Show Me Summit on Aging and Health
by
Dr. Daryl J. Hobbs

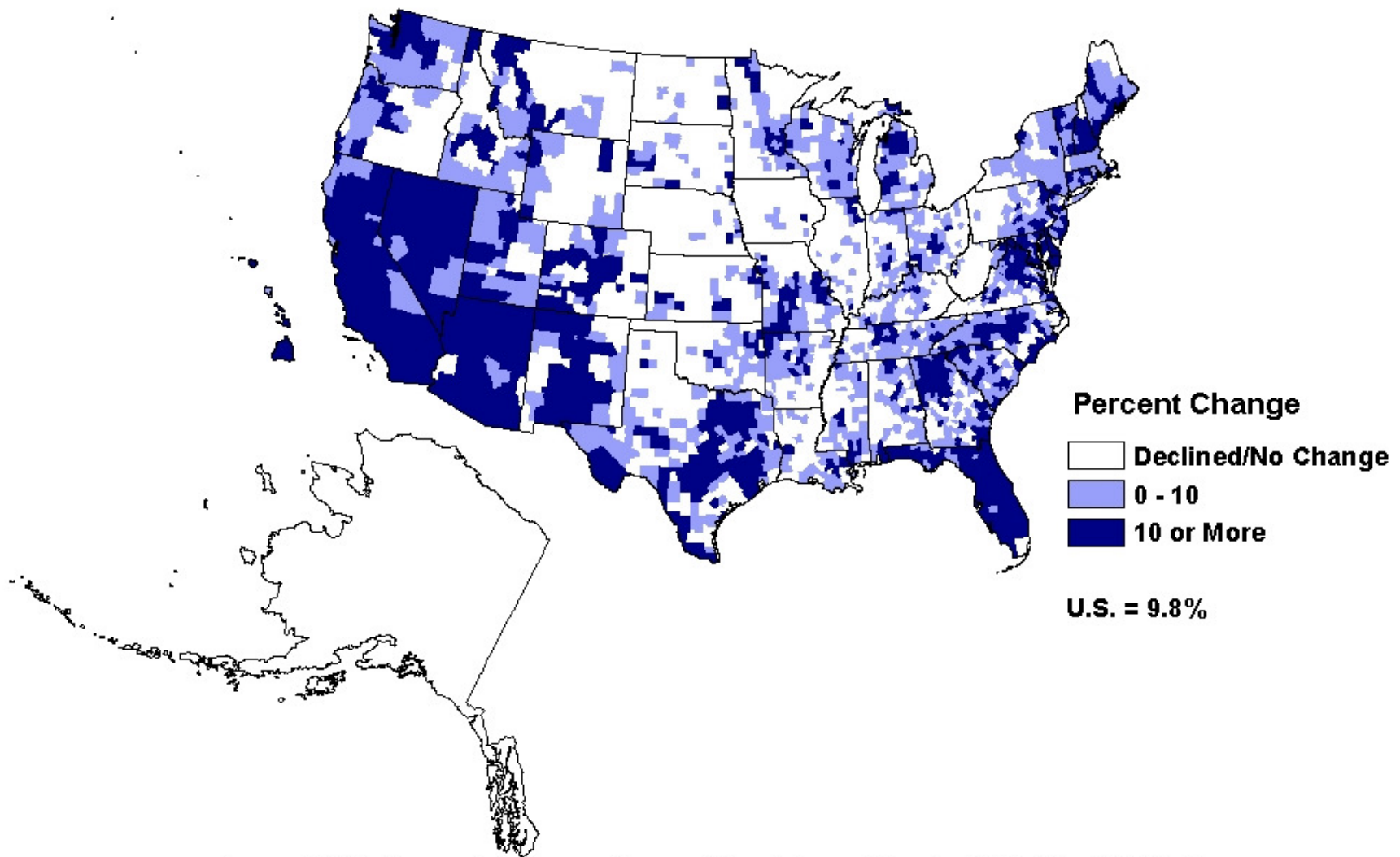# March 9, 2004
Tan-Tar-A

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OSEDA

OUTREACH & EXTENSION
UNIVERSITY OF MISSOURI
LINCOLN UNIVERSITY

Population Change

Percent Change in Total Population, 1980-1990
U.S. Counties

Percent Change

- Declined/No Change
- 0 - 10
- 10 or More

U.S. = 9.8%

Percent Change in Total Population, 1990-2000
U.S. Counties
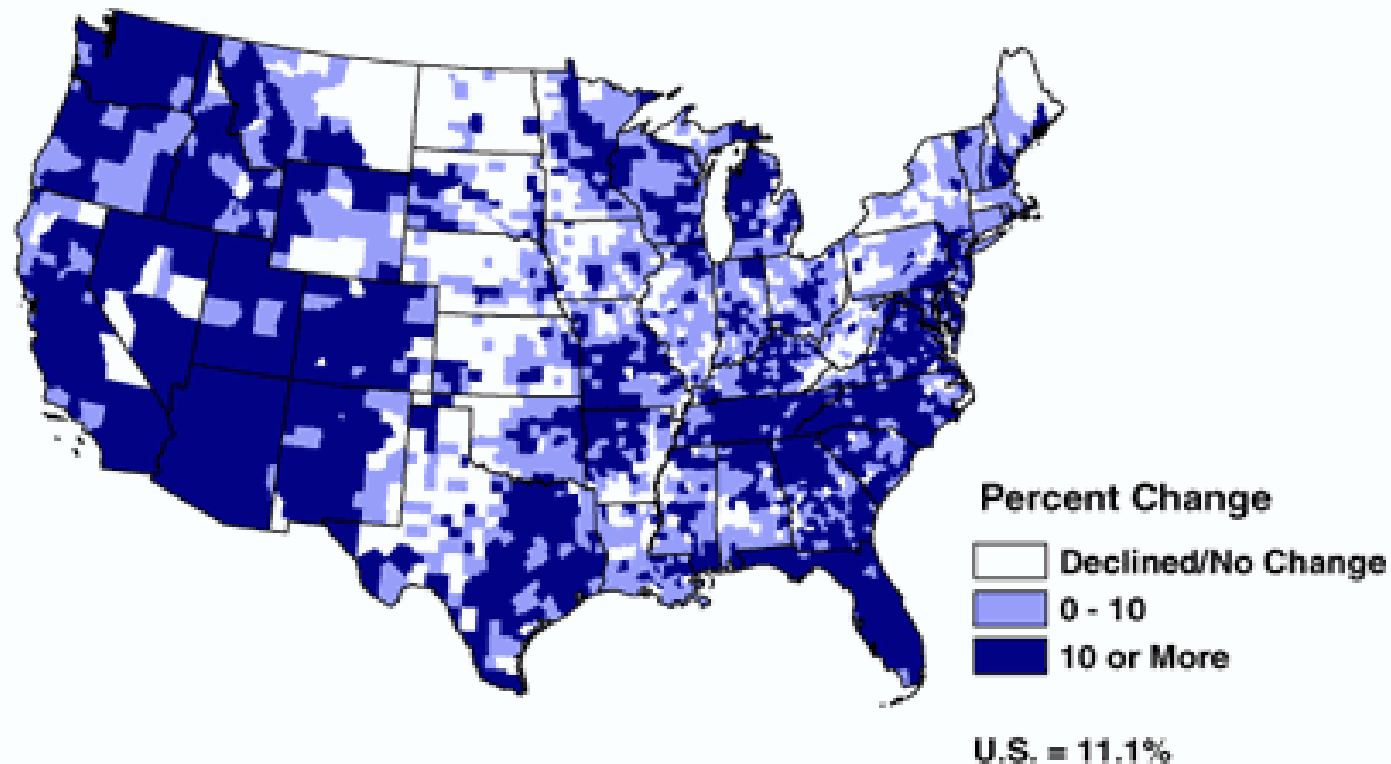
Percent Change

- Declined/No Change
- 0 - 10
- 10 or More

U.S. = 11.1%

Percent Change in Total Population
1990-2000

Declined

0 to 10

10 to 20

20 to 30

30 or More
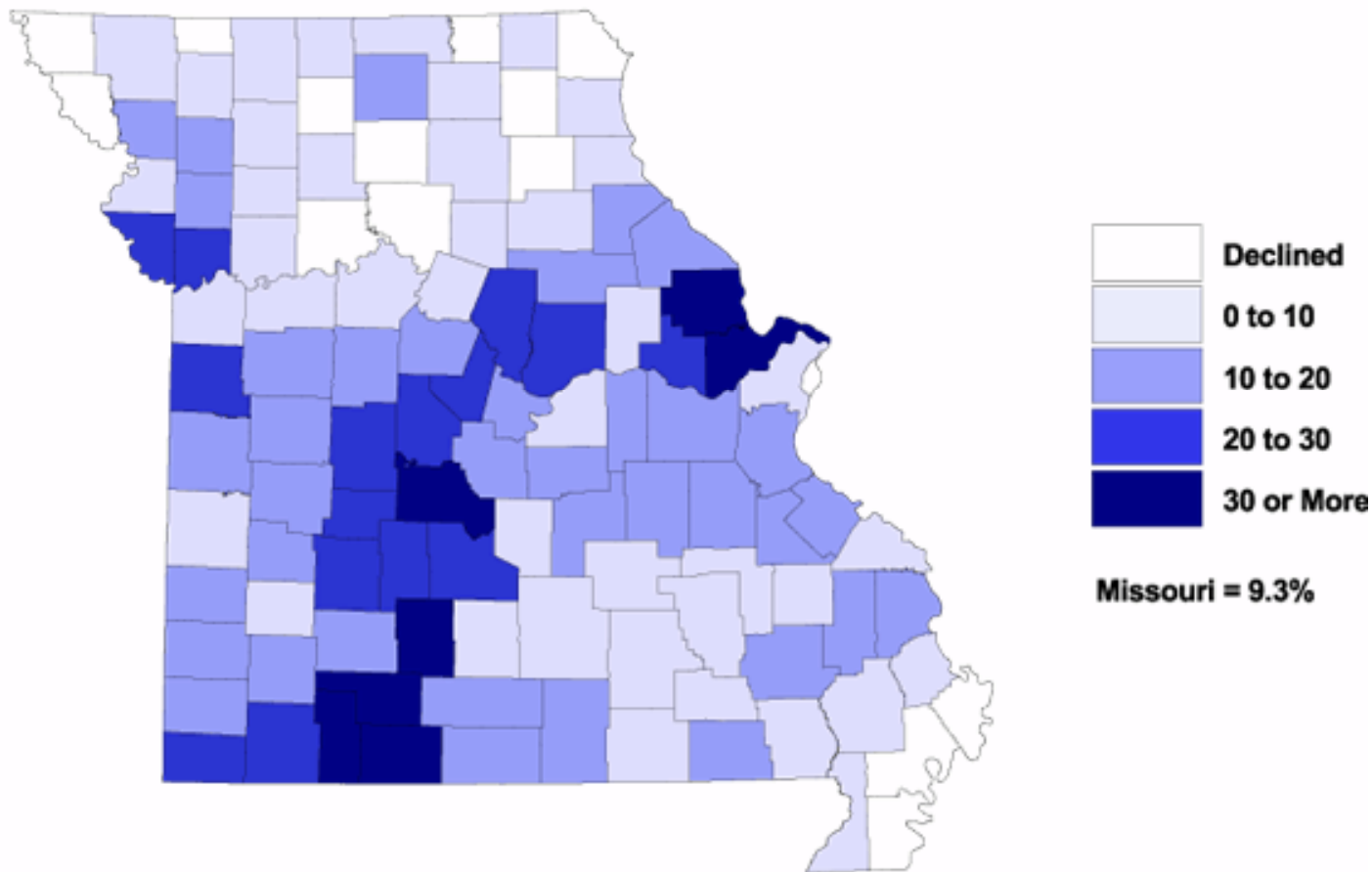
Missouri = 9.3%
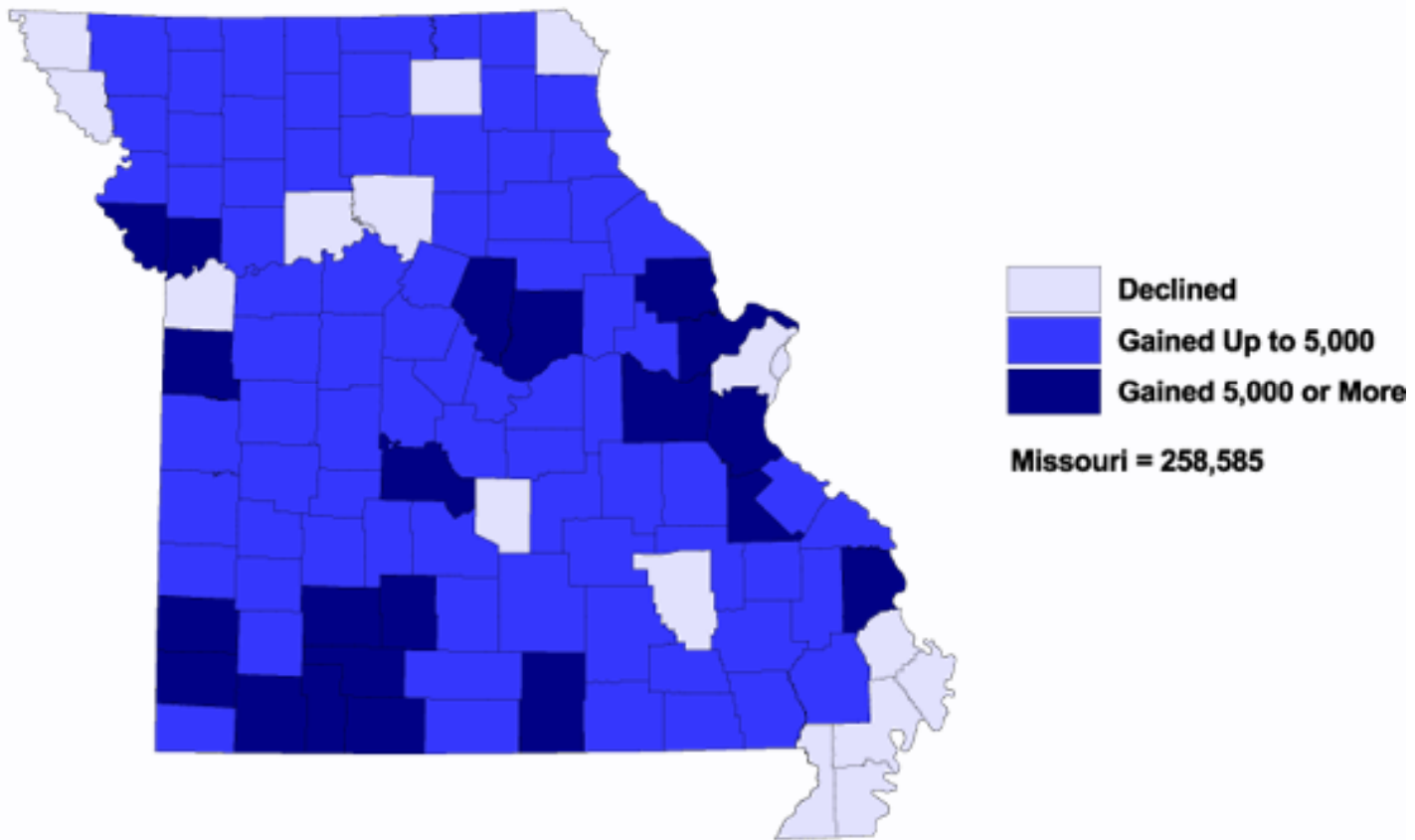
Change in Population 1980-2000

Missouri's population increased from 4,917,000 in 1980 to 5,117,000 in 1990 – an increase of 4.1 percent.

Population increased from 5,117,000 in 1990 to 5,595,000 in 2000 – an increase of 9.3 percent – more than double the increase during the 1980s.

However, national population which increased by 9.8 percent during the 1980s increased by 13.1 percent in 2000. There were 29 states whose population increased by a larger percentage than Missouri during the 1990s.

Therefore, even though Missouri population increased by more than twice the rate in the 1990s than during the 1980s, it dropped from being the 15th most populated state in 1990 to 17th in 2000.

Net Migration of the Total Population
1990-2000

Declined

Gained Up to 5,000

Gained 5,000 or More

Missouri = 258,585

Migration and Change in Population 1990-2000

Population change also occurs either because more people move into a state from other places than move away or the reverse – more people can move away than move in. During the 1980s about 65,000 more people moved away from Missouri than moved in.

A significant difference occurred during the 1990s. During the decade 258,585 more people moved to Missouri to live than moved away. That was the major reason for Missouri's much greater population growth during the 1990s.

In all but 15 counties (as shown on the map) more people moved into the counties during the 1990s than moved away.

Missouri's Metro and Non-Metro Population

	Total Population, 2000	Change, 1990-2000		Components of Change, 1990-2000			
		Number	Percent	Births	Deaths	Natural Increase	Net Migration
Missouri	**5,595,211**	**478,138**	**9.3**	**753,673**	**534,120**	**219,553**	**258,585**
Metropolitan Areas	**3,794,801**	**303,930**	**8.7**	**533,051**	**335,423**	**197,628**	**106,302**
Kansas City	1,070,052	92,061	9.4	151,194	92,855	58,339	33,722
St. Louis	2,003,762	100,232	5.3	289,492	181,937	107,555	-7,323
Remaining MSAs	720,987	111,637	18.3	92,365	60,631	31,734	79,903
NonMetro Counties	**1,800,410**	**174,208**	**10.7**	**220,637**	**198,711**	**21,926**	**152,282**

SOURCE: USDC, Bureau of the Census, Census of Population and Housing [2000 SF1; 1990 STF1]
Table produced by: University Outreach and Extension, Office of Social and Economic Data Analysis (Feb. 2002)

Natural Increase in Total Population
1990-2000
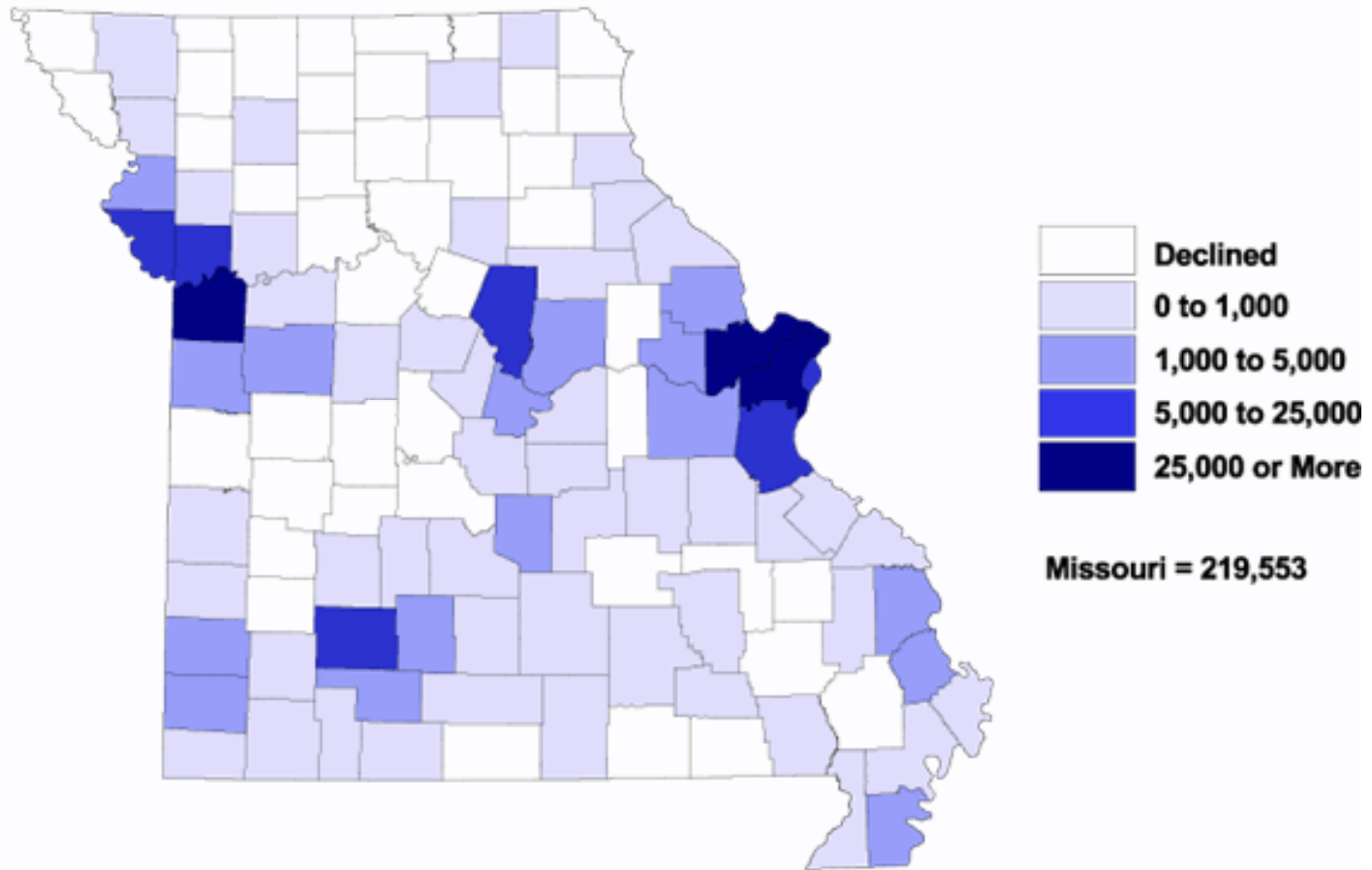
Declined
0 to 1,000
1,000 to 5,000
5,000 to 25,000
25,000 or More

Missouri = 219,553

Natural Change in Population 1990-2000

Population in any state, county, or town changes because of a difference in births and deaths. If there are more deaths than births population will go down. If there are more births than deaths population will go up. That is called **natural change**. The table shows 219,553 more births than deaths during the 1990s.
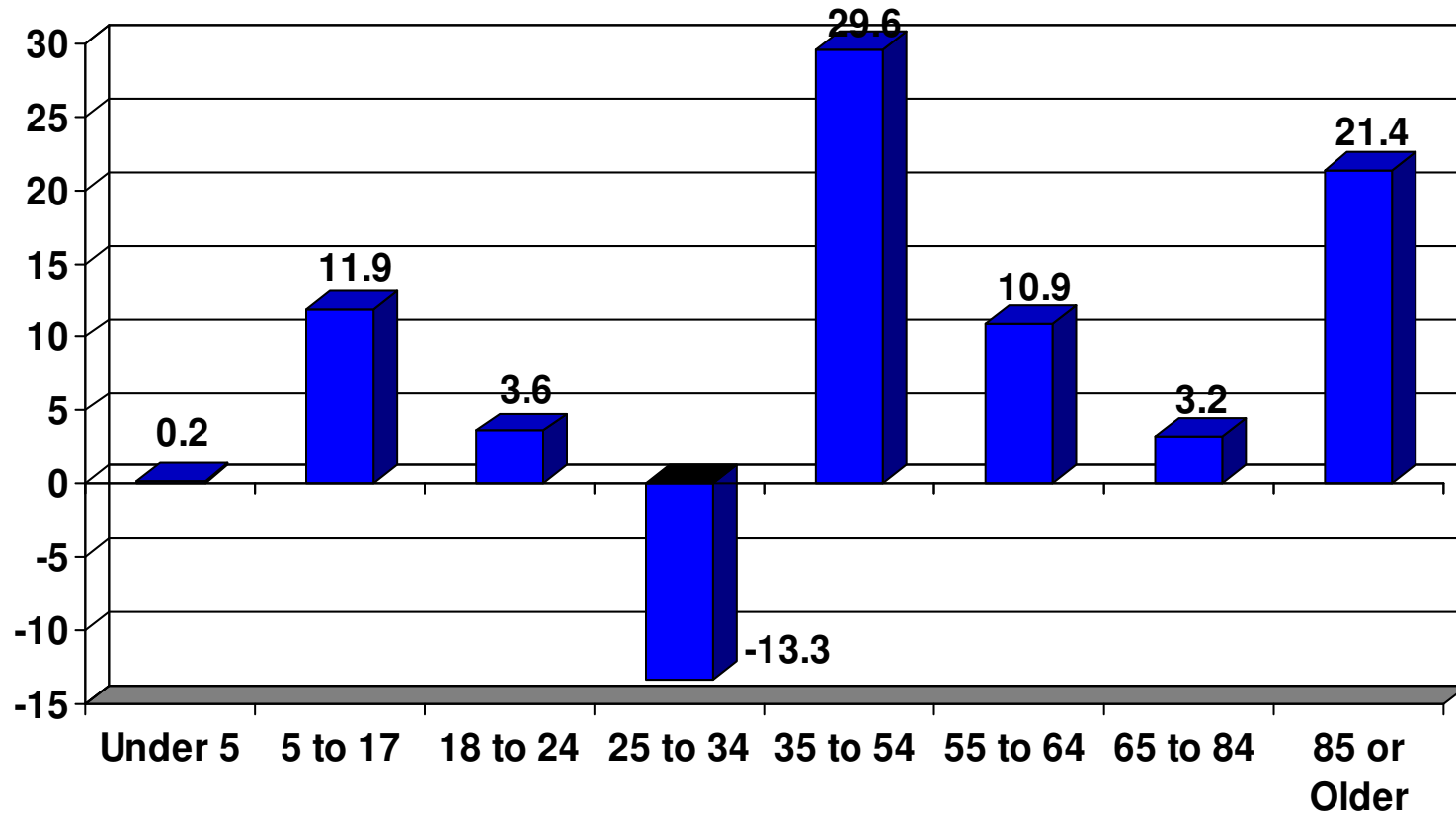
 The map shows that a majority of counties in rural north Missouri and many in West Central and Southeast had more deaths than births.

 The map also shows the greatest natural increases occurred in suburban St. Louis and Kansas City.

 Significant natural increases also occurred in the Columbia and Springfield areas.

Population by Age

Percent Change in Missouri Population by Selected Age Cohorts, 1990-2000

Age Cohort	Percent Change
Under 5	0.2
5 to 17	11.9
18 to 24	3.6
25 to 34	-13.3
35 to 54	29.6
55 to 64	10.9
65 to 84	3.2
85 or Older	21.4

Percent Change in Population Cohorts 1990-2000

As shown on the adjoining graph by far the greatest change in the size of an age cohort was that part of the population age 35-54 at the time of the 2000 Census. That part of the population is often referred to as the "Baby Boom" generation.

Because that population moved from the 25-44 age range in 1990 to 35-54 in 2000, they left behind a much smaller population. Therefore, the graph shows a 13 percent decline in the population age 25-34 by 2000. But that is only because that age group was very large in 1990 and was significantly smaller in 2000.

Because the "baby boom" generation has moved beyond usual child-bearing years and left behind a much smaller cohort (18-34), the size of the 0-5 age cohort did not increase during the 1990s.

The population age 65-84 increased by a very small amount during the 1990s. That is primarily because many of the people in that age cohort were born during the depression of the 1930s when birth rates were very low.

Family Households with Children 2000

There were 2.2 million households in Missouri in 2000. Of those two-thirds (1.48 million) were classified as "family households". Family households are those that are occupied by two or more persons who are related to each other. Of the family households, 699,779 had their own children under age 18 living in the household (31.9 percent of all households). There were 776,637 family households without children at home (35.4 percent of all households).

Family households without children increased by 15.2 percent during the 1990s while family households with children increased by only 0.8 percent.

The adjoining map shows percent of family households with children as a percent of all households. The map shows that the smallest proportion of family households with children are in rural North Missouri and the rural Southwest.

The map also shows the highest proportion of family households with children to be in the Kansas City and St. Louis outlying suburban counties, as well as Central Missouri and the Springfield suburban counties.

Senior Population Change

Percent of Population Age 55 to 64, 2000
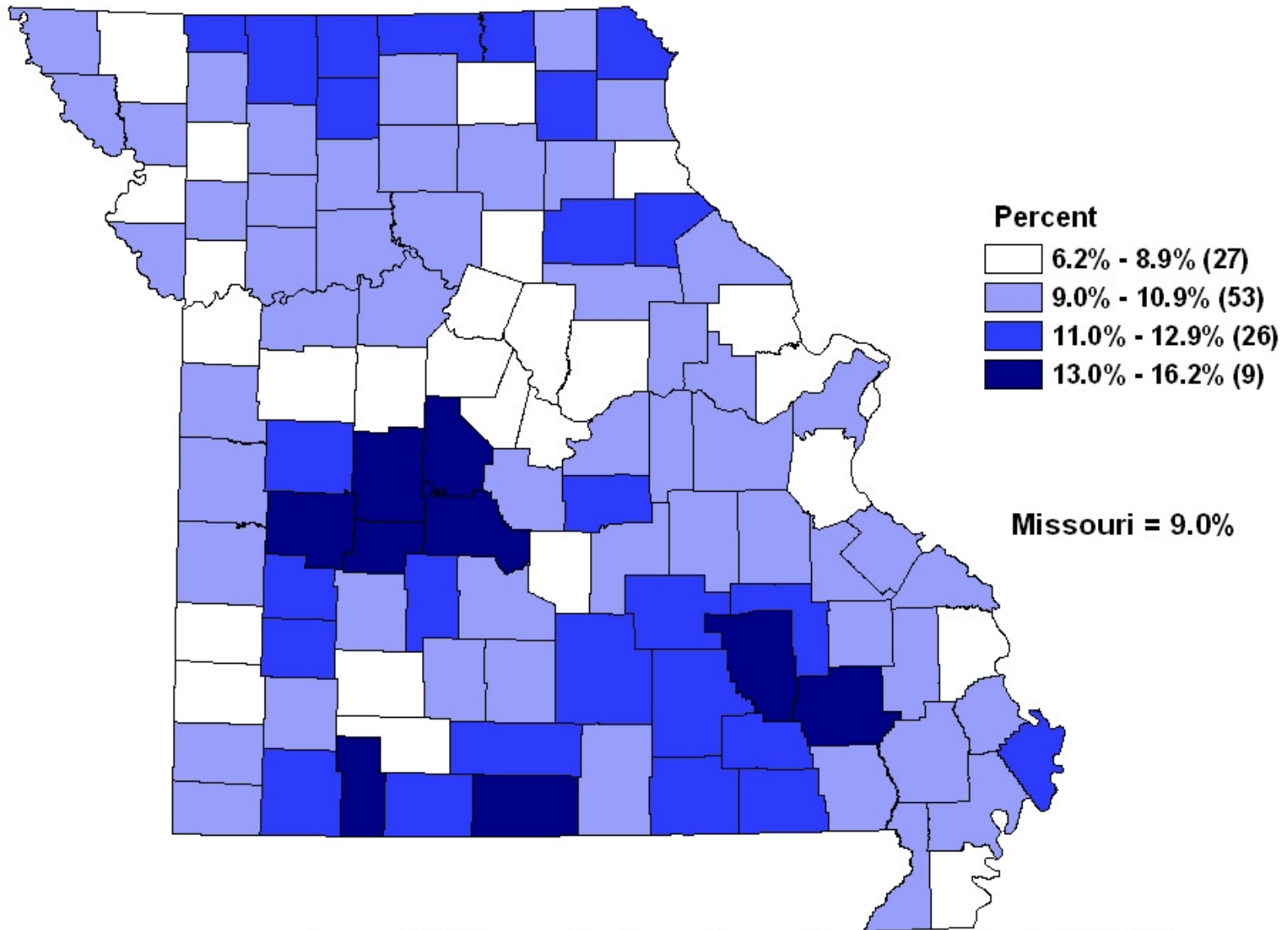
Percent

- 6.2% - 8.9% (27)
- 9.0% - 10.9% (53)
- 11.0% - 12.9% (26)
- 13.0% - 16.2% (9)

Missouri = 9.0%

Change in Population Age 65–84

The map clearly shows the counties with the greatest increase in 65-84 population during the 1990s to be suburban Kansas City and St. Louis, Columbia, Lake of the Ozarks and the Springfield-Branson area. This is a trend different from the previous three to four decades.

It is significant that most counties in rural North, Southeast and West Central Missouri declined in population age 65-84 during the 1990s. There were 63 rural counties whose 65-84 population declined. The population of that cohort declined by 10.7 percent in the Northeast region and 8.2 percent in the Northwest region.
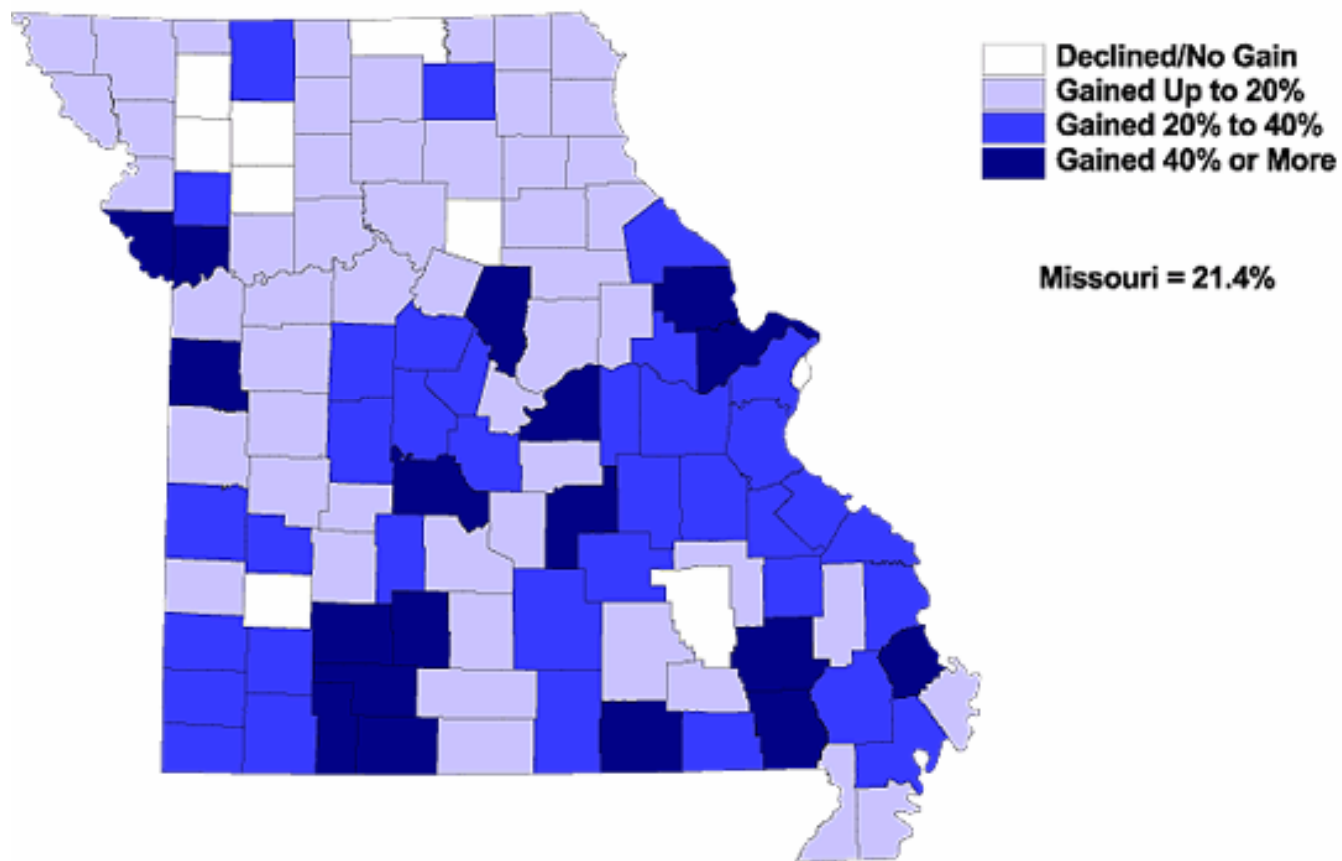
The 65-84 population has proven to be relatively mobile, moving to locations providing services and other social, economic and environmental amenities. Their movements have a significant effect on local economies and service providers.

Percent Change in Population Age 65 to 84 Years
1990-2000

Declined/No Gain
Gained Up to 20%
Gained 20% or More

Missouri = 3.2%
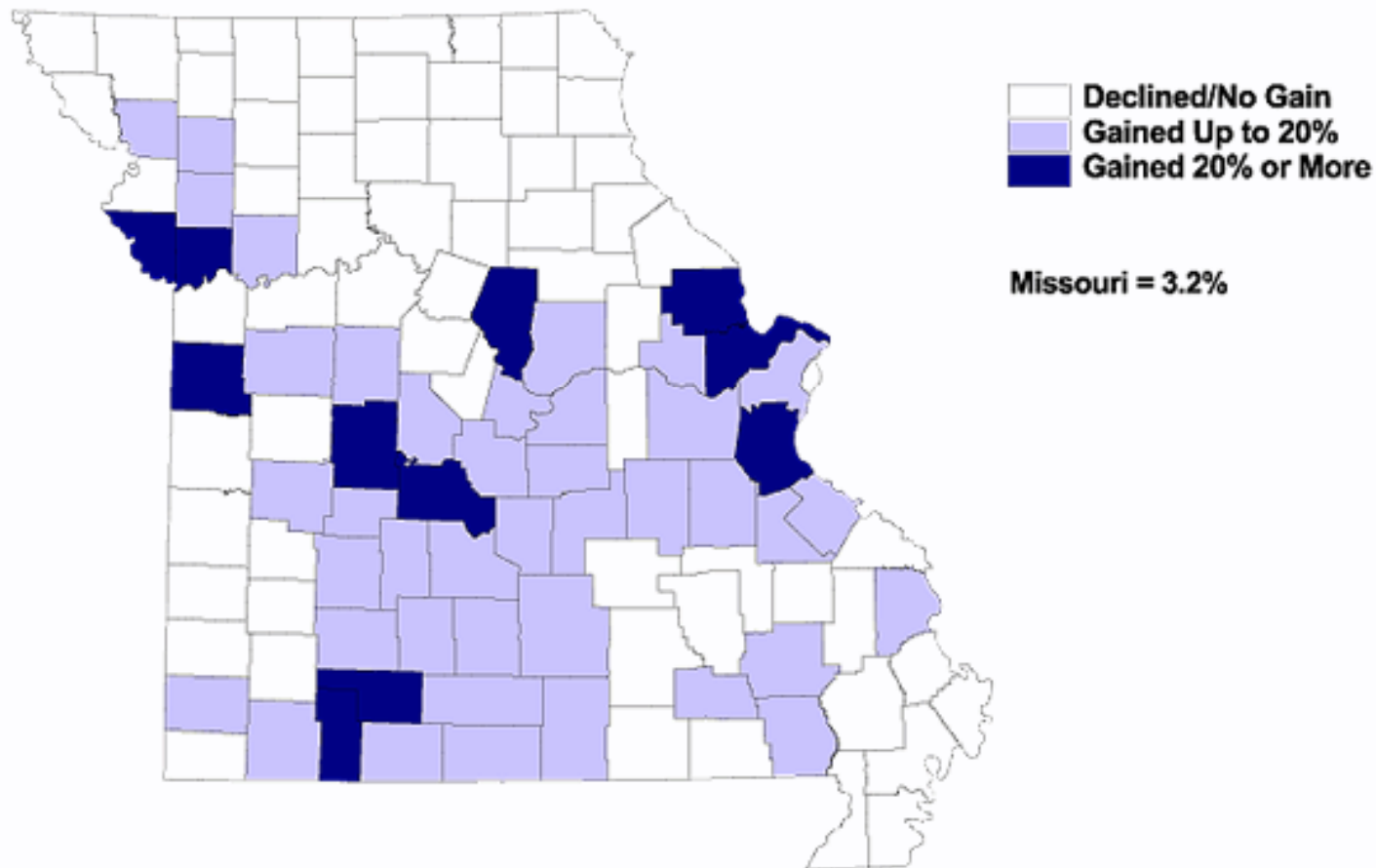
SOURCE: USDC, Bureau of the Census. Census of Population and Housing [2000 SF-1; 1990 STF-1]
Map Produced by: University Outreach and Extension, Office of Social and Economic Data Analysis (E.J. Cleveland, 11/01)

Percent Change in Population Age 85 Years and Older
1990-2000

Declined/No Gain
Gained Up to 20%
Gained 20% to 40%
Gained 40% or More

Missouri = 21.4%

Change in Population 85 and Older
1990-2000

The population 85 and over has been one of the fastest growing cohorts of the population for the past three to four decades. People are living longer. In Missouri the 85 and over population increased by 21.4 percent during the 1990s. Only eight counties and the City of St. Louis experienced a decline during the 1990s.

The greatest increases occurred in the St. Louis, Kansas City, Columbia, Springfield-Branson, and Lake of the Ozarks areas. Significant increases are also associated with counties having major health care services.

Senior Households

Households In Which Householder is Age 65 and Older

The extent to which households are occupied by seniors is reflected in the adjoining map. There are 40 counties, all rural, in which more than 30 percent of households are headed by a person age 65 or older. The smallest percent of households headed by a senior is found in suburban counties of Kansas City, St. Louis and Springfield. There is another cluster in Central Missouri including Columbia, Jefferson City and Fulton.

 The next map shows that a high percent of senior households are occupied by one person age 65 or older.   The highest percentage (44 percent or more) of senior households is found throughout rural north Missouri. Other clusters are found in the Southeast region, especially the Bootheel, and along the Kansas border in the West Central region.

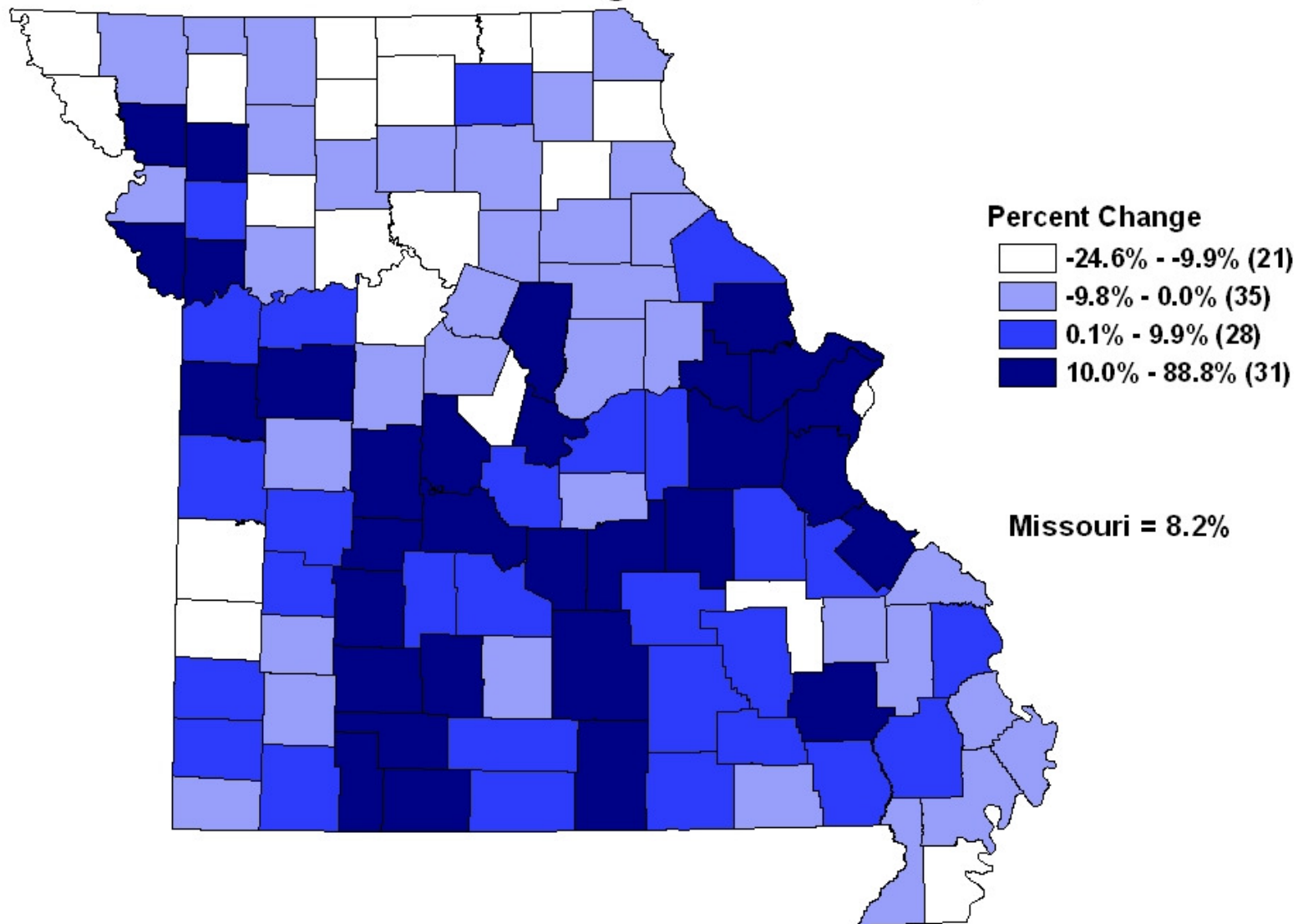# Percent of All Households Where Householder is 65 Years or Older, 2000
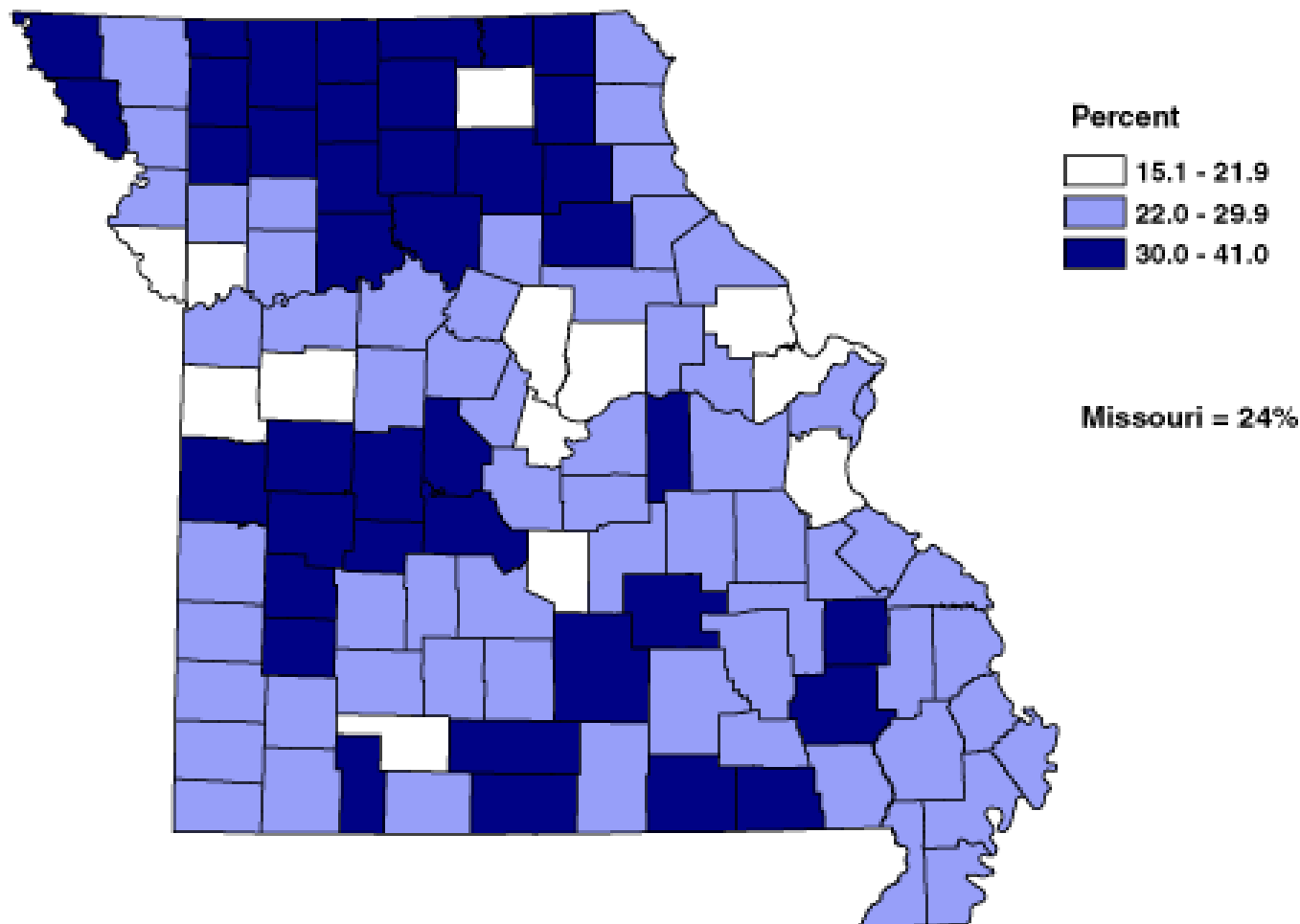
Percent

- 15.1 - 21.9
- 22.0 - 29.9
- 30.0 - 41.0

Missouri = 24%

Percent Change Owner Occupied Housing Householders Age 65 and Older, 2000

Percent Change

- -24.6% - -9.9% (21)
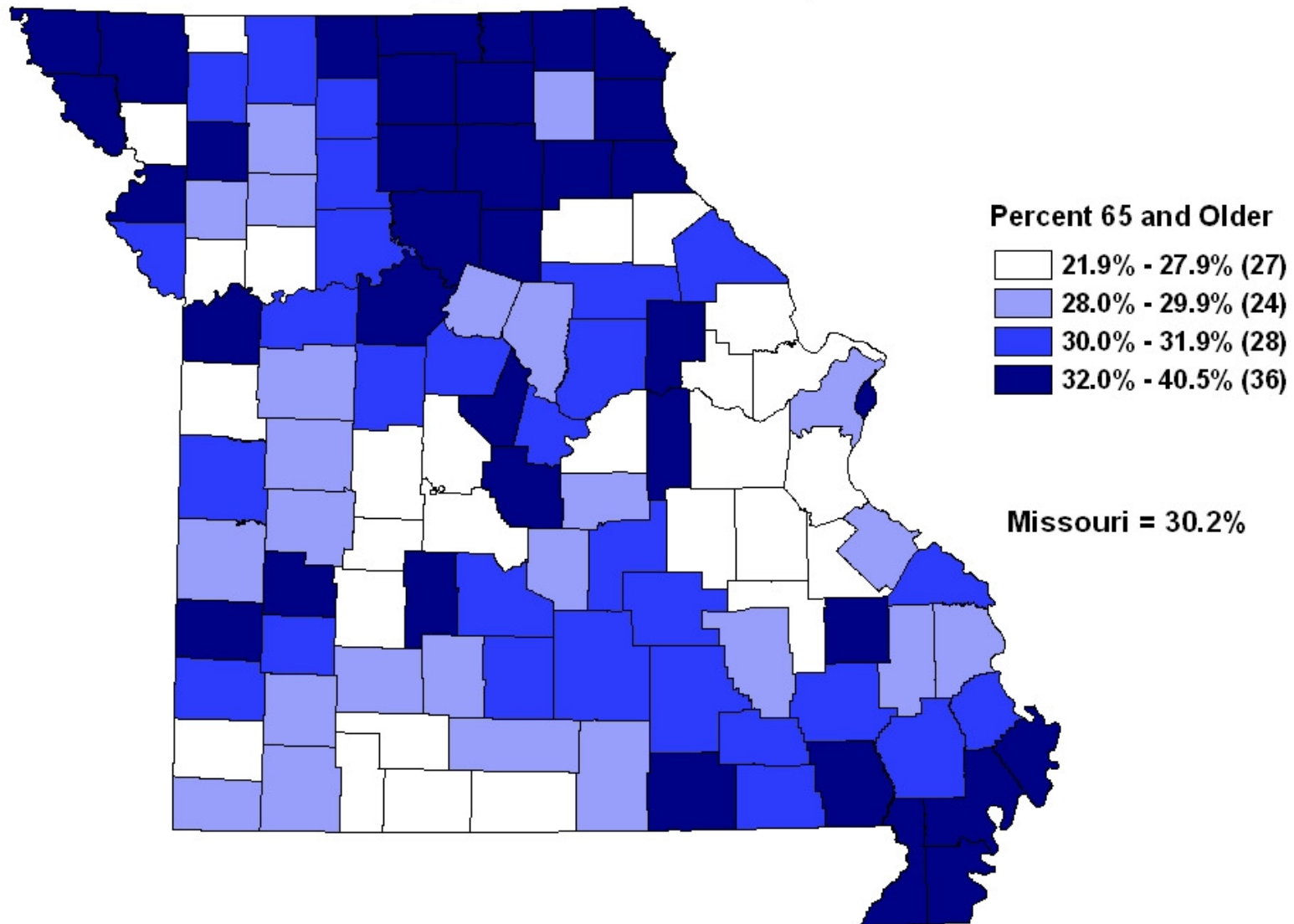- -9.8% - 0.0% (35)
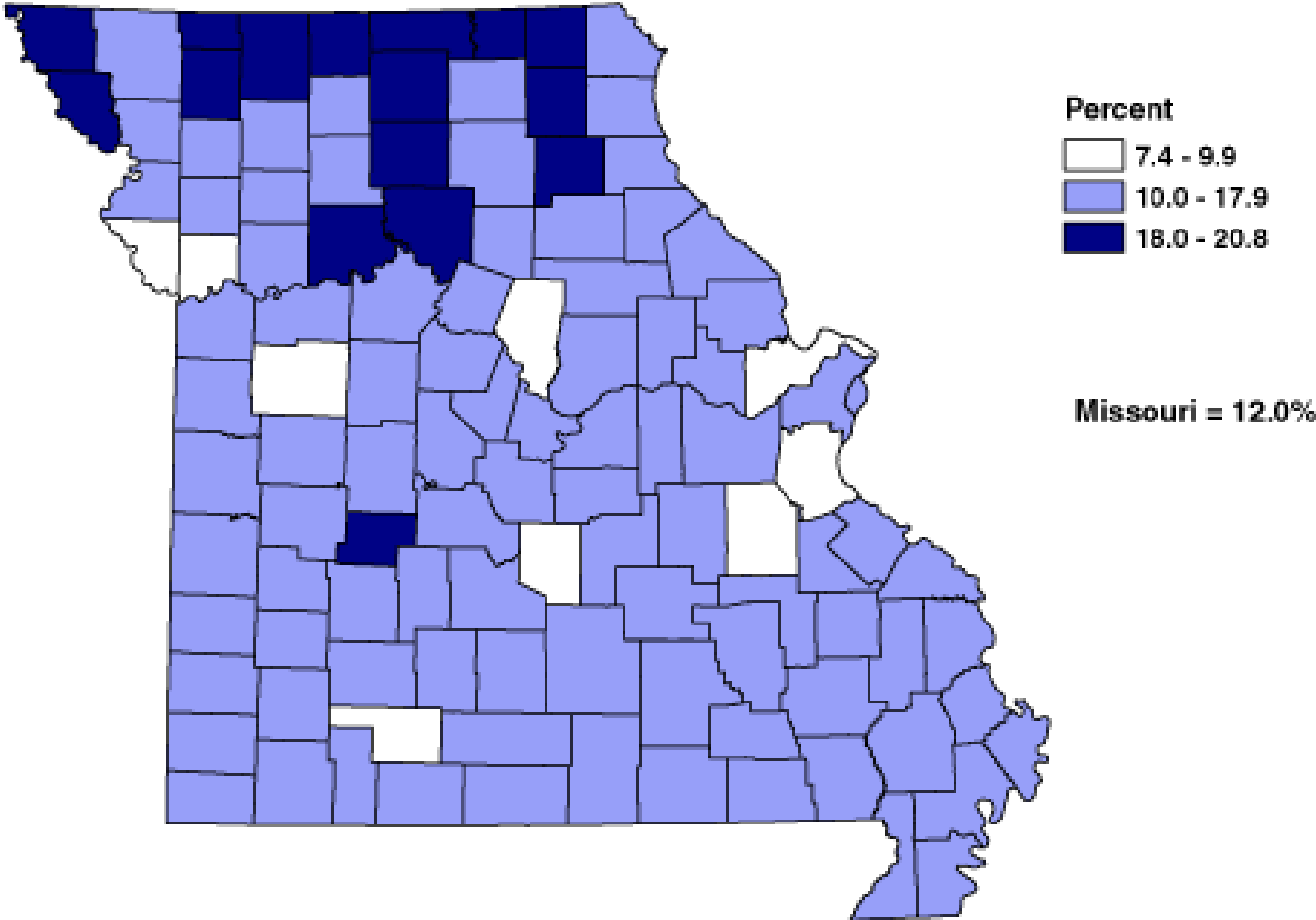- 0.1% - 9.9% (28)
- 10.0% - 88.8% (31)

Missouri = 8.2%

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared by: The Office of Social and Economic Data Analysis - (OSEDA)
Map Generated on 03.08.2004

Percent of One Person Households
With Person Age 65 Years or Older, 2000
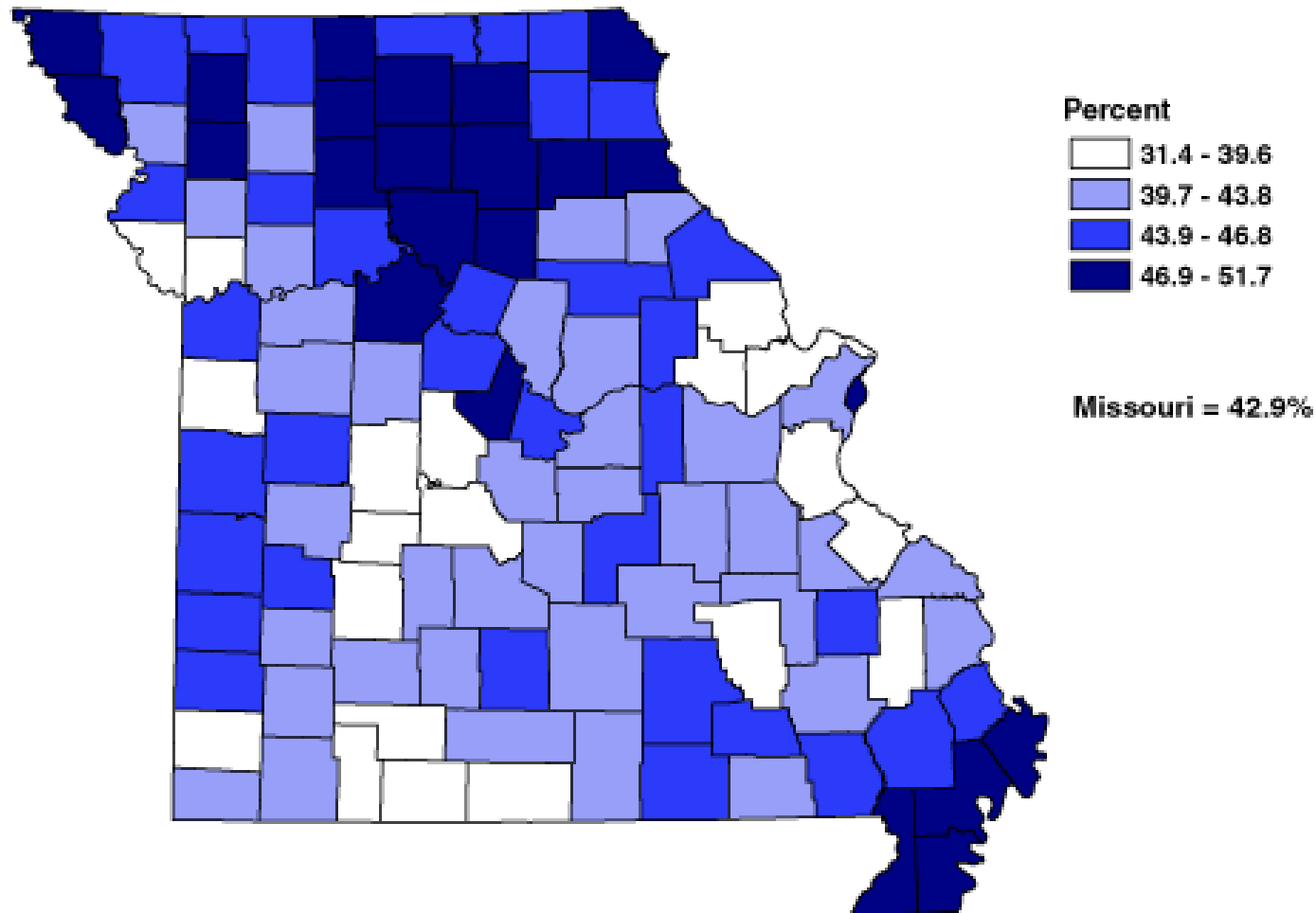
Percent

☐	31.4 - 39.6
☐	39.7 - 43.8
☐	43.9 - 46.8
☐	46.9 - 51.7

Missouri = 42.9%

Percent of NonFamily Householders Living Alone: Age 65 and Older, 2000

Percent 65 and Older

- 21.9% - 27.9% (27)
- 28.0% - 29.9% (24)
- 30.0% - 31.9% (28)
- 32.0% - 40.5% (36)

Missouri = 30.2%

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared by: The Office of Social and Economic Data Analysis - (OSEDA)
Map Generated on 03.08.2004

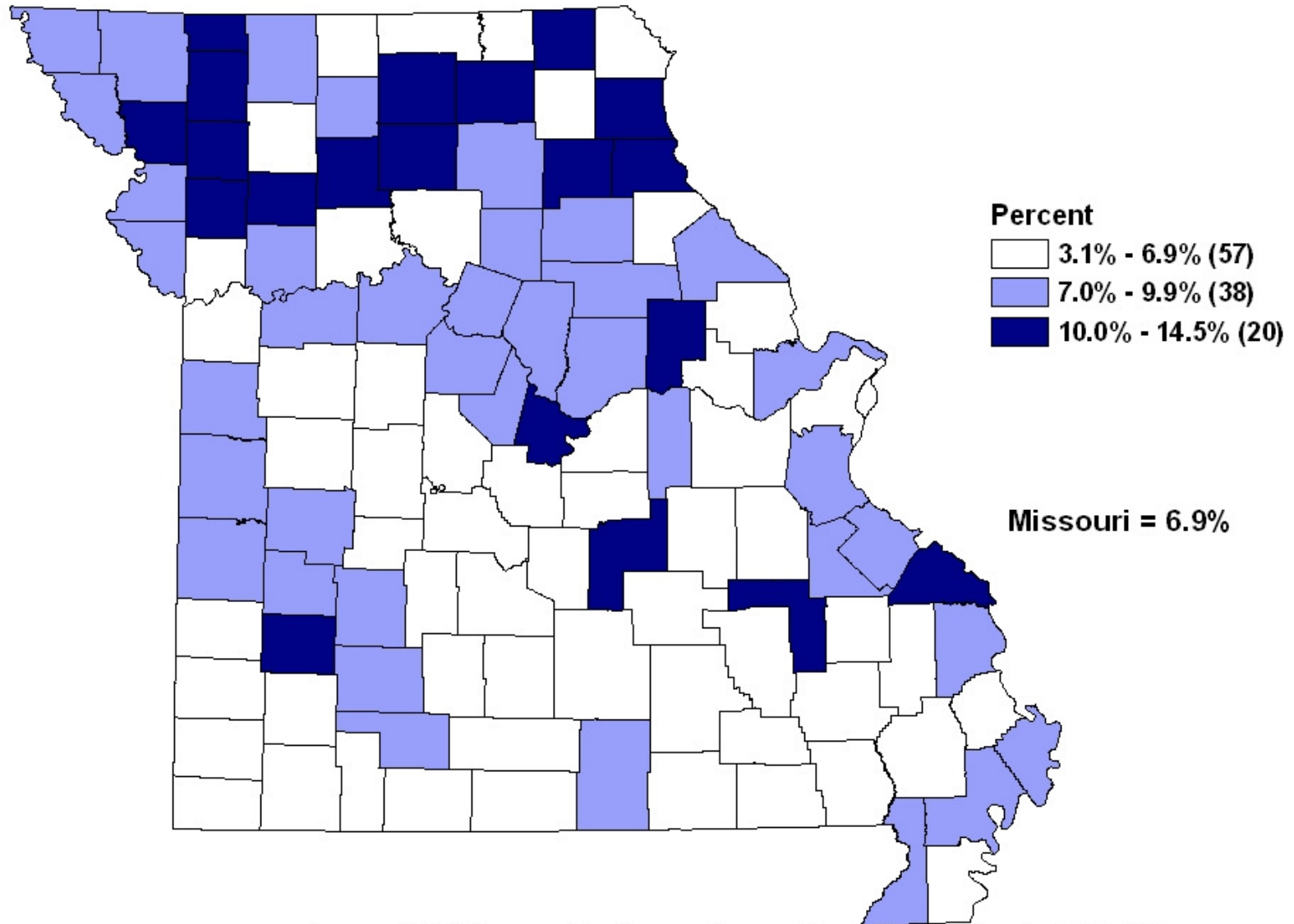# Households in Which Householder is Age 75 and Older

As shown on the adjoining map, households in which the householder is age 75 or over account for between 10 and 18 percent of households in most counties. There is, however, a concentration of counties in the rural north region in which more than 18 percent of householders are 75 or over.

The next adjoining map shows that for Missouri as a whole 51 percent of households in which the householder is 75 of older, the householder is the only occupant. The highest concentration of single occupant households is found across the rural north region. Other clusters of several counties are scattered across southern Missouri.

Percent of All Households Where Householder is 75 Years or Older, 2000

Percent

- 7.4 - 9.9
- 10.0 - 17.9
- 18.0 - 20.8

Missouri = 12.0%

Percent of One Person Households
With Person Age 75 Years or Older, 2000

Percent

☐ 41.9 - 48.1
☐ 48.2 - 52.3
☐ 52.4 - 55.6
☐ 55.7 - 60.4

Missouri = 51.0%

Percent of Group Quarter Population, 1990

Percent

- ☐ 3.1% - 6.9% (57)
- ☐ 7.0% - 9.9% (38)
- ■ 10.0% - 14.5% (20)

Missouri = 6.9%

Percent of Group Quarter Population, 2000

Percent

- ☐ 2.3% - 6.9% (55)
- ▨ 7.0% - 9.9% (44)
- ■ 10.0% - 14.9% (16)

Missouri = 6.8%

St. Louis County Senior Population

CensusTract
Neighborhood Areas

Jamestown

Riverwood

Black Jack

Spanish Lake

Bridgeton

Florissant

Ferguson

Moline

Berkeley/ Airport

Bellefontn Nbrs/ Riverview

Maryland Heights

St. Ann

Jennings

Overland

Normandy

Parkway North

Wellston/ Pagedale

Creve Coeur

Ladue/ Clayton

University City/Olivette North

University City/Olivette South

West Chesterfield

Chesterfield

Town and Country

Maplewood/Richmond Heights

North Ballwin/ Manchester

Des Peres/ Valley Park

Kirkwood/ Glendale

Webster Groves

South Ballwin/ Manchester

Crestwood/ Sunset Hills

Shrewsbury/ Affton

Lindbergh

Lemay

Southwest

Sappington/ Concord

Mehlville

•There are nearly 145,000 seniors in St. Louis County or 14.1 percent of total population - a larger proportion than the nation (13 percent) or the state (13.5 percent).

•St. Louis County's senior population is growing four times faster than the county population overall and twice as fast as the senior population in Missouri.

•About half the senior population is 75 and older, and 12 percent are 85 and older. The oldest seniors have been growing more rapidly than younger seniors.

Percent Population Age 65 and Older
by Census Tract Neighborhood Areas, 2000
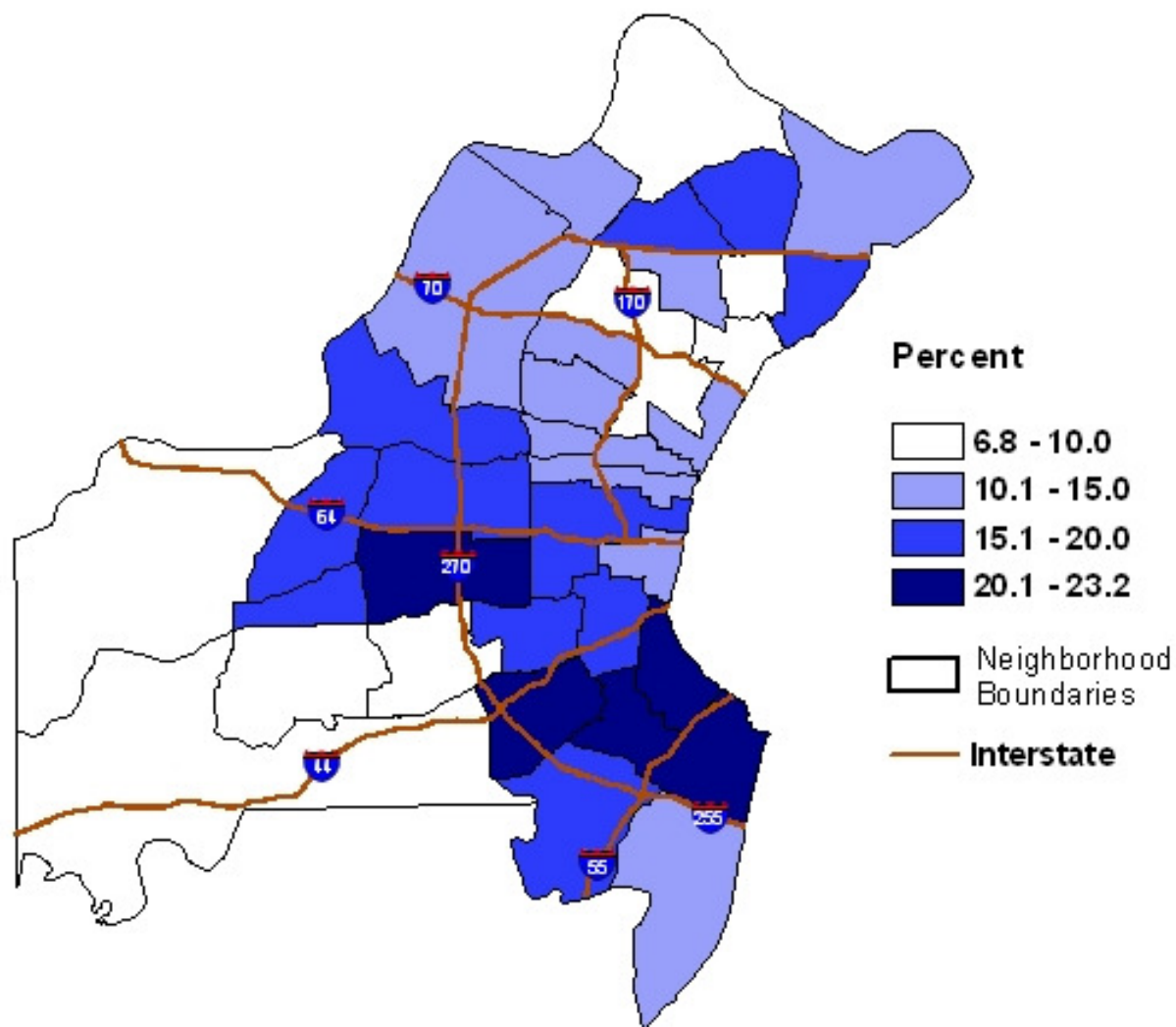
Percent

- 6.8 - 10.0
- 10.1 - 15.0
- 15.1 - 20.0
- 20.1 - 23.2

Neighborhood Boundaries

Interstate

Percent of Population Age 65 and Older, 2000

Percent

- 7.9 %- 14.9% (40)
- 15.0% - 19.9% (58)
- 20.0% - 26.0% (17)

Missouri = 13.5%
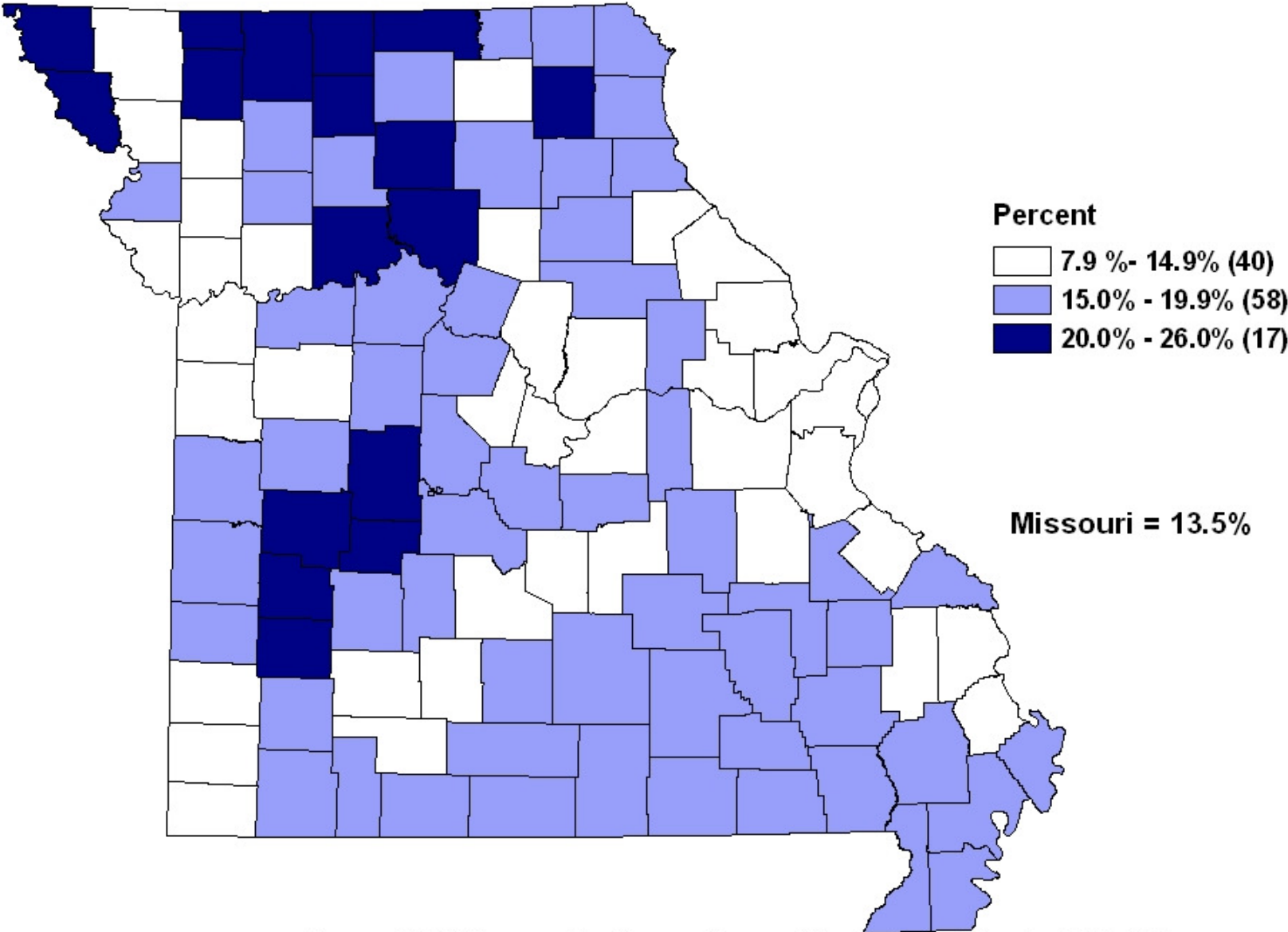
Population by Age & Sex 2000
Ladue/Clayton Area

Male	Age	Female
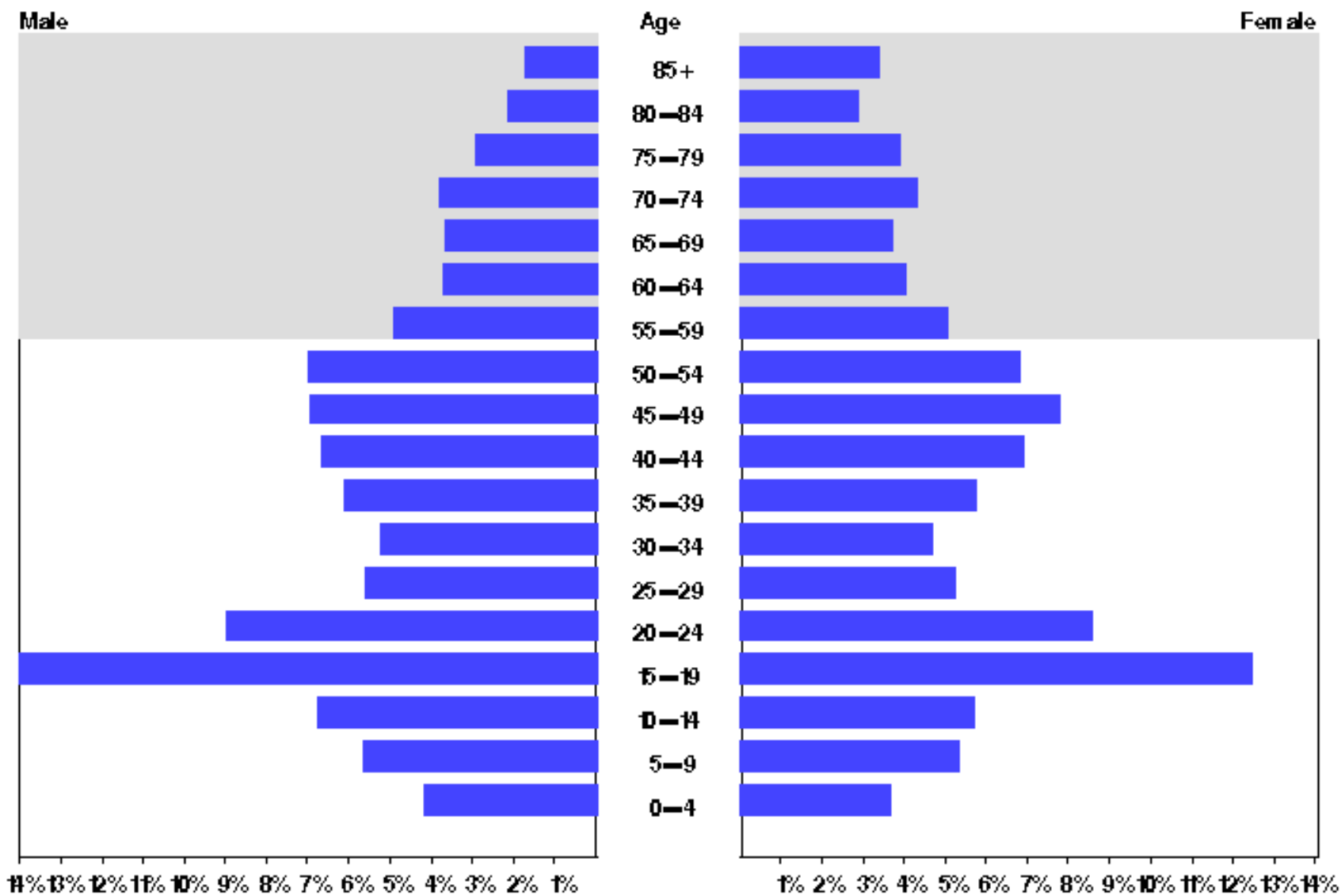
Population by Age & Sex 2000
Wellston/Pagedale Area

Male | Age | Female

	85+	
	80—84	
	75—79	
	70—74	
	65—69	
	60—64	
	55—59	
	50—54	
	45—49	
	40—44	
	35—39	
	30—34	
	25—29	
	20—24	
	15—19	
	10—14	
	5—9	
	0—4	

10% 9% 8% 7% 6% 5% 4% 3% 2% 1%   1% 2% 3% 4% 5% 6% 7% 8% 9% 10%
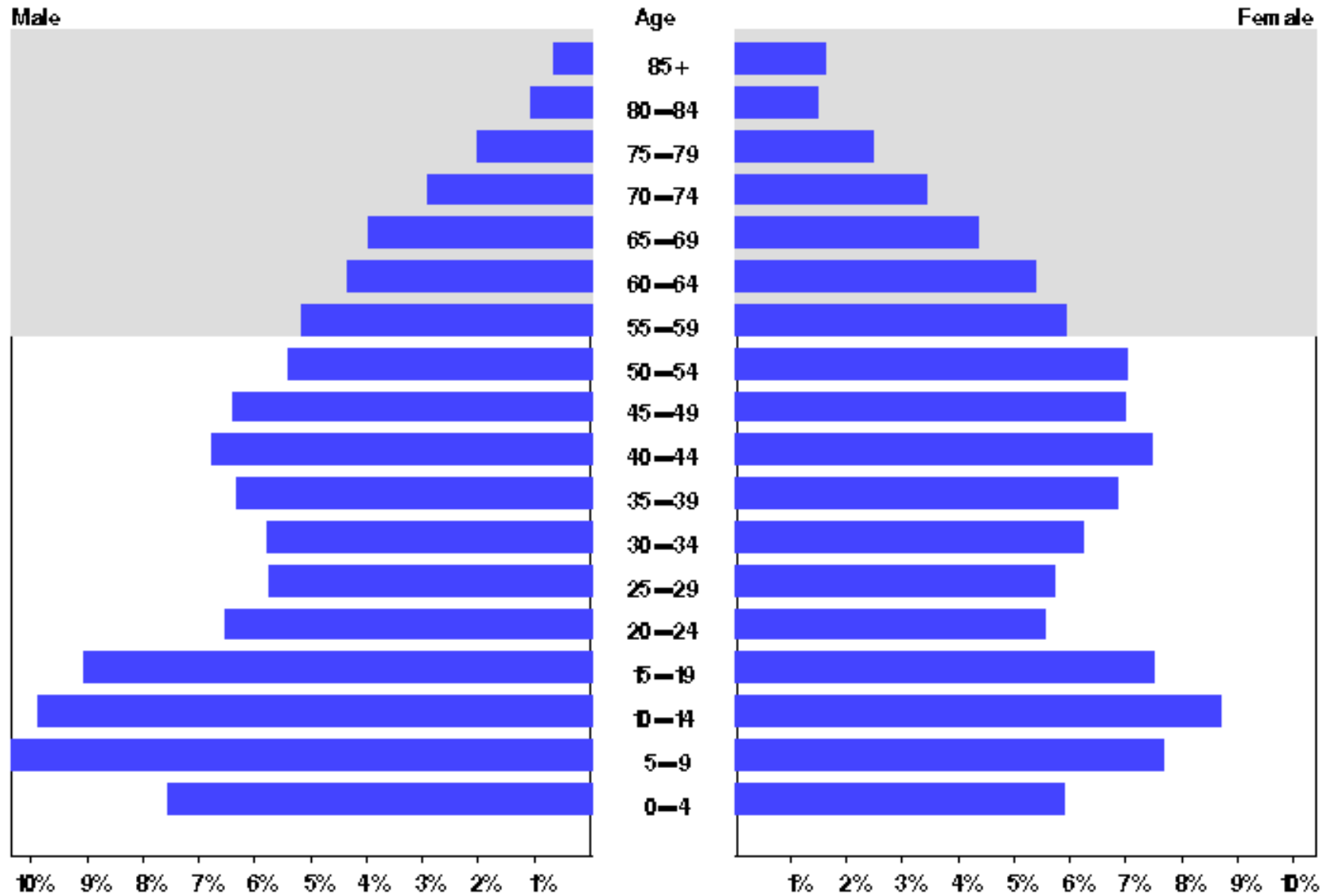
Percent Females Population Age 65 and Older by Census Tract Neighborhood Areas, 2000
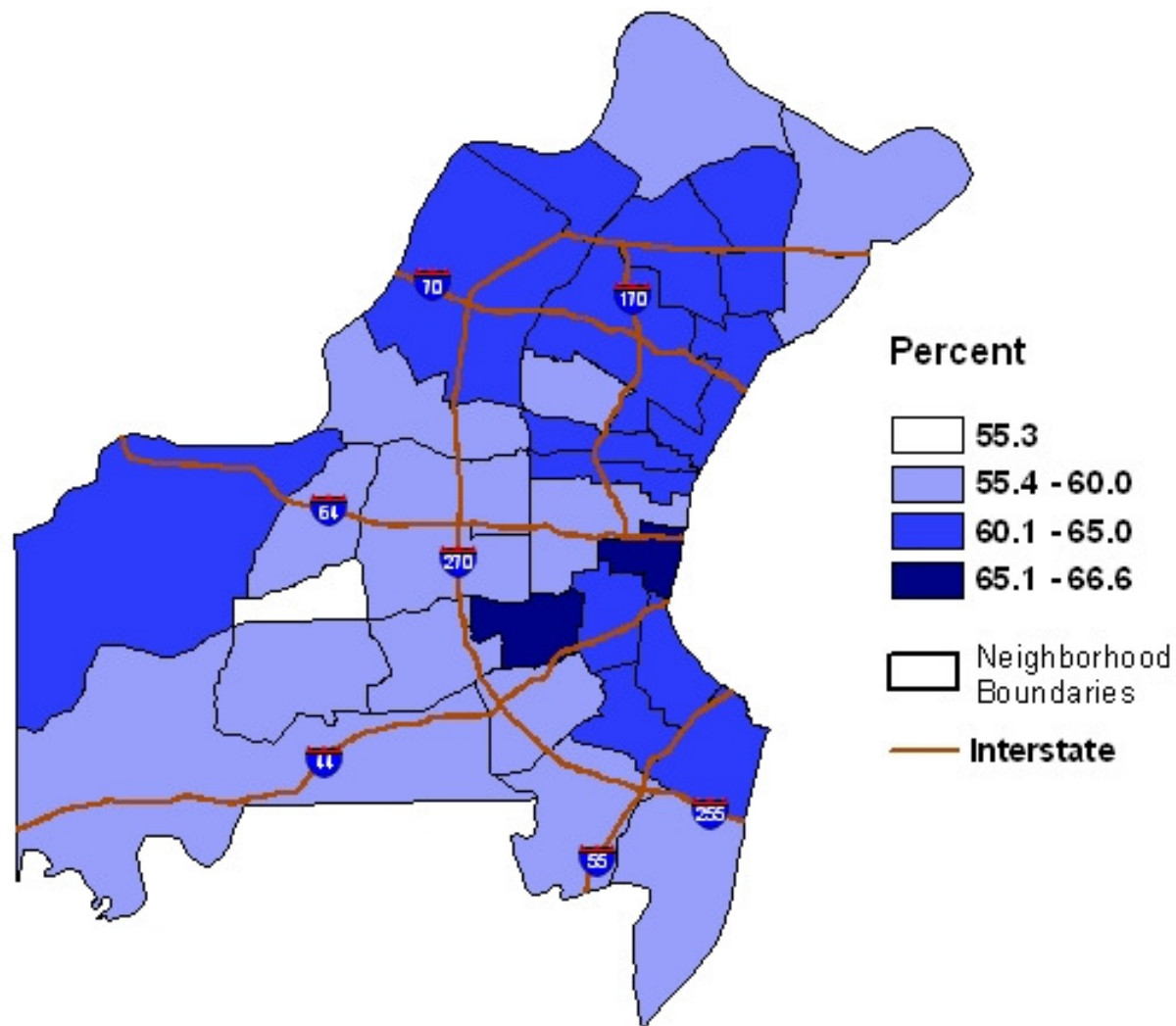
Percent

|	
☐	55.3
☐	55.4 - 60.0
☐	60.1 - 65.0
☐	65.1 - 66.6

☐ Neighborhood Boundaries

— Interstate

•Over 41,000 seniors in St. Louis County were living alone in 2000-about 29 percent of the 65 and older population. Maplewood/Richmond Heights had the largest proportion living alone (43 percent) and Town and Country the smallest proportion (16 percent).

Percent Population Age 65 and Older That Are Married Couples by Census Tract Neighborhood Areas, 2000
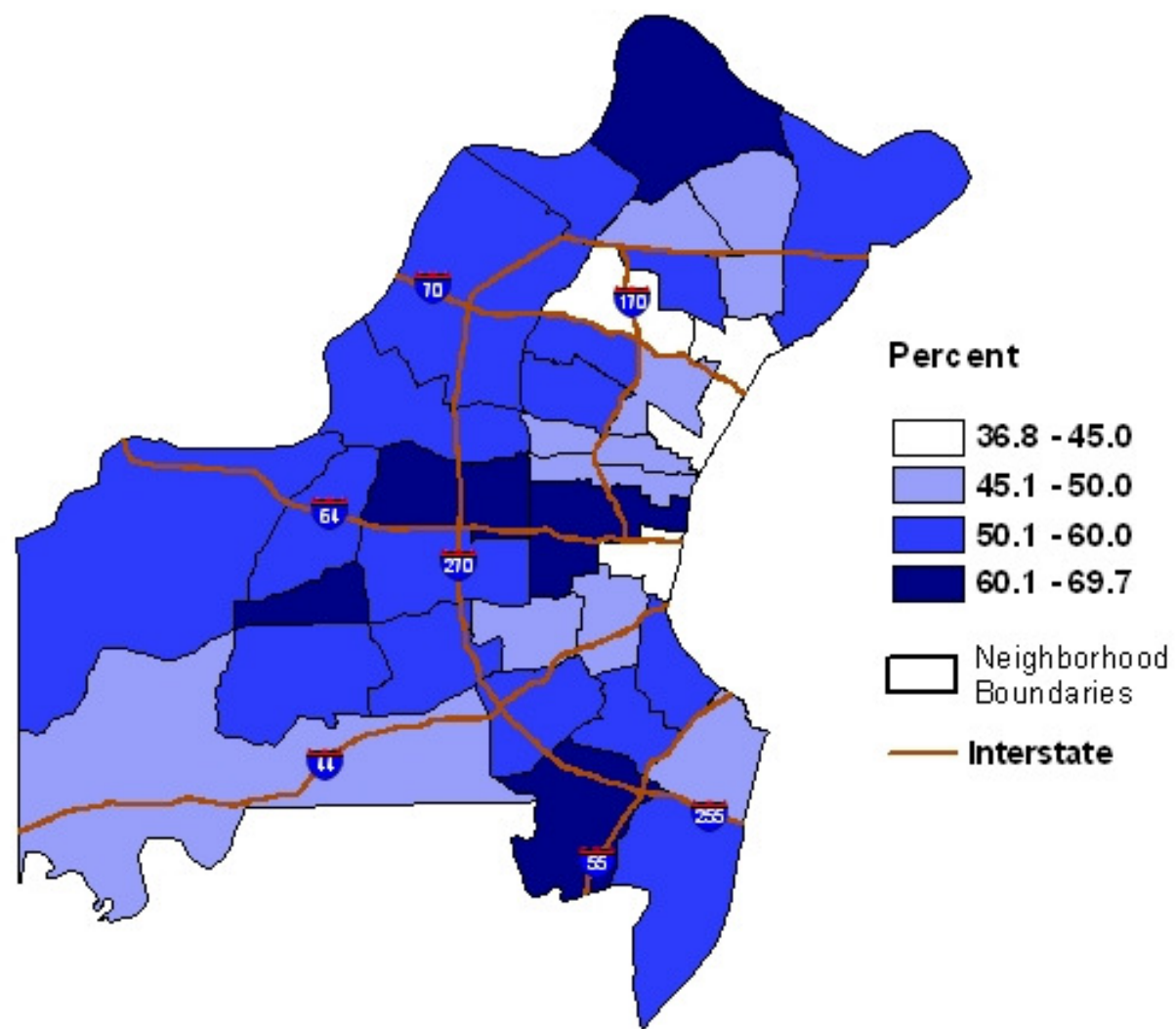
Percent

- 36.8 - 45.0
- 45.1 - 50.0
- 50.1 - 60.0
- 60.1 - 69.7

Neighborhood Boundaries

Interstate

Percent of Population Age 65 to 74 that are Home Owners by Census Tract Neighborhood Areas, 2000
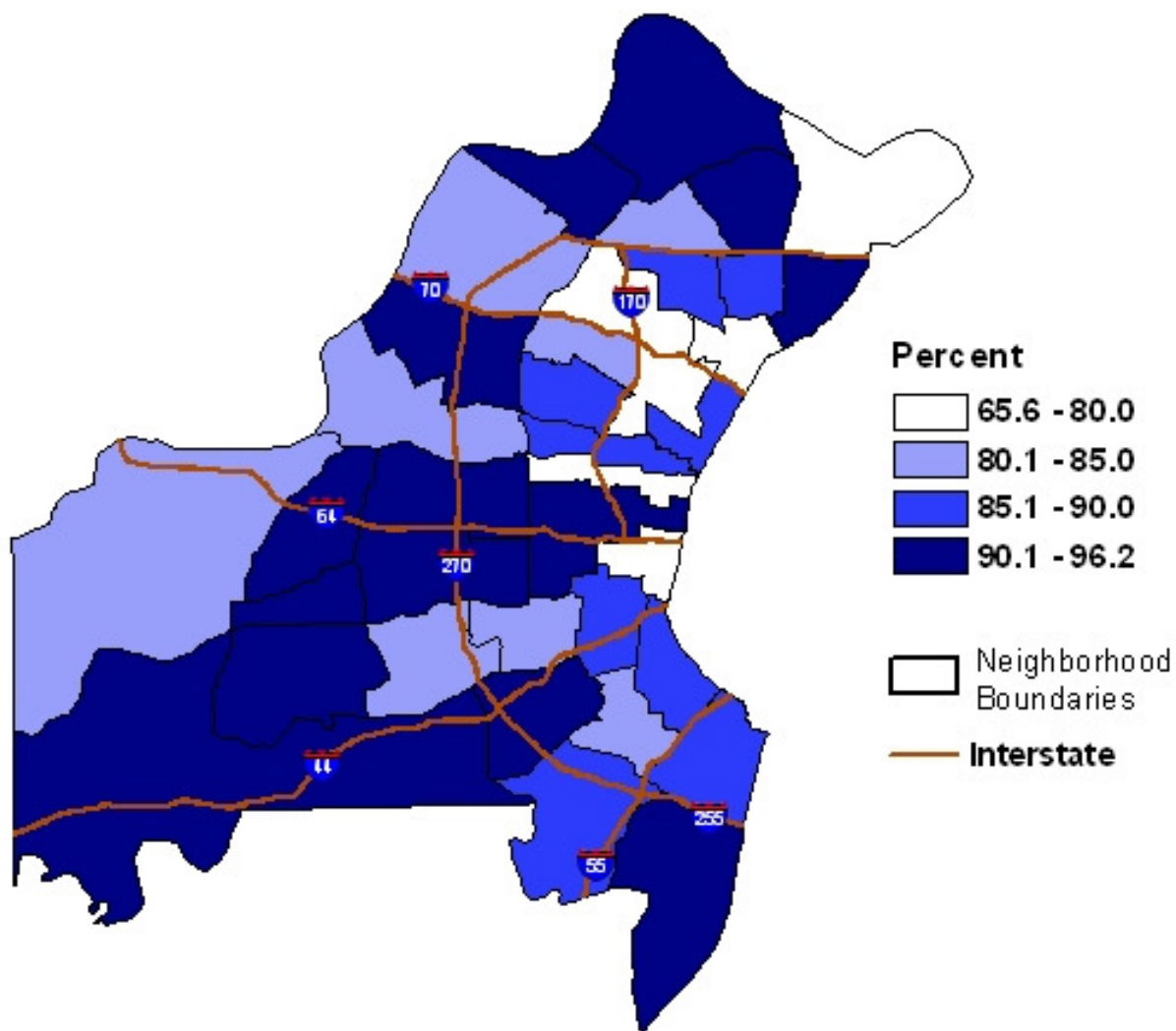
Percent

☐	65.6 - 80.0
☐	80.1 - 85.0
☐	85.1 - 90.0
■	90.1 - 96.2

☐ Neighborhood Boundaries

── Interstate

Racial Minorities

Changes in Racial Minority Populations

The racial minority population of Missouri increased from 630,840 in 1990 to 847,128 in 2000 – an increase of 34.3 percent. In comparison, the Missouri population reporting themselves as white increased by 5.3 percent during the 1990s. Racial minorities accounted for 12.3 percent of Missouri's population in 1990, but increased to 15.1 percent of the population in 2000.

African Americans are the largest racial minority accounting for 11.2 percent of state total population in 2000. The African American population increased from 548,208 in 1990 to 629,391 in 2000 – an increase of 14.8 percent.   Most of this increase in African American population occurred in Jackson County (Kansas City) and in St. Louis counties.

The Missouri Asian population increased from 41,277 in 1990 to 64,773 in 2000 – an increase of 56.9 percent.

For the first time in the 2000 Census persons were given the choice to report as multi-racial. 82,061 (1.5% of state population) reported themselves as multi-racial. The greatest concentrations of racial minorities are in St. Louis City and County and Jackson County (Kansas City) and along I-70 connecting the cities.
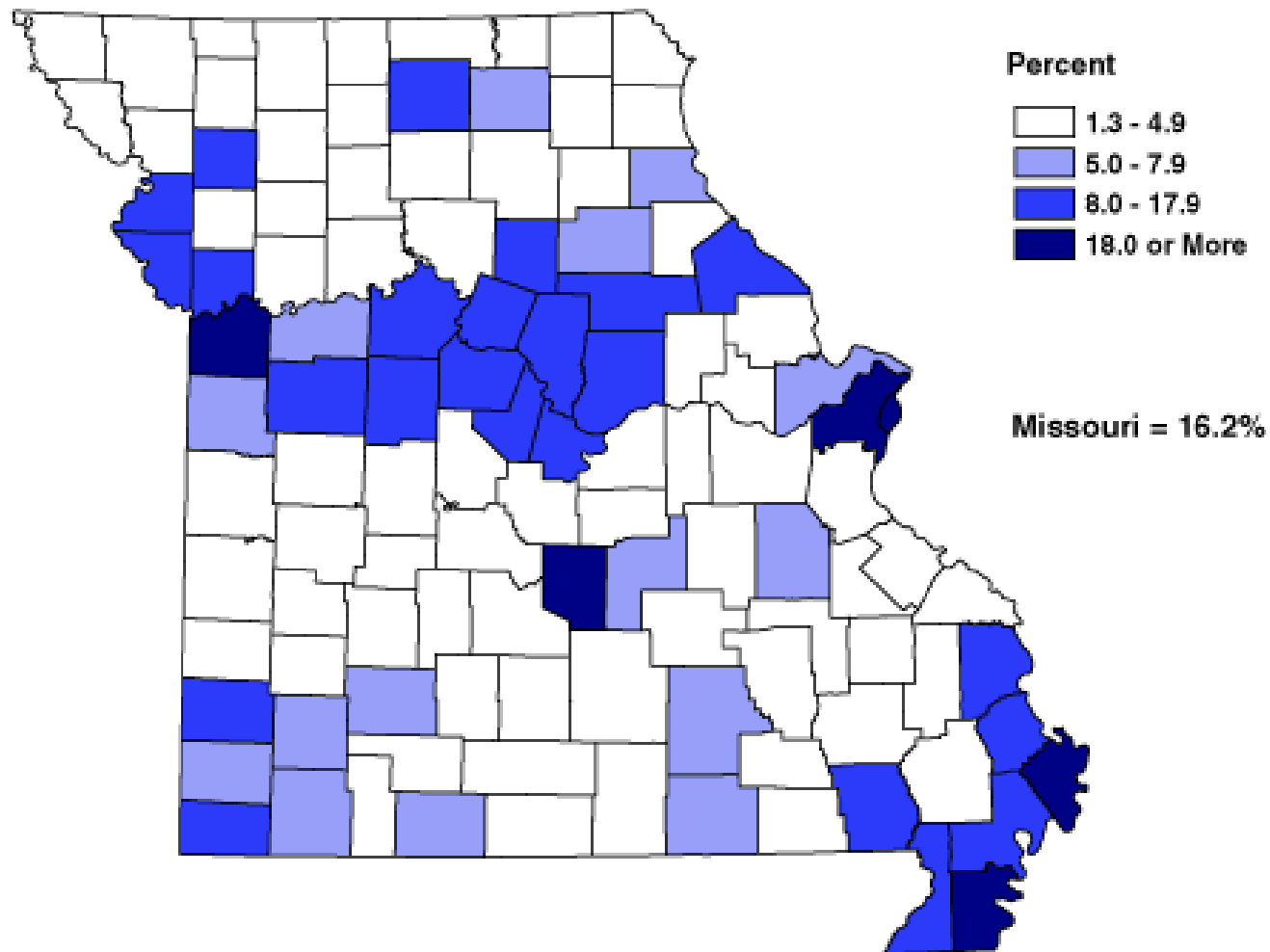
•The senior population in St. Louis County is about 90 percent White and 9 percent African American. The Hispanic population, which is not considered a racial category by the Census, accounts for 5 percent of the 2000 senior population.

Percent African American Population Age 65 and Older by Census Tract Neighborhood Areas, 2000

Percent

☐	0.0 - 3.0
☐	3.1 - 6.5
☐	6.6 - 15.0
☐	15.1 - 23.7

☐ Neighborhood Boundaries

— Interstate
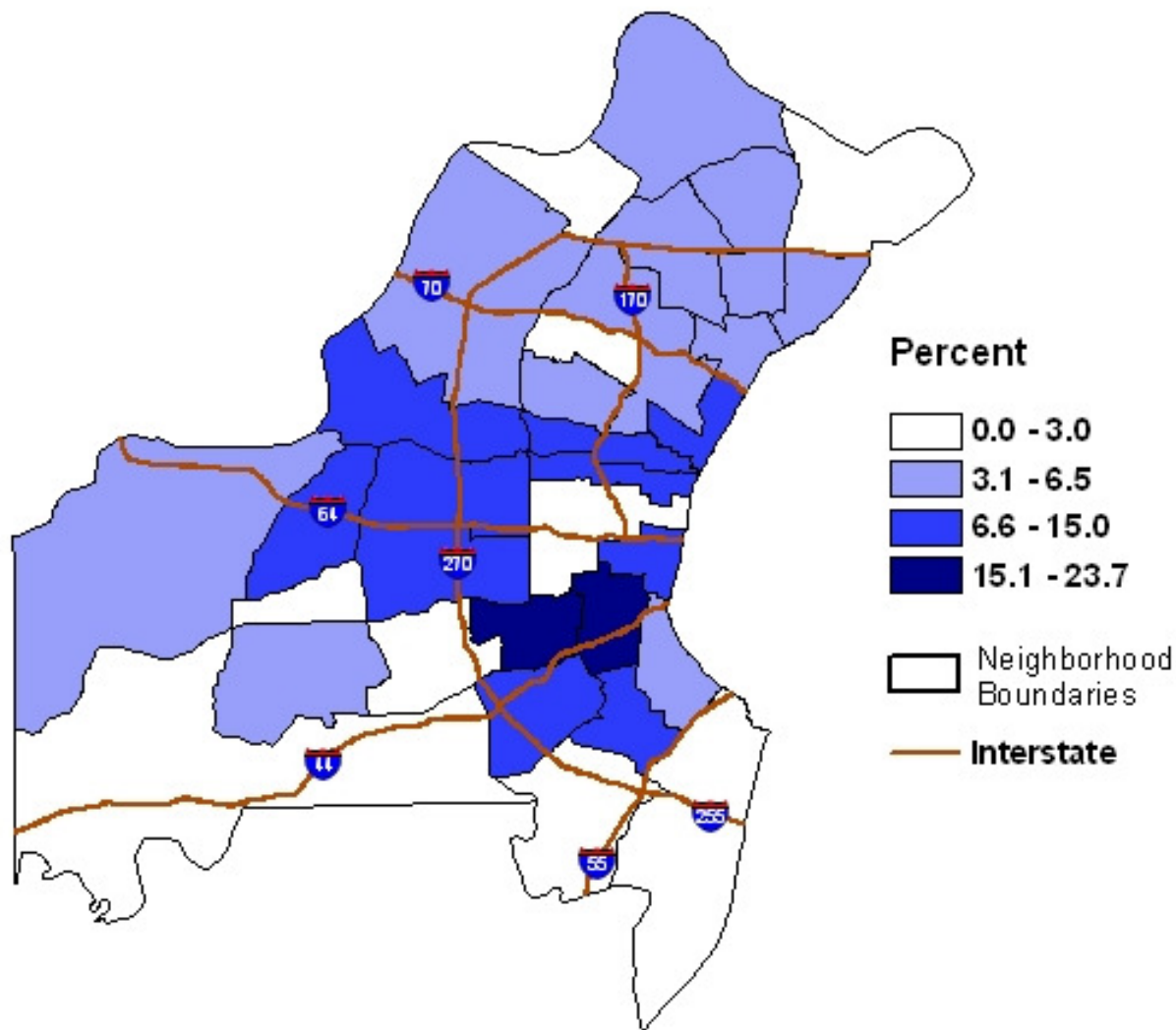
Racial Minority Population as a Percent of Total, by County, 2000

Percent

- 1.3 - 4.9
- 5.0 - 7.9
- 8.0 - 17.9
- 18.0 or More

Missouri = 16.2%

Percent Change in Racial Minority Population, 1990-2000
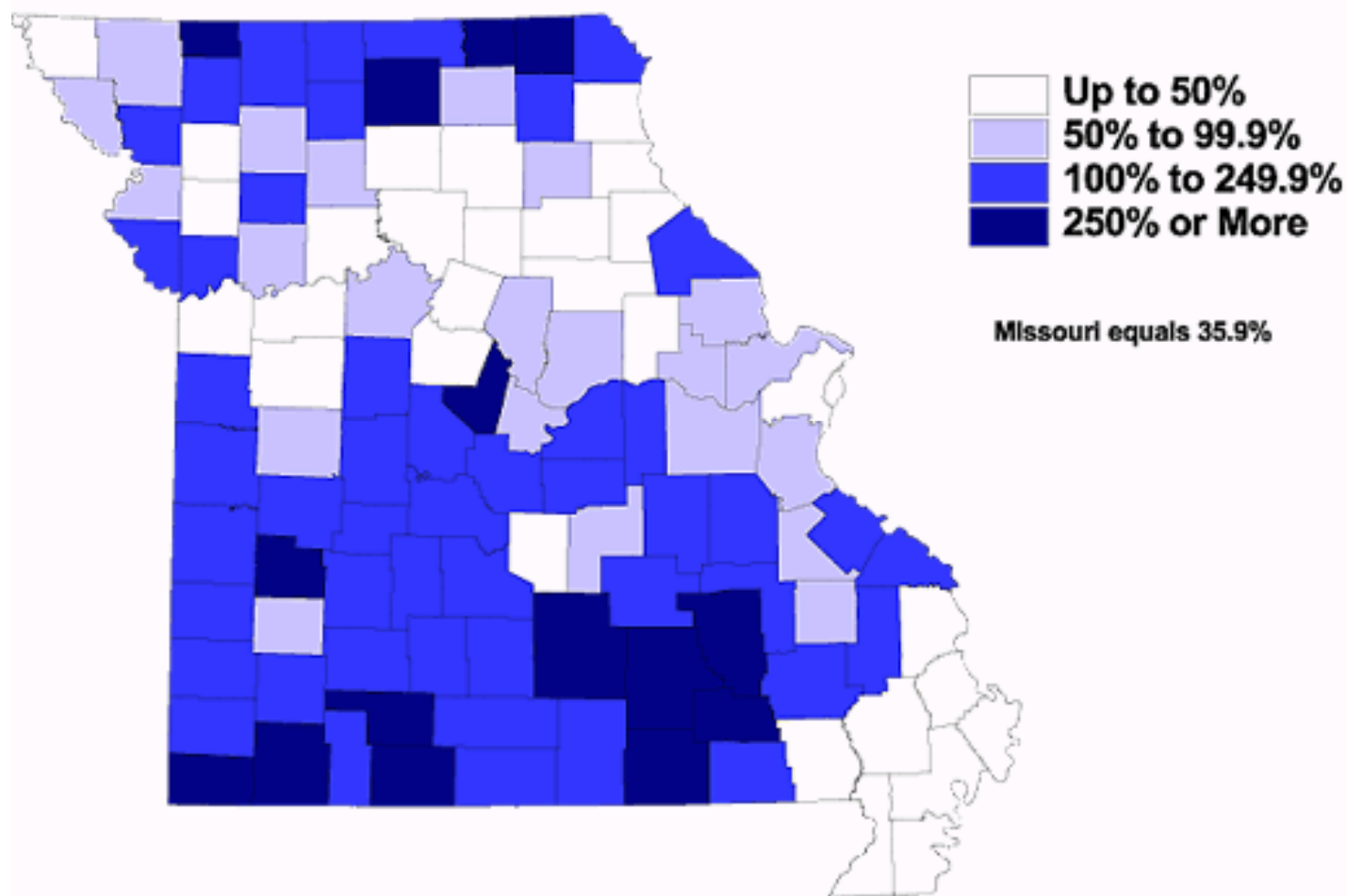
Up to 50%
50% to 99.9%
100% to 249.9%
250% or More

Missouri equals 35.9%

Map Produced by: University Outreach and Extension, Office of Social and Economic Data Analysis (January 2002)
Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF1; 1990 STF1]

Missouri African American Population Age 65-84 and 85 and over, 1990-2000

	Age 65-84			
	1990	2000	Change	% Change
Population	45,046	47,454	2,408	5.3%
	Age 85 and over			
	1990	2000	Change	% Change
Population	5,266	6,178	912	17.3%

St. Louis County, Jackson County and St. Louis African American Population

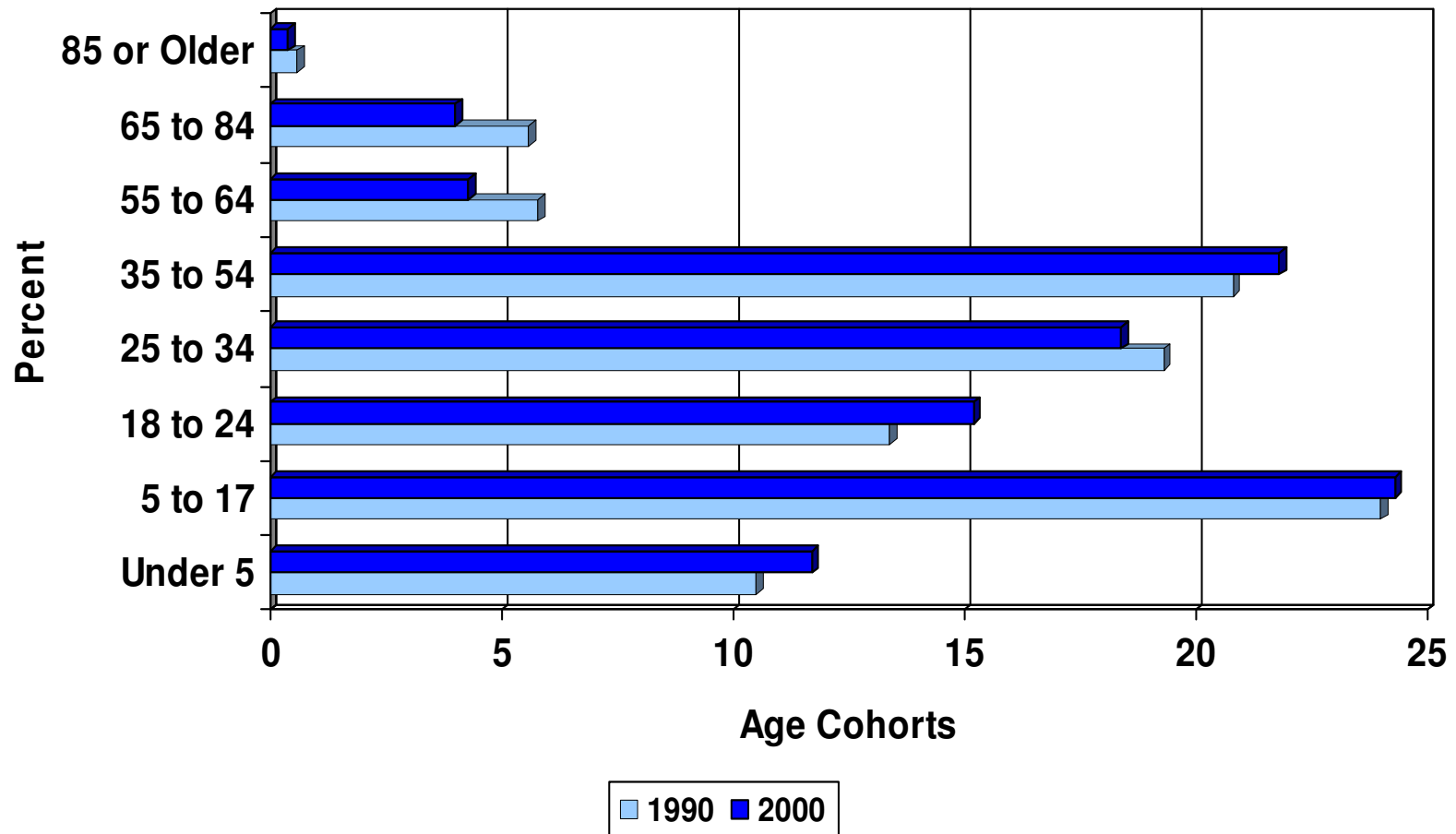| Age 65 and over			
Population	1990	2000	% Change
St. Louis County	7,748	12,990	67.7%
St. Louis City	23,236	20,604	-11.3%
Jackson County	12,129	13,268	9.4%
Total	43,113	46,862	8.7%
Together St. Louis County, Jackson County and St. Louis account for 87.4 percent of Missouri African-American total.			

Hispanic Population

Number Change in Missouri's Hispanic Population
1990-2000
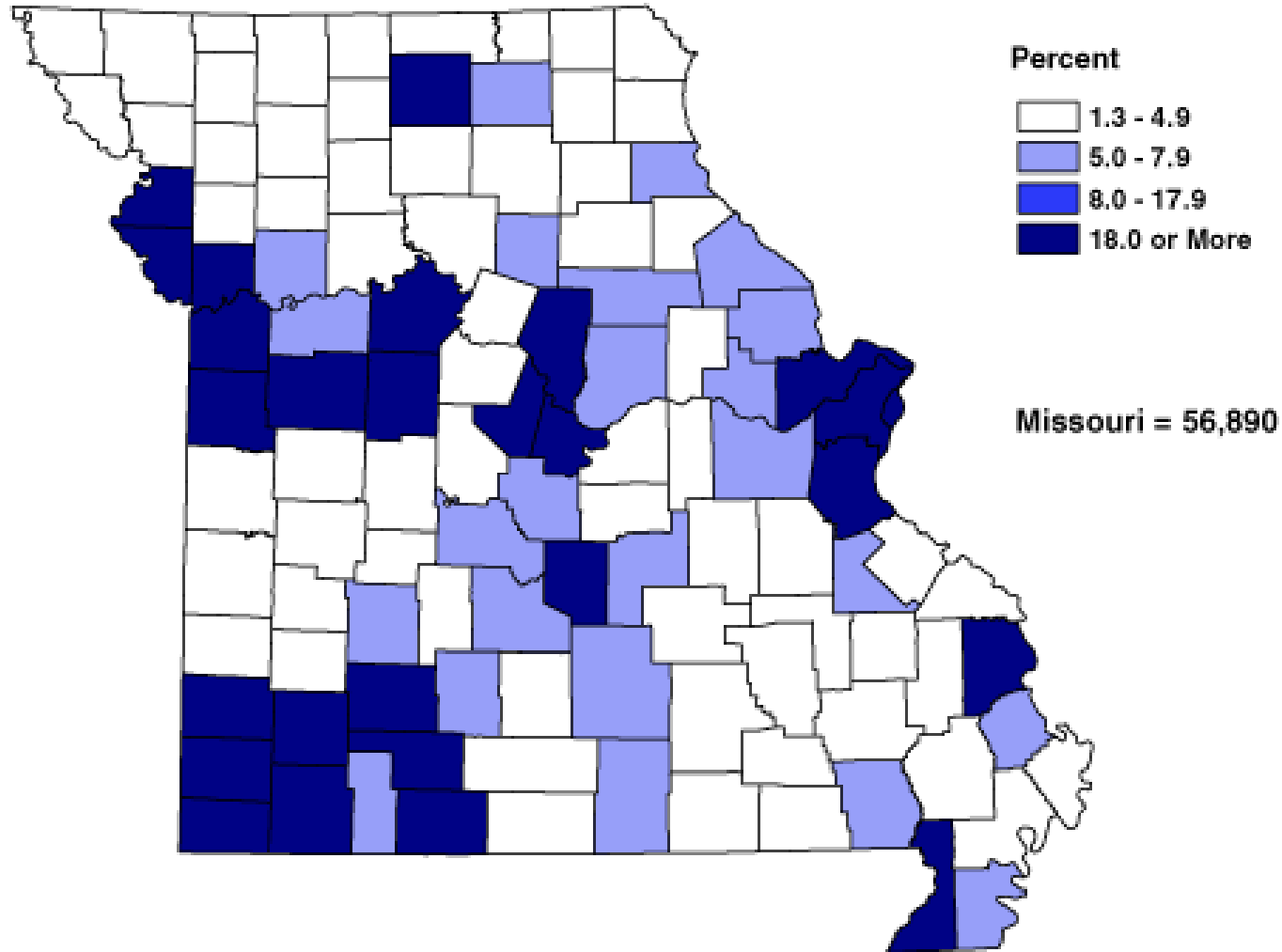
Percent

☐	1.3 - 4.9
☐	5.0 - 7.9
☐	8.0 - 17.9
■	18.0 or More

Missouri = 56,890

Missouri's Hispanic Population by Age Cohorts 1990-2000

Percent (y-axis)

- 85 or Older
- 65 to 84
- 55 to 64
- 35 to 54
- 25 to 34
- 18 to 24
- 5 to 17
- Under 5

Age Cohorts (x-axis): 0, 5, 10, 15, 20, 25

Legend: □ 1990 ■ 2000

Senior Employment

•More than 20,000 (14.3 percent) St. Louis County seniors are employed, which is a slightly rate of senior employment than Missouri statewide (13.2 percent).
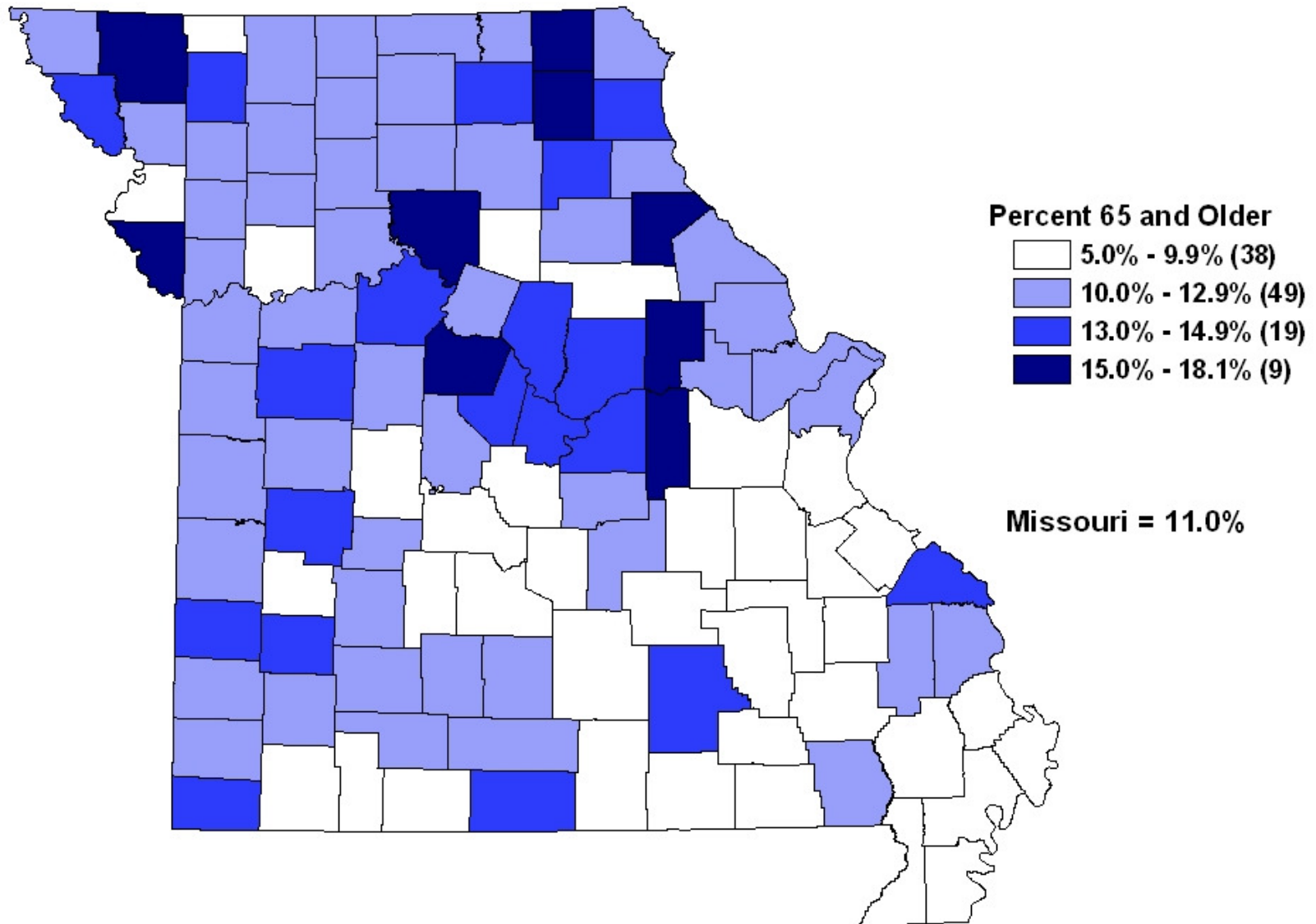
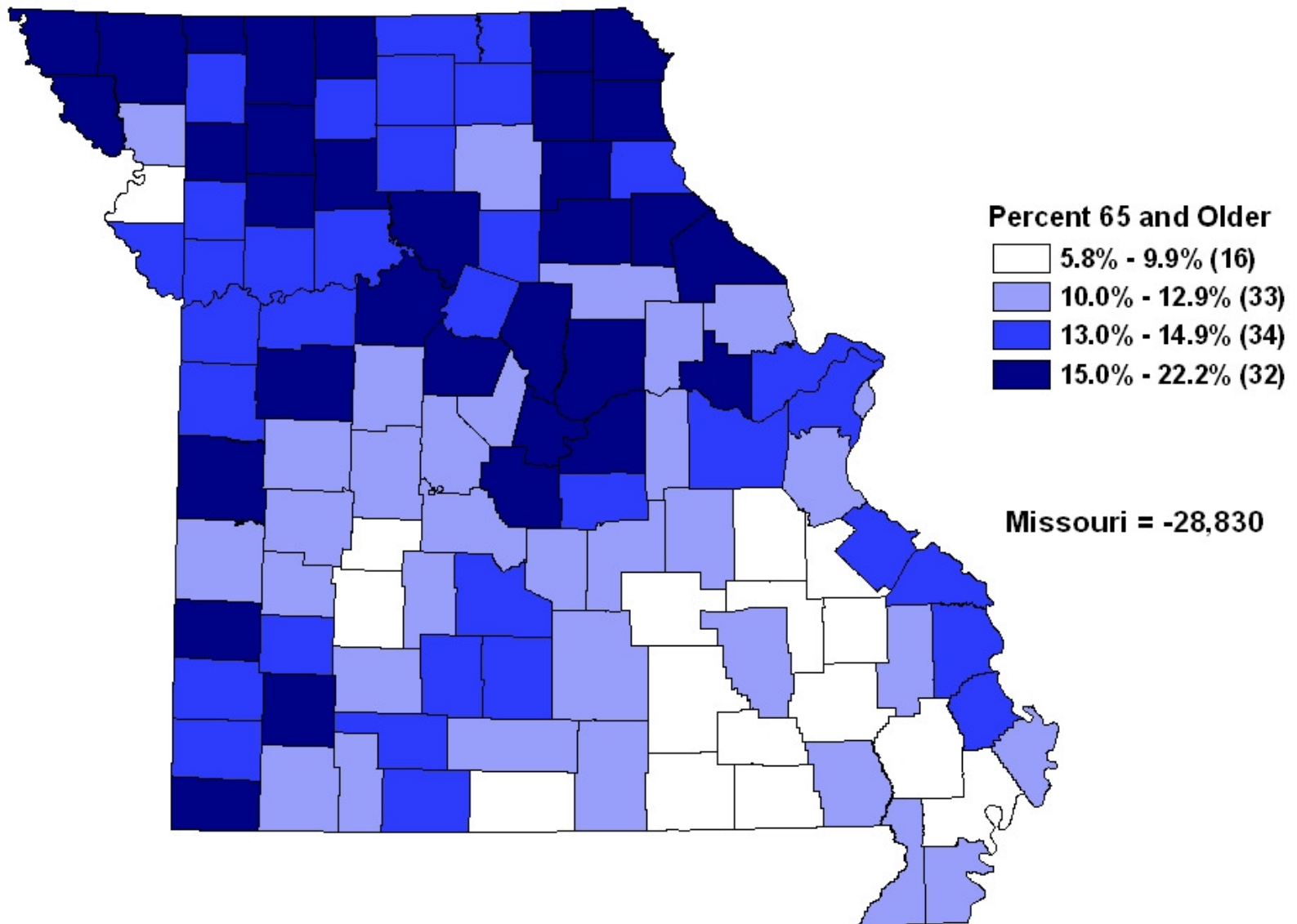# Percent of Population Age 75 and Older Employed by Census Tract Neighborhood Areas, 2000

Percent

- 2.0 - 5.0
- 5.1 - 7.5
- 7.6 - 10.0
- 10.1 - 12.9

Neighborhood Boundaries

Interstate

Percent of Population Age 65 and Older Employed, 1990

Percent 65 and Older

☐	5.0% - 9.9% (38)
☐	10.0% - 12.9% (49)
☐	13.0% - 14.9% (19)
☐	15.0% - 18.1% (9)

Missouri = 11.0%

Percent of Population Age 65 and Older Employed, 2000

Percent 65 and Older

- 5.8% - 9.9% (16)
- 10.0% - 12.9% (33)
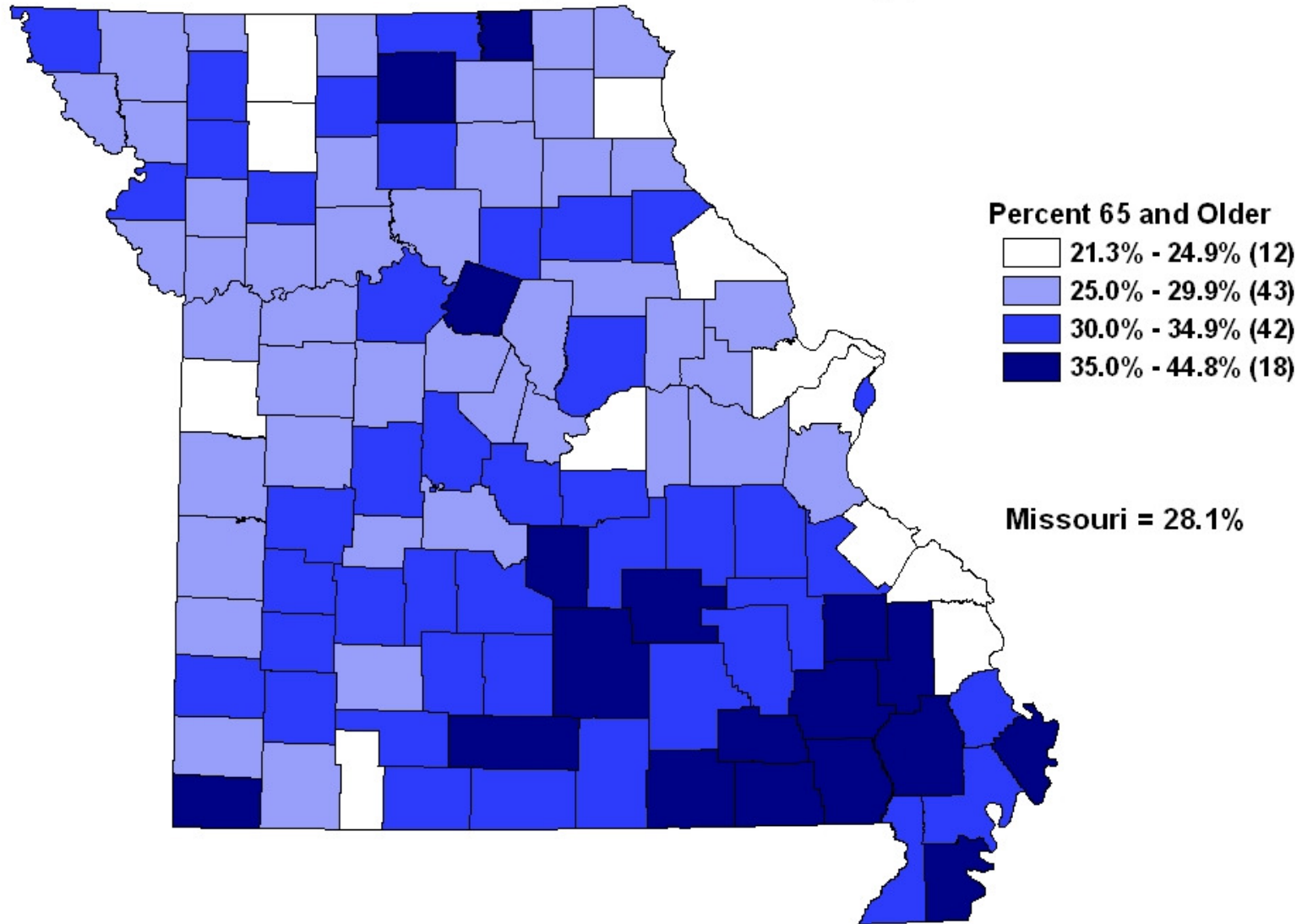- 13.0% - 14.9% (34)
- 15.0% - 22.2% (32)

Missouri = -28,830

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared by: The Office of Social and Economic Data Analysis - (OSEDA)
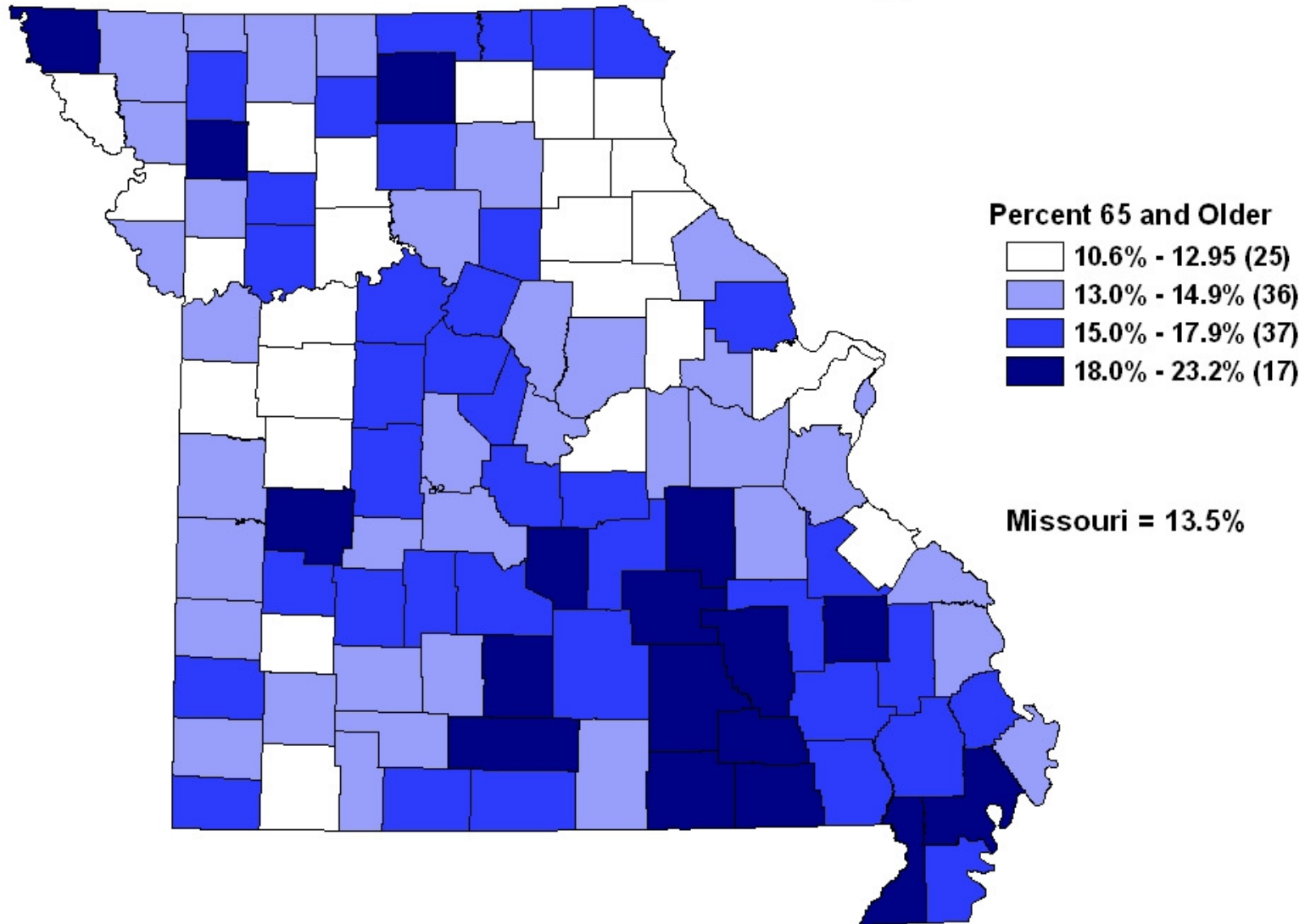Map Generated on 03.08.2004

Disabilities

•Two-thirds of the St. Louis County senior population reports having at least one disability - nearly 95,000 persons. While the county rate of disability is lower than the state rate (78. 5 percent), there are some areas of the county where more than 90 percent of the seniors report having a disability.

Percent of Population Age 65 and Older
With a Physical Disability, 2000

Percent 65 and Older

☐	21.3% - 24.9% (12)
☐	25.0% - 29.9% (43)
☐	30.0% - 34.9% (42)
■	35.0% - 44.8% (18)

Missouri = 28.1%

Percent of Population Age 65 and Older
With a Sensory Disability, 2000

Percent 65 and Older

- 10.6% - 12.95 (25)
- 13.0% - 14.9% (36)
- 15.0% - 17.9% (37)
- 18.0% - 23.2% (17)

Missouri = 13.5%

Percent of Population Age 65 and Older with a Self-Care Disability by Census Tract Neighborhood Areas, 2000
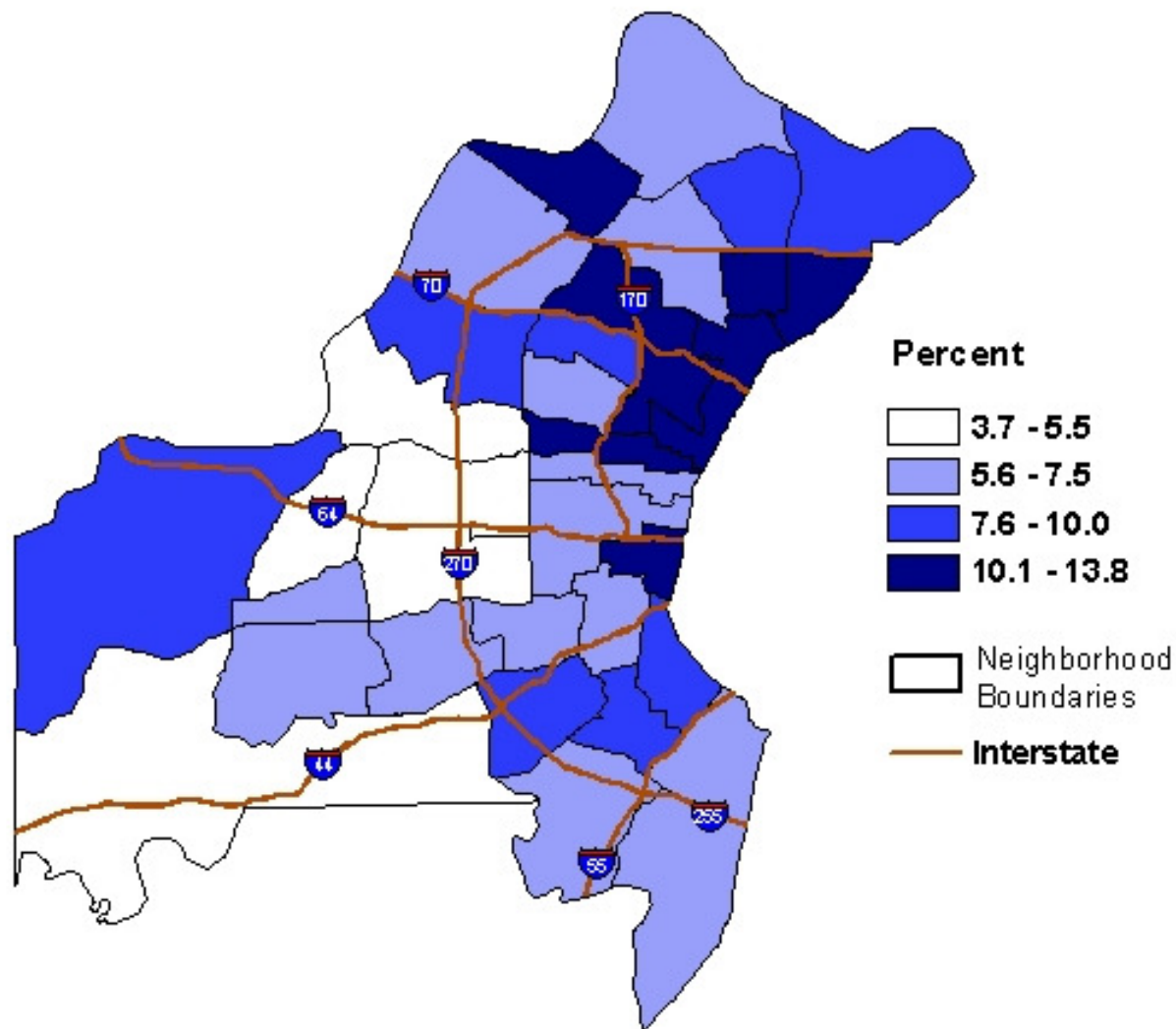
Percent

- 3.7 - 5.5
- 5.6 - 7.5
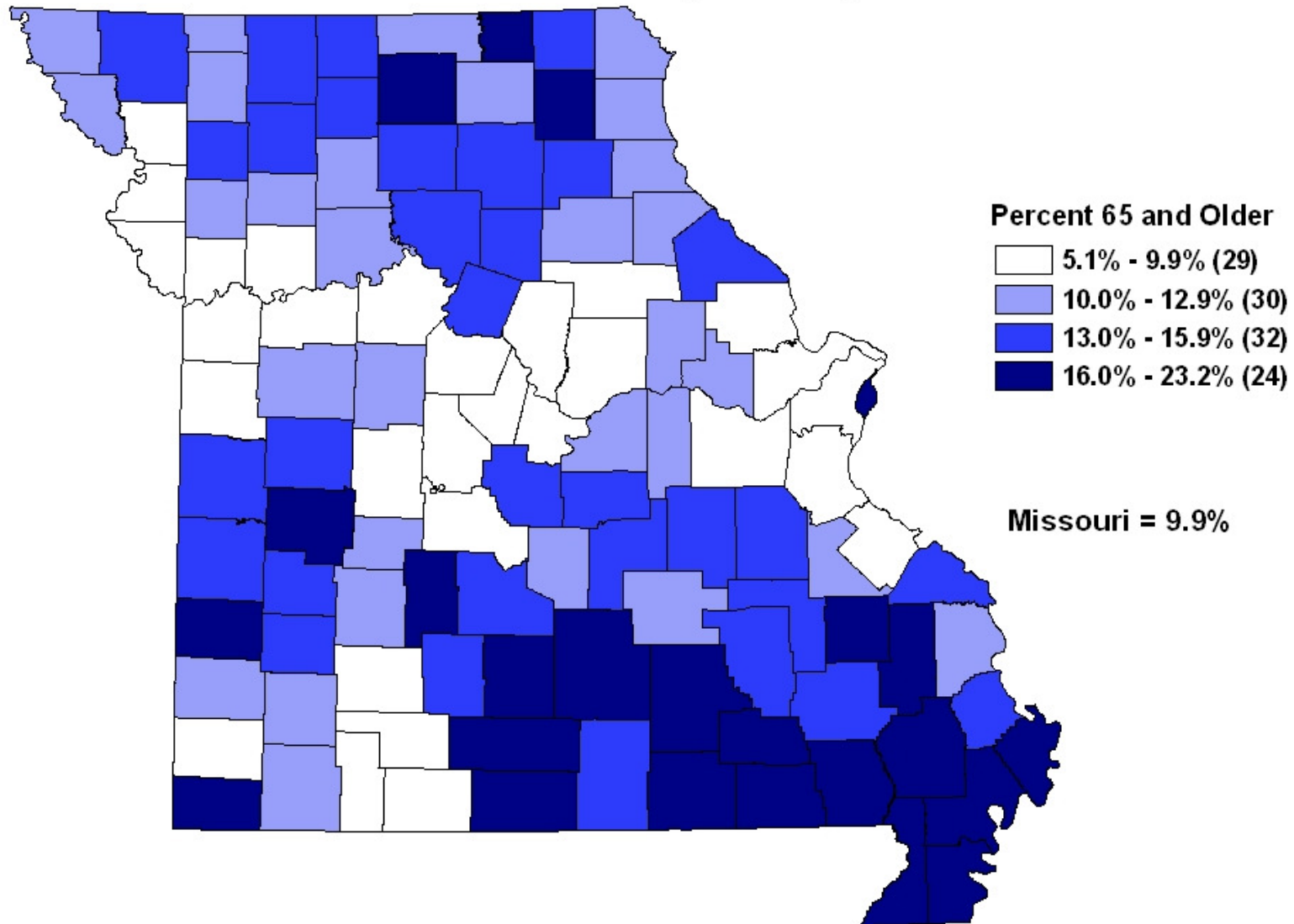- 7.6 - 10.0
- 10.1 - 13.8

Neighborhood Boundaries

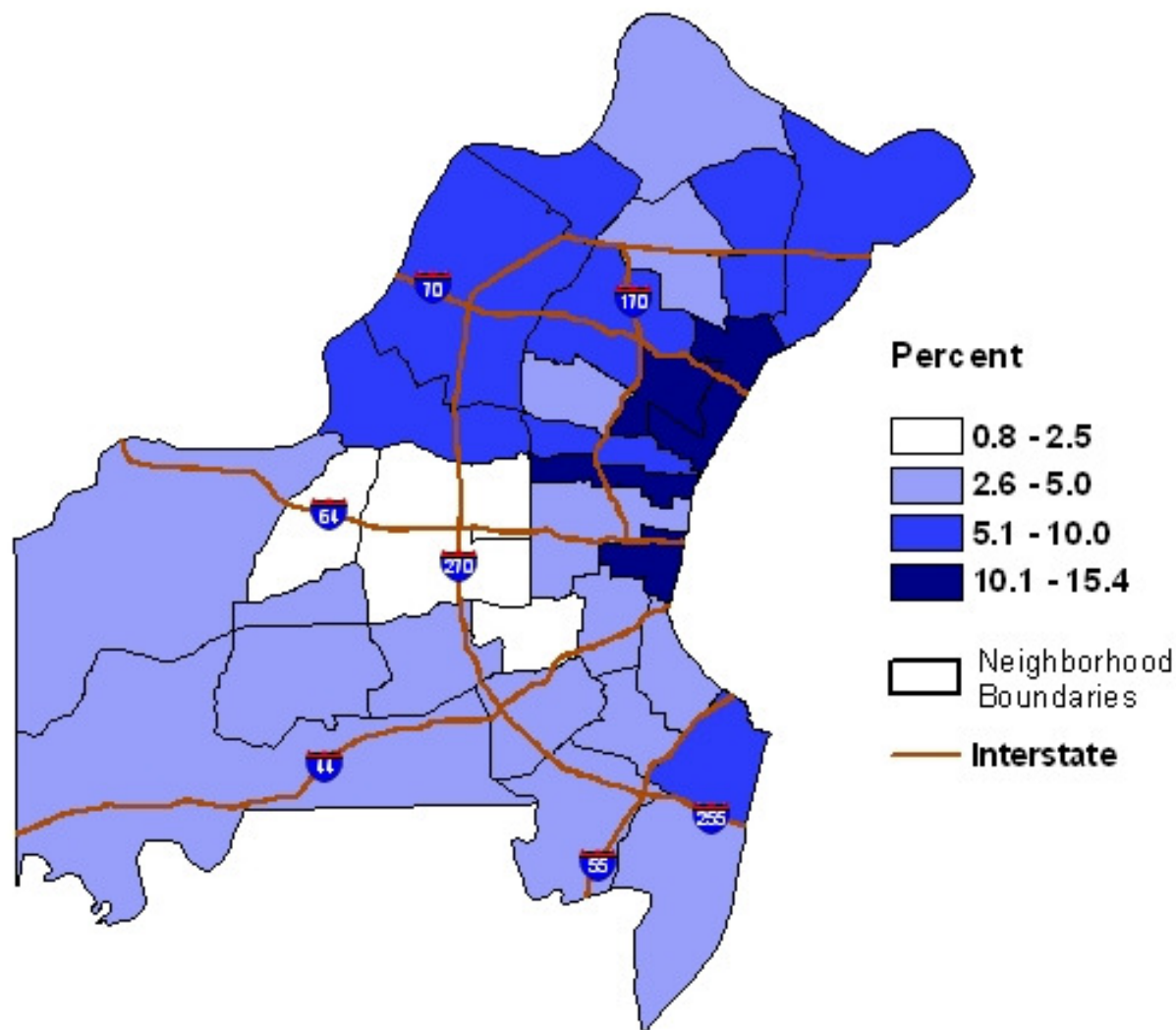Interstate

Senior Poverty

Poverty Among Missouri Seniors

- Number of Missouri seniors with income below poverty declined from 99,306 in 1990 to 70,476 in 2000 – a 29 percent decrease

- The lowest senior poverty rates were in the St. Louis, Kansas City and Springfield metro areas and a 9 county area in central Missouri

- There were 30 counties in which more than 15 percent of seniors were below poverty with the majority concentrated in eastern Ozarks and Bootheel.

Percent of Population Age 65 and Older
Below Poverty Level, 2000

Percent 65 and Older

- 5.1% - 9.9% (29)
- 10.0% - 12.9% (30)
- 13.0% - 15.9% (32)
- 16.0% - 23.2% (24)

Missouri = 9.9%

Percent of Population Age 65 and Older Below Poverty by Census Tract Neighborhood Areas, 2000

Percent

- 0.8 - 2.5
- 2.6 - 5.0
- 5.1 - 10.0
- 10.1 - 15.4

Neighborhood Boundaries

Interstate

Senior Education

Percent of Population Age 65 and Older
With a High School Diploma, 2000
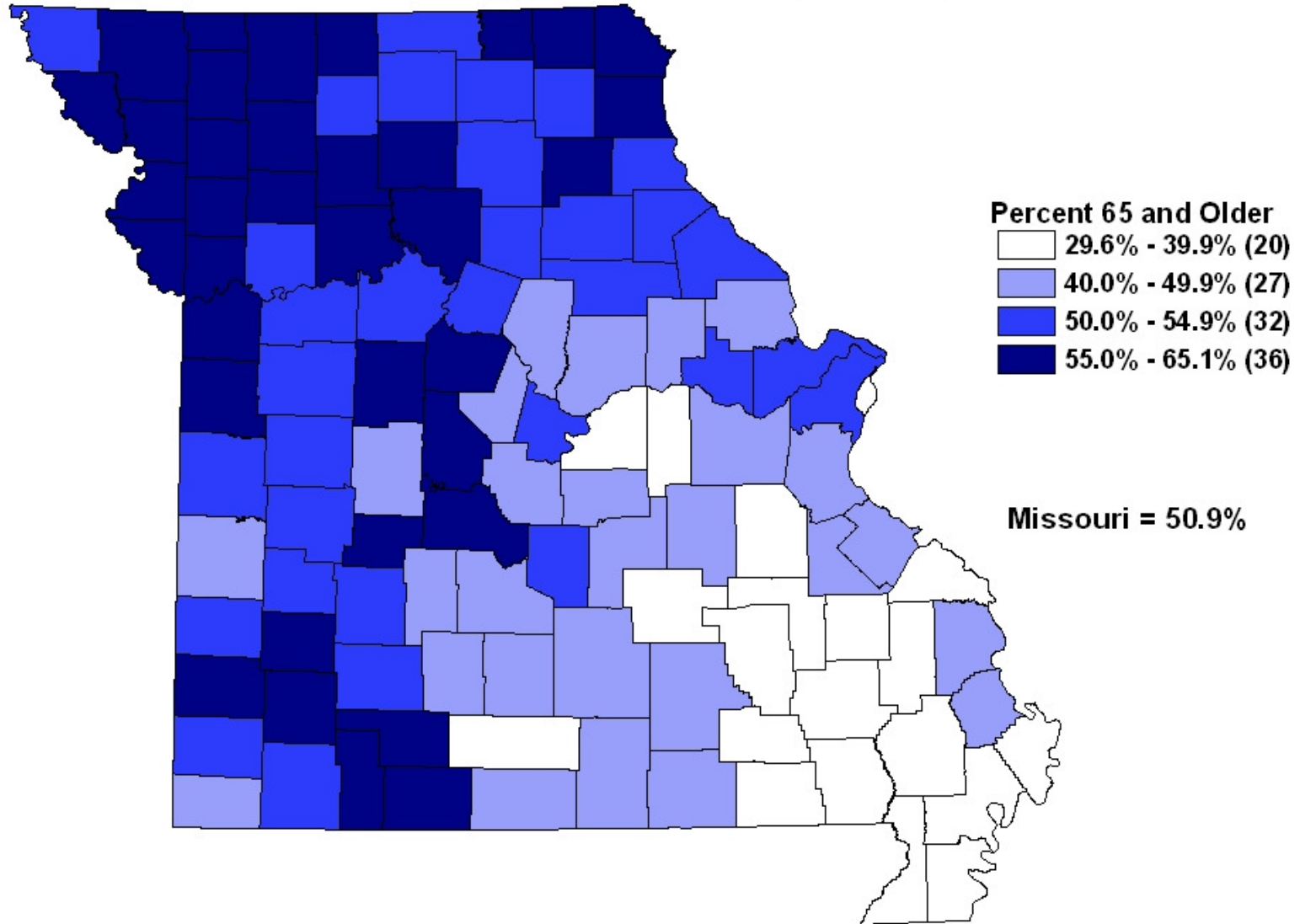
Percent 65 and Older

☐	29.6% - 39.9% (20)
☐	40.0% - 49.9% (27)
☐	50.0% - 54.9% (32)
☐	55.0% - 65.1% (36)

Missouri = 50.9%

Percent of Population Age 65 and Older
With a Bachelor's Degree, 2000

Percent 65 and Older

- 1.8% - 3.5% (27)
- 3.6% - 4.5% (36)
- 4.6% - 5.5% (25)
- 5.6% - 13.3% (27)

Missouri = 6.8%
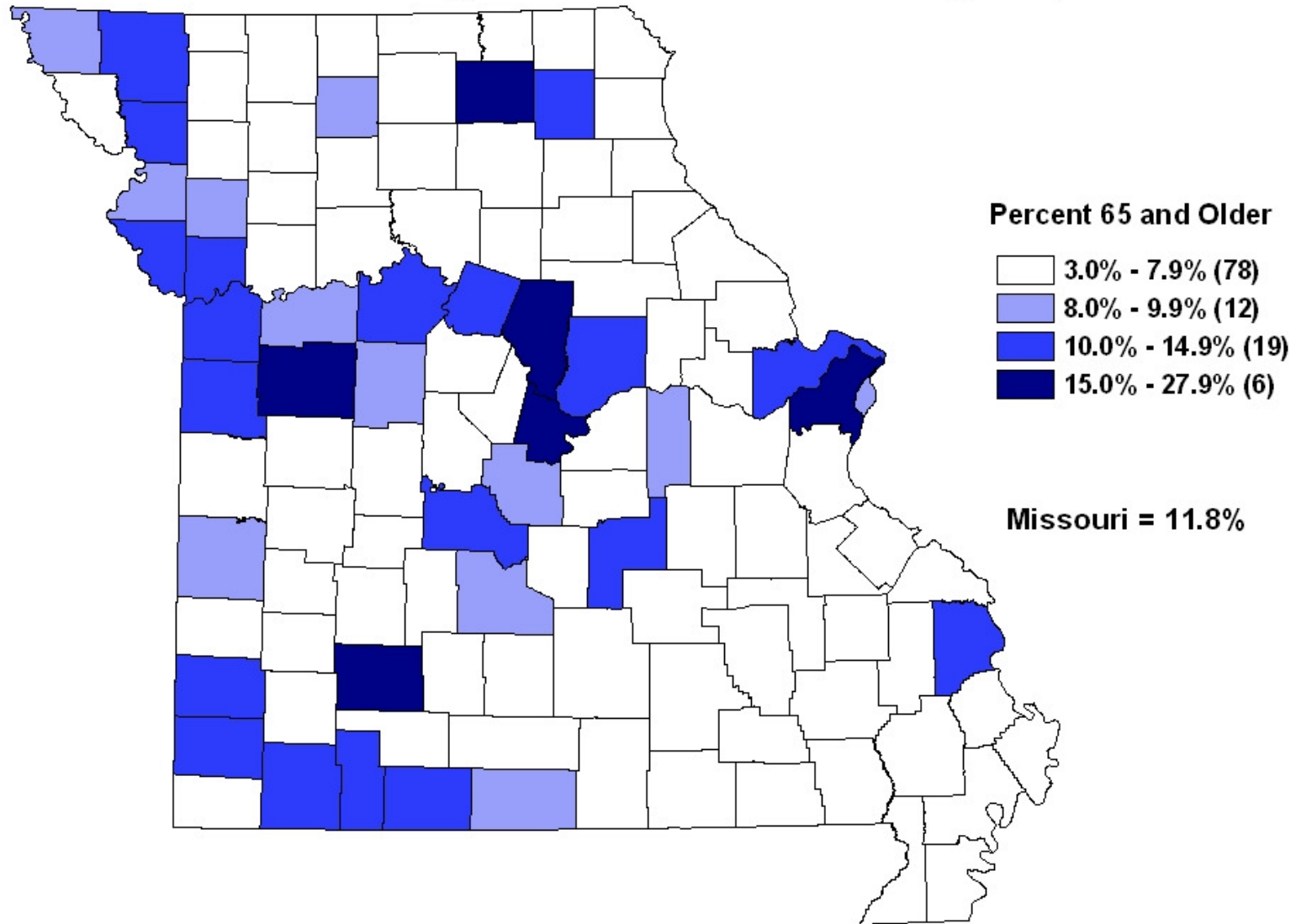
Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared by: The Office of Social and Economic Data Analysis - (OSEDA)
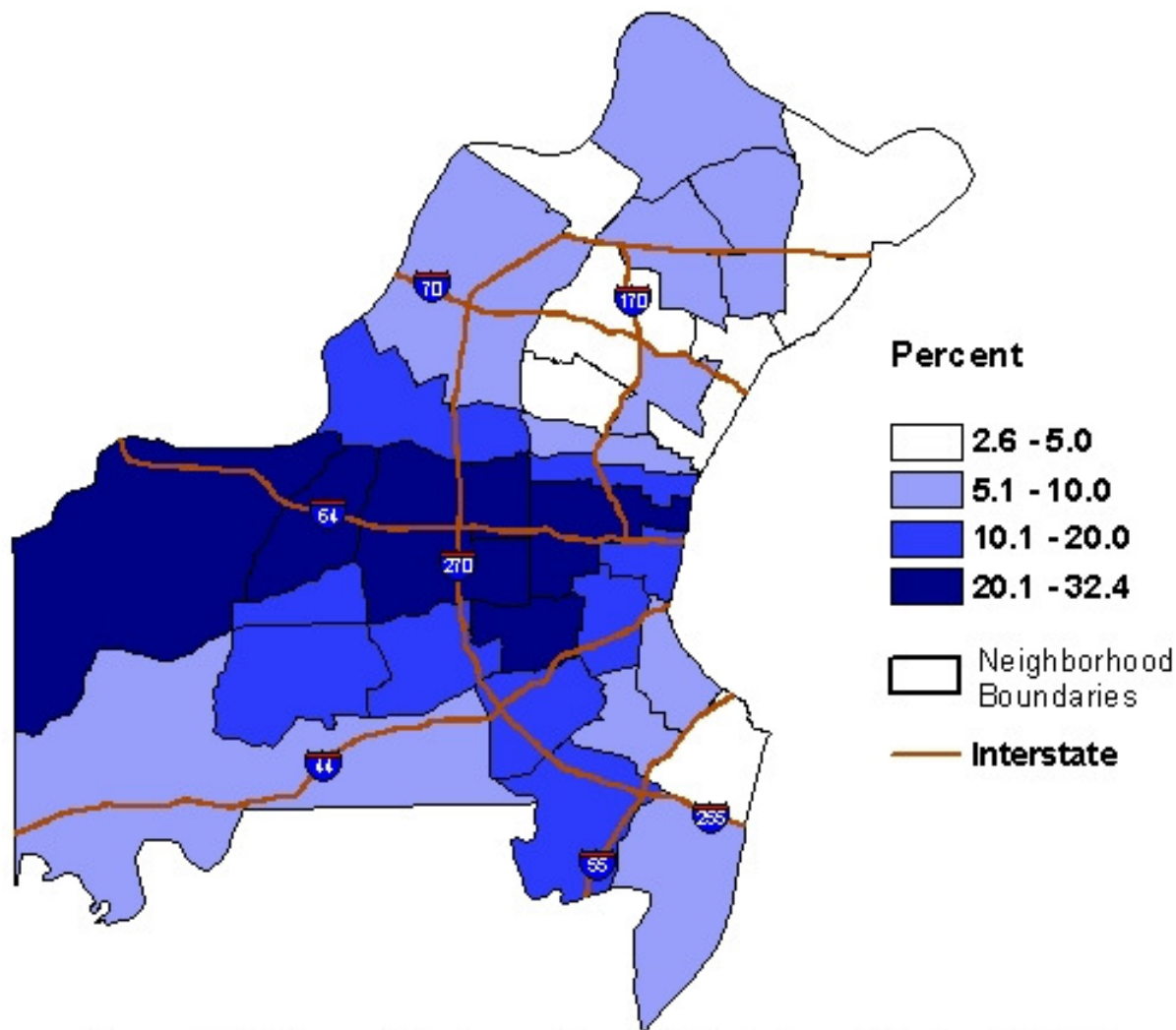Map Generated on 03.08.2004

Percent of Population Age 65 and Older
With a College or Professional Degree, 2000

Percent 65 and Older

- 3.0% - 7.9% (78)
- 8.0% - 9.9% (12)
- 10.0% - 14.9% (19)
- 15.0% - 27.9% (6)

Missouri = 11.8%

Percent of Population Age 65 and Older With a Bachelor's Degree by Census Tract Neighborhood Areas, 2000

Percent

- 2.6 - 5.0
- 5.1 - 10.0
- 10.1 - 20.0
- 20.1 - 32.4

☐ Neighborhood Boundaries

— Interstate

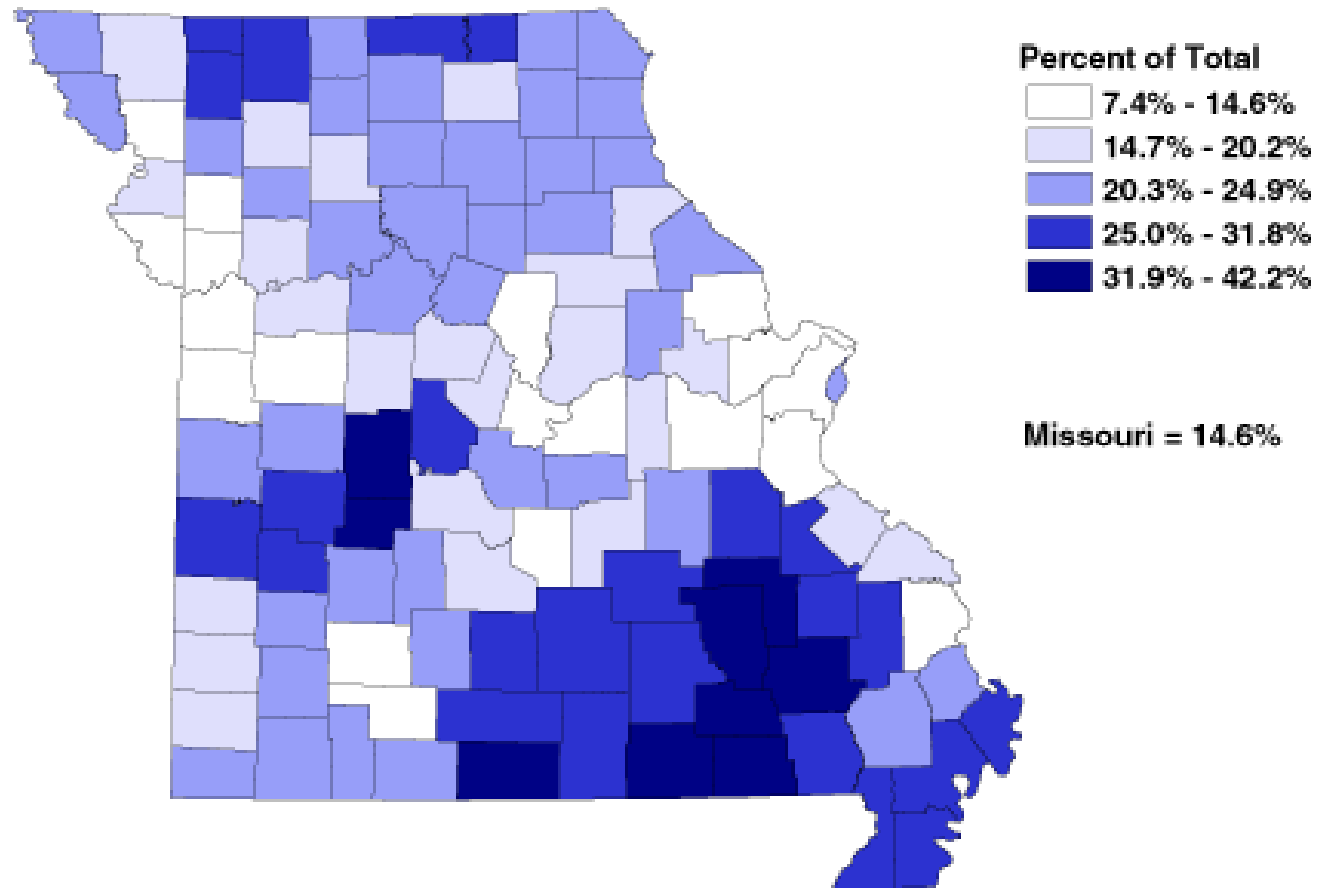# Impact and Change of Transfer Payments

Transfer Payments as a Percent of Total Personal Income 2000

Transfer payments have become an important part of income, especially in many rural counties. Transfer payments are a part of personal income for those persons who are entitled to them. In fact, those payments are often referred to as entitlements. They include such well known programs as Social Security, Medicare, Medicaid, unemployment compensation, etc. The types of payments are shown on the following graph which indicates that 41 percent of total transfer payments are Social Security, 21 percent are Medicare and 19 percent Medicaid.

Together, Social Security and Medical payments account for more than 80 percent of total transfer payments.
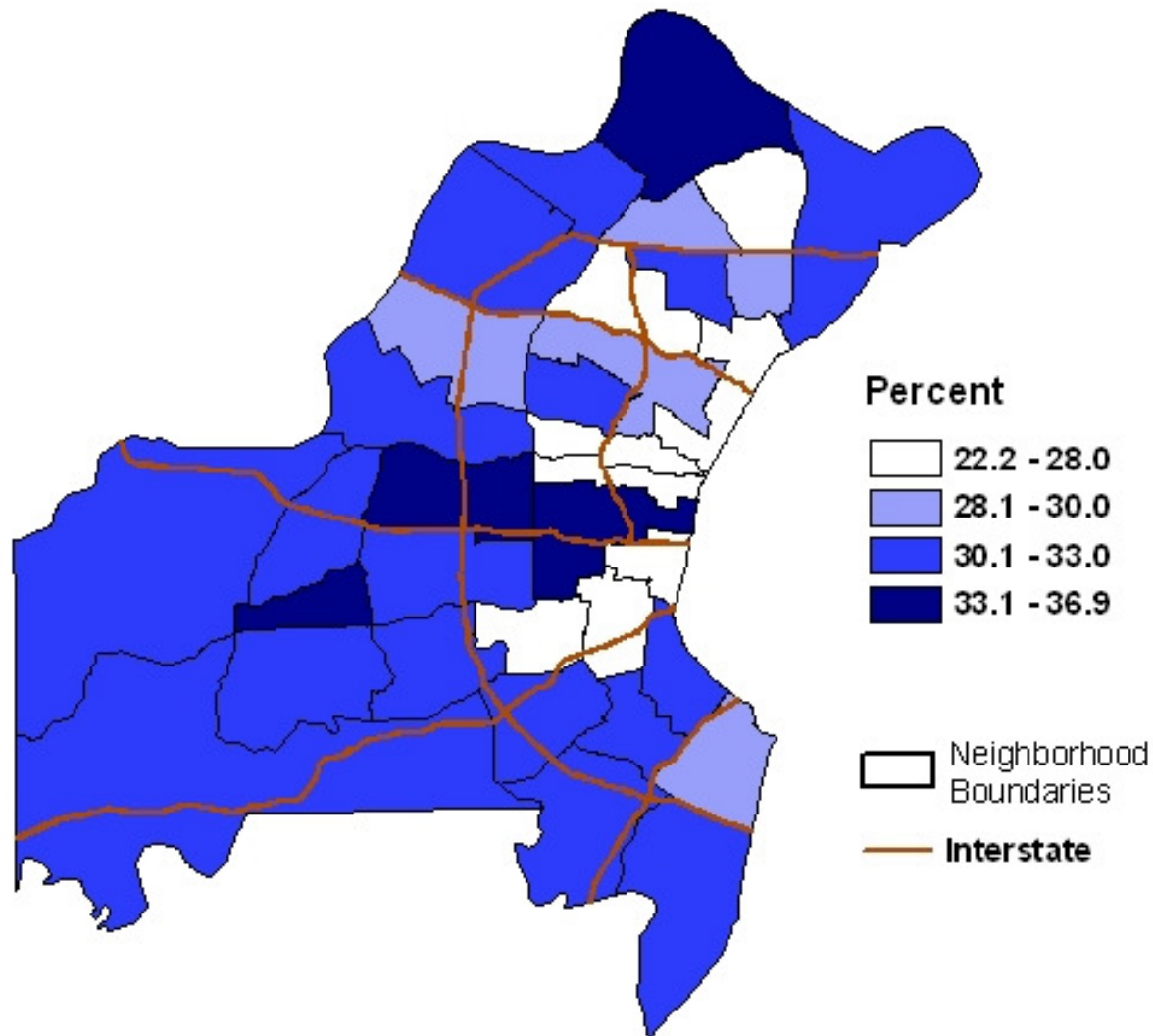
The map shows there are 75 counties in which transfer payments account for more than 20 percent of total county personal income. In 16 of those counties transfer payments account for more than 30 percent of total personal income. It is generally in smaller rural counties in which transfer payments account for more than 20 percent of personal income. The greatest concentrations of those counties are in rural north and rural southeast.

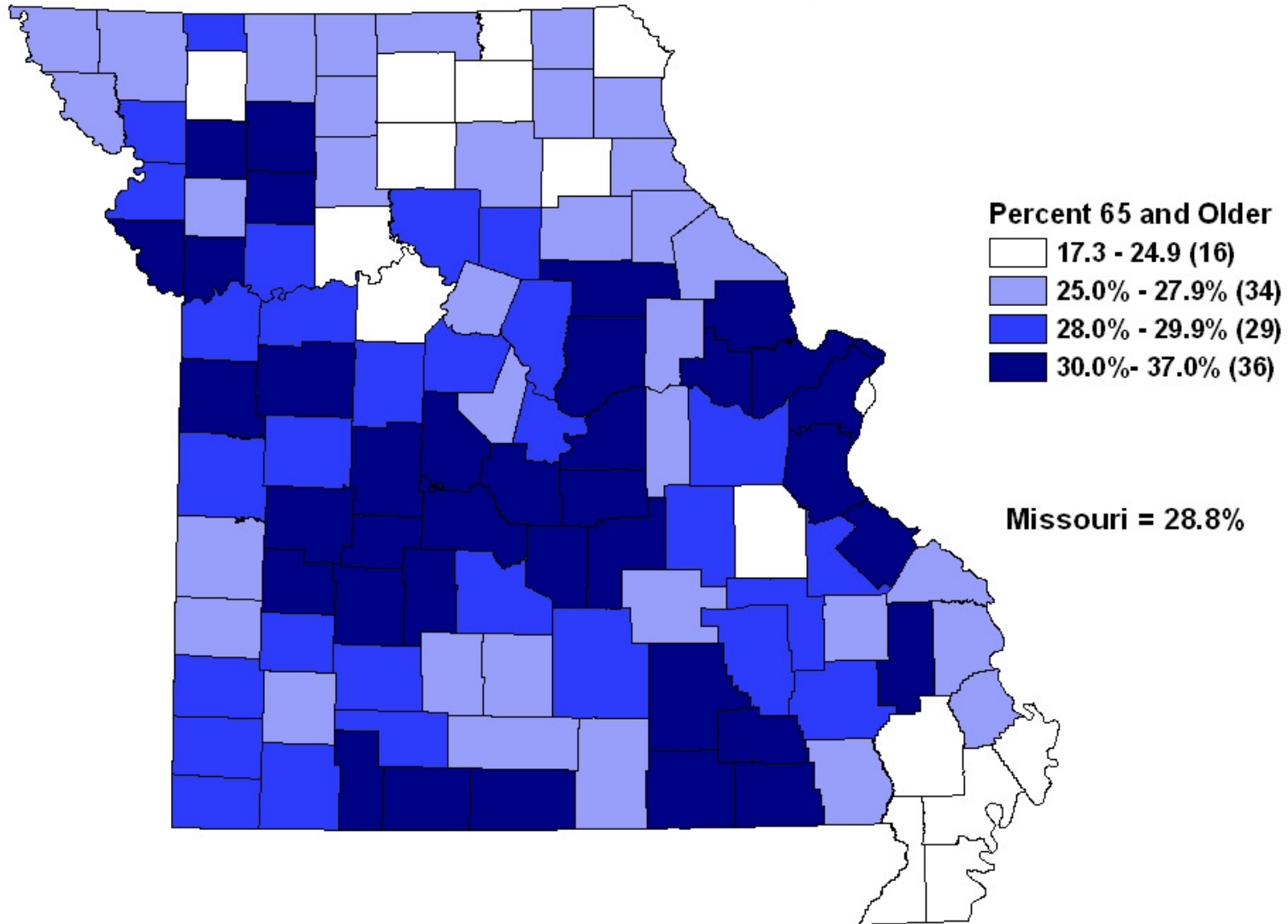# Transfer Payments as a Percent of Total Personal Income
2000

Percent of Total

- 7.4% - 14.6%
- 14.7% - 20.2%
- 20.3% - 24.9%
- 25.0% - 31.8%
- 31.9% - 42.2%

Missouri = 14.6%

Percent of Population Age 65 and Older that are Veterans by Census Tract Neighborhood Areas, 2000

Percent

☐	22.2 - 28.0
☐	28.1 - 30.0
☐	30.1 - 33.0
☐	33.1 - 36.9

☐ Neighborhood Boundaries

— Interstate

Percent of Population Age 65 and Older
Civilian Veterans, 2000

Percent 65 and Older

- 17.3 - 24.9 (16)
- 25.0% - 27.9% (34)
- 28.0% - 29.9% (29)
- 30.0%- 37.0% (36)

Missouri = 28.8%

Missouri Transfer Payments by Type, 2000

- Veterans benefits 2%
- Other 8%
- Unemployment benefits 1%
- Social Security 41%
- Income Maintenance 8%
- Medicaid 19%
- Medicare 21%

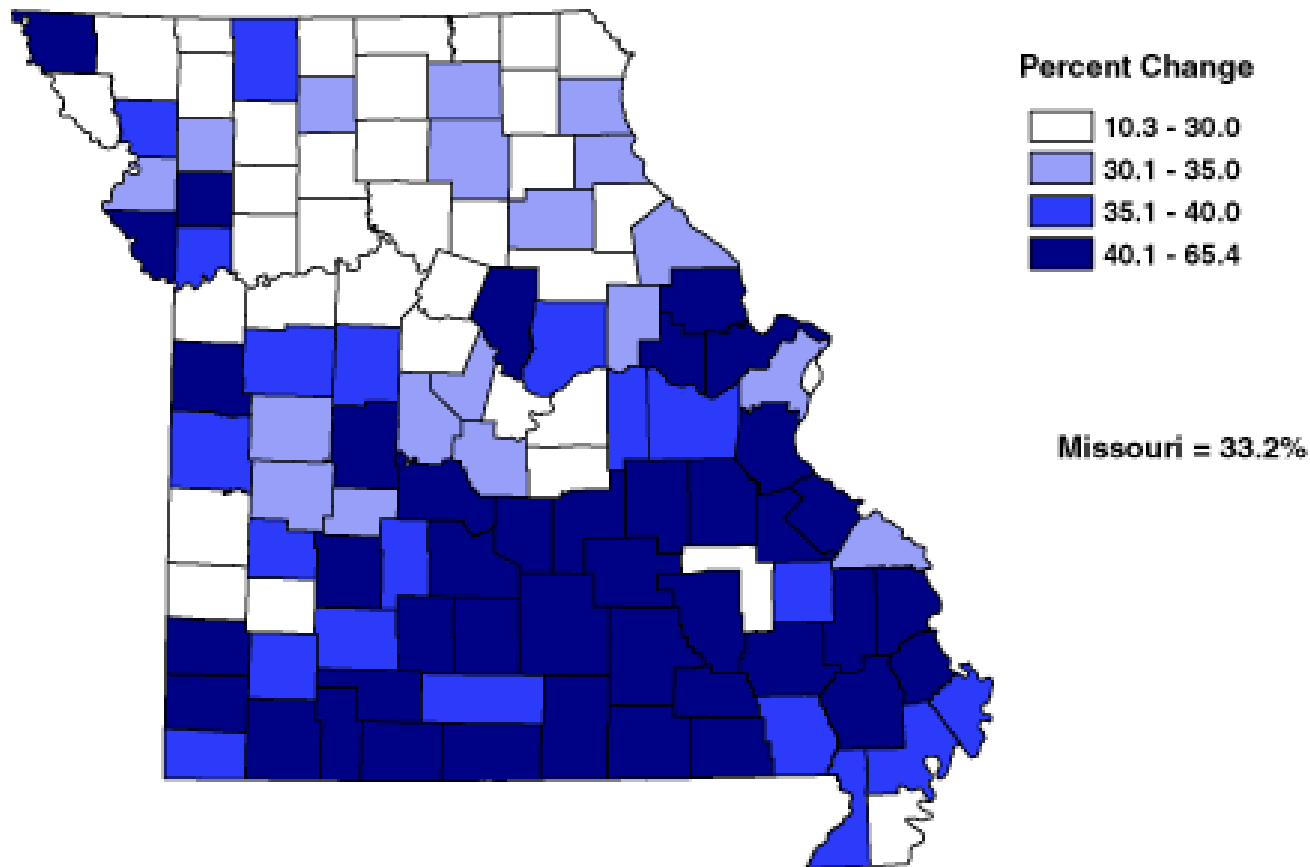# Percent Change in Medical Payments

The adjoining map shows wide variation in amount of transfer medical payments from 1995-2000. The map shows that it is generally across rural north Missouri where transfer medical payments increased least, and in rural southern Missouri where the payments increased most. A major factor contributing to the smaller rate of increase in the amount of medical payments in rural north Missouri is the loss of entitled population. Recall that across rural north Missouri deaths significantly exceeded births.

The next adjoining map displays the rate of increase specifically for Medicare payments from 1990 to 2000. The maps shows clearly that the lowest rate of increase is across rural north Missouri.

Percent Change in Medical Payments, by County, 1995-2000

Percent Change

- 10.3 - 30.0
- 30.1 - 35.0
- 35.1 - 40.0
- 40.1 - 65.4

Missouri = 33.2%

Percent Change in Medicare Payments, by County, 1990-2000

Percent Change

- 31.7% - 75.0%
- 75.1% - 100.0%
- 100.1% - 110.0%
- 110.1% - 191.9%

Missouri = 89.6%

Percent Change in Retirement & Disability Payments 1995-99
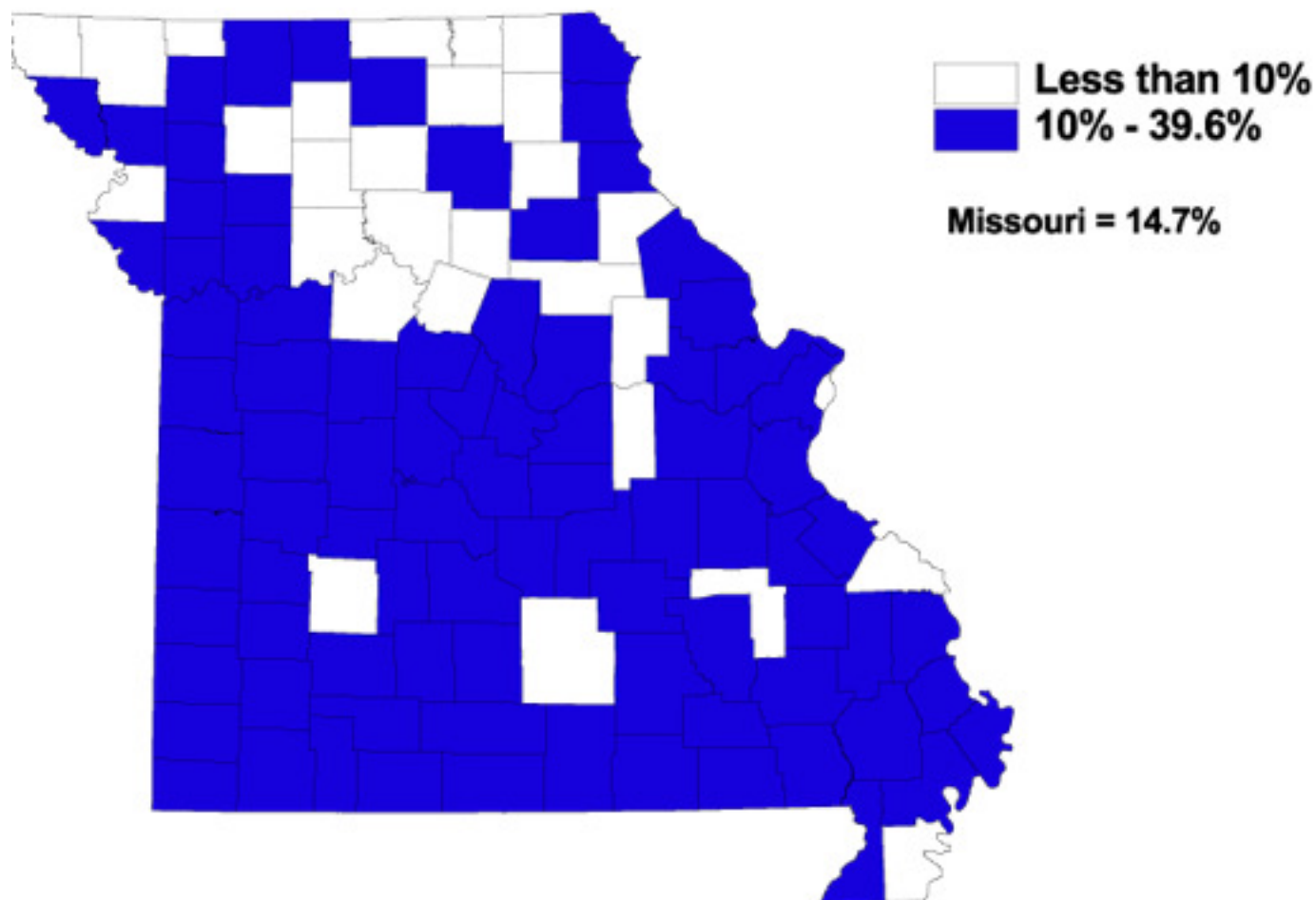

Less than 10%
10% - 39.6%

Missouri = 14.7%
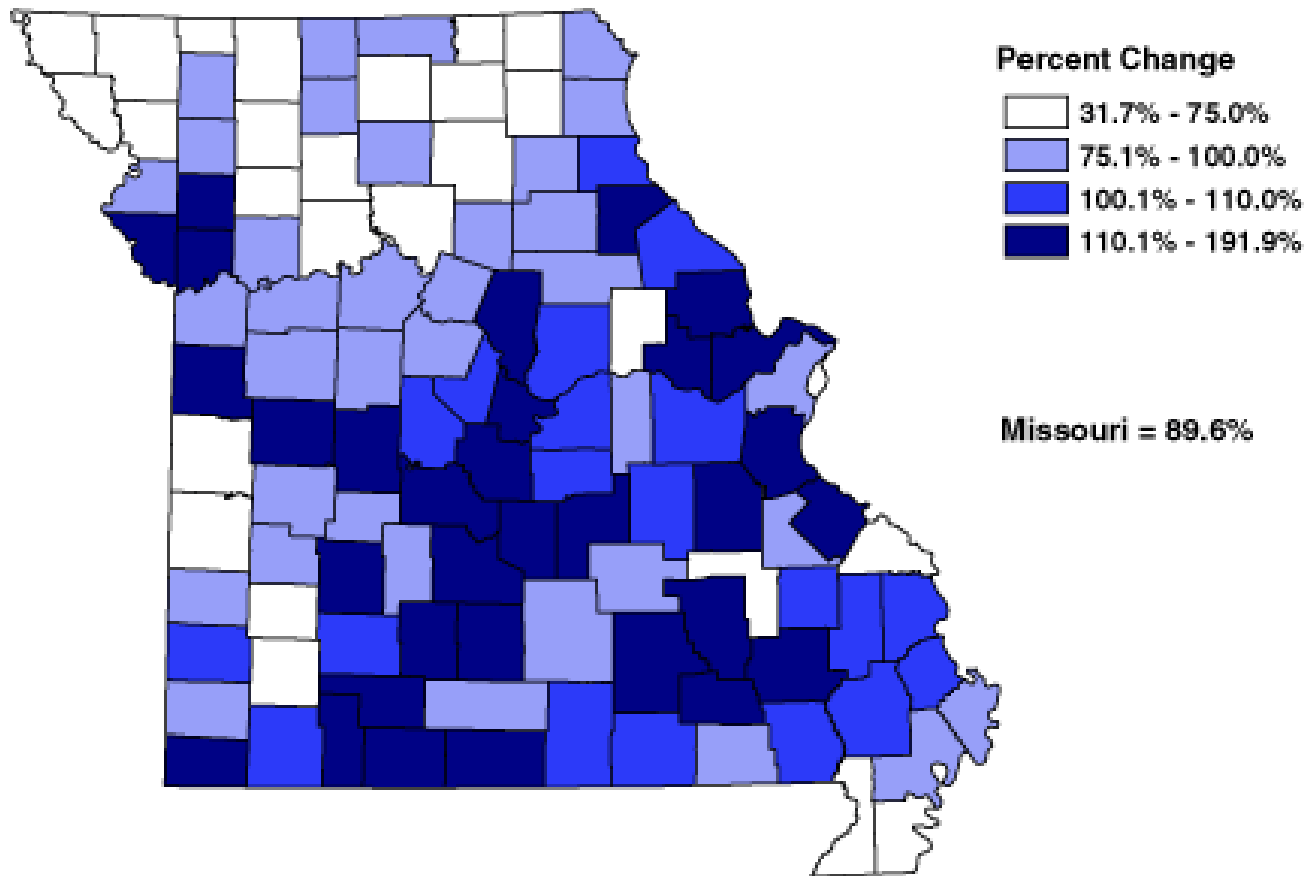
SOURCE: USDC, Bureau of Economic Analysis, Regional Econoic Information System
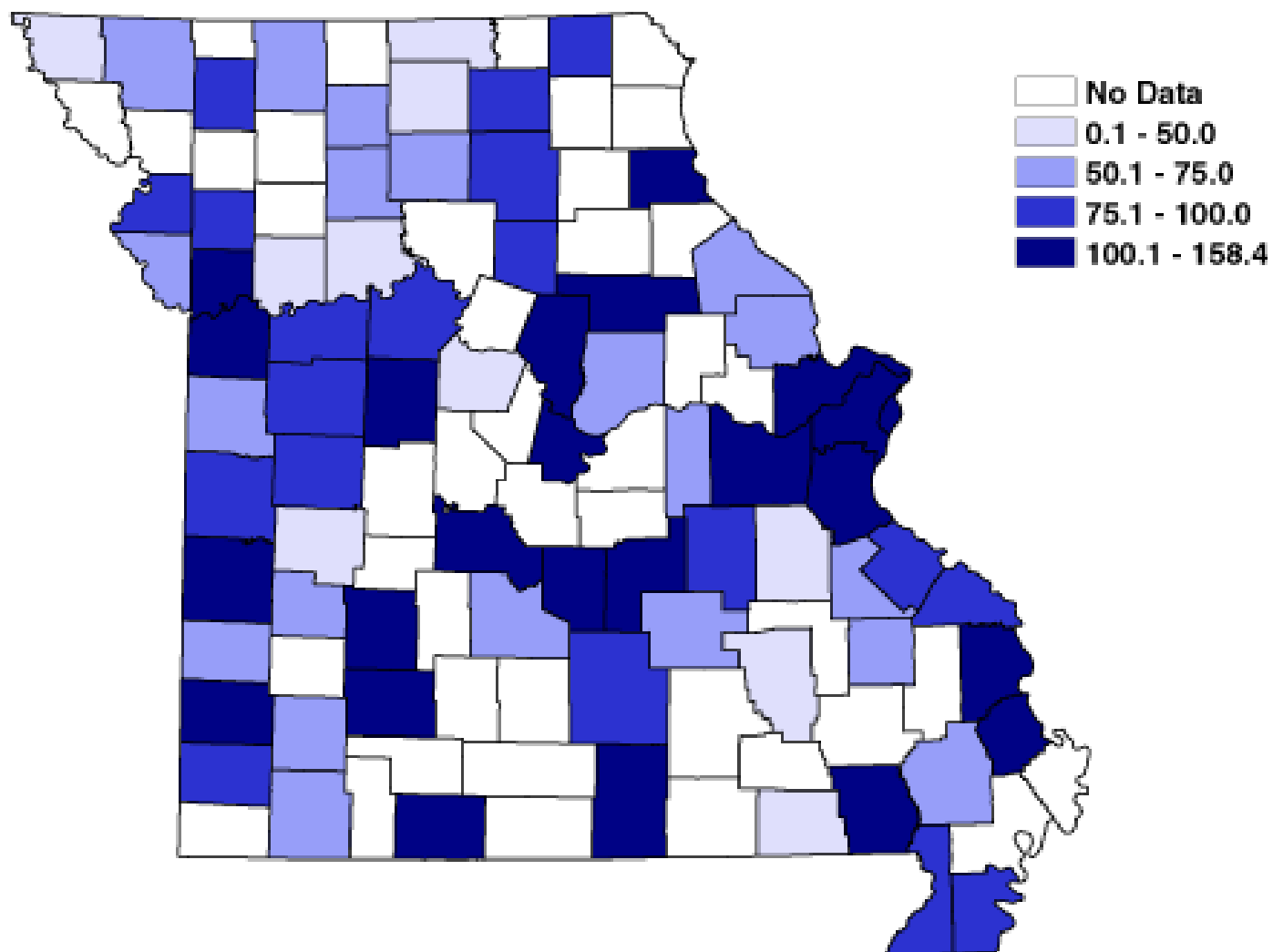Produced by: University Outreach and Extension, Office of Social and Economic Data Analysis [Feb. 8, 2002]

Distribution of Health Care Resources

Hospital Retention Rates

The Hospital Retention Rate is a measure of the extent to which residents of counties who are hospitalized in a year are admitted to their county hospital, if the county has a hospital. The adjoining map indicates those 44 counties, which do not have a hospital (shown in white on the map). The shading in the remaining 71 counties shows the extent to which hospitalized county residents were admitted to a hospital in their home county. Those 22 counties, which are shaded in the darkest blue, are the counties having the highest hospital retention rates – more than 60 percent of hospitalized residents were admitted in their home county. This category included larger population counties in places such as St. Louis County, Columbia, Jefferson City, Springfield, Kirksville, Hannibal, St. Joseph, Joplin, West Plains, etc. However, some small population county hospitals such as Atchison and Scotland also had high retention rates

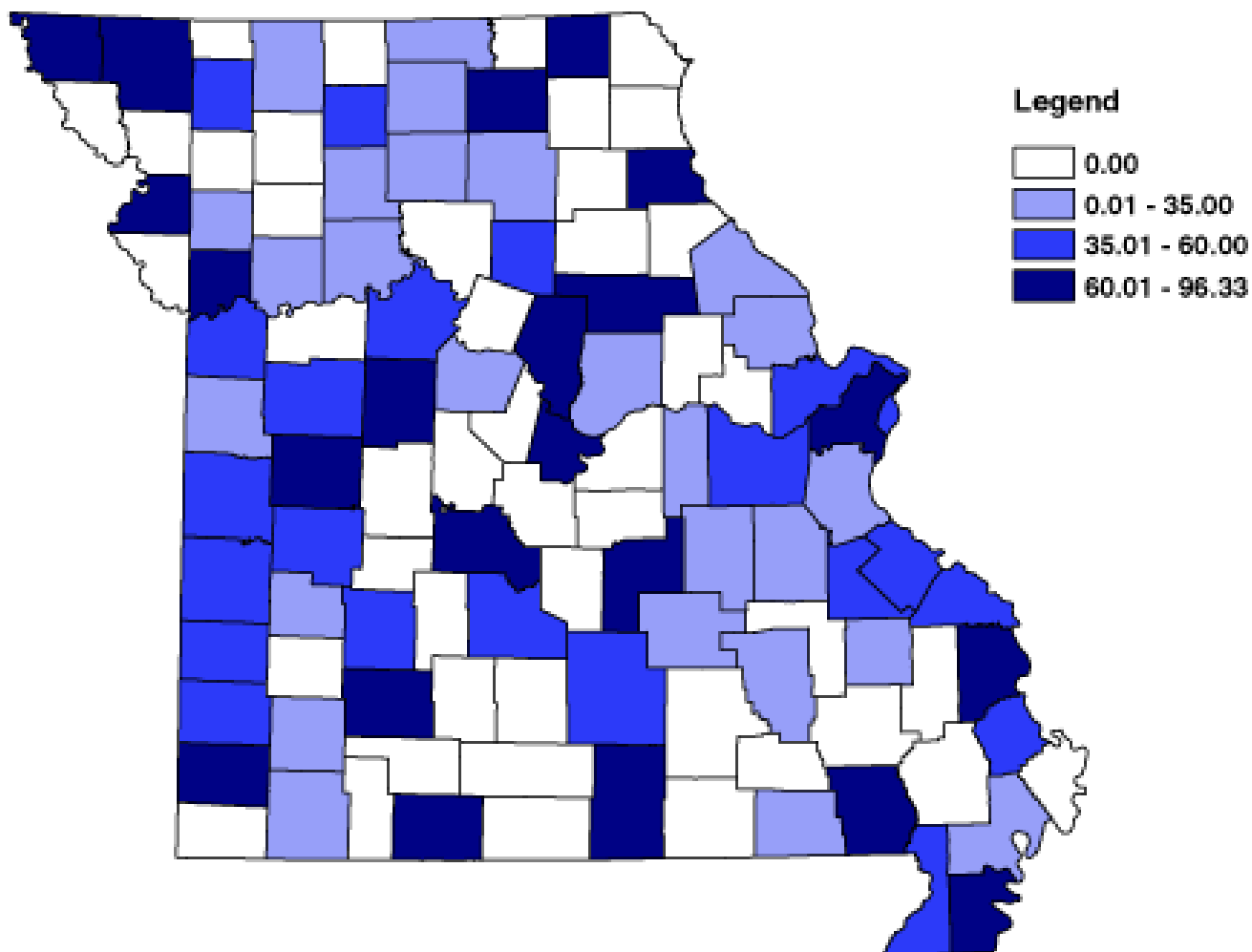The next highest category shown is those counties in which the retention rate was between 35 and 60 percent. There are 21 counties included in this category. Included among those counties are Jackson (Kansas City), St. Louis City, St. Charles and Franklin. The lowest retention rate is counties that retained fewer than 35 percent of hospitalized residents. There were 28 counties in that category.

Hospital Resource Intensity Index, 2000

Legend:
- No Data
- 0.1 - 50.0
- 50.1 - 75.0
- 75.1 - 100.0
- 100.1 - 158.4

Hospital Retention Rates, 2001

Legend

- ☐ 0.00
- ☐ 0.01 - 35.00
- ☐ 35.01 - 60.00
- ☐ 60.01 - 96.33

Hospital Resource Intensity Index 2000

Dr. Lanis Hicks of the UMC Department of Health Information Management and Informatics has constructed an index showing the extent of services offered by hospitals. She has been publishing this index for the last decade or more. The intensity index is displayed for each county having one or more hospitals on the adjoining map.

The higher the index number the greater the extent of health care services offered, including the level of technical and diagnostic capabilities. The index numbers range from as low as 17.3 to a high of 158.4. The 24 counties having an index of greater than 100 are generally regional, tertiary care centers. Included in that range are not only counties like Jackson (Kansas City), St. Louis City, St Louis, Greene (Springfield), Boone (Columbia), but also regional health care centers such as Poplar Bluff, Cape Girardeau, Jefferson City, West Plains, Joplin, Hannibal, Kirksville, Sedalia, Mexico, Nevada, etc.
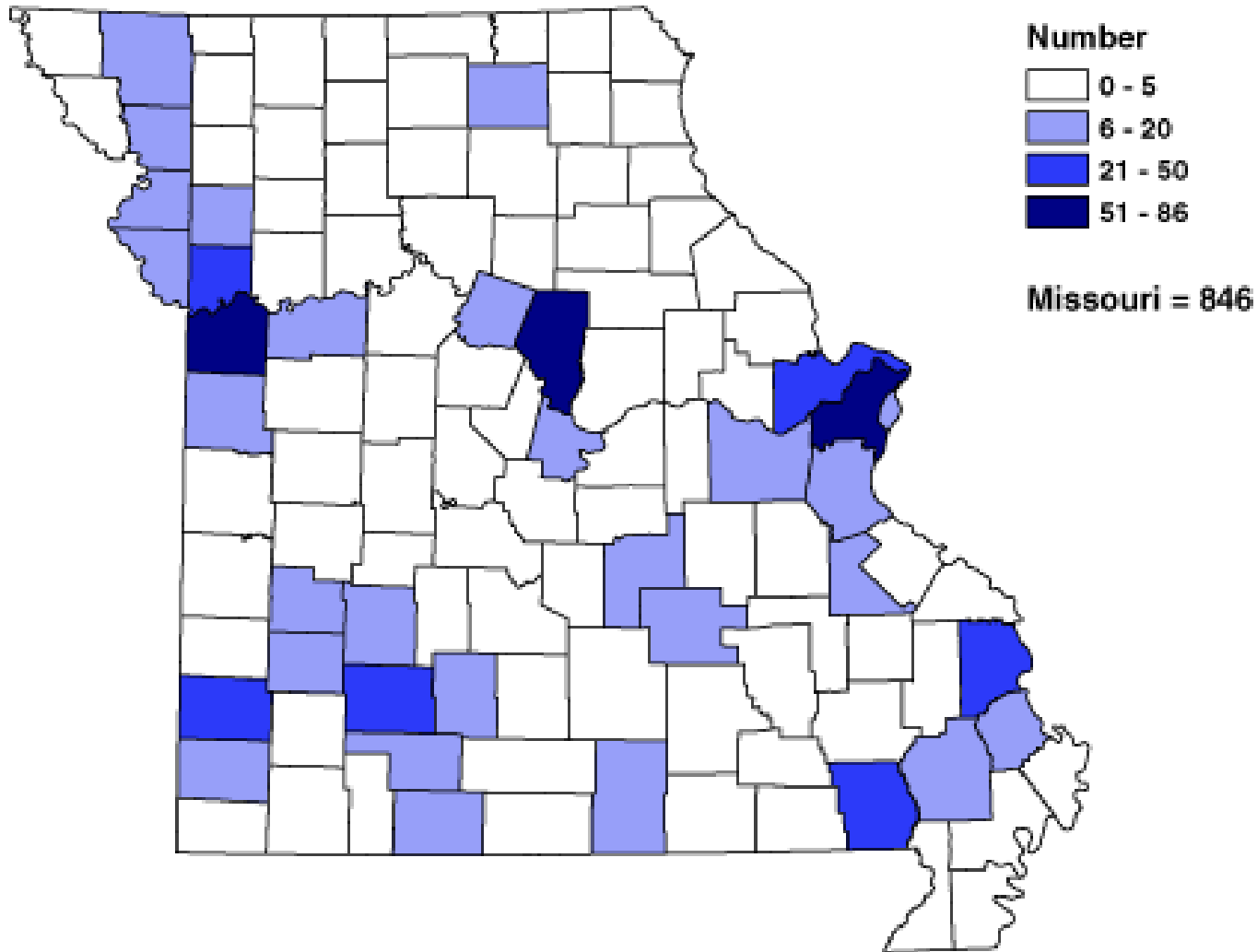
Registered Nurses per 10,000 Population, 2001
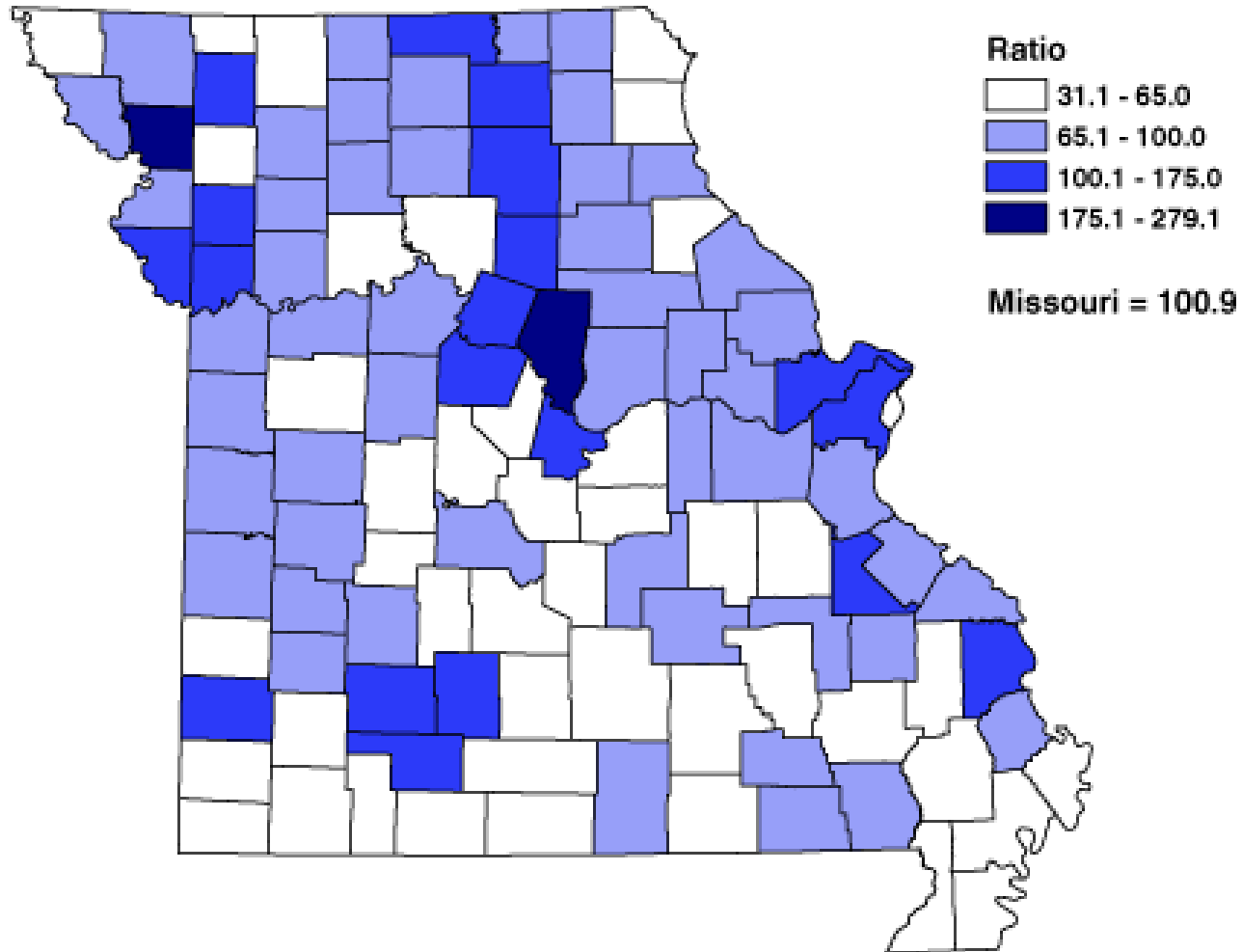
Ratio

- ☐ 31.1 - 65.0
- ☐ 65.1 - 100.0
- ☐ 100.1 - 175.0
- ☐ 175.1 - 279.1

Missouri = 100.9

Registered Nurses per 10,000 Population

In 2001 there were 56,789 registered nurses in Missouri – a ratio of 100.9 registered nurses per 10,000 population. The counties with the greatest number of nurses were St. Louis (14,242), Jackson (5,940), St. Charles (4,323), Greene (2,816) and Boone (2,409). More than 52 percent of Missouri registered nurses reside in those five metropolitan counties.

The adjoining map shows there were 21 counties in which there were more than 100 nurses per 10,000 population. The map shows a higher density of registered nurses in the Kansas City and St. Louis metro areas and in the vicinity of Columbia, Springfield, Joplin and Kirksville. The map also shows there were 44 counties in which there were fewer than 65 nurses per 10,000 population. Those counties are concentrated in southern Missouri. Thirty-five of the 44 low-density counties are located south of the Missouri River.

Number of Family Nurse Practitioners per County, 2001

Number

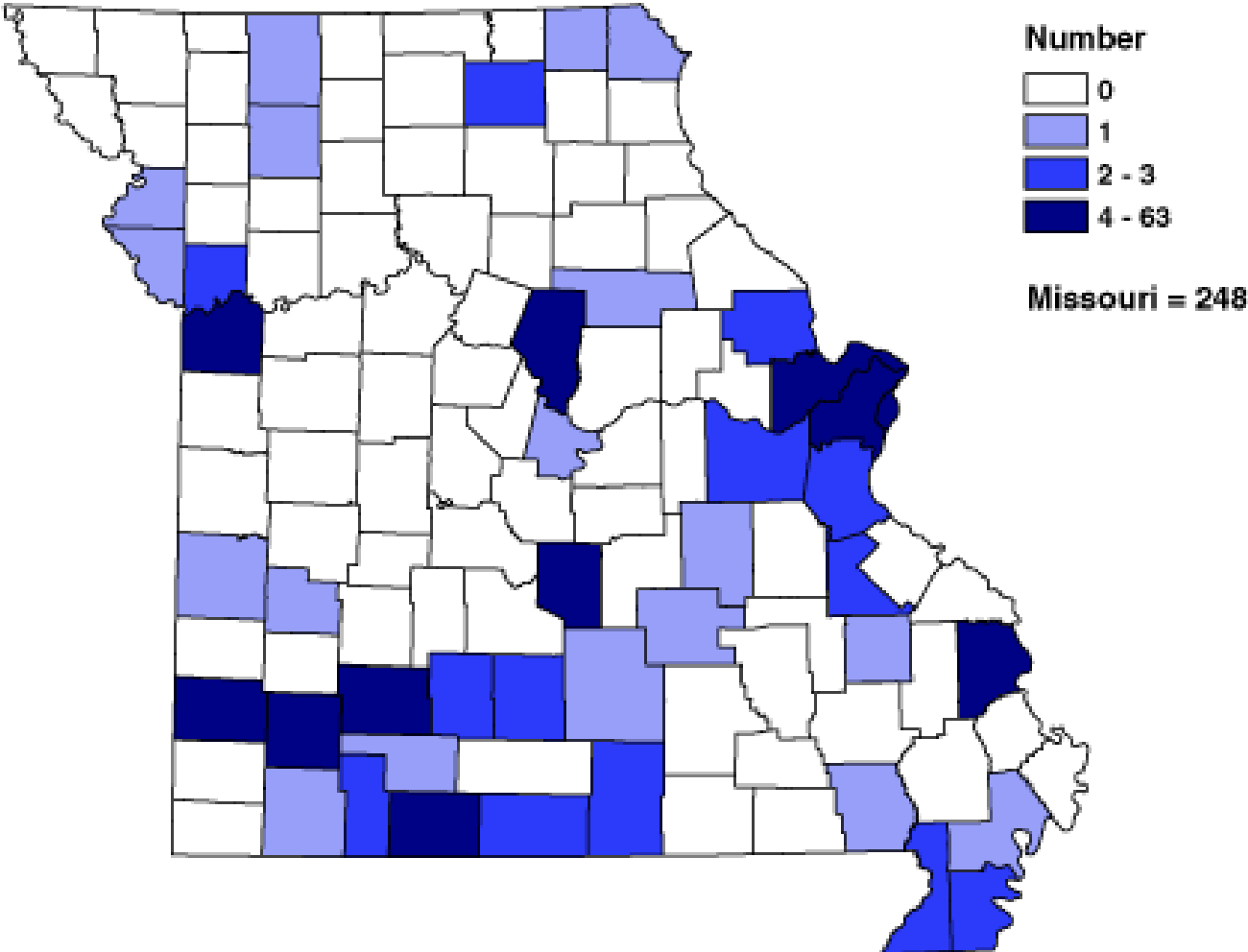- ☐ 0 - 5
- ☐ 6 - 20
- ☐ 21 - 50
- ☐ 51 - 86

Missouri = 846

Number of Family Nurse Practitioners Per County

Professional registration data indicate 846 Family Nurse Practitioners in 2001. The data report at least one nurse practitioner in 103 of the 115 counties. However, there were either one or two nurse practitioners in 42 of those counties. There were an additional 38 counties in which there were three, four or five.

Most of the 35 counties in which there were more than six family nurse practitioners are located in the larger population areas or in regional health care centers such as Maryville, Cape Girardeau, Rolla, Poplar Bluff, West Plains, etc.

The largest concentrations were in Boone, St. Louis, and Jackson counties with 86, 81 and 62 family nurse practitioners respectively.

Number of Physicians Assistants per County, 2001

Number

- 0
- 1
- 2 - 3
- 4 - 63

Missouri = 248

Number of Physician Assistants Per County

Professional Registration data report 248 Physician Assistants in Missouri in 2001. Physician Assistants were located in 43 of the 115 counties, but they were greatly concentrated in a few counties. Two-thirds of the physician assistants were located in five counties with the largest numbers in St. Louis (63), St. Louis City (45), Greene (25), Jackson (18) and Boone (14). The 31 counties in which there were one, two or three physician assistants were disproportionately concentrated in the Southwest Region.

Total Physicians per County, 2001

Number

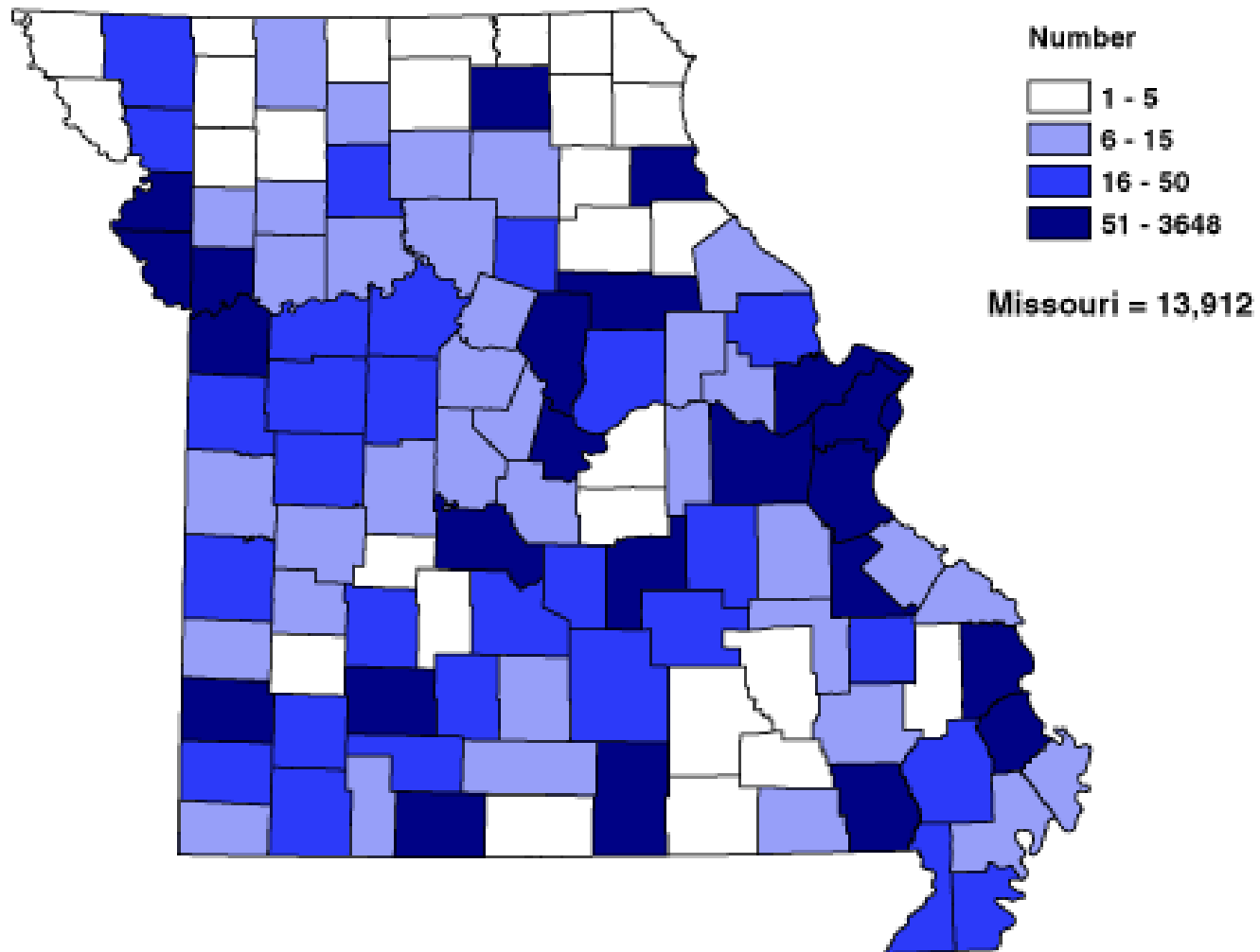|	
☐	1 - 5
☐	6 - 15
☐	16 - 50
■	51 - 3648

Missouri = 13,912

Source: Missouri Department of Economic Development, Professional Registration Data.
Prepared by: University Outreach and Extension, Office of Social and Economic Data Analysis - (OSEDA)
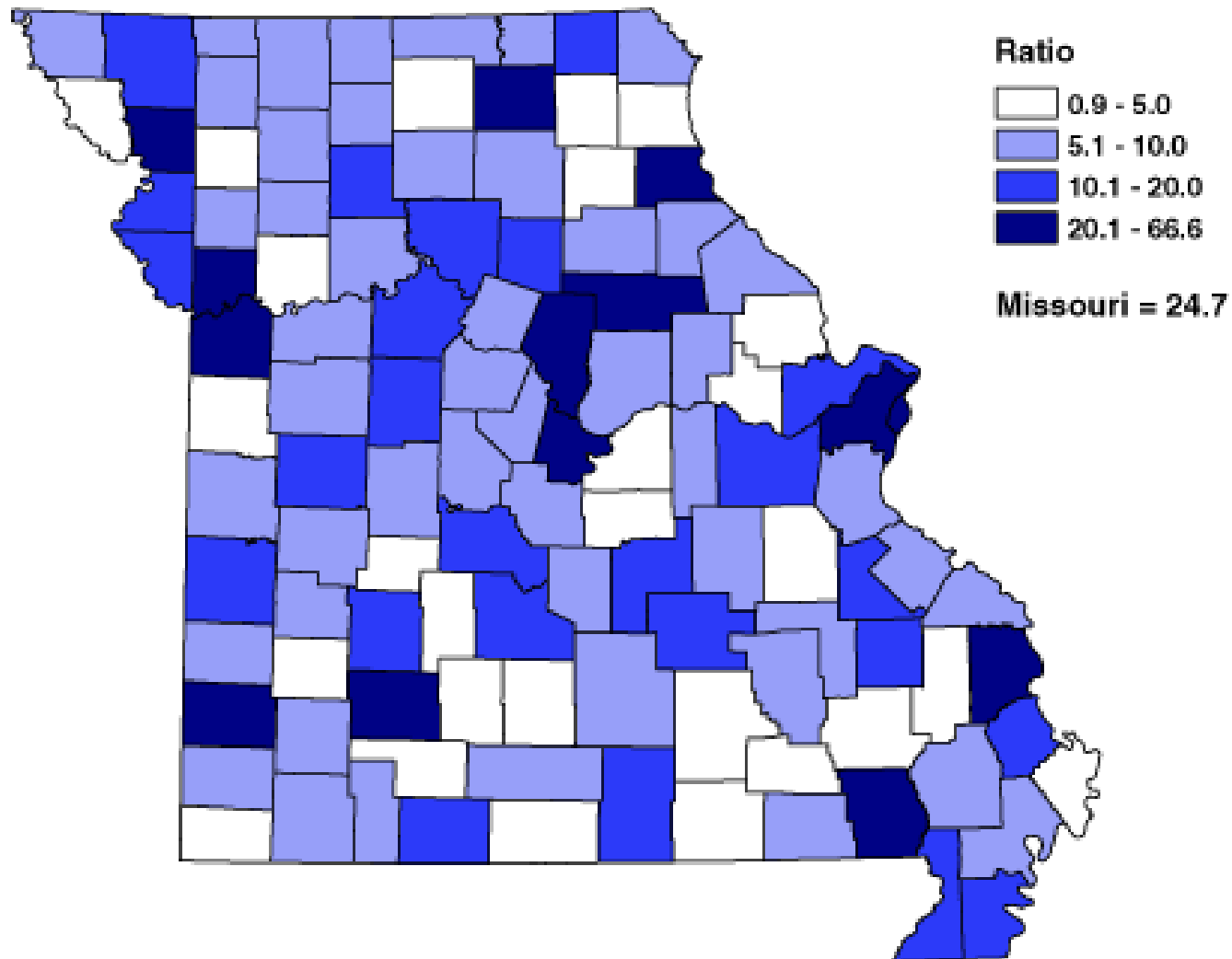Map Generated on 4.8.2003

Total Physicians Per County

There were 13,912 licensed physicians in Missouri in 2001. That category includes both Medical (12,259) and Osteopathic (1,653) doctors. The adjoining map shows that the number of physicians per county ranged from a low of one to a high of 3,648 (St. Louis County). The map shows there were 51 or more physicians in 24 counties. The counties with the greatest numbers are, in addition to St. Louis, St. Louis City (2,260), Jackson (2,200), Greene (851) and Boone (850). From those counties there is a relatively significant drop to Clay (423), St. Charles (366), Jasper (344) and Cape Girardeau (261). When combined there are 7,555 physicians in those eight counties – 54 percent of all physicians in Missouri.

At the other extreme there were three counties with only one physician, and 25 counties with from two to five physicians. Seventeen of those counties are in rural north Missouri.
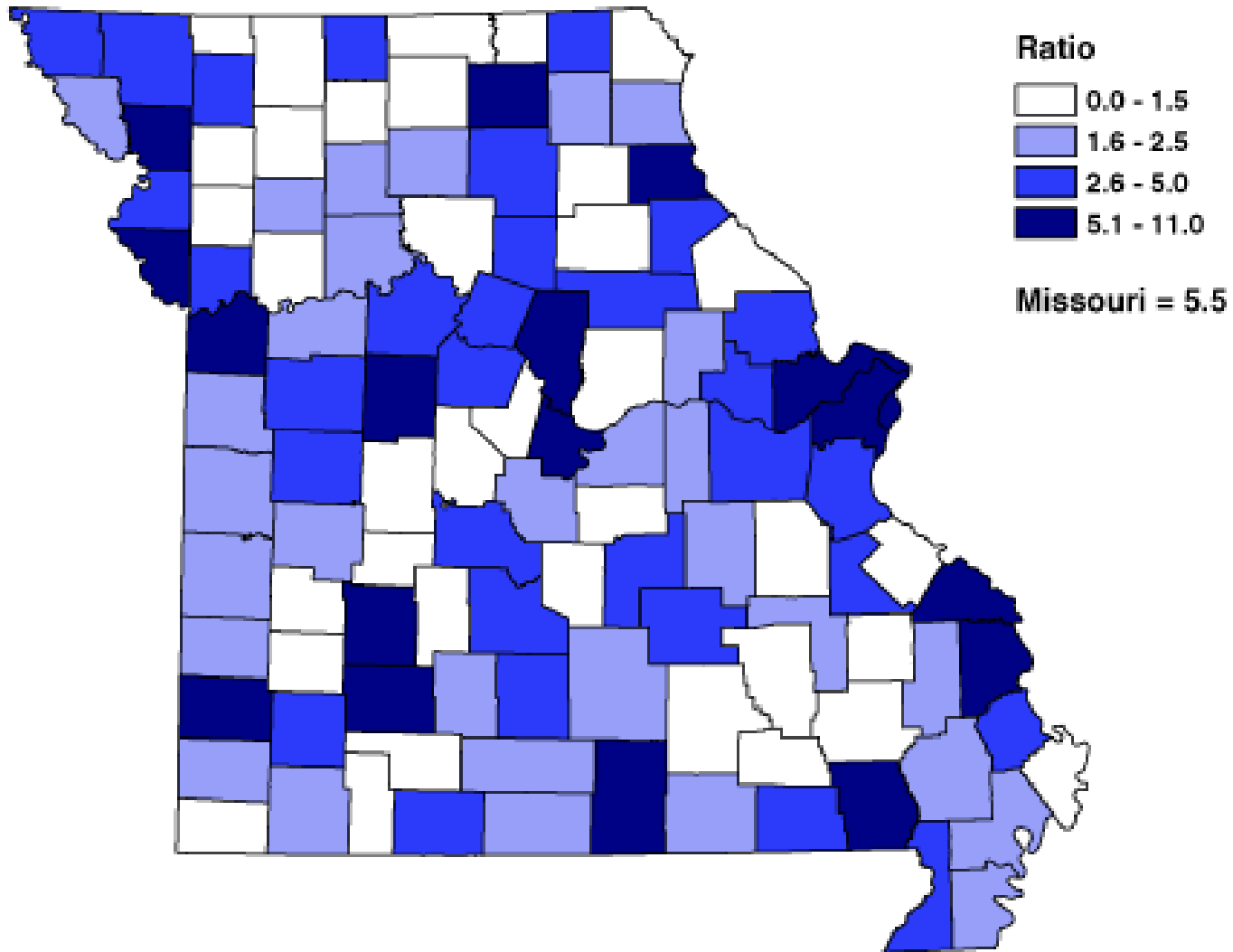
Total Physicians per 10,000 Population, 2001

Ratio

- 0.9 - 5.0
- 5.1 - 10.0
- 10.1 - 20.0
- 20.1 - 66.6

Missouri = 24.7

Physical Therapists per 10,000 Population

Registration data report 3,116 Physical Therapists in Missouri in 2001. All but 10 counties had a least one physical therapist. Physical therapists appear to be more widely distributed around the state than some other practitioners. There were 5.5 physical therapists per 10,000 population in the state, but there was no county in which there were than 11 PTs per 10,000. As the adjoining map shows, the counties having a ratio of 5.5 or greater are those that have an important concentration of health care services. They include not only Jackson, Boone, St. Louis, Kirksville and Springfield, but also regional centers such as Hannibal, Sedalia. Jefferson City, Cape Girardeau, West Plains, Poplar Bluff and Joplin.

Physical Therapists per 10,000 Population, 2001

Ratio

- 0.0 - 1.5
- 1.6 - 2.5
- 2.6 - 5.0
- 5.1 - 11.0

Missouri = 5.5

Physicians per 10,000 Population

Another way of assessing the geographic distribution of physicians is to calculate a ratio for each county. That is calculated by dividing county population by 10,000. That number is then used to divide into the number of physicians in the county. The result is a ratio showing the number of physicians per 10,000 population.   For example, in Boone County the population is 135,000 and there are 850 physicians. Doing that calculation shows 62.1 physicians per 10,000 population in Boone County. Calculating that ratio for each county provides a comparison of counties having the highest and lowest access to physicians.

The adjoining map shows that there are 24.7 licensed physicians per 10,000 population in Missouri. The highest ratios are in St. Louis City (66.6), Boone County (62.1) and Adair County (50.4). There are 14 counties in which the ratio is above the state average.

On the other hand, there are 25 counties in which there is a ratio of less than five physicians per 10,000 population. Those counties are mostly rural, but also include some suburban counties in which the population has grown rapidly but the physicians are largely concentrated in the adjoining large urban counties.

Dentists per 10,000 Population, 2001
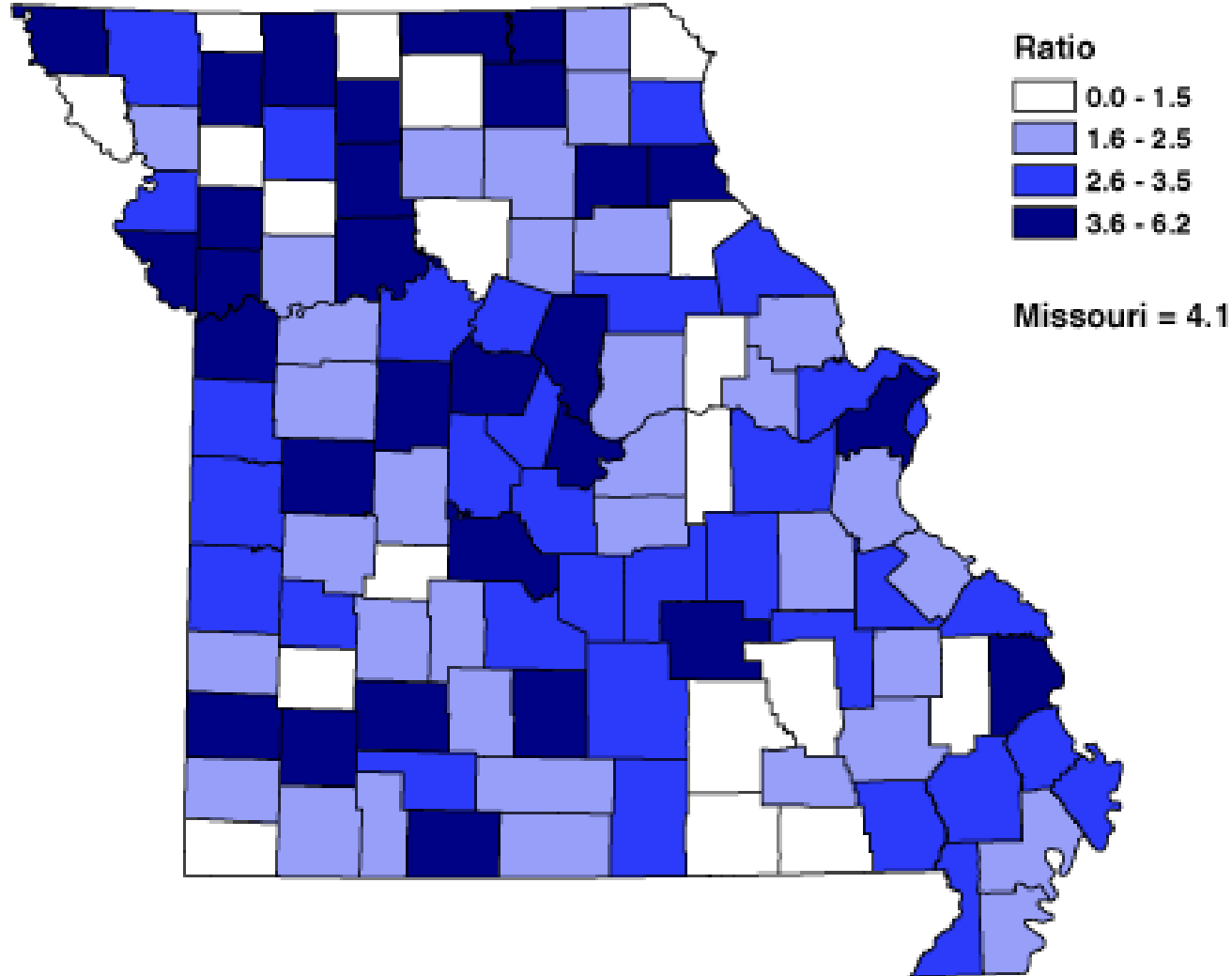
Ratio

- 0.0 - 1.5
- 1.6 - 2.5
- 2.6 - 3.5
- 3.6 - 6.2

Missouri = 4.1

Dentists per 10,000 Population

Professional Registration data report 2,306 licensed dentists in Missouri in 2001. All but seven counties had at least one dentist in 2001. There were 13 additional counties in which there was but one dentist.

The map shows there were 4.1 dentists per 10,000 population in Missouri. Compared with other health care providers there is less concentration among dentists. For example, although there were only five counties in which there were more than 5.0 dentists per 10,000 population, there were 49 counties in which the ratio was between 2.5 and 5.0