to provide an estimate for all the respondents within the sex and race/ethnicity categories.

States are ranked from highest to lowest prevalence of each risk factor or preventive service on the basis of the unrounded percentage computed for each state. For state rankings, the *median value* (i.e., the point at which an equal number of states are above and below the value) is reported as an overall summary measure.

The methods used for calculating prevalences are consistent with those used to produce the 1999 *Chronic Diseases and Their Risk Factors: The Nation's Leading Causes of Death*. However, in that document, Puerto Rico was included in the overall U.S. estimates. In this 2002 publication, neither Puerto Rico nor the other five U.S. territories are included in the overall prevalence estimates for the United States.

- Race/ethnicity may have been classified differently. Some states may have implemented the Office on Management and Budget's (OMB's) 1997 Policy Directive No. 15, the most recent standard for collecting and publishing data on race and ethnicity, while others may still be using the 1977 OMB-15 directive.
- The number of deaths for a particular disease category may include deaths for which the decedent's age is not known.

## Cause-of-Death Classifications

The following ICD-10 codes are used in this report:

Diseases of the heart *	I00-I09, I11, I13, I20-I51
Stroke (Cerebrovascular disease)*	I60-I69
All cancers	C00-C97
Lung cancer	C34
Colorectal cancer	C18-C20, C26.0
Breast cancer, women	C50
Unintentional injuries	V01-X59, Y85-Y86
Chronic obstructive pulmonary disease	J40-J47
Pneumonia and influenza	J10-J18
Diabetes mellitus	E10-E14
Alzheimer's disease	G30
Nephritis and nephrosis <sup>†</sup>	N00-N07, N17-N19, N25-N27

\*The categories "Diseases of the heart" and "Stroke" replace the broader cause-of-death category "Total cardiovascular diseases" reported in previous publications.

<sup>†</sup>Includes nephrotic syndrome.

This report uses ICD-10 codes that are consistent with NCHS publications for all cause-of-death categories except colon cancer and lung cancer. For colon and lung cancer, this publication uses ICD-10 codes that follow guidelines set by the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program.