

South Carolina Rural Health Research Center



Department of Health Administration
Norman J. Arnold School of Public Health
 University of South Carolina
 Columbia, SC 29203

Michael E. Samuels, DrPH, Director
 Janice C. Probst, PhD, Deputy Director
 Sandra Glover, PhD, Associate Director

Minorities in Rural America
An Overview of Population Characteristics

2002

Authors:

Janice C. Probst, PhD
Michael E. Samuels, DrPH
Kristen P. Jespersen, MSPH
Karin Willert, PhD
R. Suzanne Swann, PhD
Joshua A. McDuffie, MBA

Funding acknowledgment:

This report was prepared under Grant No. 6 U1C RH 00045-01 with the Federal Office of Rural Health Policy, Health Resources and Services Administration.



Joan Van Nostrand, DPA, Project Officer

Minorities in Rural America
An Overview of Population Characteristics

Table of Contents

Introduction	1
Executive Summary	2
Chapter One. Non-metro African Americans	6
Chapter Two. Non-metro Hispanics.....	11
Chapter Three.Non-metro Native Americans	14
Chapter Four. Non-metro Asians / Pacific Islanders.....	17
Chapter Five Conclusions and Recommendations.....	19

Appendices:

- A: Mapping Rural America's Minority Populations
- B: Supporting Tables
- C: Economic Patterns in Non-Metro America

Introduction

As the first offering in a series of reports addressing minority health issues, the South Carolina Rural Health Research Center presents an overview of demographic and economic statistics pertaining to rural minority populations. We attempt to answer the following questions:

- Where do rural minorities live?
- How is the rural minority population distributed across ages and sexes?
- What is the economic structure of rural, minority communities?
- What health resources are available in rural, minority communities?

This report marks the first compilation of information specifically targeting a broad range of rural minority populations and offering the same analyses for all groups. We hope it will encourage further interest in the experiences of minorities in rural America and serve as a springboard for further research.

For purposes of this report, “rural” is measured at the county level. Counties are sorted into metropolitan - non-metropolitan classifications based on Office of Management and Budget criteria. Non-metropolitan counties (hereafter, “non-metro”) are considered rural. Details concerning methods and data sources, together with supporting tables, are presented in Appendix A.

Findings pertaining to each minority group are presented in separate chapters, ordered by the size of each population in rural areas: African Americans (Chapter One), Hispanics (Chapter Two), Native Americans (Chapter Three) and Asian / Pacific Islanders (Chapter Four). Conclusions and recommendations are offered in Chapter Five. Maps illustrating geographic findings are provided in Appendix B. These maps, presented here in black and white, are available in color at our web site, <http://rhr.sph.sc.edu>. For readers wishing further background, Appendix C provides a literature review, Economic Patterns in Non-Metro America.

Executive Summary

Geography

Rural minorities, and in particular poor minorities, are geographically concentrated in different regions:

- Seven of every ten (70%) poor, non-metro African Americans live in six Southern states: Mississippi, Georgia, North Carolina, Louisiana, Alabama, and South Carolina.
- Nearly three quarters (73%) of all poor, non-metro Hispanics live in five Southwestern states: Texas, New Mexico, California, Arizona, and Colorado.
- Over half (57%) of all poor, non-metro Native Americans live in five Western states: Arizona, New Mexico, Oklahoma, South Dakota, and Montana.

Non-metro Asian / Pacific Islanders are a geographic and economic exception among non-metro minority populations. Non-metro Asian / Pacific Islanders, just over half a million people, are not geographically concentrated and are less likely than the white population to live in poverty.

Poverty

Rural poverty affects both individuals and communities. The proportion of poor persons is higher among minority populations, and total community economic resources are more constrained in communities where minority groups represent over half of the population. The lack of community resources implies that it will be difficult for rural minorities to improve their economic status. Relevant statistics:

Rural African Americans:

- One third (34%) of the non-metro African American population is poor,¹ versus 13% of the non-metro white population.
- In non-metro counties where the majority of the population is African American:
 - Average total county income is 67% of the national value: \$259 million versus \$387 million per county.
 - Bank deposits average \$144 million, 56% of the value for majority white counties, \$257 million.

Rural Hispanics:

- One quarter (25%) of the non-metro Hispanic population is poor.
- In non-metro counties where the majority of the population is Hispanic:

¹ "Poor" or "poverty" is defined as living below the Federal poverty level.

- Total county income is 66% of the average for all non-metro counties (\$257 million versus \$387 million).
- Total bank deposits are 56.2% of the average for all non-metro counties (\$141 million versus \$257 million).

Rural Native Americans

- One third (34%) of the non-metro Native American population is poor.
- In non-metro counties where the majority of the population is Native American:
 - Total county income is less than half (48%) the average for all non-metro counties (\$186 million versus \$387 million).
 - Total county bank deposits are less than a quarter (24%) of the average for all non-metro counties (\$59 million versus \$257 million). The resource disparity experienced by Native Americans is greater than that of any other minority group.

Rural Asian / Pacific Islanders are the exception:

- A smaller percentage of non-metro Asian / Pacific Islanders are poor (11%) than among whites (13%). The poverty population is not geographically concentrated. The five states accounting for over half of all poor, non-metro Asian / Pacific Islanders are Hawaii, California, New York, Oregon and Wisconsin.

Health Services Infrastructure

Individuals living in poor, non-metro counties have fewer health care resources available to them. Three of five non-metro white Americans live in Health Professions Shortage Areas (HPSAs); three out of four non-metro minority Americans do so. (Asian / Pacific Islanders are an exception to the pattern of minority disadvantage.) Relevant statistics:

Rural African Americans:

- One in eight non-metro African Americans (12%) versus one in 10 whites (10%) lives in a county without a hospital.
- In majority African American counties, there are 6.2 physicians for every 10,000 residents, versus 8.7 physicians per 10,000 residents across all non-metro counties.
- Seven out of 10 non-metro African Americans (71%), versus six of 10 non-metro whites (64%), live in counties that are whole or in part Health Professions Shortage Areas (HPSAs).
- 84% of counties where African Americans are the majority of the population are HPSAs.

Rural Hispanics:

- In non-metro counties where the majority of the population is Hispanic, there are an average of 5.3 physicians per 10,000 residents, versus 8.7 physicians per 10,000 persons across all non-metro counties.
- Three quarters of all non-metro Hispanics (76%) live in HPSA counties.
- 84% of counties where Hispanics are the majority of the population are HPSAs.

Rural Native Americans

- Non-metro Native Americans are less disadvantaged in physician supply than are other non-metro minorities, but still fall below the rural county average. In majority Native American counties, there are 8.1 physicians for every 10,000 residents, versus 8.7 physicians per 10,000 residents across all non-metro counties.
- Nearly three quarters (73%) of all non-metro Native Americans live in HPSA counties.
- Two thirds (67%) of counties where Native Americans are the majority of the population are HPSAs.

Recommendations

To address the needs of non-metro minority populations requires recognition of the simultaneous presence of low-income *individuals* in low-income *regions*. Rural, minority poverty affects both individuals and communities. At the individual level, about one third of non-metro African Americans and Native Americans, and about one quarter of non-metro Hispanics, are poor. Total community economic resources are more constrained in counties where minority groups represent over half of the population. Typically, counties with high concentrations of minorities have income and assets that are two thirds or less of the national average. In counties where Native Americans constitute the largest population group, incomes are less than half and county bank assets about a quarter of the national average.

The lack of community resources implies that it will be more difficult for non-metro minority persons to improve their economic status unless they leave their present communities. Federal funding for community development tends to bypass many impoverished non-metro counties. A group of researchers at the US Department of Agriculture have examined the flow of Federal funds to metropolitan and non-metropolitan counties. Non-metro counties tend to exceed metro counties in funds received for income security, such as Social Security, public assistance, and medical benefits. However, funding for community resource development—business assistance, community and regional development—flows principally to metropolitan counties. This trend will have to change if rural communities and rural health infrastructures are to survive.

Recommendations are as follows:

- The Secretary of the Department of Health and Human Services should assess the degree to which absence of skilled personnel may prohibit rural minority counties from participating in DHHS grant programs and the degree to which appropriate training and support could remediate this personnel shortage.
- Employment and Training Administration programs of the Department of Labor should increase the degree to which they target counties falling into the bottom 25% for economic infrastructure and human capital (the latter measured by educational attainment in the workforce).
- The Secretary of the Department of Health and Human Services should evaluate the degree to which rural health care institutions may be handicapped by limits in rural telecommunications infrastructure.
- Programs that place practitioners directly in needy rural areas, such as Community Health Centers and the National Health Service Corps, should continue and if possible increase health workforce supply for poor and minority non-metro populations.
- Current and future appropriations for National Health Services Corps and Community Health Services programs should target rural counties with the lowest existing infrastructure, measured by economic and human capital.
- The Secretary of the Department of Health and Human Services should support research into the economic and infrastructure characteristics of rural counties that are successful in attracting and retaining health care providers, with the intent of identifying local models that can be exported to other rural counties. Particular attention should be given to successful models in rural counties with significant minority populations.
- The Secretary of the Department of Health and Human Services should support research into transportation barriers experienced by poor and minority rural residents, to better policy information for planning site locations and transportation services.

Chapter One

Rural African Americans

Demographic Characteristics of the Non-metro African American Population

Approximately 5 million non-metro residents are African American. These 4,992,164 persons make up 9.3% of the non-metro United States population (1999 estimates). Southern states, including South Carolina, Georgia, Alabama, Mississippi, and Louisiana, have the greatest density of non-metro African Americans. (See Maps 1-A and 1-B, Appendix B.) Of all African Americans living in non-metro counties, 69% live in the non-metro counties of those five Southern states.

The age distribution of non-metro and urban African Americans is illustrated in Figures 1-1 and 1-2 (Appendix A), and in Maps 1C-1G (Appendix B). Both non-metro and urban African American age distributions show a high proportion of all persons falling within the child-bearing years (18-44) or younger. African American population patterns that feature a high proportion of youths to older working individuals are particularly noticeable in the Mississippi Delta region. Map 1-C shows the particularly high concentration of African American children age 12 or younger in this area. A high ratio of children within a population places high demands on education and child care, which may not be available or available only in substandard form in economically depressed non-metro areas (Calhoun, Reeder and Bagi, 2000).

Economic Characteristics of Non-metro, African American Counties

The paragraphs below look at principal types of rural county economy—agriculture, manufacturing, farming—and note the proportion of all African Americans living in each type of county. This does not imply that all African Americans are actually engaged in the “typical” industry of the counties in which they live.

Agricultural Counties

The majority of African Americans live in counties that have less than 7% of the labor force in agriculture (See Table 1-1, Appendix A). The white population is much higher in farming-dominant counties, which are principally located in the Great Plains. Only 7.8% of non-metro African – American men, and 2.5% of non-metro African American women, were employed in agriculture in 1990 (Effland and Kassel, 1996).

Manufacturing counties

Non-metro African Americans, much more so than the non-metro white population, tend to be located in counties where a relatively large proportion of the economy is in manufacturing (See Table 1-2, Appendix A). While they may not be working directly in manufacturing themselves, seven out of every 10 non-metro African

Americans (73%) lives in a county that falls above the median in the proportion of its labor force in manufacturing in 1990.

In theory, living in manufacturing-based counties would be advantageous to African Americans. Manufacturing tends to hire a greater number of low-education workers than do other economic sectors (except for low skill service jobs), and to pay them comparatively well for that educational level. In the non-metro South, where most non-metro African Americans live, family poverty rates were lower among manufacturing workers than among other private sector workers. Only 9% of families of non-metro Southern workers in manufacturing were below the poverty level in 1998, versus 22% of the families of workers in other private sector jobs (McGranahan, 2001).

Other factors may work to reduce the advantages listed in the preceding paragraph. Jobs available to non-metro African Americans in the South are influenced by the nature of the region's manufacturing base, which has focused on less skilled jobs, and also by a "particularly strong legacy of racial segregation" (Gibbs, 1996, p. 66). African Americans in the non-metro South tend to have lower incomes than whites of similar educational background (Beaulieu, Barfield and Stone, 2001). Smaller non-metro towns, particularly African American majority towns, have become "pockets of poverty with high unemployment" (Cromartie and Beale, 1996). As recently as 1980, 47% of African American women and 56% of African American men employed in service industries in the non-metro South were categorized as household or commercial cleaning staff. (Gibbs, 1996). The drop in black women in service roles between 1980 and 1990 (to 35%) was due mainly to their moving into sales, particularly cashiers, and into technical positions, particularly nurse's aides. Neither of these occupations can be said to represent a significant occupational or financial advance. In blue collar industries, African American women are generally found at the bottom rungs of the employment structure, working in job classifications such as "operator". These jobs are at the lowest end of the wage scale and have the greatest likelihood of being moved offshore to lower cost locations (Gibbs, 1996).

Mining counties

"Mining" as an industrial sector refers to industries that extract raw materials from the ground. Mining thus includes extraction of oil via wells, and sand/gravel via quarries, as well as the traditional image of an underground mine. Mining as an industry is concentrated in relatively few counties across the United States. The median percent of income derived from mining across all non-metro counties is only 0.46%; the top quartile begins at 1.97%. Non-metro African Americans are slightly less likely than non-metro Whites to live in counties in the upper quartile for mining income (See Table 1-3, Appendix B). Mining income tends to be concentrated in Appalachian counties, which have predominantly white populations, and in the West, where Hispanics are the principal minority group.

Income Available to Rural African Americans

Background

Most poor, non-metro African Americans are located in the South, including South Carolina, Georgia, Alabama, Mississippi, Louisiana as well as in western West Virginia and eastern Kentucky. Across the United States, including both non-metro and urban counties, 16.6% of persons lived below the poverty level in 1990. For metropolitan counties, the proportion of residents living in poverty was 12.8%. Non-metro counties had 18.3% of their residents living below the poverty level. Just under a third (31.8%) of African Americans across all county types live in poverty. In urban counties, however, 27.1% of African Americans lived in poverty, versus 34.1% of African American residents of non-metro counties.²

Personal Income

Average per capita income among non-metro African Americans, measured at the county level, ranges from under \$250 to \$74,896.³ (See Map 1-H.) The median per capita income for African Americans in non-metro counties was \$5,893 in 1989, while in urban counties it was \$8,171. In comparison, the median household income for the white non-metro population in these same counties was \$10,981; for the white population in urban counties with more than 0.14% African American population it was \$13,851.

About one third (33.8 %) of the non-metro African American population lives below the poverty line, versus 12.9% of the white population. The number of non-metro African American persons living below the poverty line is highest in Mississippi, Georgia, North Carolina, Louisiana, Alabama, and South Carolina. Just over two thirds (69.9%) of all poor, non-metro African Americans live in these six states.

Community resources

The level of total wealth in a community offers a partial index of the level and quality of infrastructure support available in that county. For obvious reasons, richer counties are likely to have better schools, roads, health networks, and economic opportunities in general. One measure of wealth is the total income of the population of a county. Income includes money gained through earnings, interest and dividends from savings, and transfer payments, such as Social Security. Total personal income aggregated at the county level averages \$387,087,900 per county across non-metro counties.⁴ In counties where the majority of the population is African American, this

² (US. Bureau of the Census, March Current Population Survey with aggregate data from federal individual income tax records, food stamp programs population estimates and 1990 Census figures) (www.Census.gov/hhes/www/saipe93.html).

³ All population data are from the population information on the USA Counties 1998 CD, and originate from US Census Bureau 1996 data. All income data are from the per capita income by race information on the USA Counties 1998 CD and originate from US Census Bureau 1996 data. Analysis is limited to the 1708 non-metro counties with more than 0.14% African American population. One county, Uvalde, Texas, was excluded from the sample of counties with African American population greater than 0.14% because the per capita income was reported to be more than \$200,000.

⁴ Figures are from the Bureau of Economic Analysis, 1994.

value drops to \$259,417,040, or 67.0% of the national value. In majority white non-metro counties, total personal income measured at the county level averaged \$392,241,160.

Local bank deposits speak to the ability of a community to finance local endeavors. Bank deposits aggregated at the county level average \$251,551,000 across all non-metro counties. In majority white non-metro counties, total bank deposits at the county level averaged \$257,320,460. In counties where the majority of the population is African American, this value drops to \$144,762,000, or 57.5% of the national value and 56.3% of the white county value.⁵ Non-metro counties with majority African American populations have both lower earnings and lower ability to access capital than other counties.

Medical Resources

Among 2297 non-metro counties, 529 do not have a hospital (1997 data). Approximately one in eight (12.0%) of all non-metro African Americans, versus one in 10 non-metro whites (9.6%), lives in a county without a hospital.⁶ The mean ratio of persons to hospital beds across all non-metro counties is 250 persons per bed. In counties where the majority of the population is African American, this value decreases to 219 persons per bed. Thus, bed capacity is higher in non-metro African American counties than in other rural counties.

While non-metro African Americans live in counties with more hospital beds per person, the reverse is true for nursing home beds. Across all non-metro counties, there were 255 with no nursing home at all and 666 with one nursing home in 1991; only 23 urban counties had no nursing home and 79 had one.⁷ Nearly all non-metro African Americans (95.3%) live in counties with a nursing home. The mean ratio of population to nursing home beds across all non-metro counties is 136 persons to one bed, versus 218 to one in urban counties. In non-metro counties where the majority of the population is African Americans, however, the ratio is one bed for every 175 persons. For comparison, the same ratio for non-metro counties where the majority of the population is white is one bed for every 133 persons.

Very few rural African Americans (0.6%) live in a county without any physicians;⁸ the percentage for whites is 0.9%. The mean ratio of physicians to people across all non-metro counties is 8.65 physicians for every 10,000 persons. In counties where the majority of the population is African American, this ratio drops to 6.18 physicians per 10,000 persons. African Americans are more likely than whites to live in counties that fall into the bottom quartile for physician-population ratio, and less likely to live in the top quartile. Thus, 14.8% of non-metro African Americans live in counties in

⁵ Data on total deposits to commercial banks and savings institutions are from the USA Counties 1998 CD and originate from FDIC 1997 data.

⁶ Data on hospitals are from the Bureau of Health Professions Office Of Research and Planning Area Resource File, February 2000.

⁷ Data on nursing homes are from the USA Counties 1998 CD and originate from National Center for Health Statistics 1991 data.

⁸ Data on physicians are from the Bureau of Health Professions Office Of Research and Planning Area Resource File, February 2000.

the bottom quartile for the physician/population ratio; 38.0% live in counties in the top quartile for the physician/population ratio. The same percentages of non-metro whites are 12.2% and 43.6%.

Non-metro America's sparse population and relatively low financial resources have not been conducive to attracting or retaining health care personnel. In consequence, many non-metro counties are Health Professions Shortage Areas (HPSAs). Seven out of 10 non-metro African Americans (71.2%) live in HPSA counties,⁹ versus six out of 10 non-metro whites (63.6%). Of African American majority non-metro counties, 84.3% are HPSA counties. The same percentage for majority White non-metro counties is 64.8%.

County-based ratios of beds per 1000 population and physicians per 1000 population are gross measures of access and do not consider geographic and transportation barriers in obtaining access to care. Neither do they take into consideration financial barriers. Thus, difficulties in obtaining needed health care experienced by African Americans and other minorities may be greater than implied by the differentials noted above.

⁹ Data on HPSA status from the Bureau of Health Professions Office Of Research and Planning Area Resource File, February 2000.

Chapter Two

Rural Hispanics

Demographic Characteristics of the Rural Hispanic Population

Approximately 4.5% of all non-metro residents, an estimated 2,411,569 persons, are Hispanic (Map 2-A, Appendix B). “Hispanic” is a broad category. When enumerating Hispanic data, the 1990 Census included persons from 17 different categories (Effland and Kassel, 1996). The Hispanic non-metro population has historically been concentrated in the Southwest. Of all rural Hispanics, 69.9% live in eight states: Texas, New Mexico, California, Arizona, Colorado, Washington, Florida, and Kansas.

The Hispanic population has been increasing, and county-level data from the 2000 Census, when available, should show even faster growth than the 1990 – 1999 estimates available for this report (Map 2-B). Virtually all non-metro counties (96.5%) saw their Hispanic population increase from 1990 to 1999.

The age distribution of non-metro and urban Hispanics is illustrated in Figures 2-1 and 2-2 (Appendix A) and graphically presented in Maps 2-C through 2-G (Appendix B). Both non-metro and urban Hispanic age distributions show a high proportion of all persons falling within the child-bearing years (18-44) or lower. More clearly than African-Americans, rural Hispanics fall into a population pyramid, with children making up the largest age groups. School districts in counties with significant Hispanic representation will need to plan for these children.

Economic Status of Non-metro Hispanic Counties

Non-metro Hispanics are more likely than non-metro whites to live in counties with a significant proportion of the total county population employed in agriculture. Thus, 47.5% of non-metro Hispanics, versus 29.8% of whites, live in such counties (Table 2-1, Appendix A).

Rural Hispanics are under-represented in counties where the labor force is involved in manufacturing. Half (50.0%) of non-metro Hispanics live in counties falling into the bottom quartile of the United States for percent of the work force involved in manufacturing. Only 22.2% of the non-metro Hispanic population, versus 59.1% of non-metro whites, lives in counties falling above the median in percent of total workforce engaged in manufacturing. (See Table 2-2, Appendix B). The tendency of counties where Hispanics currently live to be more vested in agriculture, and less involved in manufacturing, limits job opportunities for Hispanics. As noted earlier, manufacturing tends to hire a greater number of low-education workers than do other economic sectors (except for low skill service jobs), and to pay them comparatively well. The absence of such jobs places non-metro Hispanics at an economic disadvantage.

Non-metro Hispanics are slightly more likely than non-metro whites to live in counties in the upper quartile for percent of the workforce engaged in mining (See Table 2-3, Appendix A). The West and Southwest are regions where geology allows a significant mining presence (See Map C-3, Appendix C). However, mining does not create many jobs. Concentration of a minority population in mining areas is not economically advantageous.

Income Available to Non-metro Hispanic Residents

Personal income

Hispanics have an average per capita income, by county, ranging from under \$543 to \$93,810. (See Map 2-H, Appendix B.) The median per capita income for Hispanics in non-metro counties is \$5,888 while in urban counties it is \$8,738. For comparison, the median per capita income for the white non-metro population is \$10,801; for the white population in urban counties it is \$13,773.

One quarter (24.5 %) of the non-metro Hispanic population lives below the poverty line, versus 12.9% of the white population. The number of non-metro Hispanic persons living below the poverty line is highest in Texas, New Mexico, California, Arizona, and Colorado. (See Map 2-I, Appendix B.) Nearly three quarters (73.2%) of all poor, non-metro Hispanics live in these five states.

Community resources

As discussed in the Chapter on non-metro African Americans, total community income and community capital as measured by bank deposits provide indices of the ability of a community to offer jobs and support an effective infrastructure. Total personal income aggregated at the county level in all non-metro counties averages \$387,087,900. In counties where the majority of the population is Hispanic, this value drops to \$257,362,020, or 66.1% of the value for all non-metro counties. Bank deposits aggregated at the county level average \$251,551,000 across all non-metro counties. In counties where the majority of the population is Hispanic, this value drops to \$141,459,000, or 56.2% of the value for all non-metro counties.

Medical Resources

Rural Hispanics are not more likely than non-metro whites to live in counties without a hospital. About one in ten persons in each group, 9.7% of non-metro Hispanics and 9.6% of non-metro whites, lives in a county with no hospital. However, Hispanics live in counties with fewer hospital beds available. The mean ratio of persons to hospital beds across all non-metro counties is 250 persons per bed. In counties where the majority of the population is Hispanic, this ratio increases to 342 persons per bed.

Six percent (6.0%) of non-metro Hispanics live in counties without a nursing home. Non-metro majority-Hispanic counties have fewer nursing home beds per person, as well as fewer hospital beds per person. The mean ratio of population to nursing home beds across all non-metro counties is 136 persons per bed. In non-metro counties where the majority of the population is Hispanic, this ratio increases to 516 persons per nursing

home bed. For comparison, the same ratio for non-metro counties where the majority of the population is White is 133 persons per bed.

Very few non-metro Hispanics (1.1%) live in a county without any physicians. This value is similar to that for non-metro whites (0.9%). The mean ratio of physicians to people across all non-metro counties is 8.65 physicians per 10,000 persons. In counties where the majority of the population is Hispanic, this ratio drops to 5.27 physicians per 10,000 residents. Hispanics, like African Americans, are more likely than whites to live in counties falling into the bottom quartile for physician/population ratio, and less likely to live in counties with the highest physician / population ratios. Thus, 15.5 % of non-metro Hispanics live in counties in the bottom quartile for the physician/population ratio; 32.8% live in counties in the top quartile for the physician/population ratio. The corresponding percentages of non-metro Whites are 12.2% and 43.6%.

Three quarters of all non-metro Hispanics (75.5%) live in HPSA counties, versus 63.6% of whites. (See Map 2-J, Appendix B.) Of all Hispanic majority non-metro counties, 84.1% are HPSA counties. The same percentage for majority White non-metro counties is 64.8%. Absence of local practitioners becomes more significant when residents lack the means to schedule appointments with more distant practitioners. Nationally, 17.3% of Hispanic households, versus 5.0% of white households, were estimated to lack a telephone in 1991 (Schement, 1995).

Chapter Three

Rural Native Americans

Population Characteristics

About 1.8% of the non-metro population, or 978,300 persons, are Native American. Of all Native Americans living in non-metro counties, 63.9% live in the non-metro counties of the seven states of Oklahoma, Arizona, New Mexico, Alaska, North Carolina, South Dakota, and Montana. (See Map 3-A, Appendix B.)

Native Americans living in non-metro counties of the United States are slightly older than their urban peers, with a median age of approximately 32.0 years for non-metro Native Americans versus 31.1 years among urban Native Americans. The female Native American non-metro population is older. Male Native Americans have a median age of 30.6 years, while female Native Americans have a median age of 33.5. The age distribution of non-metro Native Americans is shown in Maps 3-B through 3-F, Appendix B.

Economic Status of Non-metro Native American Counties

Non-metro Native Americans are more likely than any other minority populations to live in counties which fall in the bottom half of all counties for percent of the work force employed in agriculture. (See Table 3-1, Appendix A.) Thus, 71.7% of all Native Americans live in counties falling below the median in percent of total workforce employed in agriculture.

Non-metro Native Americans, like non-metro Hispanics are under-represented in counties where the labor force is involved in manufacturing. Nearly half (47.1%) of non-metro Native Americans live in counties falling into the bottom quartile of the United States for percent of the work force involved in manufacturing. Only 27.5% of the non-metro Native Americans population, versus 59.1% of non-metro whites, live in counties falling above the median in percent of total workforce engaged in manufacturing. (See Table 3-2). As was noted in the discussion of non-metro Hispanics, the tendency of counties where Native Americans currently live to have a small manufacturing base limits job opportunities.

Non-metro Native Americans are slightly more likely than non-metro whites to live in counties in the upper quartile for mining income (See Table 3-3). Over half of all Native Americans (57.0%), versus 44.6% of whites, live in counties falling above the median in the proportion of workforce engaged in mining.

Income Available to Native American Residents

Personal income

Native Americans have an average per capita income, by county, ranging from under \$1,768 to \$161,818. The median per capita income for Native Americans in non-metro counties is \$6,667, while in urban counties it is \$10,109. For comparison, the

median household income for the white non-metro population is \$10,801; for the white population in urban counties it is \$13,773.

About one third (34.3%) of the non-metro Native American population lives below the poverty line, versus 12.9% of the non-metro white population. (See map 3-G.) The number of poor non-metro Native Americans is highest in the five states of Arizona, New Mexico, Oklahoma, South Dakota, and Montana. Over half (57.3%) of all poor, non-metro Native Americans live in these five states. Poverty stems from un- and under-employment.¹⁰ The unemployment rate among non-metro Native American men was 21.1% in 1990, and 15.4% among non-metro Native American women, versus 5.8% among both white men and women (Swanson, 1996). Unemployment, Tootle (1996) argues, stems not from cultural differences between Native Americans and other ethnic groups, but from their residence in counties where opportunities are fewer. A much higher proportion of non-metro Native American than non-metro white men who have left the work force report that they are not looking for work because they cannot find a job or believe no jobs are available (12.5% versus 2.1%; Tootle, 1996).

Community Economic Resources

Total personal income aggregated at the county level in all non-metro counties averages \$387,087,900. In counties where the majority of the population is Native American, this value drops to \$186,302,080, or 48.1% of that for all non-metro counties. This resource disparity is greater than that experienced by any other minority group.

Bank deposits aggregated at the county level average \$251,551,000 across all non-metro counties. In counties where the majority of the population is Native American, this value drops to \$59,061,000, or 23.5% of the value for all non-metro counties. Again, this disparity is greater than that experienced by any other minority group. The extremely low level of capital in majority Native-American counties implies that control of local economic growth is beyond the resources of these communities.

Medical Resources

Only 5.6% of non-metro Native Americans live in counties without a hospital, versus 9.6% of all non-metro Whites. Across all non-metro counties, the mean ratio of population to hospital beds is 250 persons to one bed. In counties where the majority of the population is Native American, this ratio drops to 202 person per bed.

Although inpatient beds are available, rural Native Americans may have reduced access to specific types of hospital service. A study in Montana found that 18.2% of Native American mothers, versus 60.7% of white mothers, lived in counties with Level II hospitals for obstetric care (Reichert, McBroom, Reed and Wilson, 1995). As a result, Native American mothers traveled an average of 25-30 km further for care.

¹⁰ "Unemployment" is lack of a job when the person is actively seeking one. "Under-employment" refers to persons who are only able to find part time employment when they wish to work full time. An individual who has left the work force would not be considered unemployed, even though he or she lacks a job.

Non-metro Native Americans are more likely than other minorities to live in a county that does not have any nursing homes. Thus, 10.5% of non-metro Native Americans, versus 4.7% of African Americans and 6.0% of Hispanics, live in counties without a nursing home. The mean ratio of persons to nursing home beds across all non-metro counties is 136 persons per bed. In counties where the majority of the population is Native American, this ratio increases to 375 persons to each bed. For comparison, the same ratio for non-metro counties where the majority of the population is White is 133 persons to one nursing home bed.

Very few rural Native Americans, 1.2%, live in a county without any physicians. The same percentage for Whites is 0.9%. However, the number of physicians available per resident is less. The mean ratio of physicians to residents across all non-metro counties is 8.65 physicians to 1,000 persons. In counties where the majority of the population is Native American, this ratio declines to 8.13 to 1,000. Non-metro Native Americans are more likely than whites to live in counties falling into the bottom quartile for physician / population ratio, and less likely to fall into the upper quartile. A total of 17.6 % of non-metro Native Americans live in counties in the bottom quartile for the physician/population ratio, versus 12.2% of whites; 34.5% of Native Americans live in counties in the top quartile for the physician/population ratio, versus 43.6% of non-metro whites.

Nearly three quarters (72.6%) of all non-metro Native Americans live in HPSA counties; 63.6% of Whites do. Of all Native American majority non-metro counties, 66.7% are HPSA counties. The same percentage for majority white non-metro counties is 64.8%.

Chapter Four

Asian / Pacific Islanders

About 1.0% of all non-metro residents in the United States, 533,108 persons, are Asian/Pacific Islanders. Asians / Pacific Islanders are not geographically concentrated as are other minorities; only three of the seven states which together account for a majority of non-metro Asians / Pacific Islanders are contiguous. (See Map 4-A, Appendix B.) Of all Asian/Pacific Islanders living in non-metro counties, 53.4% live in the non-metro counties of the seven states of Hawaii, California, New York, Texas, Georgia, Washington, and Oregon. Only in three rural counties, all in Hawaii, is the majority of the population Asian / Pacific Islander.

Non-metro Asian / Pacific Islanders are difficult to discuss as a group, because of the wide range of ethnicities encompassed within this rubric, and the differing economic and social histories of each. "Asian / Pacific Islander" can mean a prosperous Japanese American who is virtually indistinguishable from mainstream culture or a recent Hmong immigrant with poor language skills and few social resources. Studies of non-metro Asian / Pacific Islander populations are best carried out within specific groups and locales; this limitation should be considered when reviewing the information presented here.

Population characteristics

Asian/Pacific Islanders living in non-metro counties of the United States are slightly older than their urban peers, with a median age of approximately 32.0 years for non-metro Asian/Pacific Islanders versus 31.1 years among urban Asian/Pacific Islanders. The female Asian/Pacific Islanders non-metro population is older. Male Asian/Pacific Islanders have a median age of 30.6 years, while female Asian/Pacific Islanders have a median age of 33.5. (Age distributions of non-metro Asian / Pacific Islander populations are shown in Maps 4-B through 4-F, Appendix B.)

Non-metro Asian / Pacific Islanders have higher average educational attainment levels than the non-metro white population. Thus, 31.6% of non-metro Asian Pacific men, versus 14.0% of white men, and 20.5% of non-metro Asian / Pacific women, versus 12.0% of non-metro white women, report having a bachelor's degree or above (Swanson, 1996).

Income Available to Asian / Pacific Islanders

Personal Income

Non-metro Asian/Pacific Islanders have an average per capita income, by county, ranging from under \$1,750 to \$130,356 (See Map 4-G). The median per capita income for Asian/Pacific Islanders in non-metro counties is \$6,368 while in urban counties it is \$11,648. For comparison, the median household income for the white non-metro population is \$10,801; for the white population in urban counties it is \$13,773.

The non-metro Asian/Pacific Islander population is slightly less likely than the white population to live in poverty (See Map 4-H). Thus, 11.4 % of the non-metro Asian/Pacific Islanders live below the poverty line, versus 12.9% of the white population. The number of non-metro Asian/Pacific Islanders persons living below the poverty line is highest in the five states of Hawaii, California, New York, Oregon, and Wisconsin. Over half (53.4%) of all poor, non-metro Asian/Pacific Islanders live in these five states.

Community Economic Resources

Total personal income aggregated at the county level in all non-metro counties averages \$387,087,900. Asian / Pacific Islanders constitute a majority of the population in only four non-metro counties, all of which are in Hawaii. In those four counties, this average aggregate income is \$1,543,736,750.

Bank deposits aggregated at the county level average \$251,551,000 across all non-metro counties. In the four Hawaiian counties where the majority of the population is Asian/Pacific Islanders, this value increases to \$763,879,000.

Medical Resources

Only 2.9% of non-metro Asian/Pacific Islanders, versus 9.6% of all non-metro Whites, live in counties without a hospital. Across all non-metro counties, the ratio of residents to hospital beds is 250.0 persons to one bed. In counties where the majority of the population is Asian/Pacific Islanders, this ratio increases to 379.4 to one.

Only 1.6% of non-metro Asian/Pacific Islanders live in counties without a nursing home. The mean ratio of population to nursing home beds across all non-metro counties is 136.2 to 1, and in urban counties the ratio is 218.1 to 1. In counties where the majority of the population is Asian/Pacific Islanders, this ratio increases to 275.5 to 1. For comparison, the same ratio for non-metro counties where the majority of the population is White is 133.4 to 1.

Very few non-metro Asian/Pacific Islanders (0.2%) live in a county without any physicians. The mean ratio of physicians to people across all non-metro counties is 8.65 to 1,000. Only in four counties, three located in Hawaii, was the majority of the population Asian/Pacific Islander. The three Hawaiian counties have a physician/population ratio of 1.95 to 1,000. Most Asian/Pacific Islanders enjoy better physician access. Only 5.5 % of non-metro Asian/Pacific Islanders live in counties in the bottom quartile for the physician/population ratio; 71.8% live in counties in the top quartile for the physician/population ratio. The same percentages of non-metro Whites are 12.2% and 43.6%.

About two thirds (67.0%) of all non-metro Asian/Pacific Islanders live in HPSA counties; this value is similar to that for non-metro whites (63.6%). Of the four Asian/Pacific Islander majority non-metro counties in Hawaii, 50.0% are HPSA counties. The same percentage for majority white non-metro counties is 64.8%.

Chapter Five

Conclusions and Recommendations

Geography and Poverty

Rural minorities are geographically concentrated in areas reflecting historic settlement patterns: African Americans in the South, Hispanics in the Southwest, and Native Americans in the West. Non-metro Asian / Pacific Islanders are an exception. Only Hawaii has non-metro counties with a predominantly Asian / Pacific Islander population; this group is not geographically concentrated in the mainland. The concentration of rural minorities in specific geographic regions with distinctive histories, resources, and state-level policies makes it difficult to develop a unitary national health policy.

Minorities in non-metro areas are more likely to experience poverty than are their white peers. Poverty and health care are intertwined: persons without resources cannot afford health services, and communities without resources have difficulty attracting and retaining health care providers. Thus, issues surrounding rural poverty must be addressed if health resources for rural minorities are to reach levels comparable to rural whites.

Rural, minority poverty affects both individuals and communities. At the *individual* level, about one third of non-metro African Americans and Native Americans, and about one quarter of non-metro Hispanics, are poor. Total *community* economic resources are more constrained in counties where minority groups represent over half of the population. Typically, counties with high concentrations of minorities have income and assets that are two thirds or less of the national average. In counties where Native Americans constitute the largest population group, incomes are less than half and county bank assets about a quarter of the national average.

The lack of community resources implies that it will be more difficult for non-metro minority persons to improve their economic status unless they leave their present communities. Federal funding for community development tends to bypass many impoverished non-metro counties. A group of researchers at the US Department of Agriculture have examined the flow of Federal funds to metropolitan and non-metropolitan counties. Non-metro counties tend to exceed metro counties in funds received for income security, such as Social Security, public assistance, and medical benefits. However, funding for community resource development—business assistance, community and regional development—flows principally to metropolitan counties. Throughout the US, Federal expenditures for community resources averaged \$549 in metro counties versus \$349 in non-metro counties. In majority African American counties identified by USDA, non-metro counties averaged \$300 in community resource funding; in Mississippi, these counties averaged \$235 (1997 data; Calhoun, Reeder, Bagi 2000). Similarly, non-metro counties in Appalachia averaged \$260 in community resource funding (Bagi, Reeder and Calhoun, 1999).

To address the needs of non-metro minority populations requires recognition of the simultaneous presence of low-income individuals in low-income regions. Federal policies need to be tailored to meet the needs of such persons and communities. Determining which Federal agencies should be active in addressing non-metro policy is daunting; Calhoun and associates (2000) pooled data from 816 Federal funding streams in their analysis of majority African American counties. Some general suggestions are possible:

- Economic development assistance at present frequently bypasses poor non-metro counties, possibly because such communities lack the expertise to compete successfully in the “grantsmanship” game. Only 31% of rural counties have an economic developer on staff and only 28% employ a grants writer (Kraybill and Lobao, 2001). Economic development agencies at the state and Federal levels should develop mechanisms to foster skills development in low income rural counties. For example, communities submitting grants that show theoretical promise but lack managerial skills could be assigned a “case worker” to educate local personnel. Technical assistance conferences, with leadership and entrepreneurship training for rural county officials, offer another improvement mechanism. The Secretary of the Department of Health and Human Services should assess the degree to which absence of skilled personnel may prohibit rural minority counties from participating in DHHS grant programs and the degree to which appropriate training and support could remediate this personnel shortage.
- Rural communities in general suffer from lack of human capital, with lower educational levels than metropolitan areas. The Employment and Training Administration of the Department of Labor funds a broad range of programs to improve workforce competitiveness through grants for youth, adult and worker retraining. Both applications and subsequent funding through ETA programs should be periodically reviewed to ensure that counties falling into the bottom 25% for economic infrastructure and human capital (the latter measured by educational attainment in the workforce) are not disproportionately absent from program participation. Regarding health services infrastructure, the Secretary of the Department of Health and Human Services should evaluate the degree to which rural health care institutions might benefit from increased support for training programs located in rural minority counties.
- Rural regions fall short in basic telephone service and are even more disadvantaged when it comes to the high speed digital and broadband connections needed for Internet connectivity. The Rural Policy Research Institute has published several papers exploring the effects of telecommunications regulations and policy on rural issues. Continued study in this area is needed. In particular, research is needed into the degree to which rural health care institutions may be handicapped by inadequate telecommunications infrastructure in their communities. Telecommunications are needed allow rural facilities to take advantage of grant programs, such as those offered by the National Library of Medicine, that facilitate institutional

Internet access. The Secretary of the Department of Health and Human Services should evaluate the degree to which rural health care institutions may be handicapped by limits in rural telecommunications infrastructure.

Health Services Infrastructure

Individuals living in poor, non-metro counties have fewer health care infrastructure resources available to them. In general, three of five non-metro white Americans live in HPSAs, versus three out of four non-metro minority Americans. Differences in physician-population ratios favor white over minority population counties. While bed-population ratios favor non-metro minority counties, without providers, it is likely that the bed capacity is generally unused. County-based ratios of beds per 1000 population and physicians per 1000 population are gross measures of access and do not consider geographic and transportation barriers in obtaining access to care. Thus, difficulties in obtaining needed health care experienced by African Americans and other minorities may be greater than implied by resource differentials.

Non-metro counties with blighted economic structures are unlikely to support practitioners within present reimbursement structures. Should the economy of the United States as a whole experience a downturn during the first decade of the 2000's, as some anticipate, the greater swings experienced by non-metro minority populations in the past suggest that these populations would again be disproportionately affected. In addition, changes to the safety net structure, such as limitations to the duration of assistance through Temporary Assistance to Needy Families, may force non-metro residents to leave locations with few job opportunities.

Counties in which the majority of residents are Native American enjoy higher physician / population ratios (8.13 physicians per 10,000 residents) than do counties with majority African American (6.19 physicians) or Hispanic (5.27 physicians) populations, despite low economic resources. While the statistics presented in the preceding report are descriptive rather than explanatory, it is possible that the Indian Health Service, by placing physicians in proximity to Native American populations, has improved physician availability.

Recommendations pertinent to health services are as follows:

- Increase targeting of programs that place practitioners directly in high need areas, such as the Community Health Centers and the National Health Service Corps, to bring providers to poor and minority non-metro populations.
- Target additional current and future appropriations for National Health Services Corps and Community Health Services programs to rural counties with the lowest existing infrastructure (see recommendations re rural shortages of grant personnel, above).
- While most non-metro, minority counties suffer from shortages in health care personnel, not all do so. The Secretary of the Department of Health and Human Services should support research into the economic and infrastructure characteristics of rural counties that are able to attract and retain health care providers, with the intent of identifying local models that can be exported to

other rural counties. Particular attention should be given to successful retention in rural counties with significant minority populations.

- When providers are absent, non-metro residents must travel for health care. For non-metro minority residents who lack personal vehicles, such travel may be foregone. Most studies of travel in rural areas, however, are based on trips actually made and thus may underestimate transportation problems. Population-based, rather than clinic-based, research is needed to better define non-metro transportation issues. Research will improve practitioner understanding of barriers faced by low income minority populations and provide better policy information for planning site locations and transportation services.

Appendix A

Description of Method and Supporting Tables

Tables ordered by Chapter

Method

The information on rural poor and minority populations presented in the preceding report is cross sectional and descriptive, attempting to present information available on a national basis. Central methodological issues are the definition of rural used, the source of data elements, and the definition of “minority.”

Definition of Rural

In all original analyses prepared for the present report, rural and urban areas are distinguished at the county level, to reflect the most accessible data sources. Rural counties are defined as "non-metropolitan counties" (hereafter, non-metro). Counties are sorted into metropolitan - non-metro classifications based on Office of Management and Budget criteria. Metropolitan counties are those which (a) include incorporated cities with a population of 50,000 or which contain Census-defined urban areas and have a population of 100,000 or which (b) are contiguous to and economically linked with such counties (fringe counties). Non-metro counties include all others that do not meet the preceding definition.

Data Sources

Two principal sources supplied data used in this report. The Bureau of the Census product *USA Counties 1998* was used for economic and some health resource data. This CD-ROM database links a variety of population, social and economic statistics from multiple Federal sources at the county level. At the time this report was compiled, 2000 Census data were not available at the county level. The *Area Resource File (ARF)*, February 2000 Release, was the source of data on health professionals and facilities. The ARF is produced under contract for the Health Care Resources and Services Administration.

Definition of Minority

Any study of minority populations must begin by acknowledging that race is an identification within a social category, rather than an objectively determined status. While to some extent visual differences among groups may lend force to self-identification, for many persons of mixed ancestry race is a “choice.” Schulman and associates (1995) assert that “there is no scientifically accepted definition of race or ethnicity, and there is little consistency in the use of these terms in health care research” (p. 181). However, Hahn and Stroup (1994) take an opposite tack, noting that while racial groupings are not “scientifically derived, they have been and continue to be important determinants of health status” (p. 13).

In this report, the racial composition of the non-metro population is based on Census data, which uses respondents’ self-description. In the 1990 Census and the estimates formed from it, there were several racial categories: white, African American, American Indian, Aleut, Eskimo [the preceding three generally grouped Native American / Alaska Native], Asian, and Pacific Islander. Respondents were asked separately whether they were of Hispanic origin. The 2000 Census expanded possible definitions by allowing respondents to choose more than one race category. However, 97.6% of respondents chose only one race to describe themselves (Grieco and Cassidy, 2001)

Figures and Tables Supporting Chapter One

Figure 2-1: Non-metro African American Population, by sex and age

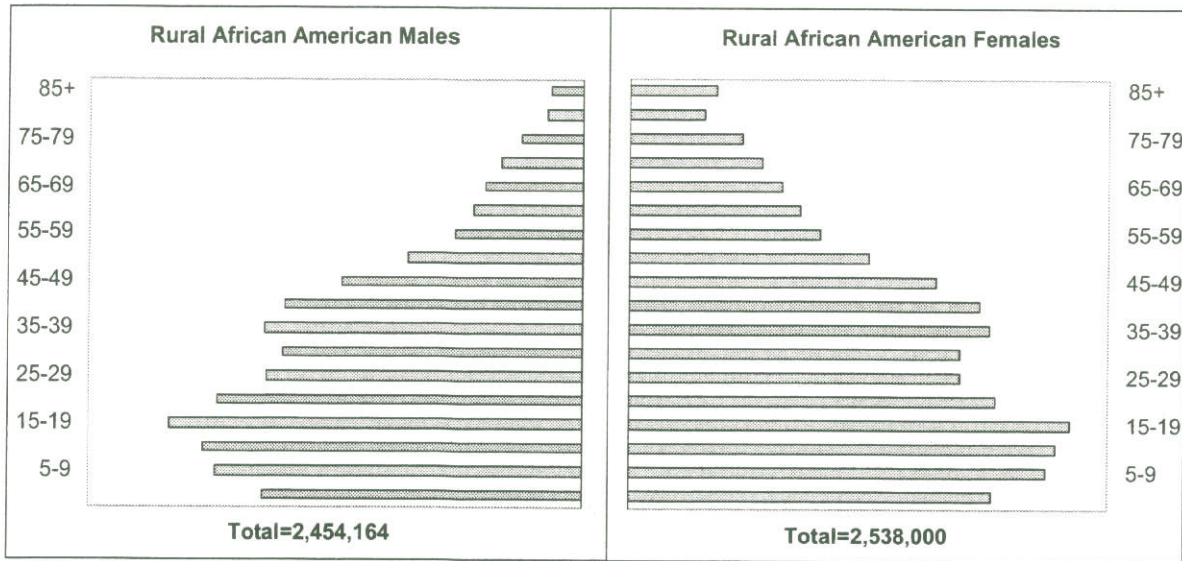


Figure 2-2: Urban African American Population, by sex and age

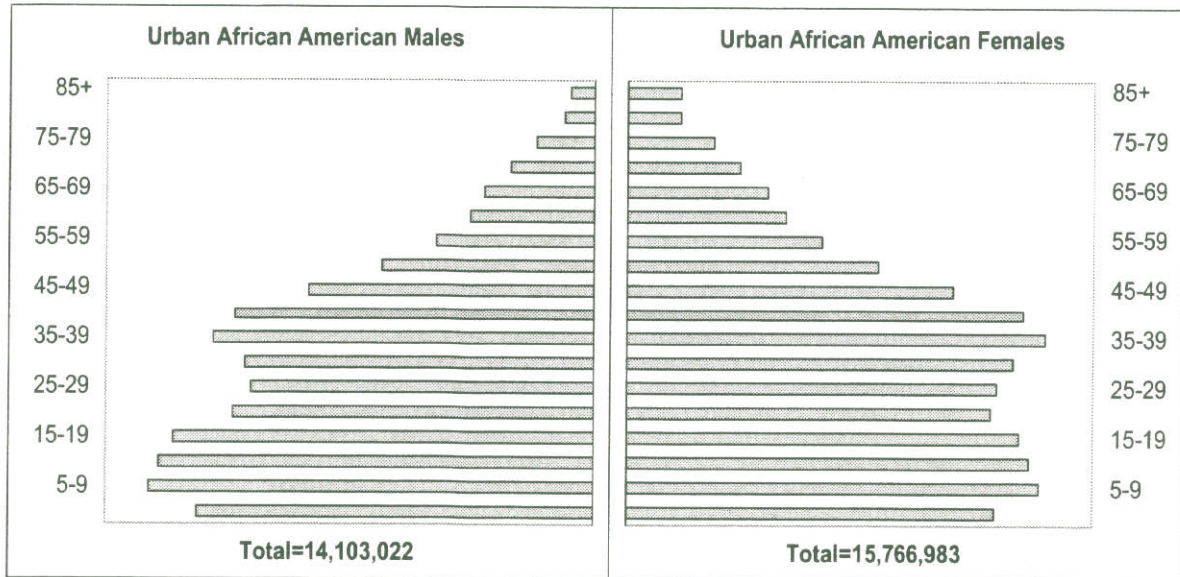


Table 1-1: Percentage of African Americans and Whites living in counties by percent of workforce employed in agriculture

% of the labor force in Agriculture at the county level	% of Non-metro African Americans	% of Non-metro Whites
Lowest Quartile 3.96%	45.75	38.43
Second Quartile 3.97%-6.97%	33.66	31.77
Third Quartile 6.98%-13.61%	17.87	20.40
Highest Quartile 13.62%-66.54%	2.70	9.37

Source: Data for 1990 labor force were obtained from *USA Counties 1998*. A small number of non-metro counties with no work force in agriculture are excluded. 0.024% of non-metro African Americans and 0.028% of non-metro whites live in such counties.

Table 1-2: Percentage of African Americans and Whites living in counties, by quartile rankings for percent of the labor force involved in manufacturing

% of the labor force in Manufacturing at the county level	% of Non-metro African Americans	% of Non-metro Whites
8.29%	6.12	15.52
8.30%-15.83%	20.89	25.37
15.84%-24.54%	29.68	29.22
24.55%-51.69%	43.31	29.89

Source: Data for 1990 labor force was obtained from *USA Counties 1998*. A small number of non-metro counties with no work force in manufacturing are excluded. 0.0001% of non-metro African Americans and 0.0019% of non-metro whites live in such counties.

Table 1-3: Percentage of African Americans and Whites living in counties by percent of labor force in mining

% of the labor force in Mining at the county level	% of Non-metro African Americans	% of Non-metro Whites
0.0%	5.37	2.19
< 0.18%	27.92	24.41
0.18%-0.46%	28.53	28.79
0.47%-1.96%	22.82	23.89
1.97%-39.19%	15.36	20.71

Source: Data from the *USA Counties 1998* for 1990 labor force data.

Figures and Tables Supporting Chapter Two

Figure 2-1. Non-metro Hispanic Population Pyramid



Figure 2-2. Urban Hispanic Population Pyramid

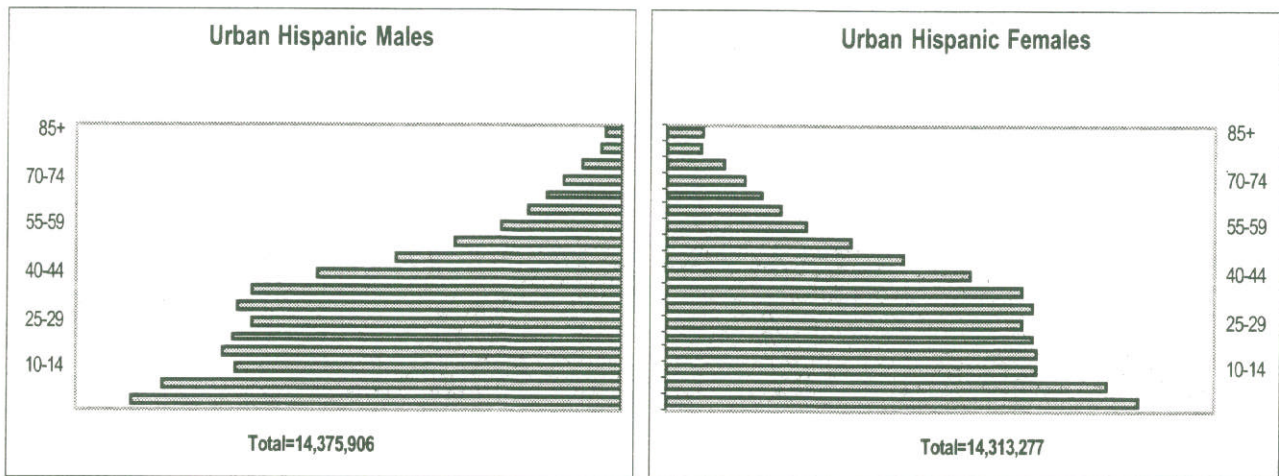


Table 2-1: Distribution of total Hispanic and white population by percent of county workforce employed in agriculture

% of the labor force in Agriculture at the county level	% of Non-metro Hispanics living in these counties	% of Non-metro Whites living in these counties
Lowest Quartile 3.96%	23.39%	38.43%
Second Quartile 3.97%-6.97%	29.12%	31.77%
Third Quartile 6.98%-13.61%	27.50%	20.40%
Highest Quartile 13.62%-66.54%	19.99%	9.37%

Source: Data from the USA Counties 1998 for 1990 labor force. A small number of non-metro counties with no work force in agriculture are excluded. 0.001% of non-metro Hispanics and 0.028% of non-metro whites live in such counties.

Table 2-2: Percentage of Hispanics and whites living in counties, by quartile rankings for percent of the labor force involved in manufacturing

% of the labor force in Manufacturing at the county level	% of Non-metro Hispanics living in these counties	% of Non-metro Whites living in these counties
8.29%	50.03%	15.52%
8.30%-15.83%	27.78%	25.37%
15.84%-24.54%	14.09%	29.22%
24.55%-51.69%	8.09%	29.89%

Source: Data the USA Counties 1998 for 1990 labor force. A small number of non-metro counties with no work force in manufacturing are excluded. 0.0002% of non-metro Hispanics and 0.0019% of non-metro whites live in such counties.

Table 2-3: Percentage of Hispanics and Whites living in counties, by percent of county labor force in mining, 1990

% of the labor force in Mining at the county level	% of Non-metro Hispanics	% of Non-metro Whites
0.0%	0.87	2.19
< 0.18%	18.33	24.41
0.18%-0.46%	17.42	28.79
0.47%-1.96%	33.21	23.89
1.97%-39.19%	30.17	20.71

Tables Supporting Chapter Three

Table 3-1. Percentage of total Native American and white population by percent of workforce employed in agriculture

% of the labor force in Agriculture at the county level	% of Non-metro Native Americans	% of Non-metro Whites
Lowest Quartile 3.96%	44.54	38.43
Second Quartile 3.97%-6.97%	27.13	31.77
Third Quartile 6.98%-13.61%	20.48	20.40
Highest Quartile 13.62%-66.54%	7.84	9.37

Table 3-2: Percentage of Native Americans and whites living in counties, by quartile rankings for percent of the labor force involved in manufacturing

% of the labor force in Manufacturing at the county level	% of Non-metro Native Americans	% of Non-metro Whites
8.29%	47.07	15.52
8.30%-15.83%	25.44	25.37
15.84%-24.54%	14.92	29.22
24.55%-51.69%	12.57	29.89

Source: Data the USA Counties 1998 for 1990 labor force. A small number of non-metro counties with no work force in manufacturing are excluded. 0.01% of Native Americans, and 0.0019% of non-metro whites, live in such counties.

Table 3-3: Percentage of Native Americans and Whites living in counties, by quartile rankings for percent of county labor force in mining, 1990

% of the labor force in Mining at the county level	% of Non-metro Native Americans	% of Non-metro Whites
0.0%	3.00	2.19
< 0.18%	24.26	24.41
0.18%-0.46%	15.71	28.79
0.47%-1.96%	25.92	23.89
1.97%-39.19%	31.12	20.71

Appendix B

Mapping Rural America's Minority Populations



South Carolina Rural Health Research Center

Department of Health Administration

Norman J. Arnold School of Public Health

Columbia, SC 29203

Michael E. Samuels, DrPH Director

Janice C. Probst, PhD, Deputy Director

Sandra Glover, PhD, Associate Director

Table of Contents

Numbering of maps corresponds to chapters in the text.

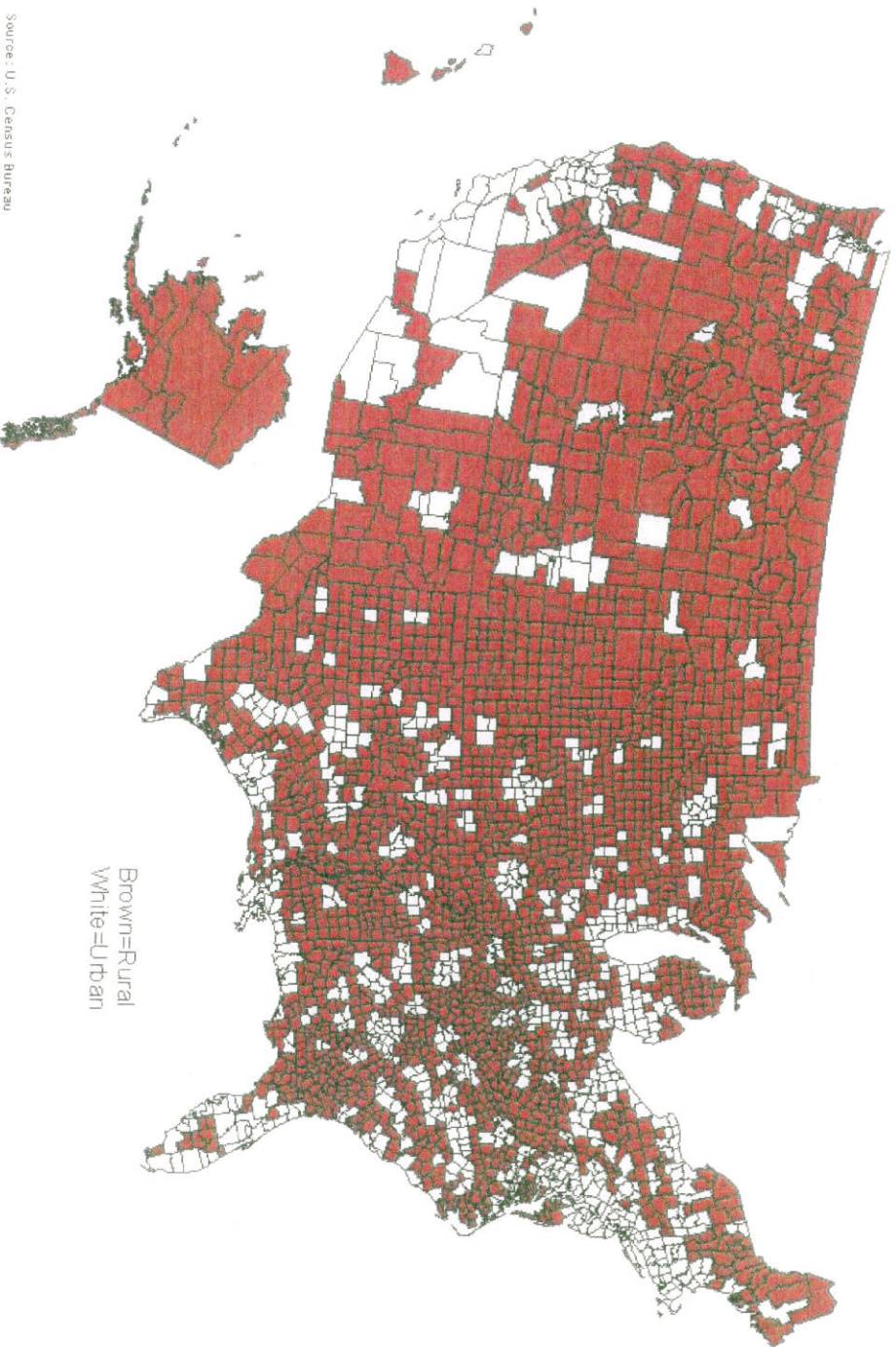
Map	Title
Chapter One	
1-A	Rural Counties in the United States, 1990
1-B	Percent of rural county population that is African American, 1999
1-C	Percent of each total rural county population that is African American and age 0-12, 1999
1-D	Percent of each total rural county population that is African American and age 13-17, 1999
1-E	Percent of each total rural county population that is African American and age 18-44, 1999
1-F	Percent of each total rural county population that is African American and age 45-64, 1999
1-G	Percent of each total rural county population that is African American and age 65 and above, 1999
1-H	Per capita income for African Americans within rural counties of the US, 1990
1-I	Percent of the African American county population that is below poverty, 1989
1-J	The relationship between HPSA designation and percent African American in rural counties of the US, 1998
Chapter Two	
2-A	Percent of rural county population that is Hispanic, 1999
2-B	Percent population change for Hispanics in rural counties of the US from 1990 to 1999
2-C	Percent of each total rural county population that is Hispanic and age 0-12, 1999
2-D	Percent of each total rural county population that is Hispanic and age 13-17, 1999
2-E	Percent of each total rural county population that is Hispanic and age 18-44, 1999
2-F	Percent of each total rural county population that is Hispanic and age 45-64, 1999
2-G	Percent of each total rural county population that is Hispanic and age 65 and above, 1999
2-H	Per capita income for Hispanics within rural counties of the US, 1989
2-I	Percent of the Hispanic population that was below poverty, 1989
2-J	The relationship between HPSA designation and percent Hispanic in rural counties of the US < 1998
Chapter Three	
3-A	Percent of each US total rural county population that is Native American, 1999
3-B	Percent of each total rural county population that is Native American and age 0-12, 1999
3-C	Percent of each total rural county population that is Native American and age 13-17, 1999
3-D	Percent of each total rural county population that is Native American and age 18-44, 1999
3-E	Percent of each total rural county population that is Native American and age 45-64, 1999
3-F	Percent of each total rural county population that is Native American and age 65 and above, 1999
3-G	Per capita income for Native Americans within rural counties of the US, 1990

3-H Percent of Native Americans below poverty in rural counties of the US, 1990

Chapter Four

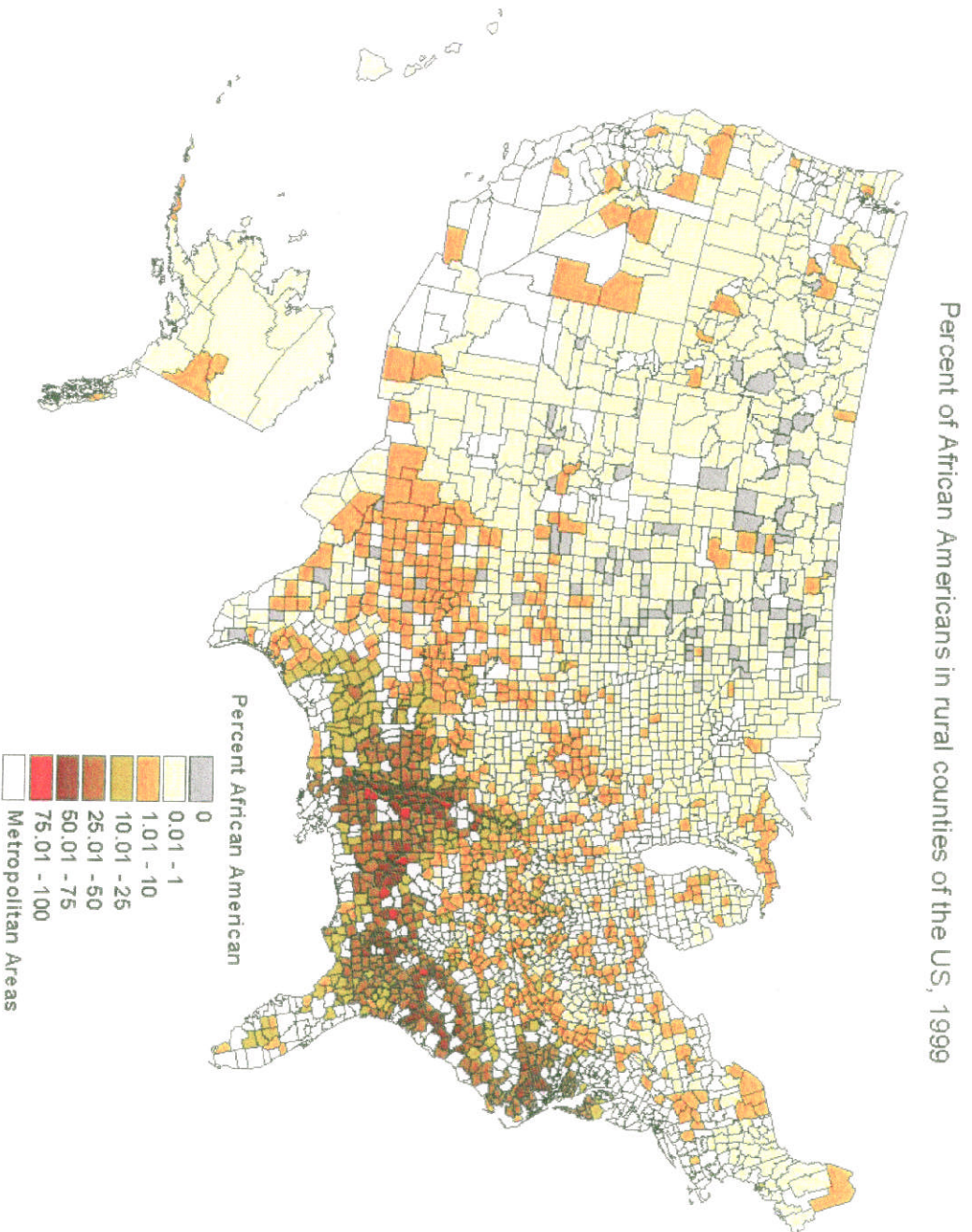
- 4-A Percent of each US total rural county population that is Asian / Pacific Islander, 19993
- 4-B Percent of each total rural county population that is Asian / Pacific Islander and age 0-12, 1999
- 4-C Percent of each total rural county population that is Asian / Pacific Islander and age 13-17, 1999
- 4-D Percent of each total rural county population that is Asian / Pacific Islander and age 18-44, 1999
- 4-E Percent of each total rural county population that is Asian / Pacific Islander and age 45-64, 1999
- 4-F Percent of each total rural county population that is Asian / Pacific Islander and age 65 and above, 1999
- 4-G Per capita income for Asian / Pacific Islanders within rural counties of the US, 1990
- 4-H Percent of Asian / Pacific Islanders below poverty in rural counties of the US, 1990

Map 1-A Rural Counties in the United States, 1990

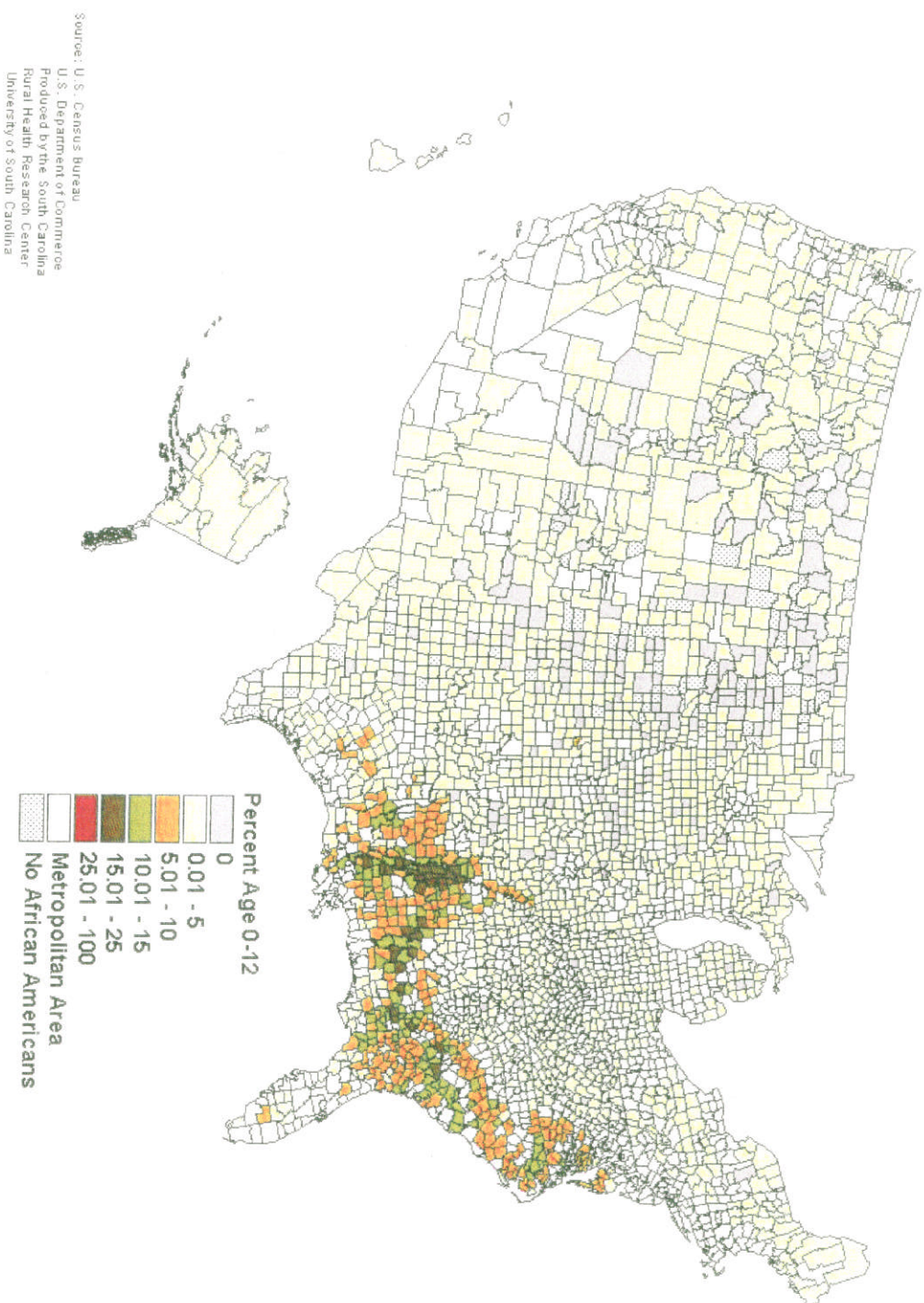


Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

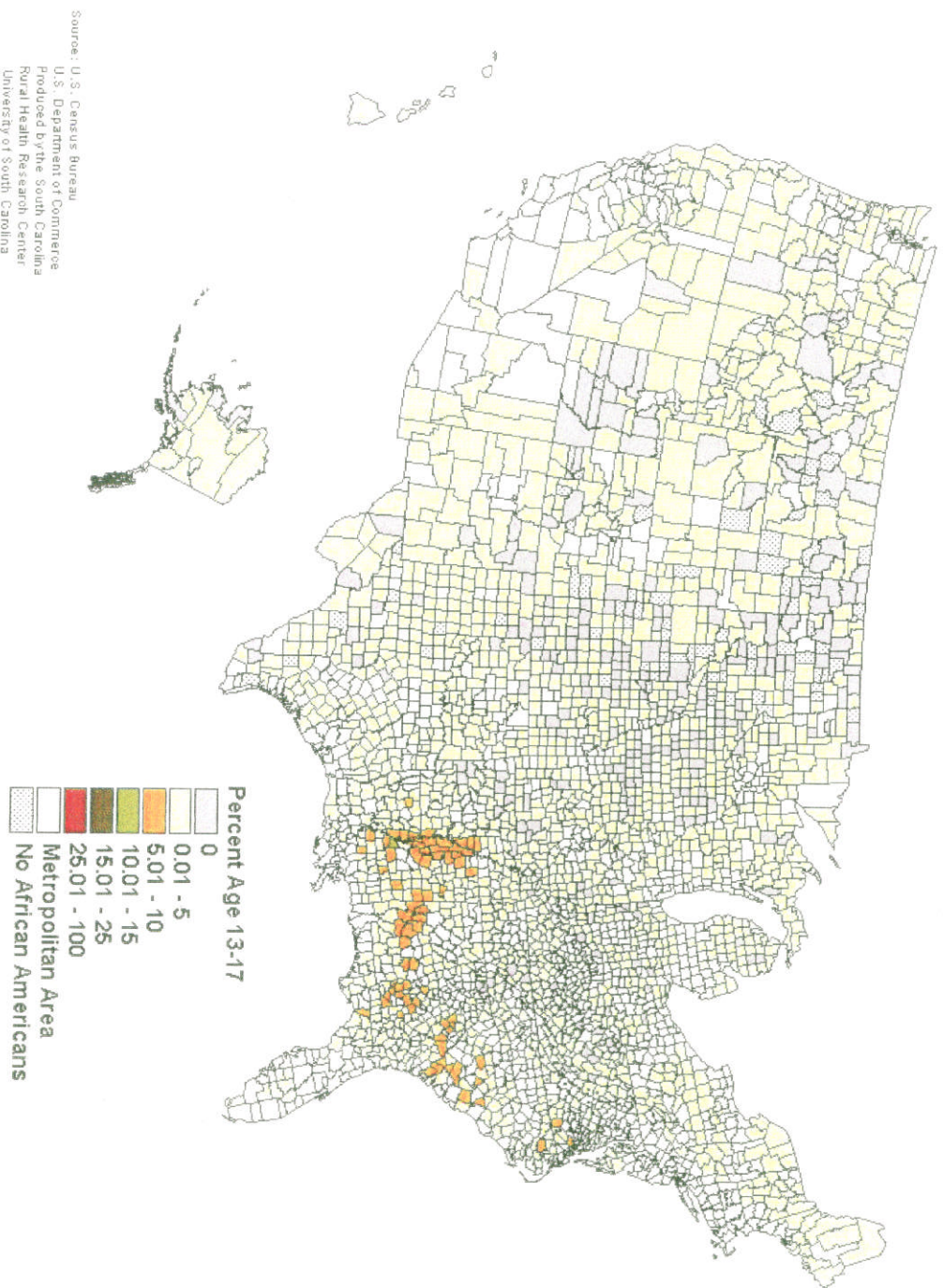
Map 1-B African American Population of Rural Counties, in percent



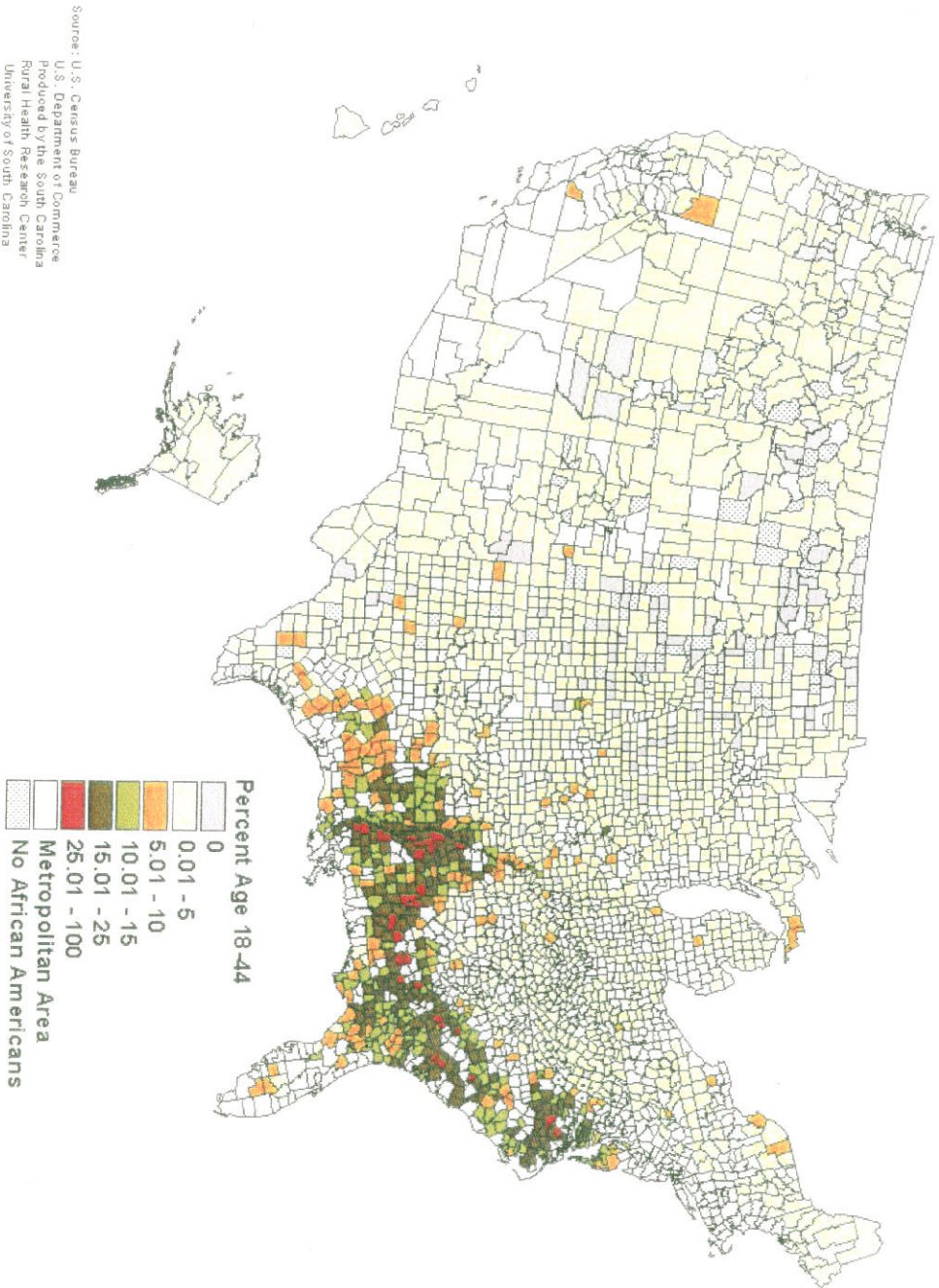
Percent of each total rural county population that is African American and age 0-12, 1999



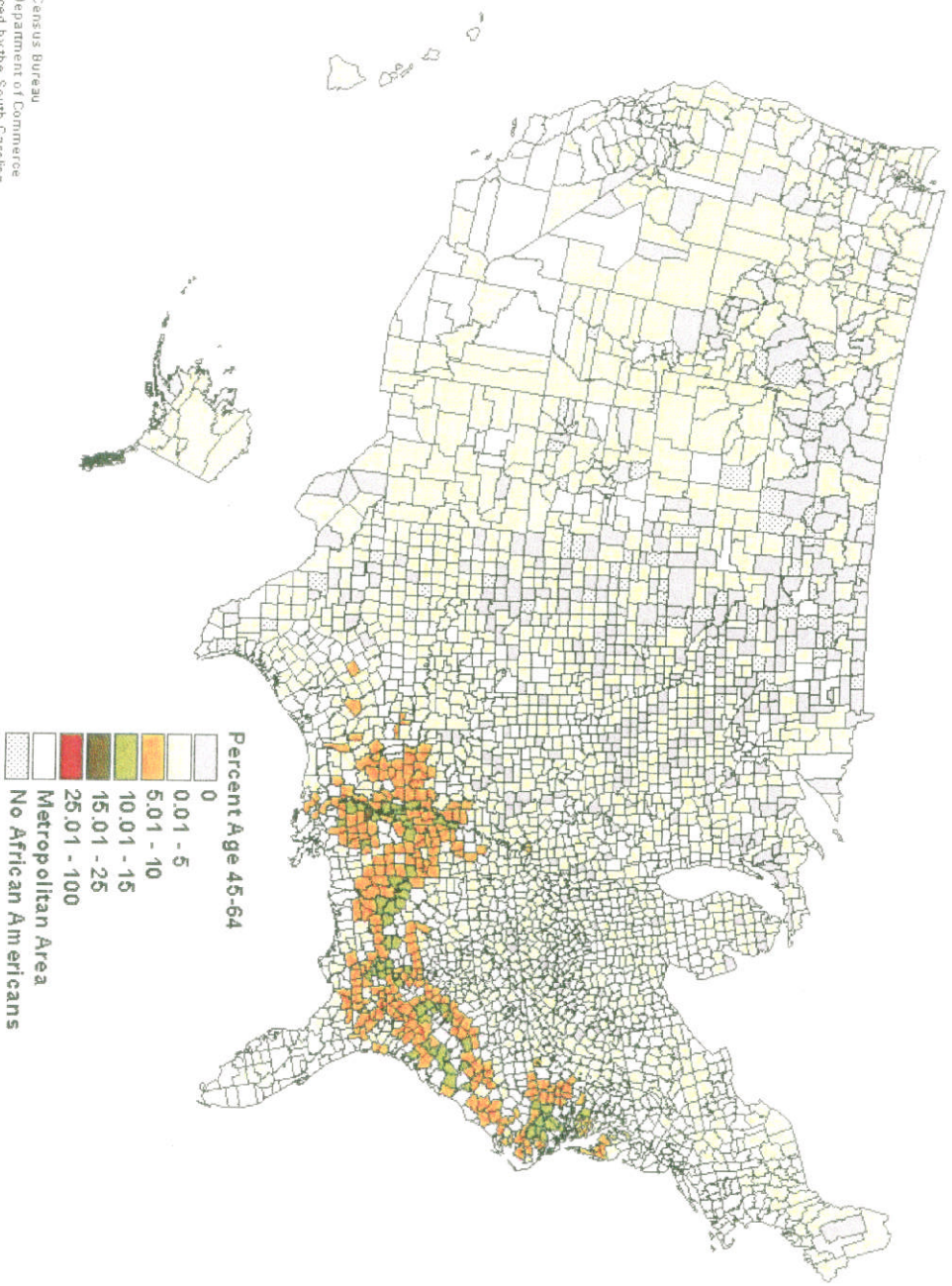
Percent of each total rural county population that is African American and age 13-17, 1999



Percent of each total rural county population that is African American and age 18-44, 1999

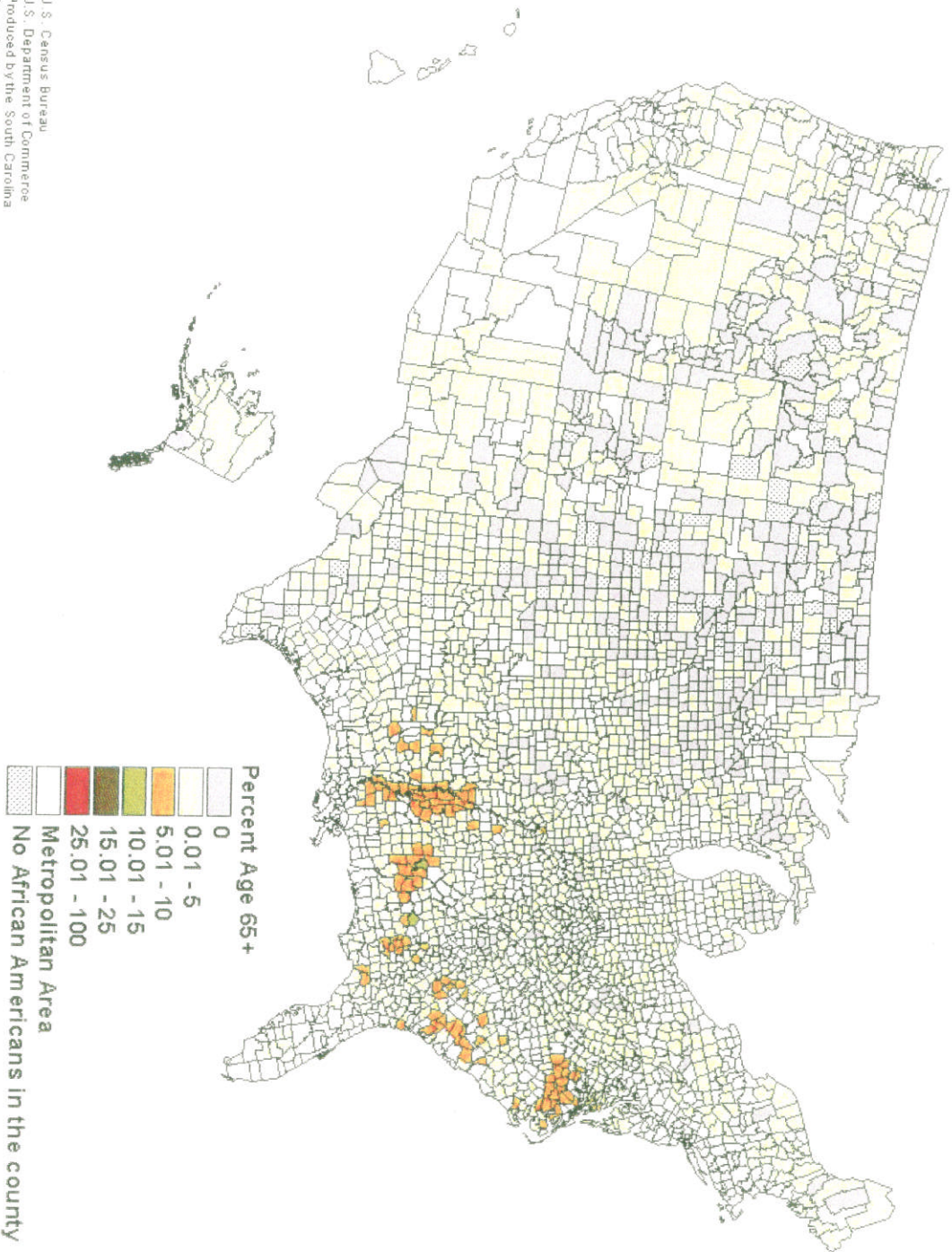


Percent of each total rural county population that is African American and age 45-65, 1999



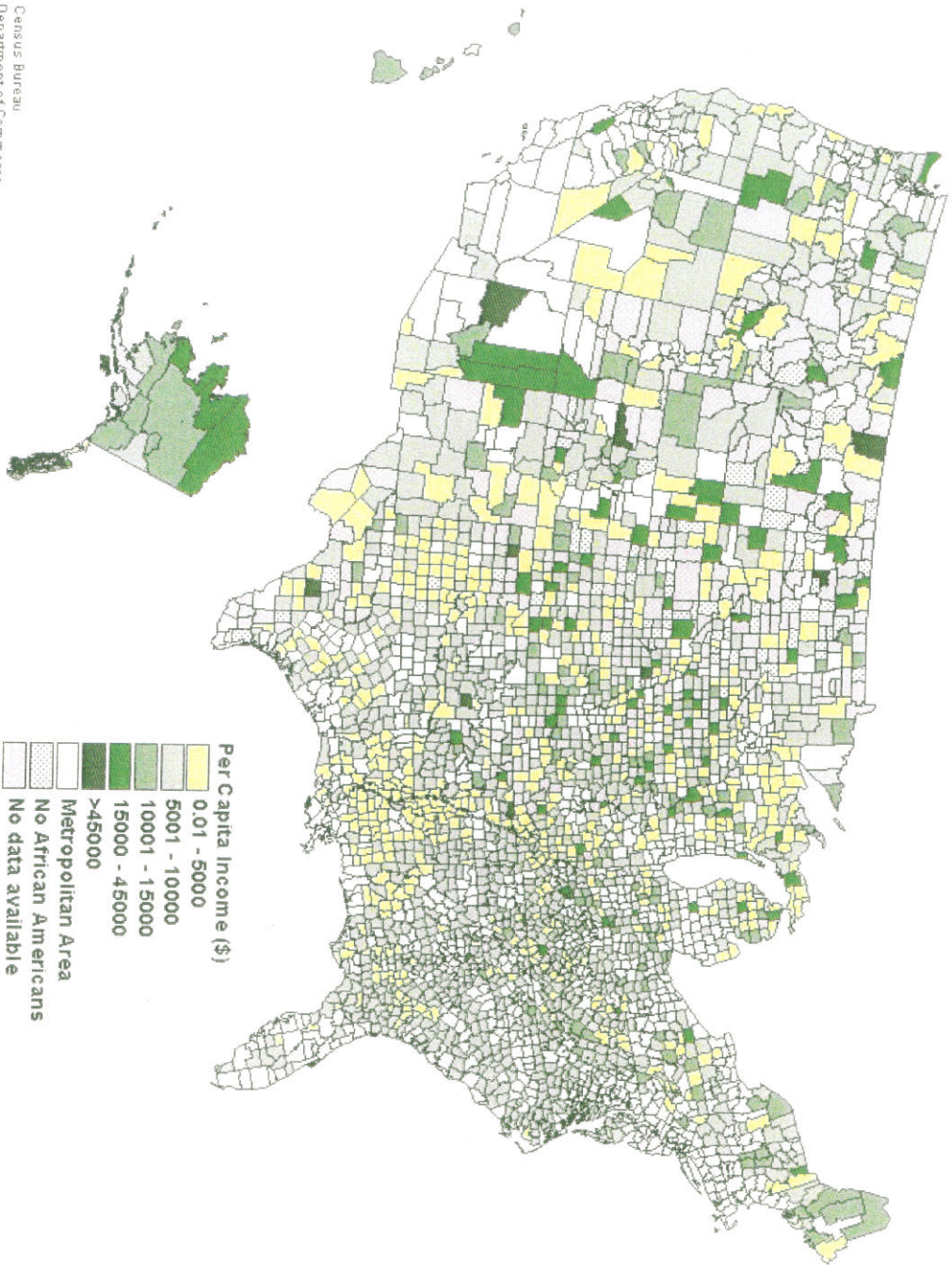
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Percent of each U.S. total rural county population that is African American and age 65+, 1999



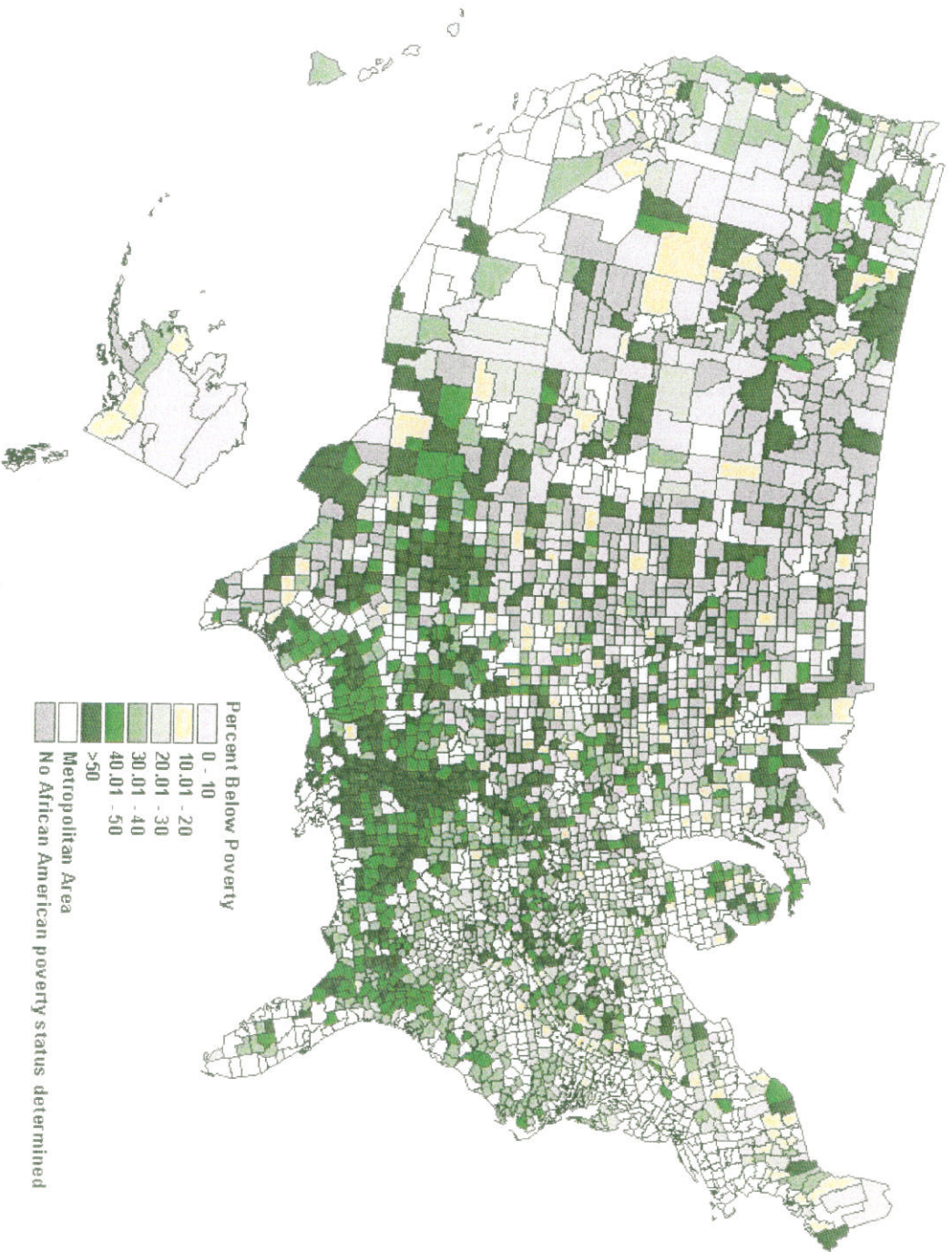
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
The University of South Carolina, Columbia, SC

Per Capita Income for African Americans within rural counties of the U.S., 1990

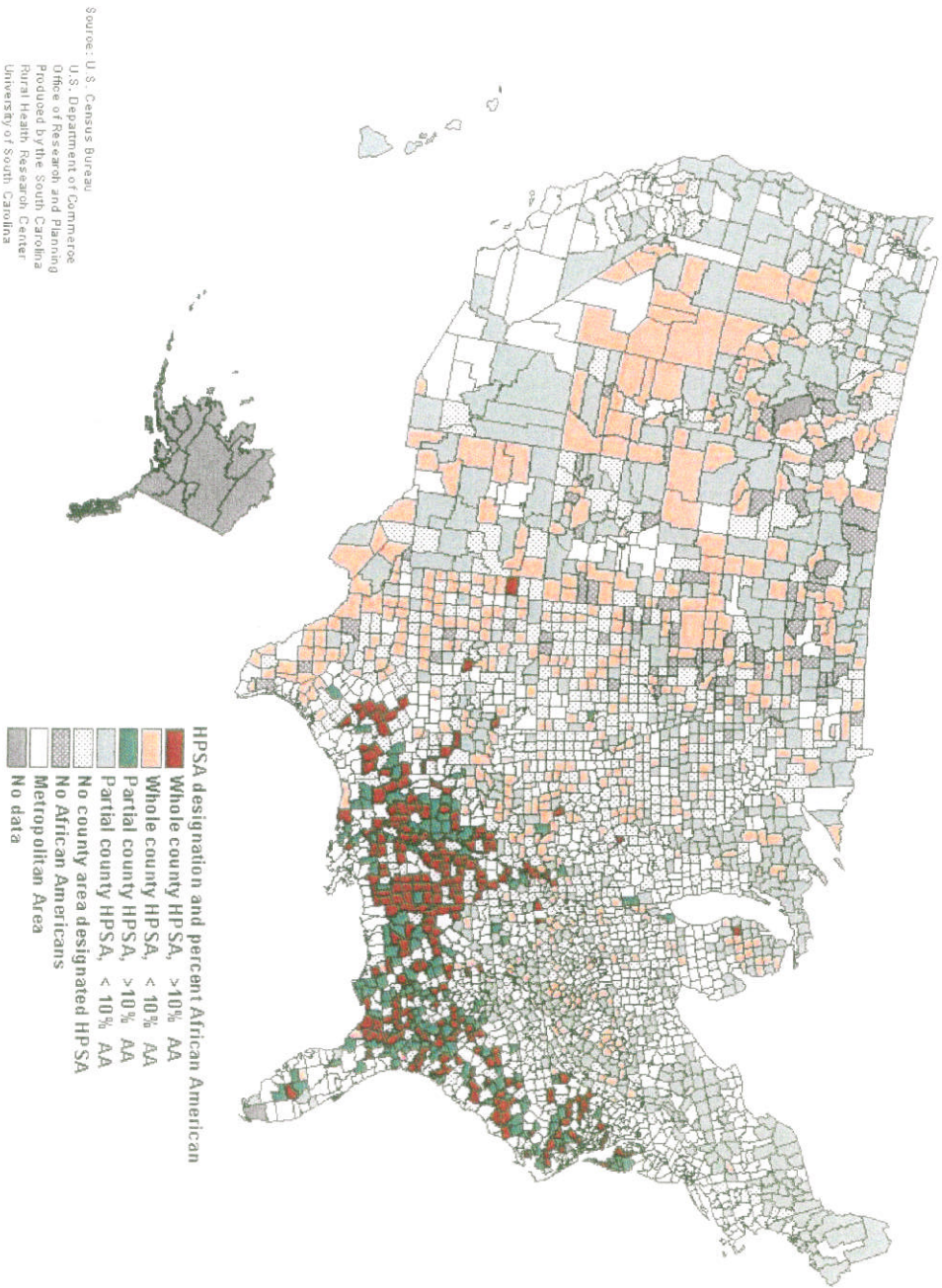


Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Percent of the African American county population that is below poverty, 1989

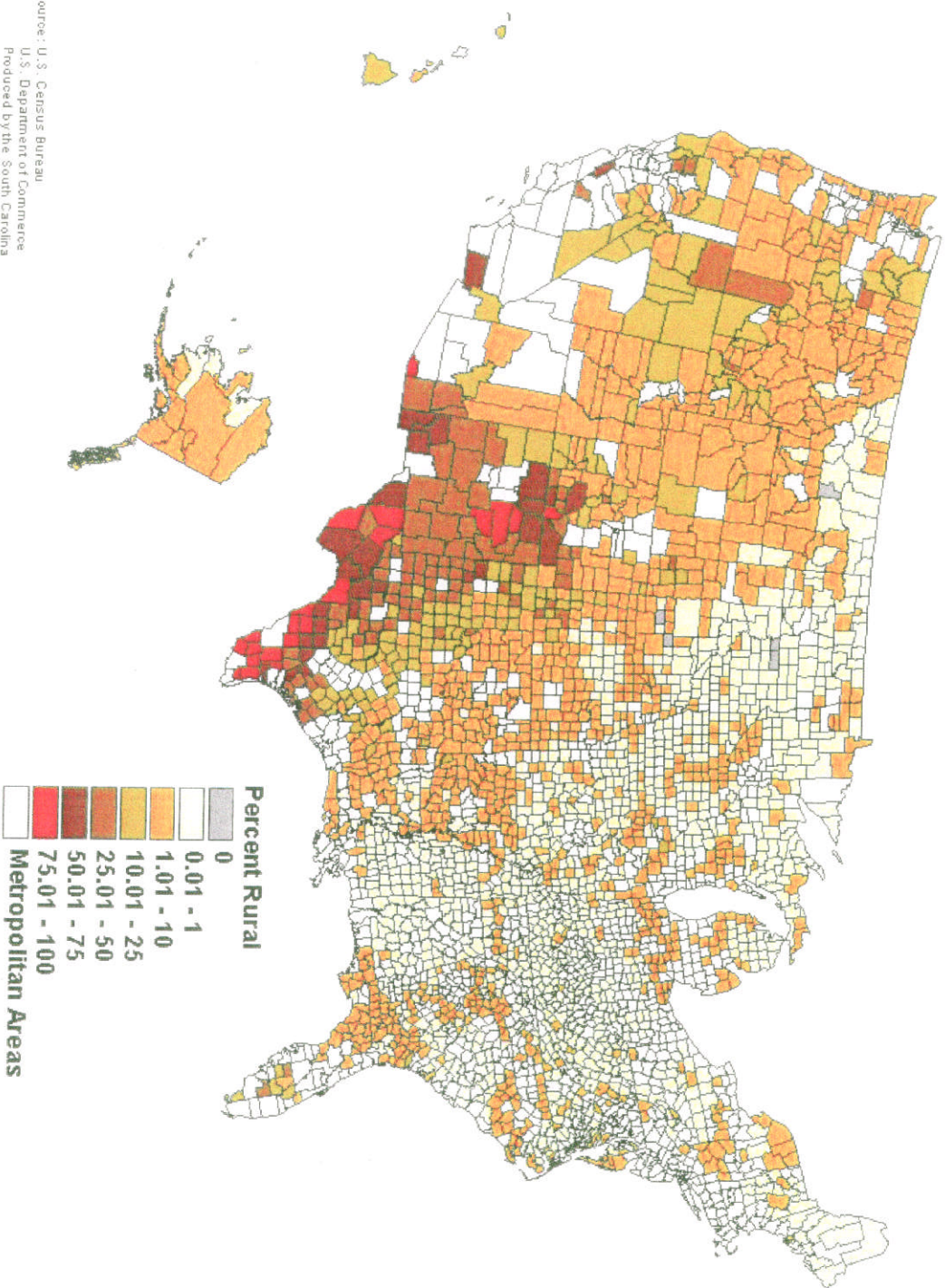


The relationship between HPSA designation and percent African American in rural counties of the U.S., 1998



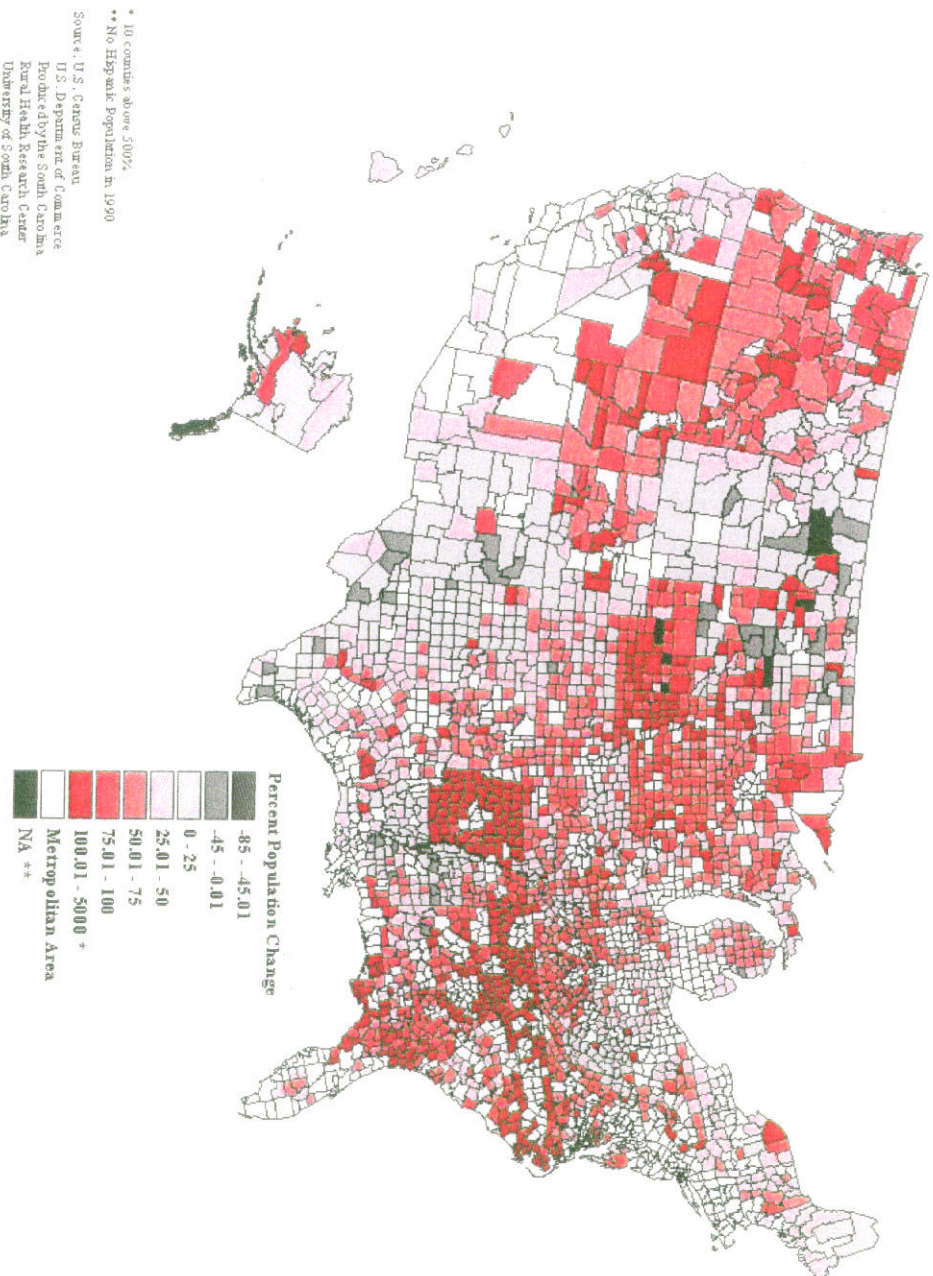
Map 2-A.

Percent of each U.S. total rural county population that is Hispanic, 1999

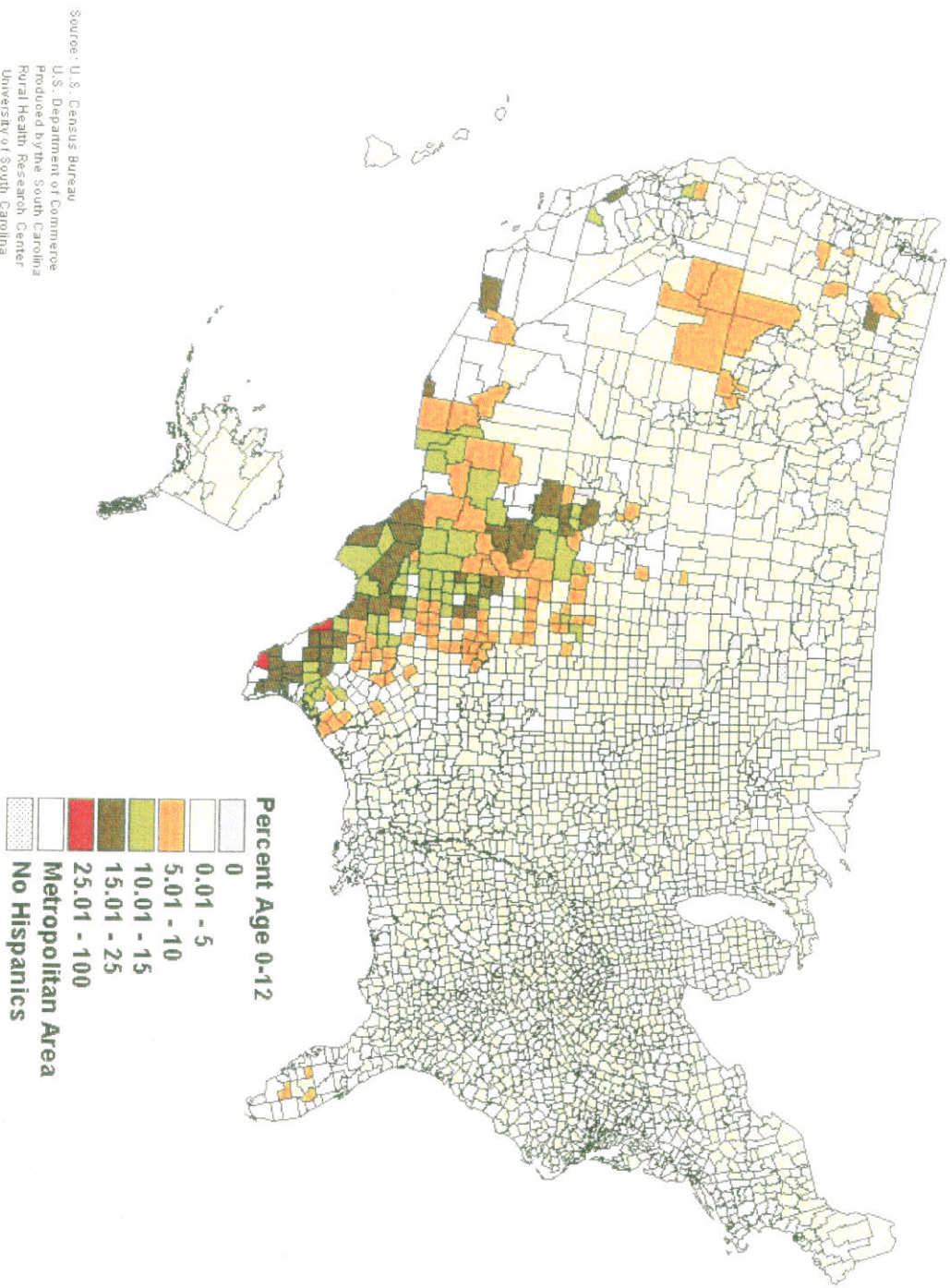


Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Percent Population Change for Hispanics in Rural Counties of the U.S. from 1990 to 1999

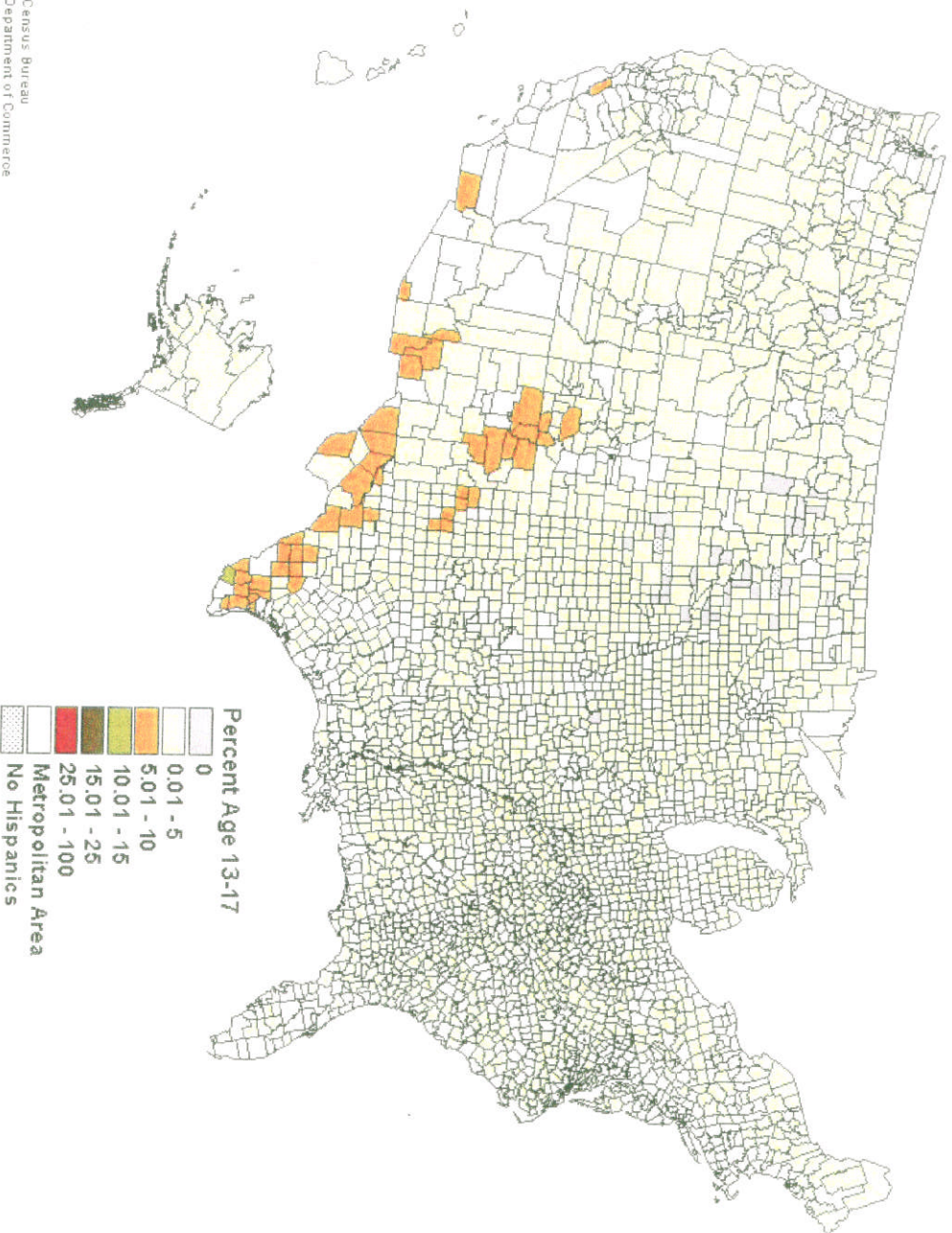


Percent of each total rural county population that is Hispanic and age 0-12, 1999



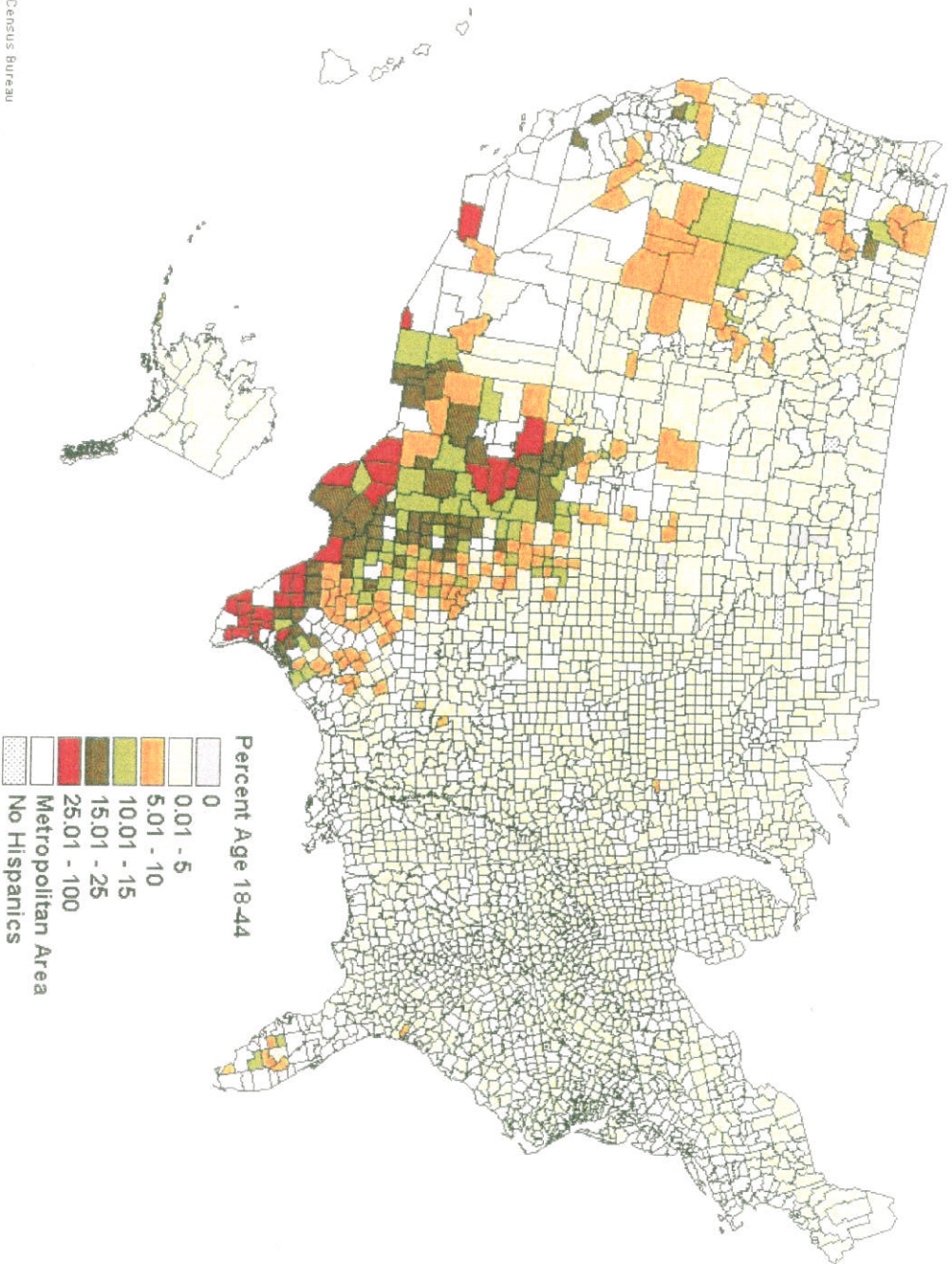
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Percent of each total rural county population that is Hispanic and age 13-17, 1999



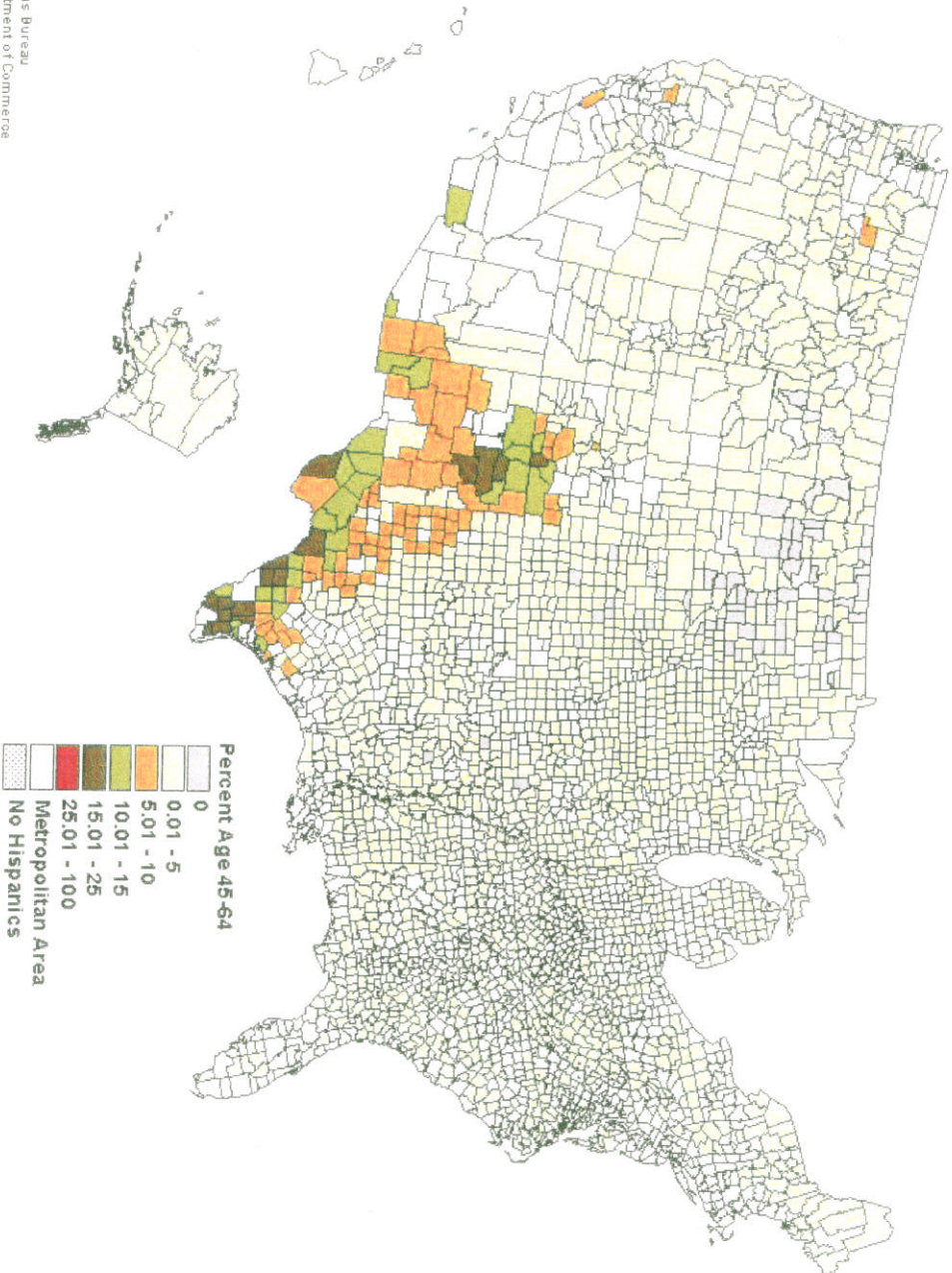
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Percent of each total rural county population that is Hispanic and age 18-44, 1999



Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center

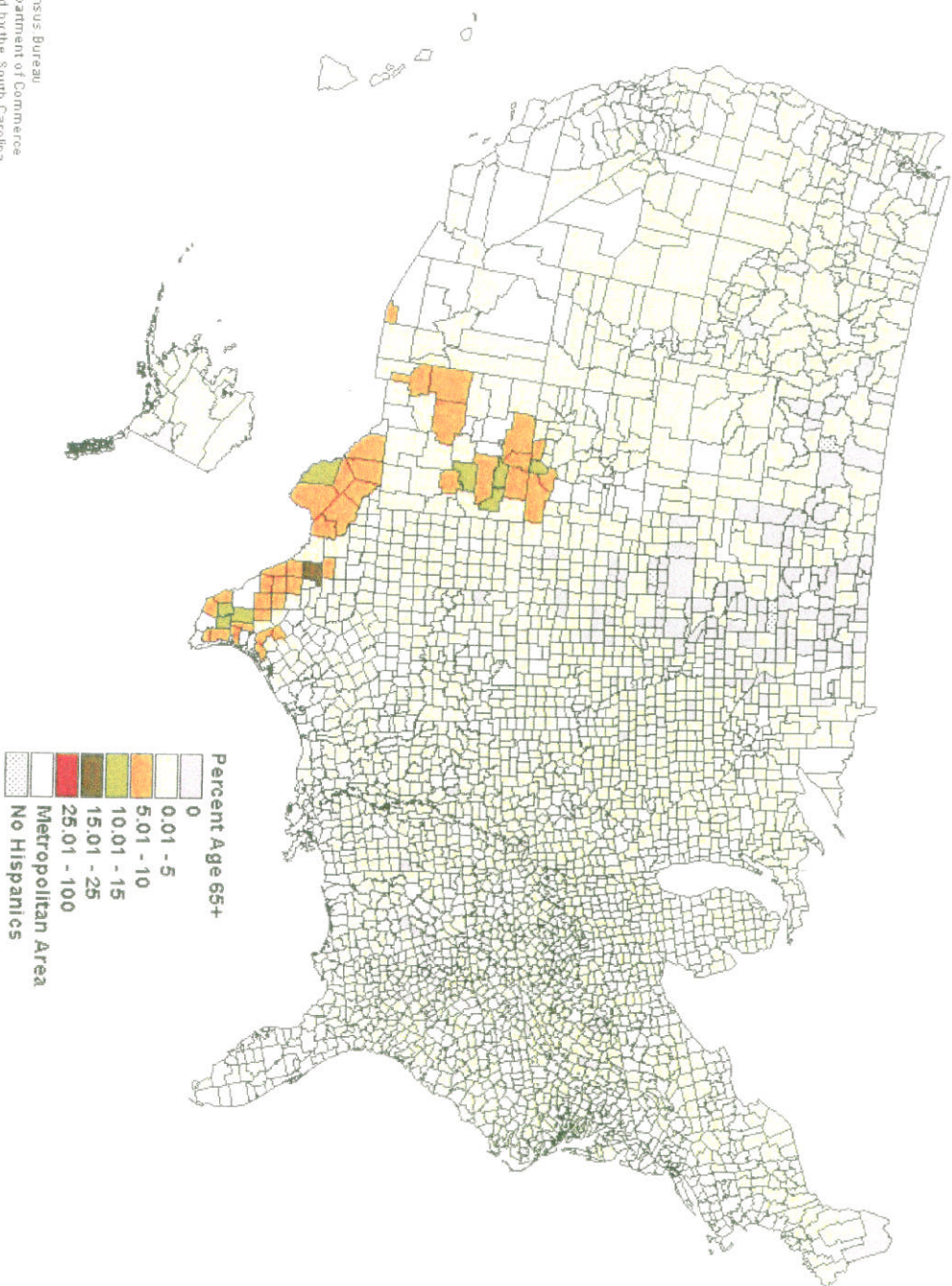
Percent of each total rural county population that is Hispanic and age 45-64, 1999



Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

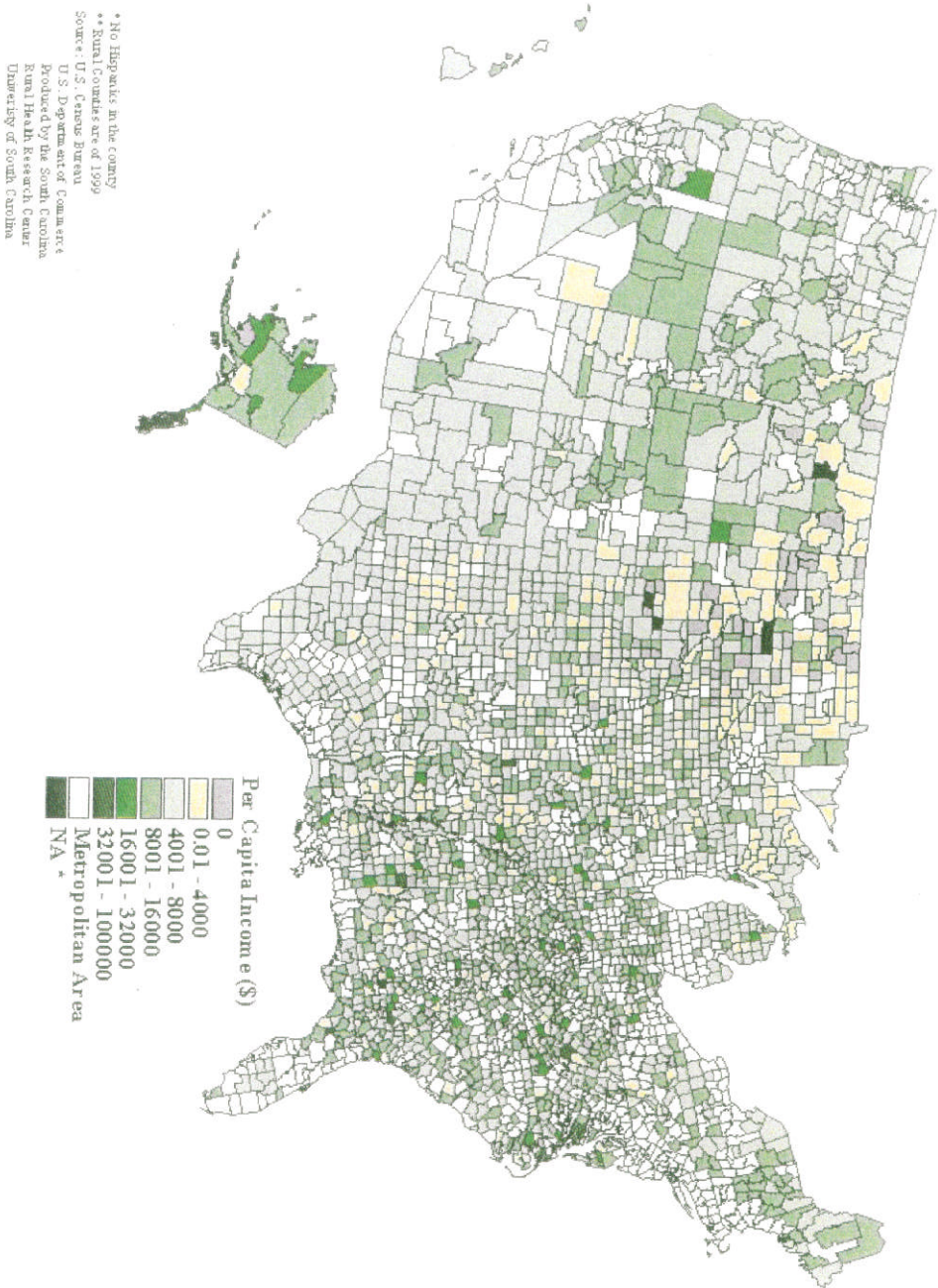
Map 2-G.

Percent of each total rural county population that is Hispanic and age 65+, 1999



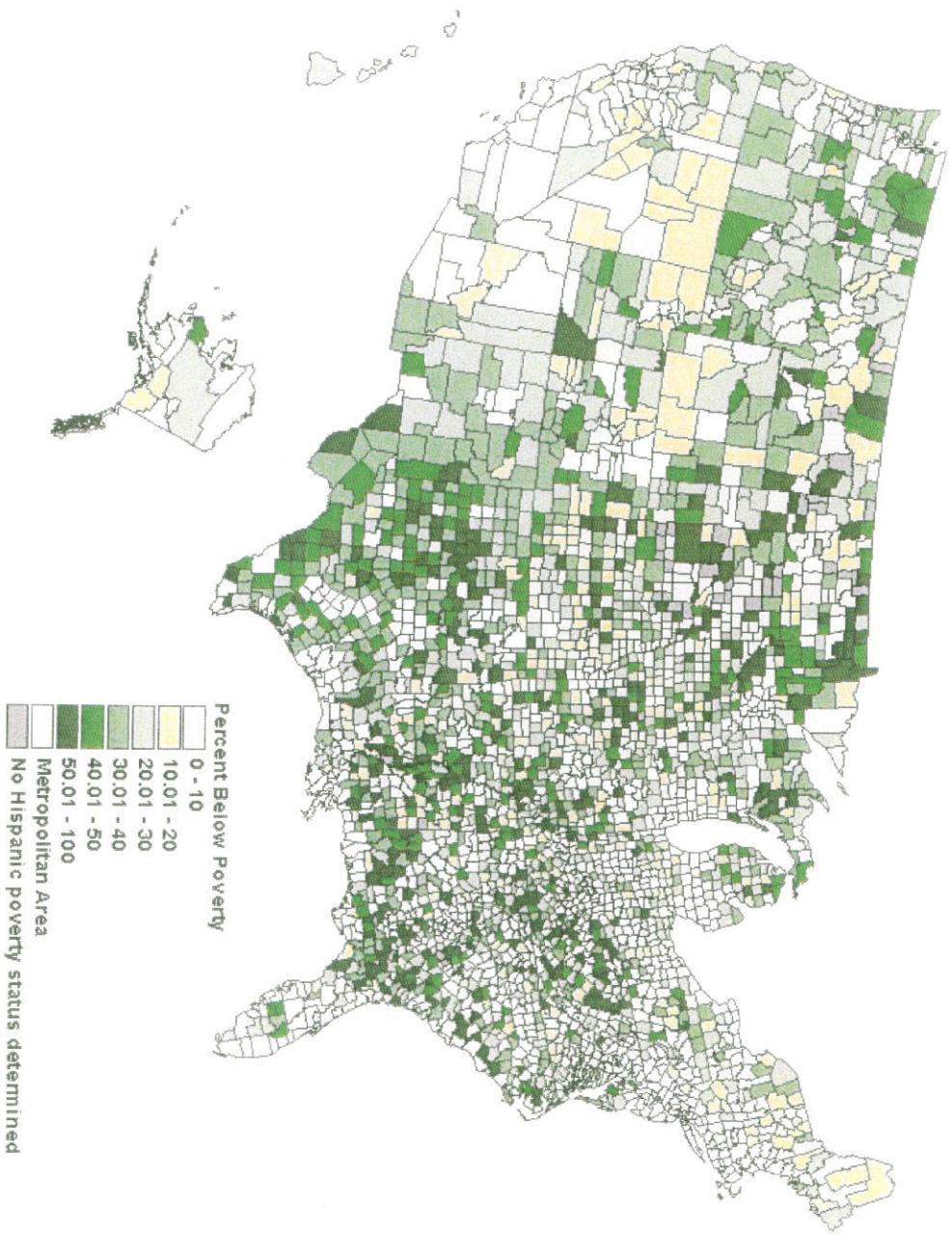
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Per Capita Income for Hispanics in Rural Counties of the U.S., 1989 **

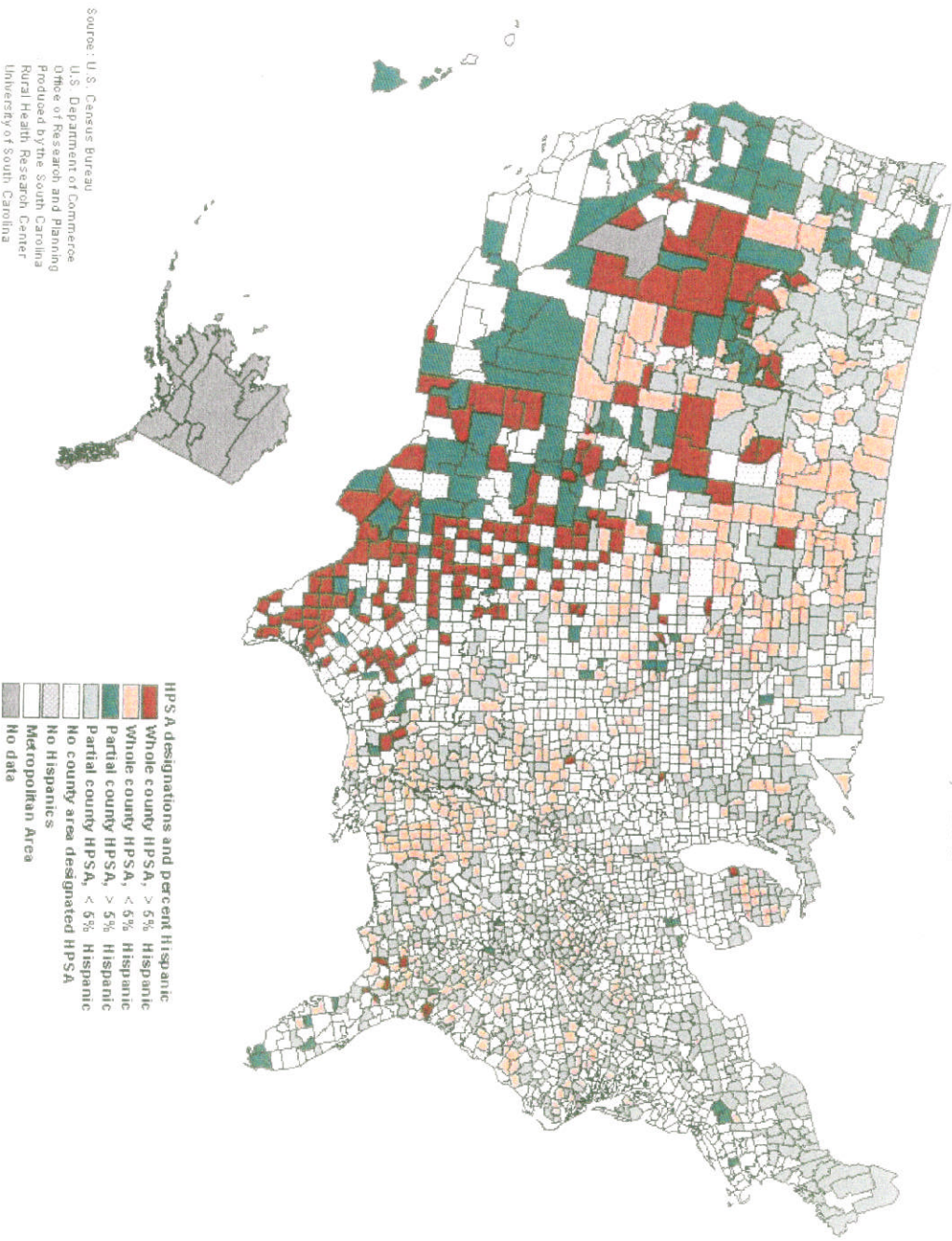


Map 2-1

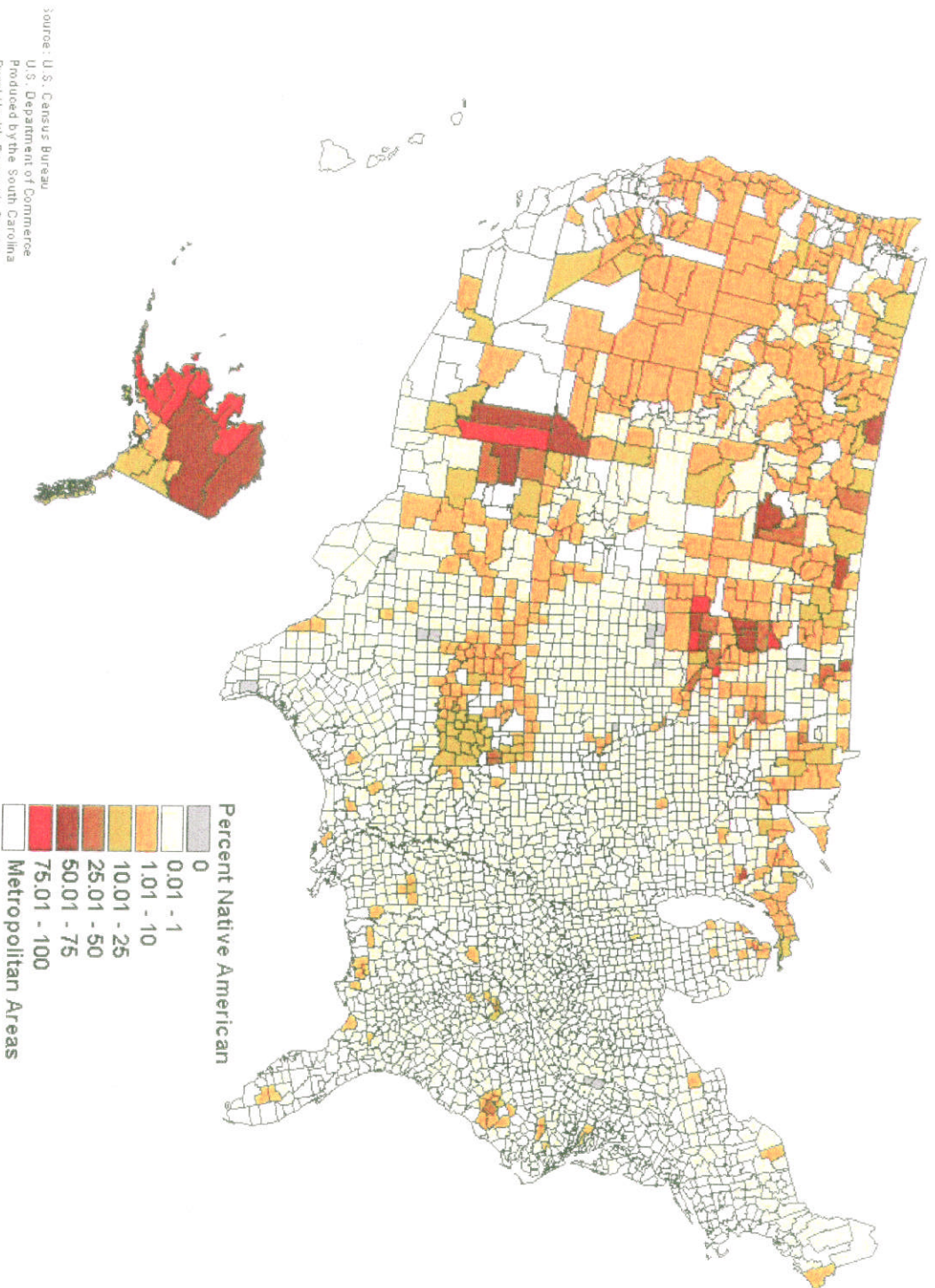
Percent of the Hispanic Population that was below poverty, 1989



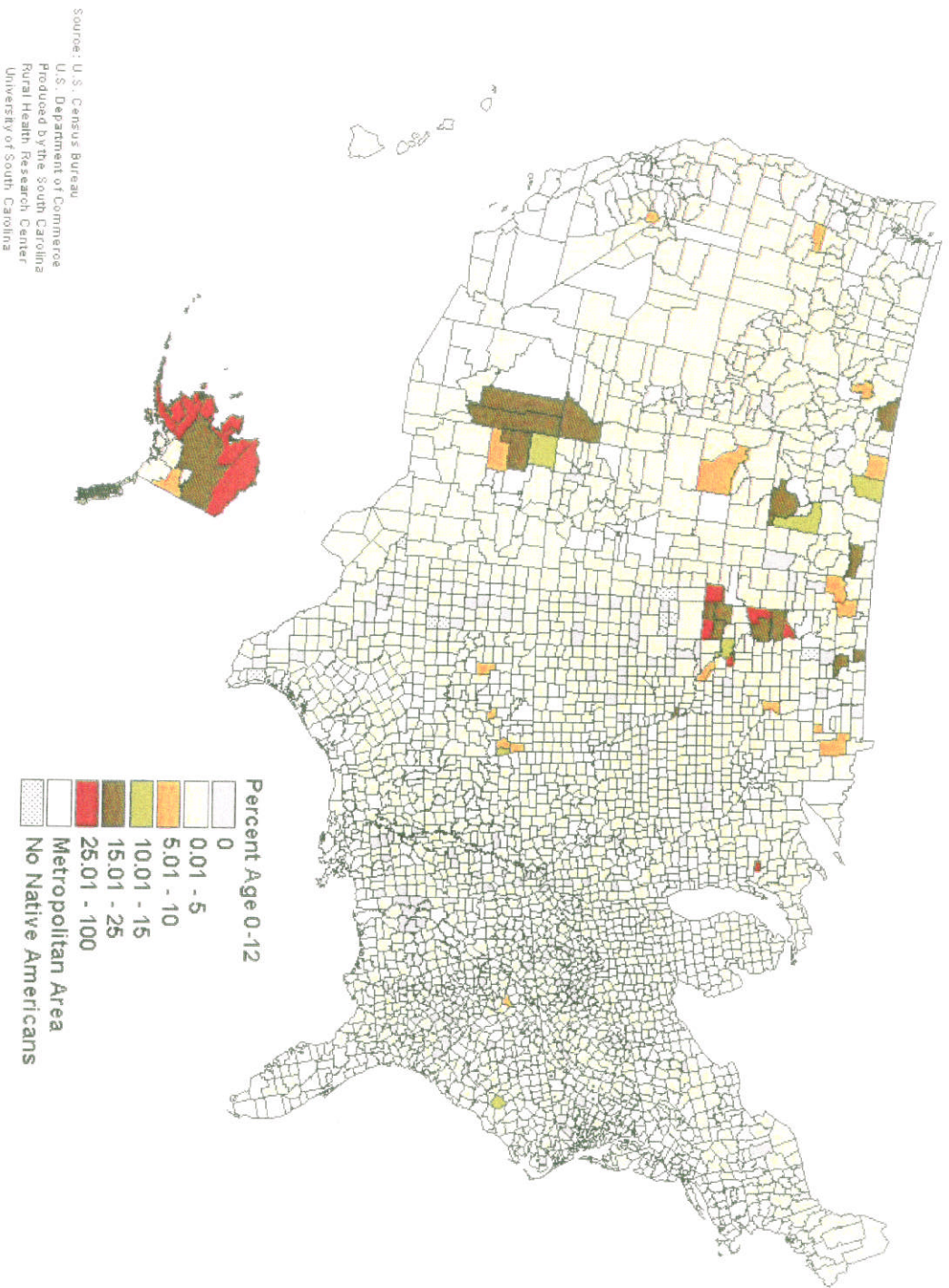
The relationship between HPSA designation and percent Hispanic in rural counties of the U.S., 1998



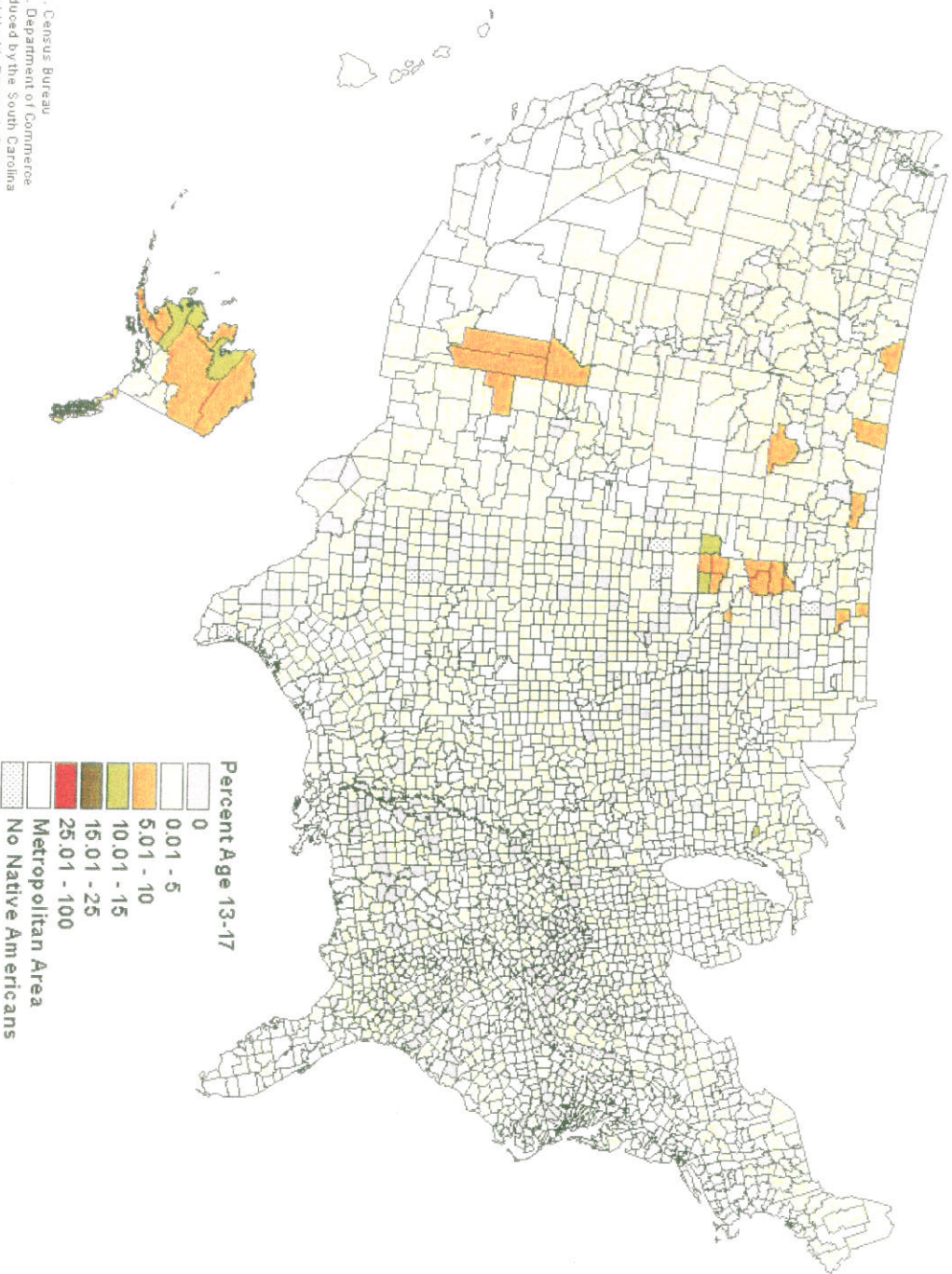
Percent of each U.S. total rural county population that is Native American, 1999



Percent of each total rural county population that is Native American and age 0-12, 1999

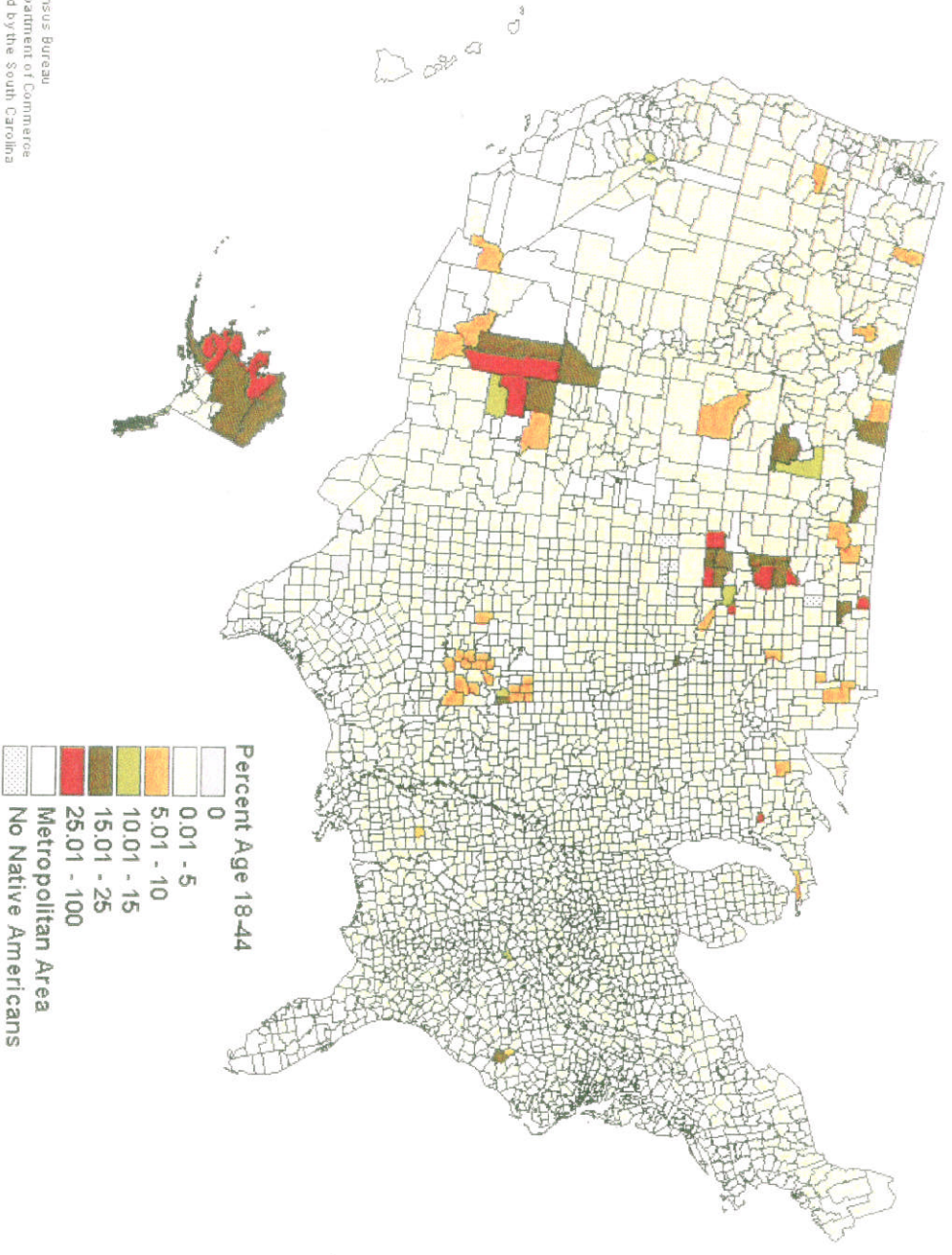


Percent of each total rural county population that is Native American and age 13-17, 1999



Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

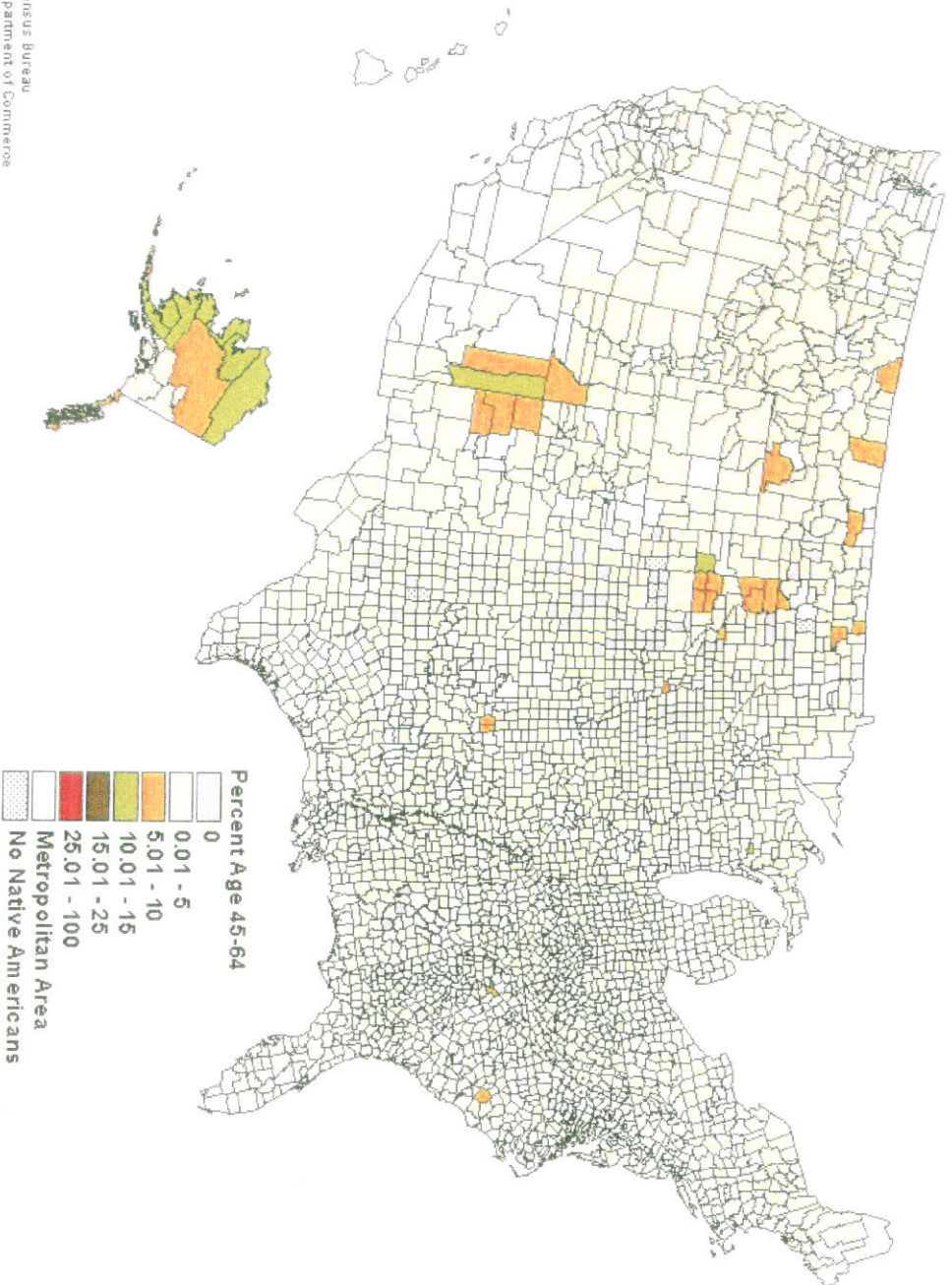
Percent of each total rural county population that is Native American and age 18-44, 1999



Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Map 3-E.

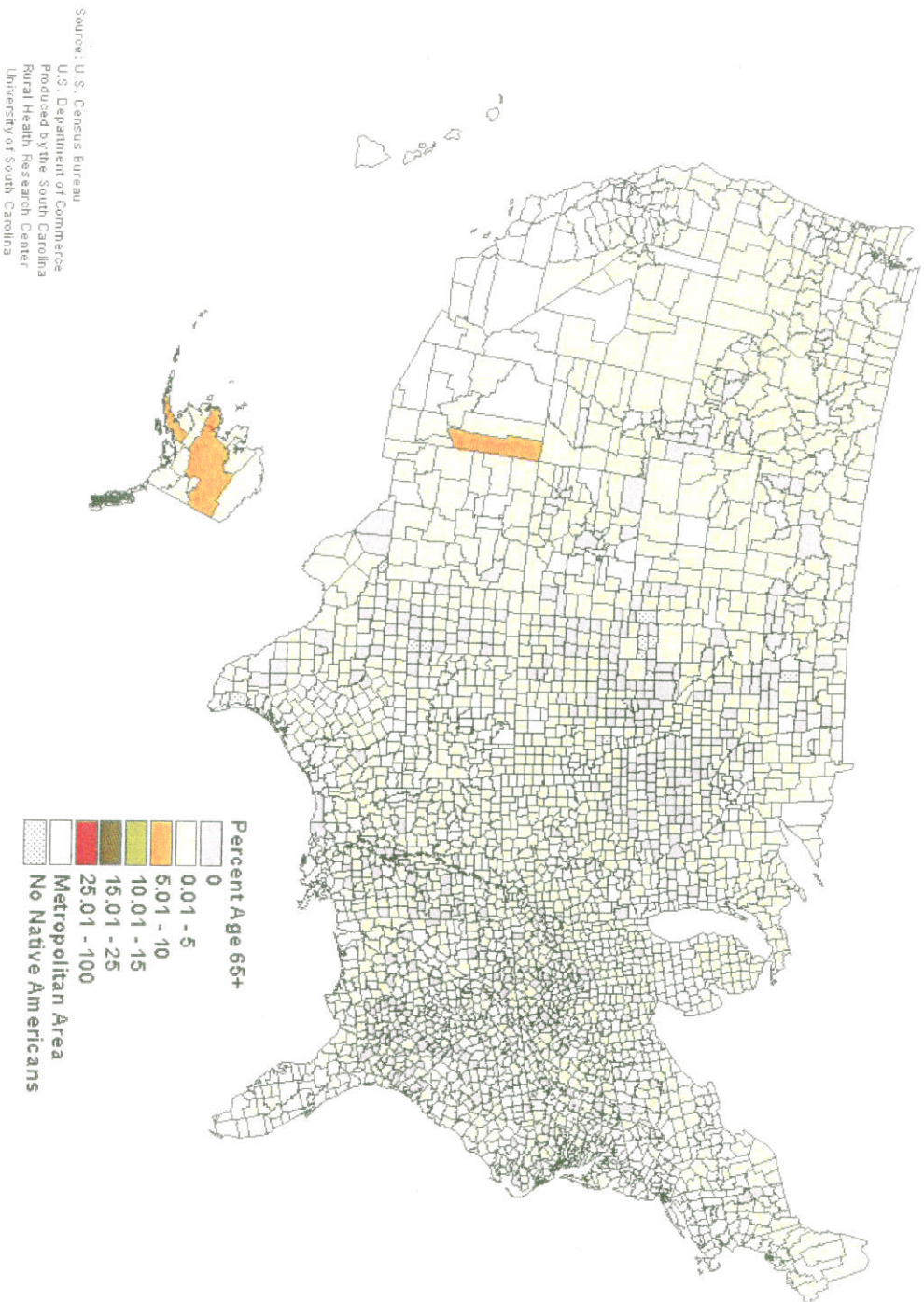
Percent of each total rural county population that is Native African and age 45-64, 1999



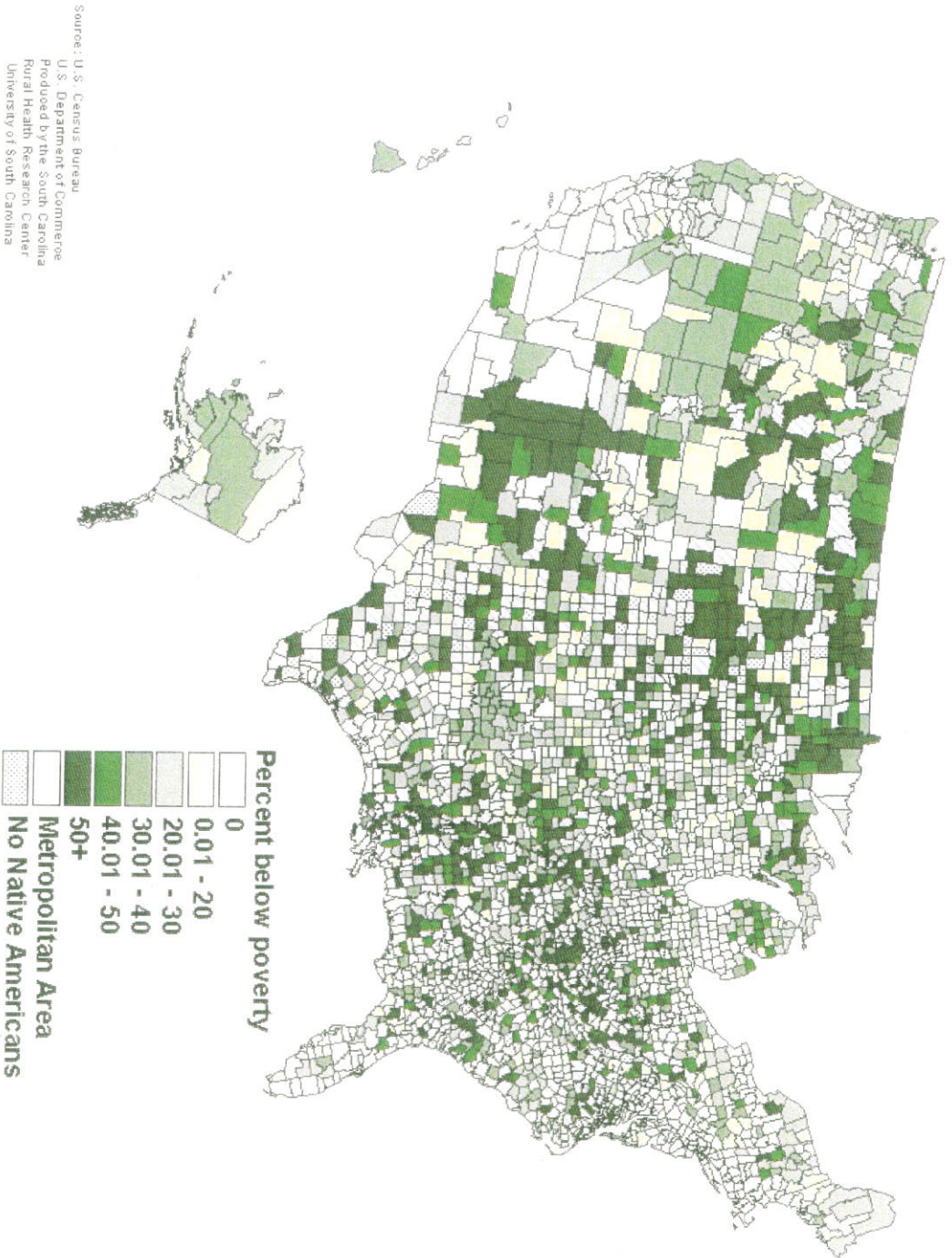
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Map 3-F.

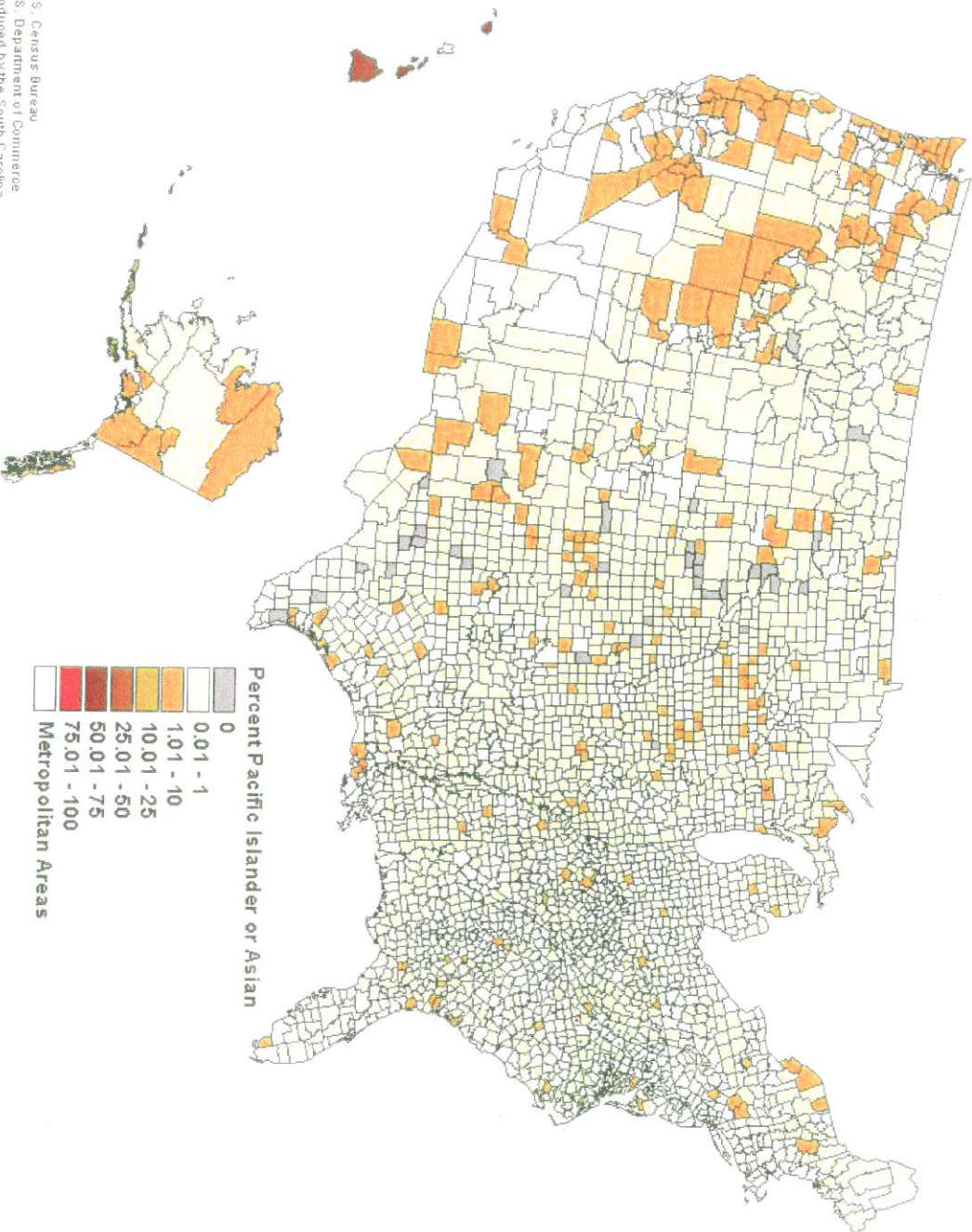
Percent of each total rural county population that is Native American and age 65+, 1999



Percent of Native Americans below poverty in rural counties of the U.S., 1990

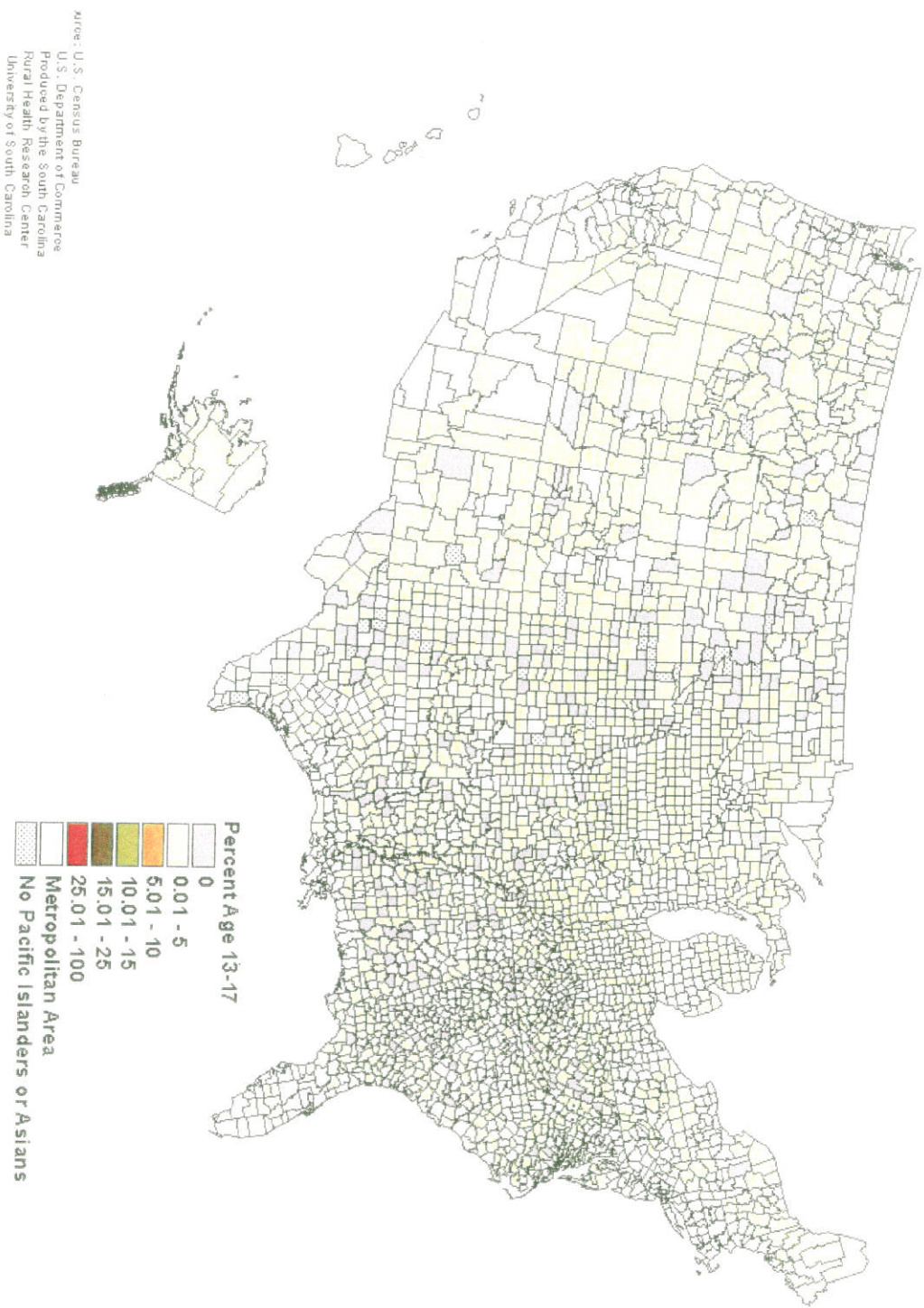


Percent of each U.S. total rural county population that is Pacific Islander or Asian, 1999



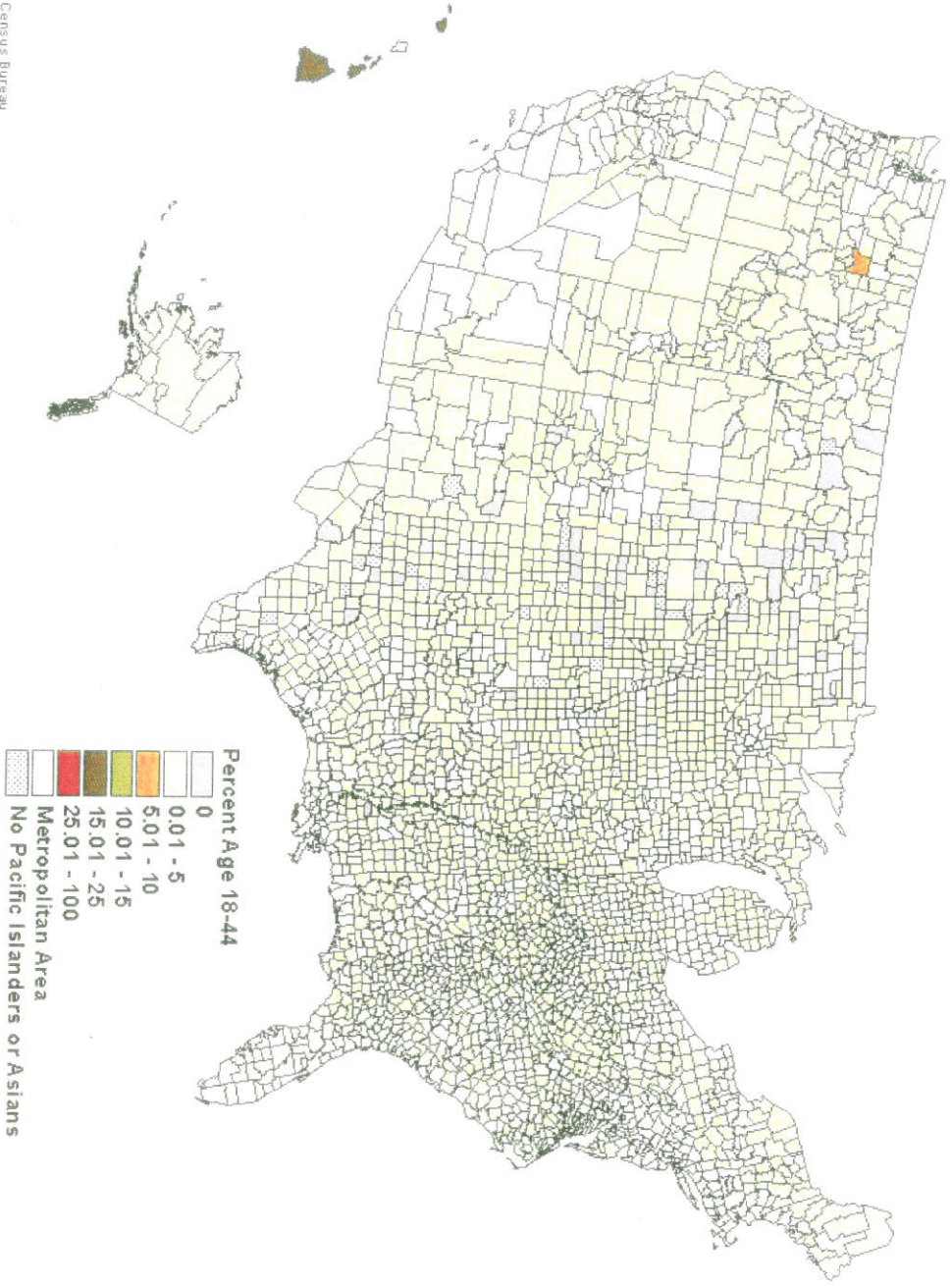
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center

Percent of each total rural county population that is Pacific Islander or Asian and age 13-17, 1999



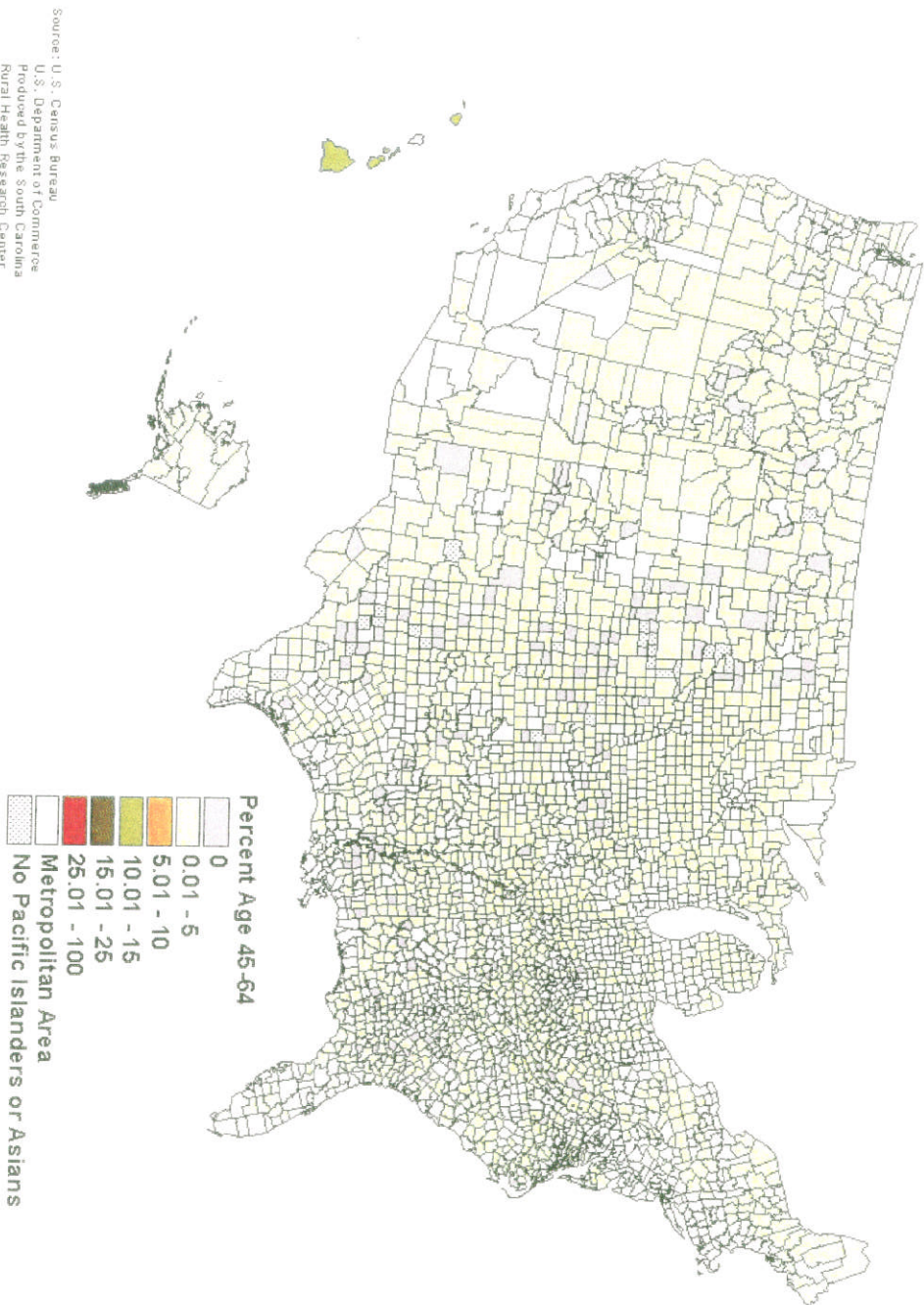
Map 4-1D

Percent of each total rural county population that is Pacific Islander or Asian and age 18-44, 1999



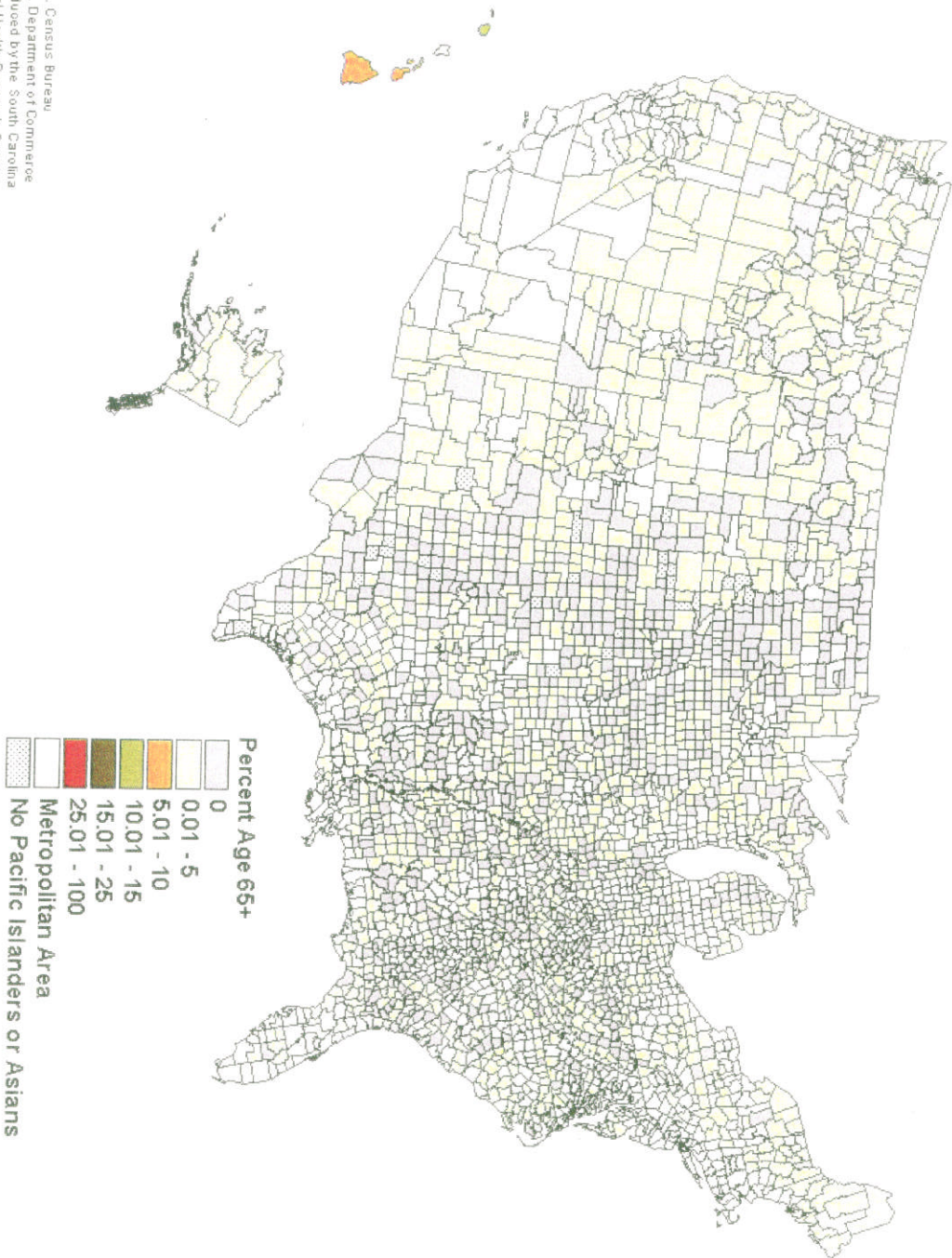
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Percent of each total rural county population that is Pacific Islander or Asian and age 45-64, 1999



Map 4-F

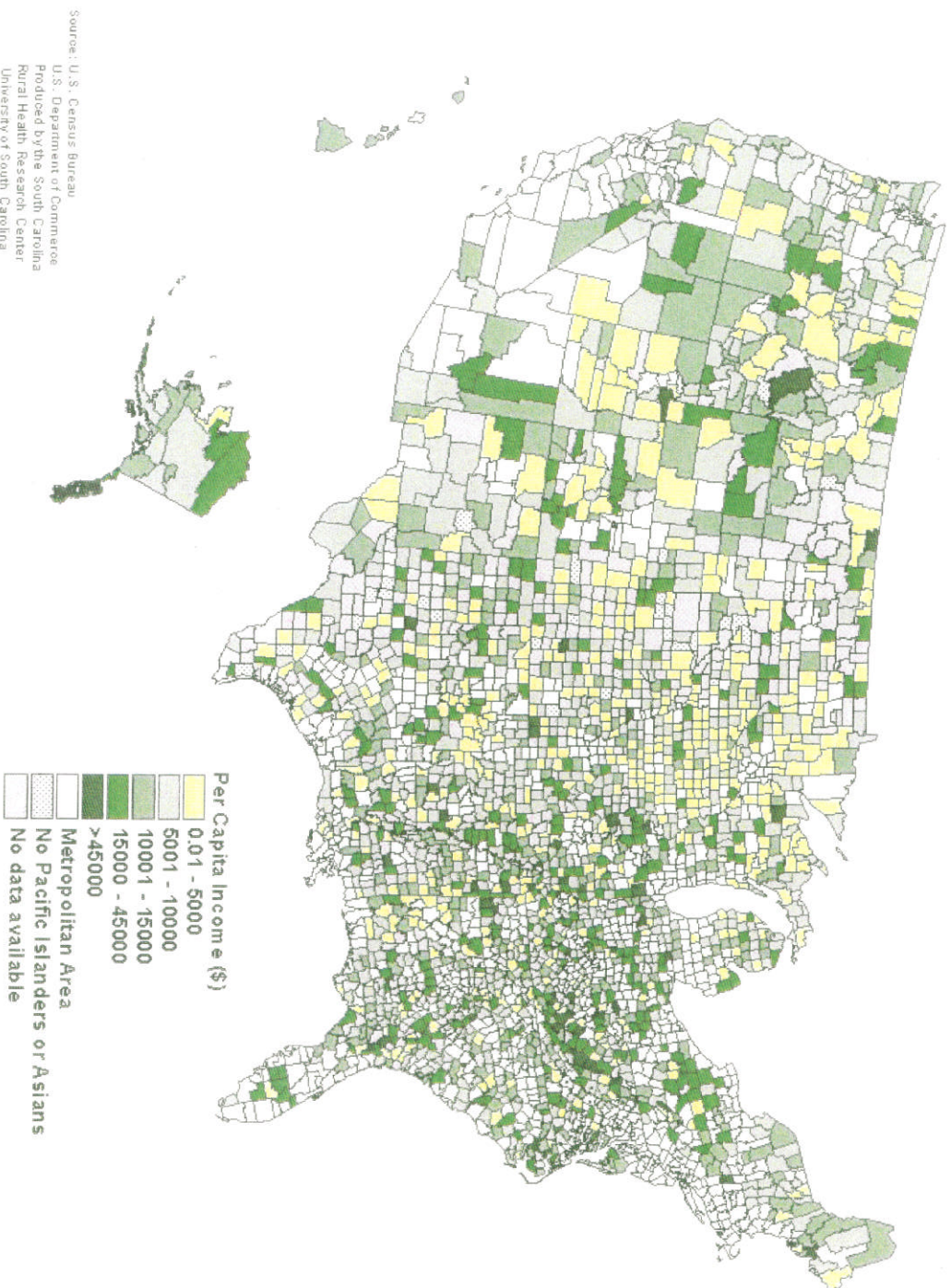
Percent of each total rural county population that is Pacific Islander or Asian and age 65+, 1999



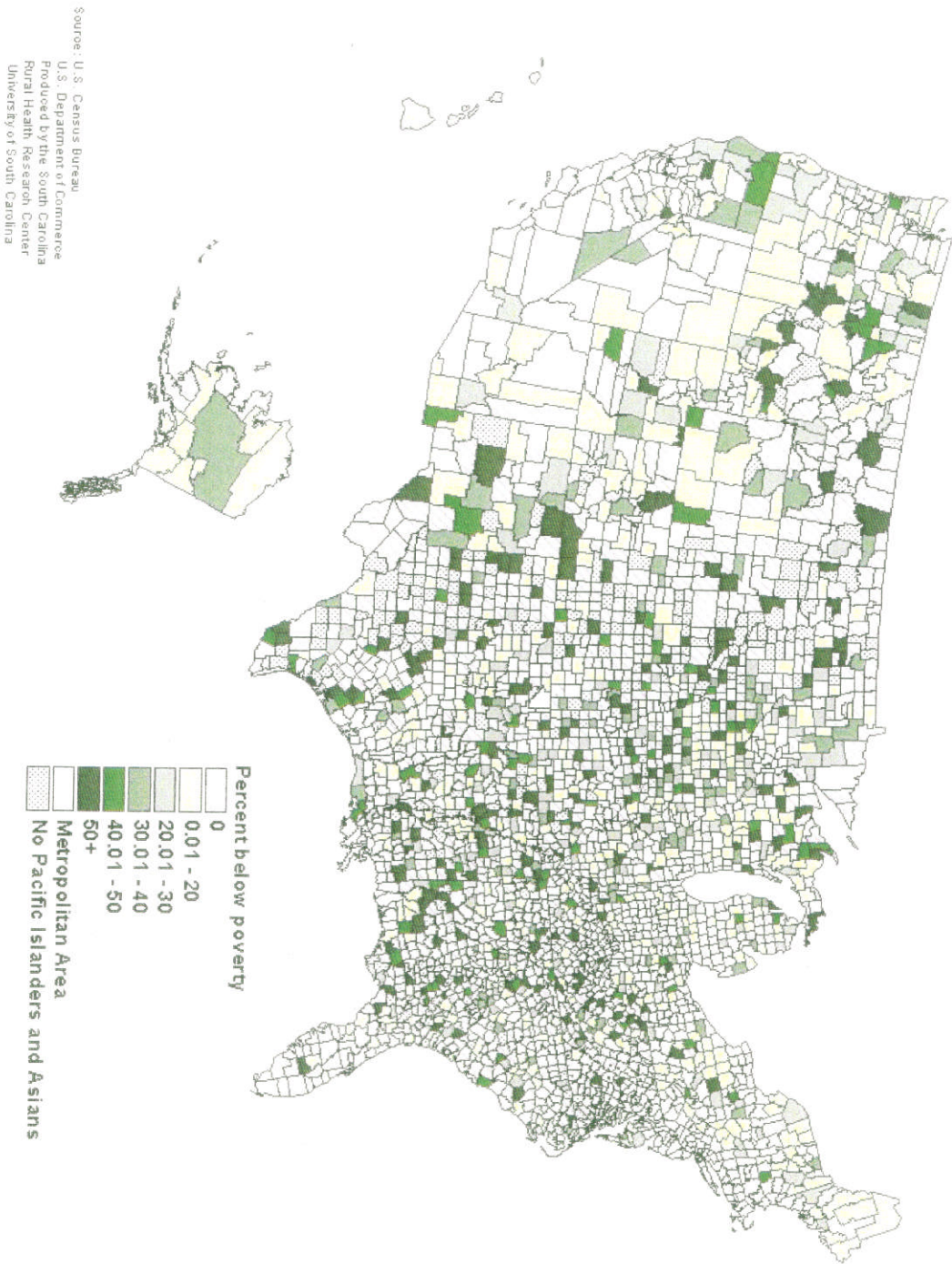
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Map 4-G

Per Capita Income for Pacific Islanders and Asians within rural counties of the U.S., 1990



Percent of Pacific Islanders and Asians below poverty in rural counties of the U.S., 1990



Appendix C

Economic Patterns in Non-Metro America

Health resources, health behaviors, health status, and health outcomes among poor and minority populations cannot be understood without addressing the life context of these persons (Forbes and Wainwright, 2001). Non-metro areas, compared to urban regions, have in common sparse populations, but population densities vary significantly between the eastern and western areas of the United States. Non-metro America is characterized by enormous diversity.

General economic diversity and differing non-metro patterns

While the term "rural" brings to mind farm scenes, agriculture actually makes up a relatively small percentage of non-metro land use and non-metro employment. Just 10% of total employment in non-metropolitan areas comes directly from farming and agricultural services (Castle, 1998). Maps C-1 through C-3 illustrate the principal occupations of non-metro county workers. Agriculture is heavily represented in non-metro counties in the Great Plains states (C-1), while manufacturing occupies the Northeast, South and Midwest counties (C-2). Mining is concentrated in mountainous regions in the Appalachian and Western states, with a swathe through Texas (C-3).

Non-metro Industry

Across non-metro counties, the average proportion of the civilian labor force engaged in agriculture was 10.1%, versus 17.1% in manufacturing. Mining, including quarrying and oil extraction, employed 1.97% of the work force. Averages conceal significant variation. As can be seen in Table C-1 (below), a quarter of all non-metro counties have fewer than 4% of their workforce engaged in agriculture. Mining is highly concentrated in a few areas of the United States; only a quarter of all counties have more than 2% of workers engaged in mining.

Table C-1. Percent of non-metro county workforce engaged in specific industries, in quartiles.

Percent of industry placing county in:	Agriculture	Manufacturing	Mining
Fourth quartile	13.62-66.54%	24.55-51.69%	1.97-39.19%
Third quartile	6.98-13.61%	15.84-24.54%	0.47-1.96%
Second quartile	3.97-6.97%	8.30-15.83%	0.18-0.46%
First quartile	0-3.96%	0-8.29%	0 - 0.18%

Source: USA Counties 1998 CD for 1990 labor force data.

Unemployment

A distinct spatial division of labor has developed in the United States, such that non-metro areas tend to be the recipients of lower skilled, lower wage jobs (Barkley, 1995). Jobs in non-metro areas are more likely to be seasonal, or have periods of interruptions due to variations in product demand (Tomaskovic-Devey, 1987). This results in less than full employment. Employment in non-metro areas is less likely to be unionized or to offer pension plans (Erickson 1981).

Unemployment in the non-metro United States is highest in the Mississippi Delta and the Southern belt of states. (See Map C-4.) Using US Census data, the percent unemployed in the labor force for non-metro counties in 1990 was approximately 6.8%. The areas with the highest levels of unemployment were eastern Kentucky, western West Virginia, Mississippi and Louisiana. Each of these regions has counties with between 10-25% unemployment in the labor force. The residents in these counties rely mainly on agriculture and less skilled manufacturing for employment opportunities.

Poverty

Much of the research attention and policy discussion regarding poverty has focused on urban or central city areas (Albrecht, Albrecht and Albrecht, 2000; Brown and Hirsch, 1995). This trend dates back to 1965 with the publication of the Moynihan report, which shifted the emphasis of poverty research from the South to the central cities of large metropolitan areas (Massey and Eggers, 1990). Several researchers have asserted that rural poverty exceeds that in other parts of the country. Beale (1996 (b)) argues that poverty has typically been more common in small town and non-metro areas than in cities and suburbs. Other studies also assert that non-metro poverty is more extensive and severe than in metropolitan areas (Albrecht, Albrecht and Albrecht, 2000; Hirsch, 1995; Jensen and Tienda, 1989; Clifford and Lilley, 1993). Non-metro Native Americans, African Americans and Mexican Americans are consistently ranked among the poorest of the poor (Jensen, 1994; Brown and Warner, 1991; Rowland and Lyons, 1989).

Available supports to counteract poverty differ at the state level. Temporary Assistance for Needy Families (TANF), for example, sets benefits at the state level. Review of benefit levels shows that states with low per capita incomes, states in which the poverty population is largely non-metro, and states in which the poverty population is largely urban / non-metro vary across urban / non-metro counties. Nonetheless, these differences affect non-metro minorities more than urban minorities, since non-metro African Americans, Hispanics and Native Americans are likely to live in states that also have low per capita incomes.

African Americans: Poverty is usually associated with the ability of the family head of household to hold jobs. McLaughlin and Sachs (1988) found that the rate of poverty in female-headed households is 32%, while husband-wife households have a poverty rate of 5.6%. In non-metro persistent poverty counties with high African American populations, 31 percent of children living in single-parent households (Beale (b), 1996). Across all non-metro counties, 36.9% of African American children, versus 9.7% of white children, were living in female-headed families. The poverty rate among female-headed African American non-metro families was 60.4%, versus 34.0% among similar white families (1990 data; Effland and Kassel, 1996). Poverty is linked to educational attainment. Among non-metro African American men between the ages of 25 - 34, 32.1% had not graduated from high school, versus 17.4% of non-metro white men; the corresponding values for non-metro women are 27.7% and 14.3% (Effland and Kassel, 1996).

Prior research shows the South, particularly non-metro counties within the South, to be the most poverty-stricken region of the United States. Area poverty is influenced by economic growth in the area, and by the availability of jobs. Brown and Hirsch (1995) analyzed these external factors. They found that the odds of poverty are higher in non-metro areas than in other residential areas. Reflecting human capital theory, they also found that education and work experience help reduce the likelihood of poverty. In this context, the continuing failure of non-metro areas, particularly in the South, to maintain adequate school systems is not encouraging

(McGranahan, 2001). Another author has suggested that current non-metro development projects in the South tend to favor those already in power to the detriment of those who do not, perpetuating poorer economic status among minority populations (Zekeri, 1999).

The non-metro African American population disproportionately suffers from poverty. In 225 of the 540 persistent poverty counties (42%), the population contains a high proportion of African Americans (Beale, 1996 b). These counties are located in the old agricultural South (Beale, 1996 b). For example, African American persistent poverty counties found in Alabama, Arkansas Louisiana and Mississippi had average 1990 Census poverty rates of 51.4% for African Americans compared with 15.4% for Whites (Beale, 1996 b).

For African Americans, residential separation and economic well-being have always had a negative relationship. Other minority groups have thrived within "immigrant enclaves" that allowed these groups to pool resources and gave ready access to a market for specialized goods and services (Cromartie and Beale, 1996). The non-metro areas of persistent high poverty dominated by African Americans have several features typically associated with low income, including: early childbearing, low availability of year round work and low levels of educational attainment (Beale, 1996 (b)). The African American residents of these areas are also much less likely to have access to a motor vehicle (Beale, 1996 (b)). Lambert (1988) found that 26% of low-income households did not have a car and that, among persons who did own a car, its average age was 11 years; 25.1% of low-income households lived in non-metro areas. Nationally, 15.9% of African American households, versus 5.0% of white households, were estimated to lack a telephone in 1991 (Schement, 1995). In persistent poverty counties, 29.3% of African American households, versus 6.8% of white households, lack a vehicle (Gibbs, 1996).

Non-metro minorities are especially vulnerable to economic swings. Economic prosperity coupled with reduction of social barriers associated with racial discrimination, resulted in the ratio of white to African American median family income falling from 2.89 in 1959--\$6,131 in 1986 dollars for non-metro African Americans, versus \$17,710 for non-metro whites--to 1.73 in 1979, \$14,964 in 1986 dollars for non-metro African Americans, versus \$25,948 for non-metro whites. During the economic downturn of the 1980's, however, the ratio of white to African American non-metro family income increased to 1.84. During this period, African American income declined more steeply than white family income, \$13,182 in 1986 dollars for non-metro African Americans, versus \$24,310 for non-metro whites (Jensen and Tienda, 1989). Much of the improvement from 1959 to 1986, Jensen and Tienda (1989) suggest, was attributable to increasing economic returns from multiple earners in non-metro African American families. However, white families derived more benefit from multiple earners than did minority families. Non-metro Hispanics, like non-metro African Americans, are especially vulnerable to economic swings. One study explicitly examined income change among Mexican Americans between 1959 and 1986. Economic prosperity during the 1960's and 1970's brought Mexican American family incomes closer to those of whites. Between 1959 and 1979, ratio of white to Mexican median family income falling from 1.73 (\$10,244 in 1986 dollars for non-metro Mexicans, versus \$17,710 for non-metro whites) to 1.47 (\$17,626 in 1986 dollars for non-metro Mexicans, versus \$25,948 for non-metro whites). During the economic downturn of the 1980's, inequality increased. By 1986, the ratio of white to Mexican American family income was greater than it had been during 1959, 1.79 (\$13,560 in 1986 dollars for non-metro Mexican Americans, versus \$24,310 for non-metro whites; all values Jensen and Tienda, 1989).

Referring again to the economic swings noted by Jensen and Tienda (1989), the vulnerability of non-metro Hispanics to future economic downturns is likely to be greater than that of urban residents. Because non-metro Hispanics are disproportionately present in counties

with few manufacturing jobs, the ability of these residents to find alternative employment is likely to be limited. Urban migration is a likely result. Further, non-metro Hispanics tend to lack educational capital. Among Mexican-American Hispanics, 50.3% of the men between 25 and 34, and 41.5% of women the same age, have less than a high school education (Effland and Kassel, 1996). For comparative purposes, 17.4% of non-metro white men and 32.1% of non-metro African American men had less than a high school education, with values for non-metro white women and non-metro African American women at 14.3% and 27.7%, respectively (Effland and Kassel, 1996).

Native Americans: Economic prosperity during the 1970's resulted in the ratio of white to Native American median family income falling from 2.02 in 1959--\$8,751 in 1986 dollars for non-metro Native Americans, versus \$17,710 for non-metro whites--to 1.40 in 1979, \$18,564 in 1986 dollars for non-metro Native Americans, versus \$25,948 for non-metro whites. During the economic downturn of the 1980's, however, the ratio of white to Native American family income increased to 1.84 as Native American income declined more steeply than white family income, \$13,182 in 1986 dollars for non-metro Native Americans, versus \$24,310 for non-metro whites (Jensen and Tienda, 1989).

Should the economy of the United States as a whole experience a downturn during the first decade of the 2000's, as some anticipate, the greater swings experienced by non-metro minority populations in the past suggest that these populations would again be disproportionately affected. In addition, changes to the safety net structure, such as limitations to the duration of assistance through Temporary Assistance to Needy Families, may force non-metro residents to leave locations with few job opportunities. Non-metro Native Americans are vulnerable to economic change, a problem heightened by tensions between the communal orientation of some Native American cultures and the individualistic, wage-oriented majority society (Pickering, 2000).

Persistent Poverty

The USDA classifies counties as persistent poverty counties in instances when poverty levels have been at 20% or more of the population for the years 1960, 1970, 1980 and 1990. This included 540 counties, most of which are in the Southeast, Appalachia and the Southwest, and also Native American reservations scattered throughout the rest of the country (Beale, 1996 b). For all of the persistent poverty counties, the average rate of poverty was 29% in 1990, compared to 14% for all non-metro counties (Beale, 1996 b). These counties are notable for their lack of manufacturing employment, lack of skilled labor, lower levels of education that other non-metro counties, and their continuing loss of residents. The unemployment rate remains significantly higher than the national average, and where jobs do exist, the wages are typically only enough to survive, not enough to get out of poverty. Another factor that contributes to the problems in persistent poverty counties is remoteness; over half of these counties are not adjacent to an urban center. This allows residents limited access to the benefits of the urbanized area, including education, employment, medical care, financial institutions and cultural opportunities.

Non-metro poverty among children is associated with African American status. While 13.2% of all children living in non-metro areas are African American, 25.4% of all poor children, and 30.9% of children receiving Temporary Aid to Needy Families, are African American (Rogers and Dagata, 2000).

Availability of Employment

Non-metro communities have a higher prevalence of working poor than metropolitan areas, and this tends to be particularly the case among non-metropolitan minorities (Jensen,

Racial/Ethnic Group	Countries in which indicated group is majority of population	75	84.3
African American	HPSAs within majority counties	89	
	% HPSA		

Table C-2. Non-metro Counties, by the racial/ethnic group accounting for the majority of the county population and whether the county is whole or in part a Health Professions Shortage Area.

Health services infrastructure refers to the degree to which a community has adequate resources to meet the health and medical needs of its residents. Non-metro areas tend to be lacking in many aspects of health services infrastructure. Smaller non-metro communities are less likely to have a hospital than are larger non-metro communities (Ricketts, 1999). People living in non-metro areas are four times more likely to live in a health professions shortage area (HPSA) than persons in metropolitan areas (North Carolina Rural Health Research Program, 2000). The appropriate ratio of primary care physicians to patients is considered to be 1:2,000; in non-metro areas the average is 1:3,500 (Center for Health Policy, 2000). Thus, non-metro residents are more likely to be without a regular source of health care and are less likely to seek care (Blank et al., 1996). Lack of privacy in small towns may lead individuals to reject preventive services associated with "embarrassing conditions" (Strickland and Strickland, 1996). In 1990, 20.5% of non-metropolitan counties did not have any mental health services (National Rural Health Association, 1999). Among non-metro hospitals, 18.6% offer emergency psychiatric services, compared with 37.4% of metropolitan hospitals (National Rural Health Association, 1999). The lack of mental health and substance abuse infrastructure means that residents in non-metro areas often go untreated (National Rural Health Association, 1999). Access to health care is worse among non-metro minority populations, even in comparison to urban minority populations (Mueller et al., 1998). Non-metro minorities are among the most medically underserved and underserved of all population groups in the United States (Williams et al., 1994; Brathwaite and Taylor, 1992). High percentage African American counties in the non-metro South have substantially lower levels of public infrastructure, such as hospitals and medical facilities, than other counties in the region, placing minorities at greater risk of unavailability of services (Brown and Warner, 1991). Minority, poor, and non-metro residents are less likely to receive preventive health screenings than are non-minority, non-poor, and urban individuals (Department of Health and Human Services, 1991).

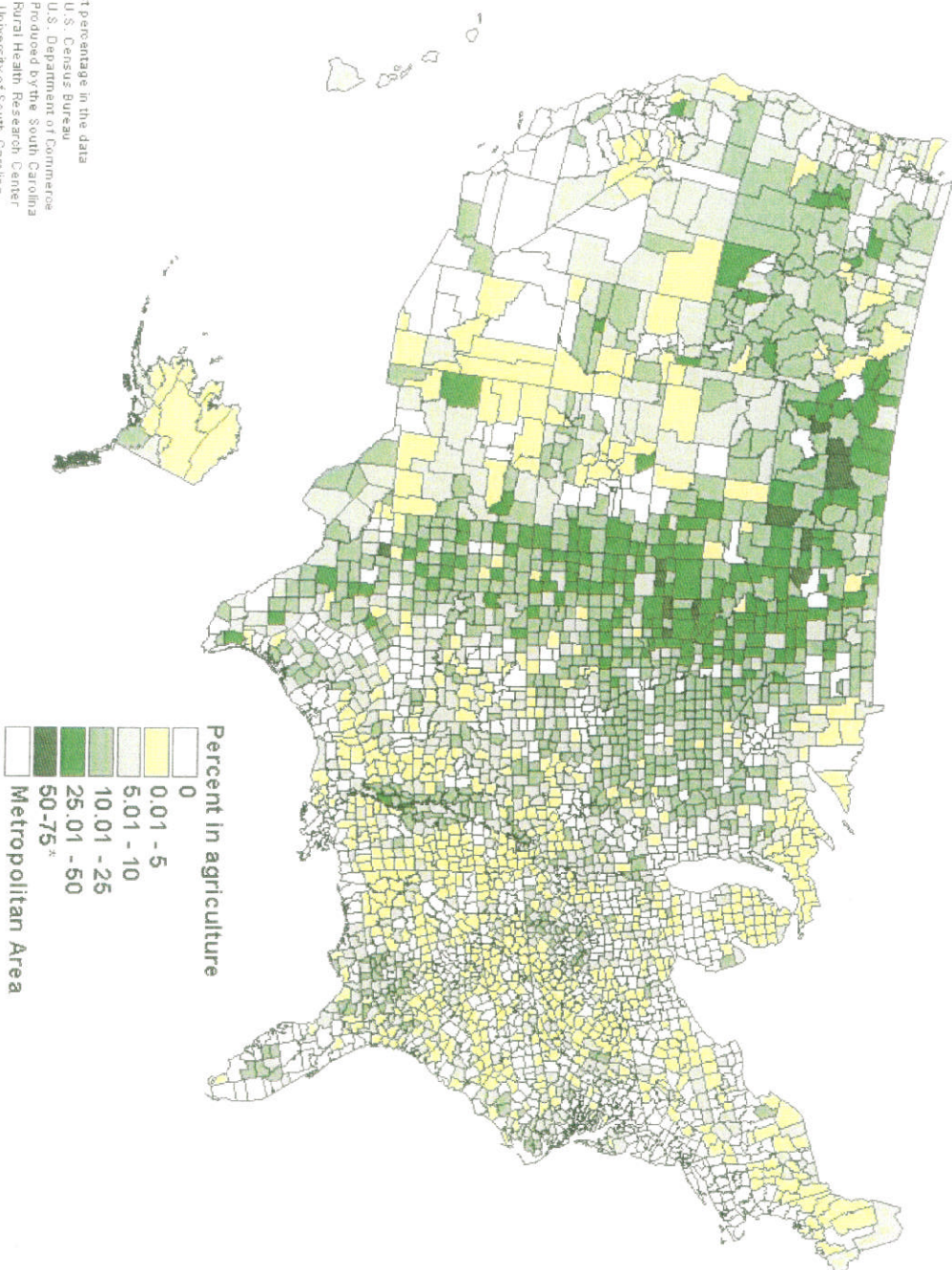
Health Services Infrastructure

1994). For the working poor, findings indicate that the cause is not a lack of desire to work, but of poor infrastructure and work opportunities. The opportunities that do exist are not substantial enough to bring the families out of poverty (Kim, 1998). Along with higher prevalence of working poor, there is also the problem of continued job losses that plague much of non-metro America (Barkley, 1995). The problems of underemployment are connected to both minority and non-metro status (Jensen, 1994). Non-metro workers are more likely to be in occupations characterized by low wages, poor benefits, little chance for upward mobility and a high chance of being moved offshore. This is particularly the case for non-metro Native Americans, African Americans, and Mexican Americans (Jensen, 1994).

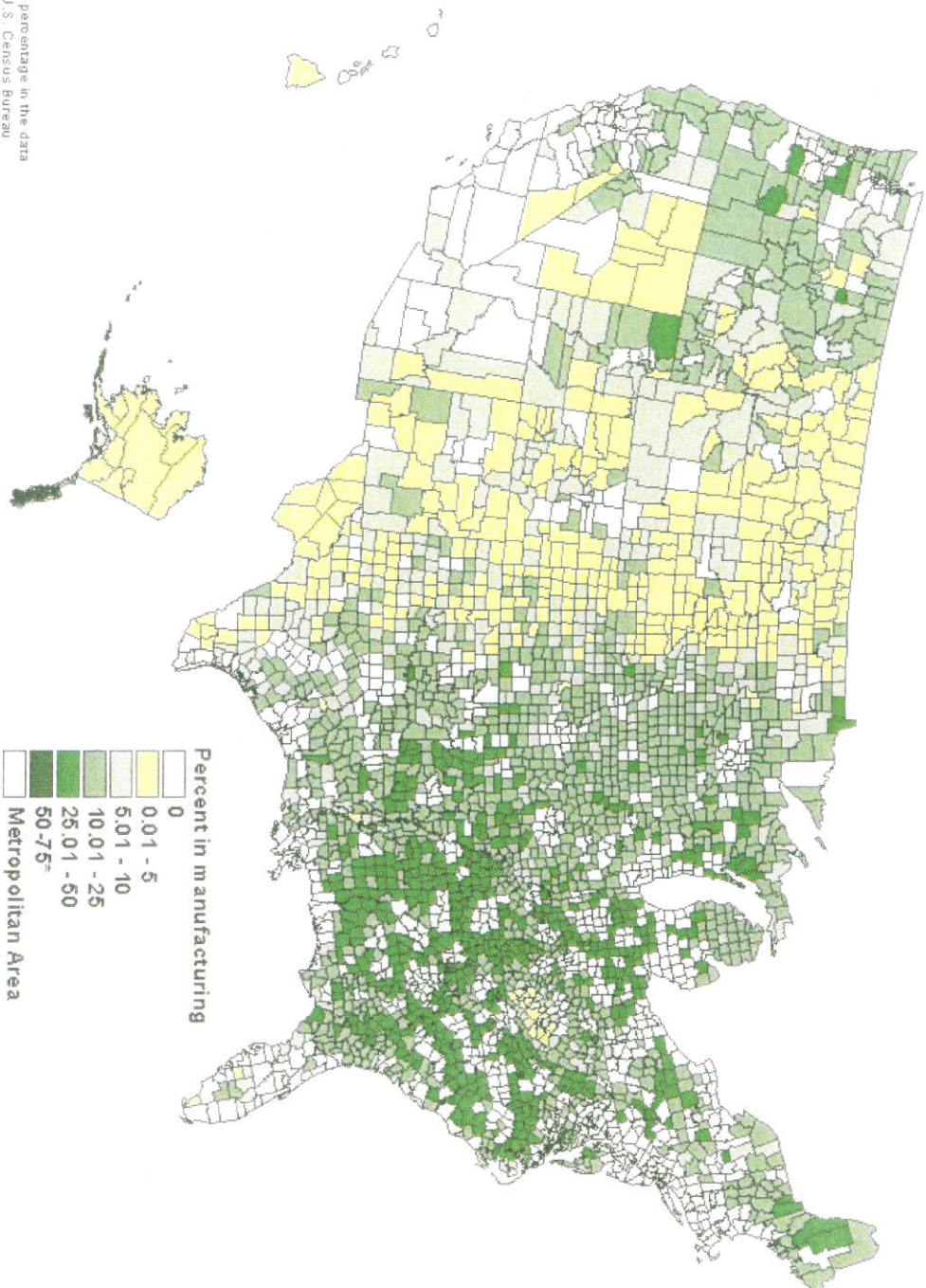
Source: Area Resource File

Hispanic	44	37	84.1
White	2,174	1,409	64.8
Asian/Pacific Islander	4	2	50.0
Native American	24	16	66.7

Percent of each county's civilian labor force in agriculture related jobs, 1990

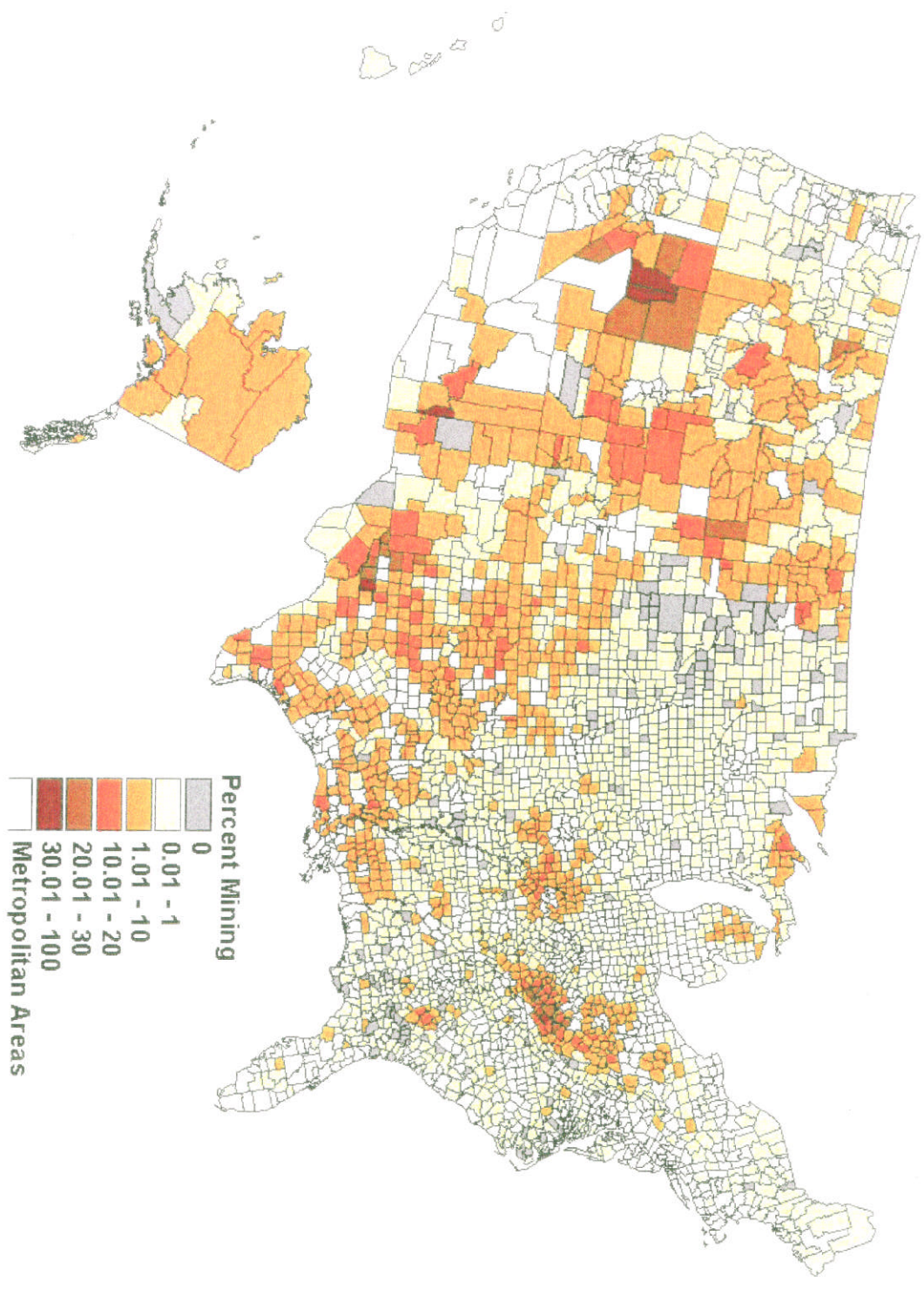


Percent of each county's civilian labor force in manufacturing related jobs, 1990



* Highest percentage in the data
Source: U.S. Census Bureau
U.S. Department of Commerce
Produced by the South Carolina
Rural Health Research Center
University of South Carolina

Percentage of the labor force involved in Mining, 1990



Percentage of the Rural Labor Force that is Unemployed, 1990

