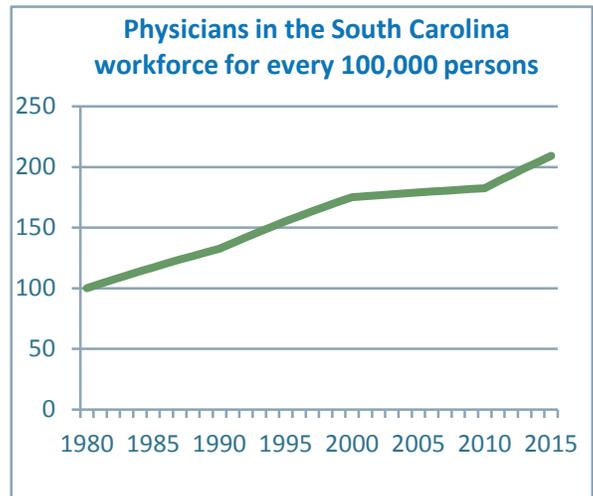




# Changes in the Physician Workforce in South Carolina: 2009 - 2015

Over the last 35 years the number of physicians practicing in South Carolina for every 100,000 persons in the state more than doubled. Growth slowed during the decade between 2000 and 2010. Since then the number of physicians practicing in the state has grown by about 20%. This report summarizes the ways in which the physician workforce in the state changed between 2009 and 2015. The data is based on information provided by physicians when renewing their license to practice in 2009 and 2015.



The physician workforce can be counted in several ways: the potential workforce - those with an active license which allows them to practice in the state; the actual workforce - those who actually do practice in the state; and the direct care workforce - those involved in direct patient care. Additionally, counts may or may not include physicians who are in graduate-level medical education (i.e. residency) training programs. Physicians working in Veterans Administration or military facilities are generally not included. See Table 1 for a breakdown of these definitional groups.

**Table 1. Licensed Physicians in South Carolina: 2009 and 2015**

	2009 Head count	2015 Head count	Six-year Growth %
# with an active license to practice in South Carolina	15,516	18,348	18.3%
# who had an active practice site within South Carolina	10,163	12,467	22.7%
<b>Of those who practice in South Carolina:</b>			
# who practiced in federal/military facilities <sup>a</sup>	259	295	13.9%
# in residency training programs	1,289	1,933	50.0%
# of active “established” physicians (i.e. not federal or residents in training)	8,615	10,239	18.9%
# of established physicians involved in direct patient care	8,426	10,055	19.4%

<sup>a</sup> Department of Defense and other federal healthcare facilities do not require that physicians hold an active license to practice in the facility’s state as long as they are actively licensed somewhere. Thus, the figures in this table may be an under-count of the actual number of physicians practicing in military facilities within South Carolina.

Table 2 reports physicians by their clinical specialty, using the AMA’s taxonomy for defining specialty groups. The year 2013 is included in the table because that is the most recent data available from the AMA and allows comparisons between South Carolina and the United States. Because the AMA figures include residents in training, they are also included in all the South Carolina numbers in Table 2. Based on counts from 2013, the size of South Carolina’s physician workforce (for every 100,000 persons) is similar to national patterns for the specialty groups with a few exceptions. In an absolute sense, our state had only 80% of the total number of physicians for every 100,000 persons as did the country as a whole in 2013 (see Table 2 - 232.4 is 80% of 290.8). Beyond this generally smaller workforce overall, South Carolina has a significantly smaller supply of Internal Medicine physicians but a larger supply of Family Medicine physicians compared to the United States.

**Table 2. Physician Workforce Counts per 100,000 in South Carolina and the U.S. by Specialty Area**

Clinical Specialty	South Carolina Physician Workforce per 100,000 Population		Growth Rate %  2009 to 2015	South Carolina	United States
	2009	2015		Physician Workforce per 100,000  in 2013	Physician Workforce per 100,000  in 2013
<b>All Physicians</b>	<b>215.8</b>	<b>248.6</b>	<b>15.2%</b>	<b>232.4</b>	<b>290.8</b>
Internal Medicine	36.1	43.8	21.5%	40.4	58.6
Family Medicine	34.3	37.7	10.0%	36.2	34.9
Pediatrics	19.4	23.3	20.2%	21.6	27.9
Emergency Medicine	12.9	16.5	27.7%	14.5	13.6
Obstetrics & Gynecology	12.9	13.3	3.3%	12.7	14.9
General Surgery	11.9	12.2	2.5%	11.8	12.8
Anesthesiology	10.0	12.2	21.0%	11.3	15.6
Psychiatry	10.3	11.0	6.2%	10.7	13.4
Orthopedic Surgery	8.2	9.5	15.6%	8.6	8.8
Cardiovascular Disease	5.8	6.5	12.4%	6.3	7.7
Ophthalmology	5.7	5.7	0.2%	5.5	6.3
Diagnostic Radiology	4.2	5.7	34.5%	4.5	8.9
Radiology	3.7	4.6	23.3%	4.2	3.4
Anatomic/Clinical Pathology	4.1	4.4	6.7%	4.3	6.2
Neurology	3.3	4.3	31.2%	4.0	5.9
Gastroenterology	3.5	3.8	7.7%	3.4	4.7
Pulmonary Diseases	2.5	3.4	34.2%	3.0	4.2
Urology	3.4	3.4	-1.5%	3.4	3.6
Dermatology	2.9	3.2	11.4%	3.1	4.0
Otolaryngology	2.7	3.1	14.6%	3.1	3.5
General Practice	2.4	2.3	-5.4%	2.3	2.8
Neurological Surgery	1.7	2.1	28.3%	1.7	2.0
Physical Medicine & Rehabilitation	1.5	2.0	39.9%	1.8	3.8
Plastic Surgery	1.7	2.0	18.1%	2.2	2.6
Child/Adolescent Psychiatry	1.7	1.7	2.3%	1.7	2.8
Allergy and Immunology	1.2	1.4	12.2%	1.3	1.5
Radiation Oncology	1.1	1.4	28.2%	1.3	1.7
Pediatric Cardiology	0.7	0.9	43.7%	0.8	0.8
Thoracic Surgery	0.7	0.9	31.2%	0.8	1.5
Occupational Medicine	0.9	0.7	-15.6%	0.7	0.8
Colon & Rectal Surgery	0.4	0.5	25.0%	0.5	0.6
Public Health/Preventive Medicine	0.4	0.3	-16.7%	0.3	0.4
General Preventive Medicine	0.2	0.3	56.2%	0.2	0.9
Medical Genetics	0.3	0.3	-18.0%	0.2	0.2
Forensic Pathology	0.2	0.2	-6.3%	0.2	0.2
Transplant Surgery	0.2	0.1	-27.1%	0.2	0.1
Nuclear Medicine	0.1	0.1	25.0%	0.1	0.5
Aerospace Medicine	0.1	0.0	-76.6%	0.1	0.1
Vascular Medicine	0.0	0.0	0%	0.0	0.01
Other Specialties	2.4	3.4	41.9%	2.9	2.1
Unknown Specialty Type	0.2	0.4	106.2%	0.3	6.5

Note: "Unknown" and "Other Specialties" contain physicians who reported specialty areas outside of the AMA taxonomy or reported none at all. Residents in training are included in this table in order to facilitate comparison to national figures.

Comparing the first two columns in Table 2 reveals which specialty groups grew between 2009 and 2015. The third column reports the growth rate and whether it was positive or negative. In most of the specialty groups the supply increased – in many cases by 20% or more. But some critically important fields show relatively slow growth: Psychiatry (both General and Child/Adolescent), General Surgery, Ob/Gyn, Ophthalmology, Urology, and Family Medicine. Be aware that slight changes in small specialty groups result in large percentage growth rates.

Another important aspect of judging the size of the physician workforce and how it might be changing is to account for the level of work effort each week. During the license renewal process, physicians report the number of hours they work in an average week. We use 40 hours per week to define a full time equivalent physician, or 1 FTE. Many physicians work more than 40 hours in a typical week, but some work less. By measuring the workforce in terms of FTEs it is possible to see how changes in work patterns (which often vary by age and gender) are affecting the overall size of the workforce.

Table 3 reports both head counts and FTE counts for all established physicians actively practicing in South Carolina. Residents have been removed from the counts, as has the standardization by population. Comparing the number of physicians in the workforce with the number of FTEs reveals that physicians - as a group - tend to work more than 40 hours per week as evidenced by FTE numbers being larger than head counts in a given year. (The average hours worked per week for all physicians was 50.9 in 2009 and 49.5 in 2015.) Also, the growth rate for head counts from 2009 to 2015 is higher than for FTEs in most specialty groups. Notable exceptions include General Surgery, Neurology, Plastic Surgery, Neurological Surgery, and Thoracic Surgery where the data suggests *more* hours being worked per week in 2015 than in 2009. On the other hand, among groups where the number of physicians has declined (e.g. General Practice, Occupational Medicine) the reduction in the FTE workforce tends to be even larger between 2009 and 2015.

Table 4 refines the physician workforce further by focusing on only those physicians involved in direct patient care. Physicians report how many hours per week are spent on a variety of activities: patient care, research, teaching, administration, training, and other duties. Table 4 reports both the head count and the FTE count of physicians in the South Carolina workforce engaged in direct patient care activities. A physician spending 40 hours per week in direct patient care was assigned an FTE value of 1.0. Someone spending 20 hours per week would have an FTE value of 0.5. Compare the growth rate for head counts in a specialty to the growth rate based on FTEs to see that even a group whose numbers are increasing may be shrinking in terms of their full time equivalents. One example would be Ophthalmologists whose numbers in the active workforce grew by 2.9% between 2009 and 2015, but whose FTE counts declined by 1.3%.

In both 2009 and 2015 98% of all physicians in the workforce spent some time in direct patient care, but the amount of time (total hours per week) varied across specialties and across time. The average number of hours reported by physicians for direct patient care activities was 43.3 in 2009 and 41.1 in 2015. In the 2015 workforce most physicians (93%) spent at least half of their weekly hours on direct patient care activities, and 77% spent at least three-quarters of their weekly hours on direct patient care.

**Table 3. Established Physician Workforce – Head Counts (Persons) and FTEs by Specialty Area**

Clinical Specialty	Established Physician Workforce				Growth Rate %	
	2009		2015		Persons	FTEs
	Persons	FTEs	Persons	FTEs		
<b>All Specialties Total:</b>	<b>8,615</b>	<b>10,974.0</b>	<b>10,239</b>	<b>12,696.2</b>	<b>18.9%</b>	<b>15.7%</b>
Internal Medicine	1,410	1,836.8	1,813	2,309.8	28.6%	25.8%
Family Medicine	1,343	1,623.1	1,469	1,723.7	9.4%	6.2%
Pediatrics	730	880.9	880	1,031.9	20.5%	17.1%
Emergency Medicine	533	587.4	714	750.8	34.0%	27.8%
Obstetrics & Gynecology	516	725.6	554	753.9	7.4%	3.9%
Anesthesiology	417	581.5	512	686.0	22.8%	18.0%
General Surgery	389	583.1	443	667.9	13.9%	14.5%
Psychiatry	380	403.8	404	412.5	6.3%	2.2%
Orthopedic Surgery	329	452.9	392	523.5	19.1%	15.6%
Cardiovascular Disease	260	386.8	298	436.3	14.6%	12.8%
Diagnostic Radiology	185	223.3	268	298.6	44.9%	33.7%
Ophthalmology	243	282.5	247	282.8	1.6%	0.1%
Radiology	150	189.6	189	236.7	26.0%	24.9%
Anatomic/Clinical Pathology	163	200.0	176	201.2	8.0%	0.6%
Gastroenterology	158	225.6	173	245.0	9.5%	8.6%
Neurology	129	175.3	162	223.6	25.6%	27.6%
Urology	152	220.6	154	222.0	1.3%	0.6%
Pulmonary Diseases	110	167.7	151	225.1	37.3%	34.3%
Dermatology	125	131.1	142	143.9	13.6%	9.8%
Otolaryngology	114	153.9	137	184.4	20.2%	19.8%
General Practice	110	114.5	104	98.1	-5.5%	-14.3%
Physical Medicine & Rehabilitation	66	80.5	98	112.3	48.5%	39.4%
Plastic Surgery	76	111.4	94	138.8	23.7%	24.6%
Neurological Surgery	72	92.8	93	123.6	29.2%	33.2%
Child/Adolescent Psychiatry	66	71.7	70	74.9	6.1%	4.5%
Allergy and Immunology	56	59.5	67	68.1	19.6%	14.4%
Radiation Oncology	44	51.7	57	63.7	29.5%	23.2%
Pediatric Cardiology	27	37.1	41	54.2	51.9%	46.0%
Occupational Medicine	40	41.3	36	33.7	-10.0%	-18.3%
Thoracic Surgery	27	42.6	35	61.0	29.6%	43.1%
Colon & Rectal Surgery	18	30.9	24	35.6	33.3%	15.0%
Public Health/Preventive Medicine	18	17.9	15	13.6	-16.7%	-24.4%
Medical Genetics	16	21.0	13	17.0	-18.8%	-19.0%
General Preventive Medicine	8	7.4	12	11.4	50.0%	54.2%
Forensic Pathology	11	12.4	10	10.8	-9.1%	-12.9%
Transplant Surgery	8	13.1	6	10.5	-25.0%	-19.5%
Nuclear Medicine	3	3.7	2	2.0	-33.3%	-46.9%
Aerospace Medicine	3	1.8	1	0.5	-66.7%	-70.0%

Note: Physicians reporting their specialty as 'other' or missing that information are not included in this table. Residents in training are not included in this table.

**Table 4. Direct Patient Care Physicians - Head Counts (Persons) and FTEs by Specialty Area**

Clinical Specialty	Established Physician Workforce Engaged in Direct Patient Care Activities				Growth Rate %	
	2009	2009	2015	2015	2009 - 2015	
	Persons	FTEs	Persons	FTEs	Persons	FTEs
<b>All Specialties Total:</b>	<b>8,427</b>	<b>9,319.4</b>	<b>10,055</b>	<b>10,535.5</b>	<b>19.3%</b>	<b>13.0%</b>
Internal Medicine	1,386	1,570.3	1,782	1,926.0	28.6%	22.7%
Family Medicine	1,316	1,393.4	1,447	1,424.9	10.0%	2.3%
Pediatrics	710	722.9	857	805.5	20.7%	11.4%
Emergency Medicine	529	514.6	706	648.6	33.5%	26.0%
Obstetrics & Gynecology	508	628.6	550	646.8	8.3%	2.9%
Anesthesiology	415	529.2	510	620.7	23.1%	17.3%
General Surgery	378	483.9	437	542.2	15.6%	12.1%
Psychiatry	368	314.5	399	324.4	8.4%	3.2%
Orthopedic Surgery	329	392.9	389	436.4	18.2%	11.1%
Cardiovascular Disease	254	343.2	292	376.1	15.0%	9.6%
Diagnostic Radiology	184	207.5	265	276.8	44.0%	33.4%
Ophthalmology	239	241.3	246	238.1	2.9%	-1.3%
Radiology	147	172.7	184	205.0	25.2%	18.7%
Anatomic/Clinical Pathology	158	161.5	169	160.2	7.0%	-0.8%
Gastroenterology	154	200.3	171	220.7	11.0%	10.2%
Neurology	128	145.0	162	176.9	26.6%	22.0%
Urology	151	199.2	153	194.4	1.3%	-2.4%
Pulmonary Diseases	109	139.9	148	181.0	35.8%	29.4%
Dermatology	122	108.1	140	118.1	14.8%	9.2%
Otolaryngology	114	129.9	137	151.9	20.2%	16.9%
General Practice	109	104.0	102	84.2	-6.4%	-19.0%
Physical Medicine & Rehabilitation	64	67.2	97	93.5	51.6%	39.1%
Plastic Surgery	75	89.6	91	104.6	21.3%	16.7%
Neurological Surgery	72	80.4	93	100.6	29.2%	25.1%
Child/Adolescent Psychiatry	65	57.7	68	59.1	4.6%	2.5%
Allergy and Immunology	56	49.6	65	58.1	16.1%	17.3%
Radiation Oncology	44	46.5	57	54.5	29.5%	17.0%
Pediatric Cardiology	25	21.7	39	34.4	56.0%	58.5%
Occupational Medicine	39	33.1	35	26.3	-10.3%	-20.6%
Thoracic Surgery	27	35.7	35	49.0	29.6%	37.0%
Colon & Rectal Surgery	18	27.2	24	30.1	33.3%	10.6%
Public Health/Preventive Medicine	10	3.6	11	4.9	10.0%	37.3%
Medical Genetics	16	13.7	13	9.7	-18.8%	-28.9%
General Preventive Medicine	4	2.6	9	6.5	125.0%	151.0%
Forensic Pathology	9	7.9	9	6.3	0.0%	-20.3%
Transplant Surgery	8	7.8	6	5.6	-25.0%	-27.9%
Nuclear Medicine	3	2.5	2	1.0	-33.3%	-60.4%
Aerospace Medicine	3	1.5	1	0.3	-66.7%	-81.4%

Note: Physicians reporting their specialty as 'other' or missing that information are not included in this table. Residents in training are not included in this table.

Table 5 reveals how the physician workforce differs in size and growth rate across the different regions of the state. Because the regions vary in size the physician workforce figures are standardized per 100,000 persons based on region population figures. Overall, the physician workforce is growing across the state (see the right-most set of columns in Table 5). The specialty workforce is growing at a slightly faster pace than the primary care physician workforce.

**Table 5. Primary and Specialty Care Physician Workforce per 100,000 population by AHEC Region**

AHEC Regions	Primary Care Physicians per 100,000 Population			Specialty Physicians per 100,000 Population			Total Physicians per 100,000 Population		
			Growth %			Growth %			Growth %
	2009	2015		2009	2015		2009	2015	
Lowcountry	102.1	110.9	8.6%	132.4	147.0	11.0%	234.6	257.9	10.0%
Mid-Carolina	80.7	85.5	6.0%	87.6	100.7	15.0%	168.3	186.3	10.7%
Pee Dee	79.7	85.8	7.7%	77.4	84.9	9.7%	157.1	170.7	8.7%
Upstate	96.6	109.5	13.4%	97.1	107.4	10.6%	193.7	217.0	12.0%
<b>State Totals:</b>	<b>90.1</b>	<b>98.4</b>	<b>9.3%</b>	<b>98.8</b>	<b>110.7</b>	<b>12.0%</b>	<b>188.9</b>	<b>209.1</b>	<b>10.7%</b>

Notes: Residents are excluded from these counts. Primary care physicians include those whose practice is primarily in General Practice, Family Medicine, Internal Medicine, Pediatrics, Obstetrics and Gynecology. Specialty physicians include any physician whose clinical specialty falls outside of primary care. These figures are based on head counts.

Another way of looking at regions within the state is to define counties by their level of urbanization. Metropolitan and Micropolitan statistical areas are geographic entities defined by the U.S. Office of Management and Budget (OMB) for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. A Metropolitan area contains a core urban area population of 50,000 or more. A Micropolitan area contains an urban core population of at least 10,000 but less than 50,000. Each Metro or Micro area consists of one or more counties and includes the county(s) containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration with the urban core (as measured by commuting to work). Any county that is not designated a Metropolitan or Micropolitan area is designated as a Non-Metro area. These Non-Metro areas are rural in nature – their population is geographically dispersed and not closely integrated with nearby urban areas. (See the end notes for a list of South Carolina counties by their Metro/Micro/Non-Metro status.)

Table 6a uses these categories to examine changes in the physician workforce. Not surprisingly, Metropolitan counties had the largest number of physicians per 100,000 population in both 2009 and 2015. But the highest growth rate in both the general workforce and among primary care physicians was seen in Micropolitan counties. Surprisingly, growth of the specialty care workforce was highest in the Non-Metro/Rural counties. That growth was spread over 18 different specialties. Cardiologists, ophthalmologists and emergency medicine physicians had the largest rates of growth, while the number of general surgeons decreased. Other specialty groups saw an increase or decrease of just 1 or 2 physicians between 2009 and 2015.

Of concern is the 9% *decline* from 2009 to 2015 in primary care physicians in Non-Metro/Rural counties. Table 6b explores this finding by detailing which primary care specialty groups are actually declining, and at what rate. The results reveal that the losses are occurring among physicians most likely to treat adults and seniors. On the other hand, the increase in the number of pediatricians and obstetric/gynecology physicians is good news in these counties that have traditionally been underserved by those specialties.

**Table 6a. Physician Workforce per 100,000 in Metropolitan/Micropolitan/Non-Metro (Rural) Areas**

	Primary Care Physicians per 100,000 Population			Specialty Physicians per 100,000 Population			Total Physicians per 100,000 Population		
	2009	2015	Growth %	2009	2015	Growth %	2009	2015	Growth %
Metropolitan	94.5	103.1	9.1%	107.4	119.7	11.4%	201.9	222.8	10.3%
Micropolitan	80.1	91.0	13.6%	77.6	83.6	7.7%	157.7	174.6	10.7%
Non-Metro (Rural)	50.5	46.0	-9.0%	23.7	28.4	19.9%	74.2	74.3	0.2%

Notes: Residents are excluded from these counts. Metropolitan areas are highly urbanized. Micropolitan areas have smaller urban areas. Non-Metropolitan areas have no urbanized areas larger than 10,000 people. See the endnotes for a more explicit definition and a list of counties in each category.

**Table 6b. Gains and Losses in the Primary Care Physician Workforce in Non-Metro (Rural) Areas**

	Physician Workforce Head Counts		Physicians per 100,000 Population in Non-Metro Counties		Per 100,000 Growth/Decline %
	2009	2015	2009	2015	
<b>All Primary Care Physicians</b>	<b>158</b>	<b>141</b>	<b>50.5</b>	<b>46.0</b>	<b>-9.0%</b>
General Practice	6	5	1.9	1.6	-15.0%
Family Medicine	79	68	25.3	22.2	-12.1%
Internal Medicine	39	26	12.5	8.5	-32.0%
Pediatrics	21	25	6.7	8.2	21.5%
Obstetrics/Gynecology	13	17	4.2	5.5	33.2%

Notes: Residents are excluded from these counts. See the endnotes for a list of counties classified as 'non-metro' based on the 2010 census.

## End Notes and References

Table 1 note: Eight physicians in residency training in 2009 and 23 in 2015 were employed in military/federal facilities. They were counted in the “federal/military” figures but not included in the count of residents.

Table 2 note: National physician counts for 2013 are from the AMA’s *Physician Characteristics and Distribution in the U.S. (2015 edition)*. Be aware that these national counts include only physicians working greater than 20 hours per week while the South Carolina numbers include all physicians with 1 or more reported work hours. Also, Military/Federal physicians are included in the national counts but excluded from the state counts. Population numbers used in Table 2 are from 2 sources (<https://factfinder.census.gov>; <http://abstract.sc.gov/chapter14/pop22.html>) and are as follows: SC 2009 - 4,589,872, SC 2013 - 4,771,929 SC 2015 - 4,896,146, and (U.S. 2013 - 316,128,839).

Table 4 notes: Residents in training are omitted from this table. A patient-care FTE is defined as 40 direct-patient-care hours worked per week. Table 4 is sorted by 2015 SC workforce head count, which is found in Table 3.

Table 5 notes: 2009 Population estimates are from County Population Estimates by Age 2000-2009 Release Date: March 2010, downloaded from <http://www.sciway.net/statistics/population.html> 2015 Population estimates are from the 2015 bridged-race postcensal estimates released by the National Center for Health Statistics downloaded from [https://www.cdc.gov/nchs/nvss/bridged\\_race/data\\_documentation.htm](https://www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm).

Table 6 notes: Metropolitan and micropolitan statistical areas are geographic entities defined by the U.S. Office of Management and Budget (OMB) for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. A metro area contains a core urban area of 50,000 or more population. A micropolitan area contains an urban core of at least 10,000 but less than 50,000 population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration with the urban core (as measured by commuting to work). Any county that is not designated a metropolitan or micropolitan area is designated as a non-metro area.

The analyses in Tables 6a and 6b used the Metropolitan status designations based on the 2010 census and released by the OMB in 2013. South Carolina counties have the following designations based on the 2010 census results:

**Metropolitan:** Aiken, Anderson, Beaufort, Berkeley, Calhoun, Charleston, Chester, Darlington, Dorchester, Edgefield, Fairfield, Florence, Greenville, Horry, Jasper, Kershaw, Lancaster, Laurens, Lexington, Pickens, Richland, Saluda, Spartanburg, Sumter, Union, York

**Micropolitan:** Abbeville, Cherokee, Georgetown, Greenwood, Marlboro, Newberry, Oconee, Orangeburg

**Non-Metro / Rural:** Allendale, Bamberg, Barnwell, Chesterfield, Clarendon, Colleton, Dillon, Hampton, Lee, McCormick, Marion, Williamsburg

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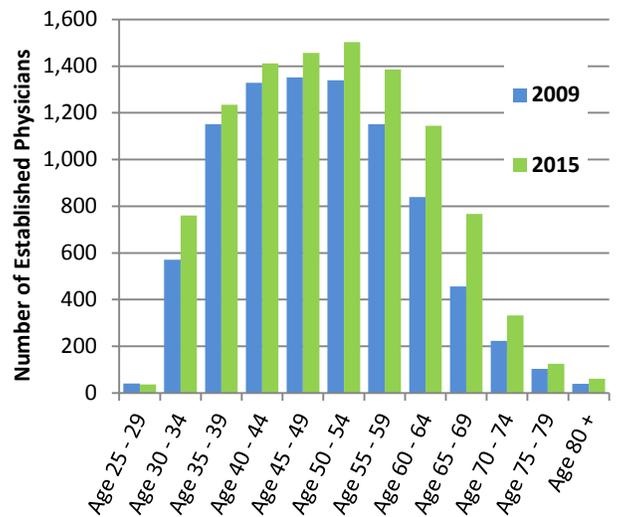
# Changes in the Demographic Characteristics of the Physician Workforce in South Carolina: 2009 - 2015

The demographic profile of the physician workforce in South Carolina changed in several ways in the short period from 2009 to 2015. Changes in the age distribution, the gender composition and the racial composition of the physician workforce (which includes both established physicians and residents in training) are reviewed in this data brief.

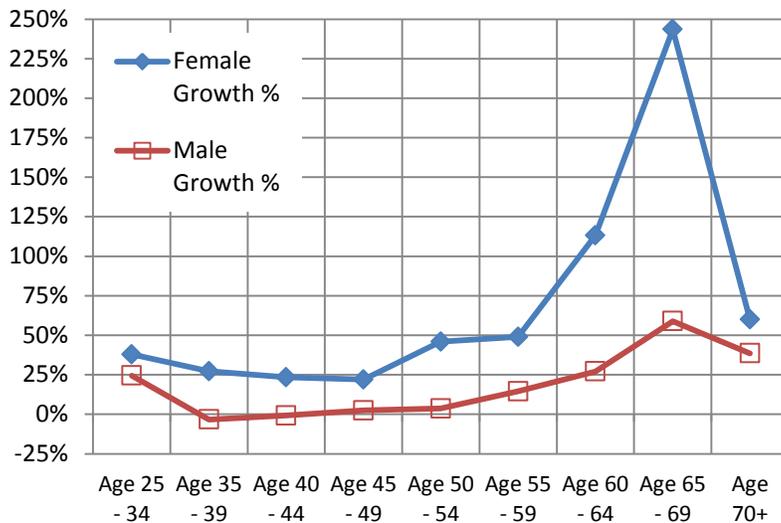
## Established Physicians

Overall, the size of the established physician workforce grew by 19% between 2009 and 2015. The chart to the right illustrates both the overall growth in the physician workforce and how the age distribution of that workforce has been changing over time. The age groupings show the movement of the large baby boom cohort through time. From 2009 to 2015 there was a 15% growth in the number of physicians under the age of 40; those aged 40 to 59 grew by 11%; and the number of active physicians age 60 and over grew by 46%. The large growth in older physicians in the workforce is the result of the aging baby boom generation and the fact that they tend to stay active in the workforce longer than previous generations.

Change in the Age Distribution of the Established Physician Workforce



Growth rates from 2009 to 2015 for established physicians in the workforce by age and gender

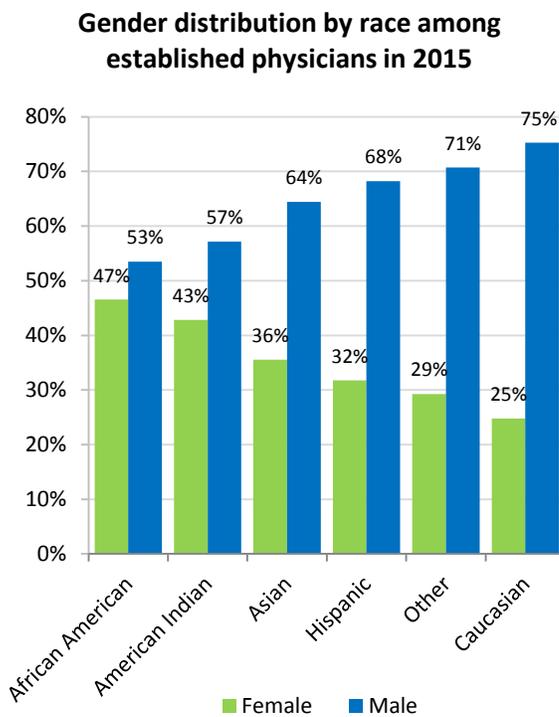


The gender profile of the physician workforce is also changing. The number of female physicians in established practice in South Carolina grew by 38% between 2009 and 2015. In 2009 females made up 23% of the established workforce and in 2015 they made up 27%. Some of this growth in female physicians in South Carolina comes from the increasing number of women attending medical school in the last two decades, but the chart to the left suggests that female physicians may also be moving into the state to practice at later stages in their career. The growth spike for females age 65-69 is unusually large because the underlying numbers were relatively small (23 in 2009, 79 in 2015).

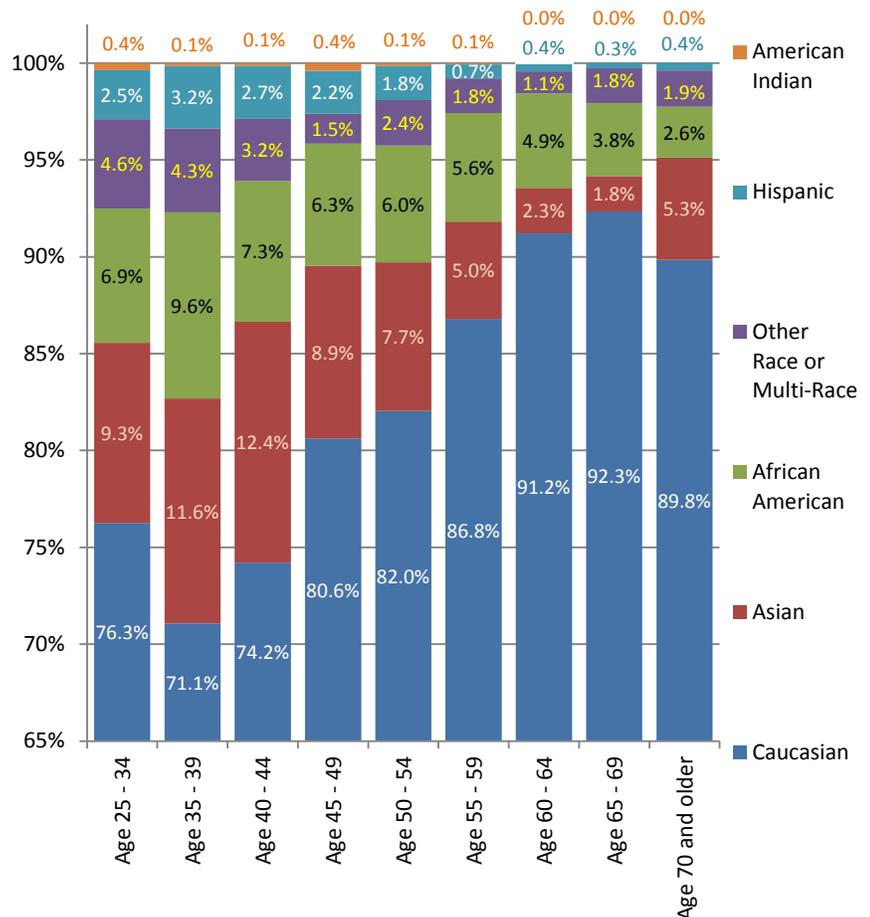
Race among established physicians	2009		2015		Growth % 2009 to 2015
Caucasian	7,254	84.4%	8,272	80.8%	14.0%
Asian	563	6.5%	819	8.0%	45.5%
African American	500	5.8%	634	6.2%	26.8%
Other or Multi-race	169	2.0%	270	2.6%	59.8%
Hispanic	110	1.3%	171	1.7%	55.5%
American Indian	11	0.1%	14	0.1%	27.3%
Race Unknown	8	0.1%	59	0.6%	
<b>Total</b>	<b>8,596</b>		<b>10,239</b>		<b>18.9%</b>

In 2009 84% of the established physician workforce was Caucasian (White). That percentage dropped to 81% by 2015 with the slight increase in the number of minority physicians entering the South Carolina workforce. The table to the left reports the number and percentage of established physicians practicing in South Carolina in each racial group in both 2009 and 2015 and the growth rate of each racial group across that time span.

The chart below on the left shows how the gender balance differs within racial groups in the 2015 established physician workforce.



Racial composition of the established physician workforce in 2015 by age group



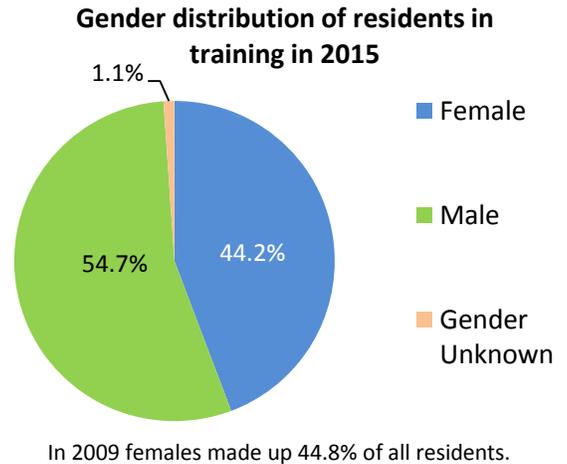
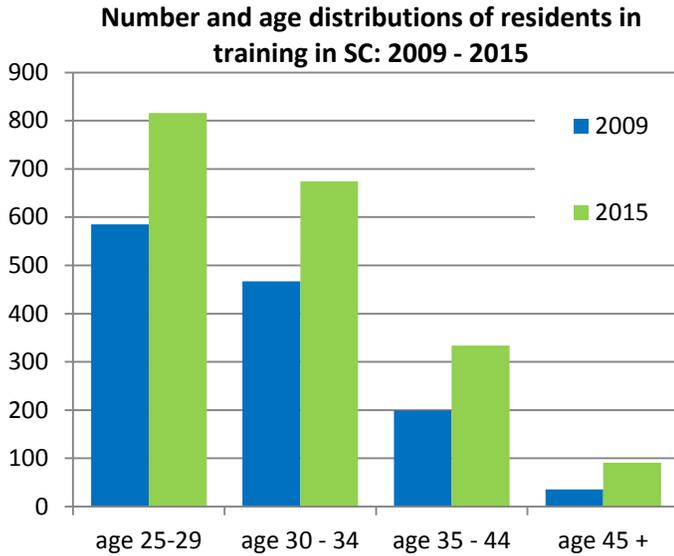
The chart above and to the right shows that younger physicians actively practicing in the South Carolina workforce are much more racially diverse than older generations, based on the 2015 workforce. The table on the following page reports the racial diversity of established physicians in different clinical subspecialty groups as well as the percent who are female and the proportion age 60 and older.

Physician Workforce Characteristics by Clinical Specialty in 2015	2015 Established Physician Headcount	Age: % age 60 and older	Gender: % female	Race: % Non-Caucasian
<b>All Established Physicians</b>	10,239	24%	27%	19%
<b>Internal Medicine</b>	1,813	19%	32%	35%
<b>Family Medicine</b>	1,469	27%	30%	19%
<b>Pediatrics</b>	880	16%	55%	23%
<b>Emergency Medicine</b>	714	15%	20%	11%
<b>Obstetrics &amp; Gynecology</b>	554	27%	48%	16%
<b>Anesthesiology</b>	512	19%	20%	10%
<b>General Surgery</b>	443	27%	11%	13%
<b>Psychiatry</b>	404	36%	40%	25%
<b>Orthopedic Surgery</b>	392	26%	3%	7%
<b>Cardiovascular Disease</b>	298	28%	8%	21%
<b>Diagnostic Radiology</b>	268	28%	12%	9%
<b>Ophthalmology</b>	247	30%	16%	9%
<b>Radiology</b>	189	14%	19%	8%
<b>Anatomic/Clinical Pathology</b>	176	28%	29%	10%
<b>Gastroenterology</b>	173	29%	5%	18%
<b>Other Specialty (not identified)</b>	164	40%	24%	16%
<b>Neurology</b>	162	25%	21%	27%
<b>Urology</b>	154	29%	9%	8%
<b>Pulmonary Diseases</b>	151	17%	16%	33%
<b>Dermatology</b>	142	32%	42%	7%
<b>Otolaryngology</b>	137	23%	9%	7%
<b>General Practice</b>	104	60%	28%	15%
<b>Physical Med &amp; Rehab</b>	98	10%	29%	23%
<b>Plastic Surgery</b>	94	20%	14%	12%
<b>Neurological Surgery</b>	93	22%	4%	14%
<b>Child/Adolescent Psychiatry</b>	70	23%	47%	14%
<b>Allergy and Immunology</b>	67	33%	24%	10%
<b>Radiation Oncology</b>	57	26%	21%	14%
<b>Pediatric Cardiology</b>	41	17%	32%	17%
<b>Occupational Medicine</b>	36	67%	17%	11%
<b>Thoracic Surgery</b>	35	23%	9%	6%
<b>Colon &amp; Rectal Surgery</b>	24	21%	13%	17%
<b>Unknown Specialty Type</b>	19	21%	11%	11%
<b>Public Health/Preventive Medicine</b>	15	33%	53%	27%
<b>Medical Genetics</b>	13	38%	38%	23%
<b>General Preventive Medicine</b>	12	42%	17%	25%

Note: Subspecialty groups with a count of 10 or fewer are not included in this table. Physicians self-report their clinical specialties during the license renewal process.

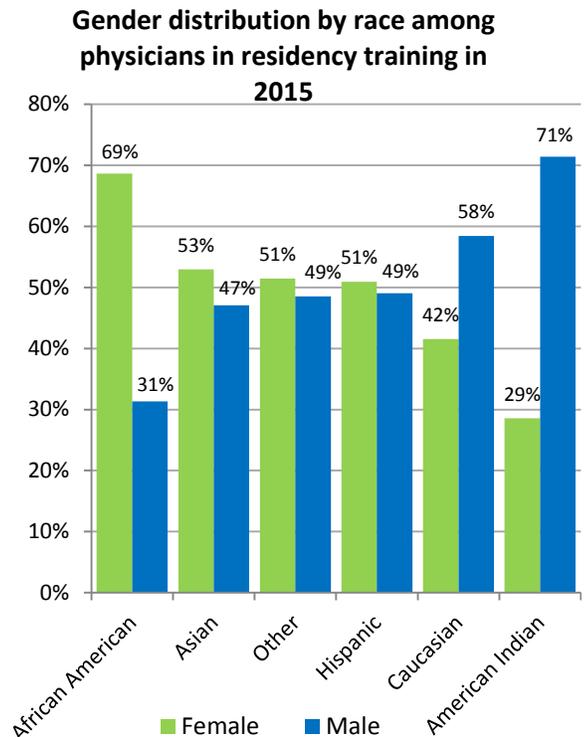
## Physicians in Residency Training Programs

The number of physicians in residency training programs within South Carolina grew from 1,289 in 2009 to 1,933 in 2015: a growth rate of 50%. In 2015 these physicians-in-training comprised 15% of the total number of physicians actively practicing in the state. Given that most physicians in residency programs are relatively new medical school graduates, their age distribution is much younger than the established physician workforce. However, some established physicians enter residency or fellowship training programs to extend their skills or change clinical specialty areas.



The age distributions of male and female residents are very similar and have not changed much from 2009 to 2015. One interesting difference among residents is that different racial groups have very different gender distributions (see the chart below and to the right). The overall distribution of racial groups among residents changed slightly between 2009 and 2015 with a small increase in the number reporting their race as 'other' which may include those with multi-racial backgrounds.

Race among physicians in residency training programs in South Carolina				
	2009		2015	
	Headcount	%	Headcount	%
<b>Caucasian</b>	1,017	78.9%	1,498	77.5%
<b>Asian</b>	105	8.1%	136	7.0%
<b>African American</b>	85	6.6%	134	6.9%
<b>Other Race</b>	26	2.0%	68	3.5%
<b>Hispanic</b>	39	3.0%	53	2.7%
<b>American Indian</b>	11	0.9%	7	0.4%
<b>Unknown</b>	6	0.5%	37	1.9%
<b>Total</b>	1,289	100.0%	1,933	100.0%



## End Notes and References

Information about the physician workforce in South Carolina presented in this report is based on information self-reported by the physicians during the renewal of their license to practice in 2009 and 2015.

Cases with missing information for a specific data element have been removed from the percentage calculations. By contrast, counts in the tables include physicians with missing data (classified as 'unknown' or 'missing') in order to sum to an accurate total count.

The information about physicians in residency training programs in 2009 and/or 2015 includes physicians in fellowship training programs.

### Suggested Citation:

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## Practice Characteristics of the Established Physician Workforce in South Carolina: 2009 - 2015

In 2015, there were 10,239 established physicians actively practicing in South Carolina, an increase of 1,624 (19%) over the 2009 workforce.<sup>1</sup> This report explores how employment status, type of practice setting, hours worked each week, and number of practice sites have changed over the period from 2009 to 2015, with an emphasis on these characteristics in 2015. All information is summarized from data provided by physicians when renewing their license to practice in either 2009 or 2015.

### Changes in Employment Patterns

Physicians describe their employment status in terms of self-employment or as an organizational employee. In 2009 69% of established physicians identified as self-employed either in a solo or group practice. In just 6 years the percent had dropped to 57% and the actual number of self-employed physicians had decreased. The following two tables show the change in both numbers and in the way physicians were distributed across different employment characteristics.

Established Physicians by Employer Type	Counts:		Growth Rate %	Year Percentages	
	2009	2015		2009	2015
Self Employed	5,976	5,866	-2%	69.4%	57.3%
Other Private Employer	1,177	2,498	112%	13.7%	24.4%
State Government	1,051	1,115	6%	12.2%	10.9%
County Government	171	389	127%	2.0%	3.8%
Federal Civilian Agency (Including US Public Health Service)	105	160	52%	1.2%	1.6%
Residency/Intern Training	101	85	-16%	1.2%	0.8%
Non-Profit Health Agency	20	46	130%	0.2%	0.4%
Individual Practitioner or Practitioner Group	-	32	NA		0.3%
Other Employer Type	1	24	NA	0.0%	0.2%
Volunteer – No Employer	13	20	54%	0.2%	0.2%
Missing/Unknown	-	4	NA		0.0%
<b>Total</b>	<b>8,615</b>	<b>10,239</b>	<b>19%</b>	<b>100%</b>	<b>100%</b>

Note: A dash in this table refers to having small or no numbers in 2009 and thus not appropriate for a growth rate estimate.

Self-Employed Physicians by Practice Structure	Counts		Growth Rate %	Year Percentages	
	2009	2015		2009	2015
Group practice, same specialty	4,509	4,453	-1%	75.5%	75.9%
Solo practice	1,016	878	-14%	17.0%	15.0%
Group practice, multi-specialty	451	535	19%	7.5%	9.1%
<b>Total Self-Employed</b>	<b>5,976</b>	<b>5,866</b>	<b>-2%</b>	<b>100%</b>	<b>100%</b>

## Primary Practice Setting

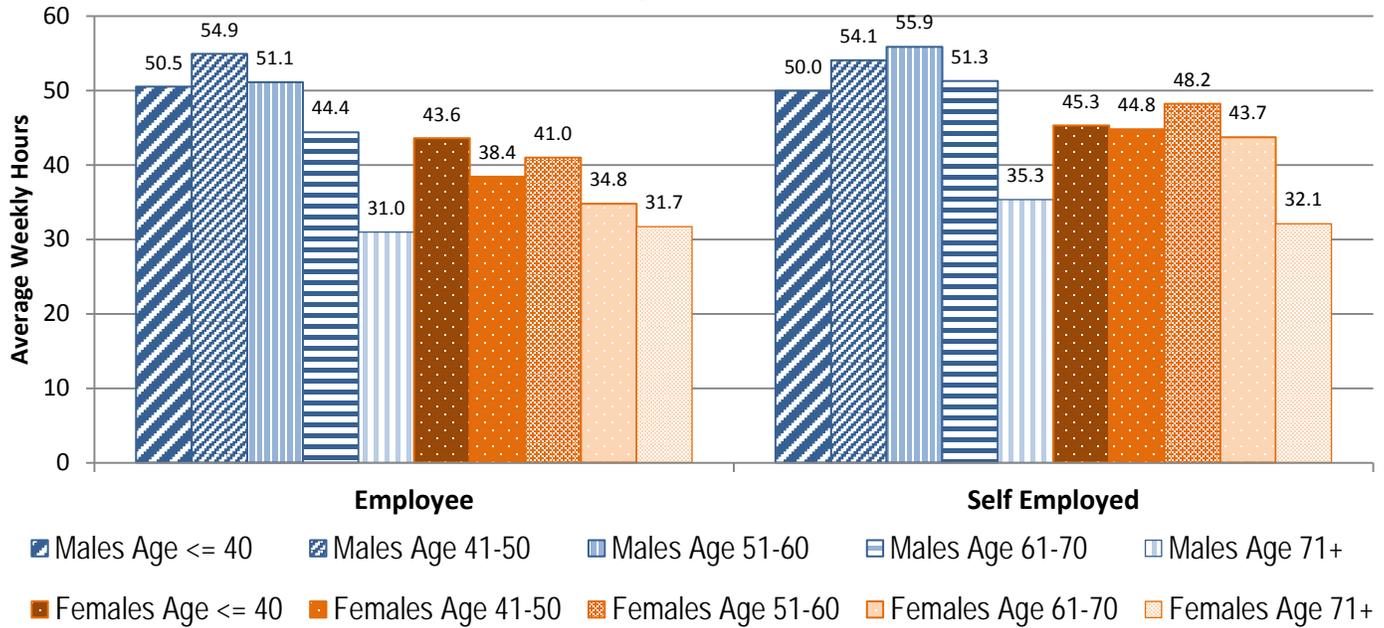
As the number of self-employed physicians was declining, a simultaneous shift occurred in the types of settings in which physicians practice. The number of established physicians whose primary practice was in a general hospital grew 66% from 2009 to 2015 while those whose primary setting was a private office grew by only 2% during that time. The table below shows the number of physicians and the distribution of the total workforce in each type of practice setting in 2009 and 2015, and the rate of growth or decline in the number practicing in those settings. Be aware that in the case of physicians practicing in private office settings, while the total count of physicians increased slightly between 2009 and 2015, the overall proportion of the physician workforce in private office settings decreased over that time period.

Established Physicians by Practice Setting	Counts:		Growth %	Year Percentages	
	2009	2015		2009	2015
Private Office	5,498	5,585	1.6%	63.8%	54.5%
General Hospital	1,651	2,739	65.9%	19.2%	26.8%
University / College Of Medicine	663	861	29.9%	7.7%	8.4%
Freestanding Outpatient Clinic	150	285	90.0%	1.7%	2.8%
Emergency / Urgent Care Clinic	175	230	31.4%	2.0%	2.2%
FQHC / Rural Clinic	137	164	19.7%	1.6%	1.6%
Outpatient Mental Health Clinic	118	112	-5.1%	1.4%	1.1%
Other Setting	41	64	56.1%	0.5%	0.6%
Psychiatric Hospital	58	59	1.7%	0.7%	0.6%
Business Establishment	24	49	104.2%	0.3%	0.5%
Administrative / Regulatory Health Agency	44	32	-27.3%	0.5%	0.3%
Freestanding Ambulatory Surgery Center	36	29	-19.4%	0.4%	0.3%
Rehabilitation Hospital	10	8	-20.0%	0.1%	0.1%
Setting Not Reported	10	22	120.0%	0.1%	0.2%
<b>Total</b>	<b>8,615</b>	<b>10,239</b>	<b>18.9%</b>	<b>100%</b>	<b>100%</b>

## Hours Worked Per Week

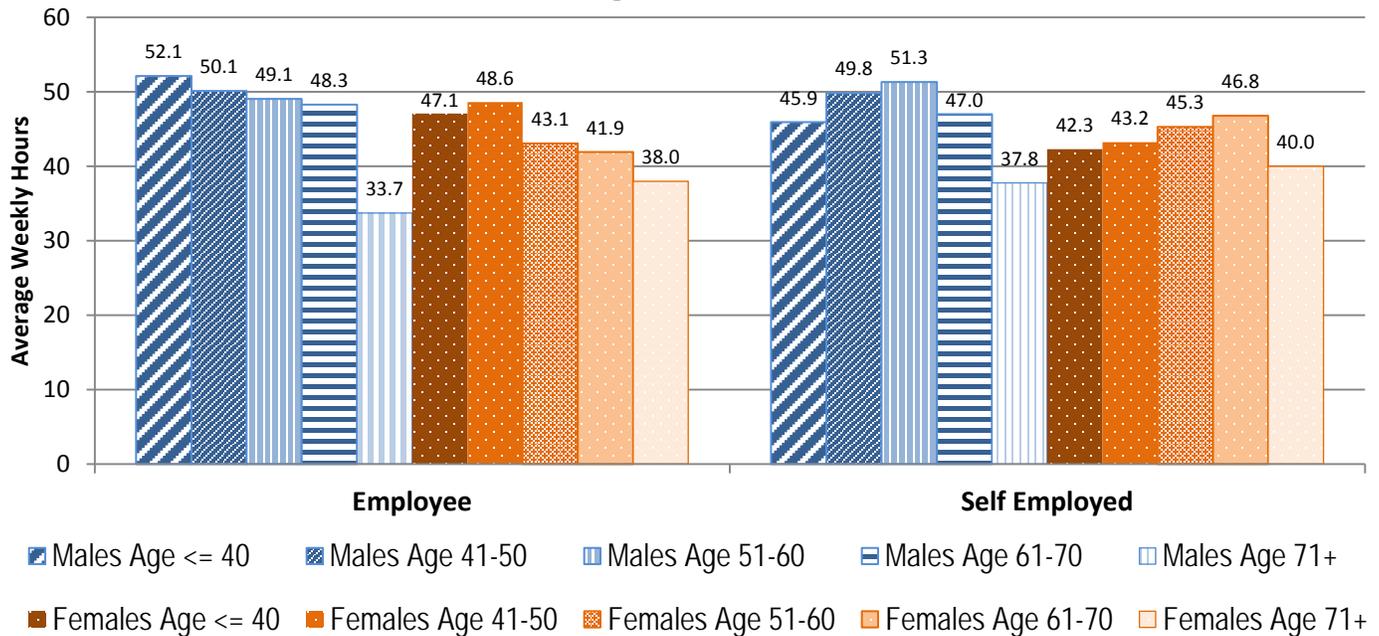
Physicians report the number of hours they work in an average week, as well as how many hours they spend on specific activities. This section reviews how physicians spend their time in different activities and how work hours differ by physician characteristics like age, gender, practice setting and employment status. These four factors (age, gender, setting and employment status) are inter-related and, due to the way the physician workforce is changing in South Carolina,<sup>2</sup> each contributes to an overall reduction in the total number of hours worked by physicians collectively, and thus the size of the full-time equivalent (FTE) workforce. The two charts on the next page illustrate the way work hours differed in 2015 by age, gender, and employment status in the two major settings in which physicians practice: ambulatory care settings (i.e. private offices, free-standing outpatient clinics, and community and rural clinics) and hospitals (i.e. general hospitals, psychiatric hospitals and rehabilitation hospitals).<sup>3</sup>

### Physicians in Ambulatory Settings - Average Hours per Week by Their Employment Status, Age and Gender - 2015



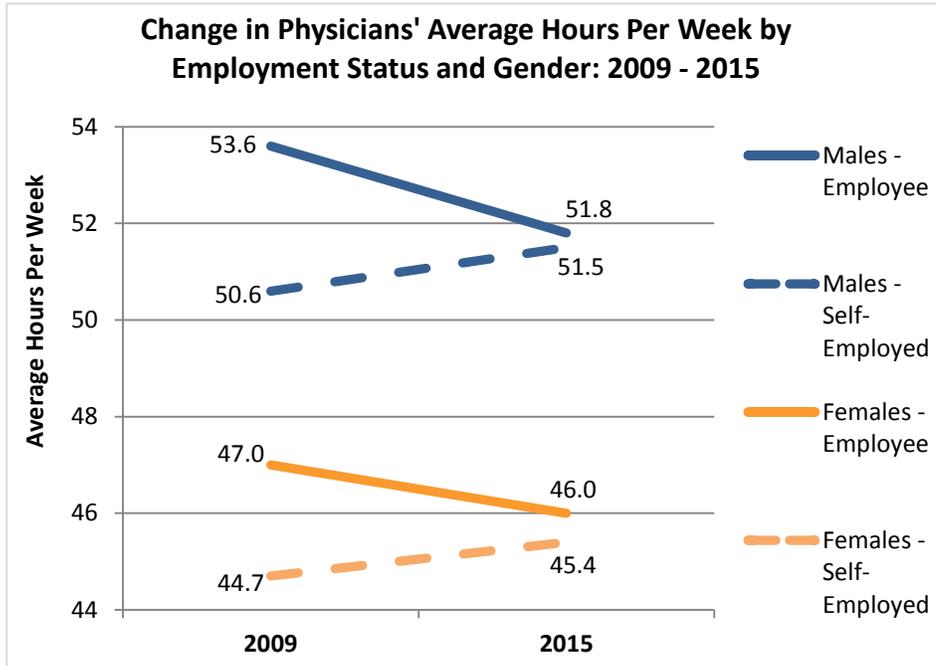
This information is based on established physicians whose primary practice was in an ambulatory care setting (private offices, free-standing outpatient clinics, and community and rural clinics) in South Carolina in 2015 and the total number of hours they reported working each week.

### Physicians in Hospital Settings - Average Hours per Week by Their Employment Status, Age and Gender - 2015



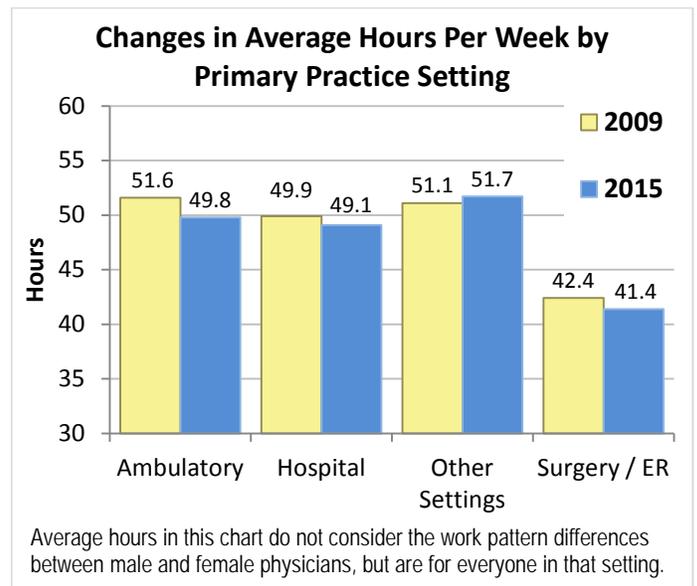
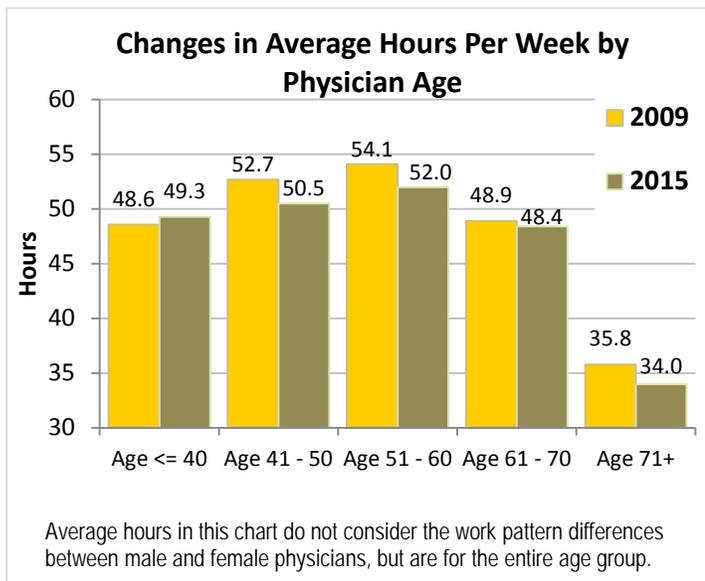
This information is based on established physicians whose primary practice setting was in a hospital (general hospitals, psychiatric hospitals and rehabilitation hospitals) in South Carolina in 2015 and the total number of hours they reported working each week. Those who reported their setting as surgery, emergency or urgent care are not included.

The charts on the previous page clearly show that female physicians – as a group – tend to work a few hours less each week than their male colleagues even when controlling for age, setting and employment status. That pattern was true in both 2009 and in 2015.



The chart to the left shows how average work hours per week have been changing in recent years. The average number of work hours for both male and female physicians who were self-employed increased very slightly (less than an hour) between 2009 and 2015, while the average for those who were employees declined slightly: 1.8 hours per week for men and 1 hour for women. As more physicians become organizational employees the downward trend in hours has a greater impact on the entire workforce.

Physician age also has an impact on work patterns, independent of gender and employment status. The chart below and to the left shows that physicians over the age of 40 have reduced the length of their work week in recent years. The chart on the right reflects those reductions within setting types. The primary drivers of this phenomenon are the aging of the largest generational cohort in the physician workforce (the Baby Boomers), and the increasing number of female physicians - who are mostly in the youngest age groups. Changes in employment setting and ownership are also contributory, but to a lesser extent.



## Hours by Activity Type

The table below summarizes the average number of hours per week that established South Carolina physicians spend in various activities, and the percentage of all physicians that reported spending at least 1 hour per week in a specific activity. The results show a decrease between 2009 and 2015 in the amount of time physicians spend on patient care activities and teaching, and a slight increase in the time spent on administration. The columns to the far right in the table reveal that the percentage of physicians engaged in direct care activities did not change, but the percent engaged in administrative duties and in training activities increased.

Physician Activity	Average Hours per Activity Each Week		Change in Hours	Percent of Physicians Engaged in Each Activity	
	2009	2015		2009	2015
Patient Care	43.3	41.0	-2.3	98%	98%
Administration	3.9	4.2	0.3	49%	56%
Teaching	1.9	1.7	-0.2	25%	26%
Research	0.8	0.8	0.0	11%	12%
Training	0.7	0.7	0.0	7%	18%
Other Activities	0.4	0.5	0.1	5%	10%
<b>Total Hours</b>	<b>51.0</b>	<b>48.9</b>	<b>-2.1</b>		

## Number of Practice Sites and Counties

The majority of South Carolina physicians practice at only one site and in only one county. However, the table below shows that between 2009 and 2015 a greater absolute number of physicians, and a greater proportion of the entire physician workforce in South Carolina began practicing at more than one practice location and in more than one county. The medical specialty groups in which at least 25% have more than one practice site in 2015 include psychiatry (25%), gastroenterology (26%), pediatric cardiology (27%), ophthalmology (27%), urology (29%), and child and adolescent psychiatry (34%).

Physicians reported having:	2009				2015			
	In a single county	In multiple counties	Total # of physicians	% of 2009 Workforce	In a single county	In multiple counties	Total # of physicians	% of 2015 Workforce
1 Practice Site	7,406	-	7,406	86.0%	8,559	-	8,559	83.6%
2 Practice Sites	457	466	923	10.7%	618	695	1,313	12.8%
3 Practice Sites	61	225	286	3.3%	74	293	367	3.6%
<b>Totals:</b>	<b>7,924</b>	<b>691</b>	<b>8,615</b>	<b>100%</b>	<b>9,251</b>	<b>988</b>	<b>10,239</b>	<b>100%</b>

## Hospitalists

When the job of hospitalist first arose in the 1990s it was defined as a physician who would assume the care of hospitalized patients in place of their primary care physicians. Over time the definition has expanded. The Society of Hospital Medicine defines hospitalists as “physicians whose primary professional focus is the general medical care of hospitalized patients. Their activities include patient care, teaching, research, and leadership related to hospital medicine.”<sup>4</sup> Beginning in 2015, physicians in South Carolina were asked if their practice position could best be described as a hospitalist. The table below summarizes physicians’ answer to that question. More than half (59.9%) who said yes have a background in general internal medicine. Note that a small percentage of physicians in other traditional primary care specialties also appear to be practicing in hospitalist positions.

Physician Specialty	In your primary place of employment, would your position be best described as a Hospitalist?				
	Yes	No	No Answer	Group N	% yes
General Internal Medicine	462	1,225	126	1,813	25.5%
Pediatrics	75	747	58	880	8.5%
Family Medicine	68	1,341	60	1,469	4.6%
Psychiatry	49	327	28	404	12.1%
Obstetrics/Gynecology	16	514	24	554	2.9%
All Other Sub-Specialists	101	4,694	324	5,119	2.0%
<b>Grand Total</b>	<b>771</b>	<b>8,848</b>	<b>620</b>	<b>10,239</b>	<b>8.0%</b>

## End notes and references

<sup>1</sup> Counts of established physicians in 2009 and 2015 exclude physicians in residency or fellowship training programs and those whose primary practice is in a military or federal facility where care is restricted to military personnel.

<sup>2</sup> See “Changes in the Demographic Characteristics of the Physicians Workforce in South Carolina: 2009-2015” available at [www.SCOHW.org](http://www.SCOHW.org) under REPORTS or by searching for physician topics.

<sup>3</sup> Note that surgery and emergency departments or urgent care settings are not included in the hospital category.

<sup>4</sup> Quoted from “What is a Hospitalist? In *The Hospitalist*, Feb. 2006. [www.the-hospitalist.org](http://www.the-hospitalist.org)

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