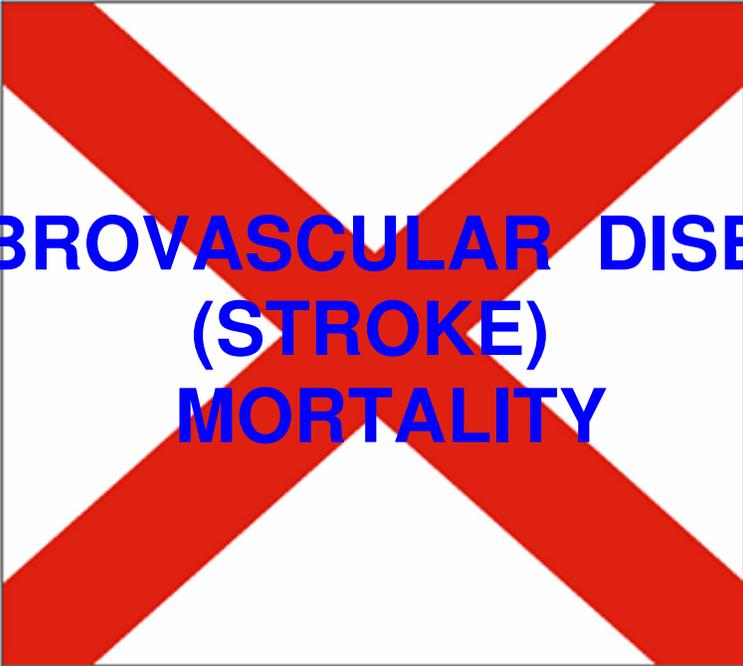


Indicators of Health Status in Alabama



**CEREBROVASCULAR DISEASES
(STROKE)
MORTALITY**

Jointly produced to assist those seeking to improve health care in rural Alabama

by

The Office of Primary Care and Rural Health,
Alabama Department of Public Health

and

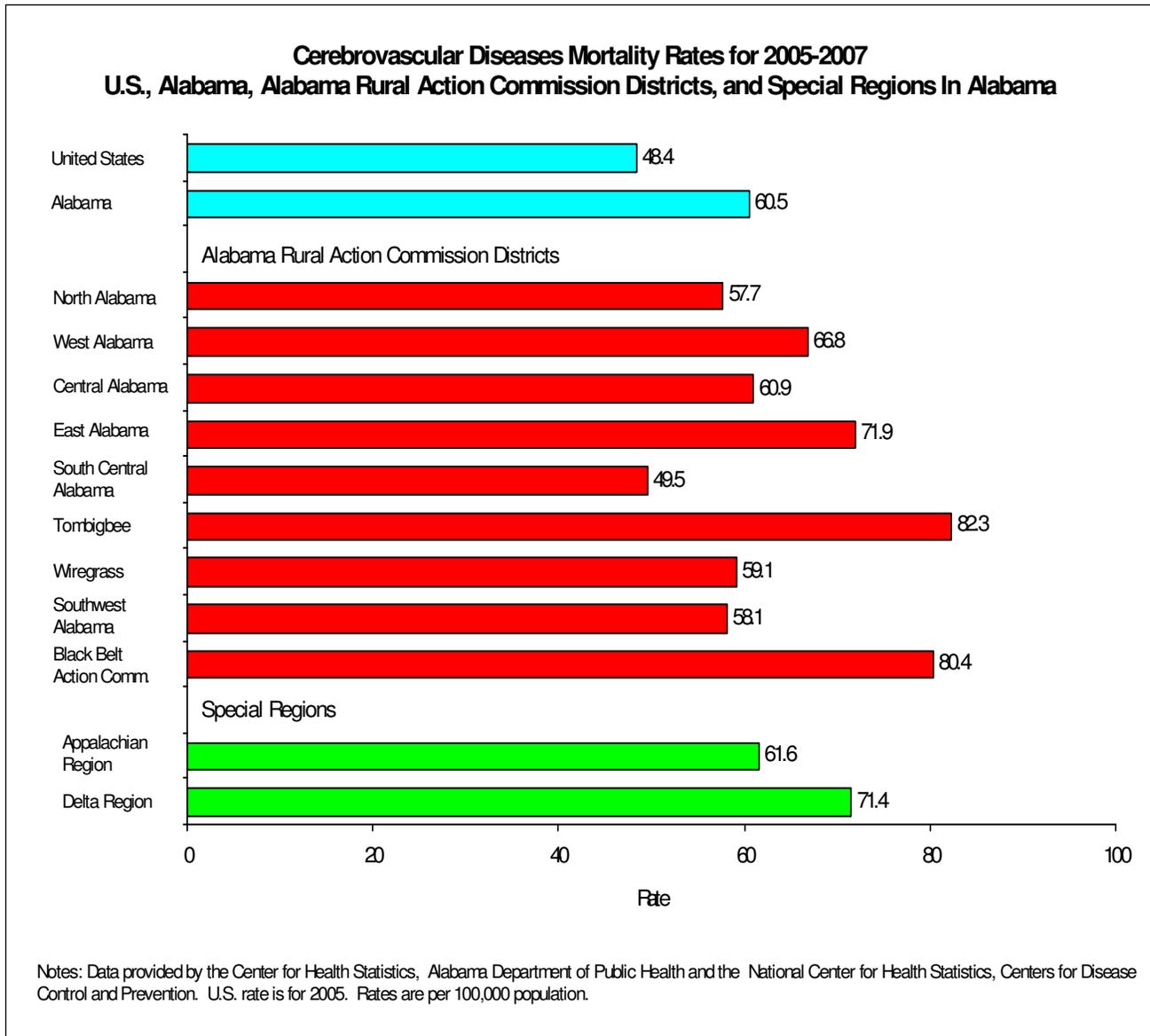
The Alabama Rural Health Association

Special thanks to the National Organization of State Offices of Rural Health and the National Rural Health Association for funding assistance in the production of this publication.

This and other reports in this series can be referenced on-line by visiting the “Reports” section of the Office of Primary Care and Rural Health Web site at <http://adph.org/ruralhealth/> or the “Rural/Urban Comparisons” section of the Alabama Rural Health Association Web site at www.arhaonline.org

January 2009

Indicators of Health Status in Alabama: CEREBROVASCULAR DISEASES MORTALITY



-  Alabama is a member of the “Stroke Belt,” an area consisting of the southeastern U.S. and the Mississippi Valley with high stroke mortality. Cerebrovascular diseases have been the third leading cause of death in Alabama since 1966.
-  Alabama currently has the 3rd highest cerebrovascular disease mortality rate among all 50 states. Alabamians aged 25-64 years have the highest cerebrovascular disease mortality rate among all 50 states.
-  Alabama lost 8,318 residents to cerebrovascular diseases during 2005-2007.
-  41 of the 45 Alabama counties with the highest cerebrovascular disease mortality rates are rural counties.

Stroke usually occurs in individuals who:

- have high blood pressure (hypertension).
- smoke.
- have elevated cholesterol.

To prevent stroke, individuals should:

- balance food and physical activity to maintain a healthy weight.
- eat 5 or more servings of fruits and vegetables daily.
- be physically active four to five times a week.

- use more non-meat main dishes such as dried peas and beans, and tofu.
- avoid or eliminate use of cigarettes, including exposure to environmental tobacco smoke (ETS).
- visit physician regularly to check blood pressure.
- take blood pressure medication as directed.
- take cholesterol lowering medications as directed.

What Is Considered to be Rural In This Publication?

There are several differing definitions for “rural” with most definitions being specific to programs or initiatives. “Rural” is not a concrete term. Opinions on what is considered as rural tend to change between geographical areas and over time. For additional information on what areas are considered as being “rural” for the various federal programs, visit the Rural Assistance Center at <http://maps.rupri.org/circ/racrural/amirural.asp> where an address can be entered to determine rural status for each program.

This publication considers entire counties as being “rural” or “urban” since most data of interest for studies is available at the county level, but not at sub-county levels. Counties are assigned a score using four major indicators of rurality in this definition. These are population per square mile, the size and number of cities in a county, percentage of total employment comprised by employment in public education, and per capita agricultural sales. For additional information on the determination of which counties are considered “rural,” please visit the “What Is Rural?” section at the Alabama Rural Health Association’s Web site, www.arhaonline.org.

This publication also presents information on the eight regions established through the Alabama Rural Action Commission, the Black Belt Action Commission, Alabama’s Appalachian Region counties, Alabama’s Delta Region counties, Alabama’s “rural” counties, and Alabama’s “urban” counties. In addition, “rural” counties are further classified and presented as being “highly” or “moderately” rural according to their score. “Rural” counties are also classified and presented as being in “rural south” or “rural north” Alabama because of great demographic and health status variation in these portions of the state.

Counties in the Various Regions or Classifications Used in This Report:

North Alabama Action Commission includes Colbert, Cullman, DeKalb, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, Marion, Marshall, Morgan, and Winston.

West Alabama Action Commission includes Bibb, Fayette, Greene, Hale, Lamar, Pickens, and Tuscaloosa.

Central Alabama Action Commission includes Blount, Chilton, Jefferson, St. Clair, Shelby, and Walker.

East Alabama Action Commission includes Calhoun, Chambers, Cherokee, Clay, Cleburne, Coosa, Etowah, Randolph, Talladega, and Tallapoosa.

South Central Alabama Action Commission includes Autauga, Bullock, Butler, Crenshaw, Elmore, Lee, Lowndes, Macon, Montgomery, Pike, and Russell.

Tombigbee Action Commission includes Choctaw, Clarke, Conecuh, Dallas, Marengo, Monroe, Perry, Sumter, Washington, and Wilcox.

Wiregrass Action Commission includes Barbour, Coffee, Covington, Dale, Geneva, Henry, and Houston.

Southwest Alabama Action Commission includes Baldwin, Escambia, and Mobile.

Black Belt Action Commission includes Bullock, Choctaw, Dallas, Greene, Hale, Lowndes, Macon, Marengo, Perry, Pickens, Sumter, and Wilcox counties.

Rural Counties include Autauga, Baldwin, Barbour, Bibb, Blount, Bullock, Butler, Chambers, Cherokee, Chilton, Choctaw, Clarke, Clay, Cleburne, Coffee, Colbert, Conecuh, Coosa, Covington, Crenshaw, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Fayette, Franklin, Geneva, Greene, Hale, Henry, Jackson, Lamar, Lawrence, Limestone, Lowndes, Macon, Marengo, Marion, Marshall, Monroe, Perry, Pickens, Pike, Randolph, Russell, St. Clair, Sumter, Talladega, Tallapoosa, Walker, Washington, Wilcox, and Winston.

Highly Rural Counties include Barbour, Bibb, Blount, Bullock, Butler, Cherokee, Choctaw, Clarke, Clay, Cleburne, Coffee, Conecuh, Coosa, Covington, Crenshaw, Cullman, Dallas, DeKalb, Escambia, Fayette, Franklin, Geneva, Greene, Hale, Henry, Jackson, Lamar, Lawrence, Lowndes, Macon, Marengo, Marion, Marshall, Monroe, Perry, Pickens, Pike, Randolph, Sumter, Washington, Wilcox, and Winston.

Moderately Rural Counties include Autauga, Baldwin, Chambers, Chilton, Colbert, Dale, Elmore, Limestone, Russell, St. Clair, Talladega, Tallapoosa and Walker.

Rural North Counties include Bibb, Blount, Chambers, Cherokee, Chilton, Clay, Cleburne, Colbert, Coosa, Cullman, DeKalb, Elmore, Fayette, Franklin, Hale, Jackson, Lamar, Lawrence, Limestone, Macon, Marion, Marshall, Pickens, Randolph, St. Clair, Talladega, Tallapoosa, Walker, and Winston.

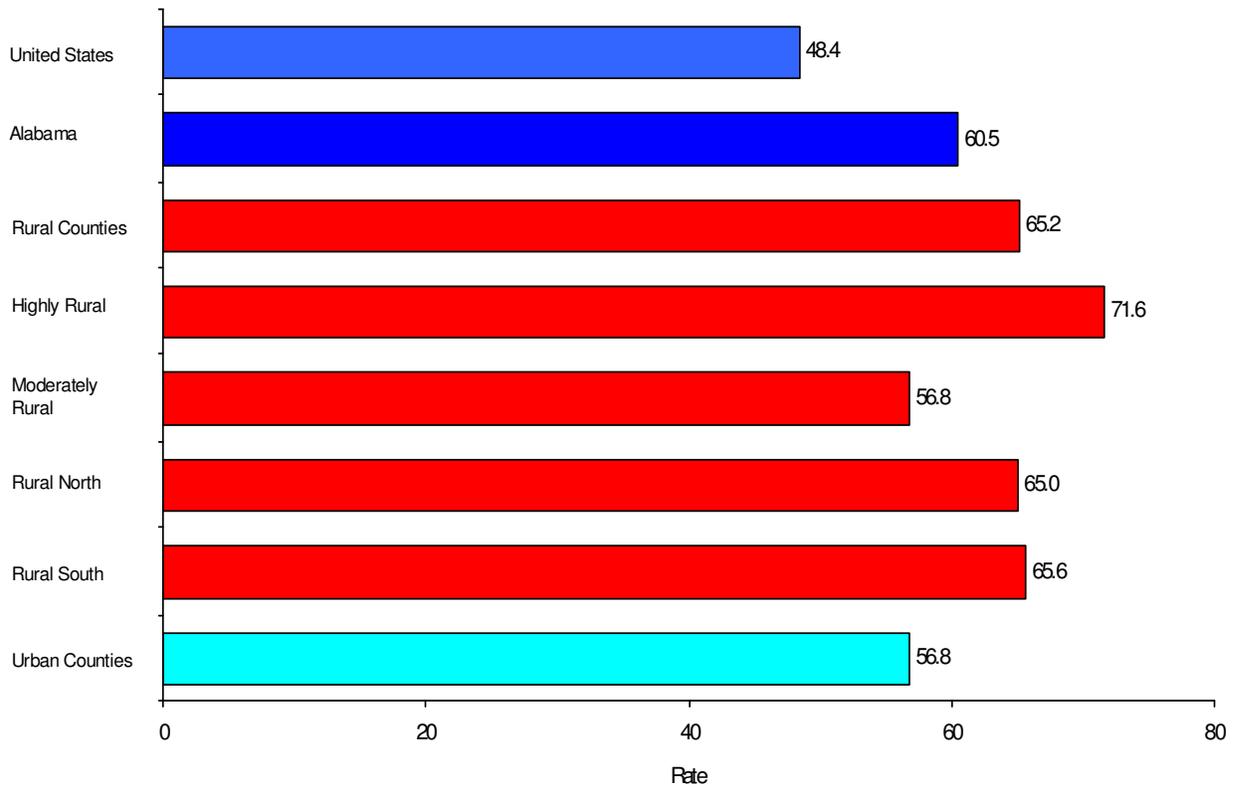
Rural South Counties include Autauga, Baldwin, Barbour, Bullock, Butler, Choctaw, Clarke, Coffee, Conecuh, Covington, Crenshaw, Dale, Dallas, Escambia, Geneva, Greene, Henry, Lowndes, Marengo, Monroe, Perry, Pike, Russell, Sumter, Washington, and Wilcox.

Urban Counties include Calhoun, Etowah, Houston, Jefferson, Lauderdale, Lee, Madison, Mobile, Montgomery, Morgan, Shelby, and Tuscaloosa.

Appalachian Region includes Bibb, Blount, Calhoun, Chambers, Cherokee, Chilton, Clay, Cleburne, Colbert, Coosa, Cullman, DeKalb, Elmore, Etowah, Fayette, Franklin, Hale, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Limestone, Macon, Madison, Marion, Marshall, Morgan, Pickens, Randolph, St. Clair, Shelby, Talladega, Tallapoosa, Tuscaloosa, Walker, and Winston counties.

Delta Region includes Barbour, Bullock, Butler, Choctaw, Clarke, Conecuh, Dallas, Escambia, Greene, Hale, Lowndes, Macon, Marengo, Monroe, Perry, Pickens, Russell, Sumter, Washington, and Wilcox counties.

**Cerebrovascular Diseases Mortality Rates
U.S. and Selected Alabama Areas, 2005-2007**

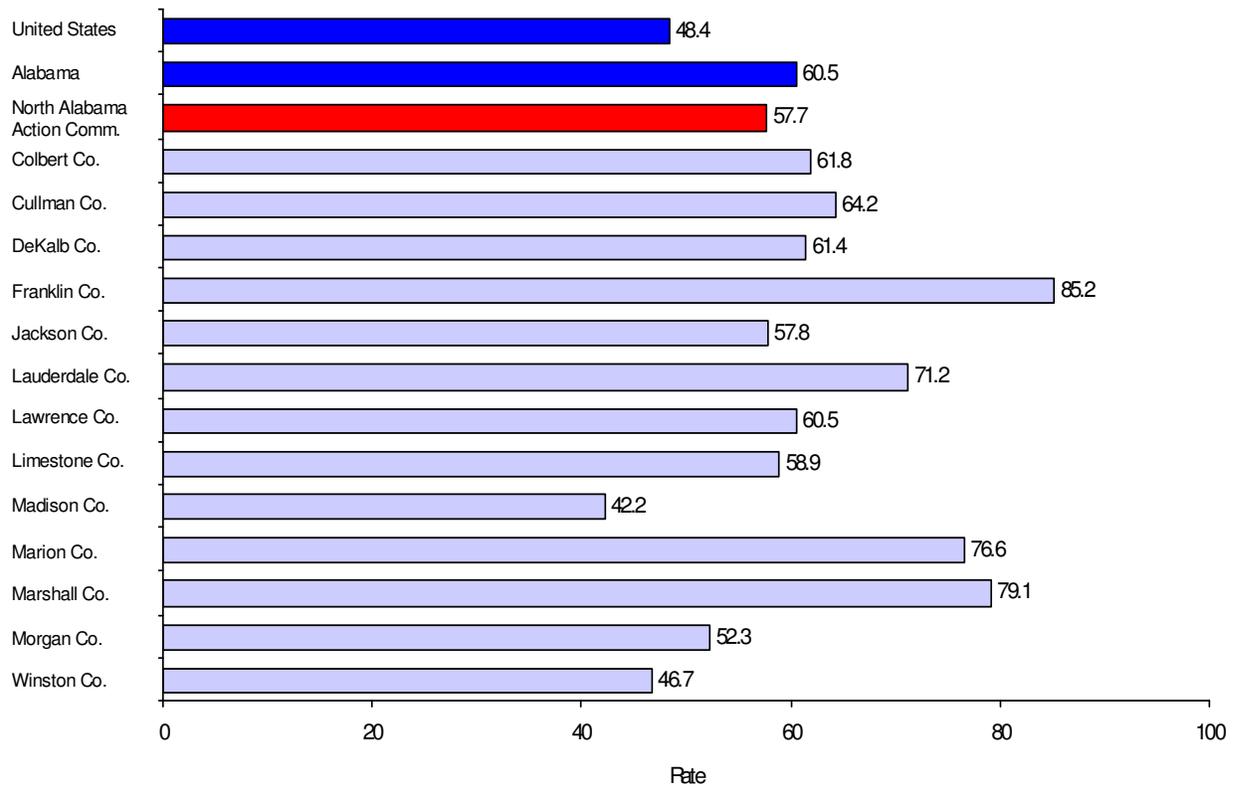


Notes: Data provided by the Center for Health Statistics, Alabama Department of Public Health and the National Center for Health Statistics, Centers for Disease Control and Prevention. U.S. rate is for 2005. Rates are per 100,000 population.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
U.S. and Selected Alabama Areas, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
United States	Not Applicable	143,579	48.4
Alabama	Not Applicable	8,318	60.5
Rural Alabama Counties	Not Applicable	3,919	65.2
Highly Rural Alabama Counties	Not Applicable	2,459	71.6
Moderately Rural Alabama Counties	Not Applicable	1,460	56.8
Rural North Alabama Counties	Not Applicable	2,350	65.0
Rural South Alabama Counties	Not Applicable	1,569	65.6
Urban Alabama Counties	Not Applicable	4,399	56.8

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the North Alabama Action Commission Counties, 2005-2007**

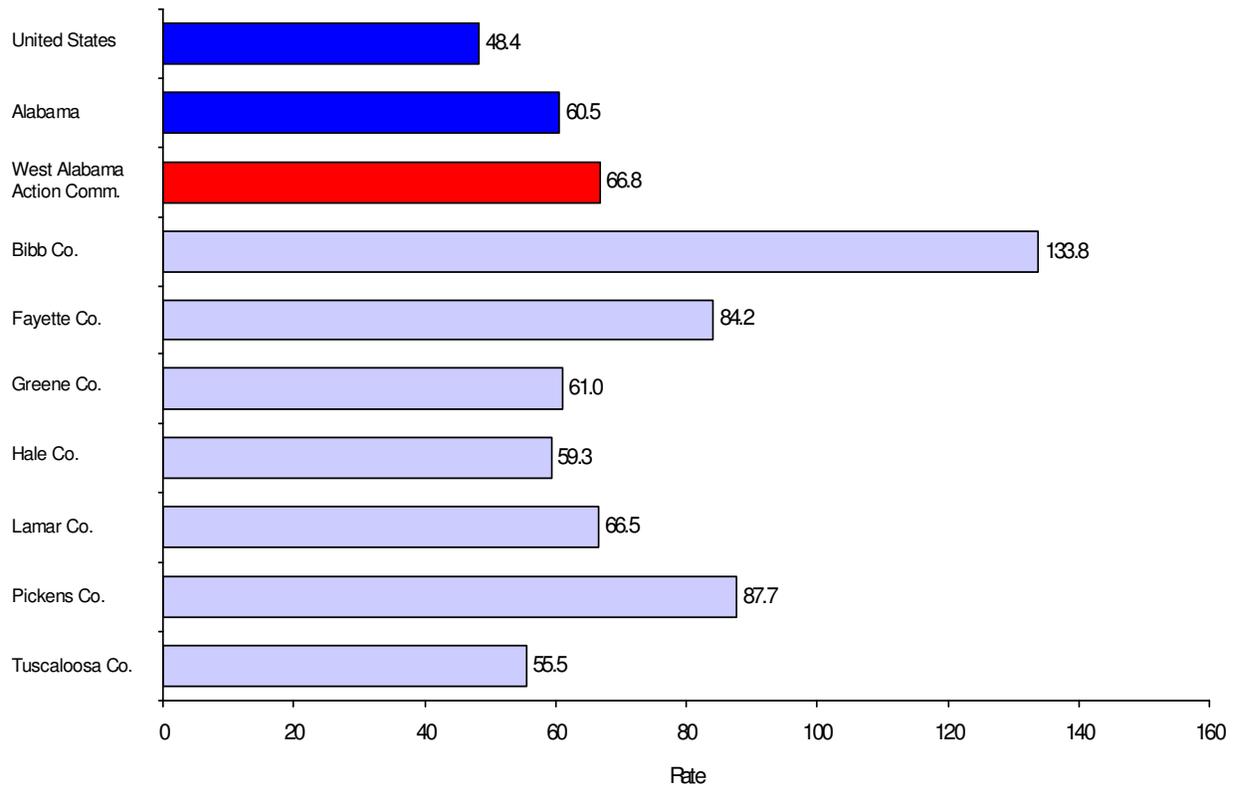


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**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
North Alabama Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
North Alabama Action Commission	Not Applicable	1,800	57.7
District's Rural Counties Combined	Not Applicable	1,045	65.5
District's Urban Counties Combined	Not Applicable	755	49.5
Colbert County	Yes	101	61.8
Cullman County	Yes	154	64.2
DeKalb County	Yes	124	61.4
Franklin County	Yes	78	85.2
Jackson County	Yes	92	57.8
Lauderdale County	No	188	71.2
Lawrence County	Yes	62	60.5
Limestone County	Yes	127	58.9
Madison County	No	388	42.2
Marion County	Yes	68	76.6
Marshall County	Yes	205	79.1
Morgan County	No	179	52.3
Winston County	Yes	34	46.7

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the West Alabama Action Commission Counties, 2005-2007**

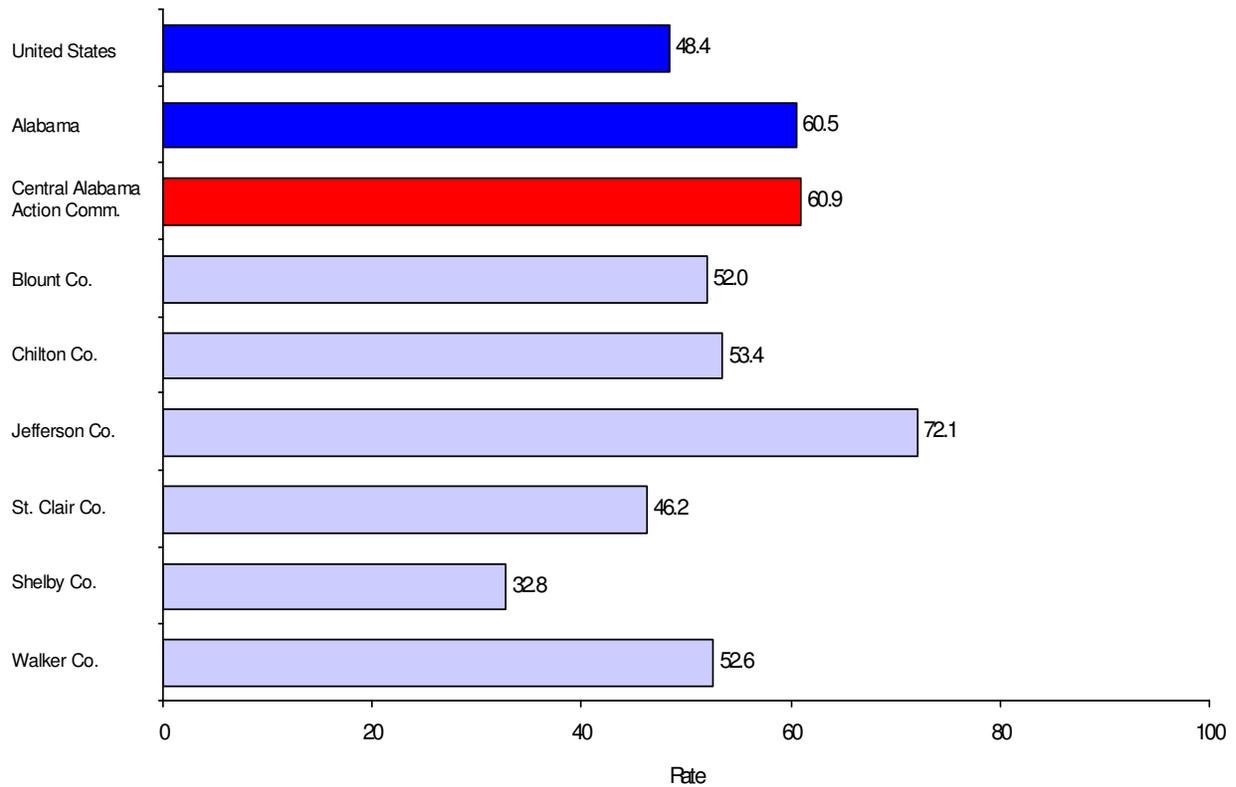


Notes: Data provided by the Center for Health Statistics, Alabama Department of Public Health and the National Center for Health Statistics, Centers for Disease Control and Prevention. U.S. rate is for 2005. Rates are per 100,000 population.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
West Alabama Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
West Alabama Action Commission	Not Applicable	552	66.8
District's Rural Counties Combined	Not Applicable	261	86.3
District's Urban Counties Combined	Not Applicable	291	55.5
Bibb County	Yes	86	133.8
Fayette County	Yes	45	84.2
Greene County	Yes	17	61.0
Hale County	Yes	32	59.3
Lamar County	Yes	29	66.5
Pickens County	Yes	52	87.7
Tuscaloosa County	No	291	55.5

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the Central Alabama Action Commission Counties, 2005-2007**

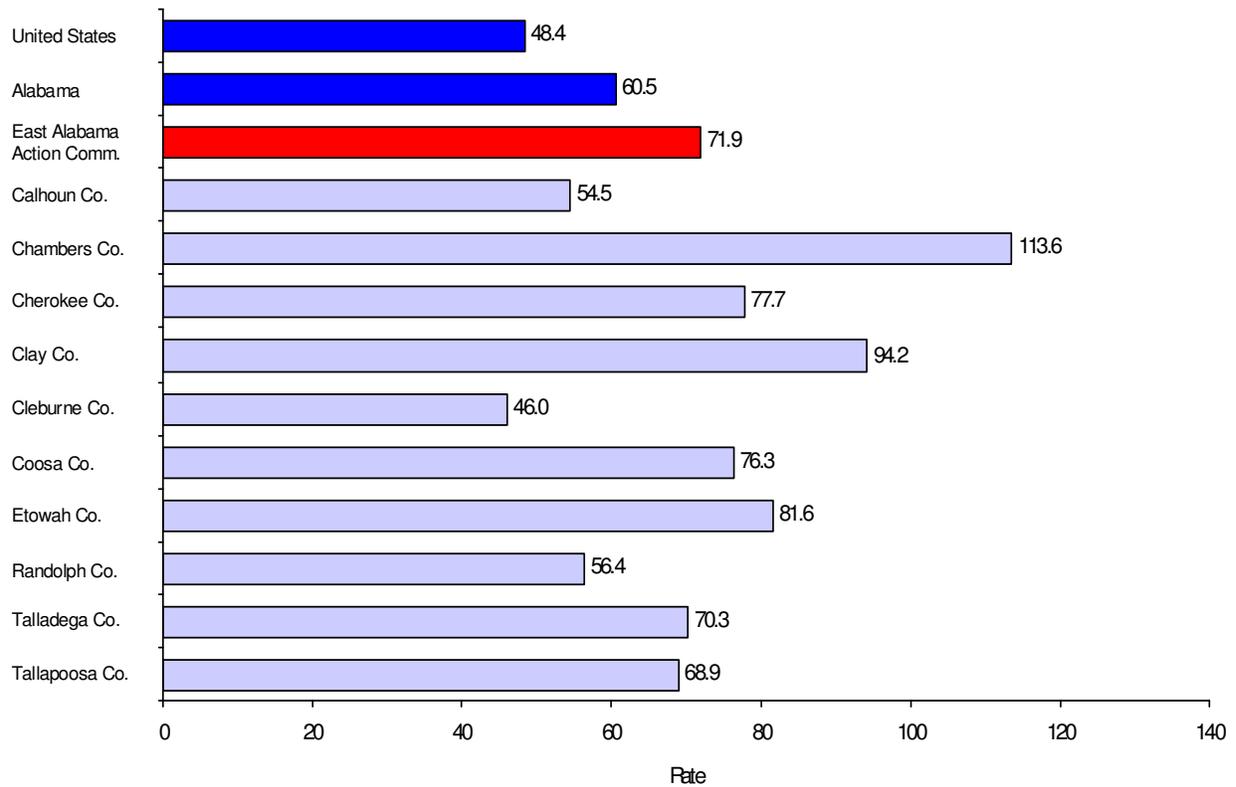


Notes: Data provided by the Center for Health Statistics, Alabama Department of Public Health and the National Center for Health Statistics, Centers for Disease Control and Prevention. U.S. rate is for 2005. Rates are per 100,000 population.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
Central Alabama Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
Central Alabama Action Commission	Not Applicable	1,967	60.9
District's Rural Counties Combined	Not Applicable	367	50.6
District's Urban Counties Combined	Not Applicable	1,600	63.8
Blount County	Yes	87	52.0
Chilton County	Yes	67	53.4
Jefferson County	No	1,426	72.1
St. Clair County	Yes	104	46.2
Shelby County	No	174	32.8
Walker County	Yes	109	52.6

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the East Alabama Action Commission Counties, 2005-2007**

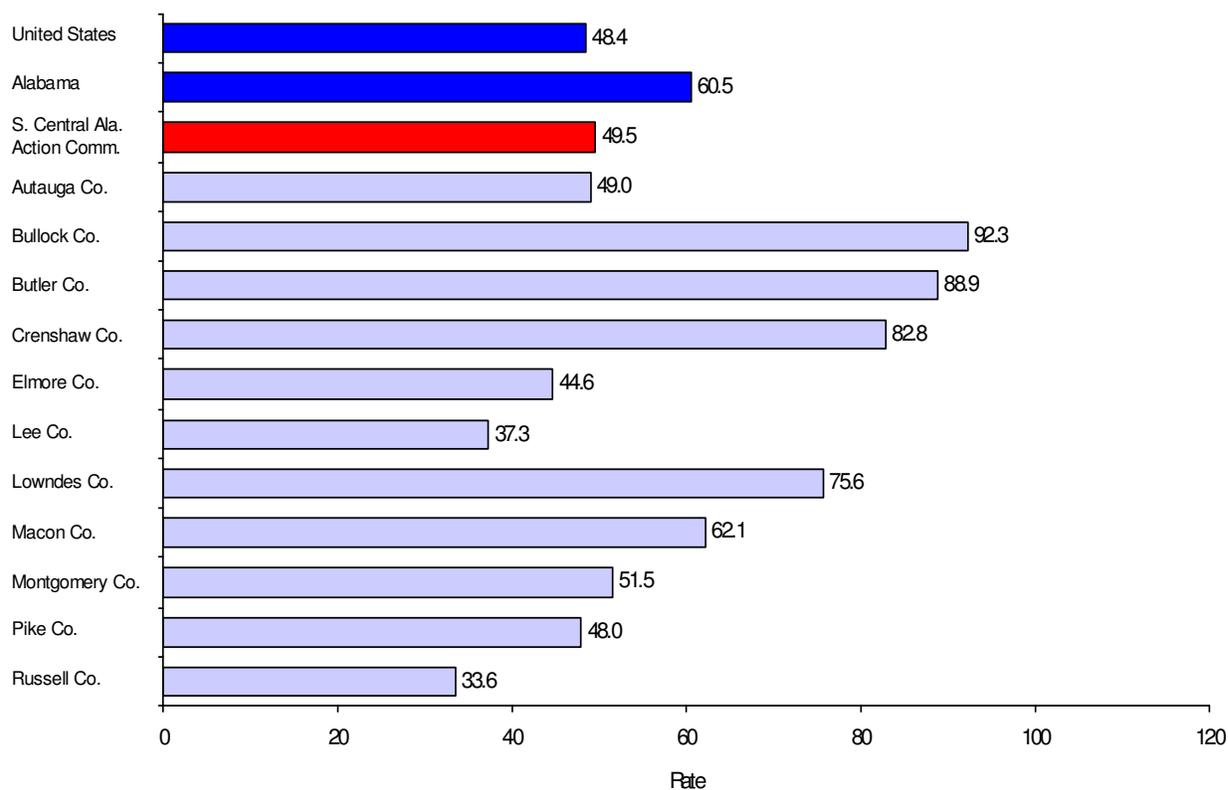


Notes: Data provided by the Center for Health Statistics, Alabama Department of Public Health and the National Center for Health Statistics, Centers for Disease Control and Prevention. U.S. rate is for 2005. Rates are per 100,000 population.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
East Alabama Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
East Alabama Action Commission	Not Applicable	987	71.9
District's Rural Counties Combined	Not Applicable	551	76.0
District's Urban Counties Combined	Not Applicable	436	67.4
Calhoun County	No	184	54.5
Chambers County	Yes	119	113.6
Cherokee County	Yes	57	77.7
Clay County	Yes	39	94.2
Cleburne County	Yes	20	46.0
Coosa County	Yes	25	76.3
Etowah County	No	252	81.6
Randolph County	Yes	38	56.4
Talladega County	Yes	169	70.3
Tallapoosa County	Yes	84	68.9

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the South Central Alabama Action Commission Counties, 2005-2007**

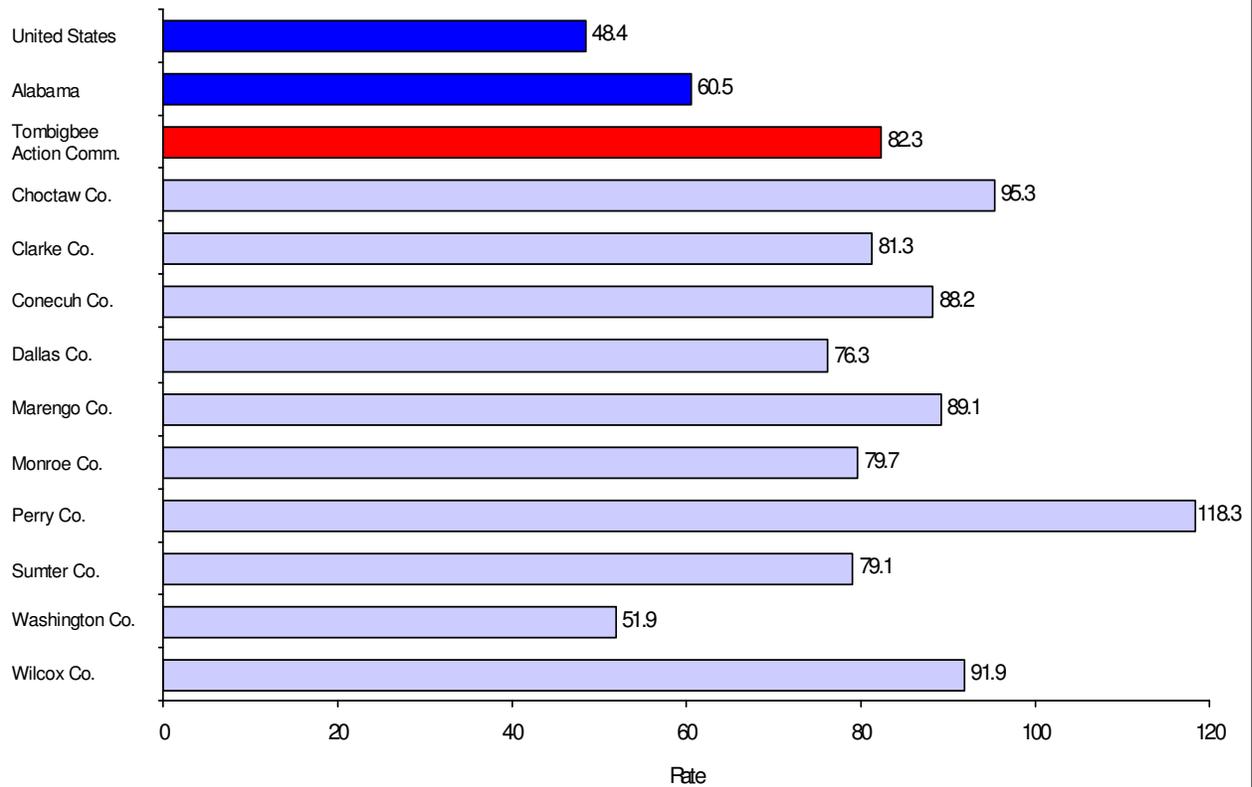


Notes: Data provided by the Center for Health Statistics, Alabama Department of Public Health and the National Center for Health Statistics, Centers for Disease Control and Prevention. U.S. rate is for 2005. Rates are per 100,000 population.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
South Central Alabama Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
South Central Alabama Action Commission	Not Applicable	945	49.5
District's Rural Counties Combined	Not Applicable	455	53.4
District's Urban Counties Combined	Not Applicable	490	46.3
Autauga County	Yes	72	49.0
Bullock County	Yes	30	92.3
Butler County	Yes	54	88.9
Crenshaw County	Yes	34	82.8
Elmore County	Yes	101	44.6
Lee County	No	143	37.3
Lowndes County	Yes	29	75.6
Macon County	Yes	42	62.1
Montgomery County	No	347	51.5
Pike County	Yes	43	48.0
Russell County	Yes	50	33.6

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the Tombigbee Action Commission Counties, 2005-2007**

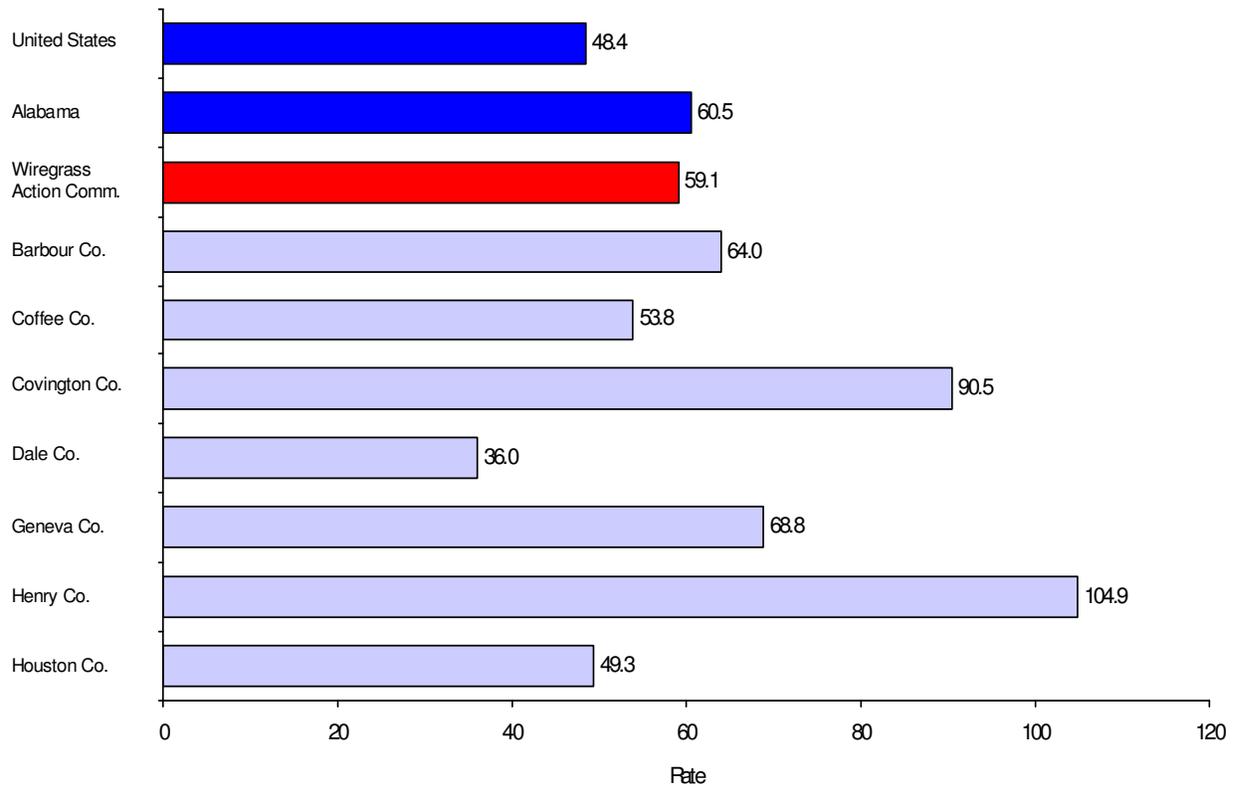


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**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
Tombigbee Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
Tombigbee Action Commission	Not Applicable	484	82.3
District's Rural Counties Combined	Not Applicable	484	82.3
District's Urban Counties Combined	Not Applicable	No Urban Counties in District	
Choctaw County	Yes	41	95.3
Clarke County	Yes	65	81.3
Conecuh County	Yes	35	88.2
Dallas County	Yes	99	76.3
Marengo County	Yes	57	89.1
Monroe County	Yes	55	79.7
Perry County	Yes	38	118.3
Sumter County	Yes	32	79.1
Washington County	Yes	27	51.9
Wilcox County	Yes	35	91.9

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the Wiregrass Action Commission Counties, 2005-2007**

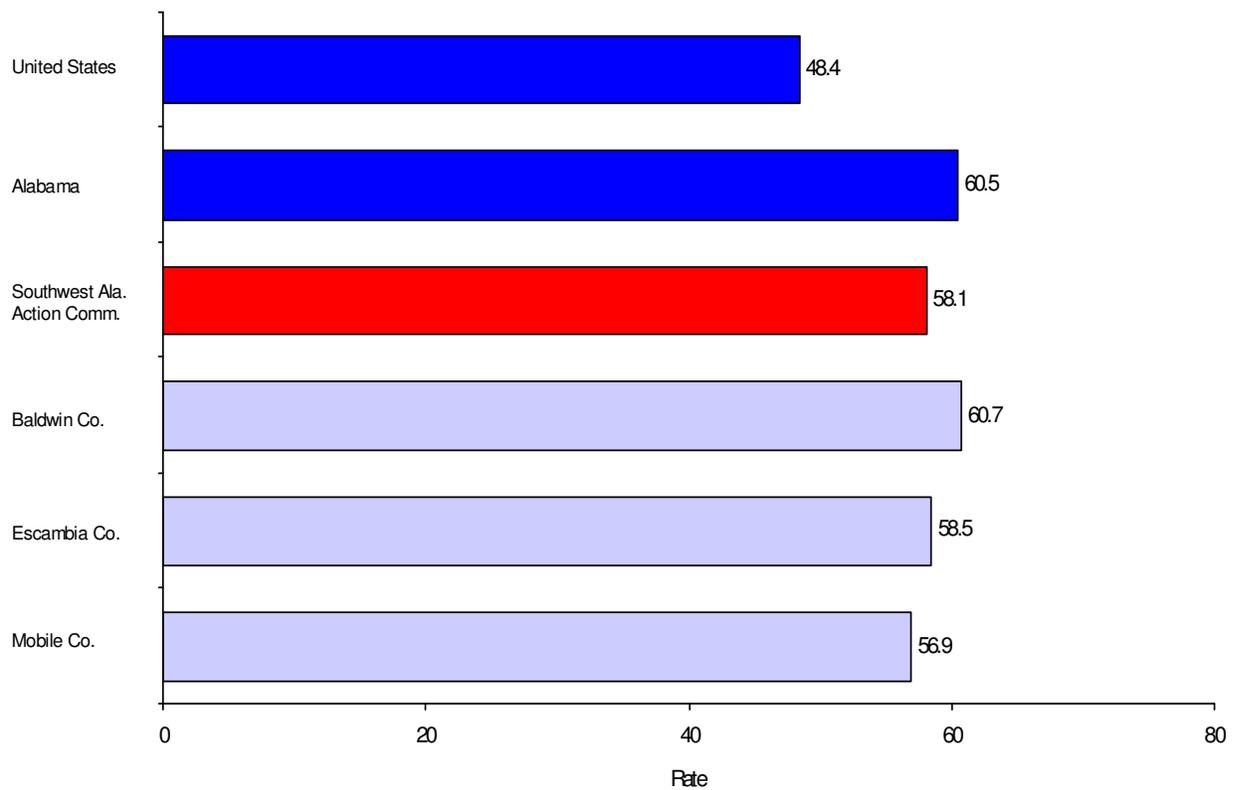


Notes: Data provided by the Center for Health Statistics, Alabama Department of Public Health and the National Center for Health Statistics, Centers for Disease Control and Prevention. U.S. rate is for 2005. Rates are per 100,000 population.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
Wiregrass Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
Wiregrass Action Commission	Not Applicable	526	59.1
District's Rural Counties Combined	Not Applicable	385	63.8
District's Urban Counties Combined	Not Applicable	141	49.3
Barbour County	Yes	54	64.0
Coffee County	Yes	74	53.8
Covington County	Yes	100	90.5
Dale County	Yes	52	36.0
Geneva County	Yes	53	68.8
Henry County	Yes	52	104.9
Houston County	No	141	49.3

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the Southwest Alabama Action Commission Counties, 2005-2007**

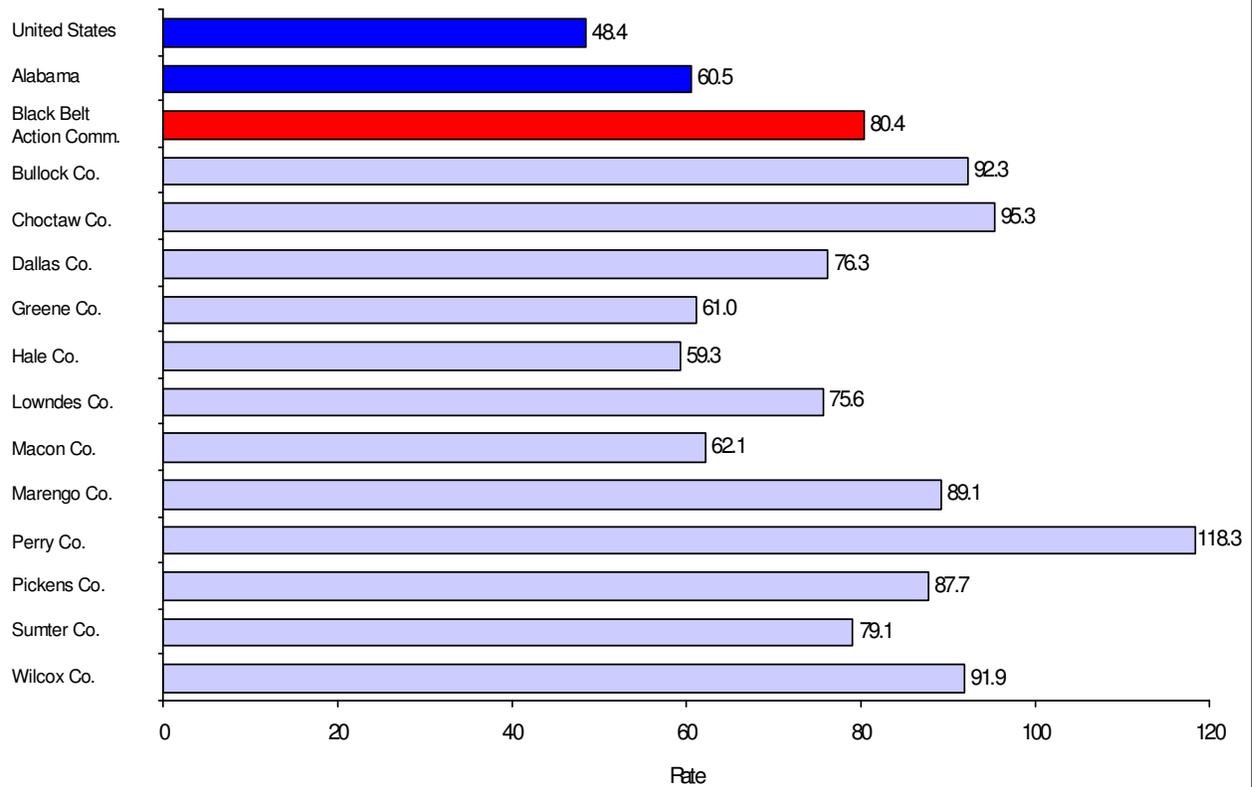


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**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
Southwest Alabama Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
Southwest Alabama Action Commission	Not Applicable	1,057	58.1
District's Rural Counties Combined	Not Applicable	371	60.3
District's Urban Counties Combined	Not Applicable	686	56.9
Baldwin County	Yes	305	60.7
Escambia County	Yes	66	58.5
Mobile County	No	686	56.9

**Cerebrovascular Diseases Mortality Rates
U.S. Alabama, and the Black Belt Action Commission Counties, 2005-2007**



Notes: Data provided by the Center for Health Statistics, Alabama Department of Public Health and the National Center for Health Statistics, Centers for Disease Control and Prevention. U.S. rate is for 2005. Rates are per 100,000 population.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
Black Belt Action Commission Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
Black Belt Action Commission	Not Applicable	504	80.4
District's Rural Counties Combined	Not Applicable	504	80.4
District's Urban Counties Combined	Not Applicable	No Urban Counties in District	
Bullock County	Yes	30	92.3
Choctaw County	Yes	41	95.3
Dallas County	Yes	99	76.3
Greene County	Yes	17	61.0
Hale County	Yes	32	59.3
Lowndes County	Yes	29	75.6
Macon County	Yes	42	62.1
Marengo County	Yes	57	89.1
Perry County	Yes	38	118.3
Pickens County	Yes	52	87.7
Sumter County	Yes	32	79.1
Wilcox County	Yes	35	91.9

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
Alabama's Appalachian Region Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
Alabama's Appalachian Region	Not Applicable	5,432	61.6
Region's Rural Counties Combined	Not Applicable	2,350	65.0
Region's Urban Counties Combined	Not Applicable	3,082	59.2
Bibb County	Yes	86	133.8
Blount County	Yes	87	52.0
Calhoun County	No	184	54.5
Chambers County	Yes	119	113.6
Cherokee County	Yes	57	77.7
Chilton County	Yes	67	53.4
Clay County	Yes	39	94.2
Cleburne County	Yes	20	46.0
Colbert County	Yes	101	61.8
Coosa County	Yes	25	76.3
Cullman County	Yes	154	64.2
DeKalb County	Yes	124	61.4
Elmore County	Yes	101	44.6
Etowah County	No	252	81.6
Fayette County	Yes	45	84.2
Franklin County	Yes	78	85.2
Hale County	Yes	32	59.3
Jackson County	Yes	92	57.8
Jefferson County	No	1,426	72.1
Lamar County	Yes	29	66.5
Lauderdale County	No	188	71.2
Lawrence County	Yes	62	60.5
Limestone County	Yes	127	58.9
Macon County	Yes	42	62.1
Madison County	No	388	42.2
Marion County	Yes	68	76.6
Marshall County	Yes	205	79.1
Morgan County	No	179	52.3
Pickens County	Yes	52	87.7
Randolph County	Yes	38	56.4
St. Clair County	Yes	104	46.2
Shelby County	No	174	32.8
Talladega County	Yes	169	70.3
Tallapoosa County	Yes	84	68.9
Tuscaloosa County	No	291	55.5
Walker County	Yes	109	52.6
Winston County	Yes	34	46.7

For additional information on the Appalachian Region, visit the Appalachian Regional Commission's Web site at <http://www.arc.gov/index.jsp>; the Appalachian Regional Commission – Alabama Programs Office Web site at <http://www.adeca.alabama.gov/>; or contact Bonnie Durham, Alabama Program Manager at (256) 845-3472.

**Cerebrovascular Diseases (Stroke) Mortality and Mortality Rates
Alabama's Delta Region Counties, 2005 – 2007**

Area	Is County Rural?	Deaths	Rate Per 100,000
Alabama's Delta Region	Not Applicable	910	71.4
Region's Rural Counties Combined	Not Applicable	910	71.4
Region's Urban Counties Combined	Not Applicable	No Urban Counties in Region	
Barbour County	Yes	54	64.0
Bullock County	Yes	30	92.3
Butler County	Yes	54	88.9
Choctaw County	Yes	41	95.3
Clarke County	Yes	65	81.3
Conecuh County	Yes	35	88.2
Dallas County	Yes	99	76.3
Escambia County	Yes	66	58.5
Greene County	Yes	17	61.0
Hale County	Yes	32	59.3
Lowndes County	Yes	29	75.6
Macon County	Yes	42	62.1
Marengo County	Yes	57	89.1
Monroe County	Yes	55	79.7
Perry County	Yes	38	118.3
Pickens County	Yes	52	87.7
Russell County	Yes	50	33.6
Sumter County	Yes	32	79.1
Washington County	Yes	27	51.9
Wilcox County	Yes	35	91.9

For additional information on the Delta Region, visit the Delta Regional Authority's Web site at <http://www.dra.gov/> or contact one of the Delta Regional Authority – Local Development District Offices as follows:

Alabama – Tombigbee Regional Commission, (334) 682-4234 (Choctaw, Clarke, Conecuh, Dallas, Marengo, Monroe, Perry, Sumter, Washington, and Wilcox counties)

Lee – Russell Council of Governments, (334) 749-5264 (Russell County)

South Alabama Regional Planning Commission, (251) 433-6541 (Escambia County)

South Central Alabama Development Commission (334) 244-6903 (Bullock, Butler, Lowndes, and Macon counties)

Southeast Alabama Regional Planning and Development Commission, (334) 794-4093 (Barbour County)

West Alabama Regional Commission, (205) 333-2990 (Greene, Hale, and Pickens counties)

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For additional information please contact the Office of Primary Care and Rural Health Development at (334) 206-5396 or the Alabama Rural Health Association at (334) 281-3866.