

Blacks

Blacks were the largest racial and ethnic minority group among U.S. residents ages 35 years and older in 2000, making up 12.9% of all residents. During 1991–1998, the age-adjusted stroke death rate for blacks in this age group was 166/100,000.

The national map of age-adjusted, spatially smoothed stroke death rates for all blacks shows considerable geographic disparity across the 1,872 counties for which sufficient data existed to calculate rates. County death rates ranged from 74 to 311/100,000. A greater than twofold difference existed between the midpoint of the highest quintile (261) and the midpoint of the lowest quintile (111). 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 blacks (Figure 3.10). 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.

According to the map, the highest stroke death rates for blacks were reported in counties located primarily in two regions of the Southeast. The first region includes nearly the entire state of South Carolina, much of North Carolina, and many of the southern, rural Georgia counties of the Cotton Belt. The second region is the Mississippi River Valley and Delta, specifically counties in Arkansas, western Mississippi, and western Tennessee. Smaller groupings of counties in the highest quintile were also observed in northeastern Texas, northwestern Illinois, and along the Washington–Idaho border. Counties with low rates were reported primarily in the southwestern states of Nevada, Arizona, and New Mexico, along with parts of the Northeast. Several metropolitan areas had stroke death

rates in the lowest quintile, including Boston, the District of Columbia, New York City, and Philadelphia.

Women and Men

During 1991–1998, the age-adjusted death rate for stroke was 153/100,000 for black women and 182/100,000 for black men ages 35 years and older.

The maps of age-adjusted, spatially smoothed stroke death rates for black women and men show considerable geographic disparity across the counties for which sufficient data existed to calculate rates. For black women, county death rates ranged from 70 to 302/100,000. The range for black men was 84 to 404/100,000. For both women and men, a greater than twofold difference existed between the midpoint of the highest quintile (249 for women, 322 for men) and the midpoint of the lowest quintile (105 for women, 124 for men).

Figure 3.10
Frequency Distribution of
Smoothed County Stroke
Death Rates Among Blacks
Ages ≥ 35 Years,
1991–1998

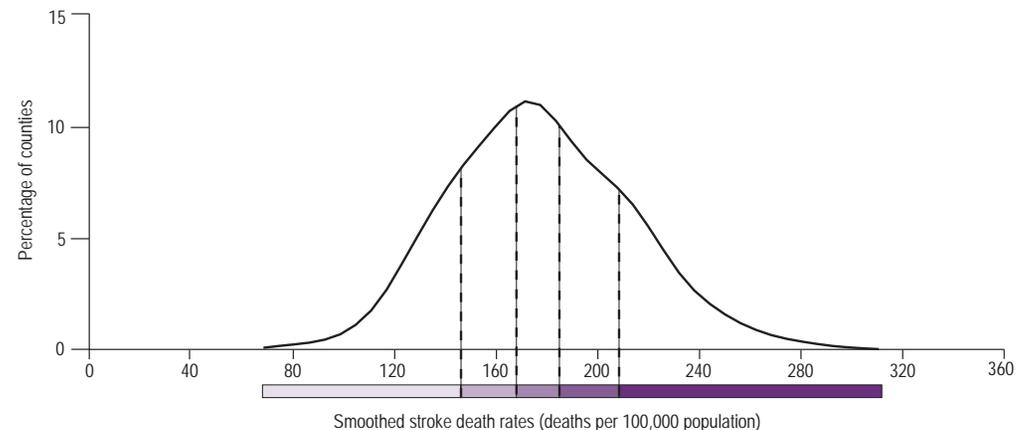
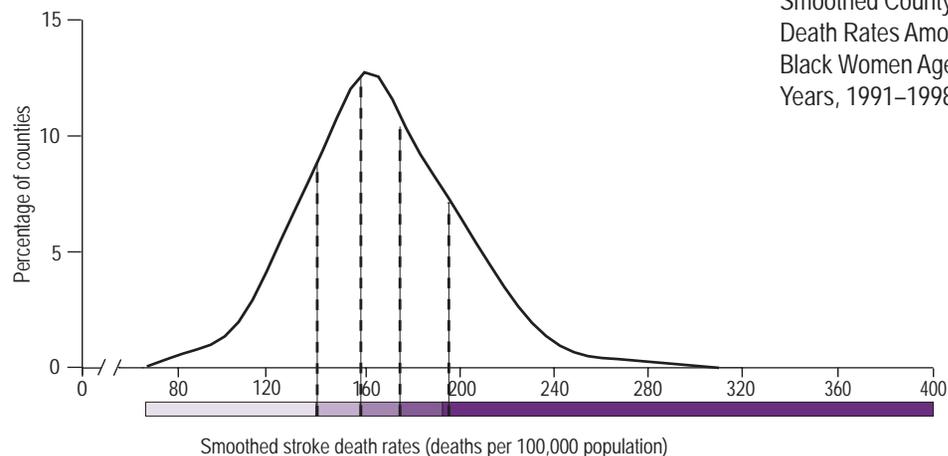


Figure 3.11
Frequency Distribution of
Smoothed County Stroke
Death Rates Among
Black Women Ages ≥35
Years, 1991–1998



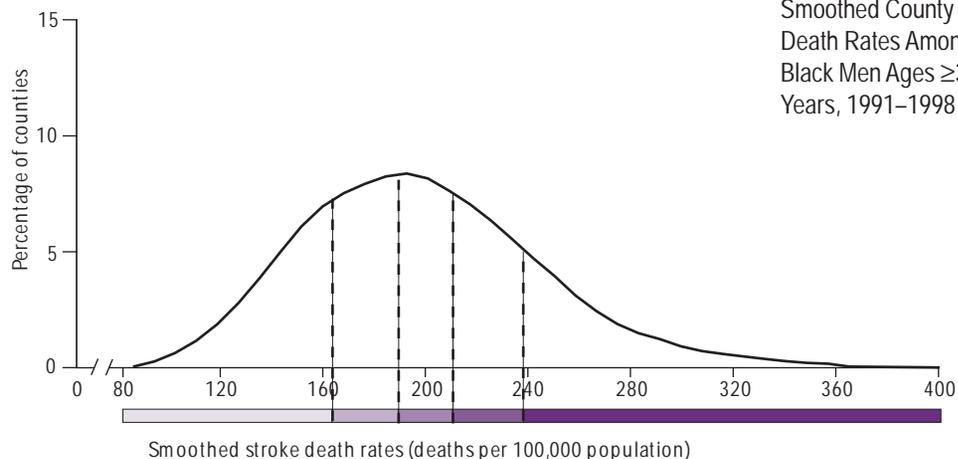
The frequency distributions show the range of smoothed stroke death rates for black women (Figure 3.11) and men (Figure 3.12) in all counties for which rates were calculated.

The maps indicate that for both black women and men, a majority of the counties in the southeastern states were in the two highest quintiles of stroke death rates. The southeastern coastal states (Virginia, North Carolina, South Carolina, Georgia, and Florida) and parts of the Mississippi Delta (as far east as Alabama) had dense concentrations of counties in the highest quintiles for women and men. Differences in the geographic patterns between women and men were observed in the western states. California, Arizona, Nevada, and Washington showed more counties in the top two quintiles for black women than for black men.

A Note on Methods

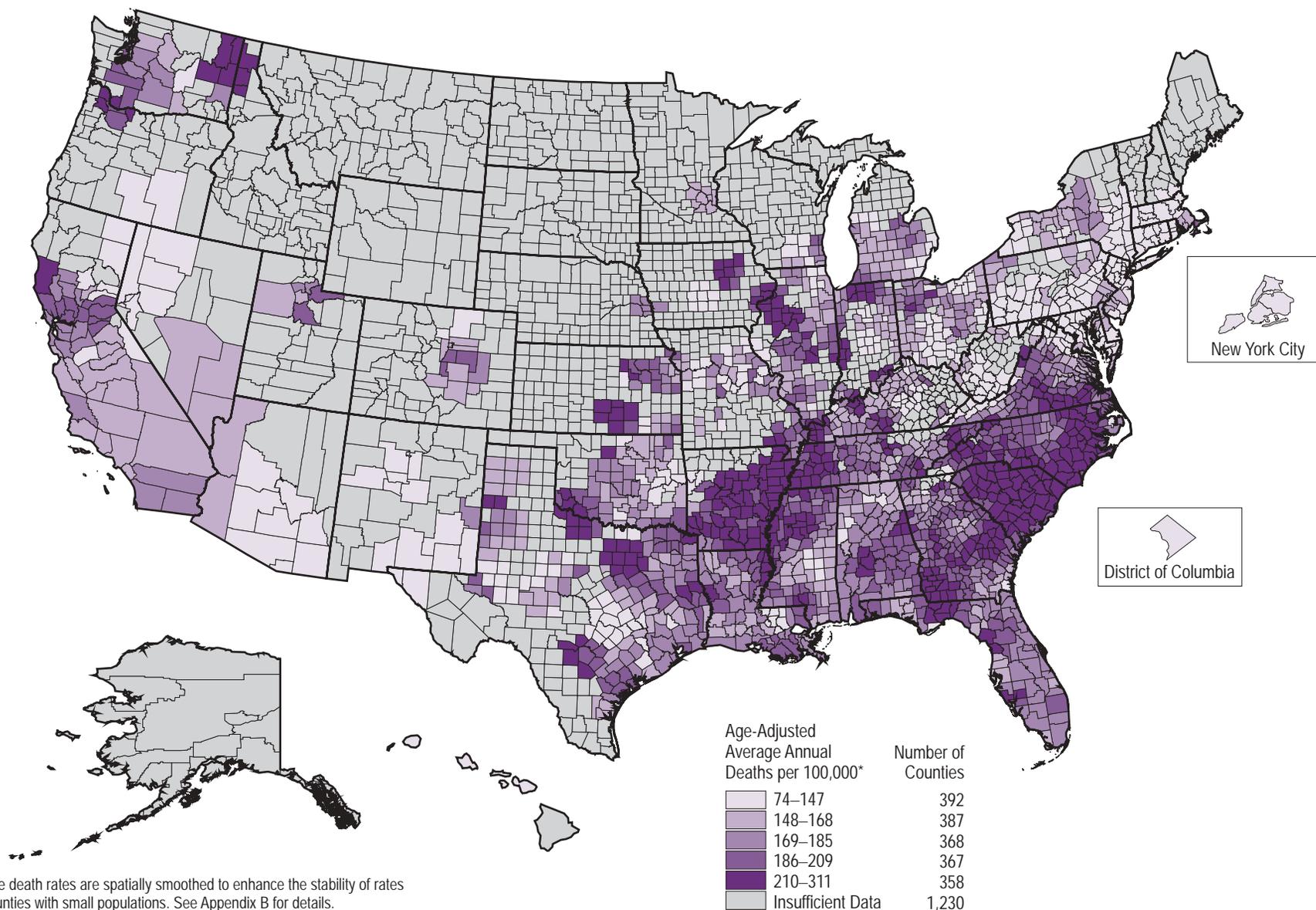
Stroke deaths were defined as those for which the underlying cause of death listed on the death certificate was cerebrovascular disease, defined according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (codes 430–438) (Washington, DC: Department of Health and Human 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 these death rates and create the maps can be found in Appendix B.

Figure 3.12
Frequency Distribution of
Smoothed County Stroke
Death Rates Among
Black Men Ages ≥35
Years, 1991–1998



Smoothed County Stroke Death Rates 1991–1998

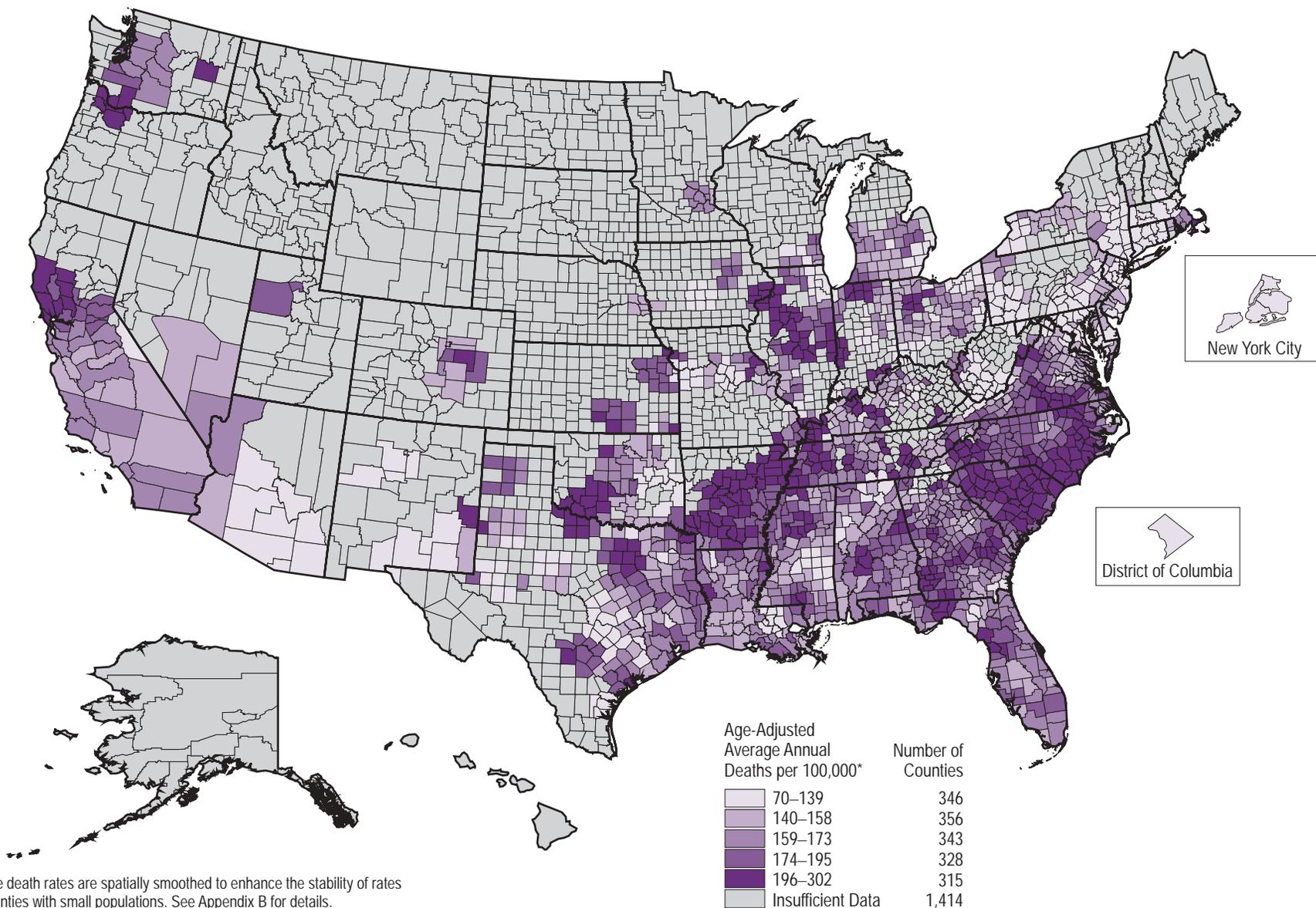
Blacks Ages 35 Years and Older



*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

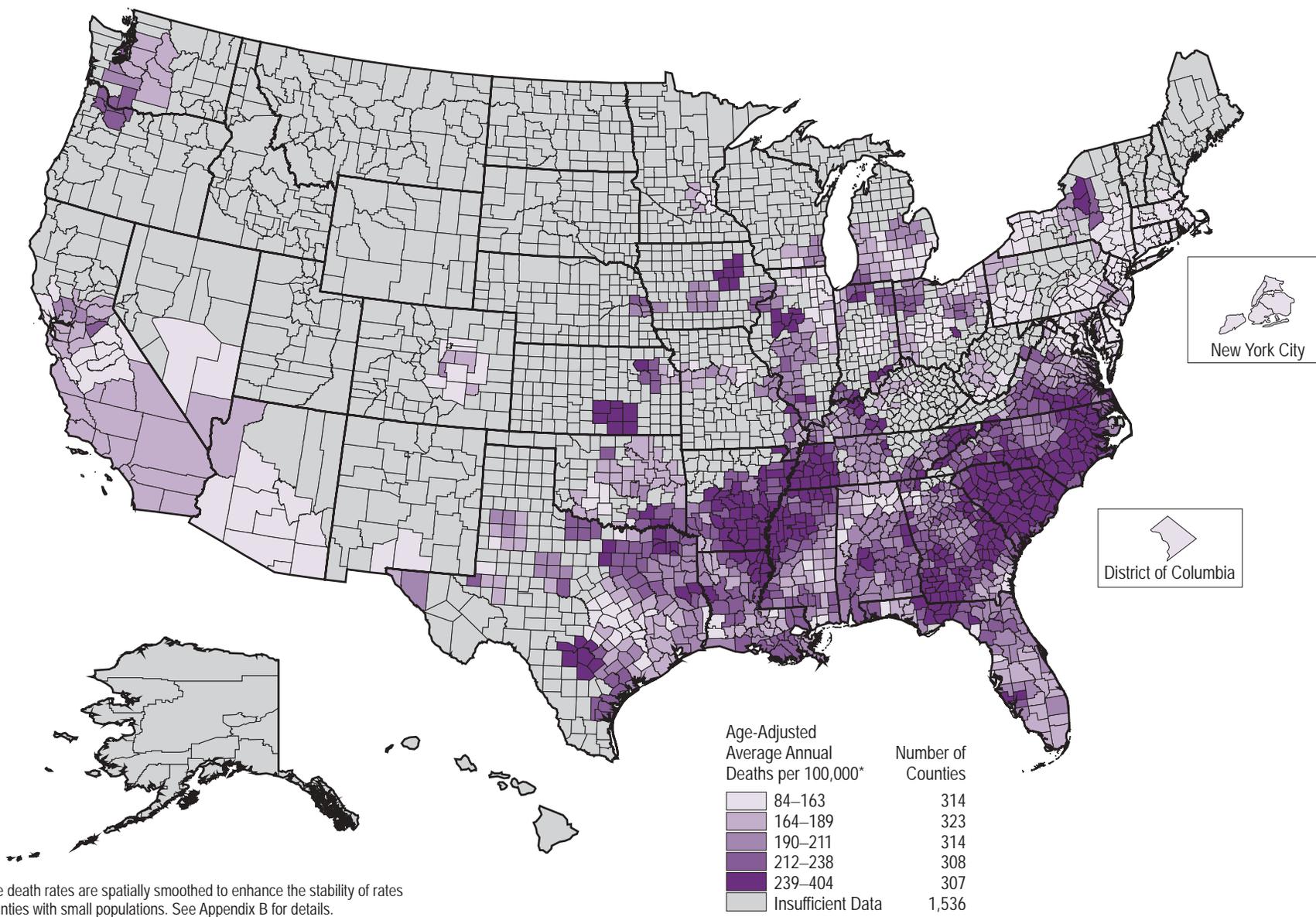
Black Women Ages 35 Years and Older



*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

Black 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.

Hispanics

Hispanics were the second largest racial and ethnic minority group among U.S. residents ages 35 years and older in 2000, making up 12.5% of all residents. During 1991–1998, the age-adjusted stroke death rate for Hispanics in this age group was 79/100,000.

The national map of age-adjusted, spatially smoothed stroke death rates for all Hispanics shows considerable geographic disparity across the 724 counties for which sufficient data existed to calculate rates. County death rates ranged from 20 to 239/100,000. An approximately fourfold difference existed between the midpoint of the highest quintile (173) and the midpoint of the lowest quintile (41). 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 Hispanics in all counties for which rates were calculated (Figure 3.13). 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.

According to the map, the highest stroke death rates for Hispanics were reported primarily in an area that extends from central New Mexico southeast into northwestern and central Texas, with an additional concentration among counties in and around Corpus Christi. Smaller groupings of counties in the highest quintile were also observed in eastern Texas, south-central Colorado, and northern Washington. The majority of counties in the highest three quintiles are located in the southwestern and Pacific states. Although several counties with low rates were reported in northern California and Nevada, most of the lowest rates were observed in the Northeast, southern Florida, and Chicago, Illinois.

Women and Men

During 1991–1998, the age-adjusted death rate for stroke was 72/100,000 for Hispanic women and 88/100,000 for Hispanic men ages 35 years and older.

The maps of age-adjusted, spatially smoothed stroke death rates for Hispanic women and men show considerable geographic disparity across the counties for which sufficient data existed to calculate rates. For Hispanic women, county death rates ranged from 22 to 156/100,000. The range for Hispanic men was 35 to 194/100,000. For both women and men, an approximately threefold difference existed between the midpoint of the highest quintile (128 for women, 159 for men) and the midpoint of the lowest quintile (39 for women, 55 for men).

The frequency distributions show the range of smoothed stroke death rates for Hispanic women (Figure 3.14) and

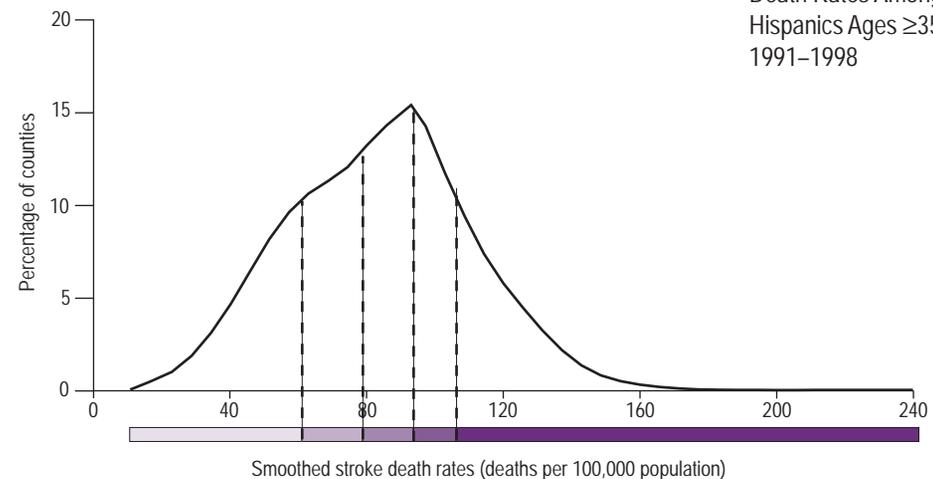


Figure 3.13
Frequency Distribution of
Smoothed County Stroke
Death Rates Among
Hispanics Ages ≥ 35 Years,
1991–1998

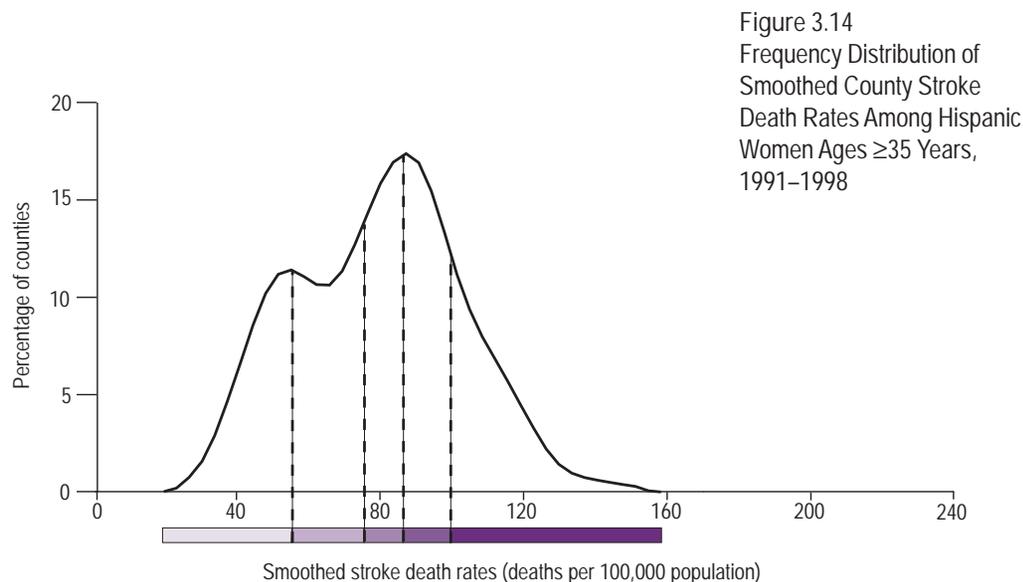


Figure 3.14
Frequency Distribution of
Smoothed County Stroke
Death Rates Among Hispanic
Women Ages ≥ 35 Years,
1991–1998

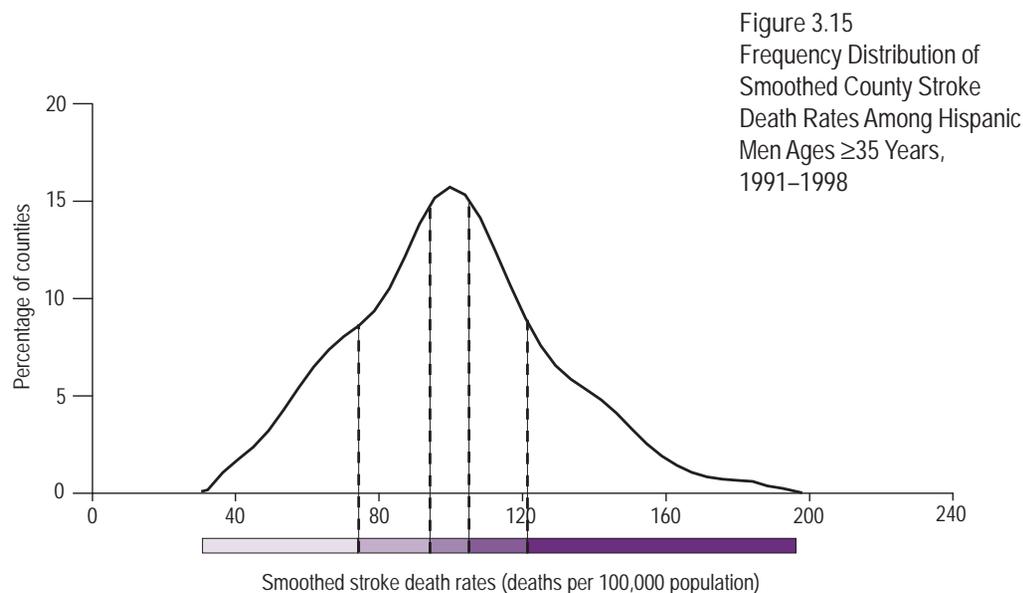


Figure 3.15
Frequency Distribution of
Smoothed County Stroke
Death Rates Among Hispanic
Men Ages ≥ 35 Years,
1991–1998

men (Figure 3.15) in all counties for which rates were calculated.

The maps indicate that the largest concentrations of counties with the highest rates for both Hispanic women and men were reported in the southwestern states and California. New Mexico and California had larger concentrations of counties in the highest quintile for women compared with men, whereas Washington had a larger concentration of counties with high rates for men.

A Note on Methods

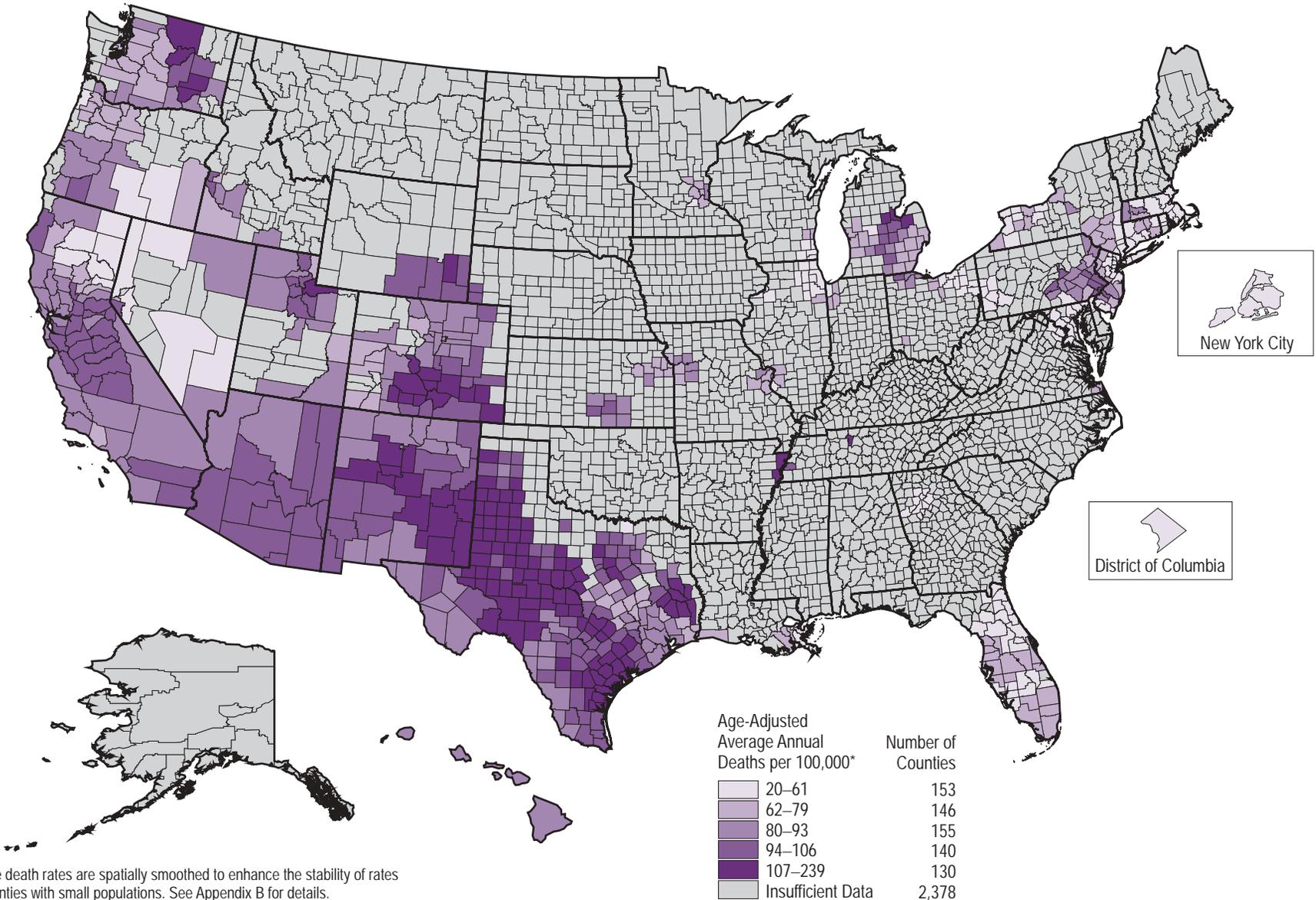
Stroke deaths were defined as those for which the underlying cause of death listed on the death certificate was cerebrovascular disease, defined according to the *International Classification of Diseases, 9th Revision, Clinical Modification* (codes 430–438) (Washington, DC: Department of Health and Human 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 these 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 Hispanic decedents are sometimes misreported as non-Hispanic on death certificates (see Section 1). Therefore, an unknown proportion of stroke deaths were likely omitted from the calculation of rates for Hispanics. 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 Hispanic origin on death certificates was a greater problem in certain parts of the country, then the geographic patterns presented here could be biased.

Smoothed County Stroke Death Rates
1991–1998

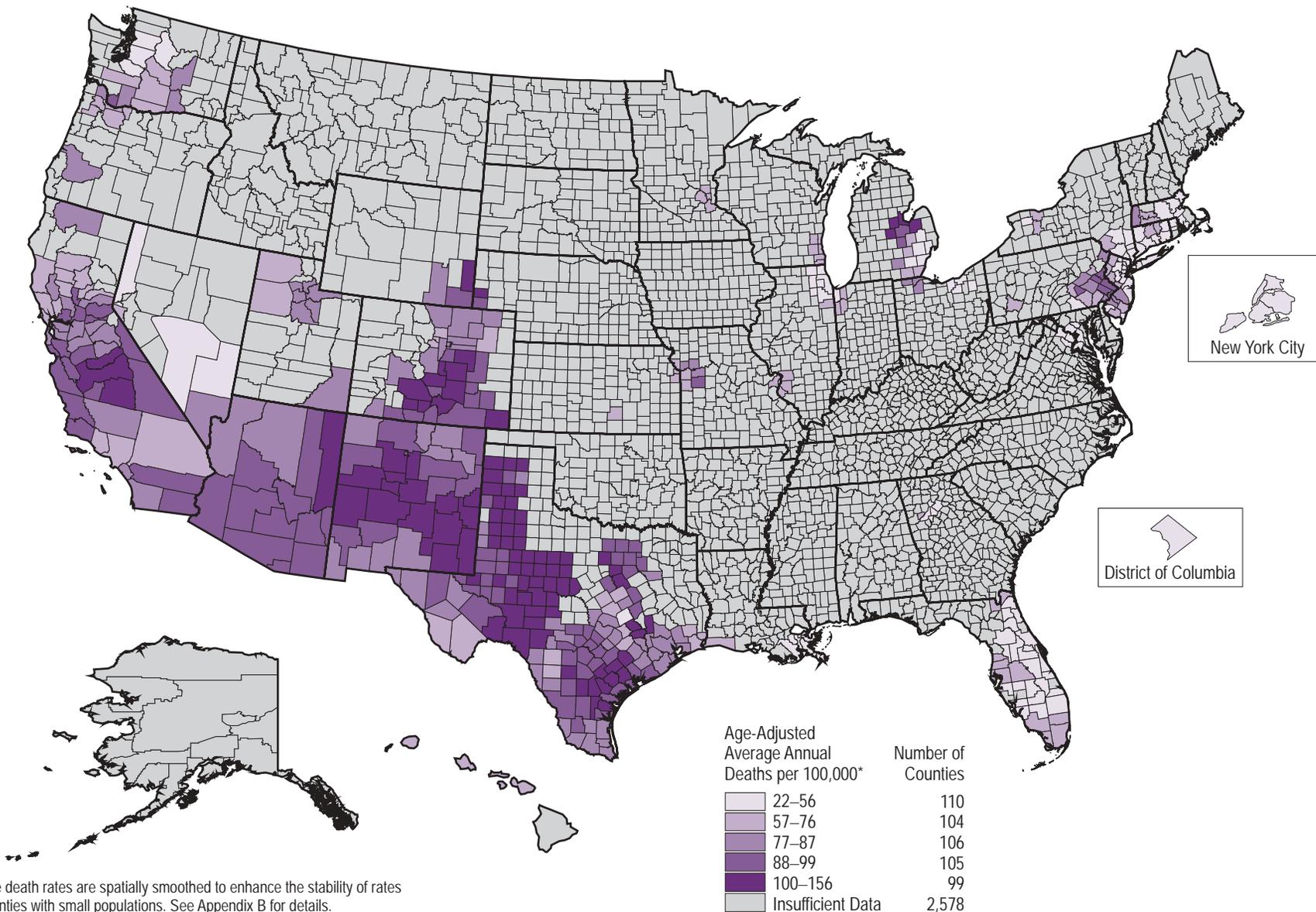
Hispanics
Ages 35 Years and Older



*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

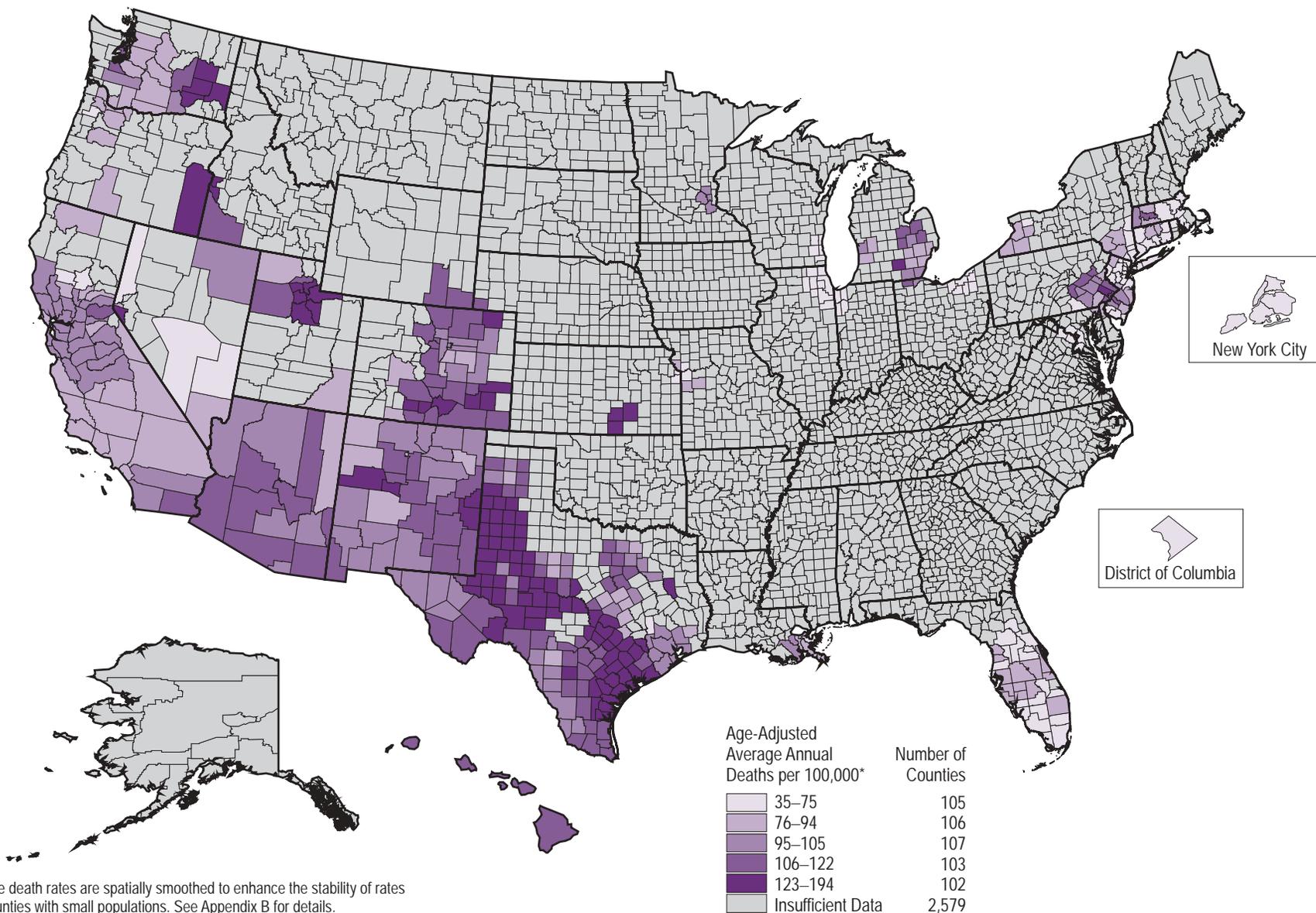
Hispanic Women Ages 35 Years and Older



*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

Hispanic 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.

