State Rural Plan for South Carolina

Prepared by the SC Rural Health Research Center

August 28, 2008

Lead Author: Brandi Wright, Ph.D.(c)

Contributing Authors:
Jessica Bellinger, Ph.D.(c)
Monica Y. Brahmbhatt, MHA
Kendra Brooks, MHA
Dr. Murali Krishna Gangadaram, BMS, MHA
Duriel Q. Garner, MHA
Nathan Hale, MPH, Ph.D.(c)
Gaylyn Henderson, MPH(c)
Ronnie Mack, MPA, MHA
Cassandra Mayhew, MPH
Lindsay Rozovich, MHA
Jessica Wilkes, RN, BSN

Editor: Amy Brock Martin, Dr.P.H.

Table of Contents

Introduction	p. 3
1. Definition of Rural & Related Demographics	p. 4
Hispanic and Foreign Born Populations in Rural South Carolina	p. 9
Growth of Foreign-Born Population	p. 10
Income and Poverty	p. 11
Education	p. 13
Employment Status	p. 14
II. Health Status of Rural South Carolina	p. 16
Infant Mortality	p. 17
Low Birth Weight/Very Low Birth Weight	p. 17
Chronic Disease	p. 18
Diabetes	p. 19
Hypertension and Stroke	p. 20
Obesity	p. 21
HIV/AIDS	p. 22
Cancer	p. 22
Oral Health	p. 24
III. The Organization and Support of rural health Systems in South Carolina	p. 25
The Rural Hospital	p. 25
Nursing Shortages in Hospitals	p. 29
Hospital Leadership	p. 30
Long-Term Care Facilities/Services	p. 33
Community Health Centers and Rural Health Clinics	p. 38
Mental Health Providers	p. 42
Emergency Medical Services	p. 43
Healthcare Workforce Issues	p. 45
Incentive Programs	p. 52
SC Office of Rural Health	p. 54
SC Rural Health Research Center	p. 55

Introduction

Description of the State

South Carolina is a triangular shaped state in the southeastern region (Deep South) of the United States of America. South Carolina is bordered to the north by North Carolina; to the south and west by Georgia, located across the Savannah River; and to the east by the Atlantic Ocean. South Carolina includes portions of three major natural regions of the eastern United States: the Coastal Plain, the Piedmont Plateau, and the Blue Ridge Mountains¹.

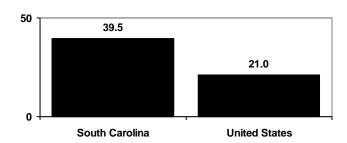
All of the major rivers in South Carolina flow southeastward across the state to the Atlantic Ocean, The three major rivers are the Santee, Great Pee Dee, and Savannah. There are three non-natural lakes in South Carolina created for hydroelectric power purposes: Lake Marion -110,600 acres; Lake Moultrie -60,400 acres; and Lake Murray -50,000 acres².

South Carolina is composed of four geographic areas, whose boundaries roughly parallel the northeast/southwest Atlantic coastline. The lower part of the state is the **Coastal Plain**, also know as the *Lowcountry*, which is nearly flat and composed entirely of recent sediments such as sand, silt, and clay. Just west of the Coastal Plain is the **Sandhills** region, also known as the *Midlands*. This region of the state is thought to contain remnants of old coastal dunes from a time when the land was sunken or the oceans were higher. The **Piedmont** (*Upstate*) region contains the roots of an ancient, eroded mountain chain. It is generally hilly, with thin, stony clay soils, and contains few areas suitable for farming. The northwest part of the Piedmont is also known as the **Foothills**³.

Composed of forty-six counties encompassing approximately 30,111 square miles, South Carolina is ranked 40th in the United States in land mass⁴.

In 2000, 39.5% of South Carolina's population lived in rural areas. Nationally, only 21% lived in rural areas⁵.

Percent of Residents Living in Rural, 2000



¹ South Carolina Department of Parks, Recreation and Tourism – SC Facts and Figures, http://www.scprt.com/programs/statistics/barometer.html retrieved July 9, 2008.

² South Carolina Information Highway, Lakes, http://www.sciway.net/tourism/lakes.html retrieved June 20, 2008.

³ US Geographic Regions, http://www.statemaster.com/state/sc-south-carolina/geo-geography retrieved June 7, 2008

⁴ US Census Bureau, Census, 2006 Statistical Abstract of the United States; Table 17 and 18, http://www.ors2.state.sc.us/abstract/chapter1/staterank1.php retrieved June 9, 2008.

⁵ US Census Bureau, Census 2000, SF3, Table P5, SC Office of Research and Statistics, http://www.sccommunityprofiles.org/scpages/sc urban.asp?COUNTYID=47 retrieved June 9, 2008.

I. Definition of Rural & Related Demographics

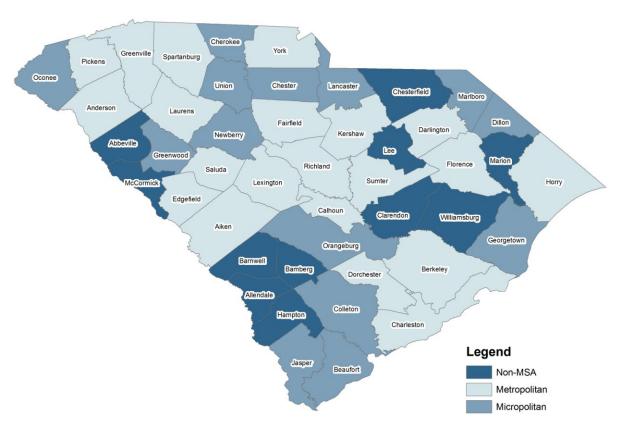
The term "rural" has many definitions, depending on the source and purpose. In the SC Rural Health Plan, three definitions are presented with corresponding demographic data: (a) Non-Metropolitan Statistical Area and (b) Urban Influence Codes.

a. Metropolitan Statistical Area (MSA) vs. Non-Metropolitan Statistical Area (Non-MSA)

Metropolitan and micropolitan statistical areas are defined by the US Office of Management and Budget (OMB) for use by Federal statistical agencies in collecting, tabulating, and publishing statistics. A metropolitan statistical area is defined as an area of at least 50,000 people. A micropolitan statistical area contains an urban core of at least 10,000 but less than 50,000 residents. Non-metropolitan statistical areas are defined as a geographic area with less than \$10,000 in a core area⁶.

The following map shows which counties are rural and urban, based on the OMB definition. The data is current as of June 2008.

South Carolina Counties by MSA Status



⁶ US Office of Management and Budget (OMB), http://www.census.gov/population/www/estimates/metrodef.html retrieved June 9, 2006

As of 2000, 18% of the South Carolina population lived in metropolitan statistical areas, compared to 75% in micropolitan and 7% in non-metropolitan statistical areas. Using the OMB definition, the state's demographic profile is presented in the following table:

Table 1: 2000 Demographic Profile by Metropolitan Statistical Area Classification⁷

Demographic Category	Non-MSA (Total Number) (Categorical Percent)	Micropolitan (Total Number) (Categorical Percent)	MSA (Total Number) (Categorical Percent)	Total (Total Number) (Categorical Percent)
Total	276,930	3,001,853	733,229	4,012,012
Gender				
Male	134,211	1,459,221	355,497	1,948,929
	48.5%	48.6%	48.5%	48.6%
Female	142,719	1,542,632	377,732	2,063,083
	51.5%	51.4%	51.5%	51.4%
Race	,			
White	129,766	2,104,541	461,371	2,695,678
	46.9%	70.1%	62.9%	67.2%
Black	142,696	789,873	250,158	1,182,727
	51.5%	26.3%	34.1%	29.5%
Other	4,468	107,439	21,700	133,607
	1.6%	3.6%	3.0%	3.3%
Age				
Under 18	73,684	751,294	184,663	1,009,641
	26.6%	25.0%	25.2%	25.2%
18 to 64	167,151	1,902,438	447,449	2,517,038
	60.4%	63.4%	61.0%	62.7%
65>	36,095	348,121	101,117	485,333
	13.0%	11.6%	13.8%	12.1%

_

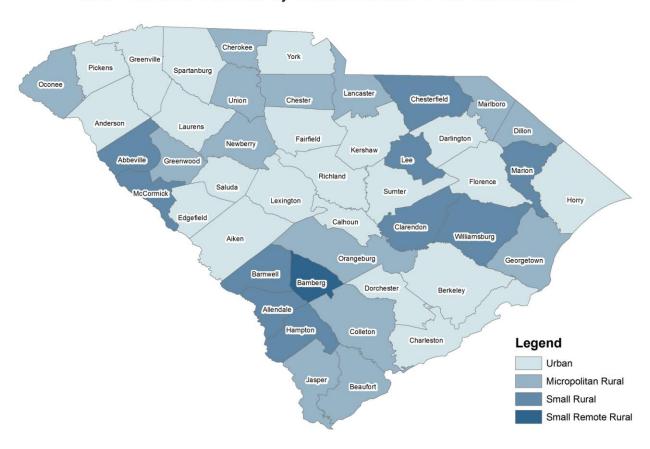
 $^{^7}$ US Census Bureau, Census of Population and Housing, $\underline{\text{http://factfinder.census.gov}}$ retrieved July 4, 2008.

b. Urban Influence Code (UIC)

Urban Influence Codes (UICs) classify counties, their equivalents, and independent cities into 12 categories, based on population and commuting data from the 2000 Census⁸. UICs are used primarily by researchers to determine the impact levels that rurality has on indicators of interest. UICs 1 and 2 are defined as "Urban," while all other UICs are rural. Typical groupings are: "micropolitan" (UICs 3, 5, and 8), "small rural" (UICs 4, 6, and 7), and "small remote rural" (9, 10, 11, and 12).

The following map delinates county classifications using categorical groupings of the UICs (urban, micropolitan, small rural, and small remote rural). The data is current as of June 2008.

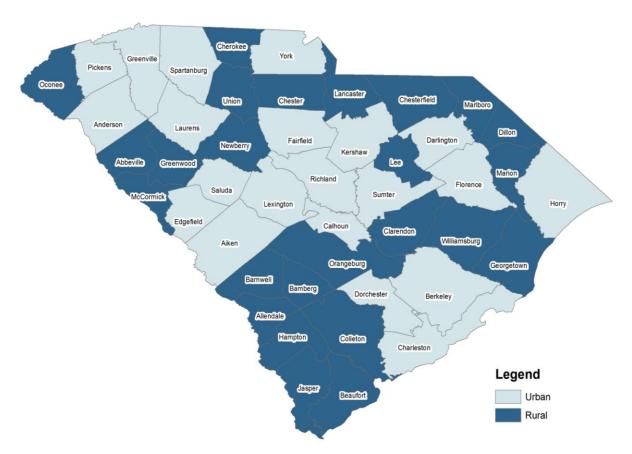
South Carolina Counties by Urban Influence Code Classification



⁸ US Department of Agriculture Economic Research Service, http://www.ers.usda.gov retrieved June 10, 2008.

When grouping the UICs into two categories (rural and urban), 25 of the 46 counties are defined as rural. The map below delinates these groupings, which are current as of June 2008:

South Carolina Counties by Rural/Urban Classification



As of 2000, **25.1%** of the population **lived in all rural areas** (small and remote, small, and micropolitan), compared to 74.9% in urban. Using the UIC definition, the state's demographic profile, when examined by rural and urban status, is presented in the following table⁹:

Table 2: 2000 Demographic Profile by Urban Influence Code Categories 10

Demographic		Rural (Total #) (Category %)				State Total	
Category	Small & Remote	Small	Micropolitan	All Rural	(Category %)		
Total	16,658	260,272	733,229	1,010,159	3,001,853	4,012,012	
Gender							
Male	7,831	126,380	355,497	489,708	1,459,221	1,948,929	
	47.0%	48.6%	48.5%	48.5%	48.6%	48.6%	
Female	8,827	133,892	377,732	520,451	1,542,632	2,063,083	
	53.0%	51.4%	51.5%	51.5%	51.4%	51.4%	
Race							
White	6,136	123,630	461,371	591,137	2,104,541	2,695,678	
	36.8%	47.5%	62.9%	58.5%	70.1%	67.2%	
Black	10,384	132,312	250,158	392,854	789,873	1,182,727	
	62.3%	50.8%	34.1%	38.9%	26.3%	29.5%	
Other	138	4,330	21,700	26,168	107,439	133,607	
	0.8%	1.7%	3.0%	2.6%	3.6%	3.3%	
Age							
Under 18	4,235	69,449	184,663	258,347	751,294	1,009,641	
	25.4%	26.7%	25.2%	25.6%	25.0%	25.2%	
18 to 64	10,109	157,042	447,449	614,600	1,902,438	2,517,038	
	60.7%	60.3%	61.0%	60.8%	63.4%	62.7%	
65>	2,314	33,781	101,117	137,212	348,121	485,333	
	13.9%	13.0%	13.8%	13.6%	11.6%	12.1%	

Data presented from this point on in the plan will be categorized using the Urban vs. Rural classification from the UIC.

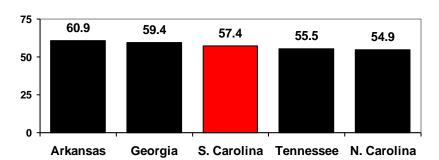
⁹ US Census Bureau, Census 2000, Population and Housing , http://www.ors2.state.sc.us/abstract/chapter14/pop14.asp retrieved June 10, 2008

 $^{^{10}}$ US Census Bureau, Census 2000 Summary File 1, Matrices P13 and PCT12, $\underline{\text{http://factfinder.census.gov}}$ retrieved June 7, 2008

Hispanic and Foreign Born Populations in Rural South Carolina

A noted limitation of the demographic tables presented for the two definitions is the categorization of race to only three groups: White, Black, and Other. It is important to note the similarity of races and ethnicities that comprise the "other" category, although the numbers are too small to adequately represent them in the previous tables.

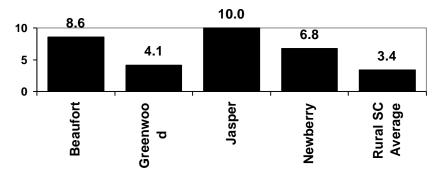
Top 5 States with Greatest Change in Hispanic Populations: 2000-2006



The growth in the Hispanic population, in particular, deserves attention in this plan. The Hispanic population has tripled in our state during the past decade¹¹. South Carolina ranks 3rd nationally in percent change of Hispanic or Latino population growth for the entire state, as presented in the chart on the left¹².

Based on the July 1, 2005 Census Population Estimate, persons with Hispanic ethnicity represented **3.4%** of the state's rural population¹³. Rural counties with above average representation of Hispanic populations in the state are identified in the chart on the right:

SC Rural Counties with Above Average Percent Population of Hispanic Persons, July 1, 2005 Census Estimate



¹¹ US Census Bureau, Census 2000, South Carolina Office of Research and Statistics, http://www.sccommunityprofiles.org/scpages/sc hispanic data.asp?COUNTYID=47 retrieved July 30, 2008.

¹² US Census Bureau, Census 2000, Population Estimates, July 1, 2000 to July 1, 2006, http://www.factfinder.census.gov/ retrieved July 30, 2008.

¹³ U.S. Census Bureau, http://www.ors2.state.sc.us/abstract/chapter14/pop13.asp retrieved August 6, 2008.

Growth of Foreign-Born Population

The number of foreign-born individuals in the state of South Carolina has more than doubled, increasing by 132.1 percent in the last decade (1990-2000)¹⁴. Table 3 compares the birth location of persons living in rural South Carolina to their urban peers:

Table 3. Foreign-Born and Native Population, 2000

	Urban	Rural	S.C. Total	U.S. Total
	(Total number)	(Total number)	(Total number)	(Total number)
	(Category %)	(Category %)	(Category %)	(Category %)
Total Population	2,826,610	1,185,402	4,012,012	281,421,906
Native Population	2,739,896	1,156,138	3,896,034	250,314,017
	97%	97.5%	97%	88.9%
Born in State	1,777,619	791,335	256,954	168,729,388
	63%	67%	64%	60%
Born in Different State	935,842	357,676	1,293,518	78,057,078
	33%	30%	32.2%	27.7%
Northeast	198,796	103,964	309,460	18,563,204
	7%	9%	7.7%	6.6%
Midwest	150,515	51,804	202,319	21,969,267
	5%	4%	5%	7.8%
South	518,714	184,336	703,050	25,301,191
	18%	15.5%	17.5%	9%
West	61,117	17,572	78,689	12,223,416
	2%	1.5%	2%	4.3%
Born Outside U.S.	26,435	7,127	33,562	3,527,551
	0.9%	0.6%	0.8%	1.3%
Puerto Rico	3,846	1,026	4,872	1,439,674
	0.1%	0.1%	0.1%	0.5%
U.S. Island Areas	1,108	340	1,441	166,960
	0	0	0	0.1%
Born Abroad of	21,488	5,761	27,249	1,920,917
American Parents	0.8%	0.5%	0.7%	0.7%
Foreign-Born	86,714	29,264	115,978	31,107,889
Population	3%	2.5%	2.9%	11.1%
Naturalized Citizen	21,996	10,032	42,983	12,542,626
	0.8%	0.8%	1.1%	4.5%
Not a Citizen	53,763	19,232	72,995	18,565,263
	2%	1.6%	1.8%	6.6%

-

¹⁴ US Census Bureau, http://sccommunityprofiles.org/scpages/sc foreign.asp?COUNTYID=47 retrieved August 1, 2008.

Income and Poverty

In 2006, the **median family income** for South Carolina families was \$52,900, a sharp comparison to the median rural family income of **\$43,972**. The top 5 rural counties with the lowest median family income are presented in the following chart¹⁵:

\$50,000 \$33,800 \$34,500 \$39,400 \$38,300 \$36,500 \$25,000 Allendale Bamberg Dillon Marlboro Williamsburg

Top 5 Rural Counties with Lowest Median Family Income, 2006

As of 2005, the **personal per capita income** for the 25 rural counties in our state was **\$23,344**, which is approximately \$5K less than the state average (\$28,285) and more than \$11K less than the national average (\$34,471)¹⁶. When ranking all South Carolina counties, 22 of the 25 rural counties occupy the lowest rankings for personal per capita income. Table 4 shows the rural counties' personal per capita income and their respective state rankings.

Table 4: Personal Per Capita Income & Rankings for Rural South Carolina Counties, 2005

Rural County	Personal Per Capita	Rural County	Personal Per Capita
	Income (State Ranking)	-	Income (State Ranking)
Allendale	\$18,871 (46)	Cherokee	\$22,651 (33)
Williamsburg	\$20,005 (45)	Colleton	\$22,764 (32)
Marion	\$20,299 (44)	Lancaster	\$23,560 (30)
Lee	\$20,307 (43)	Jasper	\$23,696 (29)
Barnwell	\$20,409 (42)	Newberry	\$23,901 (28)
Marlboro	\$20,485 (41)	Orangeburg	\$24,002 (26)
McCormick	\$20,643 (40)	Union	\$24,396 (24)
Dillon	\$20,850 (39)	Chester	\$24,814 (22)
Bamberg	\$20,989 (38)	Greenwood	\$25,471 (20)
Clarendon	\$21,266 (37)	Oconee	\$28,561 (9)
Hampton	\$21,566 (36)	Georgetown	\$30,399 (6)
Abbeville	\$22,111 (35)	Beaufort	\$39,308 (1)
Chesterfield	\$22,286 (34)		

¹⁵ U.S. Department of Urban Development, Economic and Market Analysis Divisions, http://www.ors2.state.sc.us/abstract/chapter13/income10.asp retrieved August 6, 2008

¹⁶ U.S. Department of Commerce, Bureau of Economic Analysis, 2005, http://www.ors2.state.sc.us/abstract/chapter13/income28.php retrieved August 6, 2008.

Poverty levels in South Carolina are high, especially in rural areas. Unfortunately, the most recent poverty estimates available are dated 1999. Given the economic status in the latter part of the 21st century's first decade, it is reasonable to suggest poverty rates will be higher at the next decennial census. The 1999 poverty data comparing rural and urban South Carolina are presented in Table 5:

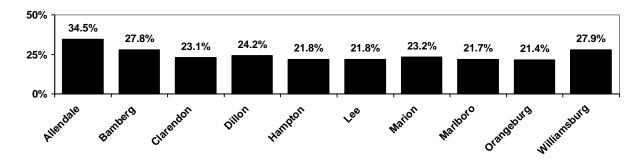
Table 5 South Carolina Persons Living Below Poverty Level by Race and Residence, 1999¹⁷

Category	Urban	Rural	Total
	(Total Number)	(Total Number)	(Total Number)
	(Categorical %)	(Categorical %)	(Categorical %)
Total Races	391,682	178,627	570,309
White	168,262	56,077	224,339
	43.0%	31.4%	39.3%
Black	188,348	110,070	298,418
	48.1%	61.6%	52.3%
Hispanic	15,936	6,504	22,440
	4.1%	3.6%	3.9%
Other	19,136	5,976	25,112
	4.9%	3.3%	4.4%

As Table 5 demonstrates, proportionately, urban Whites are more likely to live below the poverty level than rural however, rural Blacks are more likely to be poor than their urban counterparts.

The proportion of rural children living in poverty is even more startling. In 1999, **19.5%** of children living in the 25 rural counties were living below poverty, as compared to 14.1% of all children in South Carolina. The 10 rural counties with the highest rates of children living in poverty are identified in the chart below ¹⁸:

Top 10 Rural Counties with Highest Proportions of Children Living Below Poverty, 1999



¹⁸ U.S. Census Bureau. 1999 http://www.ors2.state.sc.us/abstract/chapter13/income12.asp retrieved August 6, 2008.

¹⁷ US Census, 1999, http://www.ors2.state.sc.us/abstract/chapter13/income12.asp retrieved August 1, 2008.

Education

Related to income and employability, the next section is the **educational attainment** of a population. As of 2000, **29.4%** of rural South Carolinians aged 18 years and older lacked a high school diploma, compared to only 22.1% of their urban peers. Additionally, more rural adults than urban stop their education as a high school graduate with more urban continuing on to college. These trends are shows in Table 6 below.

Table 6: Educational Attainment for Persons Aged 18 Years and Older in South Carolina by Residence 2000¹⁹

	Urban	Rural	Total
Educational Level	(Total Number)	(Total Number)	(Total Number)
	(Categorical %)	(Categorical %)	(Categorical %)
Total	2,250,894	752,025	3,002,919
Less than 9 th Grade	154,020	74,193	228,213
	6.8%	9.9%	7.6%
9 th – 12 th Grade, No Diploma	344,061	146,771	490,832
	15.3%	19.5%	16.3%
No Diploma (sum of above two	498,081	220,964	719,045
categories)	22.1%	29.4%	23.9%
High School Graduate	652,907	248,920	901,827
	29.0%	33.1%	30.0%
Some College, No Degree	502,690	135,148	637,838
	22.3%	18.0%	21.2%
Associate Degree	145,238	40,909	186,147
	6.5%	5.4%	6.2%
Bachelor's Degree	307,148	70,707	377,855
	13.6%	9.4%	12.6%
Graduate or Professional Degree	144,830	35,377	180,207
_	6.4%	4.7%	6.0%

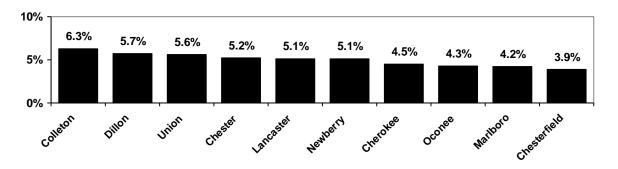
High School drop-out rates are also an important indicator of a community's economic viability. During the 2002-2003 school year, 3.4% of rural children enrolled in the 9th through 12th grades dropped out of school, which is not remarkably different from the overall state proportion of 3.2%. Many of the highest drop out rates are found in rural counties. The chart on the next page identifies the 10 rural counties with the highest drop out rates for children enrolled in the 9th through 12th grades during the 2002-2003 school year.

_

¹⁹ US Census Bureau, 2000, http://www.ors2.state.sc.us/abstract/chapter7/education4.asp retrieved July 26, 2008.

²⁰ South Carolina Department of Education, Office of Research, Report on Student Dropout and Completion Rates," 2002-03 and "Summary of All 2002-03 S.C. High School Completers Enrolled in 2003-04 College Freshman Classes in S.C. and Other States. Retrieved from http://www.ors2.state.sc.us/abstract/chapter7/education12.asp on August 7, 2008.

Top 10 Rural Counties with Highest Drop Out Rates for Children Enrolled in Grades 9th - 12th, 2002-2003 School Year



During the same school year, two rural school districts received negative recognition from the South Carolina Department of Education. Bamberg District 2 had the largest percent of pupils eligible for the free and reduced price lunch program (93.1%). The Allendale School District had the highest teacher turnover rate from the previous school year (33.3%).²¹

Employment Status

There appear to be fewer rural South Carolinians working in management or professional positions than urban. Conversely, there are more rural adults employed in production, transportation, and material moving occupations than their urban peers. Table 7 shows the differences by occupation types.²²

Table 7: Employed Civilian Population 16 years & over by Occupation Type and Residence, 2000

Category	Urban	Rural	Total
Category	(Total Number)	(Total Number)	(Total Number)
	(Categorical %)	(Categorical %)	(Categorical %)
Employed Civilian Pop. 16 & Over	1,407,539	417,161	1,824,700
Management, Professional and Related	432,081	98,036	530,117
	30.7%	23.5%	29.1%
Service	205,694	62,967	268,661
	14.6%	15.1%	14.7%
Sales and Office	365,069	94,655	459,724
	25.9%	22.7%	25.2%
Farming, Fishing, and Forestry	6,315	4,364	10,679
	0.4%	1.0%	0.6%
Construction, Extraction and	155,811	53,237	209,048
Maintenance	11.1%	12.8%	11.5%
Production, Transportation and	242,572	103,899	346,471
Material Moving	17.2%	24.9%	19.0%

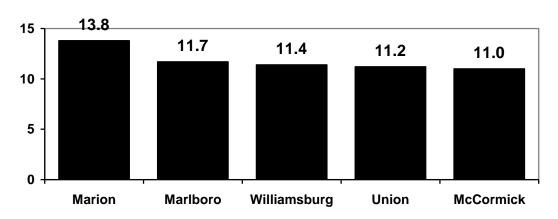
²¹ <u>South Carolina Department of Education, Office of Research,</u> "Rankings of the Counties and School Districts of South Carolina 2002-03," March 2005.

²² US Census Bureau, http://www.ors2.state.sc.us/abstract/chapter8/employment8.asp retrieved July 24, 2008.

Unemployment

Contrasting with who works is those who are unemployed. For 2005, the state's unemployment rate was 6.8%, comparing sharply with the unemployment rate of the 25 rural counties, which was 9.1%. The rural county with the lowest unemployment rate in 2005 was Jasper (5.0%). The rural county with the highest rate was Marion (13.8%). The five rural counties with the highest unemployment rates in 2005 are presented in the chart below²³:

Top 5 Rural Counties with Highest Unemployment Rates, 2005



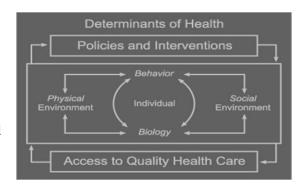
_

²³ U.S. Department of Labor, Bureau of Labor Statistics. <u>Local Area Unemployment Statistics</u>, Labor Force Data by County, 2004 and 2005 annual averages. http://www.ors2.state.sc.us/abstract/chapter8/employment16.asp retrieved on August 7, 2008.

II. Health Status of Rural South Carolina

To understand the health status of a population, it is very important to monitor and evaluate the outcomes of the determinants of health. The health status of a given population is the description of health for that area. Health status can be measured by birth and death rates, life expectancy, quality of life, morbidity from specific diseases, risk factors, use of ambulatory and inpatient care, accessibility of health personnel and facilities, financing of health care, health insurance coverage, and many other factors.

The leading causes of deaths are usually a result of a variety of factors including behavior influence, environmental factor, and/or the unavailability or inaccessibility of quality health care services, as shown in the Determinants of Health Model to the right²⁴. The unavailability and inaccessibility of quality healthcare is a major factor influencing rural health status.



In the year 2005, the leading causes of death among South Carolinians were heart disease, cancer, stroke, accidents, chronic lower respiratory disease, Alzheimer's disease, diabetes, nephritic syndrome, nephrosis, pneumonia and influenza and septicemia²⁵.

Rural citizens experience significant health disparities. The majority of research efforts in rural communities focus on access to health care services. Access to care is an important issue to improving health status throughout rural South Carolina, however, other determinants of health should be of equal importance.

Factors Contributing to Rural Health Disparities²⁶

- Limited access to health care services (remote, isolated areas);
- Limited access to health care providers;
- Lower rates of health insurance; less likely to have employer-provided health care coverage and tend to be poorer;
- Rural population is typically more elderly;
- Lack of recognition and priority by legislators for rural health concerns;
- Lower socioeconomic and educational status; and cultural and social differences which leads to cultural divide in health care.

²⁴ US Department of Health and Human Services, Office of Disease Prevention and Health Promotion, http://www.healthypeople.gov retrieved June 12, 2008.

²⁵ Centers for Disease Control and Prevention, National Center for Health Statistics, http://www.cdc.gov/nchs/FASTATS/lcod.htm retrieved July 24, 2008.

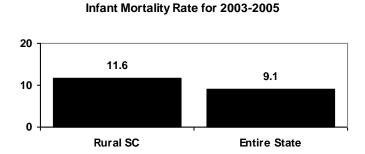
²⁶ University of Pittsburgh Center for Rural Health Practice, "Bridging the Health Divide, The Rural Public Health Research Agenda, April 2004", http://www.pitt.edu retrieved August 10, 2008.

Maternal and Child Health

Infant Mortality

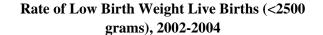
Regarded as a basic quality of life indicator for a community, the infant mortality rate (rate of infant deaths under one year of age per 1,000 live births) reflects the health of both the pregnant woman and the infant. It also reflects the condition in which a child lives during his first year of life and the parenting the child receives²⁷.

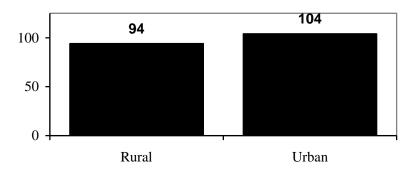
The infant mortality rate is higher among the 25 rural counties than the state as a whole. The rates, presented in the chart on the right, are per 1,000 births²⁸. It is important to note than 19 of the 25 rural counties had fewer than 20 infant deaths during 2003-2005. There were a total of 438 infant deaths in the rural counties during the time period, which accounted for 28.5% of all infant deaths in the state.



Low Birth Weight/Very Low Birth Weight

The rate for babies with low birth weights is lower for rural mothers than urban. Data from the vital records is presented in the chart below²⁹:





²⁷ U.S. Department of Health and Human Services, *Healthy People 2010*, 2nd ed. (Washington: U.S. Department of Health and Human Services, 2000), at 16-17, available at: http://www.healthypeople.gov/Publications/ retrieved August 12, 2008.

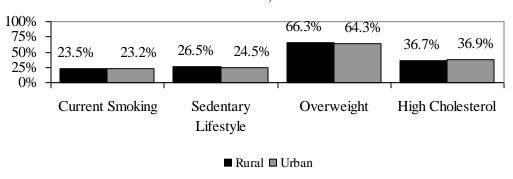
SC Department of Health and Environmental Control.
 http://scangis.dhec.sc.gov/scan/mch/infantmortality/input.aspx retrieved August 10, 2008.
 SC DHEC: PHSIS- Division of Biostatistics, Division of Public Health Informatics

Chronic Disease

Chronic conditions continue to affect the health of many South Carolinians. Through primary and secondary prevention, the goal is to reduce the risk factors that contribute to the major chronic diseases and leading causes of death among South Carolinians. Risk factors such as smoking, physical inactivity, obesity, and high cholesterol are related to the major causes of morbidity and mortality among South Carolinians. Some common behavioral risk factors that contribute to the leading causes of death are smoking, sedentary lifestyle, obesity, and high cholesterol³⁰.

The prevalence of these risk factors from the 2005 South Carolina Behavioral Risk Factor Surveillance System (BRFSS) survey is delineated in the following chart³¹.

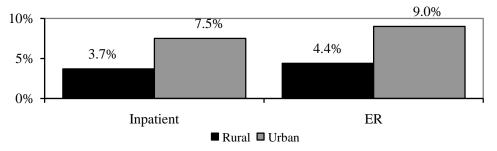
Prevalence of Risk Factors for Chronic Diseases by Residence, 2005



Asthma

Rural residents of South Carolina had fewer hospital encounters (both inpatient and emergency room) than their urban peers in 2006³². The chart below delineates the proportion of all inpatient admissions and emergency room encounters due to asthma for rural and urban residents of South Carolina.

Proportion of Hospital Encounters for Asthma by Residence, 2006



³⁰ South Carolina Department of Health and Environmental Control, "Impact of Chronic Conditions, 2005" http://www.scdhec.gov/hs/epidata/reports/county_reports retrieved July 1, 2008.

³¹ South Carolina Department of Health and Environmental Control, "Impact of Chronic Conditions, 2005" http://www.scdhec.gov/hs/epidata/reports/county reports retrieved July 1, 2008.

³² South Carolina Office of Research and Statistics, http://www.ors.state.sc.us/ Retrieved August 10, 2008.

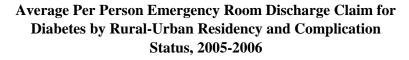
Diabetes

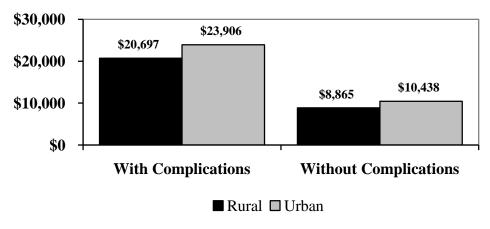
The prevalence rate of persons with diagnosed diabetes in 2005 was greater in rural than urban counties, as depicted in the chart below³³. The highest rates of diabetes in South Carolina were found in the most rural of counties, 1.7 times greater than in urban counties.

200 107 122 107 Urban Rural

Rate of Diagnosed Cases of Diabetes in South Carolina per 1,000

Because more people live in urban than rural South Carolina counties, the actual volume and costs of care for diabetes is greater in urban. For urban counties, there were 5,249 discharges for diabetes with complications and 768 without complications. For rural counties, there were 2,409 and 415 ED discharges for diabetes with and without complications, respectively. The average costs for discharges from South Carolina Emergency Departments are slightly higher in urban than rural, in spite of demonstrable differences in volume³⁴.



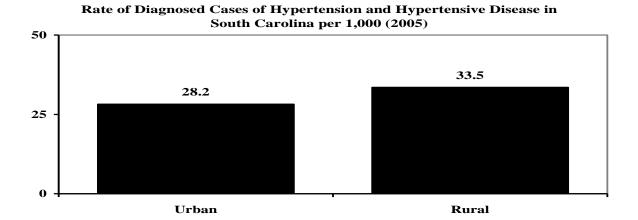


³³ South Carolina Department of Health and Environmental Control, "Impact of Chronic Conditions, 2005" http://www.scdhec.gov/hs/epidata/reports/county_reports retrieved July 1, 2008.

³⁴ SC Office of Research and Statistics. http://www.ors2.state.sc.us/erquerya.php Retrieved on August 11, 2008.

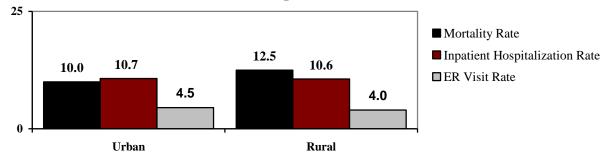
Hypertension and Stroke

The prevalence of hypertension and hypertensive diseases is much higher in rural South Carolina than in urban. The statewide rate for these conditions is 30 people per 1,000 with higher rates in rural than urban, as presented in the following chart³⁵.



As with prevalence, mortality rates from these conditions are slightly higher for rural residents with roughly 12.5 out of every 1,000 rural deaths due to these conditions, as compared to 10 for urban³⁶. However, hospital service utilizations are slightly lower for rural residents, as presented in the following chart³⁷.

Mortality, Inpatient Hospitalization, and Emergency Room Visit Rates for Hypertension and Hypertensive Disease by Residence in South Carolina per 1,000 (2005)



³⁵ South Carolina Department of Health and Environmental Control, "Impact of Chronic Conditions, 2005" http://www.scdhec.gov/hs/epidata/reports/county_reports retrieved July 1, 2008. Division of Biostatistics, Office of Public Health Statistics and Information Systems, DHEC using ICD-codes.

³⁶ ibid

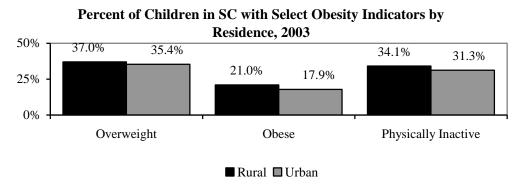
³⁷ SC Office of Research and Statistics. http://www.ors2.state.sc.us/inpatient.php Retrieved on August 11, 2008.

The prevalence of residents who have had a stroke is relatively low (3% urban v. 3.2% rural) due to the high mortality rate that accompanies the event³⁸. Statewide, 63% of all deaths are due to stroke. Examined by rural-urban status, rural fairs slightly better than urban with 55% versus 66% of deaths due to stroke³⁹. In rural, 24% of hospital admissions are due to stroke, compared to 32% for urban residents⁴⁰. Emergency room visits are markedly lower and have less variability⁴¹.

Obesity

Overweight or obese is defined as having a body mass index (BMI) greater than or equal to 25.0kg/meters squared. Obesity is a contributing factor for asthma and other respiratory problems, hypertension, diabetes, coronary heart disease, depression, gallbladder disease, osteoarthritis, sleep apnea, stroke, and some cancers⁴².

The overweight/obesity epidemic disproportionately affects rural children in South Carolina. More than 1 out of 3 rural children in South Carolina aged 10-17 years old were overweight or obese. Data from the 2003 National Survey of Children's Health demonstrate that rural children in our state are more likely to be overweight and physical inactive than their urban peers.



Obesity is defined as a body mass index exceeding the 95th percentile for the age and gender⁴³. The same data yielded the following facts for rural children and obesity indicators:

- Nearly one-half of all black rural children in South Carolina were overweight or obese (47.8%), as were 22.8% of white children.
- More than one-third of rural children (36.9%) in low income families (<200% FPL) were overweight or obese.

³⁸ South Carolina Department of Health and Environmental Control, "Impact of Chronic Conditions, 2005" http://www.scdhec.gov/hs/epidata/reports/county_reports retrieved July 1, 2008. Division of Biostatistics, Office of Public Health Statistics and Information Systems, DHEC using ICD-codes.

³⁹ ::...

⁴² South Carolina Rural Research Center, Overweight and Physical Inactivity among Rural Children Aged 10-17: A National and State Portrait. Data from the 2003 National Survey of Children's Health. http://rhr.sph.sc.edu/report by topic.html Retrieved on August 10, 2008.

⁴⁰ SC Office of Research and Statistics. http://www.ors2.state.sc.us/inpatient.php Retrieved on August 11, 2008.

South Carolina Department of Health and Environmental Control, "Impact of Chronic Conditions, 2005" http://www.scdhec.gov/hs/epidata/reports/county_reports retrieved July 1, 2008.

⁴³ South Carolina Rural Research Center, Overweight and Physical Inactivity among Rural Children Aged 10-17: A National and State Portrait. Data from the 2003 National Survey of Children's Health. http://rhr.sph.sc.edu/report_by_topic.html Retrieved on August 10, 2008.

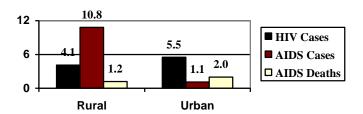
- More than one-half of rural children (58.0%) did not participate in after school sports, the highest rate in the United States.
- More than one-half of rural South Carolina children (53.6%) spent more than two hours per day using electronic entertainment media.

HIV/AIDS

According to the South Carolina Department of Health and Environmental Control (DHEC), more than 16,000 HIV/AIDS cases have been reported in the state since 1986. From July 1999 through June 2000, South Carolina ranked eighth in the nation in reported HIV/AIDS cases. More than seven of every 10 men (73%) and more than eight of every 10 women (83%) diagnosed are African American⁴⁴.

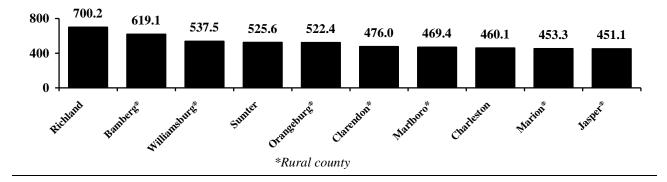
Rural counties have demonstrably higher rates of AIDS cases, but lower rates of HIV cases and AIDs deaths, as show in the chart on the right. Six of the

Cumulative Rate per 1,000 for HIV and AIDS Cases and Deaths due to AIDS by Residence



10 counties with the highest rates of AIDS are rural counties. The rankings are cumulative (per 100,000 persons) through 2005. The AIDS population rates for the 10 most prevalent counties are presented in the chart below:

Cumulative Rate through 2005 of AIDS per 100,000 persons for the 10 Most Prevalent Counties



Cancer

Cancer is the second leading cause of death in South Carolina. South Carolina also has some of the highest rates of cancer deaths in the nation, ranking 2nd in the nation in multiple myeloma, 3rd in the nation in prostate cancer and oral/pharyngeal cancer deaths, and 4th in the nation in pancreatic cancer deaths.⁴⁶

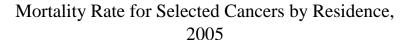
⁴⁴ South Carolina Department of Health and Environmental Control, Bureau of Disease Control, http://scdhec.gov/health/disease/stdhiv/surveillance retrieved July8, 2008.

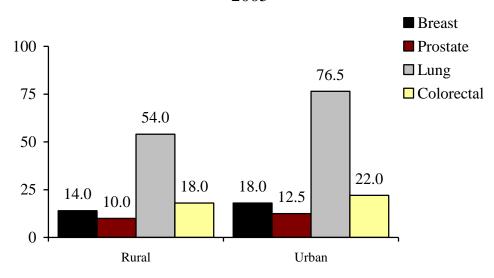
⁴⁵ South Carolina Department of Health and Environmental Control, Bureau of Disease Control, http://scdhec.gov/health/disease/stdhiv/surveillance retrieved July8, 2008.

⁴⁶ South Carolina Department of Health and Environmental Control, SC Cancer Facts and Figures 2004-2005.

How Does South Carolina Rank in Cancer Mortality? ⁴⁷			
Multiple Myeloma	2 nd		
Oral/Pharynx	3 rd		
Prostate	3 rd		
Pancreas	4 th		
Esophagus	3 rd		
Cervix	8 th		
Stomach	11 th		

Death rates for a variety of cancers are somewhat higher in urban than rural South Carolina⁴⁸. The chart below delineates mortality rates per 1,000 people for breast, prostate, lung, and colorectal cancers:





Breast Cancer is the most commonly diagnosed cancer among women in South Carolina, regardless of race, accounting for 32% of all female cancer cases. There are four counties (Allendale, Beaufort, Dorchester, Richland) that have incidence rates significantly higher than the state average⁴⁹.

Prostate Cancer is the most commonly diagnosed cancer among men in South Carolina, regardless of race, accounting for 30% of all male cancer cases. South Carolina has one of the

⁴⁷South Carolina Department of Health and Environmental Control, SC Cancer Facts and Figures 2004-2005.

⁴⁸ Division of Biostatistics, Office of Public Health Statistics and Information Systems, DHEC using ICD-codes.

⁴⁹ ibid

highest prostate cancer mortality rates in the nation, currently ranking 3rd in the nation in prostate cancer mortality⁵⁰.

Lung Cancer is the second most common cancer diagnosed in South Carolina, accounting for nearly 16% of all cancer cases. The incidence rate of lung cancer is higher for men than for women; however, rates for men are decreasing, while rates for women are increasing. Seven counties diagnosed (Berkeley, Cherokee, Colleton, Darlington, Horry, Kershaw, Lexington) have incidence rates that are significantly higher than the state average. In 2005, South Carolina was ranked 18th in the nation in lung cancer mortality. An estimated 2,730 South Carolinians were expected to die of lung cancer in 2005⁵¹.

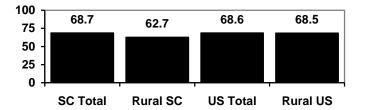
Colorectal Cancer

Colorectal cancer is the fourth most common cancer diagnosed in South Carolina, accounting for nearly 12% of all cancer cases diagnosed. From 1996-2001, a total of 12, 226 colorectal cancers were diagnosed in South Carolina, with 51% of the cases occurring in males and 49% in females. Six counties (Berkeley, Charleston, Chester, Dorchester, Kershaw, Lancaster) have incidence rates significantly higher than the state average⁵².

Oral Health

Oral health is a fundamental and critical component of health throughout life. Data from the 2003 National Survey of Children's Health demonstrates children living in rural South Carolina have more oral health challenges. "Dental Health and Access to Care among Rural Children," a chartbook developed by the SC Rural Health Research Center, demonstrated this comparison⁵³:





The 2007-2008 Oral Health Needs Assessment conducted by SC Department of Health and Environmental Control revealed that rural children's oral health status is more compromised than

⁵⁰ SC DHEC. Office of Public Health Statistics and Information Services, South Carolina Central Registry.

⁵¹ ibid ⁵² ibid

⁵³ SC Rural Health Research Center, University of South Carolina, "Dental Health and Access to Care among Rural Children. http://rhr.sph.sc.edu/index.php Retrieved on August 11, 2008.

their urban peers⁵⁴. Children living in rural areas were more likely than urban to have tooth decay (51% v. 45%), untreated cavities (29% v. 18%), and have treatment urgencies (23% v. 17%).

III. The Organization and Support of Rural Health Systems in South Carolina

The following section describes the types and numbers of rural health facilities in South Carolina that comprise the rural health infrastructure. Programs aimed at improving rural health services are also described in some detail to include recruitment and retention programs aimed at developing and supporting rural health networks.

The Rural Hospital

There are 75 Medicare certified hospitals in South Carolina, of which eight are psychiatric hospitals, two are long-term care hospitals, and three are rehabilitation hospitals. There are a total of 58 hospitals in South Carolina with fewer than 100 licensed beds. Of those, nine are Department of Corrections Infirmaries, six are other State facilities, five are private psychiatric facilities, three are rehabilitation hospitals, and two are educational institution infirmaries; the remaining 29 are general acute care hospitals. In addition, 26 of the 58 are located in cities or towns with fewer than 10,000 residents⁵⁵. Table 8 identifies the states rural hospitals and the years they were established.

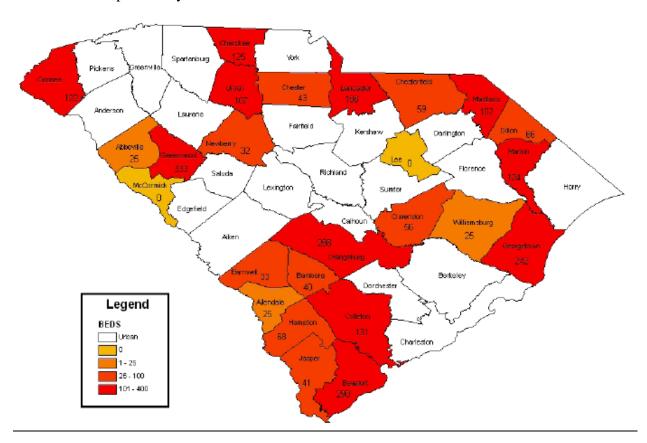
Table 8: Rural Hospitals in South Carolina and Year of Establishment

Hospital	Year Est.	Hospital	Year Est.	Hospital	Year Est.
Abbeville Area	1919	Conway Medical	1982	Marlboro Park	No data
Medical Center		Center		Hospital	
Allen Bennett	1952	East Cooper	No data	McLeod Medical	No data
Memorial Hospital		Regional Medical Ctr		Center - Darlington	
Allendale County	No data	Edgefield County	No data	McLeod Medical	No data
Hospital		Hospital		Center – Dillon	
Bamberg County	1952	Fairfield Memorial	No data	Newberry County	1925
Memorial Hospital		Hospital		Memorial Hospital	
Barnwell County	No data	Georgetown	1950	Oconee Memorial	1939
Hospital		Memorial Hospital		Hospital	
Beaufort Memorial	1944	Hampton Regional	1950	Palmetto Health	1939
Hospital		Medical Center		Baptist – Easley	
Cannon Memorial	1947	Hilton Head	1971	Self Regional	1951
Hospital		Regional Medical Ctr		Healthcare	
Carolina Pines	1999	Kershaw County	1913	Springs Memorial	No data
Regional Medical		Medical Center		Hospital	
Center					
Chester Regional	No data	Kindred Healthcare-	No data	Summerville Medical	No data
Medical Center		Charleston		Center	
Chesterfield General	No data	Lake City	No data	Upstate Carolina	1988
Hospital		Community Hospital		Medical Center	
Clarendon Memorial	1951	Laurens County	1990	Waccamaw	1950
Hospital		Health Care System		Community Hospital	
Coastal Carolina	No data	Loris Healthcare	1950	Wallace Thomson	1921
Medical Center		System		Hospital	
Colleton Medical	No data	Marion County	1952	Williamsburg	1962
Center		Medical Center		Regional Hospital	

⁵⁴ SC Department of Health and Environmental Control, Division of Oral Health. Draft results from 2007-2008 Oral Health Needs Assessment (no publication as of August 11, 2008).

⁵⁵ South Carolina Hospital Association: www.scha.org & www.myschospital.org

There are a total of 2,561 hospital beds in rural South Carolina. The map below illustrates the number of beds per county:



Top 5 County Inpatient Discharges

Rural hospitals are a major provider of care in the local healthcare systems. The top five discharges for each of the rural counties are identified in Table 9 (next page). The data is based on rural residency, not the location of the hospital. For example, a resident of Bamberg could have delivered in Hampton County, in which case the discharge would have counted in Bamberg County.

Table 9 County Listing of Top 5 Discharges

County	Top 5 Discharges
	(in order of frequency)
Abbeville	1, 2, 3, 4, 5
Allendale	1, 4, 5, 7, 8
Bamberg	1, 5, 8, 4, 9
Barnwell	5, 1, 4, 7, 6
Beaufort	1, 2, 3, 4, 10
Charleston	1, 6, 2, 4, 3
Cherokee	1, 11, 5, 4, 10
Chester	1, 4, 11, 5, 12
Chesterfield	5, 1, 4, 7, 11
Clarendon	1, 4, 5, 7, 2
Colleton	1, 4, 10, 7, 8
Darlington	4, 1, 5, 10, 7
Dillon	4, 1, 10, 7, 8
Dorchester	1, 2, 10, 3, 4
Edgefield	5, 4, 1, 11, 6
Fairfield	1, 5, 4, 7, 2
Florence	1, 4, 7, 10, 2
Georgetown	1, 4, 3, 10, 13
Greenville	1, 2, 3, 4, 14
Greenwood	1, 3, 4, 2, 6
Hampton	1, 4, 7, 2, 13
Horry	1, 4, 11, 5, 10
Jasper	1, 4, 7, 2, 13
Kershaw	1, 4, 5, 2, 7
Lancaster	13, 1, 7, 4, 15
Laurens	1, 2, 3, 4, 5
Marion	4, 1, 11, 10, 7
Marlboro	4, 5, 1, 7, 16
Newberry	1, 4, 10, 2, 13
Oconee	1, 17, 3, 5, 7
Pickens	1, 3, 5, 2, 4
Union	4, 1, 11, 5, 7
Williamsburg	4, 1, 5, 7, 18

Key:

- (1) Vaginal delivery w/o complications
- (2) Cesarean
- (3) Major joint replacement
- (4) Heart failure/shock
- (5) Simple pneumonia
- (6) Psychoses
- (7) Esophagitis, Gastroent & Misc Digest Disorders
- (8) Renal failure
- (9) Intracranial Hemorrhage or Cerebral Infarction
- (10) Chest Pain
- (11) Chronic Obstructive Pulmonary Disease
- (12) Percutaneous Cardiovascular Procedure
- (13) Rehabilitation
- (14) Uterine & Adnexa Pro for non-malignancy
- (15) Other Antepartum Diagnoses w/medical complications
- (16) Septicemia
- (17) Pulmonary Edema & Respiratory failure
- (18) Red blood cell disorders

Rural residents were more likely to be hospitalized for conditions treatable on an outpatient basis⁵⁶. The consequences of compromised access to care manifest in a variety of ways.

- Overall, rural residents are 26% more likely to be hospitalized for a possibly preventable hospitalization than urban residents
- Rural adults aged 19-44 are 23% more likely to be hospitalized for diabetes than urban.
- Rural blacks are 57% more likely to die from diabetes than are rural whites.
- Very rural blacks are 70% more likely to die from diabetes than are very rural whites.
- 48% of rural residents (and 55% of very rural residents) are hospitalized out of county (versus 19% in urban areas).

Characteristics of Small/Rural Acute Care Hospitals in South Carolina

Critical Access Hospitals (CAH) are part of the Rural Hospital Flexibility Grant Program, a federal initiative that provides funding to states to strengthen rural healthcare. The CAH program was initiated to not only to reduce hospital closures, but to progress rural healthcare. CAH provide the community with fundamental services. For services provided to Medicare patients, the Critical Access Hospitals are reimbursed on a "reasonable cost basis.⁵⁷" Table 10 identifies rural hospitals with critical access designations.⁵⁸

The Social Security Act allows specific small and rural hospitals to enter into a swing-bed agreement; this allows the hospital to use its beds to provide either acute or Skilled Nursing Facility care, as needed. In order to be designated as a swing bed hospital, a hospital or critical access hospital must participate in Medicare, meet certain requirements, and have approval from CMS to provide post-hospital Skilled Nursing Facility care⁵⁹. Table 10 identifies rural hospitals with swing beds⁶⁰.

Table 10 Critical Access Hospitals and Swing Beds

	- 0	
SC Rural Hospitals	Critical Access	Swing Beds
Abbeville Areas Medical Center	Yes	Yes
Allendale County Hospital	Yes	Yes
Bamberg County Memorial Hospital		Yes
Chesterfield General Hospital		Yes
Coastal Carolina Medical Center		Yes
Edgefield County Hospital	Yes	Yes
Fairfield Memorial Hospital	Yes	Yes
Lake City Community Hospital		Yes
Marlboro Park Hospital		Yes
McCleod Medical Center-Darlington		Yes
Wallace Thompson Hospital		Yes
Williamsburg Regional Hospital	Yes	

⁵⁶ South Carolina Hospital Association: www.scha.org & www.myschospital.org

⁵⁹ Department of Health and Environmental Control: http://www.scdhec.net

⁵⁷ South Carolina Hospital Association: www.scha.org & www.myschospital.org

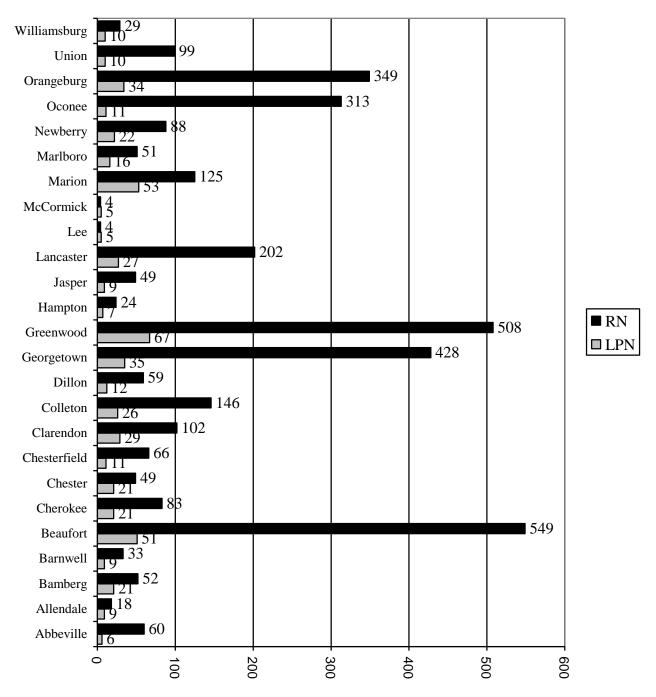
⁵⁸ National Rural Health Association (<u>www.nrharural.org</u>)

⁶⁰ (2008). Swing bed providers. Retrieved April 20, 2008, from Centers for Medicare& Medicaid Services Web site: http://www.cms.hhs.gov.

Nursing Shortages

The national and state nursing shortages get significant attention. The number of RNs and LPNs employed in hospitals in the 25 rural counties is presented in the chart below:

Active RN's and LPN's Employed in Hospitals in Rural Counties of South Carolina



RN Shortage Facts

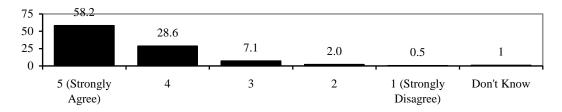
The nursing shortage exists predominantly in rural areas that are not adjacent to cities. One study suggests that this is due indirectly to lower per capita income and higher unemployment rates⁶¹. Some barriers to rural nursing recruitment and retention include difficulty in spouses finding jobs, long commutes, less opportunities for specialty care, and misperception of what rural nursing really is like.⁶²

Hospital Leadership

As a part of a dissertation in 2007, Dr. Royce (Beebe) Adams conducted a survey of boards of directors from rural hospitals in South Carolina. Select findings (shown as percents) are presented below from her survey that asked respondents to indicate their level of agreement⁶³:

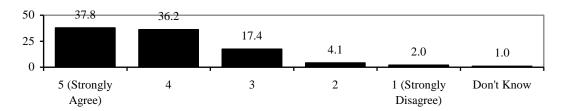
Policies

Strong policies exist for the key areas of finance, personnel, quality, safety, ethics, and all functions unique to our organization's work.

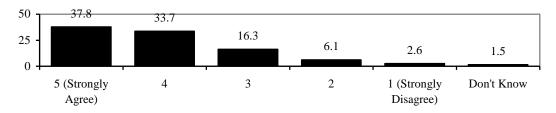


Finance

Financial reports are clearly understood by the Board.



The Board identifies any early warning signals of poor financial performance.



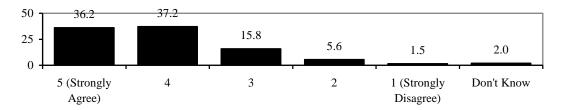
 61 Trossman, S. (2001, July/August). Rural Nursing Anyone? Recruiting nurses is always a challenge. *The American Nurse*, 33(4), 17-19.

⁶² Parran, L. (2002, June). Healthcare facilities Take Innovative Approaches to Recruitment and Retention: What's the rural perspective? *ONS News*, 17(6), 5.

⁶³ Adams, Royce. "Characteristics of Small and Rural Acute Hospital Boards in South Carolina." Dissertation for completion of the Doctor of Philosophy in the Department of Health Services Policy and Management. Norman J. Arnold School of Public Health, University of South Carolina. 2007.

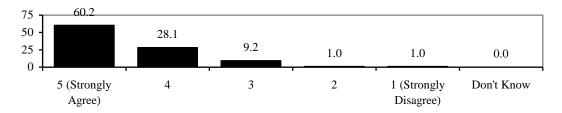
Strategic Plan

The strategic plan is used effectively to guide and evaluate efforts during the year.



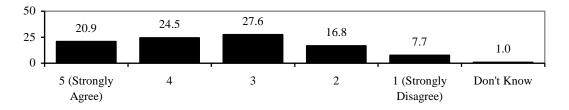
Quality of Care

The Board monitors quality of care, patient safety, and outcomes indicators.



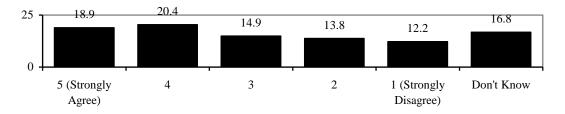
Structure

The Board membership reflects the racial composition of the community.



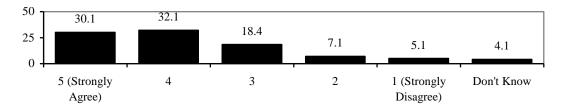
Organization.

The Board has an effective process for removing non-performing Board members.

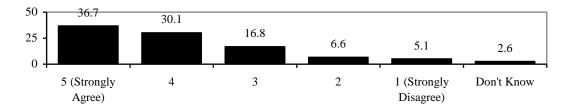


Orientation

Board members get a basic orientation about risk management, EMTALA, HIPAA & medical liability.

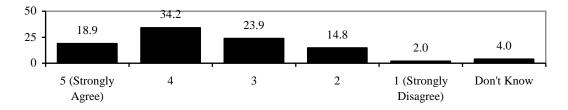


Orientation is reinforced by an ongoing program of education and development.

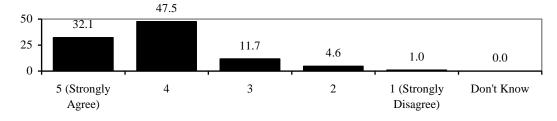


Knowledge

Board members clearly understand the third-party reimbursement system in healthcare.



The expertise/skill levels needed to be an effective board for this organization are adequately represented among current board members.



Long-Term Care (LTC) Facilities/Services

Long-Term Care is a comprehensive range of health, personal, and social services delivered over time to meet the needs of and increase the quality of life of older adults⁶⁴. Researchers, Policy Makers, and care providers are becoming increasingly more aware of the challenges of meeting the complex health and social needs of elderly rural Americans.

As the rural population gets older, the use of healthcare resources continues to rise. Many older Americans living in rural areas remain on waiting lists for essential services or need services that are not available in the area. Changes in policy are reflected in a growing reliance on private funds for services and expansion of residential care alternatives⁶⁵. To delineate the issues and recommended policy for rural LTC, the NHRA has identified the following as priorities⁶⁶:

Long-Term Care Priorities of the National Rural Health Association 2007

- State and Federal reimbursement policies in rural areas
- Home and community-based services in rural long-term care
- Long-term care infrastructure in rural America
- Research Priorities for rural long-term care

Profile of the Rural Older Adults

Despite their growing numbers, the rural elderly are poorer and less healthy than their urban counterparts. Economically, the incomes of older adults in small towns and rural communities tend to be considerably lower than their urban counterparts⁶⁷.

The rural elderly also report more chronic illness and physical impairment than their urban elders. Moreover, the availability services, health professionals and other practitioners is typically less in rural areas⁶⁸. Rural older adults represent a larger proportion of the rural population than the urban population⁶⁹. The elderly residents in rural areas have access to fewer long-term care services⁷⁰.

Long-Term Care Capacity

As of March 2008, there are 46 long-term care facilities with 4,318 beds with an average occupancy rate of 96% in rural South Carolina. Also, 74% of the facilities are for-profit

⁶⁴ National Rural Health Association (www.nrharural.org)

⁶⁵ Coburn, AF Bedow, J, & Ladd, R. (2000). Rural long-term care: What we need to know to improve policy and programs. Draft Rural Health Agenda Setting Conference. Washington, D.C. ⁶⁶ National Rural Health Association (<u>www.nrharural.org</u>)

⁶⁷ Coward, R.T., & Lee, G.R. (1985). The Elderly in Rural Society. New York: Springer.

⁶⁸ Dwyer, J.W., Miller, M.D. (1990). Determinants of primary caregiver stress and burden: Area of residence and the caregiving networks of frail elders. The Journal of Rural Health, 6(2), 161-184

⁶⁹ U.S. Census Bureau. Age and Sex: 2000.

http://factfinder.census.gov/servlet/GCTTable? ts=91533140790>January 7, 2004.

⁷⁰ Barnes, N.D. Formal home care services: Examining the long-term care needs of rural older women. Journal of Case Management 6(4):162-165, 1997.

^{71 2008} UCompareHealthCare, LLC

organizations with 17% being not-for-profit and 9% government or county owned. The distribution of long-term care facilities is presented in the map below, which demonstrates the number of facilities per county⁷².

South Carolina

South Carolina: Number of Long Term Care Facilities Located in Rural Counties

Table 11 delineates the number of long-term care beds in each rural county, which ranges as few as 34 to as many as 410^{73} .

Table 11: Total Long-Term Care Beds Per Rural County

County	# of Beds	County	# of Beds	County	# of Beds
Abbeville	116	Allendale	44	Bamberg	85
Barnwell	88	Beaufort	410	Cherokee	229
Chester	34	Chesterfield	204	Clarendon	152
Colleton	132	Dillon	195	Georgetown	256
Greenwood	303	Hampton	104	Jasper	88
Lancaster	274	Lee	120	McCormick	120
Marion	180	Marlboro	110	Newberry	264
Oconee	132	Orangeburg	393	Union	201
Williamsburg	88				

National Rural Health Association (<u>www.nrharural.org</u>)
 2008 UCompareHealthCare, LLC

Table 12 identifies the name of each long-term care facility, the number of licensed beds, the occupancy rate as of 2008, and its ownership status⁷⁴.

Table 12: Long-Term Care Facilities and Number of Beds Per Rural County

County	Facility	# Beds	Occupancy Rate	Ownership
Abbeville	Abbeville Nursing Home	94	90%	FP/Corp.
	Due West Retirement Center	22	No data	FP/Private
Allendale	John Edward Harter Nursing Center	44	86%	Gov./County
Bamberg	Laurel Baye Healthcare of Blackville	85	94%	FP/Partnership
Barnwell	Barnwell County Nursing Home	40	100%	Gov./County
	Laurel Baye Healthcare of Blackville	85	94%	FP/Partnership
	Laurel Baye Healthcare of Williston	44	91%	FP
Beaufort	Bayview Manor, L.L.C.	170	95%	FP/Corp.
	Fraser Health Care	33	82%	NFP/Corp.
	Life Care Center of Hilton Head	88	92%	FP/Corp.
	Preston Health Center	44	82%	NFP/Corp.
	Tidepoint by Hyatt Care Center	50		FP/Corp.
Cherokee	Brookview HealthCare Center	132	95%	FP/Corp.
	Cherokee County Long Term Care Facility	97	92%	Gov.
Chester	HealthSouth Rehab. Hospital of Rock Hill	34		FP/Corp.

_

⁷⁴ 2008 UCompareHealthCare, LLC

County	Facility	# Beds	Occupancy Rate	Ownership
Chesterfield	Cheraw Healthcare, Inc.	100	97%	FP/Corp.
	Chesterfield Convalescent Center, Inc.	104	100%	FP/Corp.
Clarendon	Lake Marion Nursing Facility	88	92%	NFP/Other
	Windsor Manor	64	92%	NFP/Corp.
Colleton	Oakwood Health Care	132	98%	FP/Corp.
Dillon	The Pines Healthcare Center, Inc.	84	94%	FP
	Sunny Acres	111	98%	FP
Georgetown	Georgetown Health and Rehab, Inc.	84	85%	FP/Corp.
	Lakes at Litchfield	24	96%	FP/Corp.
	Prince George HealthCare Center	148	93%	FP/Corp.
Greenwood	Magnolia Manor-Greenwood	88	100%	FP
	NHC Healthcare, Greenwood	152	93%	FP/Corp.
	Wesley Commons	63	92%	NFP/Corp.
Hampton	Harper Nursing Center	104	92%	FP
Jasper	Ridgeland Nursing Center, Inc.	88	99%	FP/Corp.
Lancaster	Lancaster Convalescent Center, Inc.	142	97%	FP/Corp.
	White Oak Manor - Lancaster	132	99%	FP/Corp.
Lee	McCoy Memorial Nursing Center	120	95%	FP/Corp.
McCormick	McCormick Health Care Center	120	93%	FP

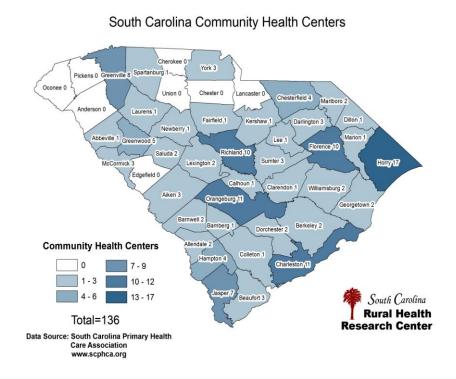
County	Facility	# Beds	Occupancy Rate	Ownership
Marion	Marion Nursing Center	88	99%	FP/Corp.
	Mullins Nursing Center	92	97%	NFP/Other
Marlboro	Dundee Nursing Home	110	97%	FP/Corp.
Newberry	J. F. Hawkins Nursing Home	118	96%	Gov./County
	White Oak Manor - Newberry	146	97%	FP/Corp.
Oconee	Mariner Health Care of Seneca	132	95%	FP
Orangeburg	Jolley Acres HealthCare Center	60	97%	FP/Corp.
	Laurel Baye Healthcare of Orangeburg	113	95%	FP/Corp.
	Methodist Oaks	132	92%	NFP
	Orangeburg Nursing Home	88	97%	FP/Corp.
Union	Ellen Sagar Nursing Home	113	100%	NFP
	Oakmont of Union	88	82%	FP/Corp.
Williamsburg	Kingstree Nursing Facility, Inc.	88	97%	FP/Corp.

Community Health Centers and Rural Health Clinics

Community Health Centers (CHCs) are community-based, non-profit organizations that provide comprehensive health care services. With a focus on primary care, prevention, education, and case management, health centers accept most health insurance plans including Medicare and Medicaid. For those patients without insurance, services are provided on a sliding fee scale based on the patient's income. CHCs receive federal grants through the US Department of Health and Human Services, Bureau of Primary Health Care (BPHC) to partially support the cost of providing health care to the nation's growing uninsured population. In addition, CHCs provide services to help ensure access to care and continuity of care including outreach, transportation, communication assistance (interpreters), case management, and social services. Some Centers may offer additional services such as mental and behavioral counseling and specialty care⁷⁵.

CHCs are governed by a community and consumer based Board of Directors and the location, hours of operation, staff and programs of each Center are tailored to meet the specific needs of the community in which it is located. All CHCs must adhere to national, state and local licensure requirements and quality standards, and are held accountable by the BPHC for specific program expectations⁷⁶.

South Carolina has 19 Community Health Centers supporting 136 delivery sites throughout the state. The map below identifies the number of community health center sites in each county.

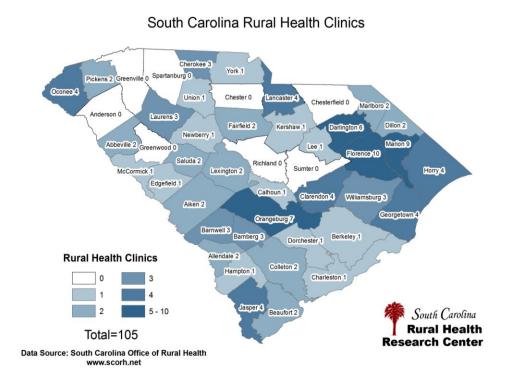


⁷⁵ South Carolina Primary Health Care Association, http://scphca.org/aboutcenter.htm retrieved July 24, 2008. ⁷⁶ibid

38

A **Rural Health Clinic** (RHC) is a clinic certified to receive special Medicare and Medicaid reimbursement. The purpose of the RHC program is to improve access to primary care in underserved rural areas. RHCs are required to use a team approach of physicians and midlevel practitioners (nurse practitioners, physician assistants, and certified nurse midwives) to provide services. The clinic must be staffed at least 50% of the time with a midlevel practitioner. RHCs may also provide other health care services, such as mental health or vision services, but reimbursement for those services may not be based on their allowable costs⁷⁷.

As of April 2008, there were 105 RHCs across the state. The map below identifies the number of RHCs in each county⁷⁸.



⁷⁷ Rural Assistance Center, http://www.racoline.org/info guides/clinics/rhcfaq.php#whatis retrieved July 22, 2008.

⁷⁸ Personal Interview with Marsha Marze, Rural Health Clinic Coordinator, SC Office of Rural Health, March 2008.

Comparison of Community Health Centers and Rural Health Clinics

Table 13 illustrates how CHCs and RHCs differ with regards to their corporate structure and reimbursement structure.

Table 13: Comparison of Corporate Structure and Reimbursement of Community Health Centers and Rural Health Clinics 79

Corporate Issue	СНС	RHC	
Profit Status	Not-for-profit only	Can be either for-profit or not-for-	
		profit	
Initial Application	Required	Required	
Federal Grant	Yes	No	
Recertification	Written Statement	On-site Survey	
Staffing Requirements	Required to have an Executive	Must employ a nurse practitioner,	
	Director, Financial Director, and	physician assistant or certified	
	Medical Director	nurse midwife at least 50% time	
Management & Control Systems	Must Provide Written Description of	Must Demonstrate Ability.	
	System		
Sliding Fee Scale	Required	Not Required	
Independent Financial Audit	Required	Not Required	
Governance	User Majority Board of Directors	No Specific Requirement	
Location Requirements	Must be in a Medically Underserved	Must be in a MUA or Health	
	Area (MUA)	Professional Shortage Area	
		reviewed within the last 3 years	
	Can be in either rural or urban	Must be in a rural area	

While both entities are centered around primary health care service delivery, there are differences with regards to their scope of services. Table 14 draws these comparisons.

Table 14: Comparison of Community Health Centers and Rural Health Clinics for Required Scope of Services⁸⁰

Criteria	RHC	FQHC	
Primary Health Svs	Required	Required	
Primary Care for Lifecycle	Not Required	Required or under arrangement	
Basic Lab	6 Specific Tests Required	Required or under arrangement	
Emergency Care	First Response Capabilities Required	Required or under arrangement	
Radiology	Required on-site or under arrangement	Required or under arrangement	
Pharmacy	Not Required	Required or under arrangement	
Preventive Dental	Not Required	Required or under arrangement	
Transportation	Not Required	Required or under arrangement	
Case Managers	Not Required	Required or under arrangement	
Dental Screening for Kids	Not Required	Required or under arrangement	
After hours care	Not Required	Required	
Hospital/Specialty Care	Required Clinic Staff or under	Required Clinic Staff or under	
	arrangement	arrangement	

 $^{^{79}}$ Comparison of Rural Health Clinic & Federally Qualified Health Center programs by USDHHS 80 ibid

40

Medicare/Medicaid Reimbursement

All Federally Qualified Community Health Centers receive cost-based reimbursement from Medicare based upon the same payment principles as RHCs. Medicaid pays RHCs using a prospective payment system (PPS) methodology based on the historical reasonable costs of the center. This PPS methodology varies by State and the payment rate may be clinic specific. RHCs get reimbursed the same amount regardless of whether the patient is seen by a mid-level practitioner (e.g., nurse practitioner or physician assistant) or a physician. Table 15 demonstrates which services are covered by entity and payor.

Table 15: Comparison of Community Health Centers and Rural Health Clinics for Covered Services⁸¹

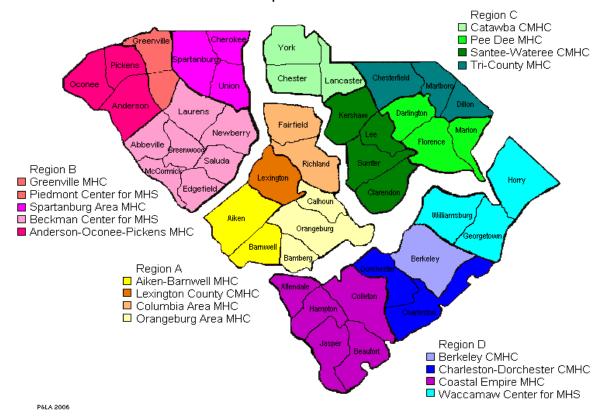
Service	RHC		FQHC	
	Medicare	Medicaid	Medicare	Medicaid
Physician Service	Yes	Yes	Yes	Yes
MLP Service	Yes	Yes	Yes	Yes
Clinical Psychology	Yes	Yes	Yes	Yes
Clinical Social Worker	Yes	Yes	Yes	Yes
Services/supplies "incident to"	Yes	Yes	Yes	Yes
Visiting Nursing Home Health	Yes	Yes	Yes	Yes
Hospital Care	N/A	If in state plan	N/A	If in state plan
Nursing Home Care	Yes	If in state plan	Yes	If in state plan
Other Ambulatory Svc	N/A	If in state plan	N/A	
DM Self mgmt training & nutritional therapy	N/A	If in state plan	Yes	If in state plan

⁸¹Comparison of Rural Health Clinic & Federally Qualified Health Center programs by USDHHS

Mental Health Providers

South Carolina is divided into 17 geographical areas, defined by the SC Department of Mental Health, called catchments or service areas, each having its own comprehensive mental health center. South Carolina has been split into four regions, each with several mental health centers, as presented in the graphic below ⁸². Community Mental Health Centers, also known as the partial hospital program, were developed to provide mental health services in the community to those patients who might otherwise require hospitalization for mental illness.

South Carolina Department of Mental Health



Comprehensive mental health centers provide services that usually include the following:

- Screening Services
- Day Treatment
- Alcohol and Drug Services
- Outpatient Services
- Consultation
- Emergency Crisis Intervention
- Case Management Services
- Mental Health Counseling/Psychiatric Services
- Psychosocial Rehabilitation
- School Based Services

⁸² South Carolina Department of Mental Health, (http://www.state.sc.us/dmh/services.htm)

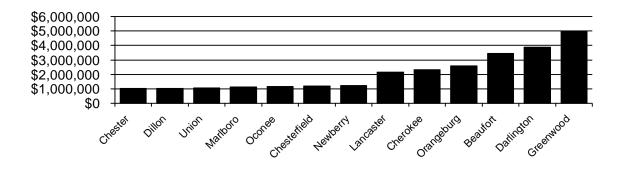
The Department of Mental Health (DMH) understands the challenges of meeting the mental health needs of rural communities. As a part of its strategic planning, (DMH) identified three goals specifically for Child and Adolescent Services. 83

Rural Strategic Goals of South Carolina Department of Mental Health

- 1. Increase out-stationed DMH staff by 5 additional DSS offices in rural areas, currently underserved DSS county offices
- 2. Increase out-stationed DMH staff by 2 additional DJJ officers in underserved DJJ counties
- 3. Increase the numbers of school-based programs by 10 with focus on rural area schools

Despite the best efforts of (DMH), many rural South Carolinians use hospital emergency rooms for mental health care. In 2006, there were 12,553 ER visits by residents of the 25 rural counties, resulting in \$32,377,888 charges. The rural counties whose residents had in excess of \$1 million worth of ER visits are presented in the following chart⁸⁴:

Emergency Room Charges for Mental Health Conditions in Counties Exceeding \$1 Million, 2006



Emergency Medical Services

Emergency Medical Services is a part of the Health Regulations Deputyship of the South Carolina Department of Health and Environmental Control (DHEC). Leadership is provided by a division director who relies on a 20 member staff and four regional EMS offices for support. The Director of EMS is advised by the EMS Advisory council, a 25-member board whose membership is described by statute. Subcommittees of the EMS Advisory Council

⁸⁴ SC Office of Research and Statistics. http://www.ors2.state.sc.us/er.php Retrieved August 11, 2008.

⁸³ South Carolina Department of Mental Health, http://www.state.sc.us/dmh/services.htm Retrieved August 8, 2008

include the Training Committee, Medical Control Committee, Equipment and Standards Committee, EMS Children Committee, and the Long Range Planning Committee.

A state medical control Physician serves as medical advisor to the Director and as chairman of the Medical Control Committee.

The Regional EMS offices were organized based on population and geographic patterns within the state. These geographical patterns were based on four regions with patient referral patterns principally used to resource hospitals within each of the areas. The four regional EMS offices provide planning, training, and technical assistance services to the state's 46 counties with funds provided under contract with the state EMS. Each regional EMS office is guided by its own Board of Directors. The regions are:

The **Upstate Regional EMS Office** serves a 12-county area, which includes Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg and Union counties.

The **Midlands Regional EMS Office** serves a 15-county area, which includes Abbeville, Aiken, Chester, Edgefield, Fairfield, Greenwood, Kershaw, Lancaster, Laurens, Lexington, McCormick, Newberry, Richland, Saluda, and York.

The **Pee Dee Regional EMS Office** serves a12-county area, which includes Chesterfield, Clarendon, Darlington, Dillon, Florence, Georgetown, Horry, Lee, Marion, Marlboro, Sumter, and Williamsburg.

The **Low Country Regional EMS Office** serves a12-county area, which includes Allendale, Bamberg, Barnwell, Beaufort, Berkeley, Calhoun, Charleston, Colleton, Dorchester, Hampton, Jasper, and Orangeburg⁸⁵.

⁸⁵ South Carolina Department of Health and Environmental Control, http://www.scdhec.gov/health/ems/ Retrieved August 9, 2008

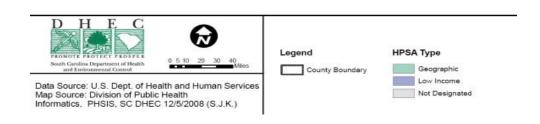
Healthcare Workforce and Profession

Primary Care Workforce

Most counties, rural and urban, in our state have some Health Professional Shortage Area (HPSA) designation. The Federal Division of Shortage Designation (DSD), Bureau of Primary Health Care, Health Resources and Services Administration, Department of Health and Environmental Control, designates areas as HPSAs. The designation is usually a geographic area consisting of a county or subcounty area and is based on the ratio of primary care physician providers to the population⁸⁶. The Office of Primary Care (OPC) compiles the information and forwards it to the DSD. Additionally, 25 of the 46 counties in South Carolina are designated as a Medically Underserved Area (MUA) and another 19 counties are designated as partial MUAs. The map below, from the SC Office Primary Care, shows the 2008 designations⁸⁷.

South Carolina Primary Care HPSA By Type



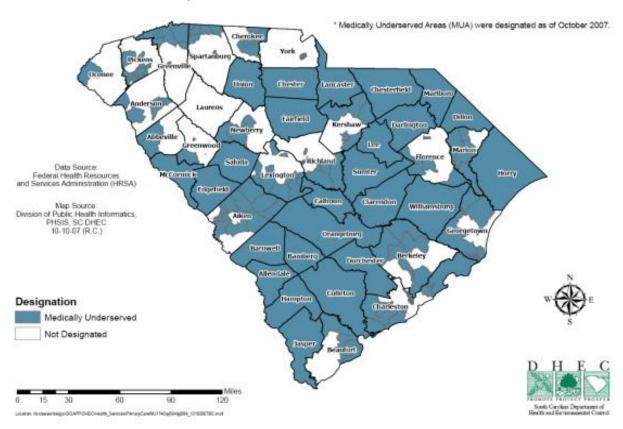


⁸⁶US Department of Health and Human Services, Health Resources and Services Administration, http://www.bhpr.hrsa.gov/shortage Retrieved August 15, 2008.

⁸⁷ SC Office of Primary Care. http://www.scdhec.gov/health/opc/hpsa.htm Retrieved on August 11, 2008.

Medically Underserved designations are comparable to HPSAs, but have stricter definitions. However, in South Carolina, the two designations reflect comparable areas. The following map demonstrates the state experiences with access to care ⁸⁸:

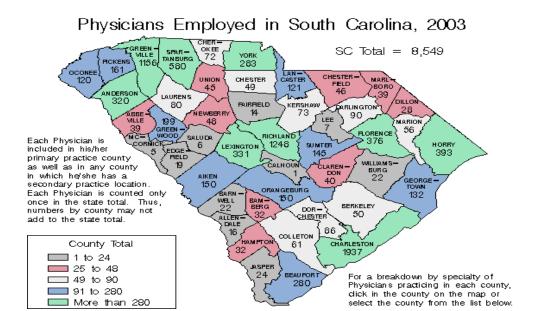
Medically Underserved Areas in South Carolina*



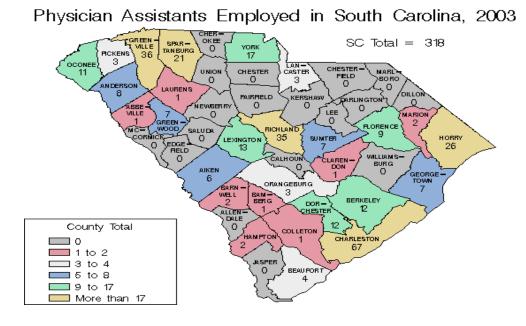
Unfortunately, workforce numbers are not published for the same time period as the HPSA designations. For physicians, the most recent data is 2003, available through the Office of Research and Statistics. County specific numbers of practicing physicians are presented in the map on the following page⁸⁹:

89 SC Office of Research and Statistics. http://www.ors2.state.sc.us/manpower1.php Retrieved August 11, 2008.

⁸⁸ SC Office of Primary Care http://www.scdhec.gov/health/opc/hpsa.htm Retrieved August 11, 2008.



Contributing to primary care access, especially in rural areas, is the use of physician assistants (PA) and advanced practice nurses. The map (below) of PAs employed in South Carolina shows that most of the rural counties in South Carolina do not have a PA employed in that county, despite the volume of rural health clinics in the state⁹⁰.

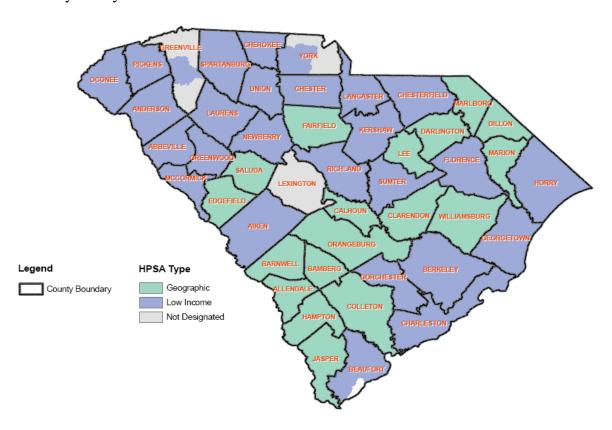


⁹⁰ South Carolina Office of Research & Statistics, http://www.ors2.state.sc.us/manpower2.php Retrieved August 11, 2008.

As November 2005, there were 302 nurse practitioners employed in the 25 rural counties. The five counties with the highest employment of nurse practitioners were: Beaufort (51), Greenwood (37), Orangeburg (35), Oconee (33), and Darlington (26)⁹¹.

Dentists

The majority of South Carolina counties are designated as Dental Health Professional Shortage Areas. HPSAs are designated as geographic, low-income populations or facility designations. The map below, produced by the SC Office of Primary Care, shows the type of Dental HPSA by county. 92



There were 1,839 dentists, 1,883 dental hygienists, and 2,970 dental assistants practicing in South Carolina in 2005. In 2000, there were 43.2 dentists per 100,000 population in South Carolina, which is well below the national rate of 63.6. The per capita ration of dental hygienists was also substantially lower then the national rate, which is at 44.2 per 100,000 population ⁹³. A map of practicing dentists from 2003 is presented on the next page. ⁹⁴

⁹¹ SC Office of Research and Statistics. http://www.ors2.state.sc.us/manpower/RN06Table13.pdf Retrieved August 11, 2008.

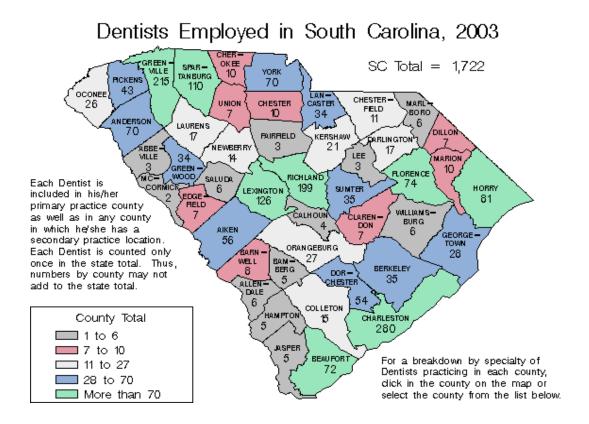
⁹² SC Office of Primary Care. http://www.scdhec.gov/health/opc/hpsa.htm Retrieved August 11, 2008.

Division of Public Health Informatics, PHSIS, SC SCDHEC (2008)

www.scdhec.net/health/opc/docs/HPSA_Dental08.pdf 94 SC Office of Research and Statistics http://www.ors2.state.sc.us/manpower1.php Retrieved August 11, 2008.

Between 1991 and 2000, the number of dentists in South Carolina increased by 71 percent while the state's population grew by 13 percent. The result was a 52 percent increase in dentists per capita compared to a 16 percent increase nationwide. However, this was offset by the 25 percent decrease in the number of dentists between 2000 and 2005, despite the state's continued population growth⁹⁵.

Only two counties, Lexington and Newberry, are not designated as Dental Professional Shortage Areas (DPSA). Of the other counties, 19 are designated as geographic DPSA, and 25 are designated as income DPSA.

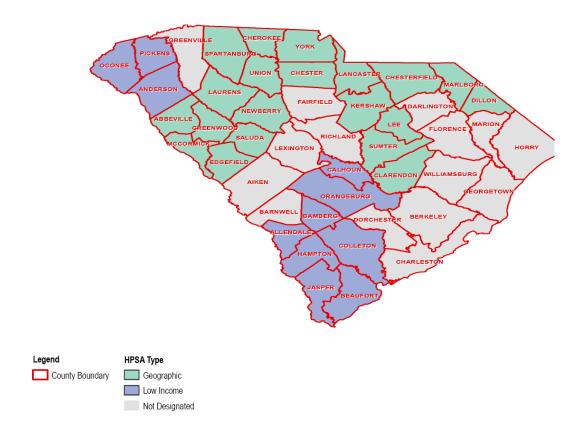


 $^{^{95}\}mbox{South Carolina Office of Research and Statistics.}$ Health and Demographics. (2003) http://www.ors2.state.sc.us/manpower/dent/dent1a.gif Retrieved August 15, 2008.

Mental Health Providers

The capacity of mental health treatment was described in a previous section. As with primary care and dental, there are HPSA designations for mental health. The map below identifies which counties have mental health HPSA designations. ⁹⁶

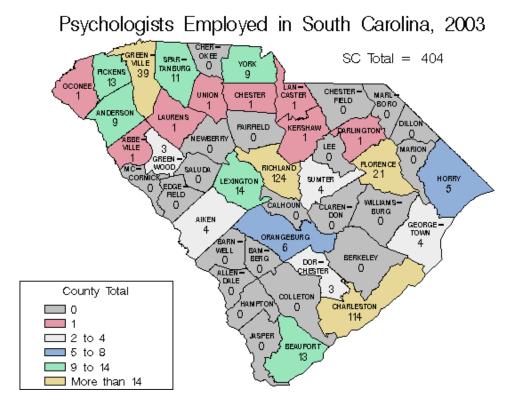
South Carolina Mental Health HPSA



50

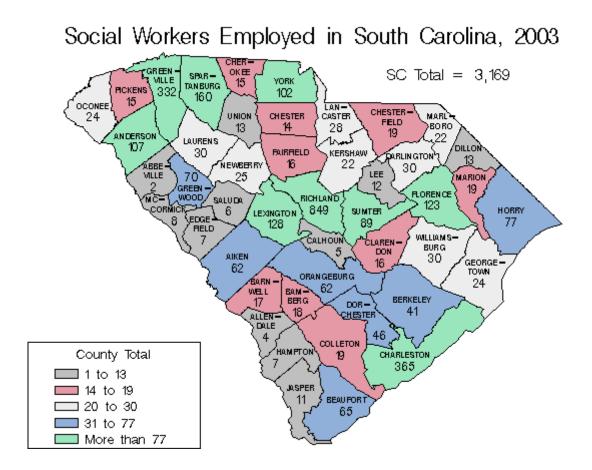
⁹⁶ SC Office of Primary Care. http://www.scdhec.gov/health/opc/hpsa.htm Retrieved August 11, 2008.

Corroborating the HPSA data is manpower data from the SC Office of Research and Statistics. There is a lack of practicing psychologists in the 25 rural counties, as delineated in the following map⁹⁷:



⁹⁷ SC Office of Research and Statistics. http://www.ors2.state.sc.us/manpower2.php Retrieved August 11, 2008

Social workers, especially in rural areas, serve as principle providers of mental health services, as they are more available than psychologists. The number of practicing social workers by county is presented in the map below ⁹⁸:



Incentive Programs

National Health Service Corps (NHSC)

The National Health Service Corps offers loan repayment and scholarship incentives in exchange for a service commitment to a primary health care facility that meets federal guidelines and is located in a health professional shortage area. The Emergency Health Personnel Act passed in 1970 created the NHSC to meet the most critical needs of rural America's health care problems. In 1982, the NHSC began forming partnerships with states to assist in the placement of providers into shortage areas. Currently, 27 states have joined the NHSC State Loan Repayment Program, a federal-state partnership to obtain the services of providers by repaying their educational loans. In addition, a Community Scholarship Program

⁹⁸ SC Office of Research and Statistics http://www.ors2.state.sc.us/manpower2.php Retrieved August 11, 2008.

was started as a federal-state and local partnership to support students committed to serve in their underserved community upon completion of their primary care training⁹⁹.

More than 20,000 health professionals have served in the Corps since its inception in 1970. Of these, over 13,500 received NHSC scholarship or loan repayment support ¹⁰⁰.

South Carolina is one of the states in partnership with the NHSC in both the State Loan Repayment Program and the Community Scholarship Program. Since 1991, 185 providers have been placed in South Carolina. Currently, 67 providers are on site and 41 providers are serving.¹⁰¹

J-1 Visa Waiver Program Facts¹⁰²

- o This program has placed 150 physicians in South Carolina over the past 9 years
- o Physicians must work full-time in an MUA or HPSA, have a three year contract with an approved employer, and must be sponsored by an Interested Government Agency
- o As of 2007, there were 13 new J-1 placements in South Carolina
- o This program places Mental Health and Primary Care Physicians in HPSAs

The Nurse Loan Repayment Program

HRSA allocates money each fiscal year for rural health and clinician recruitment and service, which includes the Nurse Loan Repayment and Scholarship Programs.

The Nurse Loan Repayment and Scholarship Program is a program that offers nursing education loan repayment of 60 percent of principal and interest to Registered Nurses (RNs) who contract to work full-time for two years in a critical shortage health care facility. For an additional year of full-time service, these RNs may be eligible to receive an extra 25 percent deduction of the original loan balance. Preference is given to those of greatest financial need¹⁰³. In 2005, 663 of the 803 awarded recipients worked in a disproportionate share hospital, which is a hospital that receives supplemental payments through Medicare and Medicaid programs to subsidize the costs associated with providing care to a high proportion of low-income patients. However, only 11.2% of theses awardees worked in a facility that was in a rural region¹⁰⁴.

Health Resources and Services Administrations. (n.d.) *Fiscal Year 2009: Justification of Estimates for Appropriations Committees.* Retrieved April 10, 2008, from ftp://ftp.hrsa.gov/about/budgetjustification09.pdf.

Retrieved April 11, 2008, from http://www.rupri.org/Forms/SouthCarolina.pdf.

Retrieved April 11, 2008, from http://www.rupri.org/Forms/SouthCarolina.pdf.

¹⁰¹ Personal interview with Mark Jordan, Director of the SC Office of Primary Care, March 2008.

¹⁰² Mark Jordan, Director, SC Office of Primary Care, Dr. Amy Martin, DrPH, Deputy Director SC Rural Health Research Center

¹⁰³ Health Resources and Services Administrations. (n.d.) *Fiscal Year 2009: Justification of Estimates for Appropriations Committees.* Retrieved April 10, 2008, from ftp://ftp.hrsa.gov/about/budgetjustification09.pdf.

United States Government Accountability Office. (2007, April). *Nursing Workforce: HHS Needs Methodology to Identify Facilities with a Critical Shortage of Nurses.* Retrieved on April 15, 2008, at http://www.gao.gov/new.items/d07492r.pdf.

Nurse Scholarship Program

The Nurse Scholarship Program offers scholarships to individuals enrolled in accredited nursing programs in exchange for two years of service in a critical shortage health facility after graduation. Preference is given to full-time undergraduate students who are not receiving financial support from their families. In 2006, 45 percent committed to working one year beyond their two-year contract 105.

South Carolina Office of Rural Health 106

The **South Carolina Office of Rural Health (SCORH)** was established in 1991 pursuant to Section 3385 of the Public Health Service Act. The general purpose of this legislation is to improve the health infrastructure in rural areas through the operation of the SCORH. In South Carolina, as a 501(c)3 organization, the SCORH operates under the direction and oversight of the SCORH Board of Directors, in partnership with the South Carolina Healthcare Recruitment and Retention Center and the South Carolina AHEC Recruitment and Retention Program. In addition, a close relationship exists with the SC Department of Health and Environmental Control's (DHEC) Office of Primary Care, the SC Primary Health Care Association, the SC Health Alliance (formerly the South Carolina Hospital Association), the SC Medical Association, and the SC Rural Health Association.

The mission of the SCORH is to improve and enhance the health status of rural and underserved people through advocacy, education and assistance to providers, communities and policy makers. The SCORH will continue to emphasize the development of a full continuum of care for the community---including primary, emergency, acute transitional care, and longterm care services, and the importance of coordinated community-based systems care. In order to accomplish this mission, the SCORH provides rural communities and health care providers with a number of programs, activities and services. These include:

- Health Care Infrastructure Development The SCORH offers expertise in community infrastructure development. This infrastructure is vital if rural communities are going to recruit and retain health care providers. Through Community forums, site visits, community development processes, and other initiatives, the SCORH helps enable rural communities to compete with larger communities for health resources.
- Rural Health Revolving Loan Program This revolving loan fund provides low interest, long-term loans to rural communities and health care facilities for renovation, construction, and expansion of services.
- Rural Health Grant Initiatives The SCORH provides technical assistance to individuals and organizations in preparing grant applications for the Rural Health services Outreach and Network Grant Programs as well as the rural Health

 $^{^{105}}$ Health Resources and Services Administrations. (2007, November). List of Rural Counties and Designated Eligible Census Tracts In Metropolitan Counties. Retrieved April 4, 2008, from ftp://ftp.hrsa.gov/ruralhealth/Eligibility2005.pdf.
 The South Carolina Office of Rural Health, http://www.scorh.net Retrieved August 15, 2008.

- telemedicine Grant Program. Assistance is also provided in reference to initiatives directed to foundations (Duke Endowment, RWJ, etc.) or other funding sources.
- South Carolina Rural Health Association the SCORH provides leadership and administrative support for all activities of the Association.
- "Focus on Rural Health" newsletter This newsletter is published quarterly and highlights current rural health issues and concerns.

Special Projects of the South Carolina Office of Rural Health

- Low Country Healthy Start This program is centered in Hampton, Allendale, Bamberg, and lower Orangeburg counties and is focused on reducing infant mortality and improving birth outcomes.
- South Carolina Rural Health Access Program This program receives funding from the Robert Wood Johnson Foundation and is aimed at improving the health of rural South Carolinians through improving access to health care.

The South Carolina Rural Health Research Center (SCRHRC)¹⁰⁷ Since its inception, the South Carolina Rural Health Research Center (SCRHRC) has focused on one principal goal: to illuminate the problems experienced by poor and minority rural populations in order to guide research, policy, advocacy and legislation. Reflecting this goal, our specific aims are to:

- Develop the methods and conduct the research necessary to provide a clear picture of health status, health care needs, health services use and health outcomes among poor and minority rural populations;
- Investigate the effectiveness of policies aimed at improving health and reducing barriers to care among rural poor and minority residents;
- Assess the resources available to and barriers experienced by rural healthcare providers as they work with poor and minority rural residents;
- Promote the development of minority researchers examining rural health issues;
- Provide expert advice to national, state and local government and to rural and minority constituency groups to empower policy development and advocacy; and
- Develop a repository of knowledge regarding health issues among poor and minority populations.

-

¹⁰⁷ SC Rural Health Research Center http://rhr.sph.sc.edu/index.php Retrieved August 11, 2008.

The Center builds on and expands ongoing cooperative research partnerships with other key organizations – government, academia, health services delivery and the rural community who can join our quest to improve the health of rural Americans.

The Center includes in its focus rural institutions, such as hospitals, community health centers, and rural health clinics, essential to the health of low-income and minority rural populations. The Center is based in the Department of Health Services Management and Policy, Arnold School of Public Health, University of South Carolina. Current and past research studies are available on the SCRHRC website, which also contains links to other sources of information about rural health.