THE STATUS OF PUBLIC HEALTH IN SPARTANBURG COUNTY: A REVIEW OF THE DATA

spartanburg community indicators project

Inspiring dialogue, strategy and change.

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April 7, 2011

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SPARTANBURG COUNTY PUBLIC HEALTH ASSESSMENT

SPARTANBURG COMMUNITY INDICATORS PROJECT

INTRODUCTION

Measuring the status of public health of a community is the first step in identifying the covariates and causal factors that determine collective and personal well-being. Armed with this knowledge, the community can adopt strategies that improve health outcomes, including developing policies, administering services, regulating health systems, implementing educational programs, and conducting research.

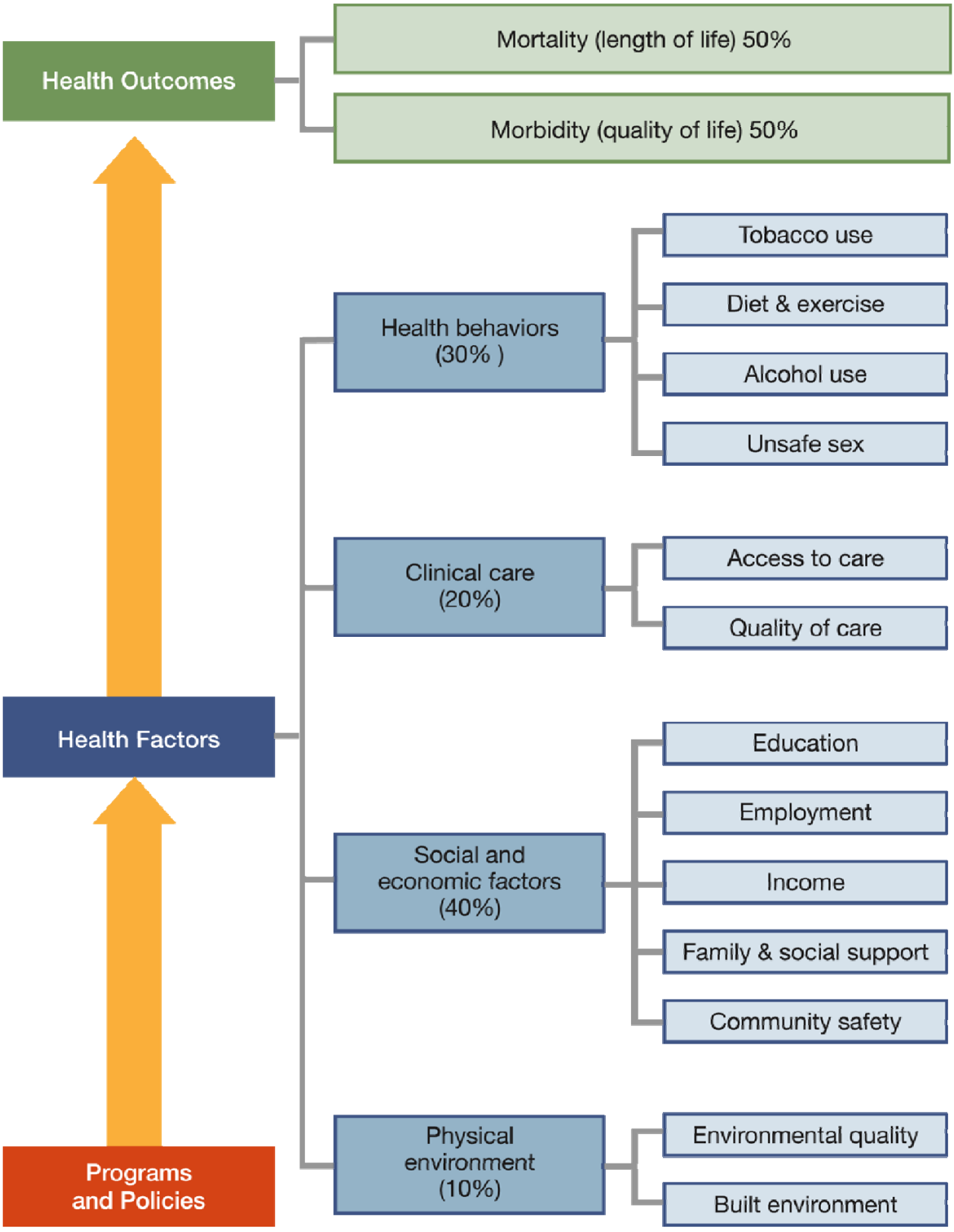
The data reported in this study reflect the indicators of public health as they occur during the human life cycle. All data are from sources recognized by subject matter experts as being valid and reliable. In order to provide context, most data are reported with appropriate comparison data or trend data. Original sources are provided so that the reader can delve further in the data as she or he wishes. Where valid and reliable data sources are limited, the data are likewise limited. Any questions may be addressed to the author of this study.

A Model for Public Health Outcomes

The University of Wisconsin Population Health Institute uses the population health model below to rank the health of communities. It demonstrates that health outcomes are determined by three factors: behavior (30%), access to and quality of health care (20%), socioeconomic variables (40%), and physical environment (10%). The indicators chosen by subject matter experts for inclusion in this study reflect each of these factors.

Source:

Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute County Health Rankings: http://www.countyhealthrankings.org



County Health Rankings model ©2010 UWPHI

INDICATORS THROUGH THE LIFE CYCLE

PREGNANCY / GESTATION

INFANT MORTALITY

Infant mortality is defined as a death occurring during the first year of life. The infant mortality rate is often used as a measure of the overall health status of a given population. It reflects the heath status of mothers and children and is also indicative of underlying socioeconomic and racial disparities. In 2007, the South Carolina infant mortality rate was 8.5 deaths per 1,000 live births. Racial and ethnic disparities related to infant mortality are persistent.

In 2007, premature births were the leading cause of infant death among all races. Sudden Infant Death Syndrome (SIDS), maternal complications of pregnancy, and accidents constitute the remaining leading causes of infant death. Mothers who begin prenatal care early and continue care throughout pregnancy reduce the risk of complications during childbirth, infant Illness and infant deaths.

In 2008, the rate of infant mortality in Spartanburg was 7.5 per 1,000. This was lower than the state rate. However, there is significant racial disparity, as black infant mortality was 11.2 per 1,000 and white infant mortality was 4.9 per 1,000. This constituted a greater disparity than the state average.

2008 Infant Mortality by Race, All Causes by Number and Crude Rate per 1,000

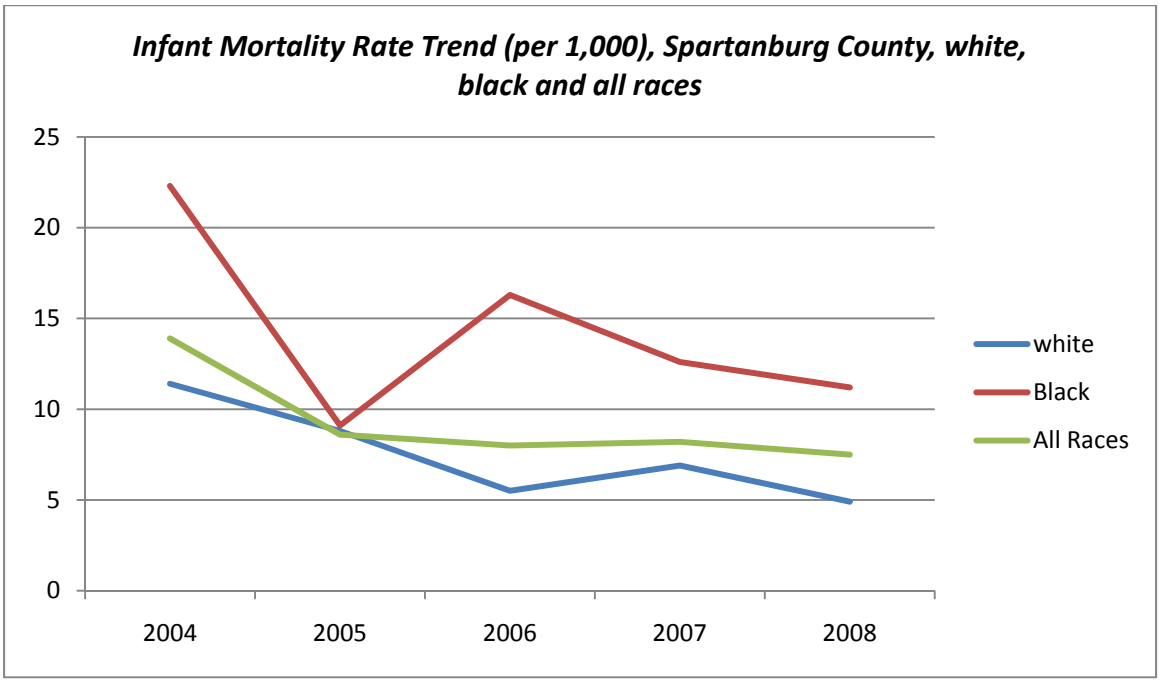
	White		Black		other		Unknown		All	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Charleston	18	5.7	25	14.7	0	0.0	4	0.0	47	9.4
Richland	4	1.9	23	9.0	0	0.0	2	0.0	29	6.0
Greenville	30	6.4	18	12.6	0	0.0	1	0.0	49	7.8
Spartanburg	13	4.9	11	11.2	1	9.4	3	0.0	28	7.5
S.C.	242	6.2	233	11.1	8	5.8	21	0.0	504	8.3

Spartanburg ranked 29th highest of the state's 46 counties for infant mortality rate for the period 2005-2007. Overall infant mortality in Spartanburg County has decreased almost every year since 2004. The

same trend is seen when the rate is disaggregated by race. Note that rates calculated with small numbers are unreliable and should be interpreted cautiously.

Infant Mortality by Race, Spartanburg County Five year Trend, All Causes by Number and Crude Rate per 1,000

	White		Black		other		Unknown		All	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
2004	29	11.4	18	22.3	1	10.1	0	0.0	48	13.9
2005	22	8.8	7	9.1	0	0.0	0	0.0	29	8.6
2006	14	5.5	14	16.3	0	0.0	0	0.0	28	8.0
2007	18	6.9	12	12.6	0	0.0	0	0.0	30	8.2
2008	13	4.9	11	11.2	3	9.4	3	0.0	28	7.5
2004-2008	96	7.5	62	14.2	3	4.2	3	0.0	163	9.2



According to SC Kids Count data, however, during the decade since 1995-1997, the overall infant mortality rate in Spartanburg County increased 13%. For Whites, the rate decreased 1.5%, but for African-Americans and others the rate increased 47.5%. State level data show a different trend, as during the decade since 1995-1997, the overall infant mortality rate decreased 3.3%. The rate for whites did not change, but for African-Americans and others, the rate decreased 3.9%.

When compared to peer counties and the state average, the data show that Charleston County has the highest infant mortality rate and Greenville has the lowest.

Infant Mortality Frequencies and Rates by County and State Aggregate, Selected Periods

	2000-2003		2003-2005		2005-2008	
	#	Rate	#	Rate	#	Rate
Spartanburg	75	7.3	104	10.1	115	8.1
Greenville	95	5.8	113	6.6	173	7.3
Richland	108	8.3	122	8.8	141	7.4
Charleston	135	9.9	149	10.5	223	11.5
SC Aggregate	1,491	9.0	1,536	9.1	2,111	9.0

Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

S.C. Department of Health and Environmental Control. (2010). Death certificate data [data file]. Available from South Carolina Community Assessment Network Web site: http://scangis.dhec.sc.gov/scan/bdp/tables/death2table.aspx

S.C. Kids Count. (2010). *2009 South Carolina kids count report*. Retrieved from http://www.sckidscount.org/health09.php?COUNTYID=47

Nathan Hale, N. (2010). *Evidenced based home visiting needs assessment*. S.C. Department of Health and Environmental Control. Retrieved February 1, 2011,from http://www.scchildren.org/public/files/docs/9.20.10NeedsAssessment.pdf

BIRTH WEIGHT

A baby who is considered to have low birth weight is born weighing less than 5.5 pounds. A baby with very low birth weight is born weighing less than 3.3 pounds. Delayed or insufficient prenatal care is a primary predictor of low birth weight. Low birth weight is also associated with mothers who are in either their teens or forties, who have less than a high school education, who are unmarried, who smoke, or who are experiencing stress or abuse. Infant mortality is strongly associated with low birth weight: 78% of infant deaths are of babies with low birth weight. Very low birth weight and premature babies often die soon after birth: 57% of infant deaths occur in the first week of life and 70% in the first 28 days.

South Carolina's rate of low birth weight is markedly higher than the national average. Birth weight has significant economic implications for tax payers. The low birth weight and very low birth weight newborns discharged from SC hospitals represent only 6.83 % of the newborns discharged but 53.46% of the total charges for newborns. Of all births in 2008 in Spartanburg County, 43.7% were paid for by Medicaid.

Spartanburg ranked 29th of the state's 46 counties for low birth weight and 31st for percent of prematurity for the period 2005-2007. When compared to the state aggregate, the rate of low birth weight and very low birth weight in the county is approximately the same. Hospital charges for babies born in Spartanburg County, regardless of weight status, is higher than the state average. A racial disparity in birth weight is evident at the county level and at the state level.

Select Birth Weight Data With State and County Comparison

	Spartanburg	South Carolina
Babies born with low birth weight, 2007	10% (N=379)	10.2% (N=6,401)
African-American and Other / White	13.6% / 8.7%	14.8% / 7.6%
Babies born with very low birth weight, 2005-2007	1.8% (N=195)	2% (N=3,645)
African-American and Other / White	2.8% / 1.4%	3.3% / 1.3%
Average hospitalization charge for low birth weight babies, 2006-2008	$36,196	$25,480
Average hospitalization charge for very low birth weight babies, 2006-2008	$314,306	$183,818
Average hospitalization charge for normal weight babies, 2006-2008	$5,241	$3,948

Percentages of babies born with low birth weight and very low birth weight are comparable among peer counties and the state aggregate. Trends are fairly consistent from 2003 to 2007.

Birth Weight By County as Percentage of All Births, Peer Counties						
	Low Birth Weight 2007 {2005}			Very Low Birth Weight 2005-2007 {2003-2005}		
	Total	White	Black / Other	Total	White	Black / Other
Spartanburg	10.0% {9.9%}	8.7% {7.7%}	13.6% {16.0%}	1.8% {1.8%}	1.4% {1.4%}	2.8% {3.0%}
Greenville	8.9% {8.8%}	7.2% {7.3%}	14.0% {13.5%}	1.5% {1.6%}	1.0% {1.3%}	3.0% {2.7%}
Richland	11.1% {10.3}	6.8% {7.0%}	14.3% {12.7%}	2.0% {2.2%}	1.1% {1.1%}	2.7% {3.0%}
Charleston	10.4% {10.0%}	6.5% {6.8%}	16.0% {14.6%}	2.3% {2.5%}	1.4% {1.4%}	3.7% {4.1%}
SC Aggregate	10.2% {10.2%}	7.6% {7.7%}	14.8% {14.7%}	2.0% {2.1%}	1.3% {1.4%}	3.3% {3.4%}

Sources:

S.C. Budget and Control Board, Office of Research and Statistics. (2010). Health and demographics [Data file]. Available from Office of Research and Statistics Web site: http://ors.sc.gov/hd/default.php

S.C. Department of Health and Environmental Control. (n.d.). *Low birth weight and the oral health link.* Retrieved from http://www.scdhec.gov/health/mch/oral/docs/LBW%20final.pdf

S.C. Kids Count. (2010). *2009 South Carolina kids count report*. Retrieved from http://www.sckidscount.org/health09.php?COUNTYID=47

Nathan Hale, N. (2010). *Evidenced based home visiting needs assessment*. S.C. Department of Health and Environmental Control. Retrieved February 1, 2011,from http://www.scchildren.org/public/files/docs/9.20.10NeedsAssessment.pdf

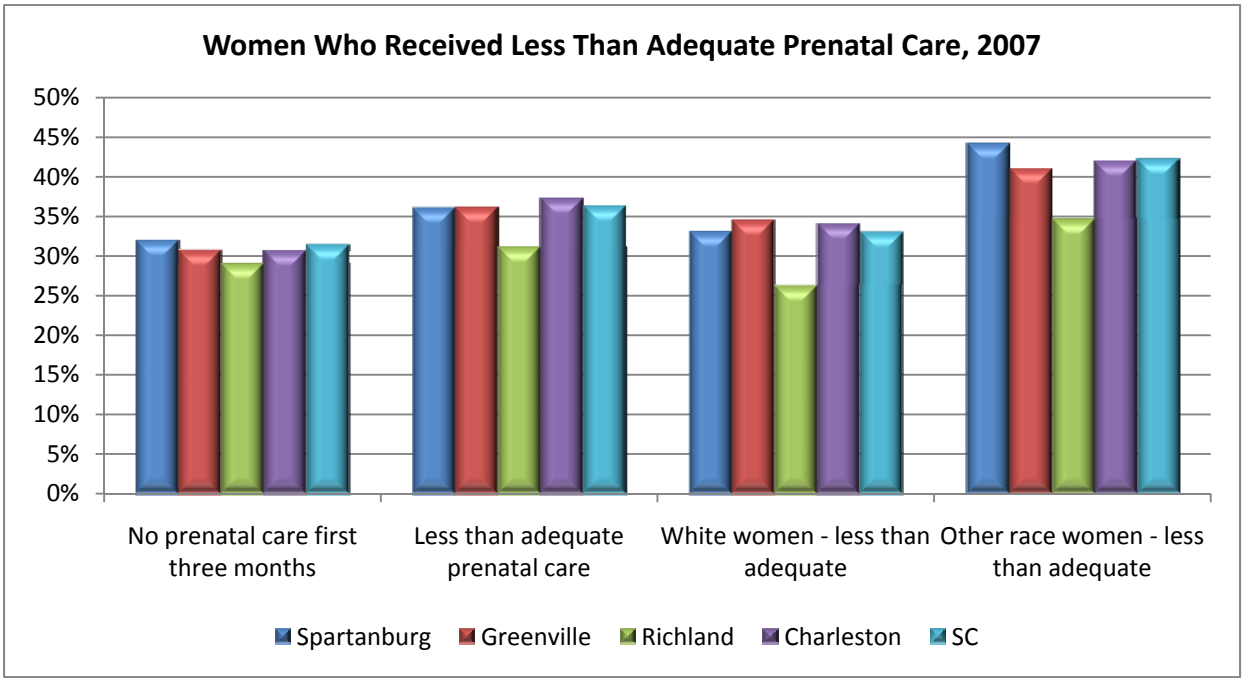
PRENATAL CARE

Good prenatal care is strongly associated with healthy birth weight and healthy babies. Conversely, delayed or insufficient prenatal care can be associated with low birth weight and other health risks for infants. Spartanburg County data is almost equal to the state average for women who received less than adequate prenatal care in 2007. In 2007, over one third of white women in Spartanburg (33.1%) received less than adequate prenatal care, and 44.2% of non-white women received less than adequate prenatal care. In 2007, 40 Spartanburg County women who gave birth had no prenatal care at all.

Of peer counties, Spartanburg and Charleston demonstrate increases from 2005 to 2007 in lack of first trimester prenatal care and less than adequate prenatal care. The state aggregate also demonstrated an increase in both categories.

Prenatal Care, 2007 and {2005}, Percent and Number of Pregnant Women			
	No prenatal care at all	No prenatal care first 3 months	Less than adequate prenatal care
Spartanburg	{8.2% / 28}	32% / 1,212 {29.2% / 996}	36.1% 1,369 {33.2% / 1,132}
Greenville	34 {1.7% /100}	30.7% / 2,030 {31.1% / 1,826}	36.1% / 2,385 {36.9% / 2,171}
Richland	54 {1.4% / 66}	29% / 1,473 {32.1% / 1,540}	31.1% / 1,578 {34.1% / 1,633}
Charleston	86 {1.0 % / 49}	30.7% / 1,593 {26.4% / 1,268}	37.3% 1,938 {34.8% / 1,671}
S.C. Aggregate	802 {1.3% / 765}	31.4% / 19,774 {29.6% / 17,038}	36.3% 22,825 {35.3% / 20,291}

As in 2005, Spartanburg County demonstrates the greatest percentage of Black / other race women receiving less than adequate prenatal care in 2007. In all counties and the state, higher percentages of Black / other race women receive less adequate prenatal care than white women.



Sources:

S.C. Kids Count. (2010). *2009 South Carolina kids count report*. Retrieved from http://www.sckidscount.org/health09.php?COUNTYID=47

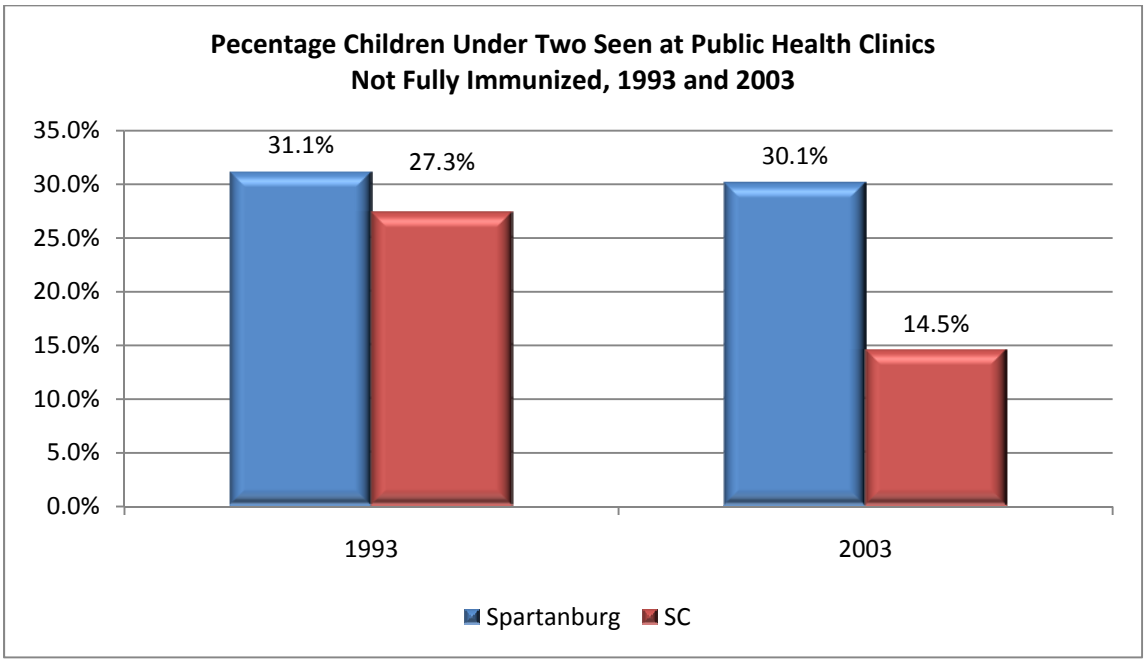
CHILDHOOD

IMMUNIZATIONS

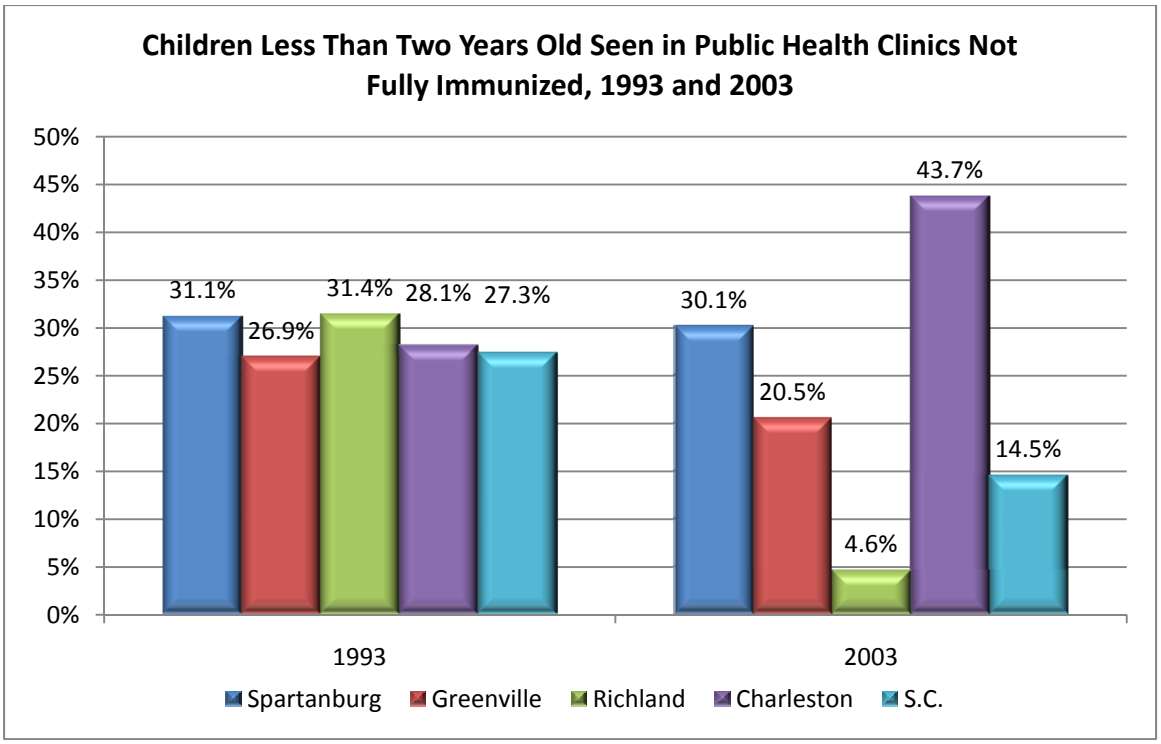
Immunization rates are an indicator of whether children are receiving adequate preventive health care. Children can get their immunizations at the local public health department if they can't get them in through other healthcare providers. New vaccines continue to be added to the childhood and adolescent immunization schedule.

According to analysts at the Immunization Division of SCDHEC, the latest rough estimate for children less than two not fully immunized in South Carolina is 17.5%. Statewide DHEC birth registry data for two-year-old children show that Spartanburg County children, as compared to children statewide, have a lower rate of full immunization against such preventable diseases as Polio, Measles, Diphtheria, Tetanus, Haemophilus Influenza B and pertussis.

Of children under age two who are seen in public health clinics, For Spartanburg County, Spartanburg has a significantly higher percentage who are not fully immunized (30.1%) than the state average (14.5%). Although the state rate is much improved since 1993 (27.3%) , the county rate is not (30.1%).



From 1993 to 2003, by county, Richland demonstrated the highest percentage decrease in children under age two not fully immunized who were seen at public health clinics. Spartanburg demonstrated the lowest percentage decrease, and Charleston demonstrated a significant increase. Only Richland had a lower percentage of children not fully immunized than the state average in 2003.



Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

S.C. Kids Count. (2010). *2009 South Carolina kids count report*. Retrieved from http://www.sckidscount.org/health09.php?COUNTYID=47

OVERWEIGHT AND OBESITY

The National Center for Health Statistics reports that, among preschool children aged 2-5, obesity increased from 5.0% to 10.4% between 1976-1980 and 2007-2008. The increase was higher for children aged 6-11, demonstrating and increase from 6.5% to 19.6%. Data released in 2009 by the Trust for America's Health and the Robert Wood Johnson Foundation indicated that U.S. childhood obesity rates have more than tripled since 1980. For children ages 10-17, South Carolina ranked 13th in 2007, with 33.7% of children in this age group being overweight or obese.

Spartanburg County subject matter experts have identified pediatric obesity as the number one pediatric medical problem in South Carolina. Data collected on younger children by the Spartanburg Childhood Obesity Task Force during the 2009-2010 school year, show that:

- 18% of elementary school children were obese
- 16.4% of elementary school children were overweight
- 34.4% of elementary school children were overweight or obese
- 63% of elementary school children were of healthy weight
- 3% of elementary school children were underweight

Sources:

Brady, K. (2008). *The status of health in Spartanburg County.* Spartanburg, South Carolina: University of South Carolina Upstate, Metropolitan Studies Institute.

Centers for Disease Control and Prevention, National Center for Health Statistics: http://www.cdc.gov/nchs/index.htm

Robert Wood Johnson Foundation. (2009, July). *F as in fat 2009: How obesity policies are failing in America.* Retrieved October 1, 2010 from http://www.rwjf.org/newsroom/product.jsp?id=45348

ADOLESCENCE

TEEN RISK BEHAVIOR

The major risks to health during the adolescent years are primarily behavioral. In recent years comprehensive, comparative youth risk data have not been available, as Spartanburg County school districts have chosen not to participate in the nationwide Youth Risk Behavior Surveillance Survey (YRBSS), administered every two years by the Centers for Disease Control and Prevention. However, in September 2010, Spartanburg County youth in 9th and 11th grades took part in the Communities That Care Youth Survey to assess youth attitude and risk behavior. A number of local funders sponsored the survey, and it was coordinated by Spartanburg Alcohol and drug Abuse Commission (SADAC). The survey was administered in high schools throughout the state, and 5,228 Spartanburg County youth participated.

General findings indicate that Spartanburg County youth have lower risk behaviors and risk attitudes as compared to the state aggregate. Selected results of the survey are reported below for Spartanburg County youth. Expanded data and statewide comparison can be found in the original report.

Risk Behaviors

Most Spartanburg County youth (65%) have never smoked tobacco, and most do not drink alcoholic beverages regularly (74.4%).

How many times in the past year have you been drunk or high at school?						
0 occasions	1 or 2	3 to 5	6 to 9	10 to 19	20 to 39	Total
4481	359	145	66	63	41	5155
86.9%	7.0%	2.8%	1.3%	1.2%	0.8%	100%

How frequently have you smoked cigarettes during the past 30 days?							
Not at all	<1 per day	1-5 per day	½ pack per day	1 pack per day	1 ½ packs per day	2 packs per day	Total
4574	280	204	80	45	14	55	5252
87.1%	5.3%	3.9%	1.5%	0.9%	0.3%	1.0%	100%

How old were you when you first smoked marijuana?						
Never	≤10	11 or 12	13 or 14	15 or 16	≥17	Total
3766	136	298	571	421	18	5210
72.3%	2.6%	5.8%	11%	8.1%	0.3%	100%

On how many occasions, if any, have you used a prescription drug such as Ritalin, Adderall, or Xanax without a doctor's prescription in your lifetime?							
0	1 or 2	3 to 5	6 to 9	10 to 19	20 to 39	40 +	Total
4737	207	94	50	48	47	79	5262
90.0%	3.9%	1.8%	1.0%	0.9%	0.9%	1.5%	100%

How old were you when you began drinking alcoholic beverages regularly (at least once per month?)						
Never	≤ 10	11 or 12	13 or 14	15 or 16	≥ 17	Total
3866	111	158	499	513	48	5195
74.4%	2.1%	3.0%	9.6%	9.9%	0.9%	100%

When you have attended a party with your friends where alcohol was available, how often did you leave with a driver who had been drinking or drive yourself home after drinking?					
Never attended a party with alcohol	Never / almost never	Sometimes	Often	All the time	Total
3000	1317	448	139	144	5048
59.4%	26.1%	8.9%	2.8%	2.9%	100%

How frequently have you used smokeless tobacco products during the past 30 days?					
Never	Once or twice	1-2 times per week	About once per day	1+ times per day	Total
4685	272	90	57	160	5264
89.0%	5.2%	1.7%	1.1%	3.0%	100%

How many times in the past year have you stolen or tried to steal a motor vehicle, such as a car or a motorcycle?						
0	1 or 2	3 to 5	6 to 9	10 to 19	20 to 39	Total
5054	81	36	20	7	11	5209
97.0%	1.6%	0.7%	0.4%	0.1%	0.2%	100%

How many times in the past year have you attacked someone with the idea of seriously hurting them?						
0	1 or 2	3 to 5	6 to 9	10 to 19	20 to 39	Total
4367	552	151	53	36	11	5170
84.5%	10.7%	2.9%	1.0%	0.7%	0.2%	100%

How many times in the past year have you carried a handgun?							
0	1 or 2	3 to 5	6 to 9	10 to 19	20 to 39	40 +	Total
4615	282	105	64	48	30	100	5244
88.0%	5.4%	2.0%	1.2%	0.9%	0.6%	1.9%	100%

Have you ever belonged to a gang?		
No	Yes	Total
4825	412	5237
92.1%	7.9%	100%

Risk Attitudes

Results reflect some disconnect between perceived risk and morality-based perceptions.

How much do you think people risk harming themselves if they smoke one or more packs of cigarettes per day?				
No risk	Slight risk	Moderate risk	Great risk	Total
245	359	1020	3533	5157
4.8%	7.0%	19.8%	68.5%	100%
How wrong do you think it is for someone your age to smoke cigarettes?				
Not at all wrong	A little bit wrong	Wrong	Very wrong	Total
546	850	1305	2483	5184
10.5%	16.4%	25.2%	47.9%	100%
How much do you think people risk harming themselves if they smoke marijuana regularly?				
No risk	Slight risk	Moderate risk	Great risk	Total
602	619	880	3019	5120
11.8%	12.1%	17.2%	59.0%	100%
How wrong do you think it is for someone your age to smoke marijuana?				
Not at all wrong	A little bit wrong	Wrong	Very wrong	Total
691	637	866	2979	5173
13.4%	12.3%	16.7%	57.6%	100%
How much do you think people risk harming themselves if they take two drinks of an alcoholic beverage nearly every day?				
No risk	Slight risk	Moderate risk	Great risk	Total
501	1024	1525	2074	5124
9.8%	20.0%	29.8%	40.5%	100%
When I am an adult I will smoke cigarettes.				
NO!	No	Yes	YES!	Total
3868	808	360	146	5182
74.6%	15.6%	6.9%	2.8%	100%

Family / Community Support of Risk

Most respondents reported that their parents would feel that it is "very wrong" if they drank alcohol regularly (70.9%), if they smoked cigarettes (77.7%), or if they smoked marijuana (82%).

If you wanted to get some cigarettes, how easy would it be for you to get some?				
Very easy	Sort of easy	Sort of hard	Very hard	Total
1552	1105	864	1579	5100
30.4%	21.7%	16.9%	31.0%	100%
If you wanted to get some alcohol, how easy would it be for you to get some?				
Very easy	Sort of easy	Sort of hard	Very hard	Total
1502	1165	964	1450	5081
29.6%	22.9%	19.0%	28.5%	100%
If you wanted to get some marijuana, how easy would it be for you to get some?				
Very easy	Sort of easy	Sort of hard	Very hard	Total
1546	731	622	2167	5066
30.5%	14.4%	12.3%	42.8%	100%
If you wanted to get a drug like cocaine, LSD, or amphetamines, how easy would it be for you to get some?				
Very easy	Sort of easy	Sort of hard	Very hard	Total
488	478	775	3319	5060
9.6%	9.4%	15.3%	65.6%	100%

Sources:

Spartanburg Alcohol and Drug Abuse Commission. (2011, February). *Spartanburg County Communities that Care Youth Survey*. Report presented at the Mary Black Foundation, Spartanburg SC.

BEHAVIORAL HEALTH

Data obtained from the 2009 YRBS for South Carolina high school students indicate that 19% of males and 31% of females reported that during the past year they felt so sad and hopeless almost every day for two weeks or more that they stopped doing some usual activities. Further, 11% males and 10% of females in high school reported that they had tried to kill themselves at some point. Nine percent of middle school students reported that they had tried to kill themselves at some point.

In 2009, Psychosis was the seventh leading diagnosis for inpatient hospitalization for residents of Spartanburg County, aged 10-19. Depressive neurosis was the twenty-fourth leading diagnosis. The same data show that in 2009 there were 416 discharges of children (age 10 to 18) diagnosed with mental disorders, including drug and alcohol use and dependence syndromes, from hospital emergency departments. Six of these adolescents were discharged to inpatient treatment.

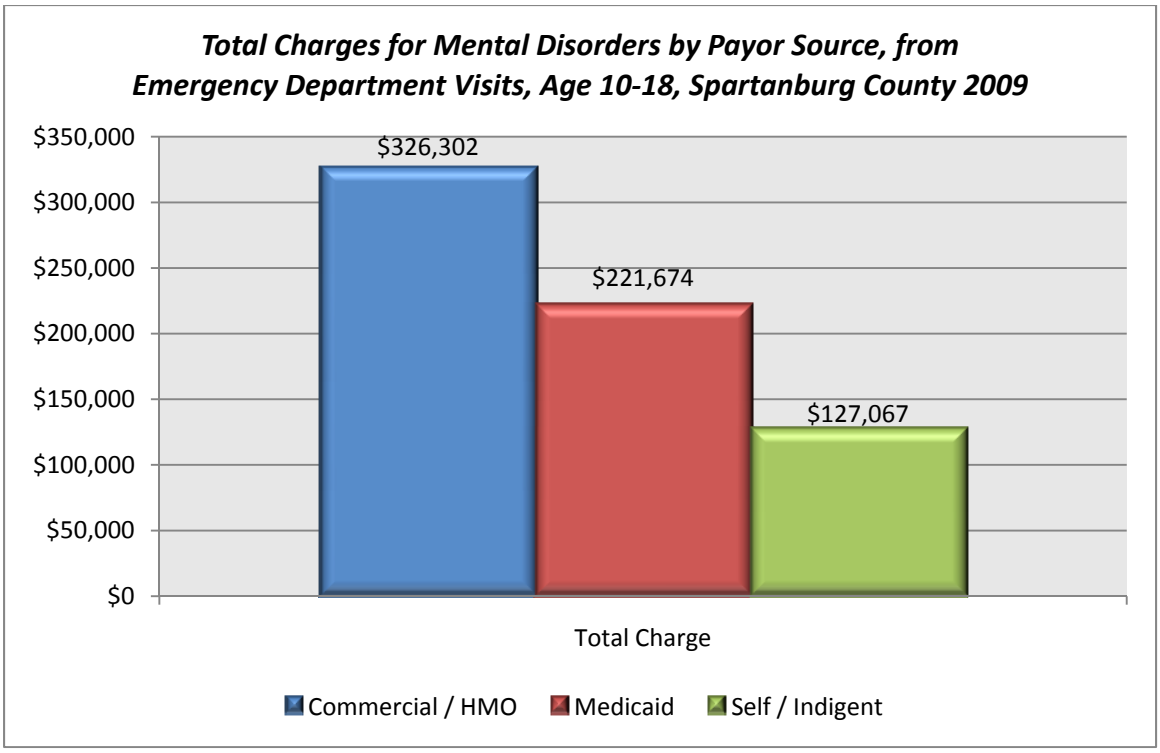
Emergency Department Discharges* for Mental Disorders, ages 10 to 18, Spartanburg County, 2009

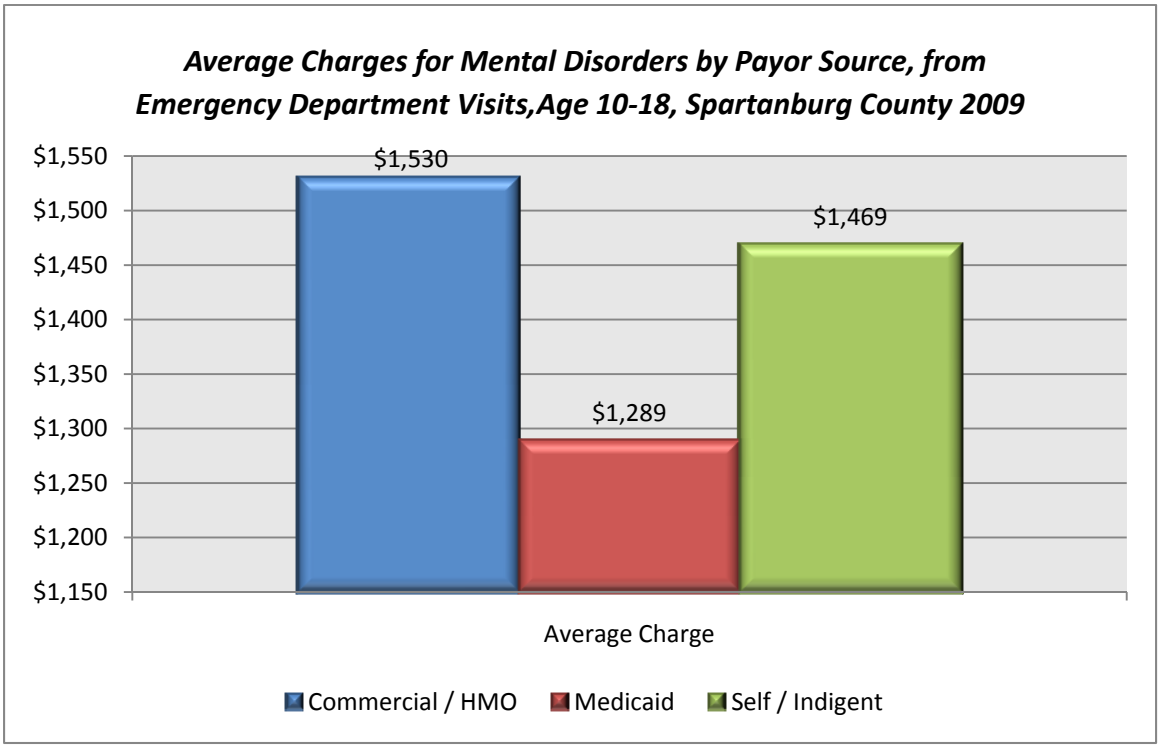
Diagnosis	# Discharges	Total Charges	Average charge
Alcohol dependence	NR**	NR	NR
Anxiety states	67	$55,324	$662
Drug dependence	NR	NR	NR
Nondependent drug use	35	$55,576	$1,588
Organic psychotic conditions	NR	NR	NR
Schizophrenic disorders	12	$32,687	$2,724
Other neuroses & personality disorders	13	$40,346	$2,044
Other psychoses	49	$107,151	$1,788
Other mental disorders	235	$345,700	$1,360
Total	416	$677,176	$1,417

*Includes 6 discharges to inpatient treatment

**data is not reported when numbers discharged equals less than 5

Of the total charges for children discharged from the Emergency Departments in Spartanburg County, 48% were billed to private insurance (commercial / HMO), 33% were billed to Medicaid, and 19% were billed to uninsured or indigent individuals. The average charge was highest for individuals covered by private insurance, and children covered by Medicaid had the lowest average charge.


Total Charges for Mental Disorders by Payor Source, from Emergency Department Visits, Age 10-18, Spartanburg County 2009
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
$326,302
$221,674
$127,067
Total Charge
Commercial / HMO
Medicaid
Self / Indigent


Average Charges for Mental Disorders by Payor Source, from Emergency Department Visits,Age 10-18, Spartanburg County 2009
$1,550
$1,500
$1,450
$1,400
$1,350
$1,300
$1,250
$1,200
$1,150
$1,530
$1,289
$1,469
Average Charge
Commercial / HMO
Medicaid
Self / Indigent

Sources:

S.C. Kids Count. (2010). *2009 South Carolina kids count report*. Retrieved from http://www.sckidscount.org/health09.php?COUNTYID=47

S.C. Budget and Control Board, Office of Research and Statistics. (2010). Health and demographics [Data file]. Available from Office of Research and Statistics Web site: http://ors.sc.gov/hd/default.php

TEEN CHILD BEARING

Teenage pregnancy is strongly associated with family poverty and reliance on child welfare systems. Children born of teenage mothers are significantly more likely to experience compromised health and well-being, including low education, low workforce readiness, and continued poverty.

National data indicate that teen pregnancy rates have decreased substantially over the last decade in South Carolina and across the country. In South Carolina, rates decreased by 14% between 1997 and 2007 overall; however, while rates between 1997 and 2003 decreased 22%, rates actually increased 10% between 2004 and 2007. The table below demonstrates that in Spartanburg County, the 2007 pregnancy rate among 15 to 17 year olds was the lowest it had been in ten years; however, the pregnancy rate for 18 and 19 year olds was almost the highest it had been in the same time period. Rates of teen pregnancy continue to be significantly higher among African Americans than among whites.

Teen Pregnancy, Spartanburg County: 1997, 2004, 2007

Total Number	1997	2004	2007	% change 2004-2007
Ages 10-19	756	624	690	+11%
Incidence Rate per 1,000	1997	2004	2007	% change 2004-2007
Ages 10-19	46.4	34.8	37.7	+8%
Black 10-19*	*60.6*	*45.8*	*55.9*	*+22%*
White 10-19	*40.6*	*29.9*	*29.9*	*0%*
Ages 15-17	60.9	40.9	38.7	-5%
Ages 18-19	125.4	114.9	122	+6%

* Includes African American pregnancies and a small number of pregnancies occurring among other minorities.

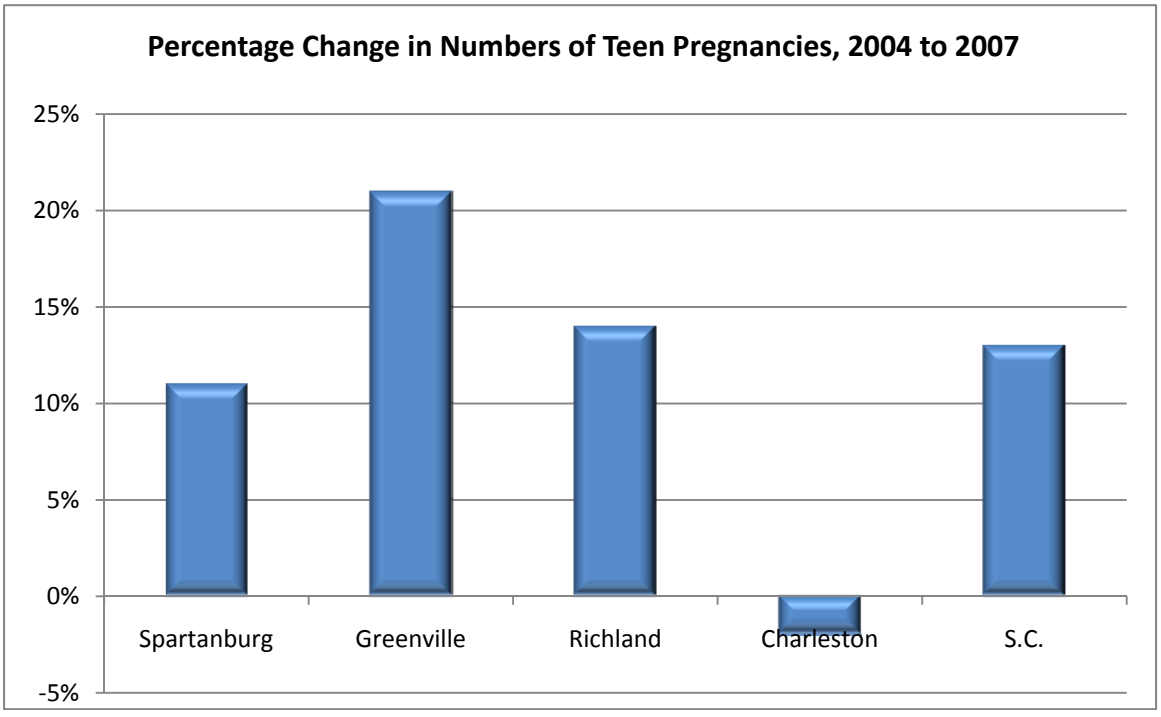
The teen pregnancy rate for Spartanburg County in 2007 was 37.7 (per 1,000 females). This exceeded the state teen pregnancy rate of 36.5, Charleston County's teen pregnancy rate of 33.7, Greenville

County's teen pregnancy rate of 34.7, and Richland County's teen pregnancy rate of 30.1. Taken alone, the 2007 data indicate that Spartanburg County has a higher teen pregnancy rate than peer counties and the state rate by age group for all three age groups.

2007 SC Teen Pregnancy Rates and Numbers by Age Group							
		Ages 10-19		Ages 15-17		Ages 18-19	
	Rank*	Number	Rate	Number	Rate	Number	Rate
Spartanburg	26	690	37.7	219	38.7	460	122.0
Greenville	33	977	34.7	331	38.2	621	107.6
Richland	40	805	30.1	274	29.3	511	82.0
Charleston	35	750	33.7	246	32.9	492	98.8
SC		10,754	36.5	3,401	36.5	7,154	115.1

*Counties are ranked in descending order by the rate of 10-19 year old pregnancies. Rankings are based on rates before rounding

The number of teen pregnancies increased in Spartanburg County by 11% between 2004 and 2007. Greenville County, Richland County and the state had higher numbers of teen pregnancies for the same time period, while numbers of teen pregnancies in Charleston County actually decreased.



The negative consequences of teen childbearing are magnified with repeat pregnancies. National data indicate that 20% of teen mothers will have a second baby within three years after the birth of their first baby. Based on 2004 data, Spartanburg County ranks 8th among the 44 South Carolina counties measured for repeat teen pregnancies. Peer counties fare better with Richland ranking 14th, Greenville ranking 15th and Charleston ranking 19th. Statewide, the rate of repeat teen pregnancies has remained stable over the past decade, as 29% of teen pregnancies in the state are among teens who have been pregnant in the past.

Hospital data from 2009 demonstrate that vaginal delivery with and without complicating diagnoses are the top two reasons for inpatient hospitalization for Spartanburg County residents, age 10-19. The third and fourth top diagnoses are for cesarean section. Together, these diagnoses account for almost 47% of hospitalization for this age group and results in significant expenditures by Medicaid, commercial insurance. There are also significant costs for patients who are self-pay or indigent. Number of discharges, charges and payor data are listed in the table below.

2009 Inpatient Discharges for Pregnancy and Birth, Spartanburg County Residents Age 10-19			
Number of Discharges	**Total Charges**	**Average Charges**	**Payor**
367	$4,481,301	$11,080	Medicaid
256	$3,108,481	$11,114	Commercial / HMO
55	$665,247	$11,166	Self / Indigent

Sources:

National Campaign to Prevent Teen and Unplanned Pregnancy. (2010). *Why it matters: Teen pregnancy, poverty, and income disparity*. Retrieved November 17, 2010 from, http://www.thenationalcampaign.org/why-it-matters/pdf/poverty.pdf

S.C. Budget and Control Board, Office of Research and Statistics. (2010). Health and demographics [Data file]. Available from Office of Research and Statistics Web site: http://ors.sc.gov/hd/default.php

South Carolina Campaign to Prevent Teen Pregnancy. (2008). *Fact Sheet: Repeat teen pregnancy.* Retrieved November 17, 2010 from http://www.teenpregnancysc.org/documents/2008_RepeatTeenPreg.pdf

South Carolina Campaign to Prevent Teen Pregnancy. (2009). *Making the connection, teen pregnancy and healthy children and families.* Retrieved November 17, 2010, from http://www.teenpregnancysc.org/pdf/MakingtheConnection_HealthyFamilies.pdf

South Carolina Campaign to Prevent Teen Pregnancy. (2009). *Simply stated…South Carolina teen pregnancy data trends – 2009.* Retrieved November 17, 2010, from http://www.teenpregnancysc.org/documents/SimplyStated_+2007newdata.pdf

South Carolina Campaign to Prevent Teen Pregnancy. (2009.) *Teen pregnancy prevention: Reinvest, refocus, recommit.* Retrieved November 17, 2010 from http://www.teenpregnancysc.org/documents/Reinvest+Refocus+Recommit+MAP.pdf

South Carolina Campaign to Prevent Teen Pregnancy. (2010). *2009 Update: Spartanburg County epidemiological profile*. Retrieved from http://www.teenpregnancysc.org/documents/Spartanburg+2009.pdf

TOBACCO USE

Results of the 2007 South Carolina Youth Tobacco Survey, indicate that 8.7 % of South Carolina middle school students smoke cigarettes, and 18.7 % of high school students smoke cigarettes. The same survey showed that white youths are much more likely than African-American youths to smoke and to use other tobacco products.

Data from the 2010 Communities That Care Youth Survey (see page 13) of 9th and 11th graders indicate that 5.7% (n = 299) smoke regularly, that 2.2% of smokers (n = 114) consume one or more packs per day, and that 3.7% (n = 192) use smokeless tobacco products regularly. Interestingly, fewer respondents indicated that they would absolutely not smoke marijuana as adults (73.2%), than respondents that indicated that they would absolutely not smoke tobacco (74.6%).

Sources:

Spartanburg Alcohol and Drug Abuse Commission. (2011, February). *Spartanburg County Communities that Care Youth Survey*. Report presented at the Mary Black Foundation, Spartanburg SC.

S.C. Kids Count. (2010). *2009 South Carolina kids count report*. Retrieved from http://www.sckidscount.org/health09.php?COUNTYID=47

S.C. Department of Health and Environmental Control Division of Tobacco Prevention and Control. (2008, November). *2007 South Carolina youth tobacco survey.* Retrieved from http://www.scdhec.gov/health/chcdp/tobacco/docs/ytsbook2007.pdf

IMMUNIZATIONS

There are four recommended adolescent vaccines: meningitis, human pappiloma virus (females), chickenpox (booster), and pertussis (booster). The SCDHEC tracks immunization rates for HPV vaccine

and meningococcal conjugated vaccine (MCV4); however the data are not complete or available at this time.

Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

ADULTHOOD

CHRONIC DISEASES

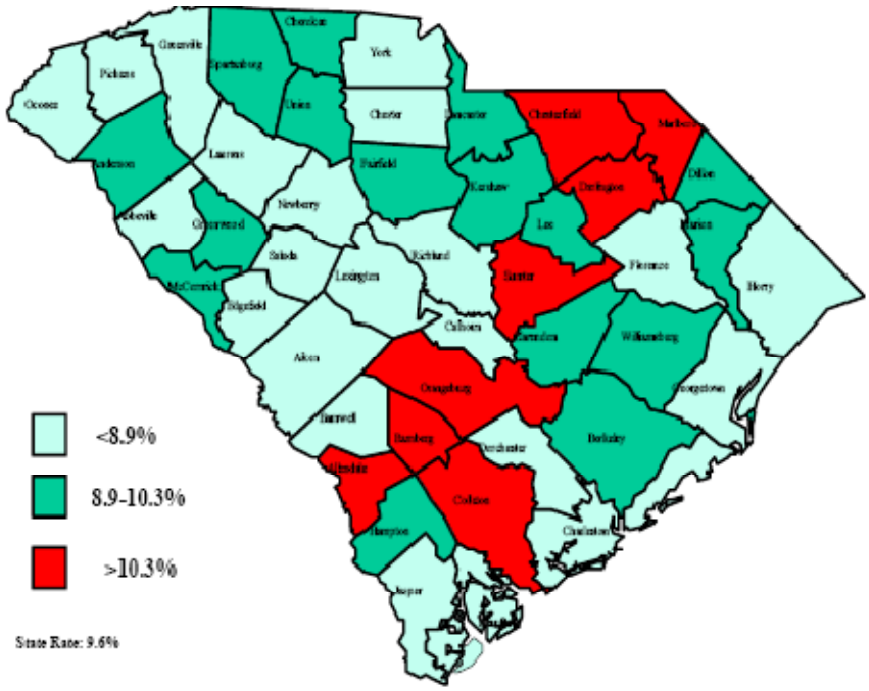
Diabetes

Diabetes is a group of metabolic diseases resulting from the body's inability to produce enough insulin, or because cells do not respond to the insulin that is produced. The result is high blood sugar that must be controlled by medication or strict dietary control. Uncontrolled diabetes can lead to many related health problems such as blindness, cardiac problems, strokes, kidney failure and amputations. Type 2 diabetes, resulting from insulin resistance, is often related to overweight and obesity. An estimated 20 million individuals, or 7.8 % of the U.S. population, live with type 2 diabetes. The Centers for Disease Control and Prevention (CDC) projects that the prevalence of diabetes in the U.S. will double or triple by 2050 to as many as one in three U.S. residents having the disease.

Among all U.S. states, South Carolina ranks 10th in cases of diagnosed diabetes, and the prevalence of the disease in the state is 9.6%. Including those who are undiagnosed, an estimated 300,000-350,000 residents of South Carolina live with diabetes. Diabetes is the seventh leading cause of death in South Carolina, with approximately 3,000 residents dying of the disease each year. One in every seven patients in a South Carolina hospital has diabetes, and hospital costs of the disease have increased by 50% in the past five years. In 2006, the total amount for hospital charges related to diabetes diagnosis in the state was $199.5 million, and the total direct and indirect costs of hospitalizations and emergency room visits were over $2.7 billion.

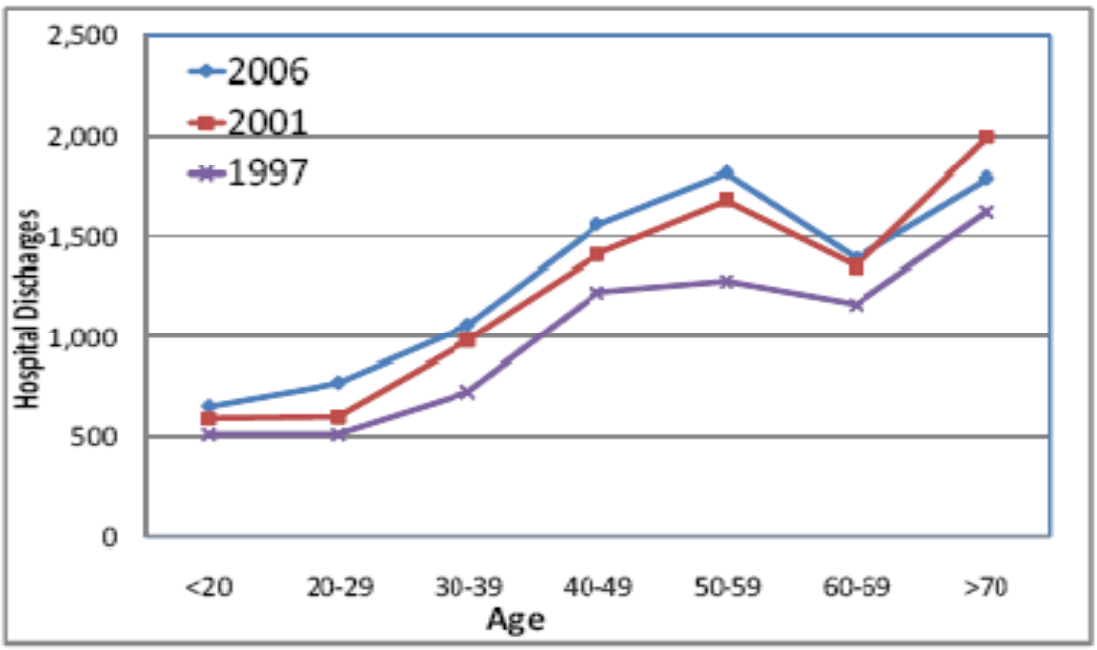
The 2007 prevalence rate of diabetes among Spartanburg County adults was between 8.9% and 10.3%.

Prevalence of Diabetes Among Adults, SC, 2007



Generally, the number of hospitalizations of persons with diabetes has been increasing for every age group in South Carolina.

Hospital discharges for patients with diabetes as primary diagnosis by age, SC, 1997, 2001, 2006



The prevalence of diabetes cases in Spartanburg County hospitals is substantially greater than the prevalence in hospitals throughout the state on average. The rate of visits to the emergency department and the rate of inpatient hospitalizations for black diabetics are higher than for white diabetics in Spartanburg County. Further, the death rate for black diabetics is substantially greater than for white diabetics. Hospital data for diabetes cases treated in South Carolina in 2008 are indicated below.

Diabetes Cases Treated in S.C. Hospitals, 2008, For Spartanburg County and State Total						
	SC Total	Spartanburg County Total	Spartanburg County by Select Demographic			
			Blacks	Whites	Males	Females
Prevalence (%)	10.1	18.7				
Number of hospitalizations	9,092	5,18	177	325	248	270
Crude rate of hospitalizations per 100,000 population	203	185	269	151	181	188
Median age of hospitalized patient	53	53	53	53	53	53
Total cost of hospitalizations ($)	237,990,000	21,288,700	6,862,700	13,865,300	10,588,500	10,700,200
Average length of hospital stay (days)	5	6	6	7	6	6
Number of ED visits	12,543	604	280	301	265	339
Crude rate of ED visits per 100,000 population	280	215	426	140	193	236
Median age of ED patients	53	53	53	53	53	53
Total cost of ED visits ($)	26,375,100	1,473,000	673,200	737,100	662,900	810,100
Number of deaths (2007)	1,230	96	23	73	46	50
Age-adjusted death rate (2007) per 100,000 population	26.2	32.3	49.1	29.6	38.7	28.2

Hypertension, Heart disease, and Stroke

According to the American Heart Association, one out of every three American adults has some form of cardiovascular disease (CVD). In 2006, South Carolina had the 17th highest death rate for CVD in the nation. In 2007, heart disease and stroke combined remained the leading cause of death in South Carolina, accounting for 29% of all deaths and more than 83,000 hospitalizations statewide.

The prevalence of hypertension cases treated in Spartanburg County hospitals is lower than the prevalence of cases treated in all state hospitals on average. Again, the rates of visits to the emergency department and inpatient hospitalization are substantially higher for blacks, as is the death rate for hypertension.

Hypertension Cases Treated in S.C. Hospitals, 2008, For Spartanburg County and State Total						
	SC Total	Spartanburg County Total	Spartanburg County by Select Demographic			
			Blacks	Whites	Males	Females
Prevalence (%)	33.2	29.7				
Number of hospitalizations	3,713	204	112	88	106	98
Crude rate of hospitalizations per 100,000 population	83	73	170	41	77	68
Median age of hospitalized patient	58	58	55	63	53	63
Total cost of hospitalizations ($)	93,705,500	8,504,700	4,213,500	4,090,300	4,028,400	4,476,300
Average length of hospital stay (days)	4	6	5	6	5	6
Number of ED visits	11,552	571	275	283	252	319
Crude rate of ED visits per 100,000 population	258	203	419	132	184	222
Median age of ED patients	53	53	48	58	53	58
Total cost of ED visits ($)	23,401,600	1,068.400	523,900	521,100	411,800	656,600
Number of deaths (2007)	405	22	8	14	9	13
Age-adjusted death rate (2007) per 100,000 population	8.7	7.1	16.2	5.4	6.9	7.4

The data differ somewhat for heart diseases cases treated in hospitals. Again, Spartanburg County's prevalence is lower than the state average; however, the rate of hospitalization is significantly higher for whites than for blacks, although the rate of visits to the emergency department is still substantially higher for blacks. The death rate for heart disease cases is also substantially higher for blacks.

Heart Disease Cases Treated in S.C. Hospitals, 2008, For Spartanburg County and State Total						
	SC Total	Spartanburg County Total	Spartanburg County by Select Demographic			
			Blacks	Whites	Males	Females
Prevalence (%)	4.6	3.3				
Number of hospitalizations	57,663	3,197	581	2,568	1,727	1,470
Crude rate of hospitalizations per 100,000 population	1,287	1,139	884	1,194	1,261	1,023
Median age of hospitalized patient	68	68	63	68	68	73
Total cost of hospitalizations ($)	2,664,788,200	183,860,100	28,940,000	152,273,000	104,667,400	79,192,700
Average length of hospital stay (days)	5	5	6	5	5	5
Number of ED visits	16,745	783	210	556	410	373
Crude rate of ED visits per 100,000 population	374	279	320	259	299	259
Median age of ED patients	63	63	58	63	58	63
Total cost of ED visits ($)	79,558,700	4,784,400	1,135,900	3,602,100	2,691,800	2,092,600
Number of deaths (2007)	8,983	522	103	414	280	242
Age-adjusted death rate (2007) per 100,000 population	192.7	176.3	226.8	166.4	228.9	135.2

For stroke cases treated in hospitals, again, Spartanburg County's prevalence is lower than the state aggregate. As with heart disease, the rate of hospitalization is higher for whites than for blacks, but so is the rate of visits to the emergency department. The death rate for stroke cases is also higher for whites.

Stroke Cases Treated in S.C. Hospitals, 2008, For Spartanburg County and State Total						
	SC Total	Spartanburg County Total	Spartanburg County by Select Demographic			
			Blacks	Whites	Males	Females
Prevalence (%)	3.2	1.7				
Number of hospitalizations	14,062	1,119	231	868	499	620
Crude rate of hospitalizations per 100,000 population	314	399	352	404	364	431
Median age of hospitalized patient	68	68	63	73	68	70
Total cost of hospitalizations ($)	484,134,800	45,549,700	10,067,500	34,612,100	19,196,100	26,353,600
Average length of hospital stay (days)	6	6	6	5	5	5
Number of ED visits	3,667	3,667	32	142	77	98
Crude rate of ED visits per 100,000 population	82	62	49	66	56	68
Median age of ED patients	68	68	68	68	68	68
Total cost of ED visits ($)	21,637,800	1,085,400	197,900	881,700	513,100	572,300
Number of deaths (2007)	2,460	159	22	131	62	97
Age-adjusted death rate (2007) per 100,000 population	53.3	54.6	46.2	53.2	54.6	53.2

Chronic Obstructive Pulmonary Disease (COPD) and Asthma.

Chronic Obstructive Pulmonary Disease (COPD) is one of the most common lung diseases that results in breathing difficulties. The two main forms of COPD, chronic bronchitis and emphysema, are characterized by narrowing of the airways that limits airflow to and from the lungs. COPD is most commonly caused by cigarette smoking, is usually non-reversible, and becomes progressively worse over time.

COPD Cases Treated in S.C. Hospitals, 2008, For Spartanburg County and State Total						
	SC Total	Spartanburg County Total	Spartanburg County by Select Demographic			
			Blacks	Whites	Males	Females
Number of hospitalizations	16,331	1,3887	234	1,141	506	881
Crude rate of hospitalizations per 100,000 population	365	498	356	531	369	613
Median age of hospitalized patient	63	53	58	63	68	63
Total cost of hospitalizations ($)	362,609,500	44,538,300	6,436,400	37,799,800	14,632,000	29,906,300
Average length of hospital stay (days)	5	5	5	5	4	6
Number of ED visits	43,676	2,067	789	1,190	950	1,117
Crude rate of ED visits per 100,000 population	975	736	1,201	553	693	777
Median age of ED patients	38	38	28	43	33	43
Total cost of ED visits ($)	73,861,300	3,593,000	1,112,500	2,388,500	1,577,600	2,015,400
Number of deaths (2007)	2,036	165	24	140	91	74
Age-adjusted death rate (2007) per 100,000 population	44.0	56.5	53.1	56.8	78.7	42.6

Asthma is a common chronic inflammatory disease of the airways, characterized by wheezing, shortness of breath, coughing, and chest tightness. Unlike COPD, asthma symptoms can be prevented by avoiding triggers such as allergens and irritants. Generally, with treatment, prognosis is good. Asthma data from Spartanburg County show that :

- Approximately 16,250 adults (7.6%) in the county suffer annually from asthma
- In 2008, there were 533 hospitalizations for asthma in the county for all ages
- Asthma / bronchitis is the leading cause of hospitalization in Spartanburg County for children under the age of 18
- $1,734,504 was charged in 2008 for hospital and ED visits in Spartanburg County for asthmatic children under 18 years old (Medicaid covered 41% of these charges)

Sources:

Boyle, J.P., Thompson, T.J., Gregg, E.W., Barker, L.E., & Williamson, D.F. (2010). Projection of the year 2050 burden of diabetes in the US adult population: Dynamic modeling of incidence, mortality, and prediabetes prevalence. *Population Health Metrics,* 8. Advance online publication. Retrieved October 26, 2010, doi:10.1186/1478-7954-8-29

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

S.C. Department of Health and Environmental Control. (2009, October). *Burden of diabetes in South Carolina, 2009 edition*. Retrieved October 1, 2010 from http://www.scdhec.gov/administration/library/CR-009477.pdf

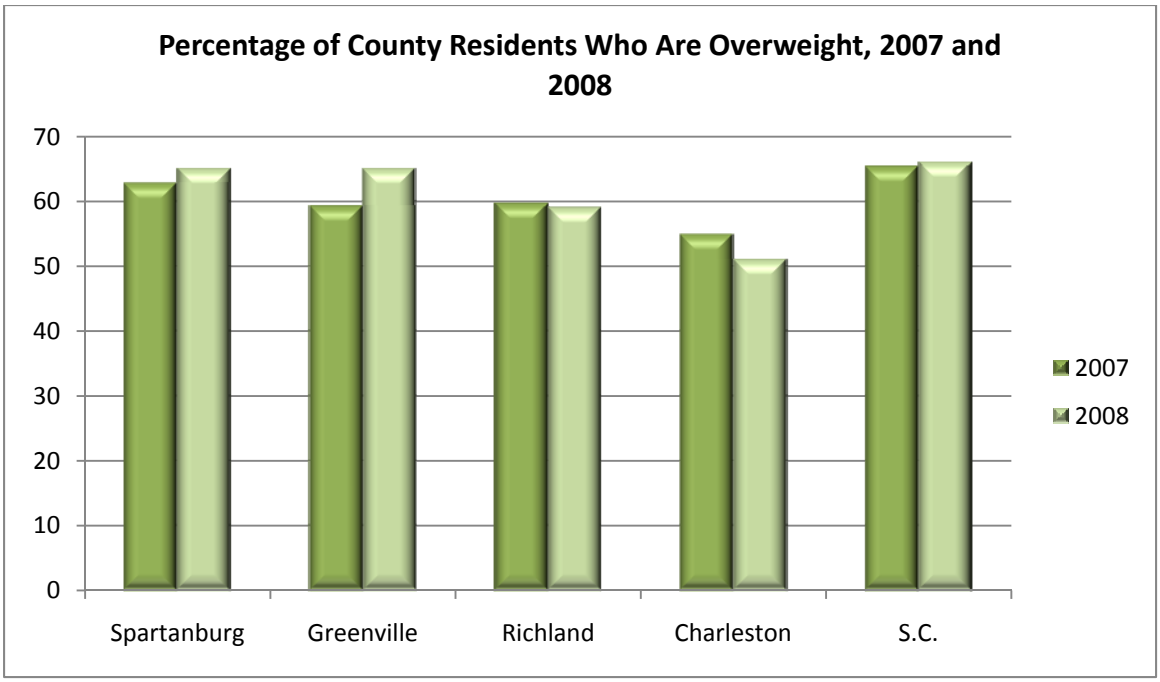
S.C. Department of Health and Environmental Control. (2010, Freburary). *Asthma in Spartanburg County 2008*. Retrieved from http://www.scdhec.gov/health/epidata/docs/asthma/Spartanburg.PDF

S.C. Department of Health and Environmental Control, Bureau of Community Health and Chronic Disease Prevention. (2010, February). *County chronic disease fact sheet.* Retrieved from http://www.scdhec.gov/hs/epidata/county_reports.htm

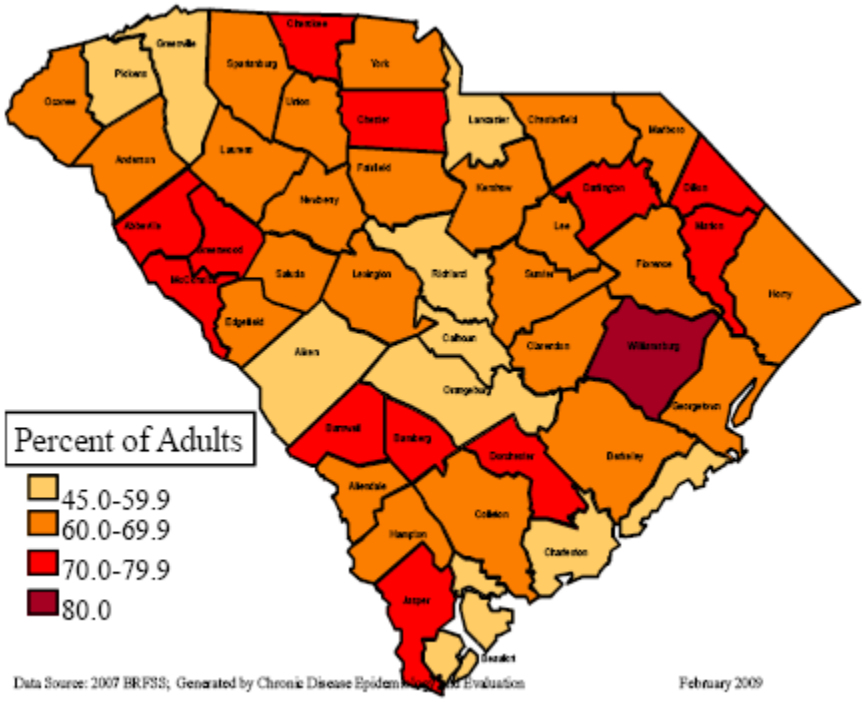
OVERWEIGHT AND OBESITY

Obesity is a major contributor to poor health outcomes in South Carolina. Being overweight or obese leads to serious chronic health conditions that significantly increase health care costs and decrease quality of life. Data released in 2009 by the Trust for America's Health and the Robert Wood Johnson Foundation indicated that adult obesity rates exceed 25% in 31 states and exceed 20% in 49 states and the District of Columbia. Two-thirds of American adults are either obese or overweight. South Carolina ranked 5th highest among states and the District of Columbia for rate of adult obesity, 2006-2008, with 29.7% of the adult population being obese.

According to 2008 BRFSS data, 65% of Spartanburg County adults are overweight or obese. This is only slightly under the state prevalence of 66%. Overweight increased in Spartanburg and Greenville Counties from 2007 to 2008, but decreased in Richland and Charleston. The same data show that sedentary lifestyle, another risk factor for chronic health conditions, has 28% prevalence in Spartanburg County, slightly higher than the state prevalence of 27%.

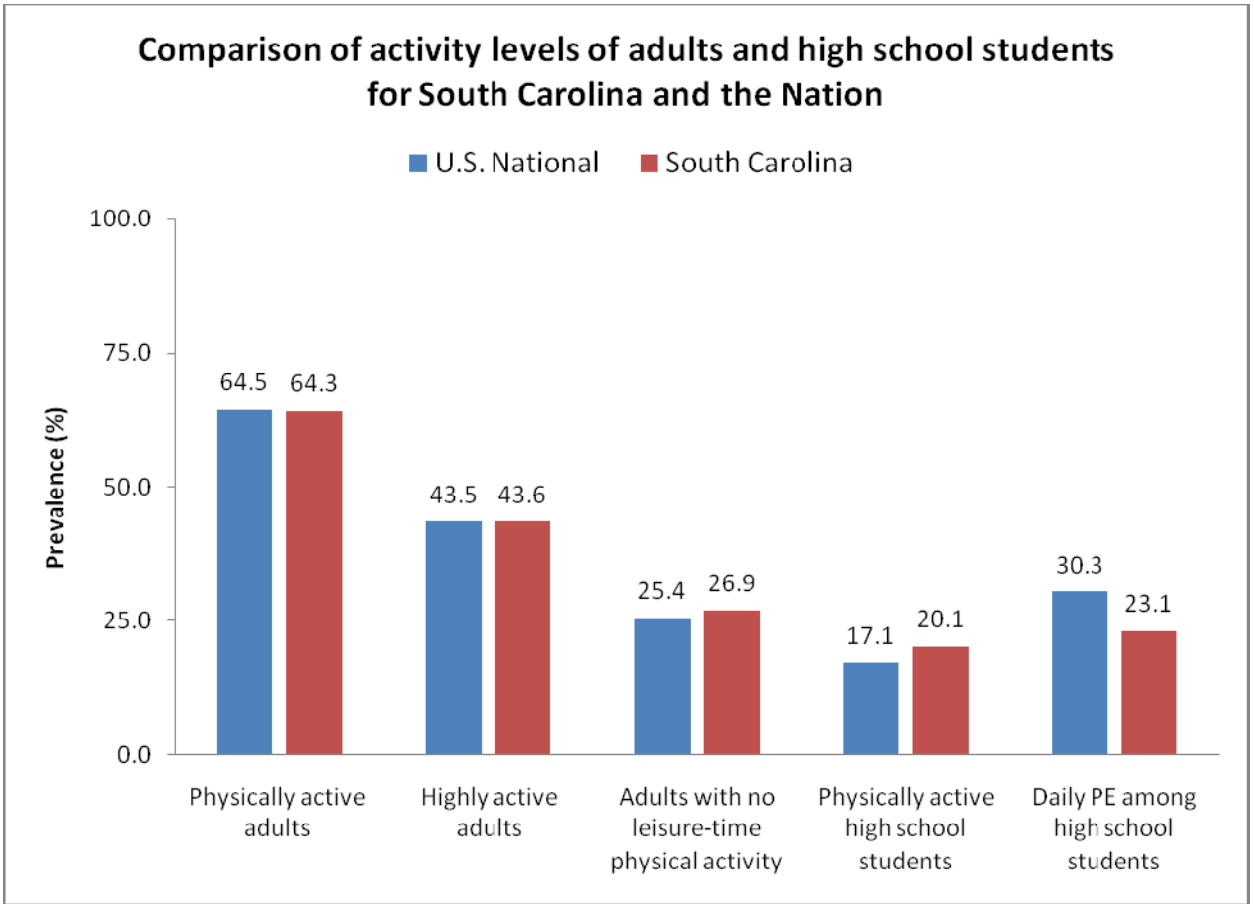


Prevalence of overweight and obesity in adults, 2007:



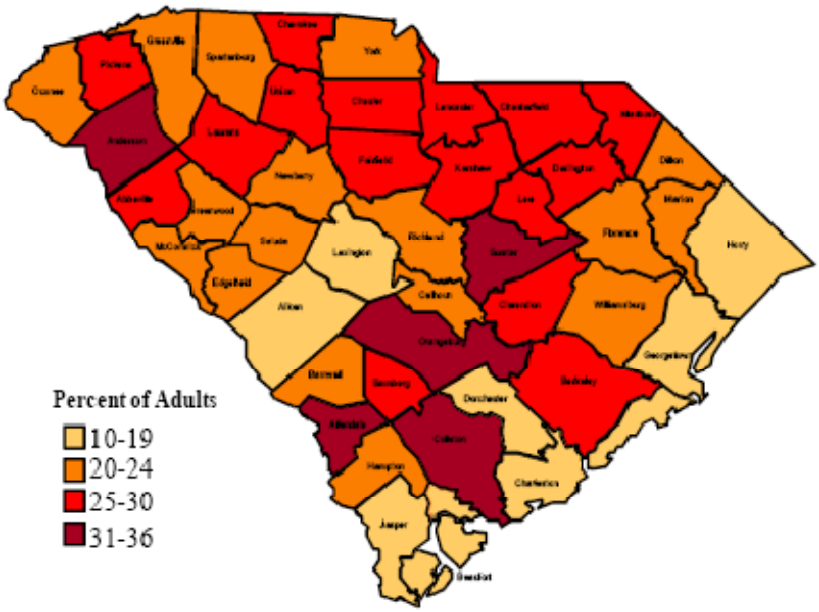
The 2010 County Health Rankings Project (a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin's Population Health Institute) reported that Spartanburg County's adult obesity rate was 30%, compared to the state rate of 29%.

The CDC's 2008 Physical Activity guidelines for Americans recommend that children should do at least 60 minutes or more of moderate or vigorous physical activity daily and adults should do at least 150 minutes of moderate intensity or 75 minutes of vigorous intensity physical activity per week, or an equivalent combination of the two. South Carolina residents indicate that they are as physically active as their national peers. The chart below shows self-reported activity levels of South Carolina residents compared with national peers from the 2007 and 2008 BRFSS and the 2007 YRBSS.



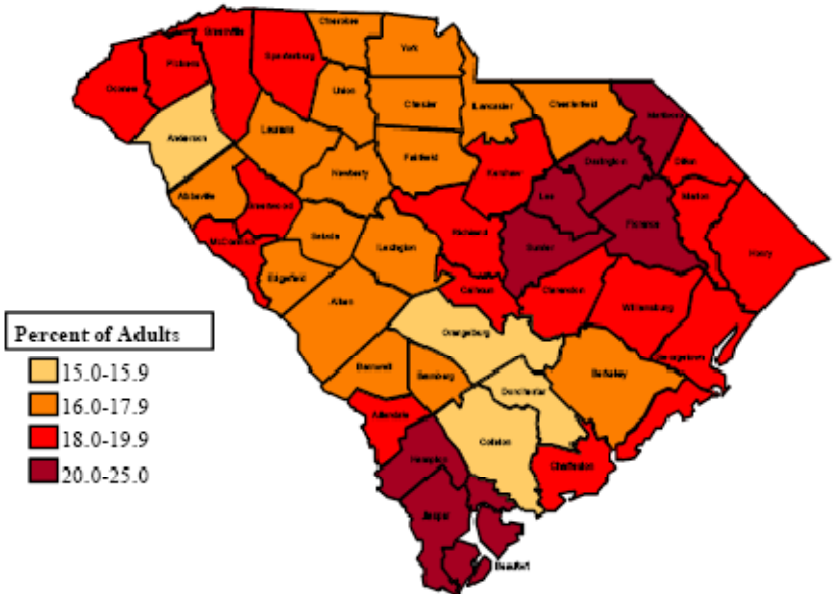
In Spartanburg County, 20-24% of adults consider themselves to be physically inactive.

Prevalence of physical inactivity among adult South Carolinians, 2007



In terms of dietary influence, between 18% and 20% of Spartanburg County residents consume less than the five recommended servings of fruits and vegetables each day. This may be exacerbated by the fact that most residents living within the City of Spartanburg and many residents living a number of municipalities within the county have limited access to grocery stores and, therefore, consume an imbalance of unhealthy foods to fresh foods.

Prevalence of SC adults who consume less than five fruits and vegetables per day, 2007



Sources:

Brady, K. (2009). *Spartanburg County community food assessment*. Spartanburg, South Carolina: University of South Carolina Upstate, Metropolitan Studies Institute.

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

S.C. Department of Health and Environmental Control. (2009, October). *Burden of diabetes in South Carolina, 2009 edition*. Retrieved October 1, 2010 from http://www.scdhec.gov/administration/library/CR-009477.pdf

S.C. Department of Health and Environmental Control, Bureau of Community Health and Chronic Disease Prevention. (2010, February). *County chronic disease fact sheet.* Retrieved from http://www.scdhec.gov/hs/epidata/county_reports.htm

Robert Wood Johnson Foundation. (2009, July). *F as in fat 2009: How obesity policies are failing in America.* Retrieved October 1, 2010 from http://www.rwjf.org/newsroom/product.jsp?id=45348

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (n.d.). *State Indicator report on physical activity, 2010 South Carolina action guide*.

IMMUNIZATION

Influenza and pneumonia are the 10th leading cause of death in South Carolina, claiming 728 residents in 2007. Influenza epidemics cause an average 36,000 deaths and more than 200,000 hospitalizations in the U.S. every year. The best way to reduce the effect of influenza is getting a flu shot every year. A vaccine for H1N1 flu became available in October 2009. Pneumonia, a bacterial infection in the lungs, is a common complication of the flu. A pneumococcal vaccine is recommended for people 65 and older. Most people need only one pneumococcal vaccine in a lifetime. Medicare Part B pays for both the flu and pneumococcal vaccines.

For Spartanburg County, 2008-2009 BRFSS data indicate that 62% of adult residents had not had a flu shot in the past 12 months. This is almost double the state rate of 32%. Likewise, 77% of Spartanburg county adults had never had a pneumonia vaccine, compared to the 33.8% state rate. County residents age 65 and over are more likely to be immunized, with 62.8% having had a flu shot in the past 12 months, and 60.9% having had a pneumonia vaccine.

The SC DHEC Division of Acute Disease Epidemiology monitors the incidence and prevalence of flu and flu-like symptoms throughout the state and provides weekly electronic updates in its Influenza Surveillance Weekly Report.

Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

S.C. Department of Health and Environmental Control, Bureau of Community Health and Chronic Disease Prevention. (2010, February). *County chronic disease fact sheet.* Retrieved from http://www.scdhec.gov/hs/epidata/county_reports.htm

S.C. Department of Health and Environmental Control, Division of Acute Disease Epidemiology, Influenza Surveillance Weekly Report: http://www.scdhec.gov/health/disease/acute/flu.htm

RISK FACTORS FOR CHRONIC HEALTH CONDITIONS

Approximately 80% of U.S. medical expenditures are related to chronic disease. The primary risk factors that contribute to the major chronic diseases and leading causes of death among South Carolinians are smoking, sedentary lifestyle, overweight, high cholesterol, and eating less than five fruits / vegetables per day. The table below provides a synopsis of BRFSS data by county for these factors for 2005, 2007 and 2008 (fruit and vegetable consumption is only available for 2007).

Prevalence of Risk Factors for Chronic Disease by County, 2005, 2006, & 2007

	Current Smoking	Sedentary Lifestyle	Overweight	High Cholesterol	Less Than 5 Fruits/ Vegetables per day
Spartanburg	2005: 23% 2007: 22% 2008: 13%	2005: 28% 2007: 26% 2008: 28%	2005: 65% 2007: 64% 2008: 65%	2005: 39% 2007: 39% 2008: 31%	2007: 81%
Greenville	2005: 21% 2007: 22% 2008: 23%	2005: 23% 2007: 23% 2008: 21%	2005: 58% 2007: 62% 2008: 65%	2005: 35% 2007: 41% 2008: 42%	2007: 81%
Richland	2005: 19% 2007: 19% 2008: 15%	2005: 21% 2007: 26% 2008: 25%	2005: 60% 2007: 64% 2008: 59%	2005: 38% 2007: 34% 2008: 41%	2007: 80%
Charleston	2005: 20% 2007: 23% 2008: 22%	2005: 25% 2007: 20% 2008: 21%	2005: 59% 2007: 61% 2008: 51%	2005: 38% 2007: 39% 2008: 44%	2007: 80%

S.C. Aggregate	2005: 22% 2007: 22% 2008: 20%	2005: 26% 2007: 25% 2008: 27%	2005: 65% 2007: 65% 2008: 66%	2005: 37% 2007: 39% 2008: 43%	2007: 81%

Note that smoking data from this source does not mirror smoking data reported on page 45.

BEHAVIORAL HEALTH

Mental Health

Local subject matter experts have identified lack of sufficient behavioral health care as being one of the critical public health issues in Spartanburg County. The Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS) found that Spartanburg residents report a slightly higher number of "mentally unhealthy" days than the state average - 3.8 per month vs. 3.6 per month. The 2008 Spartanburg County BRFSS results indicate that 37% of county residents missed work or other usual activities at least one day in the month prior to the survey due to mental condition or other emotional problems. Almost 20% of respondents missed between 8 and 30 days of work or other usual activities. However, 88% of 2009 Spartanburg respondents indicated that they are not receiving mental health treatment from a doctor or other health professional.

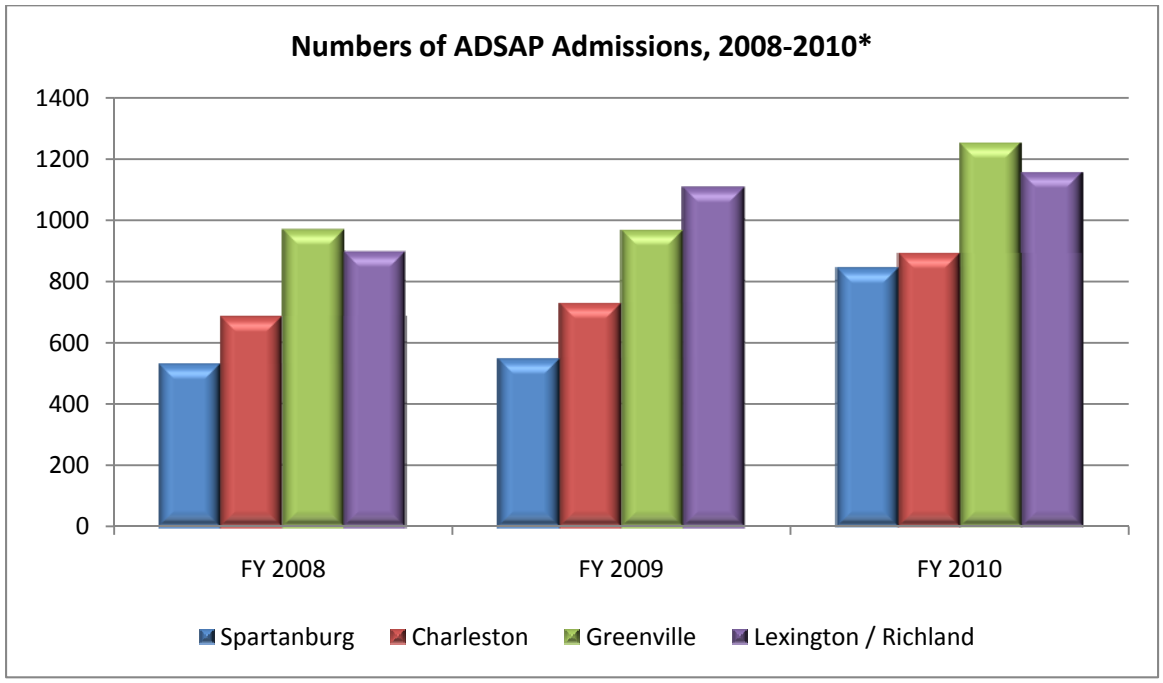
Many people, especially the uninsured, seek treatment for mental health conditions through hospital emergency departments. From there, some are admitted for inpatient treatment and some are referred to Mental Health Centers or other outpatient treatment providers. However, a significant proportion of persons in need of mental health treatment does not follow up or experience long waiting lists for treatment. These systemic issues support a repeating cycle of treatment seeking for acute conditions through emergency departments. In 2009, there were 4,308 visits to Spartanburg County emergency departments for behavior health issues. Total charges for these visits were $21,036,512. Of these 4,308 visits, 1,587 were for self-pay or indigent patients, accounting for $5,142,007 of total charges. In addition, Medicaid or Medicare visits accounted for $10,702,854 of total charges.

Frequently, mental health disorders are comorbid with abuse of alcohol and other drugs. In fact, estimated U.S. population lifetime prevalence rates are 22.5% for any non-substance abuse mental disorder, 13.5% for alcohol dependence-abuse, and 6.1% for other drug dependence-abuse. Among patients with an alcohol disorder, 37% have a comorbid mental disorder, and among patients with drug disorders, 53% have a comorbid mental disorder.

Addictions

In 2009 there were 123 visits for treatment in Spartanburg County hospital emergency departments for alcohol dependence syndromes, 41 for drug dependence, and 502 for nondependent use of drugs. The total charges for drug and alcohol related emergency department visits that did not result in inpatient admission was $2,048,688. An additional 42,941 in charges was incurred for patients who came through the emergency department and were subsequently admitted to inpatient treatment. Medicaid and Medicare paid for 151 of these visits, and 377 of these visits were by self-pay / indigent patients.

The South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS) provides assessment, education, intervention and treatment services through the Alcohol and Drug Safety Action Program (ADSAP). As of February, 2009, state law mandates that all individuals convicted of driving or boating under the influence complete a certified ADSAP. Numbers of persons admitted to ADSAP have increased in Spartanburg County and peer counties over the past three years.



*through September 2, 2010

Spartanburg County BRFSS data for 2008-2009 indicate that 99.5% of respondents reported that they had at least one alcoholic drink in the past month. Based on answers to a number of questions on the survey, 3.2% of respondents are characterized as being at risk for heavy alcohol consumption.

Sources:

Regier, D.A., Farmer, M.E., Rae, D.S., Locke, B.Z., Keith, S.J., Judd, L.L., et al. (1990). Comorbidity of mental disorders with alcohol and other drug abuse: Results form the Epidemiologic Catchment Area (ECA) study. *Journal of the American Medical Association*, 264(19), 2511-2518.

S.C. Budget and Control Board, Office of Research and Statistics. (2010). Health and demographics [Data file]. Available from Office of Research and Statistics Web site: http://ors.sc.gov/hd/default.php

South Carolina Department of Alcohol and Other Drug Abuse Services
http://www.daodas.state.sc.us/statistics.asp

S.C. Department of Health and Environmental Control, Health Services, Epidemiological Data and Reports: http://www.scdhec.gov/hs/epidata/brfss_index.htm

MORTALITY

For the year 2009, the average life expectancy for Spartanburg County is 74.4 years, compared to the national average of 76.5 years. Spartanburg County ranked 23rd out of the 46 South Carolina counties for mortality in 2009. Premature death is represented by the years of potential life lost before age 75 (YPLL-75). Every death occurring before the age of 75 contributes to the total number of years of potential life lost. For example, a person dying at age 25 contributes 50 years of life lost, whereas a person who dies at age 65 contributes 10 years of life lost to a county's YPLL. The YPLL measure is presented as a rate per 100,000 population and is age-adjusted to the 2000 U.S. population. The premature death rate for Spartanburg County in 2009 was 10,182.

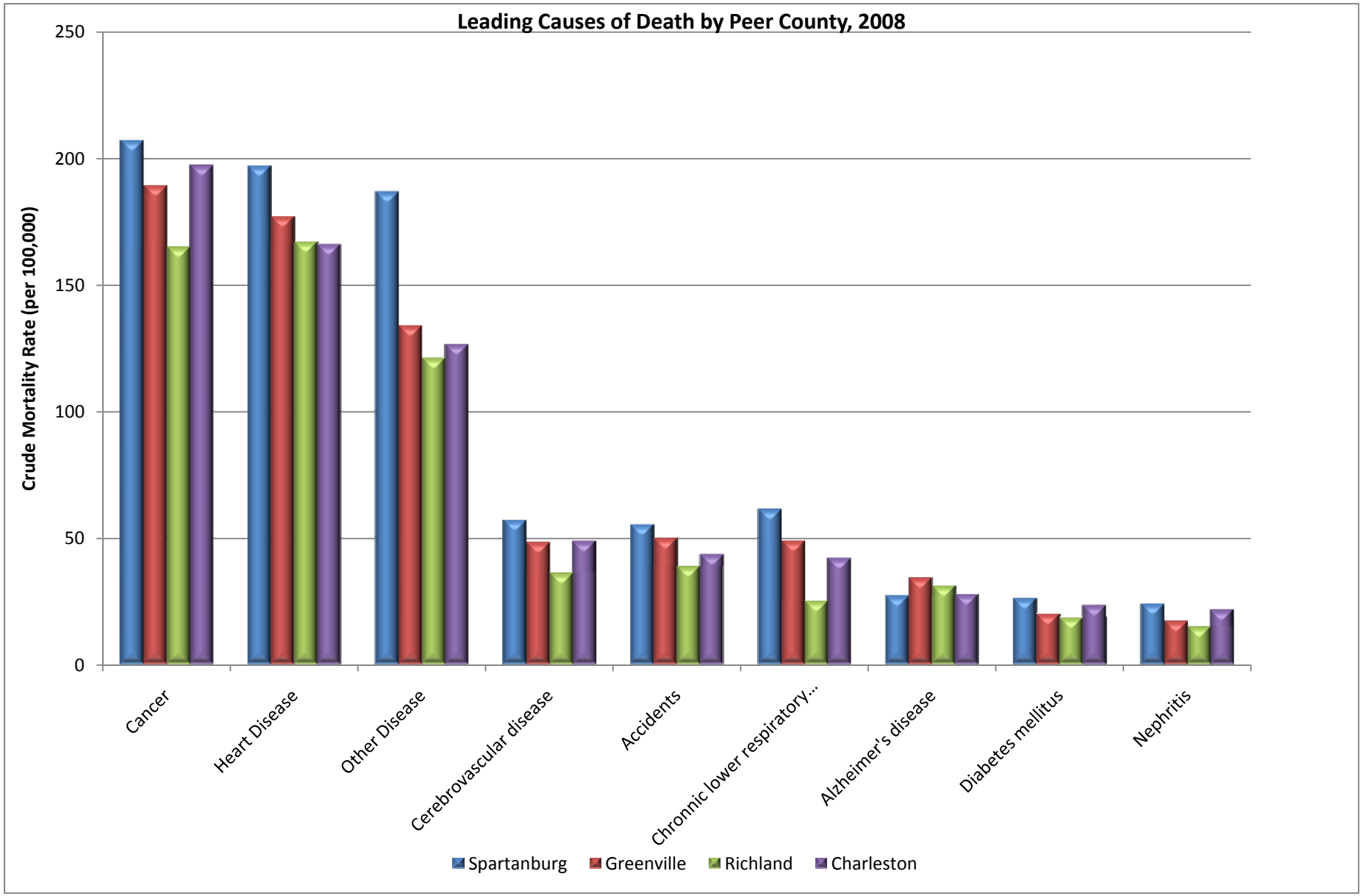
The national leading causes of death are listed in the table below with rates for Spartanburg County. These are reported by age class for Whites and Blacks where possible (where there are no available data, fewer than 20 deaths are documented). There are insufficient data to report for other ethnicities.

Spartanburg County Percentage Deaths for National Leading Causes of Death, 2009		
	White	Black
Under Age 1		
Complications of pregnancy / birth	36%	48%
Birth Defects	21%	12%
Ages 1-14		
Injuries	30%	Not available
Cancer	12%	Not available

Homicide	Not available	Not available
Ages 15-24		
Injuries	32%	16%
Homicide	Not available	42%
Suicide	Not available	Not available
Cancer	Not available	Not available
Ages 25-44		
Injuries	25%	10%
Cancer	16%	Not available
Heart Disease	11%	13%
Suicide	Not available	Not available
HIV / AIDS	Not available	12%
Homicide	Not available	13%
Ages 45-64		
Cancer	31%	27%
Heart Disease	23%	24%
Ages 65+		
Heart Disease	25%	24%
Cancer	20%	23%

.

The top ten leading causes of death by county and by frequency are reported in the table below. All peer counties share the top nine causes of crude mortality. Cancer, heart disease, and other diseases are the top three causes of death in all counties, but the other six causes vary by county in their order.


Leading Causes of Death by Peer County, 2008
Crude Mortality Rate (per 100,000)
250
200
150
100
50
0
Cancer
Heart Disease
Other Disease
Cerebrovascular disease
Accidents
Chronnic lower respiratory...
Alzheimer's disease
Diabetes mellitus
Nephritis
Spartanburg
Greenville
Richland
Charleston

Sources:

Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute County Health Rankings: http://www.countyhealthrankings.org

U.S. Department of Health and Human Services. (2010). Community health status indicators. Available from U.S. Department of Health and Human Services Web site: http://www.communityhealth.hhs.gov/SummaryMeasuresOfHealth.aspx?GeogCD=45083&PeerStrat=14&state=South%20Carolina&county=Spartanburg

BREAST FEEDING

For children born in South Carolina in 2007, 63.8% were breastfed at some point. At six months old, 29.6% of these babies were being breastfed, and at 12 months, 12.0% of these babies were being breastfed. This is lower than the U.S. average of 75.0%, 43.0% and 22.4%, respectively.

Sources:

Centers for Disease Control and Prevention
http://www.cdc.gov/breastfeeding/data/NIS_data/2007/state_any.htm

SEXUALLY TRANSMITTED INFECTIONS

According to DHEC for 2007, South Carolina ranks eighth among U.S. states and the District of Columbia for new AIDS cases. In 2006 and 2007, 1,568 people were diagnosed with HIV in South Carolina. Compared to the 2000-2001 period, there was a 16% decrease in cases diagnosed and reported in South Carolina. As of December 2007, 14,696 people have been reported living with HIV infection (including AIDS) who are residents of South Carolina. Of these, 10,144 are men and 4,552 are women. Most people (9,851) are ages 25 – 49; 179 are children and teenagers 13-19 years. The number of people living with HIV/AIDS in South Carolina has increased dramatically in the past 10 years for all races and both genders. The CDC ranking of AIDS rates for cases diagnosed in 2008 by metropolitan statistical area (MSA) shows that Columbia SC ranks seventh (186 or 25.6 per 100,000) among U.S. MSAs, Charleston ranks twentieth (106 or 16.5 per 100,000), and Greenville ranks fifty-fifth (58 or 9.3 per 100,000). (Spartanburg did not rank by this measure.)

Richland County ranks first in the state for cumulative diagnosis rates of AIDS through 2009. Charleston and Greenville Counties rank 10th and 25th, respectively. Spartanburg County ranks 29th.

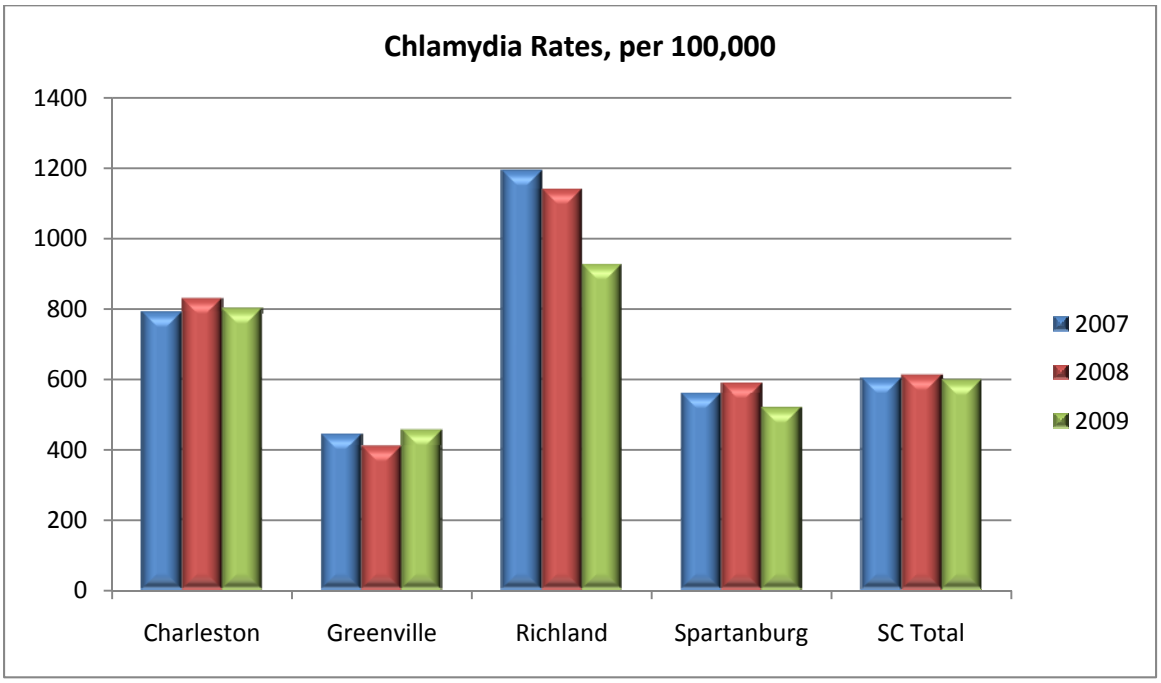
SC AIDS Cases Diagnosed by County					
	Cumulative through December 2009				2009 Only
	Cases	Cumulative Rate per 100,000	Rank of All SC Counties	Deaths	Rate per100,000
Charleston	1,749	526.9	10	917	17.2
Richland	2,870	824.2	1	1,230	31.6
Greenville	1,558	277.6	25	595	9.6
Spartanburg	657	242.4	29	323	7.4
Total	19,195	444.2	NA	9,002	14.7

Every 9.5 minutes someone in the U.S. is infected with HIV. The numbers of persons diagnosed positive for both HIV and AIDS is significantly higher. These numbers underrepresent the true prevalence of HIV and AIDS since 20% of people who are positive do not know they are infected. Again, peer counties rank higher than Spartanburg County on this measure.

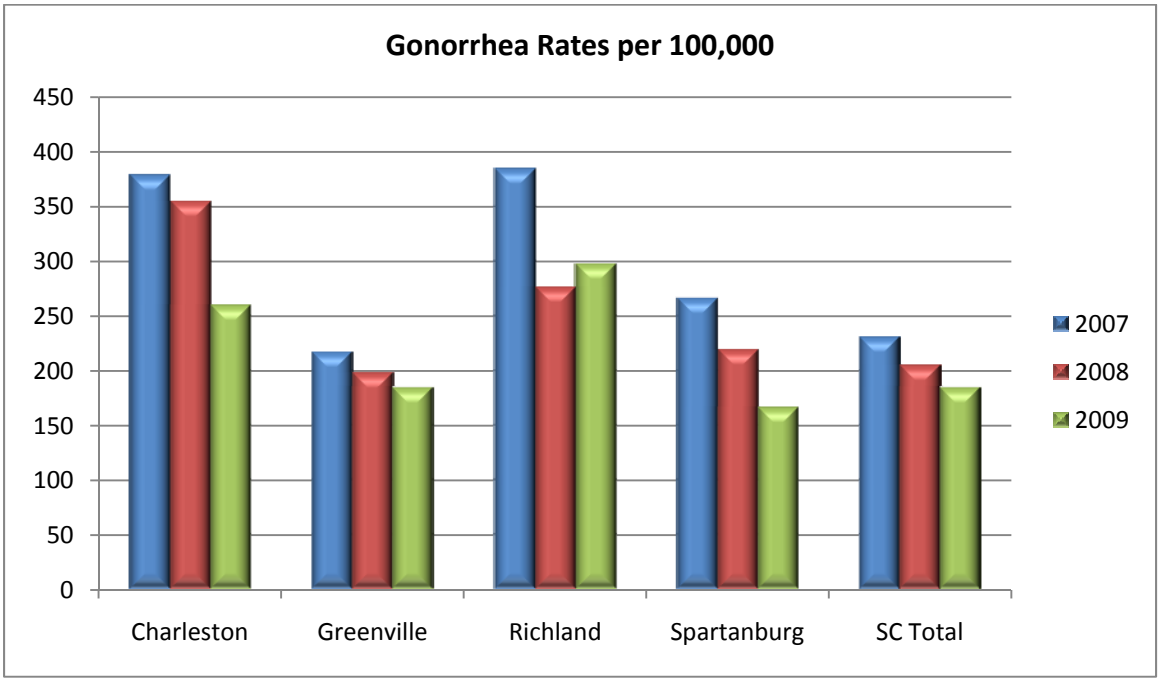
SC HIV /AIDS Cases Diagnosed by County					
	Cumulative through December 2009			2009 Only	
	Cases	Cumulative Rate per 100,000	Rank of All SC Counties	Cases	Rate per100,000
Charleston	2,818	849.0	7	84	25.3
Richland	4,563	1,310.4	1	154	44.2
Greenville	1,775	425.5	26	61	14.6
Spartanburg	972	358.6	31	31	11.4
Total	23,862	552.2	NA	771	17.8

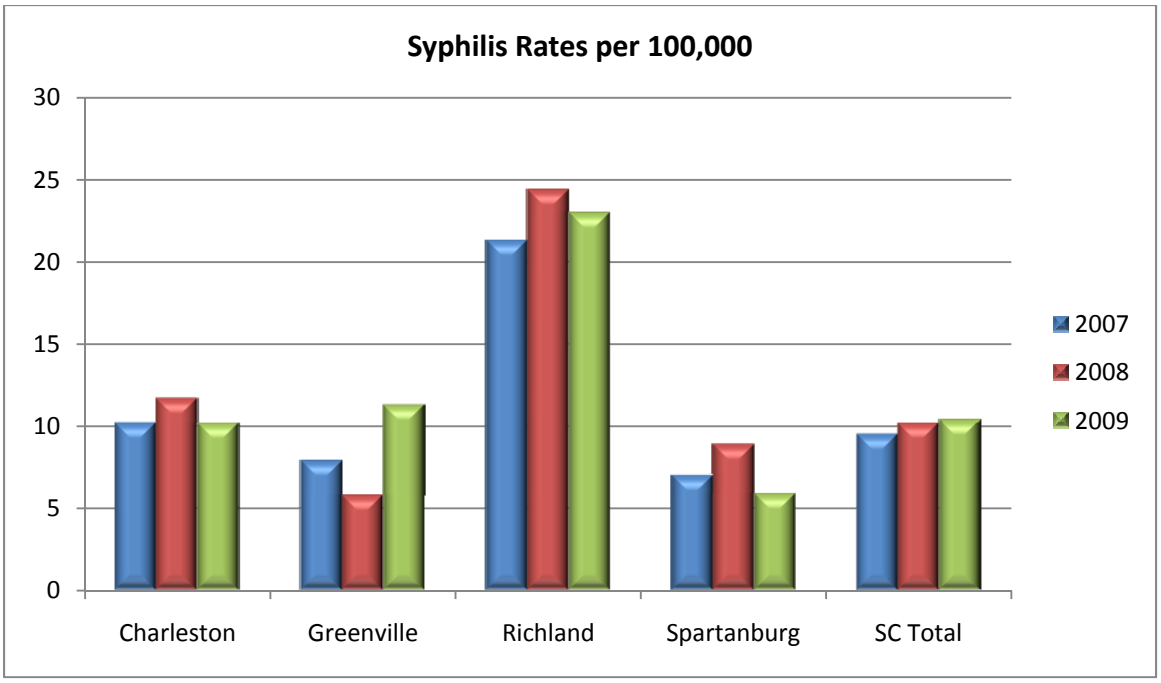
Chlamydia is the most common bacterial STI in North America and, as such, is a good indicator of the general prevalence of STIs. Any observed increases in reported chlamydia infections may be a result of increased screening and improved diagnostic tests, as well as true increases in disease. The Chlamydia

rate per 100,000 Spartanburg County residents is lower than the state average, Richland County rates, and Charleston County Rates. Among peer counties, Greenville has the consistently lowest chlamydia rates.



STIs in general are associated with a significantly increased risk of morbidity and mortality, including increased risk of cervical cancer, involuntary infertility, and premature death.





Sources:

Piedmont Care, Inc. http://www.piedmontcare.org/

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

SC Department of Health and Environmental Control. (2009). *South Carolina's STD/HIV/AIDS data surveillance report* . Retrieved October 20, 2010 from http://www.scdhe.gov/health/disease/sts/docs/December%202009.pdf

TOBACCO USE

Like obesity, tobacco use is a major contributor to poor health outcomes in South Carolina. Smoking causes heart disease, lung cancer, and other respiratory illnesses, other cancers and other negative health outcomes. In fact, tobacco use is the leading preventable cause of death and disease in the state. According to DHEC, the 2007 cost to the state due to smoking was in excess of $1 billion per year in health care expenses, and another $1.94 billion in lost productivity. DHEC recognizes smoke-free policies to be effective in combating tobacco exposure risk. The agency has developed model tobacco-

free policies tailored to schools, work places, recreational facilities, hospitals, and faith-based settings. As of 2009, four counties and 22 cities and towns in South Carolina had adopted smoke-free workplace ordinances.

According to 2008-2009 Behavioral Risk Factor Surveillance System (BRFSS) data, 30.1% of Spartanburg County adult residents smoke every day, and 12% smoke occasionally. This is comparable to the state rates of 32.6% and 12.8%. The table below reflects BRFSS smoking data for Spartanburg County by age and educational status. Young adults in Spartanburg County smoke at the highest rates, and smoking decreases as educational attainment increases.

2008-2009 Spartanburg County Smoking Data from BRFSS

		Smoke every day		Smoke some days		Don't smoke at all	
	County Total	Number	%	Number	%	Number	%
	398	109	30.1	48	12	241	57.9
18-24	5	4	65.4	0		1	35.6
25-34	19	8	26.7	3	13.9	8	59.4
35-44	52	19	32.4	9	12.1	24	55.5
45-54	77	36	41.8	13	18	28	40.2
55-64	100	25	23.7	12	11.9	63	64.4
65+	145	17	13.5	11	6.8	117	79.7
Less than HS	76	30	60	15	18.8	31	21.2
HS or GED	132	44	35.4	15	11.4	73	53.2
Some post HS	82	23	23.8	11	14.8	48	61.4
College Grad	107	12	8.9	7	6.5	88	84.6

In its 2007 *South Carolina Adult Tobacco Survey*, DHE reports a lower prevalence of adult smoking. Key findings included:

- 19.2% of S.C. adults are smokers (22% of males and 16.6% of females)
- Young adults, age 18-24, reported the highest smoking rate (26.1%), and rates declined as education and household income increased
- 80% of current smokers report smoking every day
- 45% of current smokers attempted to quit during the past 12 months

Smoking status impacts the local healthcare system and exacts a greater toll on healthcare dollars. In the 2010 fiscal year, 6,664 patients were seen in the Spartanburg Regional Health System Emergency Department as outpatients who had smoking-related diagnosis codes. These patients had 8,239 visits. When combined with the patients admitted to the hospital, smokers account for 28% of the total patient population. Total charges incurred were $22,025,105, or $2,673 per visit. This is nearly $1300 greater than the average charge of $1,405 per visit for patients who did not have a smoking related diagnosis code.

Sources:

S.C. Department of Health and Environmental Control, Division of Tobacco Prevention and Control. (2008). *The 2007 South Carolina adult tobacco survey: A statewide report.* Retrieved April 5, 2011 from http://www.scdhec.gov/health/chcdp/tobacco/docs/ATS2007report_Final_32010.pdf

S.C. Department of Health and Environmental Control, Health Services, Epidemiological Data and Reports: http://www.scdhec.gov/hs/epidata/brfss_index.htm

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

S.C. Department of Health and Environmental Control, Bureau of Community Health and Chronic Disease Prevention. (2010, February). *County chronic disease fact sheet.* Retrieved from http://www.scdhec.gov/hs/epidata/county_reports.htm

ACCESS TO HEALTHCARE

MEDICALLY UNDERSERVED AND HEALTH PROFESSIONAL SHORTAGE AREAS

For optimal public health, sufficient numbers of health professionals must be available to the population and distributed in a way that meets medical needs for ongoing care. The Primary Care Office of SC DHEC conducts ongoing evaluation of the state's communities to designate Health Professional Shortage Areas (HPSA) or Medically Underserved Areas (MUA). Although eligibility for the two designations is established using different criteria and data, designation as either one is used by more than 30 federal and state programs to establish eligibility for health services resources.

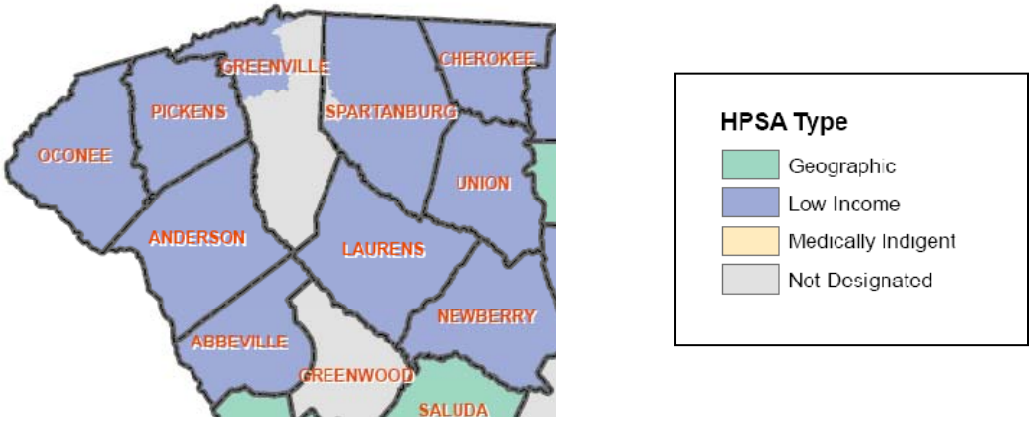
It should be noted that the Primary Care Office does not recommend using HPSA or MUA designations as a measure of access to health care, as designation may not reflect recent changes in a given health care system.

Most South Carolina counties have a shortage of health professionals. Health Professionals Shortage Areas are designated in terms of shortage for the total population, shortage for low income residents, or shortage of facilities. Medically Underserved Area designations are available for primary care only.

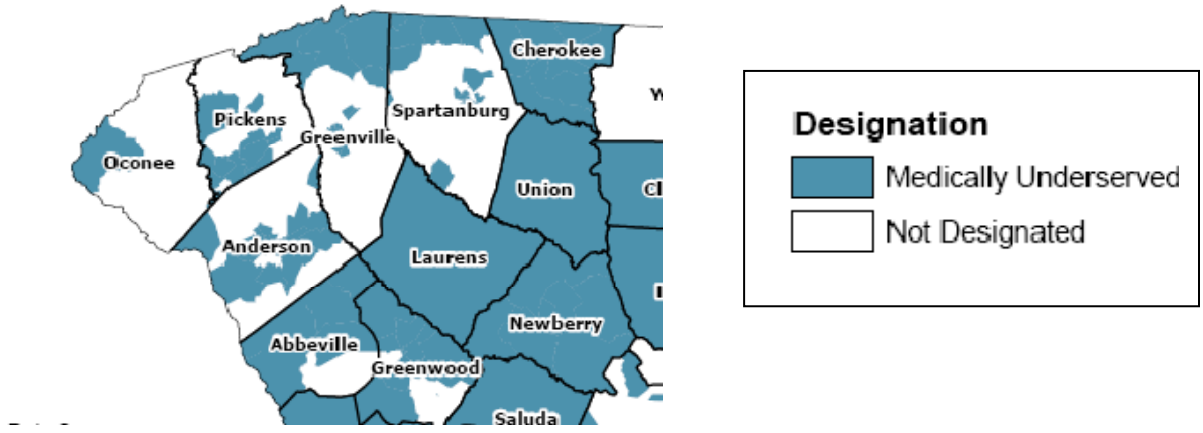
In 2009, the primary care physician to population ratio for Spartanburg County was 1:1,775. This was extremely close to the SC State ratio of 1:1,777 and was based on 2008 population estimates. Primary care physicians were defined as family/general practitioners, general internal medicine physicians, and general pediatricians.

As of June 2009, almost all of Spartanburg County was designated as a Primary Care HPSA for low income residents. Medically Underserved Area designations are available for primary care only. As of March, 2010 pockets of Spartanburg County, especially in the northern portion, were designated as medically underserved. Although the same area can be designated as a HPSA and a MUA, an area cannot be designated as both a geographic and low income population HPSA.

Primary Care Health Professional Shortage Areas in the Upstate by Type, as of June 2009



Medically Underserved Areas in the Upstate, designated as of March 2010



Sources:

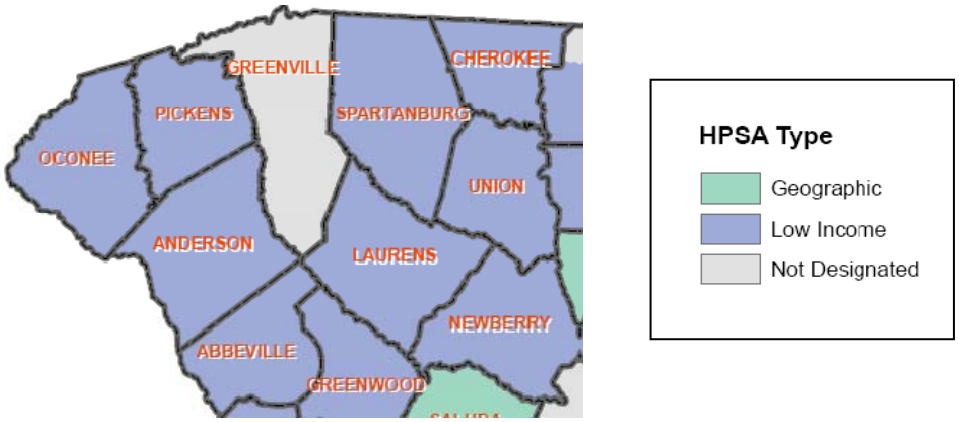
SC Department of Health and Environmental Control, Primary Care Office: http://www.scdhec.gov/health/opc/hpsa.htm#hpsa

DENTAL HEALTH CARE

Tooth decay is a chronic disease that affects people of all ages. Untreated decay can lead to poor nutrition, speaking problems, sleeping problems, and chronic pain. In adults, tooth decay has been associated with an increased risk for future tooth problems, heart disease and diabetes. It has been demonstrated that children with tooth decay experience increased academic problems.

As of June 2009, all of Spartanburg county was designated a Dental HPSA for low income residents. Further, local subject matter experts have identified the fragmentation and lack of dental care for low income uninsured residents as being one of the critical public health issues in Spartanburg County.

Dental Health Professional Shortage Areas in the Upstate by Type, as of June 2009



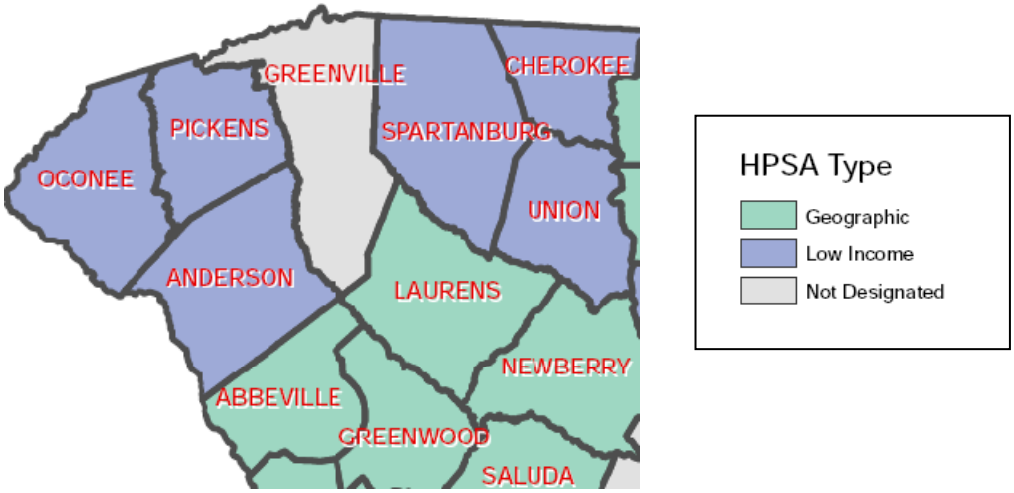
Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

SC Department of Health and Environmental Control, Primary Care Office: http://www.scdhec.gov/health/opc/hpsa.htm#hpsa

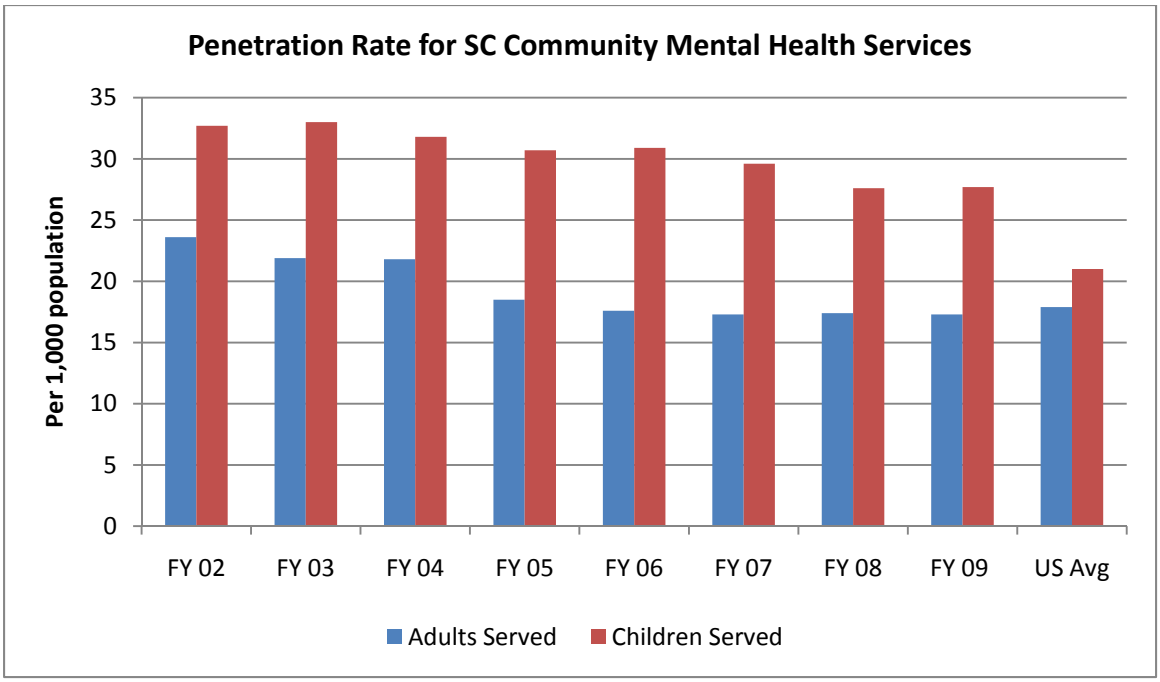
As of June 2009, all of Spartanburg county was designated a Mental Health HPSA for low income residents. Local subject matter experts have identified lack of sufficient mental health care as being one of the critical public health issues in Spartanburg County.

Mental Health Professional Shortage Areas in the Upstate by Type, as of June 2009

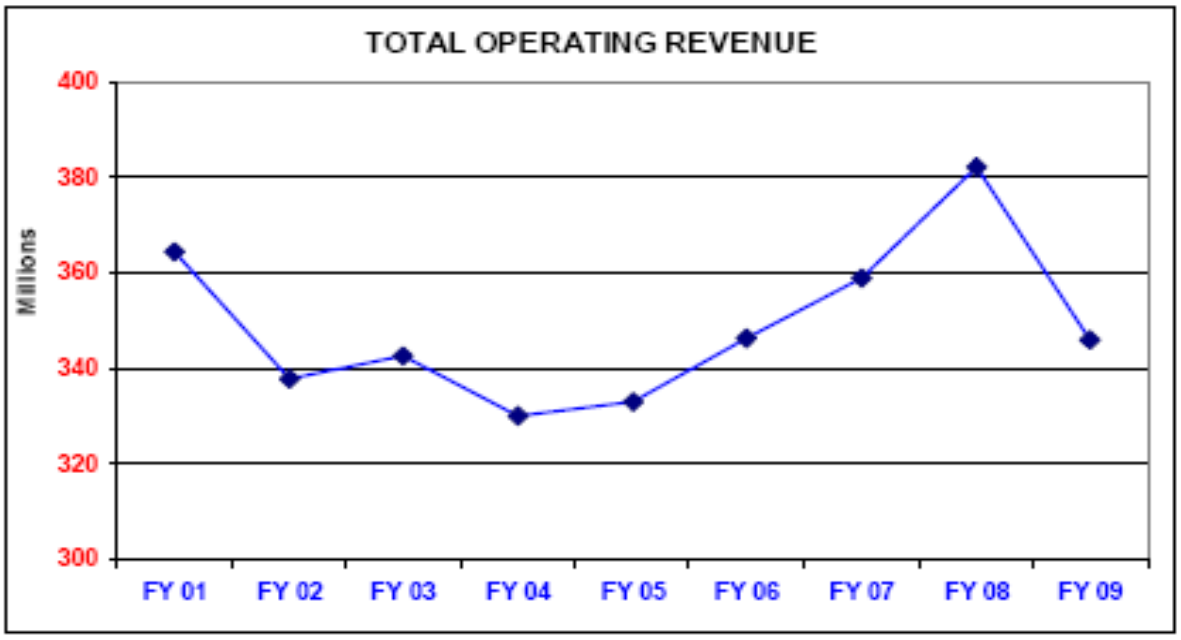


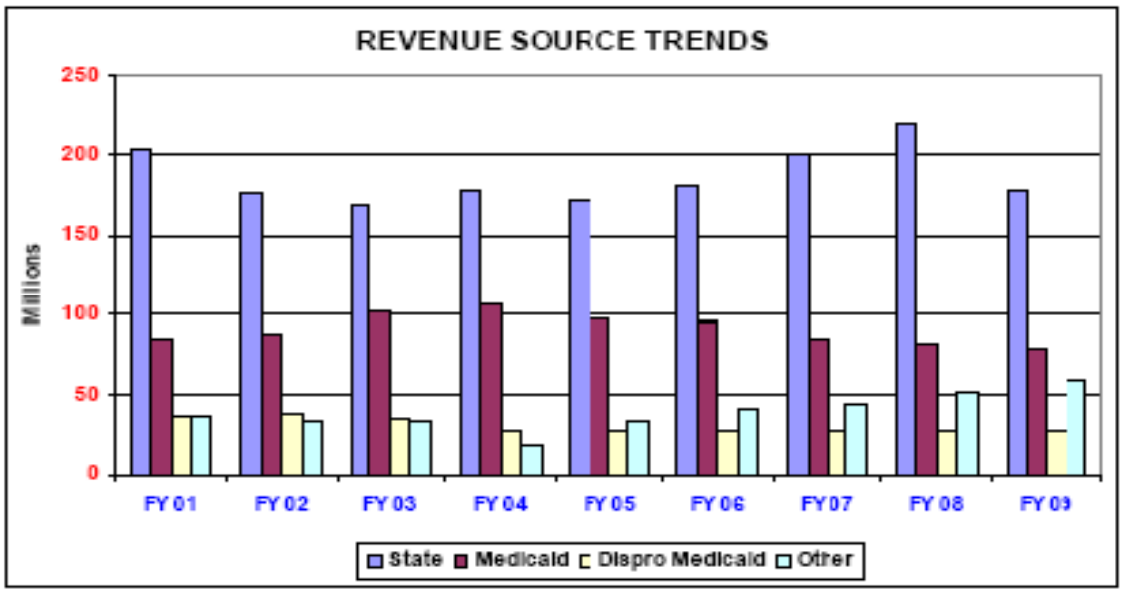
For low income uninsured residents of the county, the default provider of mental health services is the SC Department of Mental Health (SCDMH) through the Spartanburg Area Mental Health Center. Statewide, the SCDMH provides services is through 17 Community Mental Health Centers and sixty-four mental health clinics. In order to provide better access to children and families, mental health staff is out-stationed in almost half of all SC public schools, and a number of county DSS offices and emergency rooms. Some programs provide case management and treatment in the client's home.

The SC DMH reports a decrease in "penetration rate", the extent to which the department reaches adults and children who need mental health services, over the last several years. In 2002 the Department served 23.6 adult state residents per 1,000 residents. In 2009, the Department served 17.9 adults per 1,000 residents. Reportedly, this reflects the Department's priority of services to the populations most in need through reduced services to persons who are not severely mentally ill, and increased services to those who are seriously, severely, and persistently mentally ill.



Total DMH operating revenue has fluctuated 2001 to 2009, and revenue sources have shifted. Services in Spartanburg County are affected by these funding issues and shifts in service priority.





Sources:

SC Department of Health and Environmental Control, Primary Care Office: http://www.scdhec.gov/health/opc/hpsa.htm#hpsa

South Carolina Department of Mental Health. (2009). *Accountability report FY 2009*. Retrieved from http://www.state.sc.us/dmh/09_accountability_report.pdf

SAFETY NET PROVIDERS

Spartanburg County has an estimated 29,000 residents ages 19-64 who are living at or below 150% of Federal Poverty Level (about $16,000 yearly gross income for an individual or $33,000 for a family of four), and who are living without health insurance. For those with chronic health conditions such as diabetes and high blood pressure, lack of ability to access (and pay for) medical care often results in exacerbation of conditions leading to acute events that are treated in the local hospital emergency departments at high cost. For those with emerging and acute healthcare needs the same holds true.

It is the mission of local healthcare "safety net" providers to serve low income uninsured residents by providing services in ambulatory settings so that chronic conditions are treated and costly emergency department visits are avoided. These providers include ReGenesis Federally Qualified Health Care Center (FQHC), St. Luke's Free Clinic, and the Family Medicine Residency Program at Spartanburg Regional Hospital. In addition, AccessHealth Spartanburg, launched in July 2010, provides case management, navigation and connection to needed medical services for county residents ages 19-64 who live at or below 150% of Federal Poverty Level.

According to the National Association of Community Health Centers, FQHCs provide care at a cost of 41% less than equivalent care provided in other settings, saving the health care system between $9.9 billion and $17.6 billion each year. Much of these savings come through reduced uncompensated care and less cost to Medicaid and the State Children's Health Insurance Programs. Providing services in an ambulatory setting avoids costly emergency department visits, preventable illnesses, and debilitating complications from untreated chronic conditions.

Reducing health inequities is a notable outcome of FQHCs. In addition to the economic impact of health centers, health outcomes of those served by FQHCs are often improved relative to similar populations not served by a health center. For example, communities with health centers have 10% lower infant mortality rates than similar communities not served by health centers.

In 2009, ReGenesis served 9,000 patients, most of whom were between ages 20 and 64. Patients listed home addresses in 91 different zip codes. The total cost of providing medical services was $4,469,085. The total cost of providing mental health and pharmaceutical services was $90,588.

As of the summer of 2010, St. Luke's Free Medical Clinic had a patient load of 1,600 and was serving 10-15 new patients each week utilizing a largely volunteer medical staff.

Sources:

Brady, K. (2010). *The ReGenesis project: Environmental justice for Spartanburg*. Spartanburg, South Carolina: University of South Carolina Upstate, Metropolitan Studies Institute.

National Association of Community Health Centers. (2007, August). *Access granted: The primary care payoff.* Washington, DC.

BARRIERS TO HEALTH

HEALTH DISPARITIES AND INEQUITIES

The National Institute of Health defines health disparities as "differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States". Health disparities occur when one group experiences unequal burdens of disease. Sometimes, disparities occur when one group has a certain biological predisposition to additional burden for a specific condition or disease as in the case of Tay-Sachs disease among people of Eastern European Jewish ancestry or sickle cell anemia among people of African or

Mediterranean descent. However, when disparities result from unfair or avoidable conditions, health inequity exists. Often, these inequities are born of particular social determinants of health such as income, employment, exposure to toxic conditions, lack of social support, discrimination, or access to healthy food.

Sources:

U.S. Department of Health and Human Services, National Institute of Health: http://www.nih.gov/

S.C. Department of Health and Environmental Control Office of Minority Health: http://www.scdhec.gov/health/minority/disparities.htm

DISPARITIES BY CONDITION BY RACE / ETHNICITY

When compared to whites, minorities experience a disproportionate share of negative health outcomes. Some findings for South Carolina include the following.

- The 2007 infant mortality rate among black populations of 13.8 deaths per 1,000 live births is 2.3 times greater than the white infant mortality rate of 6.0 deaths per 1,000 live births.

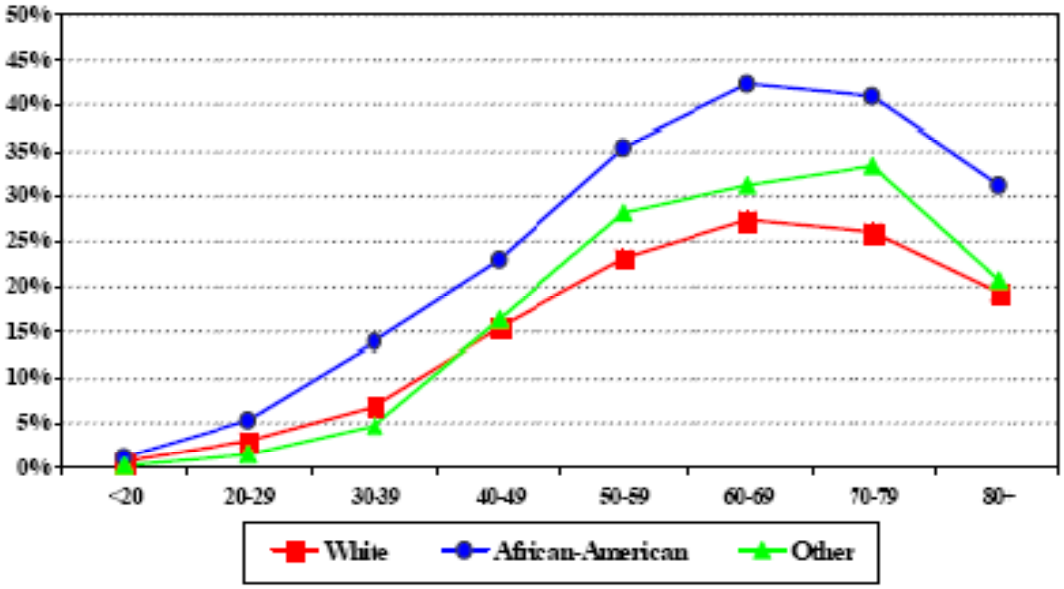
- The death rate for diseases of the heart for South Carolina's Blacks in 2007 was 236.5 per 100,000, compared to 180.3 for whites, a difference of 31 %.

- According to 2006 South Carolina data, cervical cancer is the 6th most commonly diagnosed cancer among African-American women and the 14th most commonly diagnosed cancer among white women, excluding miscellaneous cancers. While the overall trend for cervical cancer mortality is decreasing, it is two times higher in African-American women than in white women.

- More than seven out of every 10 newly diagnosed HIV infections in South Carolina occur among Blacks, even though Blacks only represent a third of South Carolina's population. The rate of people living with HIV/AIDS per 100,000 was almost six times higher for African-American males than for white males, and close to 12 times higher for African-American females than white females.

- Minorities, especially blacks, experience a substantially higher death rate from diabetes than whites. Hospitalization rates for renal failure are more than double among blacks when compared with whites. However, the racial disparity in prevalence is narrowing, primarily because the prevalence of diabetes in the white population is increasing.

Proportion of Hospitalizations with diabetes of all hospitalizations by race –age 2006



Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

S.C. Department of Health and Environmental Control. (2009, October). *Burden of diabetes in South Carolina, 2009 edition*. Retrieved October 1, 2010 from http://www.scdhec.gov/administration/library/CR-009477.pdf

DISPARITIES BY SOCIOECONOMIC STATUS

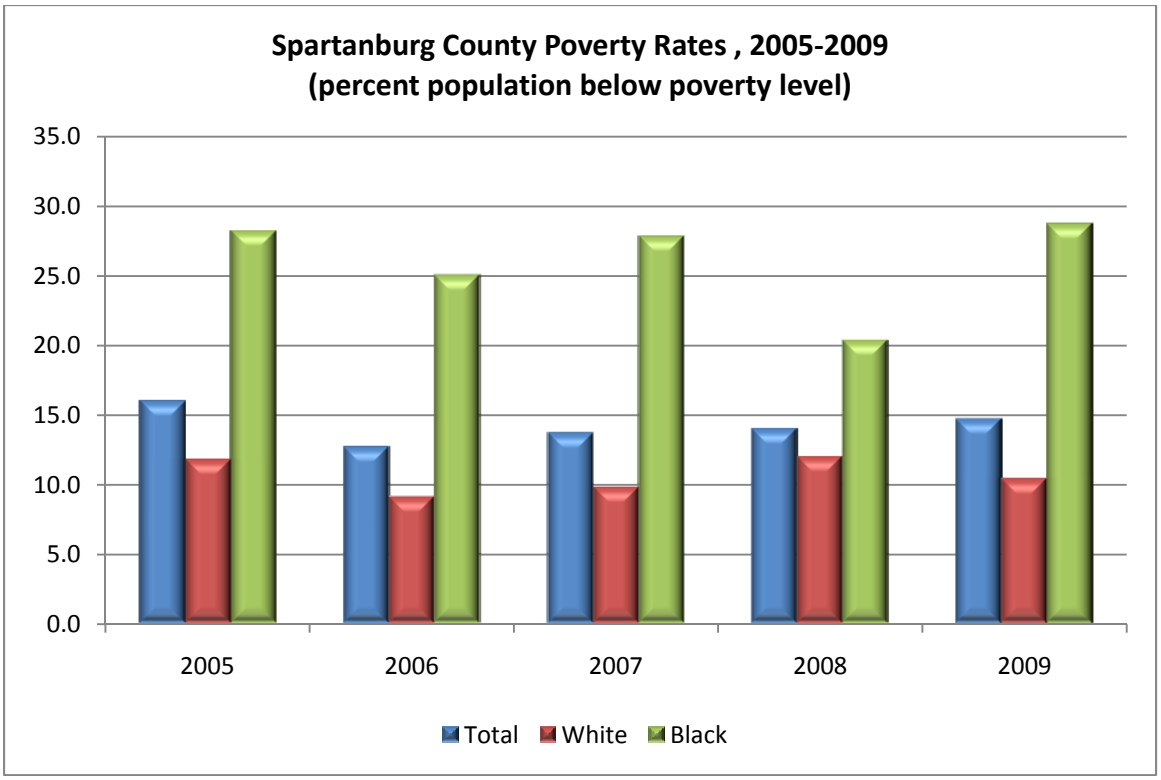
One of the strongest and most consistent predictors of morbidity and mortality is socioeconomic status (SES). Results of a 1992 study (Winkelby, Jatulis, Frank & Fortmann) found that socioeconomic predictors of health persist across all diseases with few exceptions, continue through the lifespan, and extend across numerous risk factors for disease. SES includes financial, occupational and educational influences. Of these influences, education is the strongest and most consistent predictor of health. Studies reported in the related literature confirm that, when the relative impact of each dimension of socioeconomic status is quantified, it is education, rather than income, occupation, or a composite of dimensions, that is the strongest predictor of health. Hypotheses suggest that education facilitates the acquisition of positive social, psychological, and economic skills and assets that have health impacts beyond those realized through income alone. These assets include positive attitudes about health,

access to preventive health services, membership in peer groups that promote positive health behaviors, and higher self-esteem and self-efficacy.

Spartanburg County is at greater risk for poor health outcomes due to the low population educational attainment.

Educational Attainment, Spartanburg County Residents Age 25 and over						
	Spartanburg County		South Carolina		United States	
	2005-2007	2006-2008	2005-2007	2006-2008	2005-2007	2006-2008
% High School Grad and Higher	78.1	78.5	81.4	82.1	84.0	84.5
% Bachelor's Degree and Higher	18.6	19.9	22.8	23.2	27.0	27.4

Because educational level is a strong predictor of income level, it follows that there is a strong correlation between income and health status. The official U.S. poverty rate in 2009 was 14.3%, up from 13.2% in 2008. This was the second statistically significant annual increase in the poverty rate since 2004 and was the highest poverty rate since 1994. The 2009 poverty rate for South Carolina was 17.1%, up from 15.7% in 2008. The counties within the state with the lowest population density tend to have the highest poverty rates. The 2009 poverty rate for Spartanburg county was 14.7%, up from 14.0% in 2008. Poverty rates continue to be higher for minorities. The 2009 poverty rate for Black or African Americans in Spartanburg County was 28.8%, up from 20.4% in 2008.



Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

U.S. Census Bureau (2010, September). *Income, poverty, and health insurance coverage in the United States: 2009*. Retrieved October 30, 2010 from http://www.census.gov/prod/2010pubs/p60-238.pdf

Winkleby, M.A., Jatulis, D.E., Fank, E., & Fortmann, S.P. (1992). Socioeconomic status and health: How education, income, and occupation contribute to risk factors for cardiovascular disease. *American Journal of Public Health, 82*, 816-820.

DISPARITIES BY GEOGRAPHY

Rural areas generally have higher rates of uninsured, as well as higher proportions of residents who receive Medicaid or Medicare. Residents in rural communities are also at added risk of poor health outcomes. In addition, residents of rural areas often have low income, placing them at added risk. For example, although South Carolina has experienced improvement in children's overall oral health status, the burden of oral disease disproportionately affects some children more than others. Black children

who were participating in free and reduced lunch programs and living in rural communities were most likely to have untreated tooth decay.

Twenty-seven percent of the state's residents reside in rural or very rural counties; however, Spartanburg County is classified as an urban county (even there are many rural "pockets" in the county).

Sources:

S.C. Department of Health and Environmental Control. (2009). *Healthy people living in healthy communities: 2009 report on the health of South Carolina's people and environment*. Retrieved October 20, 2010, from http://www.scdhec.gov/administration/library/ML-006048.pdf

INSURANCE COVERAGE

COVERAGE RATES

According to 2008 Census Bureau estimates, 19.9% of South Carolinians under age 65 have no health insurance. This places the state at 14th highest among U.S. states and the District of Columbia (Texas has the highest uninsured rate at 26.5%, and Massachusetts has the lowest at 4.6%).

In South Carolina, 821,000 residents receive Medicaid. The effects of the current recession include 2,000 to 5,000 residents being added each month to the Medicaid rolls. It is projected that there will be a $220 million shortfall in the Medicaid budget FY 2010-1011. The most recent data show that:

- 43% of South Carolina children are covered by Medicaid
- 52% of all births in the state are paid for by Medicaid
- 70% of all South Carolina nursing home residents are paid for by Medicaid

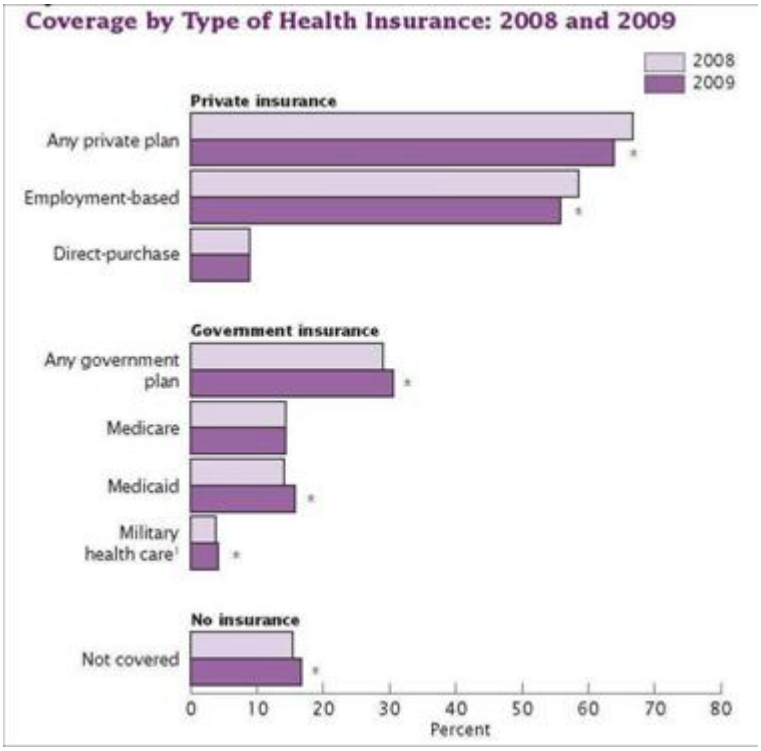
In 2008, 18.5% of all Spartanburg County residents were uninsured. The table below demonstrates that this is a higher percentage than in peer counties - Greenville, Richland, Charleston - the state average, and the U.S. average. Further, whereas the uninsured rates decreased in peer counties from 2005 to 2008, they increased in Spartanburg County. It is instructive to consider also uninsured rates for ages 18 to 64, the primary working age, exempt from Medicaid and Medicare by entitlement. Again, the uninsured rate is highest in Spartanburg, the only county of the four peer counties that has a higher uninsured rate for this age group than the state average.

Percentage Uninsured, Spartanburg County and Peer Counties, 2005 and 2008			
	2005	2008	
	All Ages	All Ages	Ages 18 to 64
Spartanburg	18.2%	18.5%	22.9%
Greenville	19.1%	17.5%	21.6%
Richland	16.5%	14.0%	17.9%
Charleston	19.6%	16.7%	20.9%
SC Average		17.4%	22.7%
U.S. Average		15.1%	19.8%

State BRFSS data for 2008 / 2009 indicate that 17.1% of Spartanburg County residents were unable to see a doctor at some point in the preceding 12 months because they could not afford to. This was an increase over the 14.7% who reported the same in 2007. The table below demonstrates differences by race and educational level for this measure. Clearly, minorities and undereducated residents were less likely to have accessed medical care.

Spartanburg County Results for "Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?" 2008 - 2009 S.C. BRFSS	
County Total	17.1%
White, Non-Hispanic	12.4%
Black, Non-Hispanic	28.6%
Other	32.2%
Less than High School	32.6%
High School or GED	23.9%
Some Post-High School	12.7%
College Graduate	7.5%

The percentage of U.S. residents without health insurance increased to 16.7 % in 2009, from 15.4 % in 2008. The number of uninsured people increased to 50.7 million in 2009 from 46.3 million in 2008. The percentage of people covered by employment-based health insurance was the lowest since 1987, and the percentage of people covered by government health insurance programs increased to 30.6 % in 2009 from 29.0 % in 2008, the highest percentage since 1987. The uninsured rate is higher among people with lower incomes.



Sources:

U.S. Census Bureau (2010, September). *Income, poverty, and health insurance coverage in the United States: 2009*. Retrieved October 30, 2010 from http://www.census.gov/prod/2010pubs/p60-238.pdf

S.C. office of research and statistics: http://ors.sc.gov/

S.C. Public Health Institute (2009, November). *Data brief: Update on sources of data on the uninsured in South Carolina*. Retrieved October 30, 2010 from http://scphi.org/wordpress/wp-content/uploads/2010/12/ACSDataBrief1109.pdf.

EMERGENCY DEPARTMENT USAGE

According to the South Carolina Public Health Institute in its *Report on Frequent Users of Hospital Emergency Departments in South Carolina* (February, 2011), hospital emergency departments across the state are increasingly used for care that should occur in a primary care setting. In 2009, there were 42,118 emergency department visits that did not result in inpatient admission by self pay / indigent patients in Spartanburg County. The average charge for these visits was $1,504, and total charges were $63,339,808. Of this total, $2,745,877 was for mental disorders that did not result in admission.

The same year, an additional 2,092 self pay / indigent patients came through the emergency department and were admitted to inpatient care. These patients incurred an additional $75,729,570 in charges. Excluding newborns, total charges for self pay / indigent persons in Spartanburg County discharged from inpatient care were 116,311,477 (average charge $29,820).

The top 20 inpatient diagnoses for indigent self-pay patients for Spartanburg County residents in calendar year 2008 are listed in the table below.

Top 20 Inpatient Diagnoses, Spartanburg County Residents, Self-Pay / Indigent, Calendar Year 2008, (Sorted by Total Charges)

Primary Diagnosis	# Patients	#Discharges	Total Charges
Rehabilitation Procedure	209	220	$10,226,615
Acute Myocardial Infarct	82	85	$5,358,338
Septicemia	38	38	$3,877,317
Diseases of the Pancreas	55	71	$3,494,970
Other Chronic Ischemic Heart Disease	57	61	$3,466,313
Diabetes Mellitus	71	88	$2,648,942
Other Lung Diseases	33	39	$2,449,575
Other Cellulitis / Abscess	87	93	$2,292,387
Cerebral Artery Occlusion	44	45	$2,046,667
Conditions Not Otherwise Specified	48	50	$1,955,980
Heart Failure	48	53	$1,890,370
Acute Appendicitis	45	45	$1,687,242
Cholelithiasis	44	44	$1,661,044
Single Liveborn	337	337	$1,483,214

Fluid / Electrolyte Disorder	38	42	$1,462,473
Acute Renal Failure	38	39	$1,379,017
Asthma	55	61	$1,352,064
Respiratory System/ Other Chest Symp	65	65	$1,336,961
Cardiac Dysrhythmias	30	31	$1,123,846
Chronic Bronchitis	30	33	$1,064,125
Total	**1,454**	**1,540**	**$52,257,460**

Sources:

S.C. office of research and statistics: http://ors.sc.gov/

S.C. Public Health Institute (2011, February). A r*eport on frequent users of hospital emergency departments in South Carolina*. Retrieved April 1, 2011 from http://scphi.org/2011/02/a-report-on-frequent-users-of-hospital-emergency-departments-in-south-carolina/

AIR AND WATER QUALITY / TOXIC EXPOSURE

Maintenance of the environment is critical to protecting public health. Even in the fifth century BC, Hippocrates, known as the father of medicine, expounded, "If you want to learn about the health of a population, look at the air they breathe, the water they drink, and the places where they live." Exposure to environmental toxins from mercury, ozone, particulate matter and other pollutants cause or exacerbate health problems. Spartanburg County, like many other communities, is faced with environmental challenges that endanger public health and quality of life. For example, Spartanburg County is designated by the EPA as a nonattainment area for ozone, as it fails to meet national air quality standards. The county is also characterized by a high rate of short term particle pollution exposure. Further, as of 2009, there were 31 Eligible Response Sites for hazardous waste cleanup in the county.

County Health Rankings indicate that, in Spartanburg County in 2009, there were 7 days that air quality was unhealthy for sensitive populations due to fine particulate matter (FPM, < 2.5 µm in diameter). There were 16 days that air quality was unhealthy for sensitive populations due to ozone levels. Both exceeded the state average. However, in 2010 these measures had improved to 2 days of unhealthy air quality due to fine particulate matter and 15 days of unhealthy air quality due to ozone levels.

For expanded local data on environmental determinants of public health, see the Community Indicators report on *The State of the Natural Resources in Spartanburg County* at www.strategicspartanburg.org.

Sources:

Brady, K. (2009). *The status of natural resources in Spartanburg County.* Spartanburg, South Carolina: University of South Carolina Upstate, Metropolitan Studies Institute.

SUMMARY INFORMATION

The Gallup-Healthways Well-Being Index, resulting from a 2010 survey of 353,000 U.S. adults, ranked 188 U.S. metropolitan areas for residents' health and wellbeing. Overall, Spartanburg ranked 182nd of metropolitan areas, and South Carolina ranked 35th of the 50 U.S. states. Participants, called at random, reported their perceptions of their own emotional health, physical health, healthy behavior, work environment, and basic access to resources critical to well-being such as medicine, clean water, and safety resources. Other South Carolina cities or Metropolitan Statistical Areas included in the ranking were Charleston, Greenville, Myrtle Beach and Columbia. The chart below is taken from the *State, City & Congressional District Well-Being Report for South Carolina* for the 2010 the Gallup-Healthways Well-Being Index. Spartanburg ranked in the fifth quintile nationally for life evaluation, emotional health, physical health, work environment, and basic access to resources. Healthy behavior ranked in the fourth quintile. Numbers indicate rank among all 188 metropolitan areas on these measures.

South Carolina City Rankings

Ranking from data collected January 2, 2010 – December 30, 2010

		Charleston 630,100	Charlotte 1,701,799	Augusta 528,519	Greenville 613,828	Myrtle Beach 249,925	Columbia 716,030	Spartanburg 275,534	STATE
Overall Rank	2010	18	50	112	124	153	163	182	35
	2009	56	79	58	148	92	64	N/A	35
Life Evaluation	2010	24	34	51	127	58	117	157	24
	2009	23	58	25	123	182	75	N/A	33
Emotional Health	2010	5	74	25	134	177	143	178	28
	2009	53	60	18	90	21	26	N/A	14
Physical Health	2010	15	44	68	122	51	118	181	39
	2009	109	33	39	89	37	61	N/A	31
Healthy Behavior	2010	13	85	104	132	188	163	131	30
	2009	123	107	132	142	60	129	N/A	37
Work Environment	2010	67	73	161	79	61	172	177	30
	2009	64	104	109	164	4	72	N/A	30
Basic Access	2010	102	96	158	120	180	137	159	41
	2009	127	117	134	128	131	64	N/A	37

The Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute have collaborated to provide state and county rankings on health outcomes and multiple factors that influence health. Data are drawn from a variety of sources including departments of health, departments of education and the Census Bureau.

Within South Carolina, the 2010 rankings show that Beaufort County ranks first for health outcomes, and Lexington ranks first for health factors. Spartanburg ranks 19th for health outcomes (up from 21st in 2009) and 12th for health factors (up from 13th in 2009). Peer counties, Greenville, Charleston and Richland continue to rank ahead of Spartanburg for both health outcomes and health factors. Lee County and Marlboro County rank last.

The table below is the Health Ranking Summary for Spartanburg County followed by descriptors of the metrics used. New rankings are provided each March.

2010 Community Health Ranking, Spartanburg County					
	Spartanburg	**Error Margin**	**National Benchmark***	**S.C.**	**Rank of 46 Counties**
Health outcomes					**19**
Mortality					**21**
Premature Death	9,743	9,330-10,156	5,564	9,264	
Morbidity					**18**
Poor or Fair Health	17%	15 - 19%	14%	16%	
Poor Physical Health Days	3.9	3.5 – 4.3	3.1	3.6	
Poor Mental Health Days	3.8	3.3 – 4.3	3.1	3.6	
Low Birth Weight	10.1%	9.8 -10.5%	6.0%	10.1%	
Health Factors					**12**
Health Behaviors					**12**
Adult Smoking	22%	20 - 24%	19%	22%	
Adult Obesity	30%	27 - 33%	27%	30%	
Excessive Drinking	12%	10-14%	8%	15%	

Motor Vehicle Crash Death Rate	22	20 -24	12	24	
Sexually Transmitted Infections	568		83	597	
Teen Birth Rate	59	57 - 61	22	52	
Clinical Care					**8**
Uninsured Adults	22%	19 - 25%	13%	21%	
Primary Care Providers	791:1		631:1	872:1	
Preventable Hospital Stays	68	65 – 70	52	68	
Diabetic Screening	85%	80 - 90%	89%	81%	
Mammography Screening	65%	60 - 71%	74%	65%	
Social and Economic Factors					**11**
High School Graduation	79%		92%	74%	
Some College	53%		68%	56%	
Unemployment	12.4%	12.2 - 12.6%	5.3%	11.7%	
Children in Poverty	20%	16 - 23%	11%	22%	
Inadequate Social Support	23%	21 - 26%	14%	22%	
Single-parent Households	34%		20%	38%	
Violent Crime Rate	685		100	758	
Physical Environment					**45**
Air Pollution- Particulate Matter Days	2		0	0	
Air Pollution – Ozone Days	15		0	4	
Access to Healthy Foods	80%		92%	65%	
Access to Recreational Facilities	11		17	9	

* National Benchmark = 90th percentile, i.e. only 10% are better

Note: Blank values reflect unreliable or missing data

Descriptors of Metrics Used in County Health Rankings	
Health Outcomes	
Mortality	
Premature Death	Years of potential life lost before age 75 per 100,000 population
Morbidity	
Poor or Fair Health	Percent of adults reporting fair or poor health
Poor physical Health Days	Average number of physically unhealthy days reported in past 30 days
Poor Mental Health Days	Average number of mentally unhealthy days reported in past 30 days
Low Birth Weight	Percent of live births with low birth weight (< 2500 grams)
Health Factors	
Adult Smoking	Percent of adults that report smoking ≥ 100 cigarettes and currently smoking
Adult Obesity	Percent of adults that report a BMI ≥ 30
Excessive Drinking	Binge plus heavy drinking
Motor Vehicle Crash Death Rate	Motor vehicle crash deaths per 100,000 population
Sexually Transmitted Infections	Chlamydia rate per 100,000 population
Teen Birth Rate	Teen birth rate per 1,000 female population, ages 15-19
Clinical Care	
Uninsured Adults	Percent of population under age 65 without health insurance
Primary Care Providers	Ratio of population to primary care providers
Preventable Hospital Stays	Hospitalization rate for ambulatory-case sensitive conditions per 1,000 Medicare enrollees
Diabetic Screening	Percent of diabetic Medicare enrollees that receive HbA1c screening

Mammography Screening	Percent of female Medicare enrollees that receive mammography screening
Social and Economic Factors	
High School Graduation	Percent of ninth grade cohort that graduates in 4 years
Some College	Percent of adults aged 25-44 years with some post-secondary education
Unemployment	Percent of population age 16+ unemployed but seeking work
Children in Poverty	Percent of children under age 18 in poverty
Inadequate Social Support	Percent of adults without social / emotional support
Single-Parent Households	Percent of children that live in household headed by single parent
Violent Crime Rate	Violent crime rate per 100,000
Physical Environment	
Air Pollution-Particulate Matter Days	Annual number of unhealthy air quality days due to fine particulate matter
Air Pollution-Ozone Days	Annual number of unhealthy air quality days due to ozone
Access to Healthy Foods	Healthy food outlets include grocery stores and produce stands / farmers' markets
Access to Recreational Facilities	Rate of recreational facilities per 100,000 population

Sources:

Gallup-Healthways. (2011). *State of well-being: State, city & congressional district well-being report, South Carolina*. Retrieved April 1, 2010 from the Gallup-Healthways Well-Being Index Web site: http://www.well-beingindex.com/files/2011WBIrankings/SC_StateReport.pdf

Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute County Health Rankings: http://www.countyhealthrankings.org