

**1996 ADDENDUM TO "TECHNICAL APPENDIX" OF VITAL STATISTICS OF THE  
UNITED STATES: MORTALITY, 1994**

To assist the users of the mortality public-use data tapes, attached is a copy of the "Technical Appendix" of the *Vital Statistics of the United States: Mortality, 1994*. This technical appendix provides certain qualifications that are essential to using, analyzing, and interpreting the data on those tapes. Certain modifications to the technical appendix are essential to make it applicable to the mortality file for the 1996 data year. Those modifications include the following:

**I. Sources of data**

**State-coded medical data**

1996

Utah

1995

New Mexico

For 1996, of the States in the VSCP, 42 States submitted precoded medical data for all death certificates in the form of electronic data files. Of these 42 States, Maine, Montana, North Dakota, and Wyoming contracted with a private company to provide NCHS with precoded medical data. The remaining eight VSCP States, New York City, and the District of Columbia submitted copies of the original certificates from which NCHS coded the medical data.

For 1996 approximately 29 percent of the Nation's death records were multiple-cause coded using SuperMICAR and 71 percent using MICAR. This represents data from 22 States which was coded by SuperMICAR and data from 28 States, the District of Columbia, and New York City which was coded by MICAR.

All States submitted precoded demographic data for all death certificates in the form of electronic data files in 1996.

Data for Puerto Rico, the Virgin Islands, and Guam are included on the mortality public-use data tapes. These data were included for the first time for 1994.

## II. Classification of data

### A. Hispanic origin

Data for 1996 were obtained from the District of Columbia and all States except Oklahoma, which was excluded because the death certificates did not include an item to identify Hispanic or ethnic origin.

*Infant mortality*--Infant mortality data by Hispanic origin are based on deaths to residents of the same 49 states and the District of Columbia. In computing infant mortality rates, deaths and live births of unknown origin are not distributed among the specified Hispanic and non-Hispanic groups.

Infant mortality rates by Hispanic origin may be biased, because of inconsistencies in reporting Hispanic or ethnic origin between the birth and death certificates for the same infant. Estimates of reporting bias may be made by comparing rates based on the linked file of infant deaths and live births (1) with those where the Hispanic or ethnic origin of infant death is based on information from the death certificate (2). Because of these biases, it is preferable to calculate Hispanic mortality rates for infants using the file of linked infant death and live birth records (1).

In 1990 the 49 States and the District of Columbia accounted for about 99.6 percent of the Hispanic population in the United States, including about 99.5 percent of the Mexican population, 99.8 percent of the Puerto Rican population, 99.9 percent of the Cuban population, and 99.7 percent of the "Other Hispanic" population (3).

### B. Educational attainment

Deaths by educational attainment are included on the 1996 public use data tapes. These data were included for the first time for 1989. It is recommended for 1996 that analyses of educational attainment data include deaths to residents of 45 States and the District of Columbia whose data were approximately 80 percent or more complete on a place-of-occurrence basis. While data for Kentucky are included on the data tape, they would be excluded from analyses because more than 20 percent of their death certificates were classified to "unknown educational attainment." Data for Georgia, Oklahoma, Rhode Island, and South Dakota were excluded from the data tape because their

death certificates did not include an educational attainment item.

### C. Occupation and industry

Deaths by occupation and industry are included on the 1996 public-use data tapes. These data were included for the first time for 1985. These data were obtained from the following items that appear on the U.S. Standard Certificate of Death:

- o (Item 14a) USUAL OCCUPATION (Give kind of work done during most of working life, even if retired.)
- o (Item 14b) KIND OF BUSINESS OR INDUSTRY

For 1996, the occupation and industry mortality data were included for the following 19 reporting States:

Colorado	New Mexico
Georgia	North Carolina
Hawaii	Ohio
Idaho	Rhode Island
Kansas	South Carolina
Kentucky	Utah
Maine	Vermont
Nevada	West Virginia
New Hampshire	Wisconsin
New Jersey	

Data for 1993-96 were coded using the revised NCHS Part 19 instruction manual (4) and the Bureau of the Census 1990 occupation and industry titles and three-digit codes, which are shown in the 1990 Census of Population and Housing(5).

Occupation and industry mortality data for 1984-92 were based on the 1980 Bureau of the Census occupation and industry classifications. For a listing of the changes between the 1980 and the 1990 classification systems, see Appendix D of the NCHS Part 19 instruction manual(4).

In addition to the codes shown in the Bureau of the Census publication(5), the following special codes were created:

<u>Occupation</u>	<u>Industry</u>
913 Retired; with no other occupation reported	961 Own Home/At Home
914 Housewife/Homemaker	970 Retired: with no other Industry reported
915 Student	990 Blank, Unknown, NA
916 Volunteer	
917 Unemployed, never worked, disabled, child, infant	
999 Blank, Unknown, NA	

#### **D. Injury at work**

Deaths for "Injury at work" were included on the 1993 public-use data tapes for the first time. These data were obtained from the following item that appears on the U.S. Standard Certificate of Death:

- o (Item 30c) INJURY AT WORK? (Yes or No)

#### **E. Report of autopsy**

Beginning with the 1995 data year, mortality data on autopsy are no longer processed by NCHS, because of resource constraints.

### **III. Population bases for computing rates**

The population used for computing death rates (furnished by the U.S. Bureau of the Census) represents the population residing in the specified area. Population estimates used for computing rates by age, race, and sex for the United States for 1996 are based on population estimates as of July 1, 1996 (6)(available upon request). The estimates are based on demographic analysis and, therefore, are not subject to sampling variability.

Population estimates used for computing death rates by specified Hispanic origin, race for non-Hispanic origin, age, and sex for the total of 49 States (excludes Oklahoma) and the District of Columbia are as of July 1, 1996 (7)(available upon request). The estimates for Mexicans, Puerto Ricans, Cubans, and

Other Hispanics are based on the Current Population Survey (CPS) adjusted to resident population control totals and, therefore, are subject to sampling error (see Technical Appendix from *Vital Statistics of the United States: Mortality, 1994*).

Population estimates used for computing death rates by marital status, age, race, and sex for the United States (7) are as of July 1, 1996 and are available upon request. Population estimates used for computing death rates by marital status, age, Hispanic origin, race for non-Hispanic origin, and sex for the total of 49 States (excludes Oklahoma) and the District of Columbia (7) are as of July 1, 1996 and are also available upon request. The population estimates for never married, married, widowed, and divorced and for Mexicans, Puerto Ricans, Cubans, and Other Hispanics are based on the CPS adjusted to resident population control totals and, therefore, are subject to sampling error (see Technical Appendix from *Vital Statistics of the United States: Mortality, 1994*).

Population estimates used for computing death rates by educational attainment, age, and sex for the total of 45 States and the District of Columbia are presented in table IV of the Technical notes of the "Report of Final Mortality Statistics" (8).

Population estimates for each State, Puerto Rico, Virgin Islands, and Guam, (9-12) (available upon request) are based on demographic analysis, and therefore, are not subject to sampling variability.

All population estimates for 1996 are based on the 1990 census level counts that were modified by age, race, and sex to be consistent with the U.S. Office of Management and Budget categories and historical categories for death data (13).

## References

1. MacDorman, MF, Atkinson JO. Infant mortality statistics from the linked birth/infant death data set - 1995 period data. Monthly vital statistics report; vol 46 no 6, supp 2. Hyattsville, Maryland: National Center for Health Statistics. 1998.
2. Anderson RN, Kochanek, Murphy SL. Report of final mortality statistics, 1995, Monthly vital statistics report; vol 45 no 11, supp 2. Hyattsville, Maryland: National Center for Health Statistics. 1997.

3. U.S. Bureau of the Census: Unpublished data from the 1990 census for persons of Spanish origin by State.
4. National Center for Health Statistics: Industry and occupation coding for death certificates, 1993. NCHS instruction manual, Part 19. Hyattsville, Maryland: Public Health Service. 1992.
5. U.S. Bureau of the Census: Classified index of industries and occupations. 1990 Census of Population and Housing. Washington: U.S. Department of Commerce. 1992.
6. U.S. Bureau of the Census: United States population estimates, by age, sex, race, Hispanic origin, and non-Hispanic origin: 1996. Census file NESTV96. 1997.
7. U.S. Bureau of the Census: Population estimates based on unpublished tabulations prepared by the Housing and Household Economic Statistics Division.
8. Peters KD, Kochanek KD, Murphy SL. Report of Final Mortality Statistics, 1996. Monthly Vital Statistics Report; in press. Hyattsville, Maryland: National Center for Health Statistics. 1998.
9. U.S. Bureau of the Census. Census file 96AGE796.txt consistent with populations published in Product Announcement CB97-64.
10. U.S. Bureau of the Census. Census file PRICO.WK4.
11. U.S. Bureau of the Census. Census file USVI.WK4.
12. U.S. Bureau of the Census. Census file GUAM.WK4.
13. U.S. Bureau of the Census: Unpublished data from the 1990 census, by age, sex, race and Hispanic origin. 1990.