



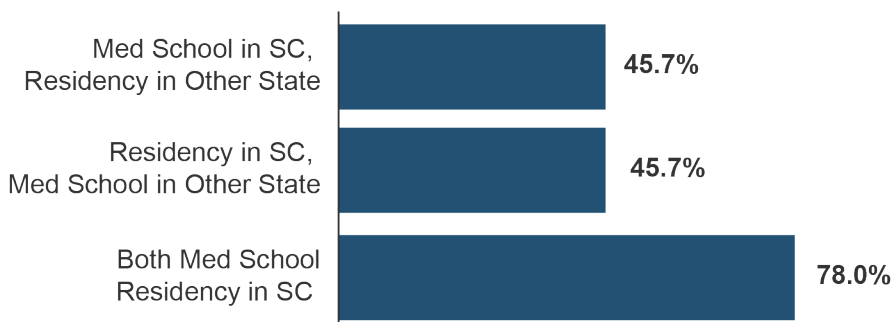
Trends of South Carolina Medical School Graduates Pursuing Residency, 2016-2024

Introduction

Understanding the dynamics of physician supply includes understanding how and where physicians train. To become a fully licensed physician, one must graduate from medical school, which is considered undergraduate medical education (UME), and complete residency training, which is graduate medical education (GME). During GME, physicians train in core specialties, such as family medicine, general surgery, and psychiatry, and are then qualified to apply for full licensure and board certification. Physicians who complete residency may pursue additional training in sub-specialty fellowships, such as pediatric surgery or endocrinology.

Medical school and residency location can influence where physicians end up practicing, with a greater proportion staying close to where they completed their residency. The likelihood of retaining physicians in the state increases if they complete both medical school and their residency training within South Carolina (**Figure 1**).

Figure 1. Retention of Active U.S. Physicians Who Trained in South Carolina as of December 2020



Note: These percentages are coincidentally identical. They are not typos. Retention here may include physicians who stayed in SC to practice or physicians that left the state after training and returned at some point before December 2020. Source: AAMC. 2021 State Physician Workforce Data Report. Washington, DC: AAMC; 2021. Available at <https://www.aamc.org/data-reports/workforce/report/state-physician-workforce-data-report>.

To better understand the physician supply in the state, this brief summarizes the residency program locations and specialties that graduates of South Carolina's medical schools from 2016-2024 collectively matched. Data for 2024 are further examined to explore a one-year snapshot of results by medical school.

Key Takeaways

General trends in where and into which specialties South Carolina medical school graduates match to residency programs remained consistent between 2016-2024.

- Location:** On average, only a quarter of South Carolina medical school graduates stay in South Carolina for residency training.
- Specialty:** On average, just over half (52%) of South Carolina medical school graduates match to a primary care specialty (family medicine, internal medicine, ob/gyn or pediatrics).
- Primary Care in SC:** Overall, the proportion of total medical school graduates matching to a *primary care* residency *within South Carolina* ranged from 12-15% between 2016-2024.

Monitoring these data can help with identifying opportunities to reinforce the pathways from SC medical schools into SC residency programs, potentially resulting in strengthening the physician workforce available to care for all South Carolinians.

The Residency Matching Process

Thousands of medical school graduates apply for residency slots each year. The National Resident Matching Program® (NRMP®) and a small number of other matching services¹ connect applicants to training sites through an algorithm designed to optimize the top choices from both the students and the residency programs. Not all applicants match to their top choice of specialty or location, and some remain unmatched, while a small number choose not to pursue a residency.

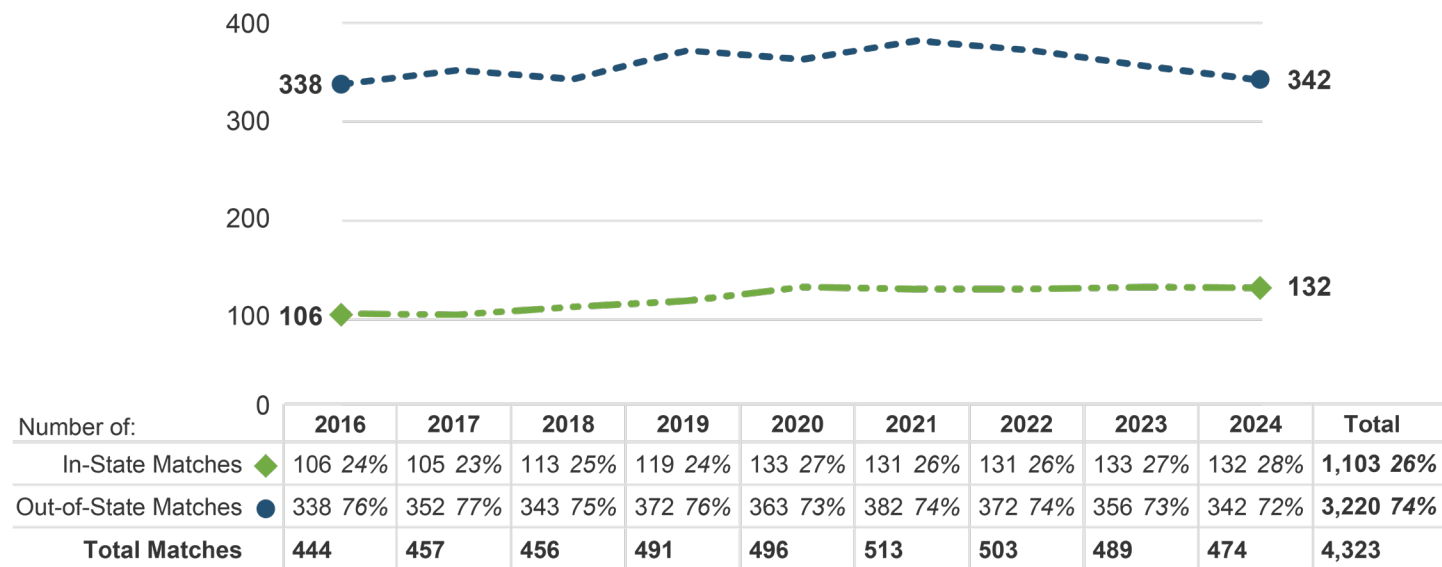
Graduates from all four of South Carolina’s medical schools – Medical University of South Carolina College of Medicine (MUSC COM), University of South Carolina School of Medicine – Columbia (USC SOM Columbia), University of South Carolina School of Medicine – Greenville (USC SOM Greenville), and the Edward Via College of Osteopathic Medicine Carolinas Campus (VCOM CC)² – and the numerous residency programs across the state participate in this matching process.

The Match® results are announced annually in March.³ MUSC COM, USC SOM Columbia, and USC SOM Greenville post their results to their websites shortly after that. VCOM maintains a robust data visualization tool that combines information for all four of its campuses, including VCOM CC. The match results analyzed in this report were obtained from each medical school and only include the NRMP Main Match® results.

South Carolina Match Trends, 2016-2024

Figure 2 shows the number of South Carolina medical school graduates that match to residency programs in South Carolina (green line) compared to all other states (blue line). As VCOM CC’s first class graduated in 2015, and USC SOM Greenville’s first class graduated in 2016, this trends analysis starts with 2016. The trends hold steady across time. In-state matches range from a low of 23% of medical school graduates staying in South Carolina in 2017 to a high of 28% in 2024.

Figure 2. In-State vs. Out-of-State Matches of South Carolina Medical School Graduates, 2016-2024



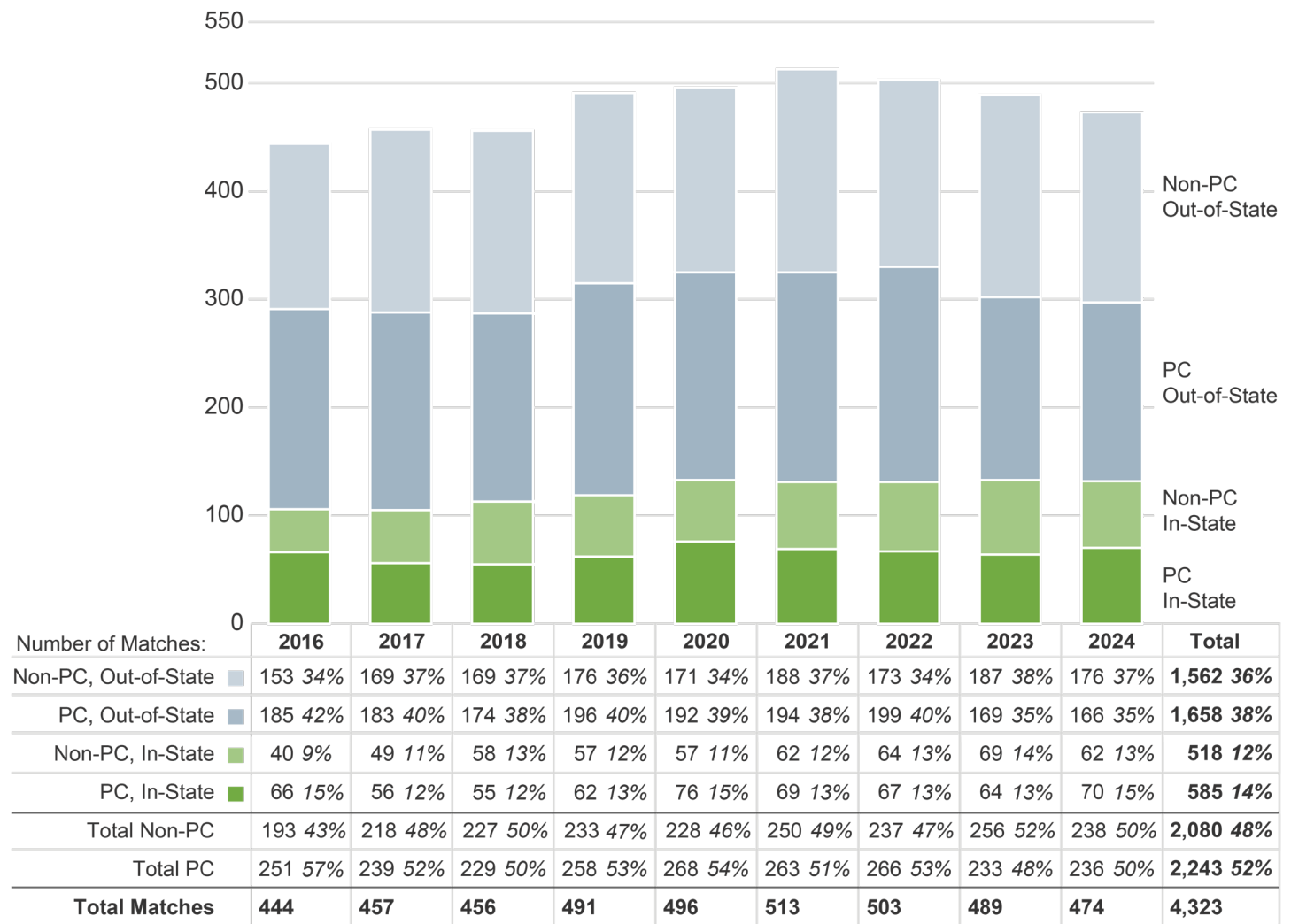
Sources: MUSC COM, USC SOM Columbia, USC SOM Greenville, and VCOM CC, 2016-2024. For more details, refer to the source notes on page 8.

¹ Examples of residency matching services outside of the NRMP® include the San Francisco Matching Service (SF Match) for ophthalmology and plastic surgery, the Urology Match, and the Military Match.
² For a brief description of the state’s four medical schools, see Gaul K. South Carolina’s Medical Schools, 2023. Charleston, SC: South Carolina Office for Healthcare Workforce, South Carolina Area Health Education Consortium. September 2024.
³ For more detailed information on the residency matching process see National Resident Match Program®. Intro to the Match, 2024. <https://www.nrmp.org/intro-to-the-match/>

Figure 3 shows the distribution of matches into primary care (PC) and non-primary care (non-PC) specialties in South Carolina (in-state) and all other states (out-of-state). Across locations, just over half of medical school graduates match into a primary care specialty. However, the percentage of all medical school graduates matching into primary care residency programs in South Carolina (dark green bar) is only 14% between 2016 and 2024.

Between 2016-2024, 19% of total medical school graduates matched to internal medicine, 15% to family medicine, 11% to pediatrics, and 7% to ob-gyn. Medical school graduates matching into a South Carolina residency program were more likely to match into family medicine (21%) than internal medicine (17%), pediatrics (10%), or ob-gyn (5%).⁴

Figure 3. Matches by Specialty Category and Location, South Carolina Medical School Graduates, 2016-2024



* Primary care includes family medicine, internal medicine, obstetrics/gynecology, and pediatrics. Non-primary care includes all other specialties and transitional, preliminary, and research matches.
Sources: MUSC COM, USC SOM Columbia, USC SOM Greenville, and VCOM CC, 2016-2024. For more details, refer to the source notes on page 8.

⁴ Data not shown. Detailed data tables showing specialty breakdown over the years based on total matches, in-state matches, and out-of-state matches, are available upon request.

South Carolina Match Results, 2024

Looking at trends in where total medical school graduates matched between 2016-2024 reveals little variation in location and specialty. This section provides a one-year snapshot of results by medical school for 2024.

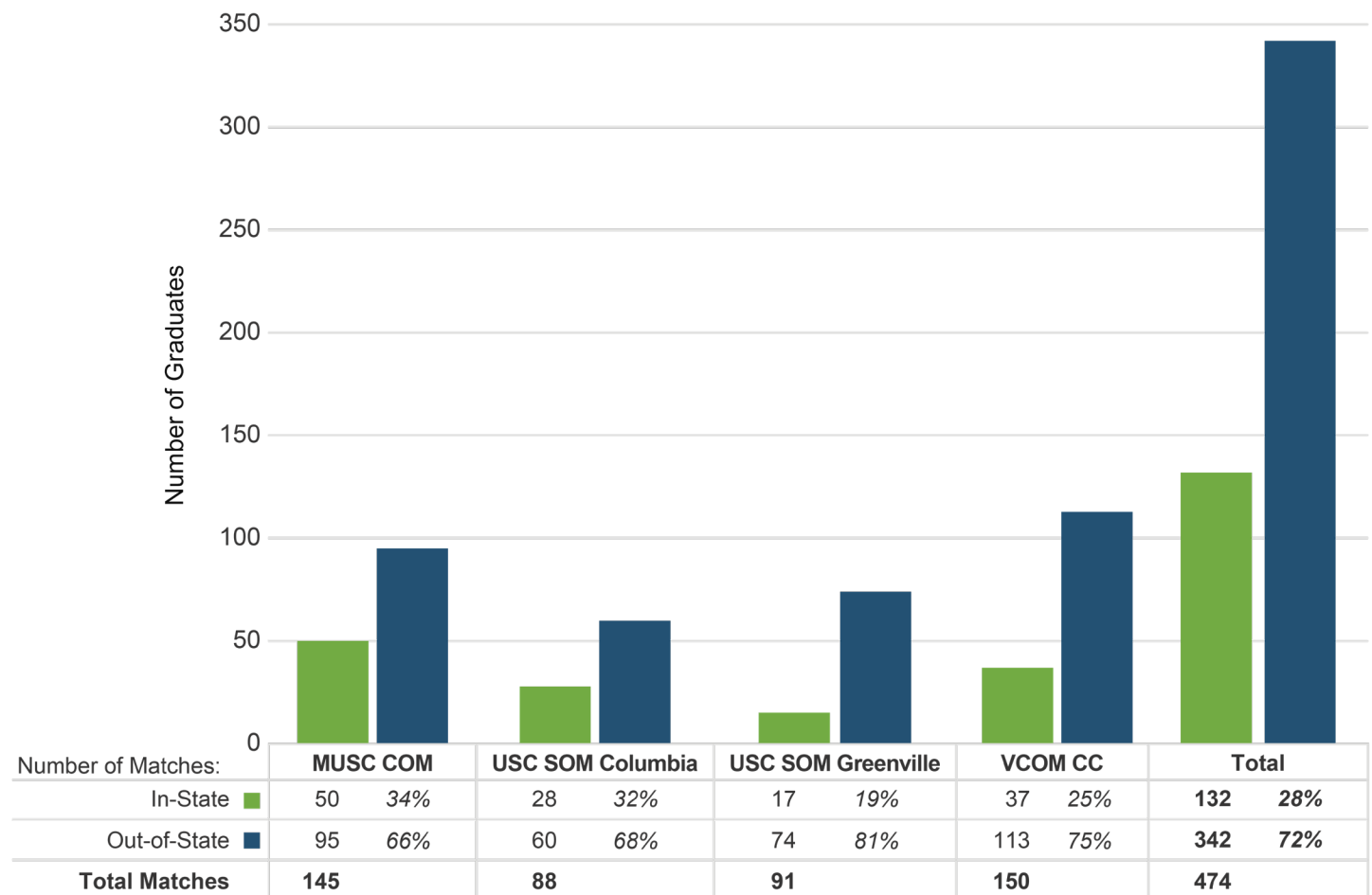
In-State vs Out-of-State Matches by Medical School

In 2024, 476 medical students graduated from the state's four medical schools⁵, and of those, 474 matched to a residency program. Of the 474 graduates who matched, 132 (28%) matched into South Carolina programs.

Figure 4 illustrates the number and percentage of in-state and out-of-state matches for South Carolina graduates by medical school. MUSC COM (34%) and USC SOM Columbia (32%) had the highest percentage of students matching to a residency program within South Carolina.

Nearly three-quarters of the state's graduates matched into programs outside South Carolina. The top ten states where the most South Carolina medical school graduates matched outside of South Carolina in 2024 include North Carolina (14%), Florida (7%), Virginia, Georgia, and Texas (5% each), Ohio (4%), Alabama, Tennessee, and New York (3% each), and California (2%).

Figure 4. In-State vs. Out-of-State Matches by South Carolina Medical School, 2024



Sources: MUSC COM, USC SOM Columbia, USC SOM Greenville, and VCOM CC. For more details, refer to the source notes on page 8.

⁵ AAMC. 2023 FACTS: Enrollment, Graduates, and MD-PhD Data. Table B-2.2: Total Graduates by U.S. Medical School, Gender, and Year, 2019-2020 through 2023-2024. <https://www.aamc.org/data-reports/students-residents/data/2023-facts-enrollment-graduates-and-md-phd-data>, retrieved 8/22/2024; personal communication with VCOM CC, 8/22/2024.

Into What Specialties Do South Carolina Medical School Graduates Match?

Table 1 shows the specialties into which South Carolina medical school graduates matched in 2024, regardless of residency program location. Half (50%) matched into a primary care specialty. VCOM CC had the highest percentage of students matching into a primary care specialty (62%).

Table 1. Specialty Matches for Medical School Graduates by South Carolina Medical School, 2024

	MUSC COM		USC SOM Columbia		USC SOM Greenville		VCOM CC		Total	
	#	%	#	%	#	%	#	%	#	%
Total	145		88		91		150		474	
Primary Care (PC)	61	42%	37	42%	45	49%	93	62%	236	50%
Family Medicine	12	8%	9	10%	5	5%	41	27%	67	14%
Internal Medicine	26	18%	11	13%	23	25%	29	19%	89	19%
Obstetrics/Gynecology	8	6%	6	7%	10	11%	5	3%	29	6%
Pediatrics	15	10%	11	13%	7	8%	18	12%	51	11%
Psychiatry	7	5%	3	3%	5	5%	3	2%	18	4%
General Surgery	5	3%	5	6%	8	9%	12	8%	30	6%
All Other Specialties	72	50%	43	49%	33	36%	42	28%	190	40%
Anesthesiology	18	12%	4	5%	6	7%	2	1%	30	6%
Child Neurology	1	1%	0	0%	1	1%	0	0%	2	0%
Dermatology	3	2%	0	0%	2	2%	0	0%	5	1%
Emergency Medicine	15	10%	11	13%	6	7%	16	11%	48	10%
Interventional Radiology (Integrated)	2	1%	1	1%	-	-	1	1%	4	1%
Medicine - Preliminary	-	-	1	1%	-	-	2	1%	3	1%
Neurological Surgery	2	1%	-	-	1	1%	1	1%	4	1%
Neurology	1	1%	3	3%	-	-	4	3%	8	2%
Ophthalmology	5	3%	1	1%	1	1%	-	-	7	1%
Orthopedic Surgery	5	3%	6	7%	2	2%	2	1%	15	3%
Otolaryngology	5	3%	1	1%	-	-	-	-	6	1%
Pathology	1	1%	2	2%	1	1%	2	1%	6	1%
Physical Medicine & Rehab.	1	1%	-	-	-	-	1	1%	2	0%
Radiation Oncology	1	1%	-	-	1	1%	-	-	2	0%
Radiology	3	2%	2	2%	3	3%	-	-	8	2%
Surgery - Preliminary	4	3%	4	5%	5	5%	2	1%	15	3%
Transitional	2	1%	5	6%	-	-	9	6%	16	3%
Urology	1	1%	1	1%	4	4%	-	-	6	1%
Vascular Surgery	2	1%	1	1%	-	-	-	-	3	1%

Note: Specialty data for advanced positions for those matching into transitional or preliminary positions were not available for all medical school graduates and are not included in this table.

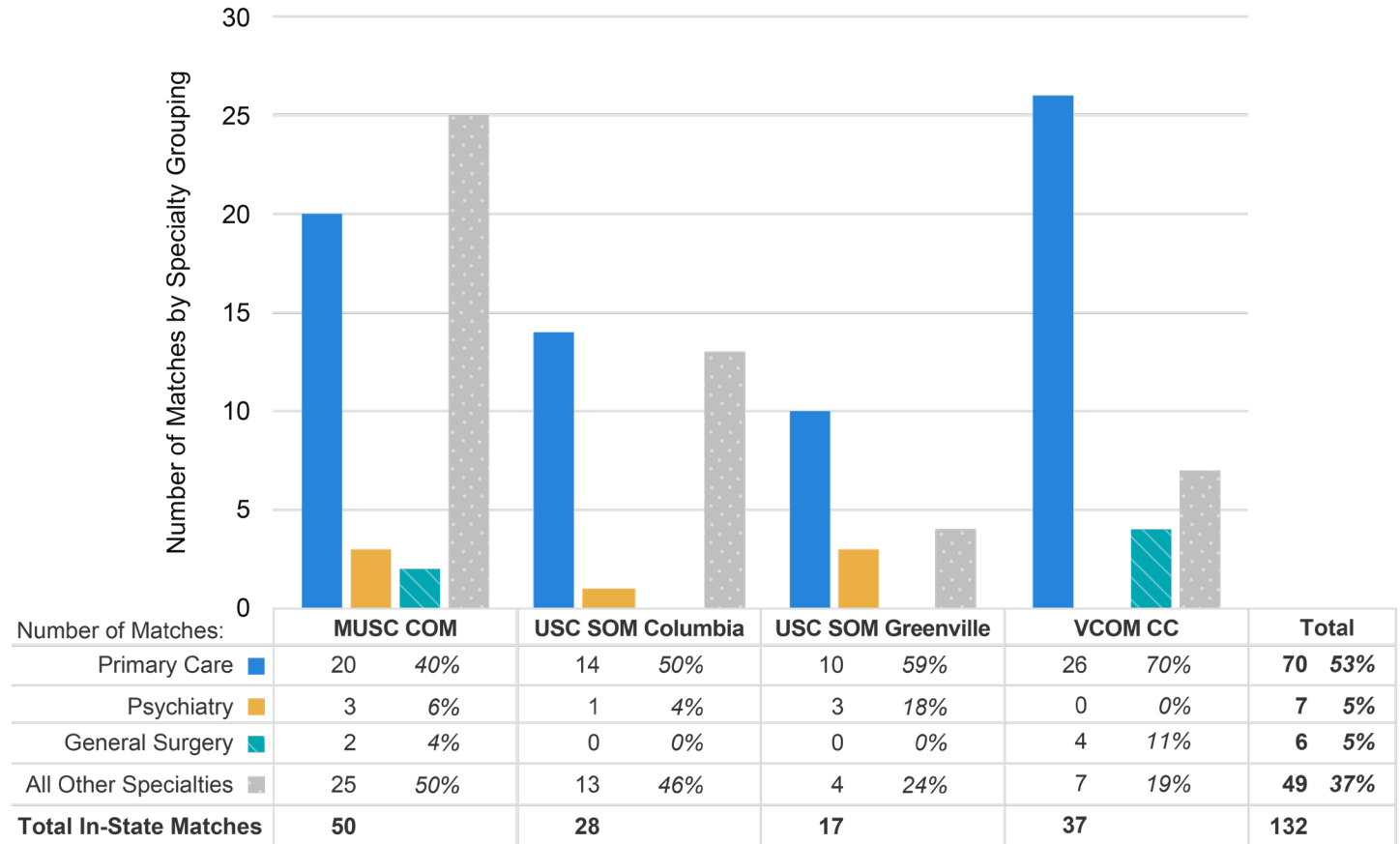
Sources: MUSC, USC SOM Columbia, USC SOM Greenville, and VCOM CC. For more details, refer to the source notes on page 8.

Into What Specialties Do Graduates Staying in South Carolina Match?

Of the 132 medical school graduates staying in South Carolina for residency, 52% matched into primary care specialties, including family medicine, internal medicine, ob/gyn, and pediatrics. **Figure 5** shows these specialty matches by medical school. VCOM CC had the largest number (n=26) and percentage (70%) of students matched into primary care within South Carolina.

While half of medical school graduates staying in-state chose primary care, this represents only a small percentage (15%) of the total 474 graduates in 2024.

Figure 5. Specialty Matches for Medical School Graduates Matching into South Carolina Residency Programs by South Carolina Medical School, 2024



* Primary care includes family medicine, internal medicine, obstetrics/gynecology, and pediatrics. Other specialties include those not counted as primary care, psychiatry, or general surgery and include transitional, preliminary, and research.

Sources: MUSC COM, USC SOM Columbia, USC SOM Greenville, and VCOM CC. For more details, refer to the source notes on page 8.

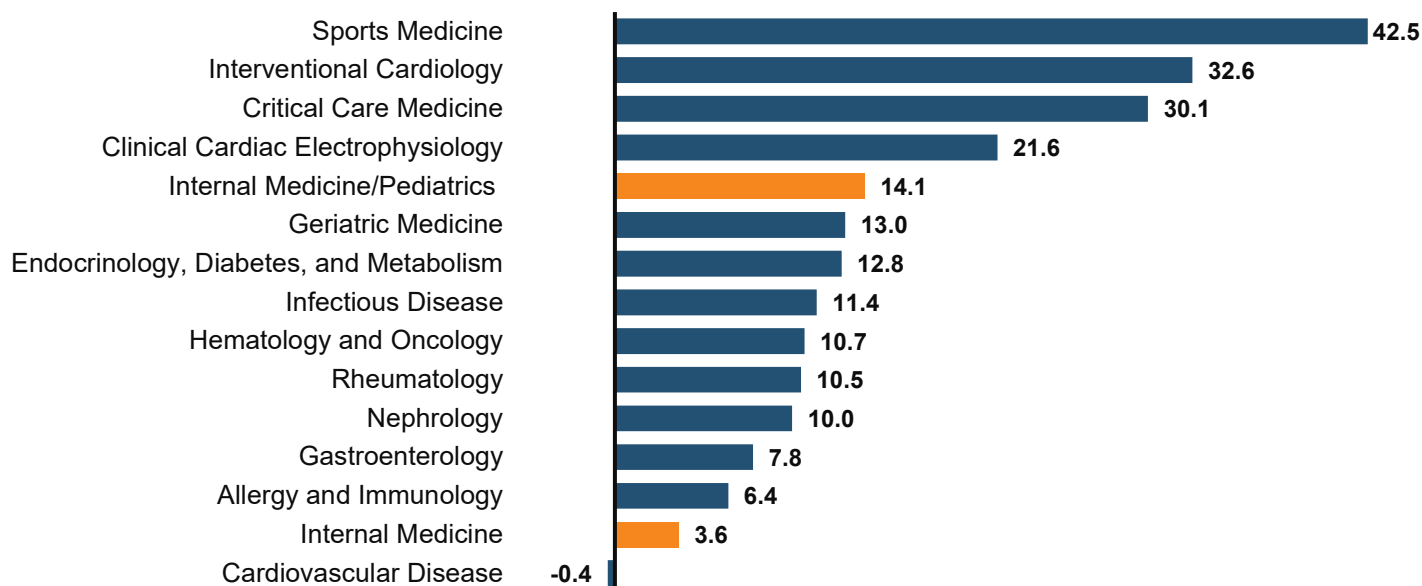
The Path to Specialization

The specialty data in the Match results do not include sub-specialty fields such as gastroenterology or oncology. Physicians who pursue these specialties complete a categorical or advanced residency program and then undertake additional training through a fellowship, typically lasting one to three years.

While South Carolina medical school graduates in 2024 matched to internal medicine and pediatrics at generally higher rates than other specialties, many will go on to pursue subspecialty training instead of pursuing generalist practice. According to data from the Association of American Medical Colleges (AAMC), the number of internal medicine and pediatric subspecialists grew faster than general internal medicine

physicians or general pediatricians between 2016 and 2021.⁶ **Figure 5** demonstrates this growth for internal medicine, where “internal medicine” and “internal medicine/pediatrics” (orange bars) would be considered generalist or primary care.

Figure 5. Percentage Change in Internal Medicine Specialists, United States, 2016-2021



Note: In the late 1980s, pulmonary disease began to evolve into what is now known as pulmonary critical care. This likely contributed to a decrease in the number of physicians in pulmonary disease (-10.8%, not shown on the chart) and an increase in critical care medicine.

Source: 2022 AAMC Physician Specialty Data Report. Table 1.9. Percentage Change in the Number of Active Physicians by Specialty, 2016-2021.

<https://www.aamc.org/data-reports/workforce/data/percentage-change-number-active-physicians-specialty-2016-2021>.

Conclusions

Notable findings include:

1. Trends in matches by location, primary care specialties, and primary care specialties within South Carolina remained consistent between 2016 and 2024.
2. About half of South Carolina medical school graduates match into a primary care program.
3. Only about one out of four South Carolina medical school graduates match into a South Carolina residency program.

South Carolina medical school graduates match into a variety of specialties, with about half of graduates securing positions in primary care fields. This is vital for maintaining access to preventative and comprehensive healthcare services. Primary care providers are critical in providing access to care for rural and underserved populations and providing referrals to specialist physicians for more complicated care. However, only a fraction of total graduates matched into primary care residency programs within South Carolina, and many of those are likely to subspecialize in the future. Additionally, national data show faster growth in the growth of internal medicine subspecialists, which suggests that not all medical school graduates matching into primary care will remain in generalist roles. While there is undoubtedly a need for specialists such as endocrinologists, there will remain a need for generalist physicians to provide accessible, preventative primary care as the first line of defense against chronic disease.

⁶ 2022 AAMC Physician Specialty Data Report. Table 1.9. Percentage Change in the Number of Active Physicians by Specialty, 2016-2021. <https://www.aamc.org/data-reports/workforce/data/percentage-change-number-active-physicians-specialty-2016-2021>.

Understanding residency match outcomes for South Carolina medical school graduates is helpful in assessing the state's future physician supply and addressing healthcare workforce needs. While many factors contribute to a graduate's ultimate residency match, by monitoring these data and better reinforcing the pathways from South Carolina medical schools into South Carolina residency programs, the state can capitalize on its investment in medical education and help ensure that the state's healthcare system can effectively meet the needs of its population.

Limitations

- GME is a national market. Students may not always match to their preferred specialty or location.
- Some medical school graduates may choose to pursue residency training in other states to gain a different perspective or experience a different location and decide to return to South Carolina later.
- Match placements only indicate where medical school graduates are placed into a PGY-1 position. They do not indicate if they will switch locations or specialties, complete an additional residency or fellowship, complete their residency, or stay in South Carolina.

Data Sources and Methods

Match data for the Medical University of South Carolina, University of South Carolina School of Medicine Columbia, and University of South Carolina School of Medicine Greenville were obtained from each school's website.

- MUSC: <https://medicine.musc.edu/education/medical-students/student-affairs/match-information>
- USC SOM Columbia: https://sc.edu/study/colleges_schools/medicine/education/md_program/about_us/index.php
- USC SOM Greenville 2022-2024 results: https://sc.edu/study/colleges_schools/medicine_greenville/life_on_campus/events/match_day/index.php. Other years can be found by using a search engine or searching the school's website using text along the lines of "USC School of Medicine Greenville 2024 Match Results."

Match data for the Edward Via College of Osteopathic Medicine – Carolinas Campus were provided by VCOM CC leadership. VCOM also maintains a robust data visualization that combines information for all four of its campuses. The tool is available at <https://www.vcom.edu/residency-match>.

Data were cleaned to remove duplicate records, standardize specialty, program name, and location, and add codes for in-state vs out-of-state, primary care, and federal/military.

Primary care includes family medicine, internal medicine, medicine/pediatrics, medicine-primary, obstetrics/gynecology, pediatrics, and pediatrics-primary.

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