

American Indians and Alaska Natives

American Indians and Alaska Natives made up 1.5% of the U.S. population ages 35 years and older in 2000. During 1991–1998, the age-adjusted stroke death rate for American Indians and Alaska Natives in this age group was 79/100,000. The American Indian and Alaska Native population in the United States is composed of many politically and culturally distinct Tribal Nations residing both in rural areas (including reservations with limited political sovereignty) and urban areas.

The national map of age-adjusted, spatially smoothed stroke death rates for all American Indians and Alaska Natives shows considerable geographic disparity across the 303 counties for which sufficient data existed to calculate rates. County death rates ranged from 29 to 272/100,000. A nearly fivefold difference existed between the midpoint of the highest quintile (222) and the midpoint of the lowest quintile (46). The quintile ranking for each county is depicted on the national map, with the darkest color representing counties with the highest rates and the lightest color representing counties with the lowest rates.

The frequency distribution shows the range of smoothed stroke death rates for American Indians and Alaska Natives in all counties for which rates were calculated (Figure 3.4). The vertical dotted lines and the graded color bar along the x-axis illustrate the quintiles into which counties were divided on the basis of these rates.

The map suggests somewhat of a north-south gradient in stroke mortality among American Indians and Alaska Natives. Counties with high rates were reported primarily in the northern states of Alaska, Washington, Idaho, Montana, Wyoming, South Dakota, Wisconsin, and Minnesota. Counties with low rates were reported primarily in central Oklahoma (predominantly among members of the Cherokee Nation), southern California, Arizona, and New Mexico. Exceptions to the north-south gradient were high rates in counties along the North Carolina–South

Carolina border (where the Lumbee Indians reside), along the southern tip of Louisiana, and in Nevada.

Women and Men

During 1991–1998, the age-adjusted death rate for stroke was 77/100,000 for American Indian and Alaska Native women and 80/100,000 for American Indian and Alaska Native men ages 35 years and older.

The maps of age-adjusted, spatially smoothed stroke death rates for American Indian and Alaska Native women and men show considerable geographic disparity across the counties for which sufficient data existed to calculate rates. For American Indian and Alaska Native women, county death rates ranged from 35 to 291/100,000. The range for American Indian and Alaska Native men was 33 to 291/100,000. For both women and men, a fivefold difference existed between the midpoint of the highest quintile (229 for women, 237 for men) and the midpoint of the lowest quintile (46 for women, 49 for men).

The frequency distributions show the range of smoothed stroke death rates for American Indian and Alaska Native

Figure 3.4
Frequency Distribution of
Smoothed County Stroke
Death Rates Among
American Indians and
Alaska Natives
Ages ≥35 Years,
1991–1998

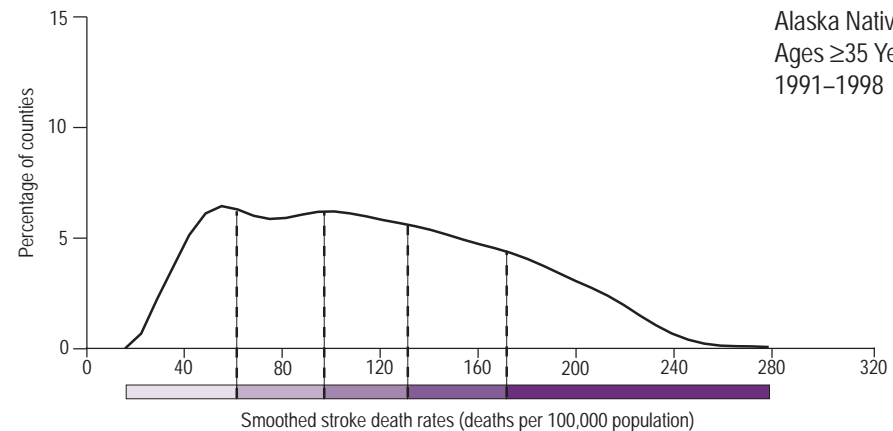


Figure 3.5
Frequency Distribution of
Smoothed County Stroke
Death Rates Among
American Indian and
Alaska Native Women
Ages ≥ 35 Years,
1991–1998

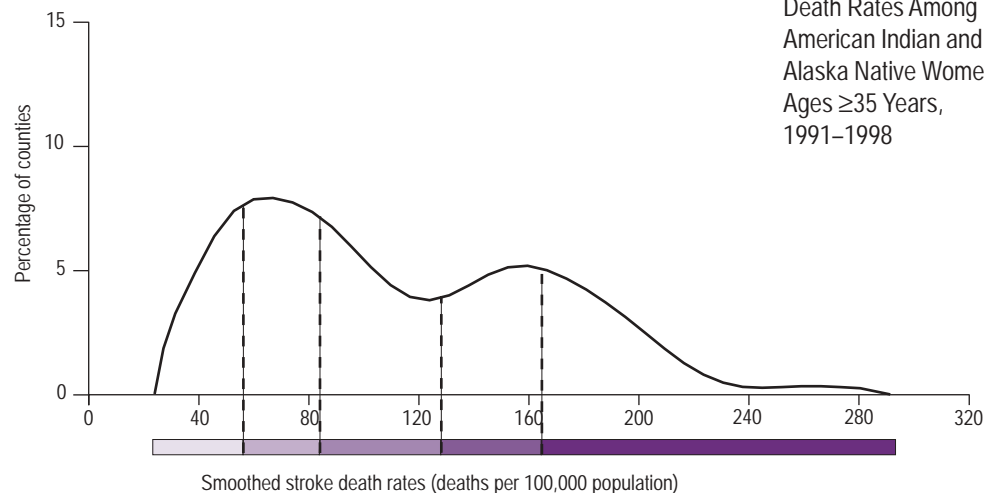
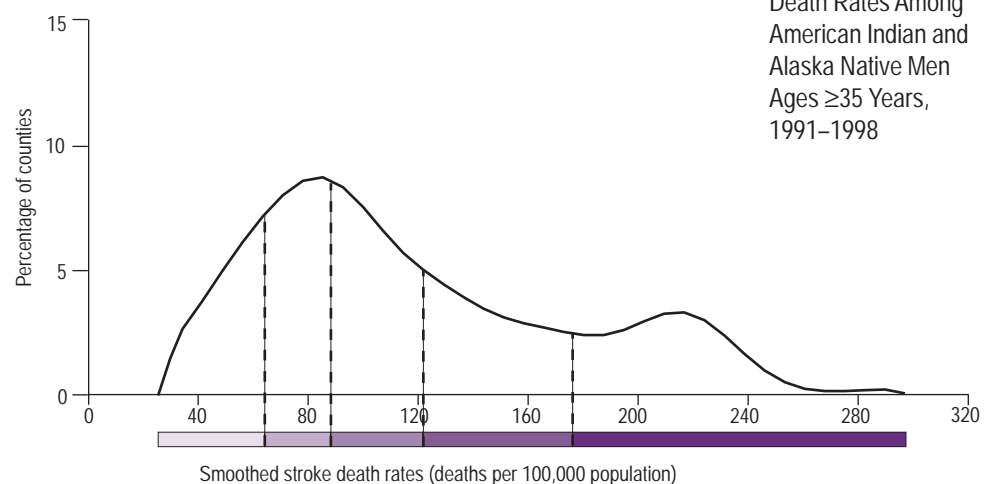


Figure 3.6
Frequency Distribution of
Smoothed County Stroke
Death Rates Among
American Indian and
Alaska Native Men
Ages ≥ 35 Years,
1991–1998



women (Figure 3.5) and men (Figure 3.6) in all counties for which rates were calculated.

The maps for women and men indicate slightly different geographic patterns than the pattern for the total population. This difference can be largely attributed to the small number of counties with sufficient data to calculate rates for women and men separately. The patterns for American Indian and Alaska Native women and men are similar, with groups of counties with high rates in Oregon, northern California, and Arizona.

A Note on Methods

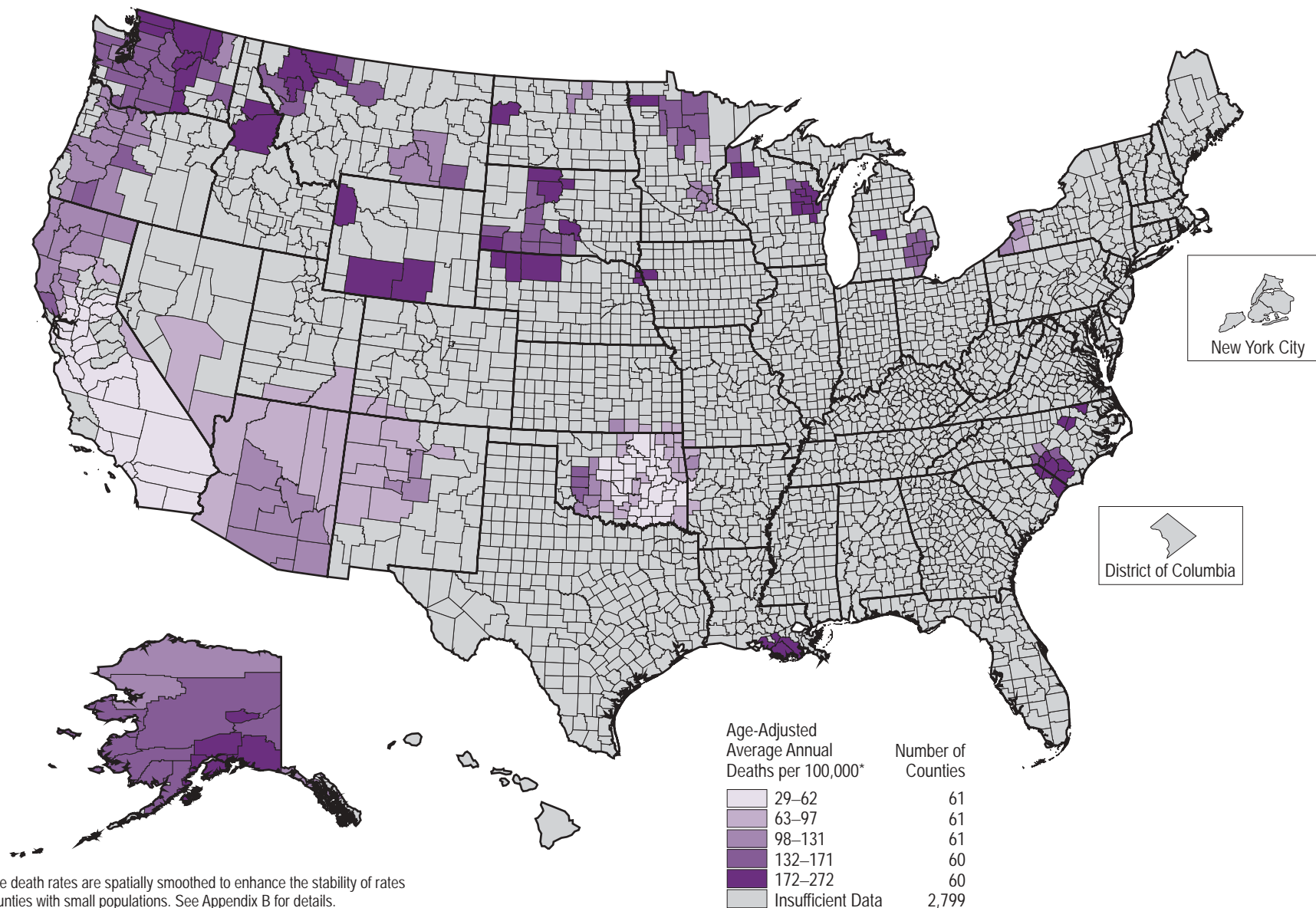
Stroke deaths were defined as those for which the underlying cause of death listed on the death certificate was cerebrovascular disease, defined according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (codes 430–438) (Washington, DC: Department of Health and Human Services; 1980). Stroke death rates were age-adjusted to the 2000 U.S. population and spatially smoothed using a spatial moving average. A detailed explanation of the methods used to generate the death rates and create the maps can be found in Appendix B.

A Cautionary Note

The race and ethnicity of decedents are not always reported accurately on death certificates. Validation studies have reported that decedents of certain racial and ethnic minorities are sometimes misreported as “white” on death certificates (see Section 1). Therefore, an unknown proportion of stroke deaths were likely omitted from the calculation of rates for American Indians and Alaska Natives. Consequently, the true stroke death rates for this population were probably higher during 1991–1998 than indicated in the figures and maps. In addition, if misreporting of race and ethnicity on death certificates was a greater problem in certain parts of the country than others, the geographic patterns presented here could be biased.

Smoothed County Stroke Death Rates 1991–1998

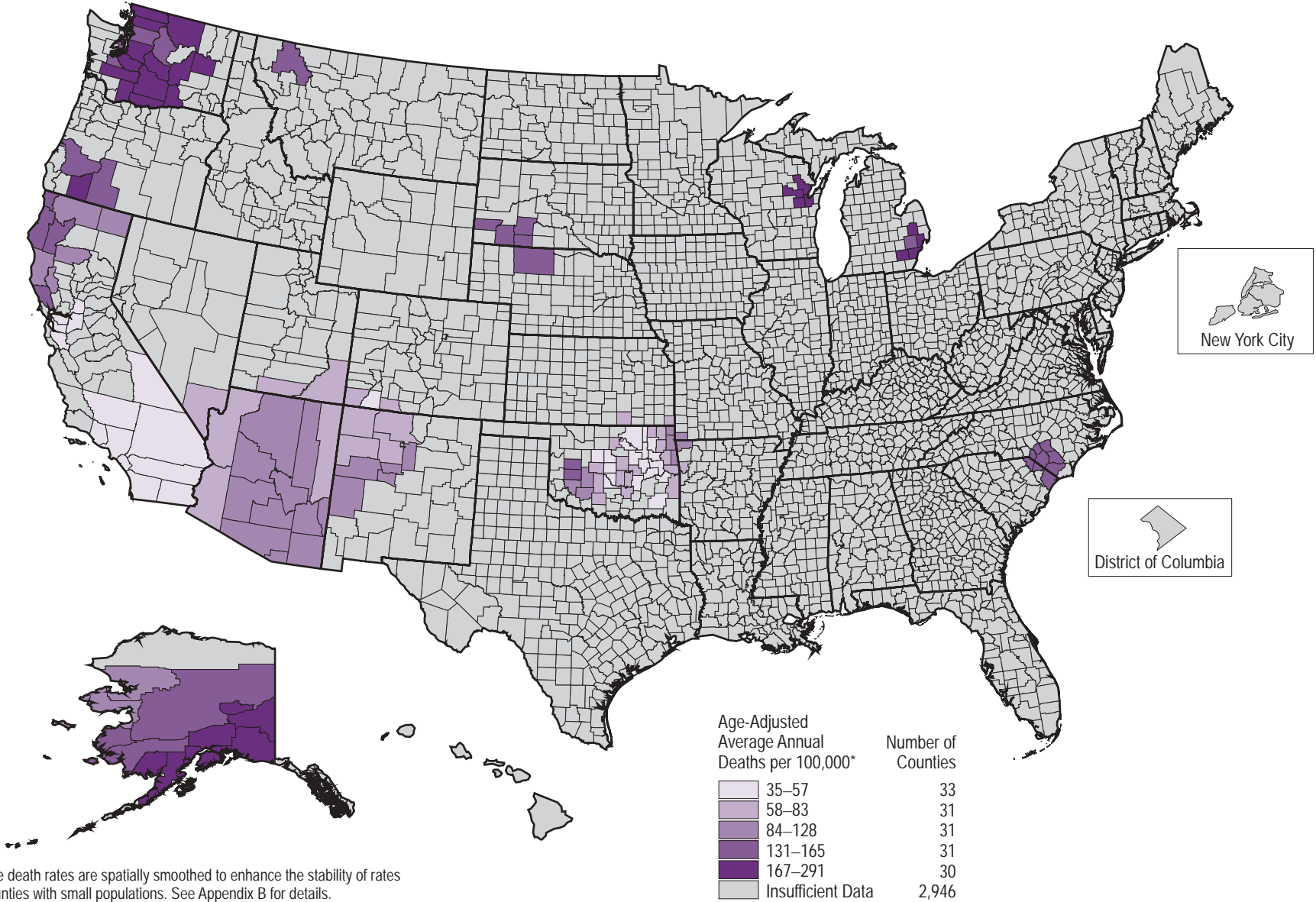
American Indians and Alaska Natives Ages 35 Years and Older



*Stroke death rates are spatially smoothed to enhance the stability of rates in counties with small populations. See Appendix B for details.

Smoothed County Stroke Death Rates 1991–1998

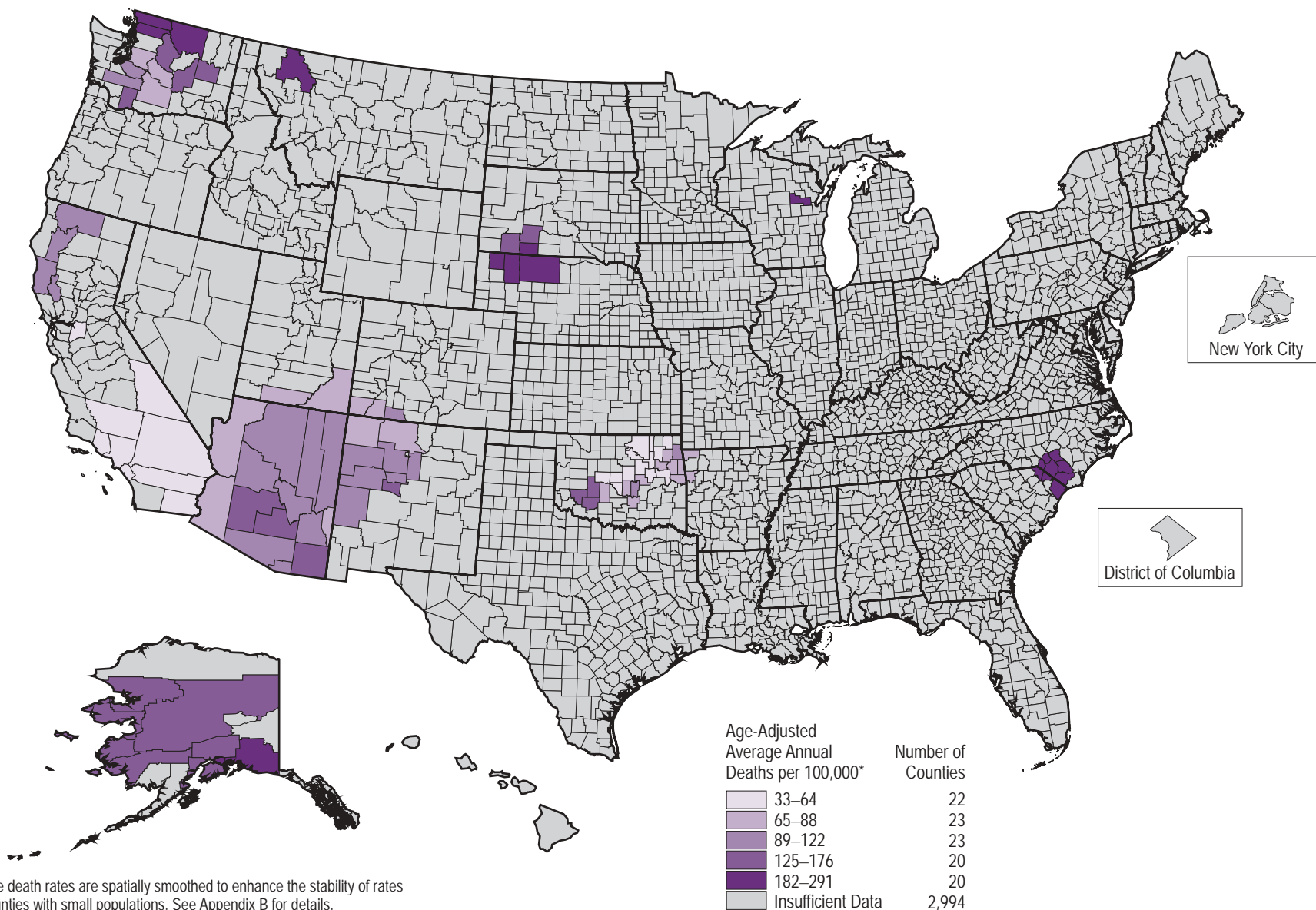
American Indian and Alaska Native Women Ages 35 Years and Older



*Stroke death rates are spatially smoothed to enhance the stability of rates in counties with small populations. See Appendix B for details.

Smoothed County Stroke Death Rates 1991–1998

American Indian and Alaska Native Men Ages 35 Years and Older



*Stroke death rates are spatially smoothed to enhance the stability of rates in counties with small populations. See Appendix B for details.

Asians and Pacific Islanders

Asians and Pacific Islanders made up 4.5% of the U.S. population ages 35 years and older in 2000. During 1991–1998, the age-adjusted stroke death rate for Asians and Pacific Islanders in this age group was 105/100,000.

The national map of age-adjusted, spatially smoothed stroke death rates for all Asians and Pacific Islanders shows considerable geographic disparity across the 364 counties for which sufficient data existed to calculate rates. County death rates ranged from 43 to 184/100,000. A nearly threefold difference existed between the midpoint of the highest quintile (156) and the midpoint of the lowest quintile (56). The quintile ranking for each county is depicted on the national map, with the darkest color representing counties with the highest rates and the lightest color representing counties with the lowest rates.

The frequency distribution shows the range of smoothed stroke death rates for Asians and Pacific Islanders in all counties for which rates were calculated (Figure 3.7). The vertical dotted lines and graded color bar along the x-axis illustrate the quintiles into which counties were divided on the basis of these rates.

The map indicates a west-east gradient of stroke mortality among Asians and Pacific Islanders. Counties with the highest rates were reported in sections of Washington, Oregon, California, Nevada, and Arizona, with pockets of counties with high rates in the metropolitan areas of Minneapolis/St. Paul, Minnesota, and Memphis, Tennessee. Counties with the lowest rates were reported in the metropolitan areas of New York City, Philadelphia, Chicago, Miami and other parts of southern and middle Florida, and New Jersey.

Women and Men

During 1991–1998, the age-adjusted death rate for stroke was 96/100,000 for Asian and Pacific Islander women and 118/100,000 for Asian and Pacific Islander men ages 35 and older.

The maps of age-adjusted, spatially smoothed stroke death rates for Asian and Pacific Islander women and men show considerable geographic disparity across the counties for which sufficient data existed to calculate rates. For Asian and Pacific Islander women, county death rates ranged from 33 to 237/100,000. The range for Asian and Pacific Islander men was 40 to 209/100,000. For both women and men, an approximately threefold difference existed between the midpoint of the highest quintile (178 for women, 176 for men) and the midpoint of the lowest quintile (54 for women, 61 for men).

The frequency distributions show the range of smoothed stroke death rates for Asian and Pacific Islander women



Figure 3.7
Frequency Distribution of
Smoothed County Stroke
Death Rates Among Asians
and Pacific Islanders
Ages ≥ 35 Years,
1991–1998

Stroke Mortality: Asians and Pacific Islanders

Figure 3.8
Frequency Distribution of Smoothed County Stroke Death Rates Among Asian and Pacific Islander Women Ages ≥35 Years, 1991–1998

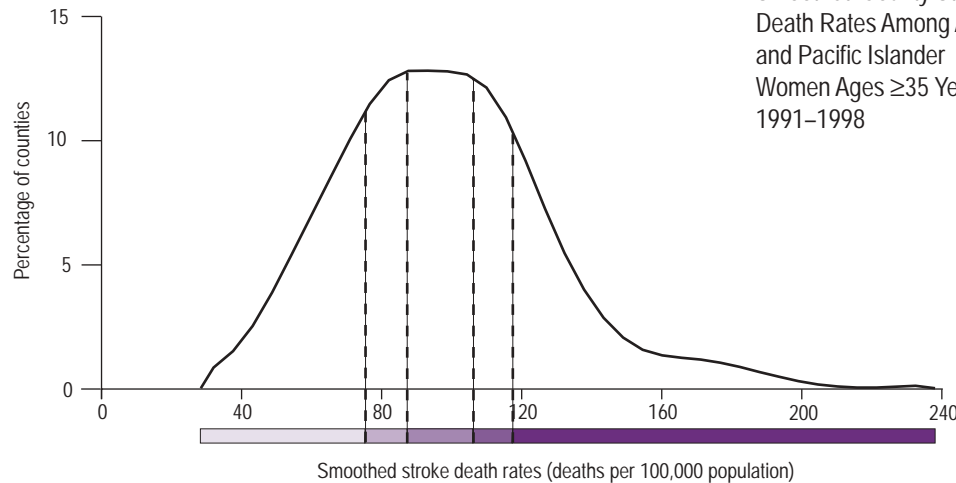
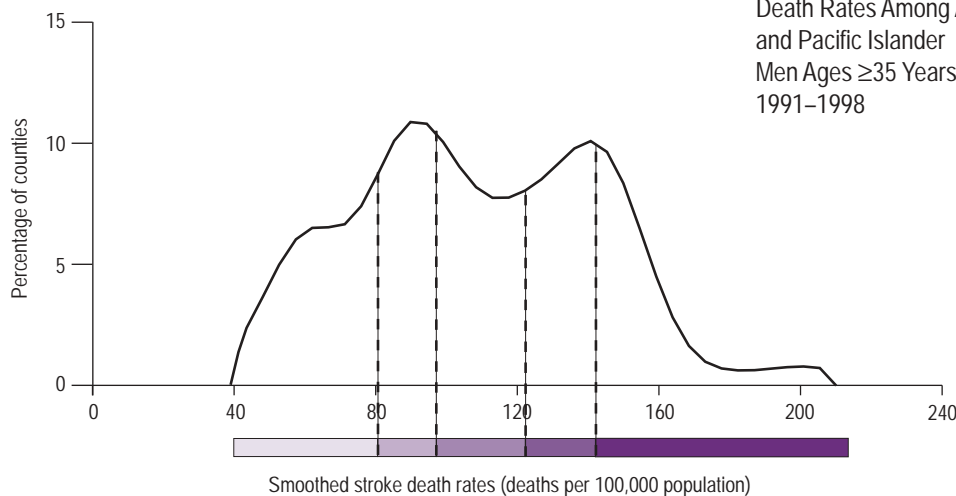


Figure 3.9
Frequency Distribution of Smoothed County Stroke Death Rates Among Asian and Pacific Islander Men Ages ≥35 Years, 1991–1998



(Figure 3.8) and men (Figure 3.9) in all counties for which rates were calculated.

The maps indicate a west-east gradient of stroke mortality for both Asian and Pacific Islander women and men. Counties with the highest rates were reported primarily in sections of Washington, Oregon, California, Nevada, Utah, and Arizona, with pockets of counties with high rates in the metropolitan areas of Minneapolis/St. Paul, Minnesota, and Dallas, Texas.

A Note on Methods

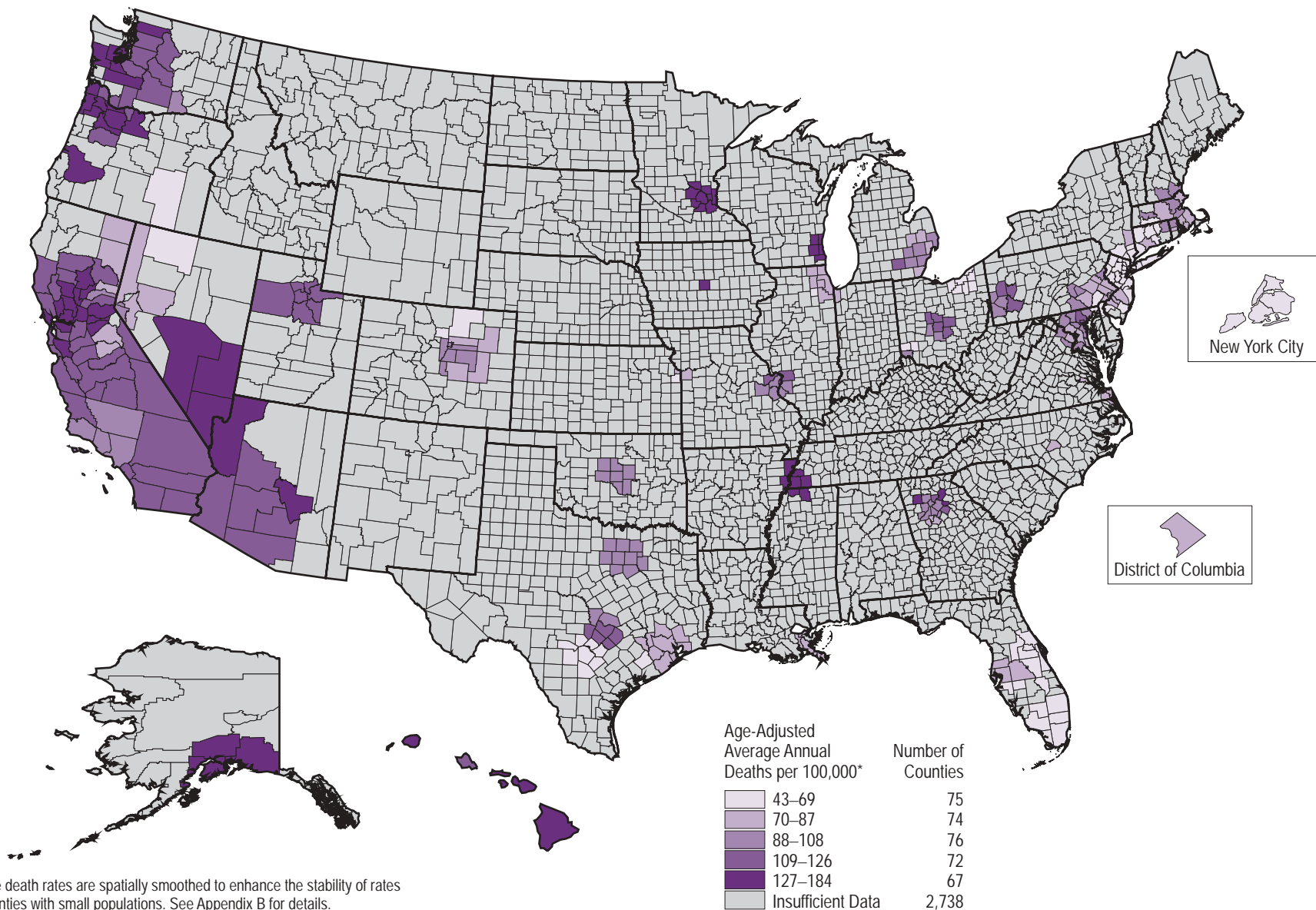
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Smoothed County Stroke Death Rates 1991–1998

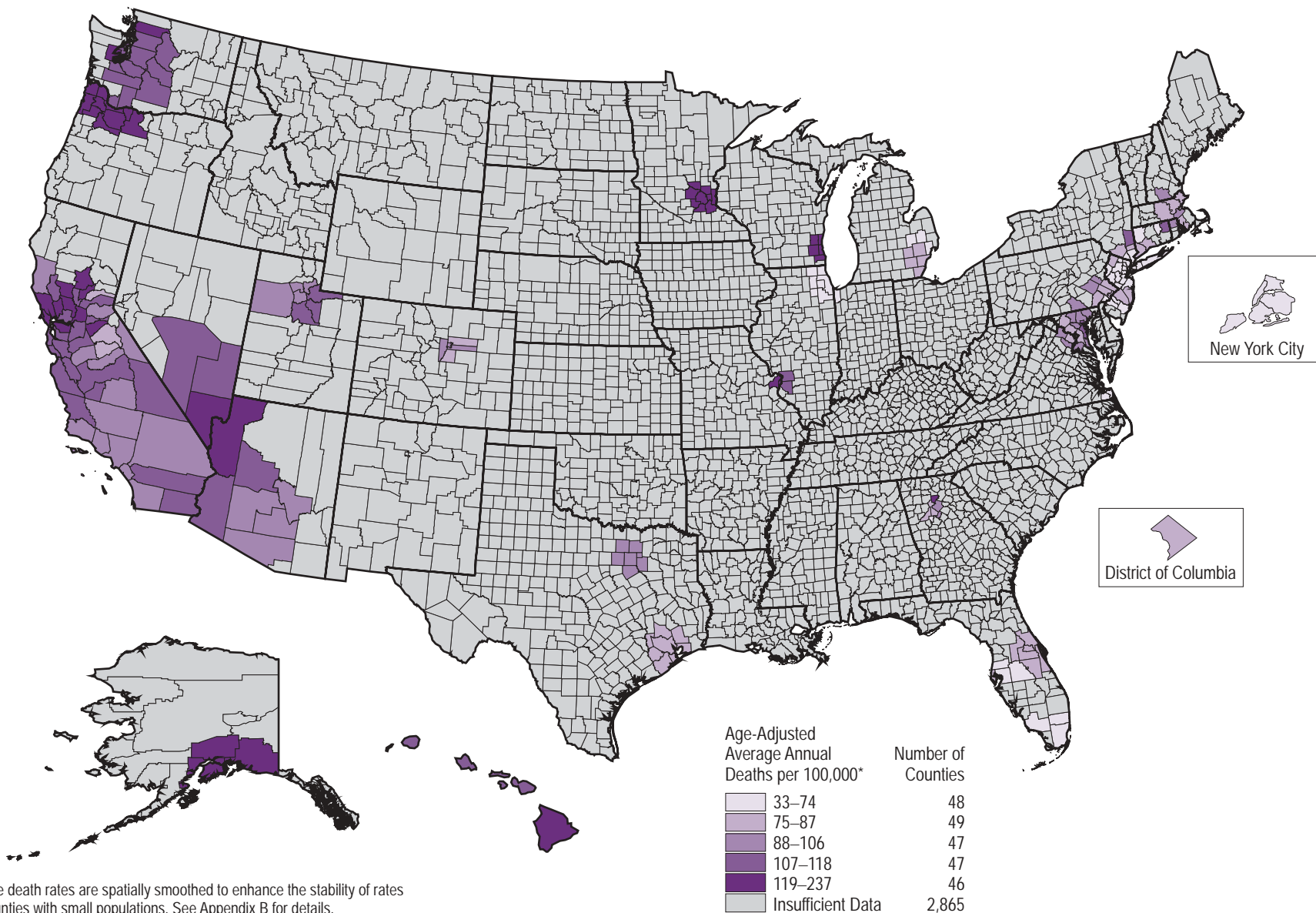
Asians and Pacific Islanders Ages 35 Years and Older



*Stroke death rates are spatially smoothed to enhance the stability of rates in counties with small populations. See Appendix B for details.

Smoothed County Stroke Death Rates 1991–1998

Asian and Pacific Islander Women Ages 35 Years and Older



*Stroke death rates are spatially smoothed to enhance the stability of rates in counties with small populations. See Appendix B for details.

Smoothed County Stroke Death Rates 1991–1998

Asian and Pacific Islander Men Ages 35 Years and Older

