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Data Resource Book

Academic Year 2019-2020

Department of Information Services / Applications and Data Analysis
Accreditation Council for Graduate Medical Education



Accreditation Council for Graduate Medical Education

401 North Michigan Avenue

Suite 2000

Chicago, Illinois 60611

Telephone: 312.755.5000

www.acgme.org

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Send inquiries to: databook@acgme.org.

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Introduction

Overview

The mission of the Accreditation Council for Graduate Medical Education (ACGME) is to improve health care and population health by assessing and advancing the quality of resident physicians' education through accreditation. The collection and analysis of data is crucial to performing these functions. The ACGME's *Data Resource Book* contains the most recent data on ACGME-accredited institutions and programs, and physicians in ACGME-accredited graduate medical education (GME) programs. The *Data Resource Book* is intended to be a concise reference for policymakers, designated institutional officials, GME program directors, and others to identify and clarify issues affecting the accreditation of GME programs and the institutions that sponsor them.

The ACGME continues to improve the *Data Resource Book* to describe the accreditation process in greater detail, and hopes it is a valuable resource for constituents. Feedback and suggestions are welcomed and valued. Send comments to databook@acgme.org.

Accreditation Data System

The Accreditation Data System (ADS) is a web-based software system that contains critical accreditation data for all Sponsoring Institutions and programs. It is a tool to collect and organize information for accreditation purposes, and serves as a means of communication between the ACGME and Sponsoring Institutions and programs. It is also used internally by the Department of Accreditation, Recognition, and Field Activities in conducting accreditation activities. ADS incorporates several applications and functions, including the Annual Update, Milestones, Case Logs, Surveys, and the application for accreditation.

ADS was originally built by the Department of Applications and Data Analysis (now the Department of Information Services) in 2000 and went through a major redesign in 2012. During the redesign process, numerous disparate data systems were consolidated, and the underlying database structure was completely refactored. Resident records across programs were linked based on identifying information, and a single record was created at the database level for each individual. ADS, in this way, not only provides an annual look at every accredited Sponsoring Institution and program, but also serves as a system to track residents longitudinally throughout the course of their educational experience.

The ADS Annual Update is scheduled for Sponsoring Institutions and programs following the start of each academic year. At that time, programs are required to enter information on new residents, confirm the status of existing/graduating residents, and enter critical information regarding faculty members, scholarly activity, participating sites, and other major program changes. Sponsoring Institutions are also scheduled to participate and must respond to institutional review questions, and update any personnel or participating site information. Capturing critical information at the start of the academic year allows the ACGME to facilitate the process of archiving Case Log procedures for graduating residents, schedule Milestones evaluations for all residents twice per academic year, and conduct the annual ACGME Resident/Fellow and Faculty Surveys. While the Annual Update occurs once a year, Sponsoring Institutions and programs are expected to keep their information up to date at all times. In this sense, ADS is currently the most comprehensive database of GME Sponsoring Institutions, programs, and physicians-in-training in the United States.

Academic Year Reporting

To create a comprehensive report on GME for the academic year, an annual snapshot of the database is taken at the end of each academic year, the results of which are summarized in this book. The trends shown here are based on the combination of these snapshots over time. This particularly affects the counts of withdrawn and newly accredited programs which may change following the publication of this report. The timing of the snapshot also affects the ACGME's ability to report on the graduating cohort, as this information is not fully available until after the fall Annual Update reporting is complete. It is for this reason that the graduates and residents leaving their programs are reported for the previous academic year (in this edition, the 2018-2019 academic year). Up-to-date information on individual Sponsoring Institutions and programs can be found on the ADS public website <https://apps.acgme.org/ads/public/>.

Definitions

The definitions listed below clarify use of terms in this Data Resource Book only. These reflect the 2019-2020 academic year, and not necessarily changes to ACGME definitions or data collection terms relative to revised requirements. Additional terms, and in some cases more comprehensive and current definitions of terms included here, are included in the ACGME Glossary of Terms, found on the ACGME website (<http://www.acgme.org/About-Us/Policies-and-Related-Materials>).

Continuing GME Programs: Continuing GME programs are those available to physicians only after successful completion of a pipeline program.

Core Faculty: In specialty programs, core faculty are faculty members, other than program directors, who devote at least 15 hours per week to resident education and administration. Core faculty members should also evaluate the competency domains, work closely with and support the program director, assist in developing and implementing evaluation systems, and teach and advise residents.

Designated Institutional Official (DIO): The individual in a Sponsoring Institution who has the authority and responsibility for all of that institution's ACGME-accredited programs.

International Medical Graduate (IMG): A graduate of a medical school outside the United States and Canada. IMGs may be citizens of the United States who chose to be educated elsewhere or non-citizens who are admitted to the United States by US Immigration authorities.

Osteopathic Recognition: A determination of substantial compliance with the published Osteopathic Recognition Requirements, following a process of evaluation and peer review.

Participating Site: An organization providing educational experiences or educational assignments/rotations for residents/fellows.

Post-Graduate Year 1 (PGY-1): Any graduate medical education position available to physicians immediately after their completion of medical school. These positions are also referred to as entry-level positions.

Pipeline Specialties: Specialties that lead to primary board certification. The net output of physicians over time from the graduate medical education system into clinical practice is determined by the number of positions available in pipeline specialties. See Appendix A.

Program: A structured educational experience in graduate medical education designed to conform to the Program Requirements of a particular specialty/subspecialty, the satisfactory completion of which may result in eligibility for board certification.

Program Director: The individual designated with authority and accountability for the operation of a GME program.

Program Year: Refers to the current year of education (of an individual resident or fellow) within a specific program; this designation may or may not correspond to a resident's post-graduate year.

Review Committee: A group comprised of volunteers that sets accreditation standards (requirements), provides peer evaluation of Sponsoring Institutions or programs to assess the degree to which these comply with the applicable published accreditation requirements, and confers an accreditation status on each Sponsoring Institution or program in its purview with regard to substantial compliance with those requirements. There are three types of Review Committee: specialty Review Committee, Transitional Year Review Committee, and Institutional Review Committee.

Resident: For the purposes of this publication only, this term is used to refer to any physician in a graduate medical education program, including both residents and fellows.

Sponsoring Institution: The organization (or entity) with ultimate financial and academic responsibility for one or more accredited graduate medical education programs, and that has the primary purpose of providing educational programs and/or health care services. Examples include a university, a medical school, a hospital, a school of public health, a health department, a public health agency, an organized health care delivery system, a medical examiner's office, a consortium, and an educational foundation.

Specialty Group: For analytic purposes, the grouping of specialties and subspecialties into one of three categories based on patient care focus: surgical, medical, and hospital-based. See Appendix B.

Specialty Program: A structured educational experience in a field of medical practice following completion of medical school and, in some cases, prerequisite basic clinical education designed to conform to the Program Requirements of a particular specialty.

Subspecialty Program: A structured educational experience following completion of a prerequisite specialty program in graduate medical education designed to conform to the Program Requirements of a particular subspecialty area.

Withdrawal of Accreditation: The conclusion, whether voluntary or administrative, of accreditation status and services. See the *ACGME Manual of Policies and Procedures* for more details and specification. These decisions may be made effective at any time during the academic year. Any program with a Withdrawal status effective prior to June 30, 2020 will be excluded from the count of accredited programs for Academic Year 2019-2020 in this edition of the *Data Resource Book*.

A Program Accreditation

This section summarizes the accreditation statuses of currently accredited programs, as well as trends in the total number of accredited programs since the 2010-2011 academic year. This section also shows the pattern of accreditation statuses by specialty for all programs, newly accredited programs, and programs with loss of accreditation. Finally, the section includes information on the lengths of programs varying by specialty, as well as on programs that have achieved Osteopathic Recognition.

Accredited Programs by Status

Of the 12,092 total accredited programs, 10,283 (4,468 specialty programs and 5,815 subspecialty programs) had a status of Continued Accreditation, accounting for 85.0% of programs. Only 172 programs (1.4%) had a status of Continued Accreditation with Warning, and an even smaller number, 14 (0.1%), had a status of Probationary Accreditation. Remaining programs had a status of either Initial Accreditation (12.9%) or Withdrawal of Accreditation (0.5%). Among specialty programs, the specialties with the highest percentage of programs with a Continued Accreditation with Warning status are:

- Plastic surgery (18.9%)
- Osteopathic neuromusculoskeletal medicine (11.1%)
- Radiation oncology (9.9%)
- Colon and rectal surgery (9.2%)

Dermatology and radiation oncology had two programs each issued Probationary Accreditation, and specialties with one program on probation include family medicine, neurological surgery, ophthalmology, physical medicine and rehabilitation, psychiatry, surgery, and thoracic surgery.

Trends in Accredited Programs

Since the 2015-2016 academic year, there has been a 21.2% increase in the total number of ACGME-accredited programs. This is primarily due to the continued transition to a single graduate medical education (GME) accreditation system. The following specialties had the highest five-year change in total number of programs:

- Family medicine (203 – 125 previously AOA-approved)
- Internal medicine (148 – 96 previously AOA-approved)
- Emergency medicine (86 – 48 previously AOA-approved)
- Surgery (69 – 46 previously AOA-approved)

Newly Accredited Programs

A total of 507 programs were newly accredited during the 2018-2019 academic year. Of the newly-accredited programs, 320 (63.1%) are in medical specialties and subspecialties, 104 (20.5%) are in hospital-based specialties and subspecialties, and 83 (16.4%) are in surgical specialties and subspecialties. In the last four academic years, specialty programs exceeded 40% of the total number of newly accredited programs, largely due to the transition to a single GME accreditation system. The specialties with the highest number of newly accredited programs are:

- Family medicine (32)
- Internal medicine (28)
- Emergency medicine (21)
- Transitional year (14)

Pediatric hospital medicine, addiction medicine (multidisciplinary), hospice and palliative medicine (multidisciplinary), selective pathology, and hematology and medical oncology had the highest number of new programs among all subspecialties, with 33, 26, 20, 12, and 11 programs, respectively, accounting for 20.1% of all newly accredited programs added this year. There are 14 subspecialties newly accredited by the ACGME in the past five years. New programs in these 14 subspecialties account for 19.4% of all new subspecialty programs.

Withdrawn Programs

Withdrawn programs are reported in three categories: those withdrawn prior to the end of the 2019-2020 academic year (which are not included in the population of accredited programs); those withdrawn at the end of the 2019-2020 academic year; and those with a future-effective withdrawal date. At the time of this report, internal medicine had eight withdrawn programs, family medicine had six withdrawn programs, followed by emergency medicine, radiology-diagnostic, and transitional year each with three withdrawn programs during the academic year. The following subspecialty had 19 withdrawn programs during the academic year: vascular and interventional radiology.

Accredited Training Length

The majority of core programs take three or four years to complete. Neurological surgery programs have the longest educational program length among core programs at seven years. Among subspecialty programs, 51.5% are one year in length, with the remaining programs requir-

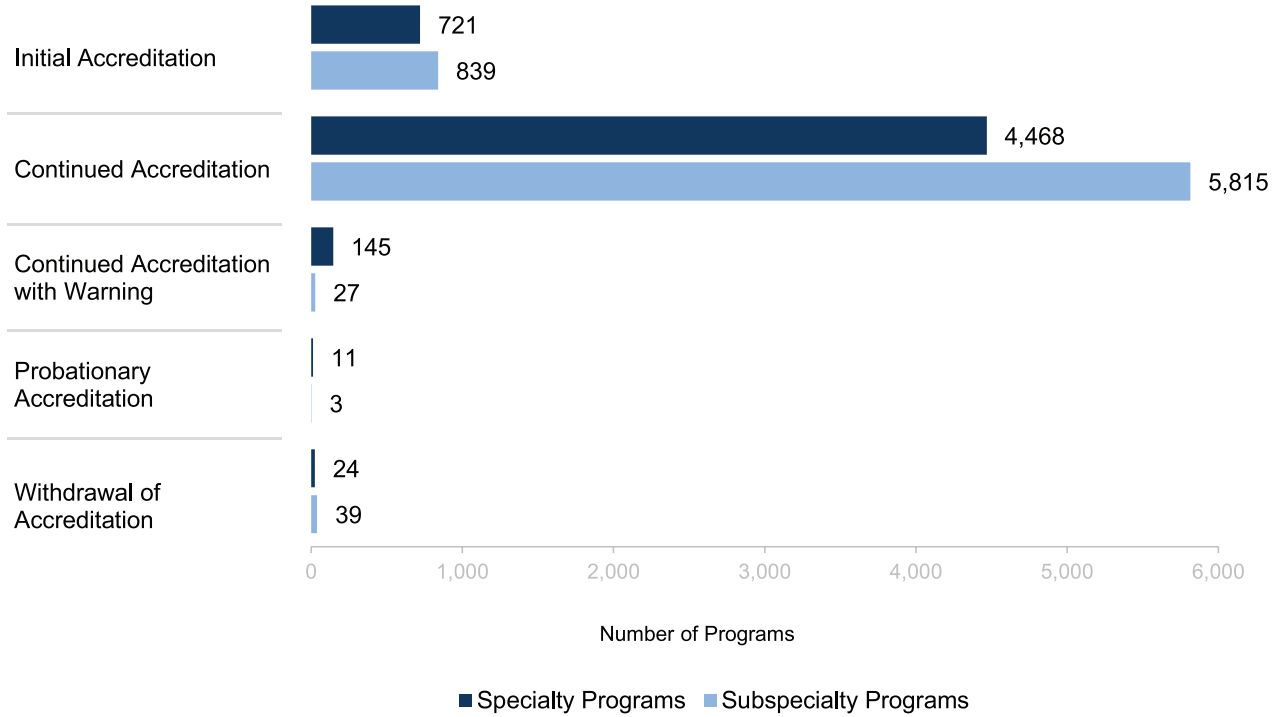
ing two or more years to complete. The internal medicine subspecialties of advanced heart failure and transplant cardiology, clinical cardiac electrophysiology, interventional cardiology, and transplant hepatology all require the completion of another subspecialty program prior to entry. These four subspecialties along with the subspecialties of endovascular surgical neuroradiology, pediatric transplant hepatology, craniofacial surgery, and congenital cardiac surgery require six to seven total years of prior education and training before entry.

Osteopathic Recognition

The 2019-2020 academic year is the fourth year that the ACGME has recognized training in Osteopathic Principles and Practice in ACGME-accredited programs. Of the 236 programs with Osteopathic Recognition, 148 (62.7%) are family medicine programs and 33 (14.0%) are internal medicine programs. ↖

FIGURE A.1

Accreditation Statuses of Currently Accredited Programs



Notes: Total number of accredited programs = 12,092. Excluding programs withdrawn prior to the end of the academic year (n=46).

FIGURE A.2

Number of Accredited Programs by Academic Year, 2010-2011 to 2019-2020

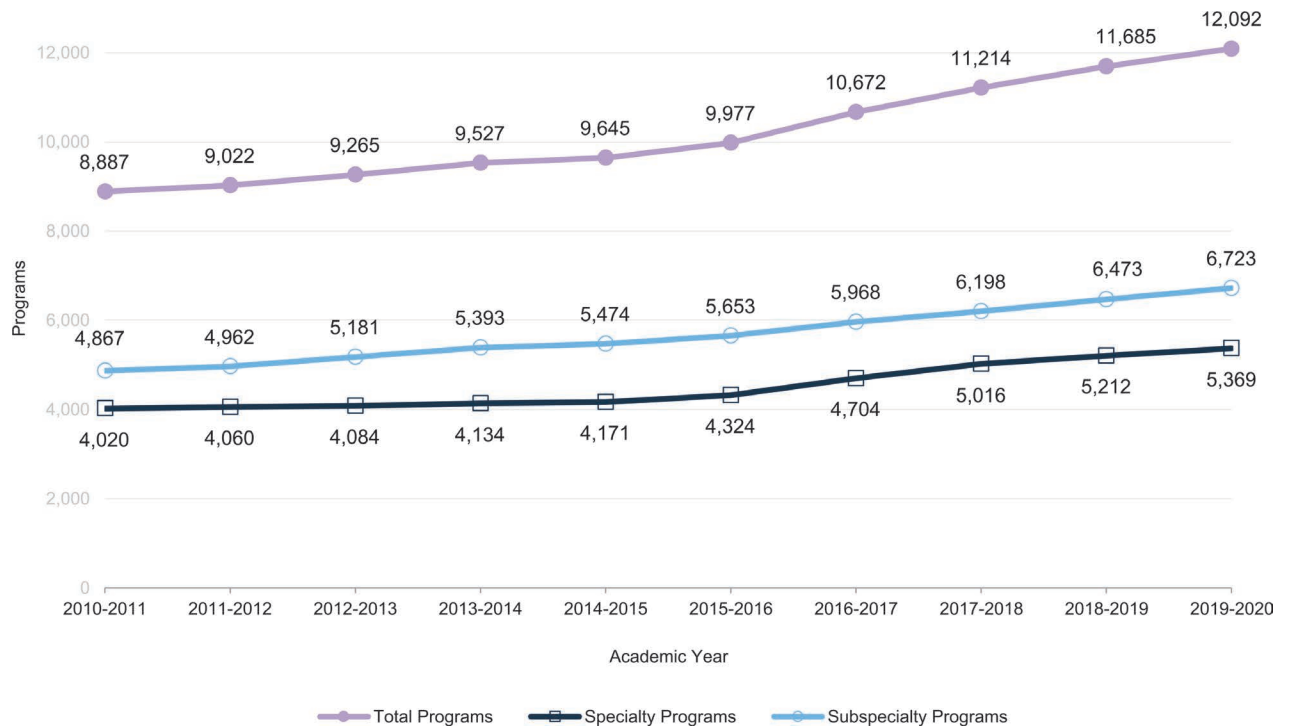


TABLE A.3
Accreditation Statuses of Currently Accredited Programs by Specialty and Subspecialty

Specialty	Total Programs	Accreditation Status									
		Initial Accreditation		Continued Accreditation		Continued Accreditation with Warning		Probationary Accreditation		Withdrawal of Accreditation	
		#	%	#	%	#	%	#	%	#	%
OVERALL	12,092	1,560	12.9%	10,283	85.0%	172	1.4%	14	0.1%	63	0.5%
TOTAL PIPELINE	4,985	664	13.3%	4,155	83.4%	135	2.7%	10	0.2%	21	0.4%
Allergy and immunology	81	3	3.7%	78	96.3%	0	0.0%	0	0.0%	0	0.0%
Anesthesiology	160	16	10.0%	143	89.4%	0	0.0%	0	0.0%	1	0.6%
- Adult cardiothoracic anesthesiology	71	5	7.0%	66	93.0%	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	63	5	7.9%	58	92.1%	0	0.0%	0	0.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	35	20	57.1%	15	42.9%	0	0.0%	0	0.0%	0	0.0%
- Obstetric anesthesiology	41	8	19.5%	32	78.0%	0	0.0%	0	0.0%	1	2.4%
- Pain medicine (multidisciplinary)	108	6	5.6%	102	94.4%	0	0.0%	0	0.0%	0	0.0%
- Pediatric anesthesiology	60	5	8.3%	55	91.7%	0	0.0%	0	0.0%	0	0.0%
Colon and rectal surgery	65	8	12.3%	51	78.5%	6	9.2%	0	0.0%	0	0.0%
Dermatology	144	10	6.9%	130	90.3%	1	0.7%	2	1.4%	1	0.7%
- Dermatopathology (multidisciplinary)	56	5	8.9%	51	91.1%	0	0.0%	0	0.0%	0	0.0%
- Micrographic surgery and dermatologic oncology	78	7	9.0%	68	87.2%	1	1.3%	0	0.0%	2	2.6%
Emergency medicine	265	59	22.3%	201	75.8%	4	1.5%	0	0.0%	1	0.4%
- Clinical informatics	5	1	20.0%	4	80.0%	0	0.0%	0	0.0%	0	0.0%
- Emergency medical services	71	18	25.4%	53	74.6%	0	0.0%	0	0.0%	0	0.0%
- Medical toxicology	26	1	3.8%	24	92.3%	1	3.8%	0	0.0%	0	0.0%
- Pediatric emergency medicine	26	1	3.8%	24	92.3%	1	3.8%	0	0.0%	0	0.0%
- Sports medicine	8	1	12.5%	7	87.5%	0	0.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	8	1	12.5%	7	87.5%	0	0.0%	0	0.0%	0	0.0%
Family medicine	701	124	17.7%	556	79.3%	14	2.0%	1	0.1%	6	0.9%
- Clinical informatics	6	3	50.0%	3	50.0%	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	50	9	18.0%	40	80.0%	0	0.0%	0	0.0%	1	2.0%
- Hospice and palliative medicine (multidisciplinary)	167	38	22.8%	129	77.2%	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	151	23	15.2%	128	84.8%	0	0.0%	0	0.0%	0	0.0%
Internal medicine	569	80	14.1%	481	84.5%	2	0.4%	0	0.0%	6	1.1%
- Adult congenital heart disease	24	13	54.2%	11	45.8%	0	0.0%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	80	11	13.8%	69	86.3%	0	0.0%	0	0.0%	0	0.0%
- Cardiovascular disease	250	28	11.2%	221	88.4%	0	0.0%	0	0.0%	1	0.4%
- Clinical cardiac electrophysiology	110	4	3.6%	106	96.4%	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	17	6	35.3%	11	64.7%	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	45	11	24.4%	34	75.6%	0	0.0%	0	0.0%	0	0.0%
- Endocrinology, diabetes, and metabolism	151	12	7.9%	139	92.1%	0	0.0%	0	0.0%	0	0.0%
- Gastroenterology	207	27	13.0%	178	86.0%	2	1.0%	0	0.0%	0	0.0%
- Geriatric medicine	111	12	10.8%	98	88.3%	0	0.0%	0	0.0%	1	0.9%
- Hematology	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	167	22	13.2%	143	85.6%	1	0.6%	0	0.0%	1	0.6%
- Infectious disease	154	11	7.1%	143	92.9%	0	0.0%	0	0.0%	0	0.0%
- Interventional cardiology	166	18	10.8%	148	89.2%	0	0.0%	0	0.0%	0	0.0%
- Nephrology	151	5	3.3%	145	96.0%	1	0.7%	0	0.0%	0	0.0%
- Medical oncology	7	1	14.3%	5	71.4%	0	0.0%	0	0.0%	1	14.3%
- Pulmonary disease	22	6	27.3%	15	68.2%	0	0.0%	0	0.0%	1	4.5%
- Pulmonary disease and critical care medicine	181	25	13.8%	155	85.6%	1	0.6%	0	0.0%	0	0.0%
- Rheumatology	125	9	7.2%	116	92.8%	0	0.0%	0	0.0%	0	0.0%
- Sleep medicine (multidisciplinary)	88	7	8.0%	81	92.0%	0	0.0%	0	0.0%	0	0.0%
- Transplant hepatology	57	6	10.5%	51	89.5%	0	0.0%	0	0.0%	0	0.0%
Medical genetics and genomics	47	2	4.3%	45	95.7%	0	0.0%	0	0.0%	0	0.0%
- Medical biochemical genetics	19	4	21.1%	15	78.9%	0	0.0%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	42	3	7.1%	38	90.5%	0	0.0%	0	0.0%	1	2.4%
Neurological surgery	118	9	7.6%	105	89.0%	1	0.8%	1	0.8%	2	1.7%
- Endovascular surgical neuroradiology	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%

TABLE A.3 *Continued*

Accreditation Statuses of Currently Accredited Programs by Specialty and Subspecialty											
Specialty	Total Programs	Accreditation Status									
		Initial Accreditation		Continued Accreditation		Continued Accreditation with Warning		Probationary Accreditation		Withdrawal of Accreditation	
		#	%	#	%	#	%	#	%	#	%
Neurology	160	17	10.6%	135	84.4%	8	5.0%	0	0.0%	0	0.0%
- Brain injury medicine	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Clinical neurophysiology	92	5	5.4%	86	93.5%	1	1.1%	0	0.0%	0	0.0%
- Epilepsy	81	21	25.9%	60	74.1%	0	0.0%	0	0.0%	0	0.0%
- Endovascular surgical neuroradiology	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	8	0	0.0%	7	87.5%	1	12.5%	0	0.0%	0	0.0%
- Neuromuscular medicine	52	6	11.5%	45	86.5%	1	1.9%	0	0.0%	0	0.0%
- Vascular neurology	106	15	14.2%	90	84.9%	0	0.0%	0	0.0%	1	0.9%
Child neurology	76	3	3.9%	70	92.1%	3	3.9%	0	0.0%	0	0.0%
Nuclear medicine	38	0	0.0%	37	97.4%	1	2.6%	0	0.0%	0	0.0%
Obstetrics and gynecology	285	24	8.4%	238	83.5%	23	8.1%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	54	5	9.3%	48	88.9%	1	1.9%	0	0.0%	0	0.0%
- Gynecologic oncology	63	14	22.2%	48	76.2%	0	0.0%	0	0.0%	1	1.6%
- Maternal-fetal medicine	97	19	19.6%	78	80.4%	0	0.0%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	51	7	13.7%	42	82.4%	0	0.0%	0	0.0%	2	3.9%
Ophthalmology	124	8	6.5%	113	91.1%	1	0.8%	1	0.8%	1	0.8%
- Ophthalmic plastic and reconstructive surgery	4	0	0.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%
Orthopaedic surgery	197	36	18.3%	149	75.6%	12	6.1%	0	0.0%	0	0.0%
- Adult reconstructive orthopaedics	24	3	12.5%	21	87.5%	0	0.0%	0	0.0%	0	0.0%
- Foot and ankle orthopaedics	7	1	14.3%	6	85.7%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	74	6	8.1%	62	83.8%	5	6.8%	0	0.0%	1	1.4%
- Musculoskeletal oncology	12	1	8.3%	10	83.3%	1	8.3%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	90	4	4.4%	85	94.4%	1	1.1%	0	0.0%	0	0.0%
- Orthopaedic surgery of the spine	18	2	11.1%	14	77.8%	0	0.0%	0	0.0%	2	11.1%
- Orthopaedic trauma	11	2	18.2%	9	81.8%	0	0.0%	0	0.0%	0	0.0%
- Pediatric orthopaedics	25	2	8.0%	23	92.0%	0	0.0%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	27	20	74.1%	4	14.8%	3	11.1%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	124	19	15.3%	102	82.3%	3	2.4%	0	0.0%	0	0.0%
- Neurotology	24	3	12.5%	21	87.5%	0	0.0%	0	0.0%	0	0.0%
- Pediatric otolaryngology	30	8	26.7%	22	73.3%	0	0.0%	0	0.0%	0	0.0%
Pathology-anatomic and clinical	142	1	0.7%	137	96.5%	4	2.8%	0	0.0%	0	0.0%
- Blood banking/transfusion medicine	51	2	3.9%	48	94.1%	1	2.0%	0	0.0%	0	0.0%
- Clinical informatics	10	5	50.0%	5	50.0%	0	0.0%	0	0.0%	0	0.0%
- Chemical pathology	4	1	25.0%	3	75.0%	0	0.0%	0	0.0%	0	0.0%
- Cytopathology	93	3	3.2%	90	96.8%	0	0.0%	0	0.0%	0	0.0%
- Forensic pathology	45	8	17.8%	37	82.2%	0	0.0%	0	0.0%	0	0.0%
- Hematopathology	86	2	2.3%	84	97.7%	0	0.0%	0	0.0%	0	0.0%
- Medical microbiology	15	0	0.0%	15	100.0%	0	0.0%	0	0.0%	0	0.0%
- Neuropathology	37	4	10.8%	33	89.2%	0	0.0%	0	0.0%	0	0.0%
- Pediatric pathology	28	2	7.1%	25	89.3%	1	3.6%	0	0.0%	0	0.0%
- Selective pathology	101	20	19.8%	81	80.2%	0	0.0%	0	0.0%	0	0.0%
Pediatrics	211	3	1.4%	207	98.1%	0	0.0%	0	0.0%	1	0.5%
- Adolescent medicine	32	5	15.6%	27	84.4%	0	0.0%	0	0.0%	0	0.0%
- Child abuse pediatrics	31	2	6.5%	29	93.5%	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	7	1	14.3%	6	85.7%	0	0.0%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	43	4	9.3%	39	90.7%	0	0.0%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	103	5	4.9%	97	94.2%	0	0.0%	1	1.0%	0	0.0%
- Pediatric cardiology	63	4	6.3%	59	93.7%	0	0.0%	0	0.0%	0	0.0%
- Pediatric critical care medicine	72	6	8.3%	66	91.7%	0	0.0%	0	0.0%	0	0.0%
- Pediatric emergency medicine	53	0	0.0%	53	100.0%	0	0.0%	0	0.0%	0	0.0%
- Pediatric endocrinology	72	3	4.2%	69	95.8%	0	0.0%	0	0.0%	0	0.0%
- Pediatric gastroenterology	65	4	6.2%	61	93.8%	0	0.0%	0	0.0%	0	0.0%
- Pediatric hematology/oncology	75	2	2.7%	73	97.3%	0	0.0%	0	0.0%	0	0.0%

TABLE A.3 *Continued*

Accreditation Statuses of Currently Accredited Programs by Specialty and Subspecialty											
Specialty	Total Programs	Accreditation Status									
		Initial Accreditation		Continued Accreditation		Continued Accreditation with Warning		Probationary Accreditation		Withdrawal of Accreditation	
		#	%	#	%	#	%	#	%	#	%
- Pediatric infectious diseases	64	3	4.7%	61	95.3%	0	0.0%	0	0.0%	0	0.0%
- Pediatric nephrology	47	3	6.4%	43	91.5%	1	2.1%	0	0.0%	0	0.0%
- Pediatric pulmonology	56	3	5.4%	53	94.6%	0	0.0%	0	0.0%	0	0.0%
- Pediatric rheumatology	36	1	2.8%	35	97.2%	0	0.0%	0	0.0%	0	0.0%
- Pediatric sports medicine	17	1	5.9%	16	94.1%	0	0.0%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	16	2	12.5%	14	87.5%	0	0.0%	0	0.0%	0	0.0%
- Pediatric hospital medicine	33	33	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	94	7	7.4%	85	90.4%	1	1.1%	1	1.1%	0	0.0%
- Brain injury medicine	23	9	39.1%	14	60.9%	0	0.0%	0	0.0%	0	0.0%
- Neuromuscular medicine	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Spinal cord injury medicine	24	5	20.8%	19	79.2%	0	0.0%	0	0.0%	0	0.0%
- Pediatric rehabilitation	22	2	9.1%	20	90.9%	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	20	1	5.0%	19	95.0%	0	0.0%	0	0.0%	0	0.0%
Plastic surgery	53	3	5.7%	40	75.5%	10	18.9%	0	0.0%	0	0.0%
Plastic surgery - integrated	82	7	8.5%	72	87.8%	3	3.7%	0	0.0%	0	0.0%
- Craniofacial surgery	8	0	0.0%	8	100.0%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	17	1	5.9%	15	88.2%	0	0.0%	0	0.0%	1	5.9%
Preventive medicine	72	3	4.2%	68	94.4%	1	1.4%	0	0.0%	0	0.0%
- Medical toxicology	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
Psychiatry	269	38	14.1%	227	84.4%	3	1.1%	1	0.4%	0	0.0%
- Addiction medicine (multidisciplinary)	78	77	98.7%	1	1.3%	0	0.0%	0	0.0%	0	0.0%
- Addiction psychiatry	53	7	13.2%	46	86.8%	0	0.0%	0	0.0%	0	0.0%
- Child and adolescent psychiatry	141	11	7.8%	127	90.1%	2	1.4%	1	0.7%	0	0.0%
- Forensic psychiatry	48	4	8.3%	44	91.7%	0	0.0%	0	0.0%	0	0.0%
- Geriatric psychiatry	62	5	8.1%	57	91.9%	0	0.0%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	63	5	7.9%	58	92.1%	0	0.0%	0	0.0%	0	0.0%
Radiation oncology	91	4	4.4%	76	83.5%	9	9.9%	2	2.2%	0	0.0%
Radiology-diagnostic	197	7	3.6%	185	93.9%	3	1.5%	0	0.0%	2	1.0%
- Abdominal radiology	14	2	14.3%	11	78.6%	0	0.0%	0	0.0%	1	7.1%
- Endovascular surgical neuroradiology	3	0	0.0%	3	100.0%	0	0.0%	0	0.0%	0	0.0%
- Musculoskeletal radiology	20	4	20.0%	16	80.0%	0	0.0%	0	0.0%	0	0.0%
- Neuroradiology	87	3	3.4%	84	96.6%	0	0.0%	0	0.0%	0	0.0%
- Nuclear radiology	17	0	0.0%	17	100.0%	0	0.0%	0	0.0%	0	0.0%
- Pediatric radiology	47	3	6.4%	44	93.6%	0	0.0%	0	0.0%	0	0.0%
- Vascular and interventional radiology	92	0	0.0%	73	79.3%	0	0.0%	0	0.0%	19	20.7%
Interventional radiology - independent	2	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	89	88	98.9%	1	1.1%	0	0.0%	0	0.0%	0	0.0%
Surgery	330	49	14.8%	270	81.8%	10	3.0%	1	0.3%	0	0.0%
- Complex general surgical oncology	29	5	17.2%	24	82.8%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Pediatric surgery	49	1	2.0%	48	98.0%	0	0.0%	0	0.0%	0	0.0%
- Surgical critical care	139	20	14.4%	117	84.2%	1	0.7%	0	0.0%	1	0.7%
- Vascular surgery	116	12	10.3%	102	87.9%	2	1.7%	0	0.0%	0	0.0%
Vascular surgery - integrated	64	11	17.2%	53	82.8%	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery	74	5	6.8%	66	89.2%	2	2.7%	1	1.4%	0	0.0%
- Congenital cardiac surgery	14	3	21.4%	10	71.4%	0	0.0%	1	7.1%	0	0.0%
Thoracic surgery - integrated	30	4	13.3%	24	80.0%	2	6.7%	0	0.0%	0	0.0%
Urology	145	9	6.2%	124	85.5%	12	8.3%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	15	4	26.7%	11	73.3%	0	0.0%	0	0.0%	0	0.0%
- Pediatric urology	26	1	3.8%	25	96.2%	0	0.0%	0	0.0%	0	0.0%
Transitional year	166	43	25.9%	118	71.1%	2	1.2%	0	0.0%	3	1.8%
Internal medicine/Pediatrics	79	1	1.3%	77	97.5%	1	1.3%	0	0.0%	0	0.0%

Notes: Pipeline specialties are highlighted. Program counts exclude programs withdrawn prior to the end of the academic year (n=46).

TABLE A.4

Number of Programs by Specialty and Subspecialty and Academic Year, 2015-2016 to 2019-2020

Specialty	Academic Year					5-Year Change	
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	#	%
	#	#	#	#	#	#	%
OVERALL	9,977	10,672	11,214	11,685	12,092	2,115	21.2%
TOTAL PIPELINE	4,021	4,383	4,668	4,842	4,985	964	24.0%
Allergy and immunology	77	79	79	78	81	4	5.2%
Anesthesiology	135	147	153	155	160	25	18.5%
- Adult cardiothoracic anesthesiology	62	66	66	69	71	9	14.5%
- Clinical informatics *	1	1	1	1	1	0	0.0%
- Critical care medicine	54	57	62	64	63	9	16.7%
- Regional anesthesiology and acute pain medicine *		9	18	29	35	26	288.9%
- Obstetric anesthesiology	28	32	34	37	41	13	46.4%
- Pain medicine (multidisciplinary)	100	101	102	104	108	8	8.0%
- Pediatric anesthesiology	56	58	60	61	60	4	7.1%
Colon and rectal surgery	57	58	62	63	65	8	14.0%
Dermatology	120	128	138	142	144	24	20.0%
- Dermatopathology (multidisciplinary)	53	53	56	55	56	3	5.7%
- Micrographic surgery and dermatologic oncology	69	75	77	77	78	9	13.0%
Emergency medicine	179	212	231	247	265	86	48.0%
- Clinical informatics *	3	4	4	4	5	2	66.7%
- Emergency medical services	50	55	61	65	71	21	42.0%
- Medical toxicology	26	27	27	27	26	0	0.0%
- Pediatric emergency medicine	22	26	26	26	26	4	18.2%
- Sports medicine	7	7	8	9	8	1	14.3%
- Undersea and hyperbaric medicine	7	7	7	7	8	1	14.3%
Family medicine	498	540	620	671	701	203	40.8%
- Clinical informatics *	1	2	2	3	6	5	500.0%
- Geriatric medicine	41	44	45	48	50	9	22.0%
- Hospice and palliative medicine (multidisciplinary)	115	130	140	149	167	52	45.2%
- Sports medicine	127	132	135	143	151	24	18.9%
Internal medicine	421	469	529	545	569	148	35.2%
- Adult congenital heart disease *	7	10	14	21	24	17	242.9%
- Advanced heart failure and transplant cardiology	68	71	75	76	80	12	17.6%
- Cardiovascular disease	193	210	235	245	250	57	29.5%
- Clinical cardiac electrophysiology	104	105	108	110	110	6	5.8%
- Clinical informatics *	8	12	13	16	17	9	112.5%
- Critical care medicine	33	34	36	43	45	12	36.4%
- Endocrinology, diabetes, and metabolism	136	141	142	149	151	15	11.0%
- Gastroenterology	168	175	189	202	207	39	23.2%
- Geriatric medicine	105	106	107	108	111	6	5.7%
- Hematology	3	2	2	2	2	-1	-33.3%
- Hematology and medical oncology	144	146	149	157	167	23	16.0%
- Infectious disease	148	146	148	149	154	6	4.1%
- Interventional cardiology	145	150	155	164	166	21	14.5%
- Nephrology	147	149	150	149	151	4	2.7%
- Medical oncology	9	6	7	8	7	-2	-22.2%
- Pulmonary disease	18	20	22	23	22	4	22.2%
- Pulmonary disease and critical care medicine	147	151	170	178	181	34	23.1%
- Rheumatology	113	114	120	122	125	12	10.6%
- Sleep medicine (multidisciplinary)	83	84	84	86	88	5	6.0%
- Transplant hepatology	47	51	51	52	57	10	21.3%
Medical genetics and genomics	45	46	46	46	47	2	4.4%
- Medical biochemical genetics	14	16	17	19	19	5	35.7%
- Molecular genetic pathology (multidisciplinary)	39	39	41	42	42	3	7.7%
Neurological surgery	108	110	112	115	118	10	9.3%
- Endovascular surgical neuroradiology	2	2	2	2	2	0	0.0%

TABLE A.4 Continued

Number of Programs by Specialty and Subspecialty and Academic Year, 2015-2016 to 2019-2020

Specialty	Academic Year					5-Year Change	
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	#	%
	#	#	#	#	#		
Neurology	139	144	153	159	160	21	15.1%
- Brain injury medicine *		1	1	1	1	0	0.0%
- Clinical neurophysiology	96	94	91	91	92	-4	-4.2%
- Epilepsy *	39	61	71	77	81	42	107.7%
- Endovascular surgical neuroradiology	1	1	1	2	2	1	100.0%
- Neurodevelopmental disabilities	8	8	8	8	8	0	0.0%
- Neuromuscular medicine	45	46	49	49	52	7	15.6%
- Vascular neurology	87	93	92	99	106	19	21.8%
Child neurology	73	74	74	74	76	3	4.1%
Nuclear medicine	43	42	41	39	38	-5	-11.6%
Obstetrics and gynecology	250	269	278	282	285	35	14.0%
- Female pelvic medicine and reconstructive surgery	48	50	51	53	54	6	12.5%
- Gynecologic oncology *		48	56	59	63	15	31.3%
- Maternal-fetal medicine *		73	88	93	97	24	32.9%
- Reproductive endocrinology and infertility *		41	50	50	51	10	24.4%
Ophthalmology	116	116	119	123	124	8	6.9%
- Ophthalmic plastic and reconstructive surgery	5	5	4	4	4	-1	-20.0%
Orthopaedic surgery	162	168	175	185	197	35	21.6%
- Adult reconstructive orthopaedics	23	23	24	24	24	1	4.3%
- Foot and ankle orthopaedics	6	6	6	7	7	1	16.7%
- Hand surgery	67	68	68	72	74	7	10.4%
- Musculoskeletal oncology	11	11	12	12	12	1	9.1%
- Orthopaedic sports medicine	94	97	96	92	90	-4	-4.3%
- Orthopaedic surgery of the spine	17	16	17	17	18	1	5.9%
- Orthopaedic trauma	9	9	11	11	11	2	22.2%
- Pediatric orthopaedics	25	25	25	26	25	0	0.0%
Osteopathic neuromusculoskeletal medicine *	1	4	13	19	27	26	2600.0%
Otolaryngology - head and neck surgery	106	109	117	122	124	18	17.0%
- Neurotology	20	20	23	24	24	4	20.0%
- Pediatric otolaryngology	23	22	25	29	30	7	30.4%
Pathology-anatomic and clinical	142	142	143	143	142	0	0.0%
- Blood banking/transfusion medicine	48	49	50	51	51	3	6.3%
- Clinical informatics *	2	5	7	8	10	8	400.0%
- Chemical pathology	3	4	4	4	4	1	33.3%
- Cytopathology	91	92	94	94	93	2	2.2%
- Forensic pathology	39	40	39	43	45	6	15.4%
- Hematopathology	85	86	85	87	86	1	1.2%
- Medical microbiology	14	15	15	15	15	1	7.1%
- Neuropathology	33	35	34	36	37	4	12.1%
- Pediatric pathology	26	26	27	27	28	2	7.7%
- Selective pathology	79	85	83	91	101	22	27.8%
Pediatrics	204	207	210	212	211	7	3.4%
- Adolescent medicine	28	29	29	30	32	4	14.3%
- Child abuse pediatrics	28	30	32	31	31	3	10.7%
- Clinical informatics *	4	5	5	5	7	3	75.0%
- Developmental-behavioral pediatrics	38	39	41	43	43	5	13.2%
- Neonatal-perinatal medicine	98	99	100	102	103	5	5.1%
- Pediatric cardiology	59	59	60	62	63	4	6.8%
- Pediatric critical care medicine	67	67	67	72	72	5	7.5%
- Pediatric emergency medicine	52	52	52	52	53	1	1.9%
- Pediatric endocrinology	69	71	72	73	72	3	4.3%
- Pediatric gastroenterology	60	63	64	65	65	5	8.3%
- Pediatric hematology/oncology	72	73	74	74	75	3	4.2%

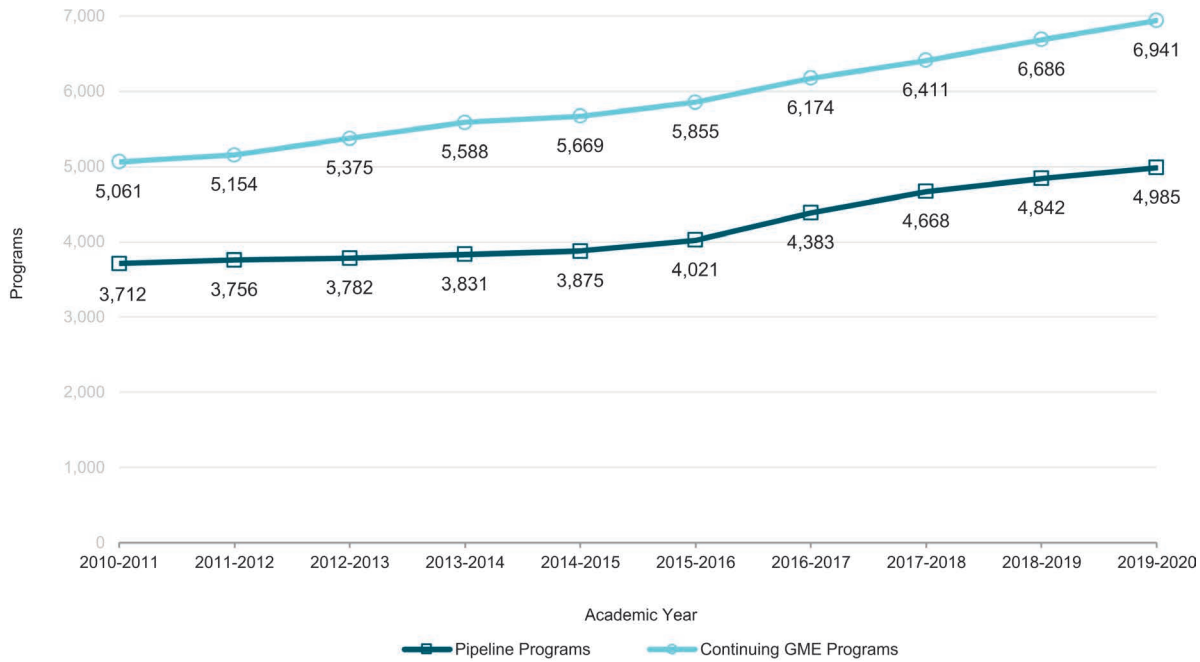
TABLE A.4 *Continued***Number of Programs by Specialty and Subspecialty and Academic Year, 2015-2016 to 2019-2020**

Specialty	Academic Year					5-Year Change	
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	#	%
	#	#	#	#	#	#	%
- Pediatric infectious diseases	64	64	65	65	64	0	0.0%
- Pediatric nephrology	45	44	45	46	47	2	4.4%
- Pediatric pulmonology	54	54	54	54	56	2	3.7%
- Pediatric rheumatology	36	36	37	35	36	0	0.0%
- Pediatric sports medicine	17	18	17	17	17	0	0.0%
- Pediatric transplant hepatology	9	13	14	15	16	7	77.8%
- Pediatric hospital medicine *					33	N/A	N/A
Physical medicine and rehabilitation	83	86	88	91	94	11	13.3%
- Brain injury medicine	8	13	18	20	23	15	187.5%
- Neuromuscular medicine	1	1	1	1	1	0	0.0%
- Spinal cord injury medicine	20	22	22	24	24	4	20.0%
- Pediatric rehabilitation	19	20	20	20	22	3	15.8%
- Sports medicine	17	19	19	19	20	3	17.6%
Plastic surgery	68	68	61	55	53	-15	-22.1%
Plastic surgery - integrated	69	76	79	81	82	13	18.8%
- Craniofacial surgery	10	9	8	8	8	-2	-20.0%
- Hand surgery	16	16	16	17	17	1	6.3%
Preventive medicine	74	76	76	75	72	-2	-2.7%
- Medical toxicology	1	1	1	1	1	0	0.0%
- Undersea and hyperbaric medicine	1	1	1	1	1	0	0.0%
Psychiatry	203	226	248	257	269	66	32.5%
- Addiction medicine (multidisciplinary) *				52	78	26	50.0%
- Addiction psychiatry	45	47	49	50	53	8	17.8%
- Child and adolescent psychiatry	126	134	138	140	141	15	11.9%
- Forensic psychiatry	42	46	47	48	48	6	14.3%
- Geriatric psychiatry	56	59	60	61	62	6	10.7%
- Consultation-liaison psychiatry	57	59	61	62	63	6	10.5%
Radiation oncology	91	92	94	94	91	0	0.0%
Radiology-diagnostic	188	194	194	195	197	9	4.8%
- Abdominal radiology	12	12	12	13	14	2	16.7%
- Endovascular surgical neuroradiology	3	4	3	3	3	0	0.0%
- Musculoskeletal radiology	15	16	16	16	20	5	33.3%
- Neuroradiology	86	85	85	87	87	1	1.2%
- Nuclear radiology	18	18	17	17	17	-1	-5.6%
- Pediatric radiology	46	46	46	47	47	1	2.2%
- Vascular and interventional radiology	95	93	93	93	92	-3	-3.2%
Interventional radiology - independent *					2	N/A	N/A
Interventional radiology - integrated *	24	65	78	84	89	65	270.8%
Surgery	261	278	301	323	330	69	26.4%
- Complex general surgical oncology	22	24	25	27	29	7	31.8%
- Hand surgery	1	1	1	1	1	0	0.0%
- Pediatric surgery	47	49	50	50	49	2	4.3%
- Surgical critical care	113	117	128	136	139	26	23.0%
- Vascular surgery	106	107	106	109	116	10	9.4%
Vascular surgery - integrated	51	53	55	60	64	13	25.5%
Thoracic surgery	68	69	72	72	74	6	8.8%
- Congenital cardiac surgery	12	13	13	12	14	2	16.7%
Thoracic surgery - integrated	27	27	26	27	30	3	11.1%
Urology	134	136	138	142	145	11	8.2%
- Female pelvic medicine and reconstructive surgery	10	11	13	14	15	5	50.0%
- Pediatric urology	28	28	26	26	26	-2	-7.1%
Transitional year	101	115	135	157	166	65	64.4%
Internal medicine/Pediatrics	79	79	78	79	79	0	0.0%

Notes: Pipeline specialties are highlighted. Asterisks (*) indicate specialties and subspecialties added within the last five years. For these specialties and subspecialties, the number and percent change are calculated from the first year of having accredited programs.

FIGURE A.5

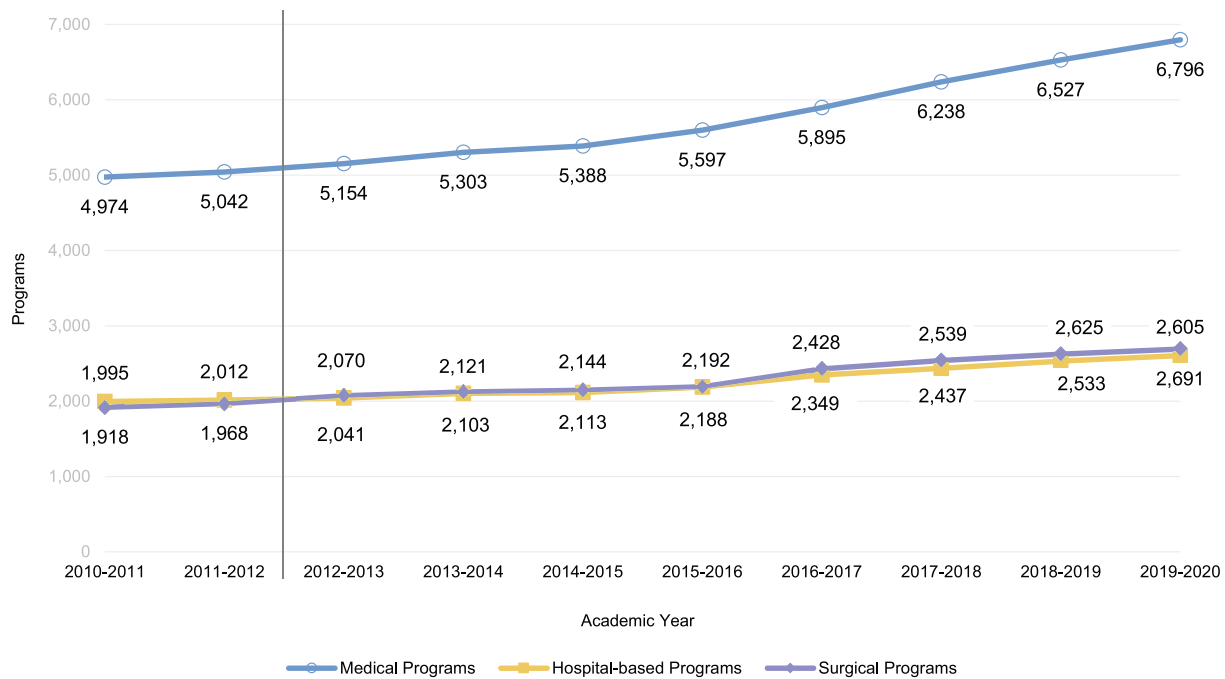
Number of Pipeline and Continuing GME Programs by Academic Year, 2010-2011 to 2019-2020



Note: Excluding transitional year programs.
Abbreviation: GME, graduate medical education.

FIGURE A.6

Number of Programs by Specialty Group and Academic Year, 2010-2011 to 2019-2020



Notes: The number of surgical programs exceeds the number of hospital-based programs beginning in the 2012-2013 academic year primarily due to the accreditation of new subspecialty programs in female pelvic medicine and reconstructive surgery and complex surgical oncology. 'Surgical Programs' labels are displayed above the line beyond that point.

FIGURE A.7

Number of Newly Accredited Programs by Specialty Group

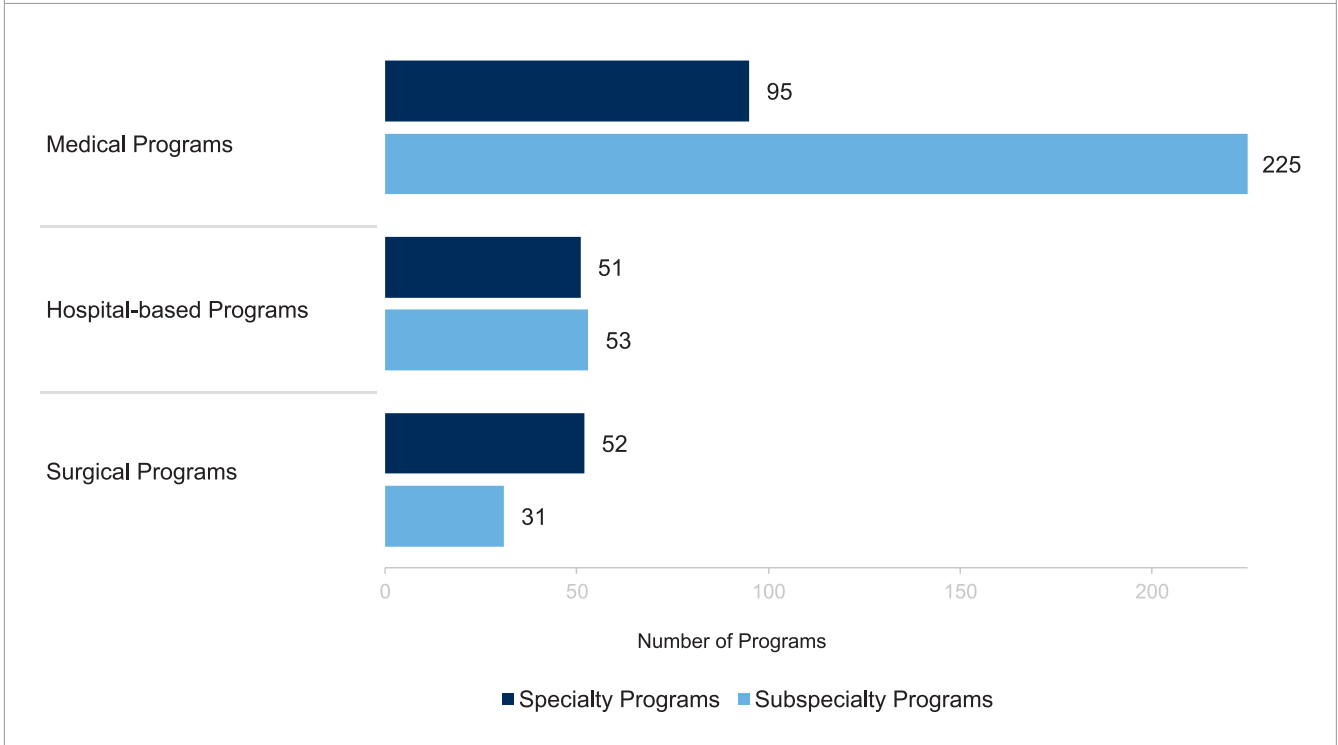


FIGURE A.8

Number of Newly Accredited Programs by Academic Year, 2010-2011 to 2019-2020

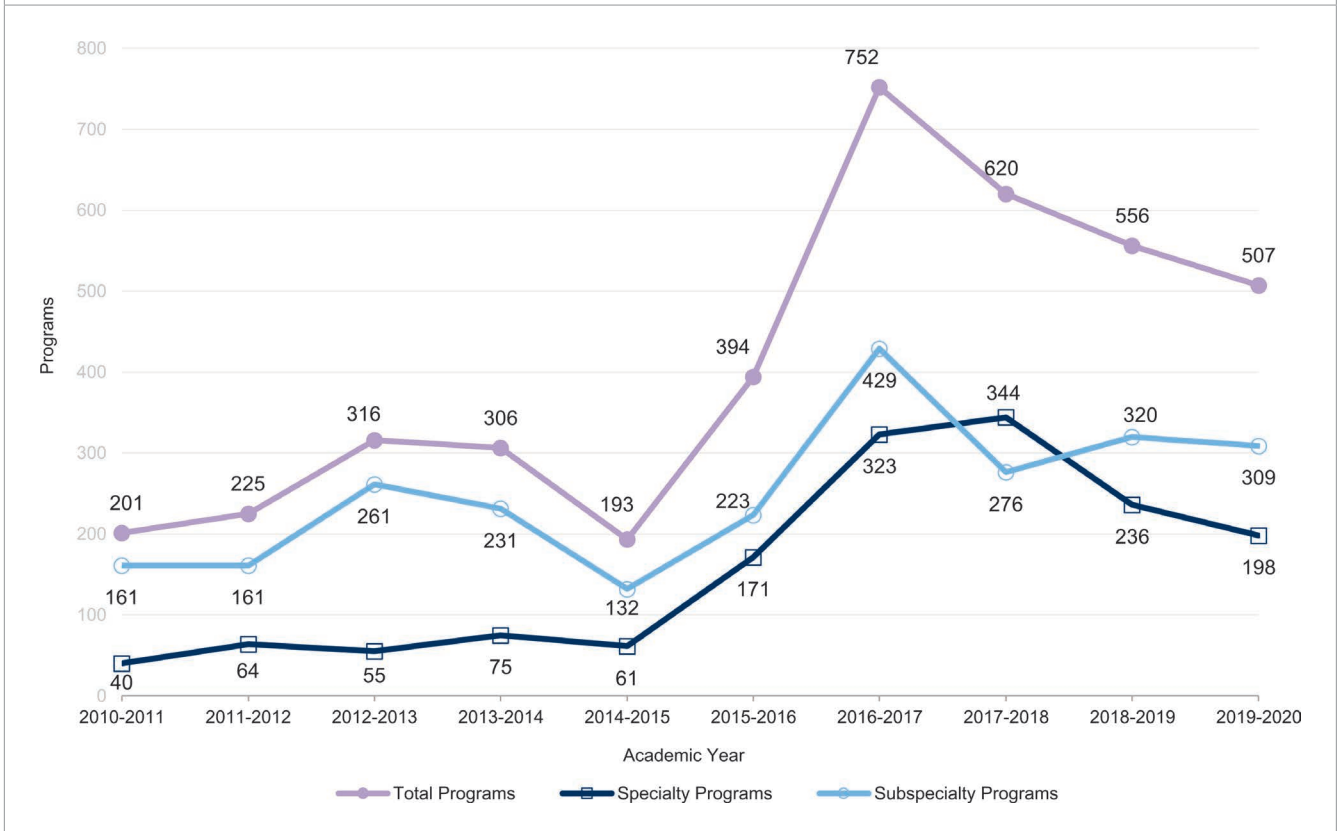


TABLE A.9

Number of Newly Accredited Programs during the Academic Year by Specialty and Subspecialty

Specialty	Total Programs	Newly Accredited Programs	Percentage of Specialty	Percent of All Newly Accredited Programs
OVERALL	12,092	507	4.2%	100.0%
TOTAL PIPELINE	4,985	179	3.6%	35.3%
Allergy and immunology	81	3	3.7%	0.6%
Anesthesiology	160	6	3.8%	1.2%
- Adult cardiothoracic anesthesiology	71	2	2.8%	0.4%
- Clinical informatics *	1	0	0.0%	0.0%
- Critical care medicine	63	0	0.0%	0.0%
- Regional anesthesiology and acute pain medicine *	35	6	17.1%	1.2%
- Obstetric anesthesiology	41	4	9.8%	0.8%
- Pain medicine (multidisciplinary)	108	4	3.7%	0.8%
- Pediatric anesthesiology	60	1	1.7%	0.2%
Colon and rectal surgery	65	2	3.1%	0.4%
Dermatology	144	2	1.4%	0.4%
- Dermatopathology (multidisciplinary)	56	2	3.6%	0.4%
- Micrographic surgery and dermatologic oncology	78	2	2.6%	0.4%
Emergency medicine	265	21	7.9%	4.1%
- Clinical informatics *	5	1	20.0%	0.2%
- Emergency medical services	71	6	8.5%	1.2%
- Medical toxicology	26	0	0.0%	0.0%
- Pediatric emergency medicine	26	1	3.8%	0.2%
- Sports medicine	8	0	0.0%	0.0%
- Undersea and hyperbaric medicine	8	1	12.5%	0.2%
Family medicine	701	32	4.6%	6.3%
- Clinical informatics *	6	3	50.0%	0.6%
- Geriatric medicine	50	3	6.0%	0.6%
- Hospice and palliative medicine (multidisciplinary)	167	20	12.0%	3.9%
- Sports medicine	151	8	5.3%	1.6%
Internal medicine	569	28	4.9%	5.5%
- Adult congenital heart disease *	24	3	12.5%	0.6%
- Advanced heart failure and transplant cardiology	80	4	5.0%	0.8%
- Cardiovascular disease	250	8	3.2%	1.6%
- Clinical cardiac electrophysiology	110	1	0.9%	0.2%
- Clinical informatics *	17	3	17.6%	0.6%
- Critical care medicine	45	2	4.4%	0.4%
- Endocrinology, diabetes, and metabolism	151	3	2.0%	0.6%
- Gastroenterology	207	6	2.9%	1.2%
- Geriatric medicine	111	4	3.6%	0.8%
- Hematology	2	0	0.0%	0.0%
- Hematology and medical oncology	167	11	6.6%	2.2%
- Infectious disease	154	6	3.9%	1.2%
- Interventional cardiology	166	3	1.8%	0.6%
- Nephrology	151	4	2.6%	0.8%
- Medical oncology	7	0	0.0%	0.0%
- Pulmonary disease	22	2	9.1%	0.4%
- Pulmonary disease and critical care medicine	181	5	2.8%	1.0%
- Rheumatology	125	5	4.0%	1.0%
- Sleep medicine (multidisciplinary)	88	4	4.5%	0.8%
- Transplant hepatology	57	5	8.8%	1.0%
Medical genetics and genomics	47	1	2.1%	0.2%
- Medical biochemical genetics	19	1	5.3%	0.2%
- Molecular genetic pathology (multidisciplinary)	42	0	0.0%	0.0%
Neurological surgery	118	3	2.5%	0.6%
- Endovascular surgical neuroradiology	2	0	0.0%	0.0%

TABLE A.9 *Continued*

Number of Newly Accredited Programs during the Academic Year by Specialty and Subspecialty				
Specialty	Total Programs	Newly Accredited Programs	Percentage of Specialty	Percent of All Newly Accredited Programs
Neurology	160	2	1.3%	0.4%
- Brain injury medicine *	1	0	0.0%	0.0%
- Clinical neurophysiology	92	3	3.3%	0.6%
- Epilepsy *	81	4	4.9%	0.8%
- Endovascular surgical neuroradiology	2	0	0.0%	0.0%
- Neurodevelopmental disabilities	8	0	0.0%	0.0%
- Neuromuscular medicine	52	3	5.8%	0.6%
- Vascular neurology	106	7	6.6%	1.4%
Child neurology	76	2	2.6%	0.4%
Nuclear medicine	38	0	0.0%	0.0%
Obstetrics and gynecology	285	5	1.8%	1.0%
- Female pelvic medicine and reconstructive surgery	54	2	3.7%	0.4%
- Gynecologic oncology *	63	4	6.3%	0.8%
- Maternal-fetal medicine *	97	4	4.1%	0.8%
- Reproductive endocrinology and infertility *	51	1	2.0%	0.2%
Ophthalmology	124	2	1.6%	0.4%
- Ophthalmic plastic and reconstructive surgery	4	0	0.0%	0.0%
Orthopaedic surgery	197	13	6.6%	2.6%
- Adult reconstructive orthopaedics	24	0	0.0%	0.0%
- Foot and ankle orthopaedics	7	0	0.0%	0.0%
- Hand surgery	74	2	2.7%	0.4%
- Musculoskeletal oncology	12	0	0.0%	0.0%
- Orthopaedic sports medicine	90	0	0.0%	0.0%
- Orthopaedic surgery of the spine	18	1	5.6%	0.2%
- Orthopaedic trauma	11	0	0.0%	0.0%
- Pediatric orthopaedics	25	0	0.0%	0.0%
Osteopathic neuromusculoskeletal medicine *	27	9	33.3%	1.8%
Otolaryngology - head and neck surgery	124	3	2.4%	0.6%
- Neurotology	24	0	0.0%	0.0%
- Pediatric otolaryngology	30	1	3.3%	0.2%
Pathology-anatomic and clinical	142	0	0.0%	0.0%
- Blood banking/transfusion medicine	51	0	0.0%	0.0%
- Clinical informatics *	10	2	20.0%	0.4%
- Chemical pathology	4	0	0.0%	0.0%
- Cytopathology	93	0	0.0%	0.0%
- Forensic pathology	45	2	4.4%	0.4%
- Hematopathology	86	0	0.0%	0.0%
- Medical microbiology	15	0	0.0%	0.0%
- Neuropathology	37	1	2.7%	0.2%
- Pediatric pathology	28	1	3.6%	0.2%
- Selective pathology	101	12	11.9%	2.4%
Pediatrics	211	0	0.0%	0.0%
- Adolescent medicine	32	3	9.4%	0.6%
- Child abuse pediatrics	31	0	0.0%	0.0%
- Clinical informatics *	7	1	14.3%	0.2%
- Developmental-behavioral pediatrics	43	0	0.0%	0.0%
- Neonatal-perinatal medicine	103	1	1.0%	0.2%
- Pediatric cardiology	63	1	1.6%	0.2%
- Pediatric critical care medicine	72	0	0.0%	0.0%
- Pediatric emergency medicine	53	0	0.0%	0.0%
- Pediatric endocrinology	72	0	0.0%	0.0%
- Pediatric gastroenterology	65	1	1.5%	0.2%
- Pediatric hematology/oncology	75	1	1.3%	0.2%

TABLE A.9 Continued

Number of Newly Accredited Programs during the Academic Year by Specialty and Subspecialty

Specialty	Total Programs	Newly Accredited Programs	Percentage of Specialty	Percent of All Newly Accredited Programs
- Pediatric infectious diseases	64	1	1.6%	0.2%
- Pediatric nephrology	47	1	2.1%	0.2%
- Pediatric pulmonology	56	2	3.6%	0.4%
- Pediatric rheumatology	36	1	2.8%	0.2%
- Pediatric sports medicine	17	1	5.9%	0.2%
- Pediatric transplant hepatology	16	1	6.3%	0.2%
- Pediatric hospital medicine *	33	33	100.0%	6.5%
Physical medicine and rehabilitation	94	4	4.3%	0.8%
- Brain injury medicine	23	3	13.0%	0.6%
- Neuromuscular medicine	1	0	0.0%	0.0%
- Spinal cord injury medicine	24	0	0.0%	0.0%
- Pediatric rehabilitation	22	2	9.1%	0.4%
- Sports medicine	20	1	5.0%	0.2%
Plastic surgery	53	0	0.0%	0.0%
Plastic surgery - integrated	82	1	1.2%	0.2%
- Craniofacial surgery	8	0	0.0%	0.0%
- Hand surgery	17	0	0.0%	0.0%
Preventive medicine	72	0	0.0%	0.0%
- Medical toxicology	1	0	0.0%	0.0%
- Undersea and hyperbaric medicine	1	0	0.0%	0.0%
Psychiatry	269	13	4.8%	2.6%
- Addiction medicine (multidisciplinary) *	78	26	33.3%	5.1%
- Addiction psychiatry	53	4	7.5%	0.8%
- Child and adolescent psychiatry	141	3	2.1%	0.6%
- Forensic psychiatry	48	0	0.0%	0.0%
- Geriatric psychiatry	62	2	3.2%	0.4%
- Consultation-liaison psychiatry	63	2	3.2%	0.4%
Radiation oncology	91	0	0.0%	0.0%
Radiology-diagnostic	197	4	2.0%	0.8%
- Abdominal radiology	14	1	7.1%	0.2%
- Endovascular surgical neuroradiology	3	0	0.0%	0.0%
- Musculoskeletal radiology	20	4	20.0%	0.8%
- Neuroradiology	87	1	1.1%	0.2%
- Nuclear radiology	17	0	0.0%	0.0%
- Pediatric radiology	47	0	0.0%	0.0%
- Vascular and interventional radiology	92	0	0.0%	0.0%
Interventional radiology - independent *	2	2	100.0%	0.4%
Interventional radiology - integrated *	89	5	5.6%	1.0%
Surgery	330	10	3.0%	2.0%
- Complex general surgical oncology	29	2	6.9%	0.4%
- Hand surgery	1	0	0.0%	0.0%
- Pediatric surgery	49	0	0.0%	0.0%
- Surgical critical care	139	4	2.9%	0.8%
- Vascular surgery	116	7	6.0%	1.4%
Vascular surgery - integrated	64	4	6.3%	0.8%
Thoracic surgery	74	2	2.7%	0.4%
- Congenital cardiac surgery	14	2	14.3%	0.4%
Thoracic surgery - integrated	30	3	10.0%	0.6%
Urology	145	4	2.8%	0.8%
- Female pelvic medicine and reconstructive surgery	15	1	6.7%	0.2%
- Pediatric urology	26	0	0.0%	0.0%
Transitional year	166	14	8.4%	2.8%
Internal medicine/Pediatrics	79	0	0.0%	0.0%

Notes: Pipeline specialties are highlighted. Asterisks (*) indicate specialties and subspecialties added within the last five years.

TABLE A.10

Number of Programs with a Withdrawn Accreditation Status during the Academic Year by Specialty and Subspecialty

Specialty	Total Programs	Accreditation Withdrawn Prior to Academic Year End		Accreditation Withdrawn at Academic Year End		Future Withdrawal of Accreditation	
		#	%	#	%	#	%
OVERALL	12,092	46	0.4%	56	0.5%	7	0.1%
TOTAL PIPELINE	4,985	19	0.4%	18	0.4%	3	0.1%
Allergy and immunology	81	0	0.0%	0	0.0%	0	0.0%
Anesthesiology	160	1	0.6%	1	0.6%	0	0.0%
- Adult cardiothoracic anesthesiology	71	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	1	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	63	0	0.0%	0	0.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	35	0	0.0%	0	0.0%	0	0.0%
- Obstetric anesthesiology	41	0	0.0%	1	2.4%	0	0.0%
- Pain medicine (multidisciplinary)	108	0	0.0%	0	0.0%	0	0.0%
- Pediatric anesthesiology	60	0	0.0%	0	0.0%	0	0.0%
Colon and rectal surgery	65	0	0.0%	0	0.0%	0	0.0%
Dermatology	144	0	0.0%	1	0.7%	0	0.0%
- Dermatopathology (multidisciplinary)	56	0	0.0%	0	0.0%	0	0.0%
- Micrographic surgery and dermatologic oncology	78	0	0.0%	2	2.6%	0	0.0%
Emergency medicine	265	3	1.1%	0	0.0%	1	0.4%
- Clinical informatics	5	0	0.0%	0	0.0%	0	0.0%
- Emergency medical services	71	0	0.0%	0	0.0%	0	0.0%
- Medical toxicology	26	1	3.8%	0	0.0%	0	0.0%
- Pediatric emergency medicine	26	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	8	0	0.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	8	0	0.0%	0	0.0%	0	0.0%
Family medicine	701	1	0.1%	5	0.7%	1	0.1%
- Clinical informatics	6	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	50	0	0.0%	1	2.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	167	1	0.6%	0	0.0%	0	0.0%
- Sports medicine	151	1	0.7%	0	0.0%	0	0.0%
Internal medicine	569	2	0.4%	6	1.1%	0	0.0%
- Adult congenital heart disease	24	0	0.0%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	80	0	0.0%	0	0.0%	0	0.0%
- Cardiovascular disease	250	1	0.4%	1	0.4%	0	0.0%
- Clinical cardiac electrophysiology	110	1	0.9%	0	0.0%	0	0.0%
- Clinical informatics	17	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	45	0	0.0%	0	0.0%	0	0.0%
- Endocrinology, diabetes, and metabolism	151	1	0.7%	0	0.0%	0	0.0%
- Gastroenterology	207	1	0.5%	0	0.0%	0	0.0%
- Geriatric medicine	111	0	0.0%	1	0.9%	0	0.0%
- Hematology	2	0	0.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	167	1	0.6%	1	0.6%	0	0.0%
- Infectious disease	154	1	0.6%	0	0.0%	0	0.0%
- Interventional cardiology	166	1	0.6%	0	0.0%	0	0.0%
- Nephrology	151	1	0.7%	0	0.0%	0	0.0%
- Medical oncology	7	0	0.0%	1	14.3%	0	0.0%
- Pulmonary disease	22	0	0.0%	1	4.5%	0	0.0%
- Pulmonary disease and critical care medicine	181	1	0.6%	0	0.0%	0	0.0%
- Rheumatology	125	1	0.8%	0	0.0%	0	0.0%
- Sleep medicine (multidisciplinary)	88	1	1.1%	0	0.0%	0	0.0%
- Transplant hepatology	57	0	0.0%	0	0.0%	0	0.0%
Medical genetics and genomics	47	0	0.0%	0	0.0%	0	0.0%
- Medical biochemical genetics	19	0	0.0%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	42	0	0.0%	1	2.4%	0	0.0%
Neurological surgery	118	0	0.0%	2	1.7%	0	0.0%
- Endovascular surgical neuroradiology	2	0	0.0%	0	0.0%	0	0.0%

TABLE A.10 Continued

Number of Programs with a Withdrawn Accreditation Status during the Academic Year by Specialty and Subspecialty

Specialty	Total Programs	Accreditation Withdrawn Prior to Academic Year End		Accreditation Withdrawn at Academic Year End		Future Withdrawal of Accreditation	
		#	%	#	%	#	%
Neurology	160	1	0.6%	0	0.0%	0	0.0%
- Brain injury medicine	1	0	0.0%	0	0.0%	0	0.0%
- Clinical neurophysiology	92	1	1.1%	0	0.0%	0	0.0%
- Epilepsy	81	0	0.0%	0	0.0%	0	0.0%
- Endovascular surgical neuroradiology	2	0	0.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	8	0	0.0%	0	0.0%	0	0.0%
- Neuromuscular medicine	52	0	0.0%	0	0.0%	0	0.0%
- Vascular neurology	106	0	0.0%	1	0.9%	0	0.0%
Child neurology	76	0	0.0%	0	0.0%	0	0.0%
Nuclear medicine	38	0	0.0%	0	0.0%	0	0.0%
Obstetrics and gynecology	285	1	0.4%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	54	1	1.9%	0	0.0%	0	0.0%
- Gynecologic oncology	63	0	0.0%	1	1.6%	0	0.0%
- Maternal-fetal medicine	97	0	0.0%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	51	0	0.0%	2	3.9%	0	0.0%
Ophthalmology	124	1	0.8%	1	0.8%	0	0.0%
- Ophthalmic plastic and reconstructive surgery	4	0	0.0%	0	0.0%	0	0.0%
Orthopaedic surgery	197	1	0.5%	0	0.0%	0	0.0%
- Adult reconstructive orthopaedics	24	0	0.0%	0	0.0%	0	0.0%
- Foot and ankle orthopaedics	7	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	74	0	0.0%	0	0.0%	1	1.4%
- Musculoskeletal oncology	12	0	0.0%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	90	2	2.2%	0	0.0%	0	0.0%
- Orthopaedic surgery of the spine	18	0	0.0%	0	0.0%	2	11.1%
- Orthopaedic trauma	11	0	0.0%	0	0.0%	0	0.0%
- Pediatric orthopaedics	25	1	4.0%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	27	0	0.0%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	124	0	0.0%	0	0.0%	0	0.0%
- Neurotology	24	0	0.0%	0	0.0%	0	0.0%
- Pediatric otolaryngology	30	0	0.0%	0	0.0%	0	0.0%
Pathology-anatomic and clinical	142	1	0.7%	0	0.0%	0	0.0%
- Blood banking/transfusion medicine	51	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	10	0	0.0%	0	0.0%	0	0.0%
- Chemical pathology	4	0	0.0%	0	0.0%	0	0.0%
- Cytopathology	93	1	1.1%	0	0.0%	0	0.0%
- Forensic pathology	45	0	0.0%	0	0.0%	0	0.0%
- Hematopathology	86	1	1.2%	0	0.0%	0	0.0%
- Medical microbiology	15	0	0.0%	0	0.0%	0	0.0%
- Neuropathology	37	0	0.0%	0	0.0%	0	0.0%
- Pediatric pathology	28	0	0.0%	0	0.0%	0	0.0%
- Selective pathology	101	1	1.0%	0	0.0%	0	0.0%
Pediatrics	211	0	0.0%	0	0.0%	1	0.5%
- Adolescent medicine	32	1	3.1%	0	0.0%	0	0.0%
- Child abuse pediatrics	31	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	7	0	0.0%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	43	0	0.0%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	103	0	0.0%	0	0.0%	0	0.0%
- Pediatric cardiology	63	0	0.0%	0	0.0%	0	0.0%
- Pediatric critical care medicine	72	0	0.0%	0	0.0%	0	0.0%
- Pediatric emergency medicine	53	0	0.0%	0	0.0%	0	0.0%
- Pediatric endocrinology	72	0	0.0%	0	0.0%	0	0.0%
- Pediatric gastroenterology	65	0	0.0%	0	0.0%	0	0.0%
- Pediatric hematology/oncology	75	0	0.0%	0	0.0%	0	0.0%

TABLE A.10 Continued

Number of Programs with a Withdrawn Accreditation Status during the Academic Year by Specialty and Subspecialty

Specialty	Total Programs	Accreditation Withdrawn Prior to Academic Year End		Accreditation Withdrawn at Academic Year End		Future Withdrawal of Accreditation	
		#	%	#	%	#	%
- Pediatric infectious diseases	64	0	0.0%	0	0.0%	0	0.0%
- Pediatric nephrology	47	0	0.0%	0	0.0%	0	0.0%
- Pediatric pulmonology	56	0	0.0%	0	0.0%	0	0.0%
- Pediatric rheumatology	36	0	0.0%	0	0.0%	0	0.0%
- Pediatric sports medicine	17	0	0.0%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	16	0	0.0%	0	0.0%	0	0.0%
- Pediatric hospital medicine	33	0	0.0%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	94	0	0.0%	0	0.0%	0	0.0%
- Brain injury medicine	23	0	0.0%	0	0.0%	0	0.0%
- Neuromuscular medicine	1	0	0.0%	0	0.0%	0	0.0%
- Spinal cord injury medicine	24	0	0.0%	0	0.0%	0	0.0%
- Pediatric rehabilitation	22	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	20	0	0.0%	0	0.0%	0	0.0%
Plastic surgery	53	1	1.9%	0	0.0%	0	0.0%
Plastic surgery - integrated	82	0	0.0%	0	0.0%	0	0.0%
- Craniofacial surgery	8	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	17	0	0.0%	1	5.9%	0	0.0%
Preventive medicine	72	0	0.0%	0	0.0%	0	0.0%
- Medical toxicology	1	0	0.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	1	0	0.0%	0	0.0%	0	0.0%
Psychiatry	269	1	0.4%	0	0.0%	0	0.0%
- Addiction medicine (multidisciplinary)	78	0	0.0%	0	0.0%	0	0.0%
- Addiction psychiatry	53	0	0.0%	0	0.0%	0	0.0%
- Child and adolescent psychiatry	141	1	0.7%	0	0.0%	0	0.0%
- Forensic psychiatry	48	0	0.0%	0	0.0%	0	0.0%
- Geriatric psychiatry	62	0	0.0%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	63	0	0.0%	0	0.0%	0	0.0%
Radiation oncology	91	1	1.1%	0	0.0%	0	0.0%
Radiology-diagnostic	197	1	0.5%	2	1.0%	0	0.0%
- Abdominal radiology	14	0	0.0%	1	7.1%	0	0.0%
- Endovascular surgical neuroradiology	3	0	0.0%	0	0.0%	0	0.0%
- Musculoskeletal radiology	20	0	0.0%	0	0.0%	0	0.0%
- Neuroradiology	87	1	1.1%	0	0.0%	0	0.0%
- Nuclear radiology	17	0	0.0%	0	0.0%	0	0.0%
- Pediatric radiology	47	0	0.0%	0	0.0%	0	0.0%
- Vascular and interventional radiology	92	0	0.0%	19	20.7%	0	0.0%
Interventional radiology - independent	2	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	89	0	0.0%	0	0.0%	0	0.0%
Surgery	330	2	0.6%	0	0.0%	0	0.0%
- Complex general surgical oncology	29	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	1	0	0.0%	0	0.0%	0	0.0%
- Pediatric surgery	49	1	2.0%	0	0.0%	0	0.0%
- Surgical critical care	139	0	0.0%	1	0.7%	0	0.0%
- Vascular surgery	116	0	0.0%	0	0.0%	0	0.0%
Vascular surgery - integrated	64	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery	74	0	0.0%	0	0.0%	0	0.0%
- Congenital cardiac surgery	14	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery - integrated	30	0	0.0%	0	0.0%	0	0.0%
Urology	145	1	0.7%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	15	0	0.0%	0	0.0%	0	0.0%
- Pediatric urology	26	0	0.0%	0	0.0%	0	0.0%
Transitional year	166	1	0.6%	2	1.2%	1	0.6%
Internal medicine/Pediatrics	79	0	0.0%	0	0.0%	0	0.0%

Notes: Pipeline specialties are highlighted. Total program counts exclude programs withdrawn prior to the end of the academic year (n=46).

TABLE A.11

Total Number of Programs, Years of Accredited Prior Training Required, and Accredited Training Lengths by Specialty and Subspecialty

Specialty	MIN No. of Prior Years	Total Programs	Accredited Training Length(s)						
			1 #	2 #	3 #	4 #	5 #	6 #	7 #
Allergy and immunology	3	81		81					
Anesthesiology	1/0	160			24	136			
- Adult cardiothoracic anesthesiology	4	71	71						
- Clinical informatics	4	1		1					
- Critical care medicine	4	63	63						
- Regional anesthesiology and acute pain medicine	4	35	35						
- Obstetric anesthesiology	3/4	41	41						
- Pain medicine (multidisciplinary)	3/4	108	108						
- Pediatric anesthesiology	4	60	60						
Colon and rectal surgery	5	65	65						
Dermatology	1/0	144			139	5			
- Dermatopathology (multidisciplinary)	4	56	56						
- Micrographic surgery and dermatologic oncology	4	78	78						
Emergency medicine	0	265			205	60			
- Clinical informatics	3	5		5					
- Emergency medical services	3	71	71						
- Medical toxicology	3	26		26					
- Pediatric emergency medicine	3	26			26				
- Sports medicine	3	8	8						
- Undersea and hyperbaric medicine	3	8	8						
Family medicine	0	701			691	10			
- Clinical informatics	3	6		6					
- Geriatric medicine	3	50	50						
- Hospice and palliative medicine (multidisciplinary)	3	167	167						
- Sports medicine	3	151	151						
Internal medicine	0	569			569				
- Adult congenital heart disease	3	24		24					
- Advanced heart failure and transplant cardiology	6	80	80						
- Cardiovascular disease	3	250			250				
- Clinical cardiac electrophysiology	6	110		110					
- Clinical informatics	3	17		17					
- Critical care medicine	3	45		45					
- Endocrinology, diabetes, and metabolism	3	151		151					
- Gastroenterology	3	207			207				
- Geriatric medicine	3	111	111						
- Hematology	3	2		2					
- Hematology and medical oncology	3	167			167				
- Infectious disease	3	154		154					
- Interventional cardiology	6	166	166						
- Nephrology	3	151		151					
- Medical oncology	3	7		7					
- Pulmonary disease	3	22		22					
- Pulmonary disease and critical care medicine	3	181			181				
- Rheumatology	3	125		125					
- Sleep medicine (multidisciplinary)	3/4/5	88	88						
- Transplant hepatology	6	57	57						
Medical genetics and genomics	2/0	47		45		2			
- Medical biochemical genetics	4	19	19						
- Molecular genetic pathology (multidisciplinary)	4	42	42						
Neurological surgery	0	118							118
- Endovascular surgical neuroradiology	6	2	2						

TABLE A.11 *Continued***Total Number of Programs, Years of Accredited Prior Training Required, and Accredited Training Lengths by Specialty and Subspecialty**

Specialty	MIN No. of Prior Years	Total Programs	Accredited Training Length(s)						
			1	2	3	4	5	6	7
			#	#	#	#	#	#	#
Neurology	1/0	160			50	110			
- Brain injury medicine	3/4	1	1						
- Clinical neurophysiology	4	92	92						
- Epilepsy	3	81	81						
- Endovascular surgical neuroradiology	5	2	2						
- Neurodevelopmental disabilities	2	8				8			
- Neuromuscular medicine	4	52	52						
- Vascular neurology	4	106	106						
Child neurology	2	76			76				
Nuclear medicine	1	38			38				
Obstetrics and gynecology	0	285				285			
- Female pelvic medicine and reconstructive surgery	4	54			54				
- Gynecologic oncology	4	63			63				
- Maternal-fetal medicine	4	97			97				
- Reproductive endocrinology and infertility	4	51			51				
Ophthalmology	1	124			124				
- Ophthalmic plastic and reconstructive surgery	4	4		4					
Orthopaedic surgery	0	197					197		
- Adult reconstructive orthopaedics	5	24	24						
- Foot and ankle orthopaedics	5	7	7						
- Hand surgery	5	74	74						
- Musculoskeletal oncology	5	12	12						
- Orthopaedic sports medicine	5	90	90						
- Orthopaedic surgery of the spine	5	18	18						
- Orthopaedic trauma	5	11	11						
- Pediatric orthopaedics	5	25	25						
Osteopathic neuromusculoskeletal medicine	0	27			27				
Otolaryngology - head and neck surgery	0	124					124		
- Neurotology	5	24		24					
- Pediatric otolaryngology	5	30	30						
Pathology-anatomic and clinical	0	142			1	141			
- Blood banking/transfusion medicine	2	51	51						
- Clinical informatics	2	10		10					
- Chemical pathology	2	4	4						
- Cytopathology	2	93	93						
- Forensic pathology	2	45	45						
- Hematopathology	2	86	86						
- Medical microbiology	4	15	15						
- Neuropathology	2	37		37					
- Pediatric pathology	2	28	28						
- Selective pathology	2	101	101						
Pediatrics	0	211			211				
- Adolescent medicine	3	32			32				
- Child abuse pediatrics	3	31			31				
- Clinical informatics	3	7		7					
- Developmental-behavioral pediatrics	3	43			43				
- Neonatal-perinatal medicine	3	103			103				
- Pediatric cardiology	3	63			63				
- Pediatric critical care medicine	3	72			72				
- Pediatric emergency medicine	3	53			53				
- Pediatric endocrinology	3	72			72				
- Pediatric gastroenterology	3	65			65				
- Pediatric hematology/oncology	3	75			75				

TABLE A.11 *Continued*

Total Number of Programs, Years of Accredited Prior Training Required, and Accredited Training Lengths by Specialty and Subspecialty

Specialty	MIN No. of Prior Years	Total Programs	Accredited Training Length(s)						
			1 #	2 #	3 #	4 #	5 #	6 #	7 #
- Pediatric infectious diseases	3	64			64				
- Pediatric nephrology	3	47			47				
- Pediatric pulmonology	3	56			56				
- Pediatric rheumatology	3	36			36				
- Pediatric sports medicine	3	17	17						
- Pediatric transplant hepatology	6	16	16						
- Pediatric hospital medicine	3	33		33					
Physical medicine and rehabilitation	1/0	94			56	38			
- Brain injury medicine	3/4	23	23						
- Neuromuscular medicine	3/4	1	1						
- Spinal cord injury medicine	3/4	24	24						
- Pediatric rehabilitation	4	22		22					
- Sports medicine	3/4	20	20						
Plastic surgery	3	53			53				
Plastic surgery - integrated	0	82						82	
- Craniofacial surgery	6	8	8						
- Hand surgery	5	17	17						
Preventive medicine	1/0	72		70	2				
- Medical toxicology	3	1		1					
- Undersea and hyperbaric medicine	3	1	1						
Psychiatry	0	269	1			268			
- Addiction medicine (multidisciplinary)	1/2/3/4	78	78						
- Addiction psychiatry	4	53	52	1					
- Child and adolescent psychiatry	3	141		141					
- Forensic psychiatry	4	48	48						
- Geriatric psychiatry	4	62	61	1					
- Consultation-liaison psychiatry	4	63	63						
Radiation oncology	1	91				91			
Radiology-diagnostic	1	197				196	1		
- Abdominal radiology	5	14	14						
- Endovascular surgical neuroradiology	5	3	3						
- Musculoskeletal radiology	5	20	20						
- Neuroradiology	5	87	87						
- Nuclear radiology	5	17	17						
- Pediatric radiology	5	47	47						
- Vascular and interventional radiology	5	92	92						
Interventional radiology - independent	4	2		2					
Interventional radiology - integrated	1	89					89		
Surgery	0	330					330		
- Complex general surgical oncology	5	29		29					
- Hand surgery	5	1	1						
- Pediatric surgery	5	49		49					
- Surgical critical care	3	139	139						
- Vascular surgery	5	116		116					
Vascular surgery - integrated	0	64					64		
Thoracic surgery	5	74		52	22				
- Congenital cardiac surgery	7	14	14						
Thoracic surgery - integrated	0	30						30	
Urology	0/1	145					145		
- Female pelvic medicine and reconstructive surgery	3/4	15			15				
- Pediatric urology	5	26	26						
Transitional year	0	166	166						
Internal medicine/Pediatrics	0	79				79			

Notes: Pipeline specialties are highlighted. Under special circumstances, some programs have been granted exceptions to the typical length of accredited training.

TABLE A.12

Number of Programs with Osteopathic Recognition by Specialty and Subspecialty

Specialty	Total Programs	Programs with Osteopathic Recognition	Percent of Specialty	Percent of All Programs with Osteopathic Recognition
OVERALL	12,092	236	2.0%	100.0%
TOTAL PIPELINE	4,985	222	4.5%	94.1%
Allergy and immunology	81	1	1.2%	0.4%
Anesthesiology	160	4	2.5%	1.7%
Dermatology	144	4	2.8%	1.7%
Emergency medicine	265	5	1.9%	2.1%
Family medicine	701	148	21.1%	62.7%
- Hospice and palliative medicine (multidisciplinary)	167	1	0.6%	0.4%
- Sports medicine	151	2	1.3%	0.8%
Internal medicine	569	33	5.8%	14.0%
- Cardiovascular disease	250	2	0.8%	0.8%
- Interventional cardiology	166	1	0.6%	0.4%
- Pulmonary disease and critical care medicine	181	1	0.6%	0.4%
Neurology	160	1	0.6%	0.4%
Obstetrics and gynecology	285	9	3.2%	3.8%
Orthopaedic surgery	197	2	1.0%	0.8%
Osteopathic neuromusculoskeletal medicine	27	3	11.1%	1.3%
Otolaryngology - Head and Neck Surgery	124	1	0.8%	0.4%
Pediatrics	211	3	1.4%	1.3%
- Pediatric sports medicine	17	1	5.9%	0.4%
Physical medicine and rehabilitation	94	1	1.1%	0.4%
Psychiatry	269	1	0.4%	0.4%
Radiology-diagnostic	197	1	0.5%	0.4%
Surgery	330	4	1.2%	1.7%
Urology	145	1	0.7%	0.4%
Transitional year	166	5	3.0%	2.1%
Internal medicine/Pediatrics	79	1	1.3%	0.4%

Note: Pipeline specialties are highlighted.

B Program Characteristics

This section summarizes the geographic distribution of programs overall and by specialty, the distribution of programs and residents by specialty group, and the average number of residents per program overall and by specialty.

Geographic Distribution

There are currently ACGME-accredited programs in all 50 states, the District of Columbia (DC), and Puerto Rico. Based on the most recent US Census estimate for 2019, there are approximately 3.65 total programs (1.62 specialty, 2.03 subspecialty) per 100,000 population, including Puerto Rico. The following states have the highest total number of programs:

- New York (1,345)
- California (1,059)
- Texas (765)
- Pennsylvania (764)

States with the lowest number of programs include Montana (4), Wyoming (4), and Alaska (2). These patterns are consistent when looking at total programs, specialty programs, and pipeline programs by state. Family medicine is currently the only specialty represented across all 50 states, DC, and Puerto Rico.

Distributions by Specialty and Program Size

In looking at the distribution of specialty programs and their active residents, the specialties with the highest percentage of total programs include:

- Family medicine (13.1%)
- Internal medicine (10.6%)
- Surgery (6.1%)
- Obstetrics and gynecology (5.3%)

In contrast, the specialties with the highest percentage of total residents include:

- Internal medicine (24.4%)
- Family medicine (11.5%)
- Pediatrics (7.8%)
- Surgery (7.4%)

These distributions are driven by total number of programs and average program size (average number of residents per program). Internal medicine programs, for example, have an average of approximately 51 residents per program, with at least one program having 218 active residents during the 2019-2020 academic year. Pediatrics has the second highest average number of residents per program with approximately 44 residents per program. Overall, the trends in mean number of residents per program show that for specialties, the average number of residents per program peaked at 24 in the 2014-2015 academic year but has since fallen to 22.3 in the 2019-2020 academic year. The average size of subspecialty programs has remained fairly constant over the last 10 years. In the 2019-2020 academic year, there were approximately 3.8 residents per program.

Distributions by Specialty Group

The distribution of programs by specialty group differs in specialty versus subspecialty programs. Of the total number of specialty programs, 44.9% of programs are in medical specialties, 31.5% are in surgical specialties, and 23.6% are in hospital-based specialties. Among subspecialty programs, 65.2% of programs are in medical subspecialties, 14.9% are in surgical subspecialties, and 19.9% are in hospital-based subspecialties. The relative patterns in the distributions of residents across specialty groups can be attributed to both the number of programs and average number of residents per program in the medical, surgical, and hospital-based disciplines. ↖

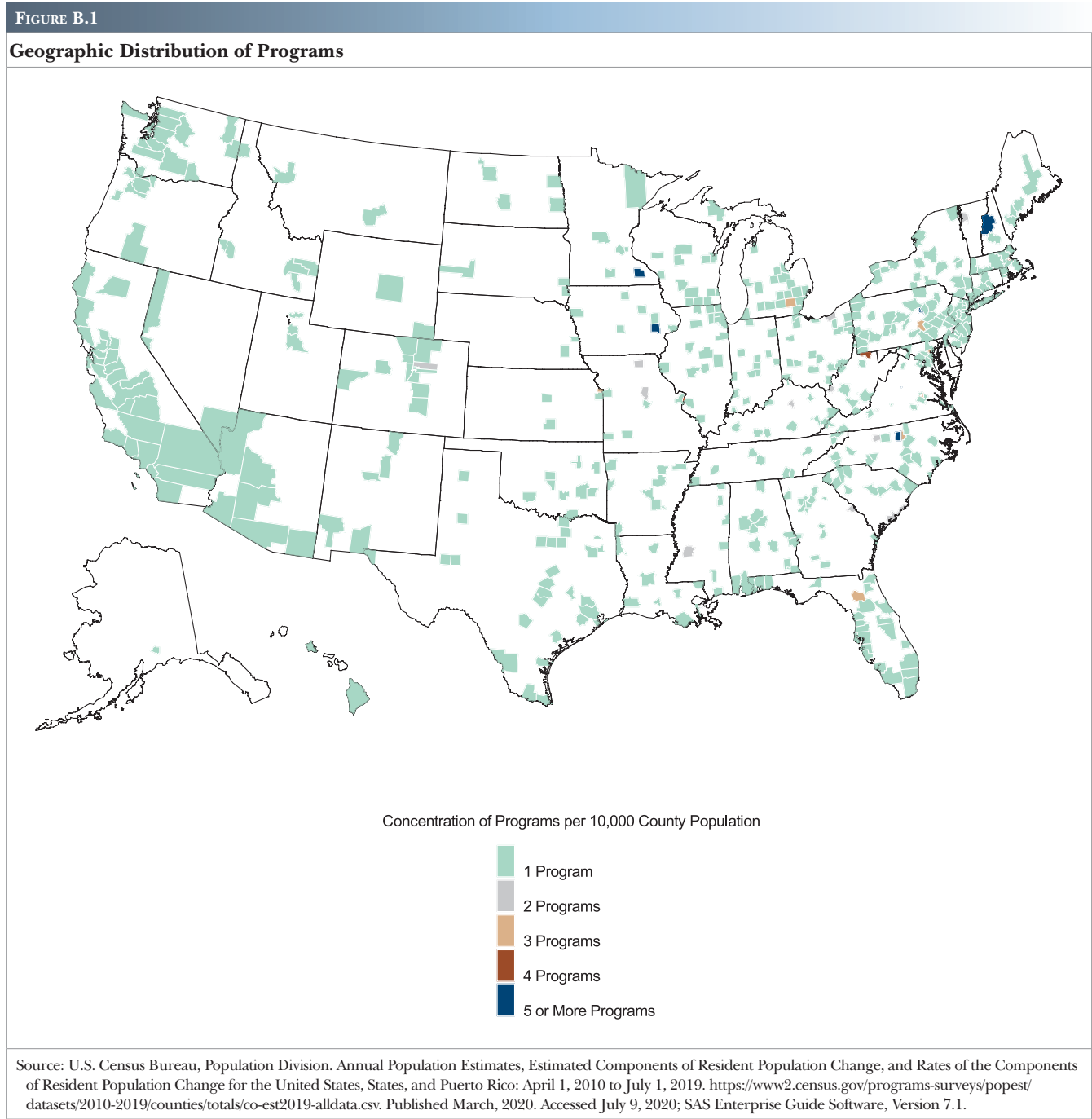


TABLE B.2

Number of Programs and Program Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population – Census Estimate 2019	Total Programs	Percent of All Programs	Programs per 100,000 Pop
OVERALL	-	331,433,217	12,092	100.0%	3.65
Alabama	AL	4,903,185	138	1.1%	2.81
Alaska	AK	731,545	2	0.0%	0.27
Arizona	AZ	7,278,717	192	1.6%	2.64
Arkansas	AR	3,017,804	83	0.7%	2.75
California	CA	39,512,223	1,059	8.8%	2.68
Colorado	CO	5,758,736	146	1.2%	2.54
Connecticut	CT	3,565,287	198	1.6%	5.55
Delaware	DE	973,764	37	0.3%	3.80
District of Columbia	DC	705,749	147	1.2%	20.83
Florida	FL	21,477,737	610	5.0%	2.84
Georgia	GA	10,617,423	233	1.9%	2.19
Hawaii	HI	1,415,872	32	0.3%	2.26
Idaho	ID	1,787,065	16	0.1%	0.90
Illinois	IL	12,671,821	536	4.4%	4.23
Indiana	IN	6,732,219	126	1.0%	1.87
Iowa	IA	3,155,070	106	0.9%	3.36
Kansas	KS	2,913,314	73	0.6%	2.51
Kentucky	KY	4,467,673	148	1.2%	3.31
Louisiana	LA	4,648,794	181	1.5%	3.89
Maine	ME	1,344,212	34	0.3%	2.53
Maryland	MD	6,045,680	263	2.2%	4.35
Massachusetts	MA	6,892,503	472	3.9%	6.85
Michigan	MI	9,986,857	578	4.8%	5.79
Minnesota	MN	5,639,632	232	1.9%	4.11
Mississippi	MS	2,976,149	80	0.7%	2.69
Missouri	MO	6,137,428	289	2.4%	4.71
Montana	MT	1,068,778	4	0.0%	0.37
Nebraska	NE	1,934,408	88	0.7%	4.55
Nevada	NV	3,080,156	55	0.5%	1.79
New Hampshire	NH	1,359,711	55	0.5%	4.04
New Jersey	NJ	8,882,190	306	2.5%	3.45
New Mexico	NM	2,096,829	69	0.6%	3.29
New York	NY	19,453,561	1,345	11.1%	6.91
North Carolina	NC	10,488,084	349	2.9%	3.33
North Dakota	ND	762,062	14	0.1%	1.84
Ohio	OH	11,689,100	630	5.2%	5.39
Oklahoma	OK	3,956,971	105	0.9%	2.65
Oregon	OR	4,217,737	100	0.8%	2.37
Pennsylvania	PA	12,801,989	764	6.3%	5.97
Puerto Rico	PR	3,193,694	75	0.6%	2.35
Rhode Island	RI	1,059,361	73	0.6%	6.89
South Carolina	SC	5,148,714	150	1.2%	2.91
South Dakota	SD	884,659	13	0.1%	1.47
Tennessee	TN	6,829,174	234	1.9%	3.43
Texas	TX	28,995,881	765	6.3%	2.64
Utah	UT	3,205,958	94	0.8%	2.93
Vermont	VT	623,989	40	0.3%	6.41
Virginia	VA	8,535,519	264	2.2%	3.09
Washington	WA	7,614,893	181	1.5%	2.38
West Virginia	WV	1,792,147	93	0.8%	5.19
Wisconsin	WI	5,822,434	211	1.7%	3.62
Wyoming	WY	578,759	4	0.0%	0.69

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE B.3

Number of Specialty Programs and Specialty Program Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Specialty Programs	Percent of All Specialty Programs	Specialty Programs per 100,000 Pop
OVERALL	-	331,433,217	5,369	100.0%	1.62
Alabama	AL	4,903,185	61	1.1%	1.24
Alaska	AK	731,545	1	0.0%	0.14
Arizona	AZ	7,278,717	88	1.6%	1.21
Arkansas	AR	3,017,804	45	0.8%	1.49
California	CA	39,512,223	455	8.5%	1.15
Colorado	CO	5,758,736	59	1.1%	1.02
Connecticut	CT	3,565,287	77	1.4%	2.16
Delaware	DE	973,764	17	0.3%	1.75
District of Columbia	DC	705,749	54	1.0%	7.65
Florida	FL	21,477,737	293	5.5%	1.36
Georgia	GA	10,617,423	111	2.1%	1.05
Hawaii	HI	1,415,872	21	0.4%	1.48
Idaho	ID	1,787,065	12	0.2%	0.67
Illinois	IL	12,671,821	243	4.5%	1.92
Indiana	IN	6,732,219	55	1.0%	0.82
Iowa	IA	3,155,070	46	0.9%	1.46
Kansas	KS	2,913,314	39	0.7%	1.34
Kentucky	KY	4,467,673	66	1.2%	1.48
Louisiana	LA	4,648,794	92	1.7%	1.98
Maine	ME	1,344,212	21	0.4%	1.56
Maryland	MD	6,045,680	107	2.0%	1.77
Massachusetts	MA	6,892,503	167	3.1%	2.42
Michigan	MI	9,986,857	311	5.8%	3.11
Minnesota	MN	5,639,632	73	1.4%	1.29
Mississippi	MS	2,976,149	40	0.7%	1.34
Missouri	MO	6,137,428	108	2.0%	1.76
Montana	MT	1,068,778	3	0.1%	0.28
Nebraska	NE	1,934,408	37	0.7%	1.91
Nevada	NV	3,080,156	35	0.7%	1.14
New Hampshire	NH	1,359,711	25	0.5%	1.84
New Jersey	NJ	8,882,190	167	3.1%	1.88
New Mexico	NM	2,096,829	28	0.5%	1.34
New York	NY	19,453,561	571	10.6%	2.94
North Carolina	NC	10,488,084	144	2.7%	1.37
North Dakota	ND	762,062	11	0.2%	1.44
Ohio	OH	11,689,100	288	5.4%	2.46
Oklahoma	OK	3,956,971	63	1.2%	1.59
Oregon	OR	4,217,737	41	0.8%	0.97
Pennsylvania	PA	12,801,989	337	6.3%	2.63
Puerto Rico	PR	3,193,694	45	0.8%	1.41
Rhode Island	RI	1,059,361	25	0.5%	2.36
South Carolina	SC	5,148,714	74	1.4%	1.44
South Dakota	SD	884,659	9	0.2%	1.02
Tennessee	TN	6,829,174	97	1.8%	1.42
Texas	TX	28,995,881	317	5.9%	1.09
Utah	UT	3,205,958	33	0.6%	1.03
Vermont	VT	623,989	16	0.3%	2.56
Virginia	VA	8,535,519	119	2.2%	1.39
Washington	WA	7,614,893	84	1.6%	1.10
West Virginia	WV	1,792,147	51	0.9%	2.85
Wisconsin	WI	5,822,434	84	1.6%	1.44
Wyoming	WY	578,759	3	0.1%	0.52

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE B.4

Number of Subspecialty Programs and Subspecialty Program Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Subspecialty Programs	Percent of All Subspecialty Programs	Subspecialty Programs per 100,000 Pop
OVERALL	-	331,433,217	6,723	100.0%	2.03
Alabama	AL	4,903,185	77	1.1%	1.57
Alaska	AK	731,545	1	0.0%	0.14
Arizona	AZ	7,278,717	104	1.5%	1.43
Arkansas	AR	3,017,804	38	0.6%	1.26
California	CA	39,512,223	604	9.0%	1.53
Colorado	CO	5,758,736	87	1.3%	1.51
Connecticut	CT	3,565,287	121	1.8%	3.39
Delaware	DE	973,764	20	0.3%	2.05
District of Columbia	DC	705,749	93	1.4%	13.18
Florida	FL	21,477,737	317	4.7%	1.48
Georgia	GA	10,617,423	122	1.8%	1.15
Hawaii	HI	1,415,872	11	0.2%	0.78
Idaho	ID	1,787,065	4	0.1%	0.22
Illinois	IL	12,671,821	293	4.4%	2.31
Indiana	IN	6,732,219	71	1.1%	1.05
Iowa	IA	3,155,070	60	0.9%	1.90
Kansas	KS	2,913,314	34	0.5%	1.17
Kentucky	KY	4,467,673	82	1.2%	1.84
Louisiana	LA	4,648,794	89	1.3%	1.91
Maine	ME	1,344,212	13	0.2%	0.97
Maryland	MD	6,045,680	156	2.3%	2.58
Massachusetts	MA	6,892,503	305	4.5%	4.43
Michigan	MI	9,986,857	267	4.0%	2.67
Minnesota	MN	5,639,632	159	2.4%	2.82
Mississippi	MS	2,976,149	40	0.6%	1.34
Missouri	MO	6,137,428	181	2.7%	2.95
Montana	MT	1,068,778	1	0.0%	0.09
Nebraska	NE	1,934,408	51	0.8%	2.64
Nevada	NV	3,080,156	20	0.3%	0.65
New Hampshire	NH	1,359,711	30	0.4%	2.21
New Jersey	NJ	8,882,190	139	2.1%	1.56
New Mexico	NM	2,096,829	41	0.6%	1.96
New York	NY	19,453,561	774	11.5%	3.98
North Carolina	NC	10,488,084	205	3.0%	1.95
North Dakota	ND	762,062	3	0.0%	0.39
Ohio	OH	11,689,100	342	5.1%	2.93
Oklahoma	OK	3,956,971	42	0.6%	1.06
Oregon	OR	4,217,737	59	0.9%	1.40
Pennsylvania	PA	12,801,989	427	6.4%	3.34
Puerto Rico	PR	3,193,694	30	0.4%	0.94
Rhode Island	RI	1,059,361	48	0.7%	4.53
South Carolina	SC	5,148,714	76	1.1%	1.48
South Dakota	SD	884,659	4	0.1%	0.45
Tennessee	TN	6,829,174	137	2.0%	2.01
Texas	TX	28,995,881	448	6.7%	1.55
Utah	UT	3,205,958	61	0.9%	1.90
Vermont	VT	623,989	24	0.4%	3.85
Virginia	VA	8,535,519	145	2.2%	1.70
Washington	WA	7,614,893	97	1.4%	1.27
West Virginia	WV	1,792,147	42	0.6%	2.34
Wisconsin	WI	5,822,434	127	1.9%	2.18
Wyoming	WY	578,759	1	0.0%	0.17

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE B.5

Number of Pipeline Programs and Pipeline Program Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Pipeline Programs	Percent of All Pipeline Programs	Pipeline Programs per 100,000 Pop
OVERALL	-	331,433,217	4,985	100.0%	1.50
Alabama	AL	4,903,185	57	1.1%	1.16
Alaska	AK	731,545	1	0.0%	0.14
Arizona	AZ	7,278,717	82	1.6%	1.13
Arkansas	AR	3,017,804	42	0.8%	1.39
California	CA	39,512,223	424	8.5%	1.07
Colorado	CO	5,758,736	53	1.1%	0.92
Connecticut	CT	3,565,287	73	1.5%	2.05
Delaware	DE	973,764	15	0.3%	1.54
District of Columbia	DC	705,749	54	1.1%	7.65
Florida	FL	21,477,737	267	5.4%	1.24
Georgia	GA	10,617,423	99	2.0%	0.93
Hawaii	HI	1,415,872	20	0.4%	1.41
Idaho	ID	1,787,065	12	0.2%	0.67
Illinois	IL	12,671,821	227	4.6%	1.79
Indiana	IN	6,732,219	49	1.0%	0.73
Iowa	IA	3,155,070	42	0.8%	1.33
Kansas	KS	2,913,314	37	0.7%	1.27
Kentucky	KY	4,467,673	61	1.2%	1.37
Louisiana	LA	4,648,794	85	1.7%	1.83
Maine	ME	1,344,212	21	0.4%	1.56
Maryland	MD	6,045,680	99	2.0%	1.64
Massachusetts	MA	6,892,503	150	3.0%	2.18
Michigan	MI	9,986,857	285	5.7%	2.85
Minnesota	MN	5,639,632	67	1.3%	1.19
Mississippi	MS	2,976,149	37	0.7%	1.24
Missouri	MO	6,137,428	102	2.0%	1.66
Montana	MT	1,068,778	3	0.1%	0.28
Nebraska	NE	1,934,408	35	0.7%	1.81
Nevada	NV	3,080,156	33	0.7%	1.07
New Hampshire	NH	1,359,711	25	0.5%	1.84
New Jersey	NJ	8,882,190	160	3.2%	1.80
New Mexico	NM	2,096,829	27	0.5%	1.29
New York	NY	19,453,561	531	10.7%	2.73
North Carolina	NC	10,488,084	132	2.6%	1.26
North Dakota	ND	762,062	10	0.2%	1.31
Ohio	OH	11,689,100	264	5.3%	2.26
Oklahoma	OK	3,956,971	62	1.2%	1.57
Oregon	OR	4,217,737	39	0.8%	0.92
Pennsylvania	PA	12,801,989	309	6.2%	2.41
Puerto Rico	PR	3,193,694	40	0.8%	1.25
Rhode Island	RI	1,059,361	24	0.5%	2.27
South Carolina	SC	5,148,714	70	1.4%	1.36
South Dakota	SD	884,659	8	0.2%	0.90
Tennessee	TN	6,829,174	92	1.8%	1.35
Texas	TX	28,995,881	296	5.9%	1.02
Utah	UT	3,205,958	30	0.6%	0.94
Vermont	VT	623,989	16	0.3%	2.56
Virginia	VA	8,535,519	112	2.2%	1.31
Washington	WA	7,614,893	78	1.6%	1.02
West Virginia	WV	1,792,147	48	1.0%	2.68
Wisconsin	WI	5,822,434	77	1.5%	1.32
Wyoming	WY	578,759	3	0.1%	0.52

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE B.6

Hospital-Based Specialty Programs by Specialty and State

State Name	State Abbreviation	AN	EM	MG	NM	PTH	GPM	RO	DR	IRI	TY	Total
OVERALL	-	160	265	47	38	142	72	91	197	89	166	1,267
Alabama	AL	1	2	1	1	3	2	1	3	1	1	16
Alaska	AK	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	2	5	0	0	1	0	2	4	2	3	19
Arkansas	AR	1	2	0	1	1	0	1	1	1	2	10
California	CA	14	22	6	6	11	8	11	18	9	10	115
Colorado	CO	1	1	1	0	2	2	1	1	1	2	12
Connecticut	CT	2	2	2	0	3	2	1	6	1	1	20
Delaware	DE	0	1	0	0	0	0	0	1	1	1	4
District of Columbia	DC	2	2	1	0	3	0	1	2	2	0	13
Florida	FL	12	19	1	1	7	3	4	10	4	15	76
Georgia	GA	2	4	1	1	2	3	1	3	2	7	26
Hawaii	HI	0	0	0	0	1	0	0	1	0	1	3
Idaho	ID	0	0	0	0	0	0	0	0	0	0	0
Illinois	IL	7	11	0	2	6	2	4	11	4	7	54
Indiana	IN	1	1	1	1	1	0	1	1	1	3	11
Iowa	IA	1	1	1	1	1	1	1	1	1	2	11
Kansas	KS	2	1	0	0	1	0	1	2	1	0	8
Kentucky	KY	2	2	0	0	2	2	2	2	0	1	13
Louisiana	LA	4	4	0	0	3	1	0	4	2	0	18
Maine	ME	1	1	0	0	0	1	0	1	1	0	5
Maryland	MD	3	2	2	3	4	5	3	3	2	2	29
Massachusetts	MA	9	5	1	1	7	3	2	10	4	6	48
Michigan	MI	7	25	2	1	5	2	4	10	3	17	76
Minnesota	MN	2	3	1	0	2	3	2	2	2	1	18
Mississippi	MS	1	3	1	0	1	1	1	1	1	1	11
Missouri	MO	5	5	1	3	4	0	1	4	2	1	26
Montana	MT	0	0	0	0	0	0	0	0	0	0	0
Nebraska	NE	1	1	1	0	2	0	1	2	1	0	9
Nevada	NV	1	3	0	0	0	1	0	1	0	2	8
New Hampshire	NH	1	1	0	0	1	1	1	1	1	0	7
New Jersey	NJ	6	10	0	0	3	2	1	7	1	4	34
New Mexico	NM	1	1	0	0	1	1	0	1	0	1	6
New York	NY	18	31	4	5	17	7	13	25	10	14	144
North Carolina	NC	3	7	2	1	4	2	3	3	3	6	34
North Dakota	ND	0	0	0	0	0	0	0	0	0	1	1
Ohio	OH	9	18	3	0	7	3	4	8	3	10	65
Oklahoma	OK	2	5	1	1	1	0	1	3	0	1	15
Oregon	OR	1	1	1	1	1	0	1	1	1	0	8
Pennsylvania	PA	10	21	2	1	8	1	5	12	7	14	81
Puerto Rico	PR	1	2	0	1	1	0	0	1	0	4	10
Rhode Island	RI	1	2	0	0	1	0	0	1	1	0	6
South Carolina	SC	2	5	1	1	1	1	1	1	1	3	17
South Dakota	SD	0	0	0	0	1	0	0	0	0	1	2
Tennessee	TN	3	4	1	1	4	2	2	4	1	1	23
Texas	TX	8	14	3	2	9	4	6	10	4	8	68
Utah	UT	1	1	1	0	1	1	1	1	1	1	9
Vermont	VT	1	1	0	0	1	0	0	1	0	0	4
Virginia	VA	3	7	1	0	2	0	2	4	2	3	24
Washington	WA	2	2	1	1	2	2	1	4	1	3	19
West Virginia	WV	1	2	0	0	1	2	1	1	0	2	10
Wisconsin	WI	2	2	2	1	2	1	2	3	3	3	21
Wyoming	WY	0	0	0	0	0	0	0	0	0	0	0

Abbreviations: AN, Anesthesiology; EM, Emergency medicine; MG, Medical genetics and genomics; NM, Nuclear medicine; PTH, Pathology-anatomic and clinical; GPM, Preventive medicine; RO, Radiation oncology; DR, Radiology-diagnostic; IRI, Interventional radiology - integrated; TY, Transitional year.

TABLE B.7

Medical Specialty Programs by Specialty and State

State Name	State Abbreviation	AI	D	FM	IM	N	CHN	ONM	PD	PM	P	IP	Total
OVERALL	-	81	144	701	569	160	76	27	211	94	269	79	2,411
Alabama	AL	1	1	8	9	2	1	0	2	1	2	2	29
Alaska	AK	0	0	1	0	0	0	0	0	0	0	0	1
Arizona	AZ	2	5	11	11	4	1	1	3	1	3	1	43
Arkansas	AR	1	1	11	7	1	1	0	1	1	2	1	27
California	CA	10	12	69	44	13	7	0	16	6	25	4	206
Colorado	CO	3	1	15	4	2	1	1	1	1	2	1	32
Connecticut	CT	1	2	4	14	2	1	1	2	0	3	1	31
Delaware	DE	1	0	3	2	0	1	0	1	0	2	1	11
District of Columbia	DC	0	3	1	4	3	1	0	2	1	4	1	20
Florida	FL	4	11	31	38	11	2	2	13	6	18	2	138
Georgia	GA	2	3	17	15	2	2	0	5	1	5	0	52
Hawaii	HI	0	0	3	3	0	0	0	2	0	2	0	10
Idaho	ID	0	0	8	3	0	0	0	0	0	1	0	12
Illinois	IL	2	7	35	26	8	2	0	10	4	12	5	111
Indiana	IN	1	1	14	4	1	1	0	2	1	3	1	29
Iowa	IA	1	1	9	4	1	1	0	2	0	3	0	22
Kansas	KS	1	1	4	4	1	0	0	2	1	2	1	17
Kentucky	KY	0	1	10	5	2	2	1	2	2	3	2	30
Louisiana	LA	3	2	10	8	4	1	0	4	1	4	3	40
Maine	ME	0	0	4	1	1	0	2	1	0	1	1	11
Maryland	MD	3	3	5	12	3	2	0	4	3	4	2	41
Massachusetts	MA	4	4	5	16	5	4	1	5	2	11	4	61
Michigan	MI	3	6	38	34	9	3	3	9	6	11	6	128
Minnesota	MN	1	3	12	4	2	1	0	2	2	3	1	31
Mississippi	MS	1	1	5	6	1	1	0	1	0	1	1	18
Missouri	MO	3	4	9	9	4	3	1	4	2	5	2	46
Montana	MT	0	0	2	1	0	0	0	0	0	0	0	3
Nebraska	NE	0	1	5	2	2	0	0	1	1	2	1	15
Nevada	NV	0	0	7	4	2	0	0	1	1	3	0	18
New Hampshire	NH	0	1	2	2	1	0	0	1	0	1	0	8
New Jersey	NJ	1	3	20	27	4	2	1	10	2	9	2	81
New Mexico	NM	0	1	6	2	1	1	1	1	1	1	0	15
New York	NY	9	12	39	63	15	9	2	32	15	35	5	236
North Carolina	NC	3	4	18	13	3	3	1	5	3	8	3	64
North Dakota	ND	0	0	6	1	0	0	0	0	0	1	0	8
Ohio	OH	5	8	35	33	8	4	2	9	6	11	4	125
Oklahoma	OK	0	1	14	5	1	0	1	4	0	4	2	32
Oregon	OR	0	2	7	6	1	1	1	1	0	2	0	21
Pennsylvania	PA	4	8	48	36	11	3	1	8	7	13	4	143
Puerto Rico	PR	1	1	4	8	1	1	0	4	2	2	1	25
Rhode Island	RI	0	2	2	3	1	0	0	1	0	1	1	11
South Carolina	SC	0	1	16	5	3	1	0	3	0	4	2	35
South Dakota	SD	0	0	3	1	0	0	0	1	0	1	0	6
Tennessee	TN	2	2	12	8	2	2	0	4	1	5	2	40
Texas	TX	4	12	38	33	11	4	1	13	6	17	3	142
Utah	UT	0	1	4	1	1	1	0	1	1	1	1	12
Vermont	VT	0	1	1	1	1	0	0	1	0	1	0	6
Virginia	VA	2	5	16	11	3	2	2	6	3	6	1	57
Washington	WA	1	1	26	7	2	1	0	2	1	2	0	43
West Virginia	WV	0	1	9	4	2	0	1	3	0	3	2	25
Wisconsin	WI	1	3	16	5	2	2	0	3	2	4	2	40
Wyoming	WY	0	0	3	0	0	0	0	0	0	0	0	3

Abbreviations: AI, Allergy and immunology; D, Dermatology; FM, Family medicine; IM, Internal medicine; N, Neurology; CHN, Child neurology; ONM, Osteopathic neuromusculoskeletal medicine; PD, Pediatrics; PM, Physical medicine and rehabilitation; P, Psychiatry; IP, Internal medicine/Pediatrics.

TABLE B.8

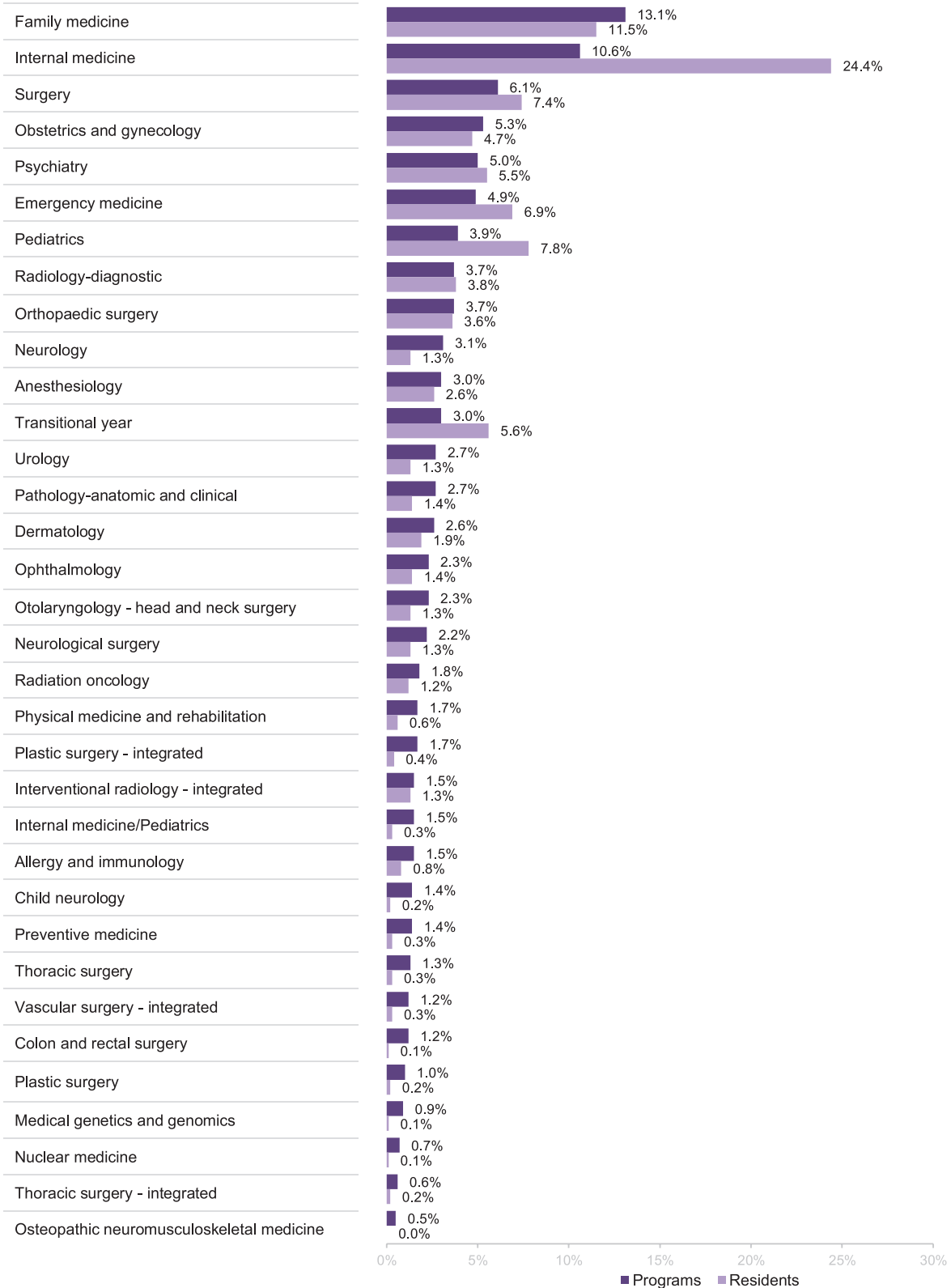
Surgical Specialty Programs by Specialty and State

State Name	State Abbreviation	CRS	NS	OBG	OPH	ORS	OTO	PS	PSI	GS	VSI	TS	TSI	U	Total
OVERALL	-	65	118	285	124	197	124	53	82	330	64	74	30	145	1,691
Alabama	AL	1	1	2	1	3	1	1	0	3	1	1	0	1	16
Alaska	AK	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	0	3	3	2	3	2	0	1	8	1	1	0	2	26
Arkansas	AR	0	1	1	1	1	1	0	0	1	1	0	0	1	8
California	CA	3	10	21	10	16	11	4	8	22	7	8	3	11	134
Colorado	CO	0	1	2	1	1	1	1	1	5	0	1	0	1	15
Connecticut	CT	1	2	6	1	2	2	0	1	6	1	1	1	2	26
Delaware	DE	0	0	1	0	0	0	0	0	1	0	0	0	0	2
District of Columbia	DC	1	2	3	3	3	2	0	1	3	1	0	0	2	21
Florida	FL	5	4	13	6	8	3	3	3	23	2	2	1	6	79
Georgia	GA	2	2	6	2	4	2	1	1	8	1	1	1	2	33
Hawaii	HI	0	0	2	0	2	1	0	0	2	0	0	0	1	8
Idaho	ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	IL	3	7	13	6	7	6	3	5	12	3	4	1	8	78
Indiana	IN	1	1	2	1	1	1	1	1	2	1	1	1	1	15
Iowa	IA	0	1	1	1	1	1	1	0	3	1	1	1	1	13
Kansas	KS	0	1	3	1	2	1	0	1	3	0	1	0	1	14
Kentucky	KY	2	2	3	2	2	2	1	1	3	0	2	1	2	23
Louisiana	LA	3	3	5	3	4	3	2	1	4	1	1	0	4	34
Maine	ME	0	0	1	0	0	0	0	0	2	1	0	0	1	5
Maryland	MD	1	4	5	4	5	3	1	1	7	0	2	1	3	37
Massachusetts	MA	4	5	6	4	4	4	3	4	10	3	4	1	6	58
Michigan	MI	4	6	25	6	16	8	3	2	23	2	2	1	9	107
Minnesota	MN	2	2	2	2	2	2	1	2	3	2	2	0	2	24
Mississippi	MS	0	1	1	1	1	1	1	1	2	0	1	0	1	11
Missouri	MO	1	3	5	4	5	4	0	3	5	2	1	0	3	36
Montana	MT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nebraska	NE	1	1	2	1	1	1	1	0	2	0	1	0	2	13
Nevada	NV	0	0	2	0	2	1	0	1	3	0	0	0	0	9
New Hampshire	NH	0	1	1	1	1	1	1	1	1	1	0	0	1	10
New Jersey	NJ	1	1	14	1	8	2	2	2	13	2	1	0	5	52
New Mexico	NM	0	1	1	0	1	1	0	1	1	0	0	0	1	7
New York	NY	9	12	36	18	19	11	3	8	38	8	8	5	16	191
North Carolina	NC	0	4	9	3	4	3	1	3	8	2	3	2	4	46
North Dakota	ND	0	0	0	0	1	0	0	0	1	0	0	0	0	2
Ohio	OH	5	4	15	6	16	8	3	5	19	5	4	2	6	98
Oklahoma	OK	0	1	5	1	2	2	1	0	3	0	0	0	1	16
Oregon	OR	1	1	1	1	2	1	0	1	2	0	1	0	1	12
Pennsylvania	PA	5	8	17	7	14	8	4	5	25	5	5	2	8	113
Puerto Rico	PR	0	1	3	1	1	1	0	0	2	0	0	0	1	10
Rhode Island	RI	1	1	1	1	1	0	0	1	1	0	0	0	1	8
South Carolina	SC	1	1	3	2	3	1	1	2	5	1	0	1	1	22
South Dakota	SD	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Tennessee	TN	1	2	7	2	4	2	3	2	6	0	1	0	4	34
Texas	TX	3	7	19	8	13	8	4	4	18	5	6	2	10	107
Utah	UT	1	1	1	1	1	1	1	1	1	0	1	1	1	12
Vermont	VT	0	1	1	0	1	1	0	0	1	0	0	0	1	6
Virginia	VA	0	4	7	3	3	4	1	3	6	1	2	1	3	38
Washington	WA	1	1	2	2	2	2	0	1	5	1	1	1	3	22
West Virginia	WV	0	1	3	1	2	1	0	1	3	1	1	0	2	16
Wisconsin	WI	1	2	3	2	2	2	0	2	4	1	2	0	2	23
Wyoming	WY	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Abbreviations: CRS, Colon and rectal surgery; NS, Neurological surgery; OBG, Obstetrics and gynecology; OPH, Ophthalmology; ORS, Orthopaedic surgery; OTO, Otolaryngology - head and neck surgery; PS, Plastic surgery; PSI, Plastic surgery - integrated; GS, Surgery; VSI, Vascular surgery - integrated; TS, Thoracic surgery; TSI, Thoracic surgery - integrated; U, Urology.

FIGURE B.9

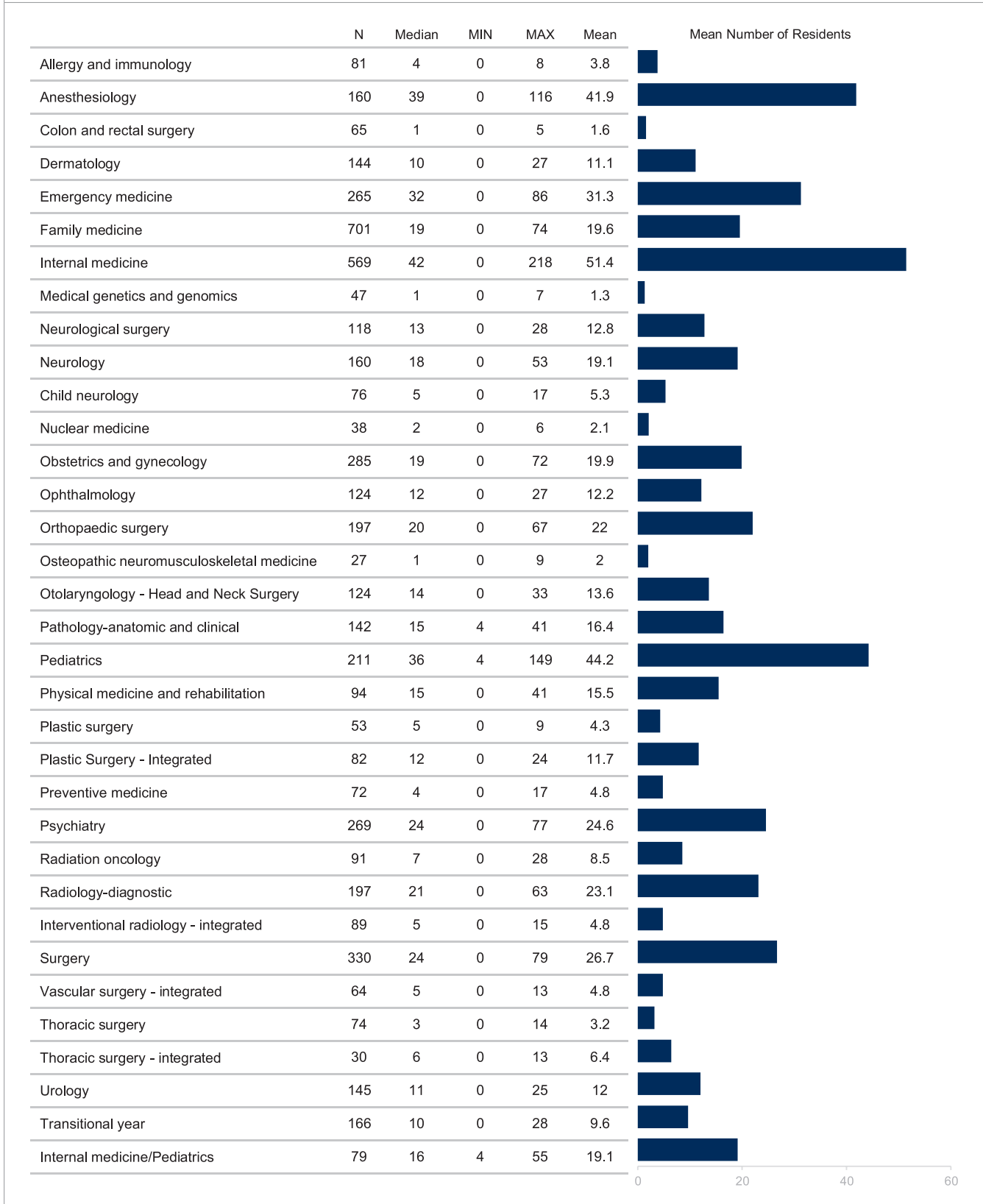
Percentage of Programs and Residents in Each Specialty



Notes: The percentages represent the number of programs/on duty residents in each specialty divided by all programs/on duty residents in specialty programs. Total number of specialty programs = 5,369. Total number of residents in specialties = 119,743.

FIGURE B.10

Mean Number of Residents per Program by Specialty



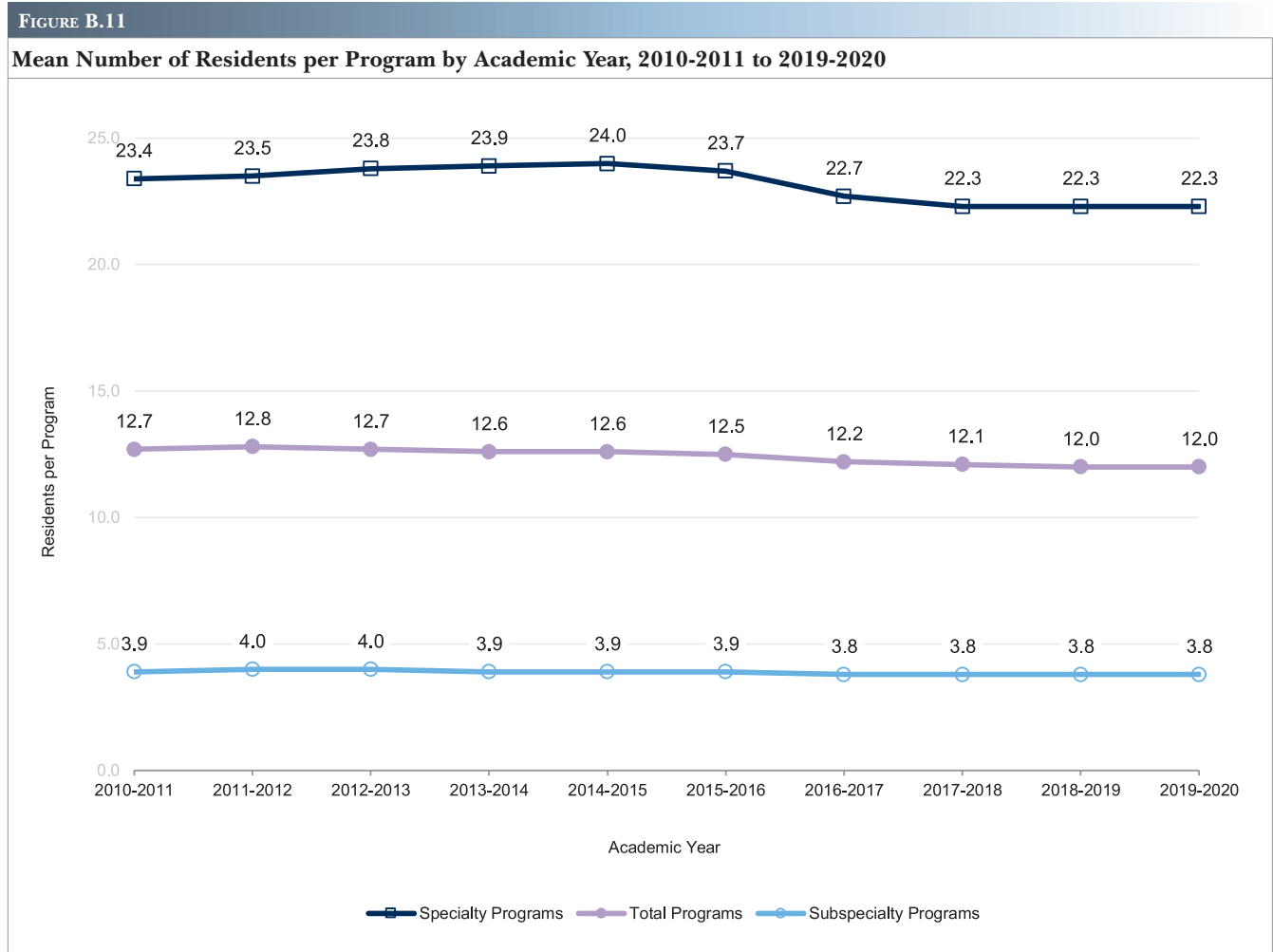
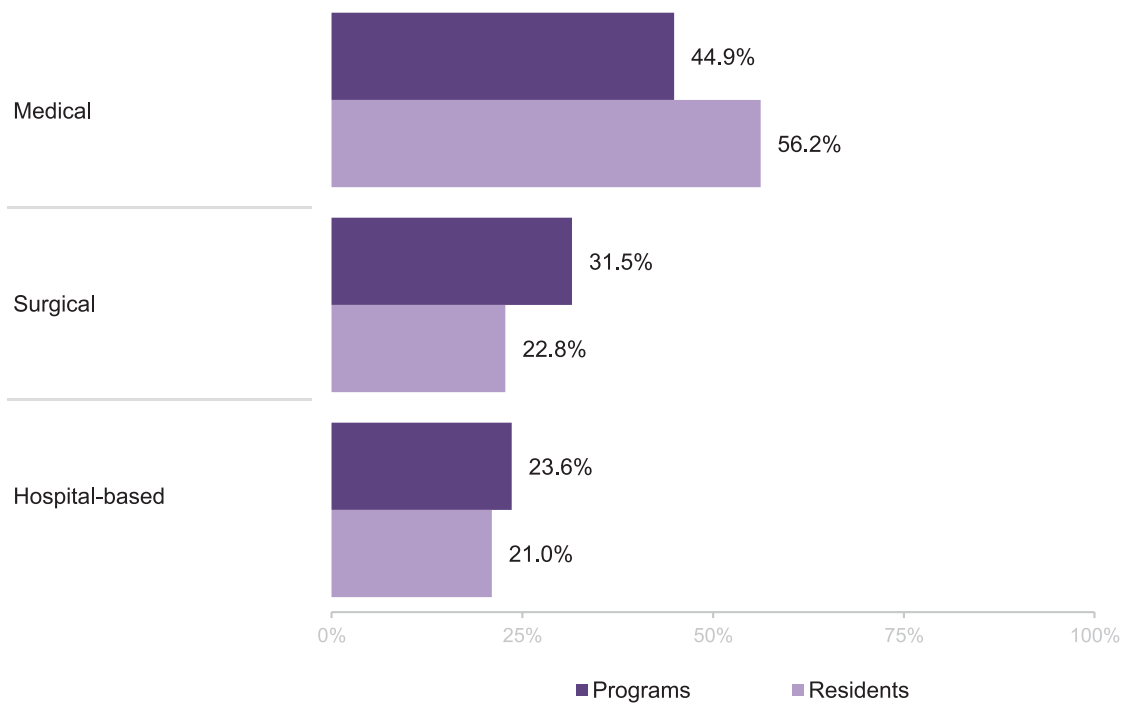


FIGURE B.12

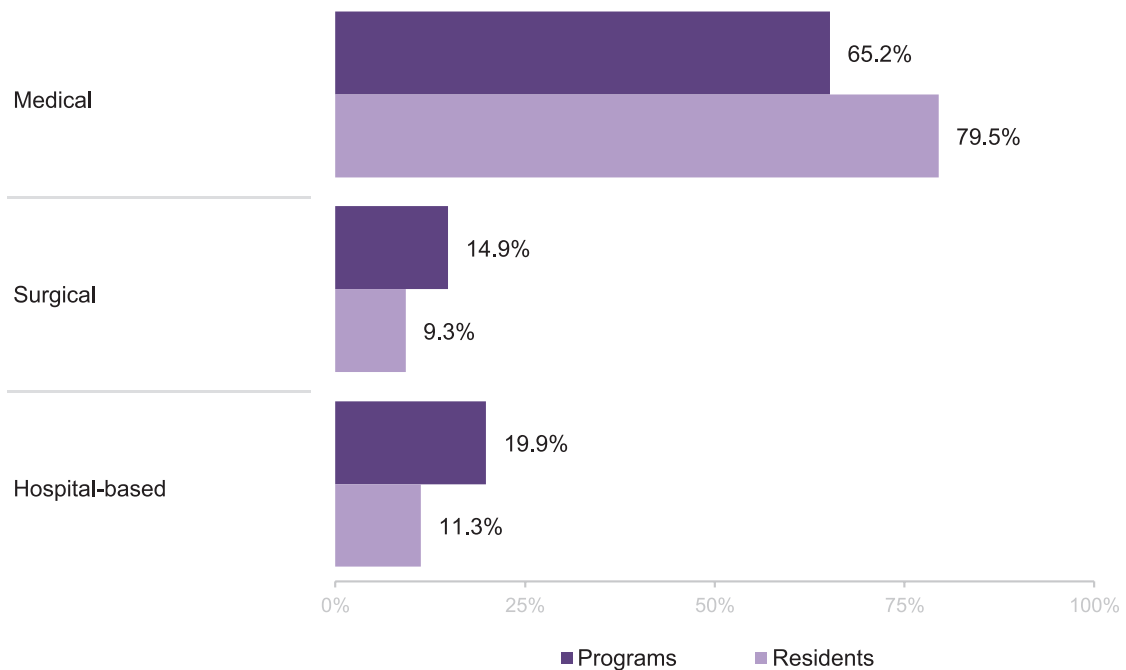
Percent of Programs and Residents in Specialties by Specialty Group



Notes: Total number of specialty programs = 5,369. Total number of residents in specialties = 119,988.

FIGURE B.13

Percent of Programs and Residents in Subspecialties by Specialty Group



Notes: Total number of subspecialty programs = 6,723. Total number of residents in subspecialties = 25,245.



Resident Characteristics

This section summarizes the characteristics of all active residents, and shows aggregate statistics on their distribution by specialty, medical school type, gender, and ethnicity since the 2010-2011 academic year. In addition, this section includes information on residents entering pipeline and continuing graduate medical education (GME) programs.

Active Residents

Of the total number of active residents (144,988), 119,743 (82.6%) are in specialty programs and 25,245 (17.4%) are in subspecialty programs. Only 0.1% (208) of the total number of active residents are part-time. In terms of trends, there has been a 28.1% increase in total active residents since 2010-2011, with growth in the number of specialty residents at 27.4%, and growth in the number of subspecialty residents at 31.6% over the last 10 years. Among residents in specialty programs, 60.2% (67,291) are in medical specialties, 19.3% (25,143) are in hospital-based specialties, and 20.5% (27,309) are in surgical specialties. The specialties with the highest percentage of total active residents are:

- Internal medicine (20.2%)
- Family medicine (9.5%)
- Pediatrics (6.4%)
- Surgery (6.1%)

Geographic Distribution

Based on the most recent US Census estimate for 2019, there are approximately 43.75 active residents (36.13 specialty, 7.62 subspecialty) per 100,000 population, including Puerto Rico. In line with the states that have the highest number of programs, the following states have the highest number of total active residents:

- New York (18,547)
- California (13,188)
- Texas (9,515)
- Pennsylvania (9,224)

Active Residents by Medical School Type

Of the 119,743 total active residents in specialty programs, 61.1% (73,106) are US allopathic medical school graduates, 21.2% (25,332) are international medical school graduates (IMGs), and 17.7% (21,252) are osteopathic medical school graduates. There are also 51 Canadian medical school graduates, and there are two res-

idents for whom medical school type was unknown. The distribution by medical school type is slightly different in subspecialty programs (25,245 active residents), with 56.9% of active residents being graduates of US allopathic medical schools, 31.8% being graduates of international medical schools, 11.0% being graduates of osteopathic medical schools, and less than 1% being Canadian medical school graduates. Over the last 10 years, there has been an 19.1% increase in US allopathic medical school graduates, a 7.6% increase in IMGs, and a 184.8% increase in osteopathic medical school graduates. The specialties with the highest percentage of IMGs include:

- Nuclear medicine (70.5%)
- Pathology – anatomic and clinical (47.3%)
- Internal medicine (38.8%)
- Medical genetics and genomics (38.3%)

While internal medicine has the third-highest percentage of IMGs, this specialty accounts for the highest number of IMGs (11,342) among all specialty programs.

Active Residents by Sex and Ethnicity

Of the 144,988 active residents, 53.9% are male, 45.1% are female, 0.2% are non-binary, and 0.9% are not reported. The specialties with the highest percentage of female residents include:

- Obstetrics and gynecology (83.5%)
- Pediatrics (69.5%)
- Child neurology (66.8%)
- Allergy and immunology (66.6%)

The specialties with the lowest percentage of female residents include:

- Orthopaedic surgery (16.1%)
- Interventional radiology – integrated (18.4%)
- Neurological surgery (19.3%)

Overall, 47.5% of all active residents are White; 20.2% are Asian; 6.1% are Hispanic, Latino or of Spanish origin; 5.1% are Black or African American; 0.3% are American Indian or Alaskan Native; and 0.2% are Native Hawaiian or Pacific Islander. 6.6% of active residents were reported as “other,” and 14.0% were reported as “unknown.”

Residents Entering the Pipeline

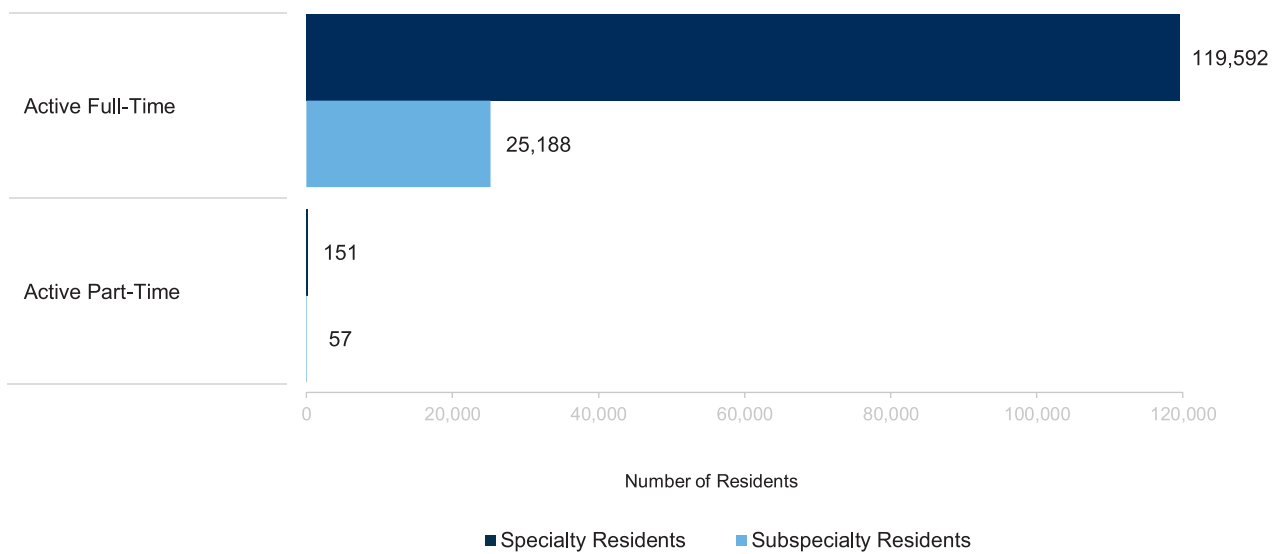
The total number of residents entering the pipeline reached 33,594 for the 2019-2020 academic year. Since 2010-2011, there has been 28.7% increase in residents

entering the pipeline, with varying patterns in growth by medical school type (16.6% increase among US LCME-accredited medical school graduates, 8.2% increase among IMGs, and 181.7% increase among osteopathic medical school graduates). Among the 2019-2020 res-

idents entering the pipeline, 58.5% (19,667) are US LCME-accredited graduates, 22.3% (7,486) are IMGs, 19.1% (6,428) are osteopathic medical school graduates, and less than one percent (12) are Canadian medical school graduates. ^Λ

FIGURE C.1

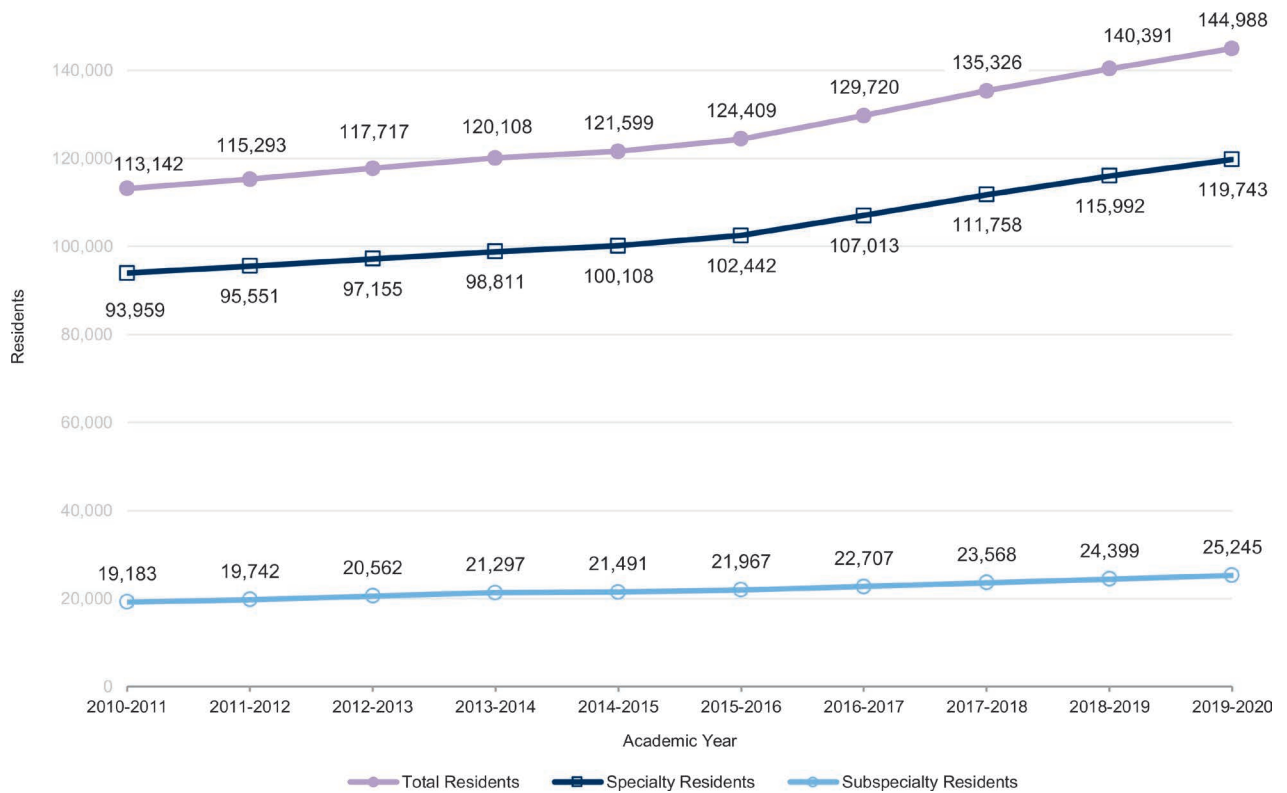
Number of Active Residents by Status



Note: Total number of active residents = 144,988.

FIGURE C.2

Number of Active Residents by Academic Year, 2010-2011 to 2019-2020



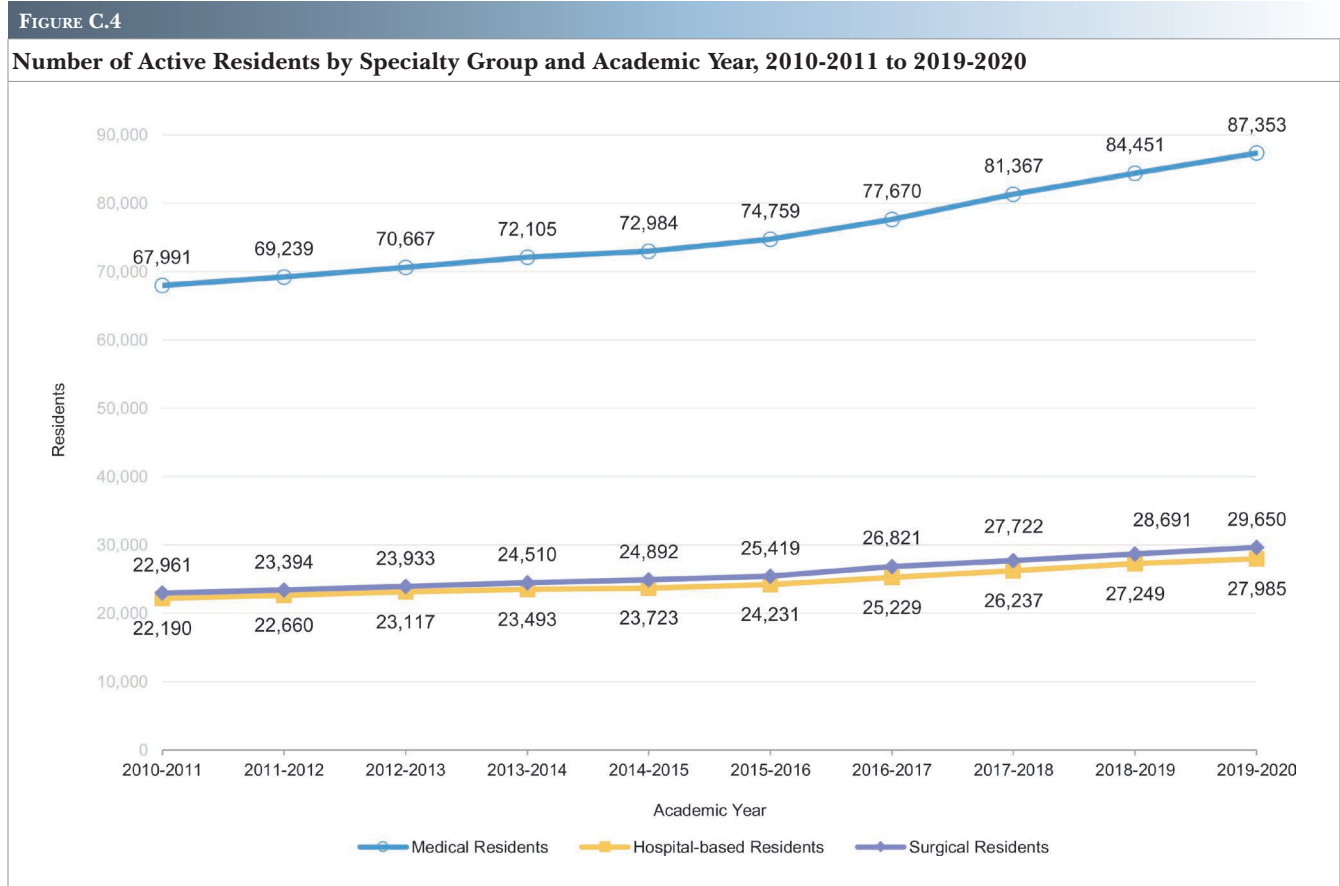
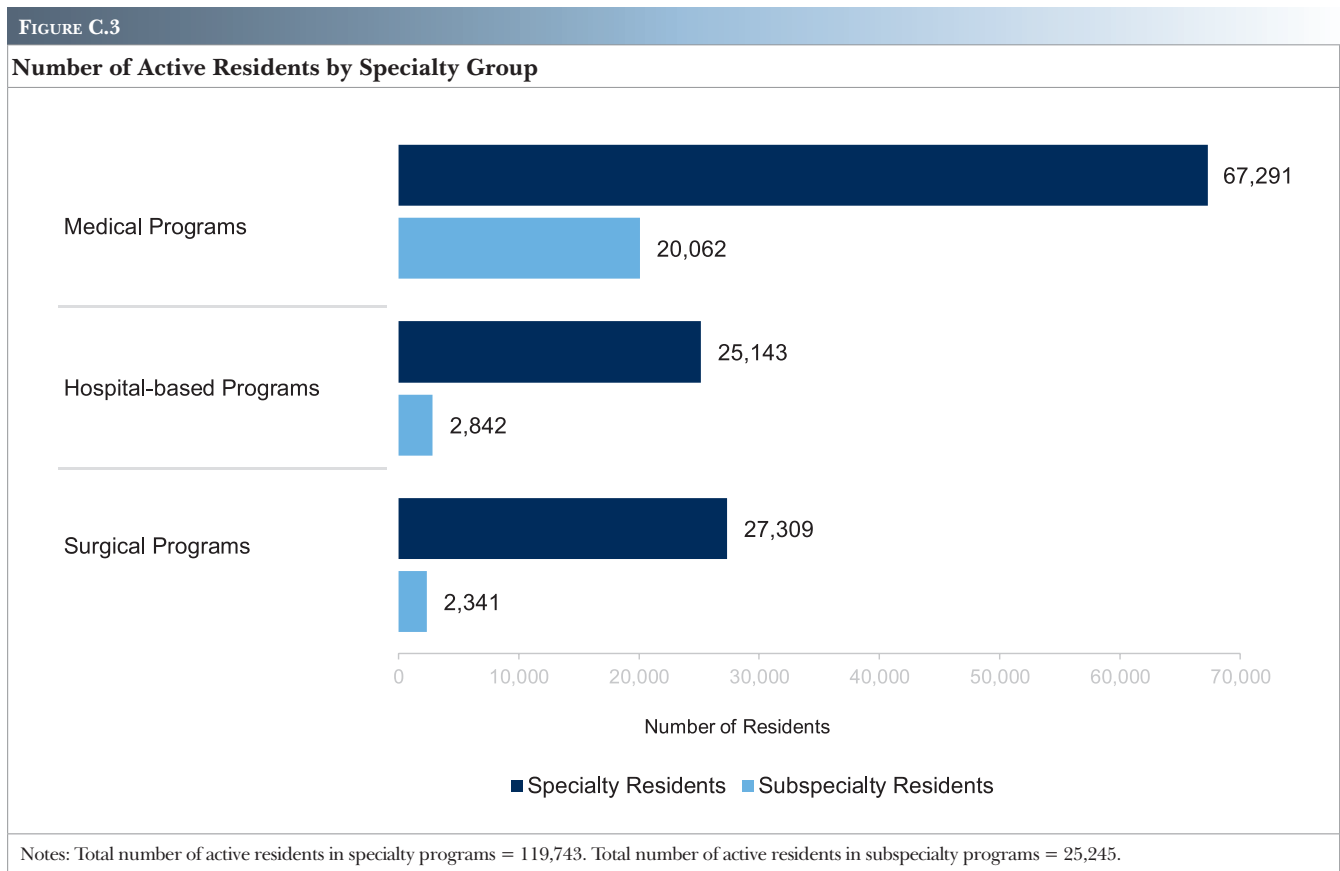


TABLE C.5

Number of Active Residents by Specialty and Subspecialty, Position Type, and Resident Year

Specialty	Total Residents	Resident Year									
		1		2		3		4	5	6	7
		Cat #	Prel #	Cat #	Prel #	Cat #	Prel #	Cat #	Cat #	Cat #	Cat #
OVERALL	144,988	49,299	3,479	40,576	278	36,320	2	11,067	3,398	367	202
TOTAL PIPELINE	117,496	33,594	3,479	33,209	278	31,907	2	11,060	3,398	367	202
Allergy and immunology	308	151		157							
Anesthesiology	6,698	1,602		1,834		1,769		1,493			
- Adult cardiothoracic anesthesiology	220	220									
- Clinical informatics	1	1									
- Critical care medicine	191	191									
- Regional anesthesiology and acute pain medicine	72	72									
- Obstetric anesthesiology	38	38									
- Pain medicine (multidisciplinary)	386	386									
- Pediatric anesthesiology	192	192									
Colon and rectal surgery	106	106									
Dermatology	1,594	534		538		513		9			
- Dermatopathology (multidisciplinary)	69	69									
- Micrographic surgery and dermatologic oncology	88	88									
Emergency medicine	8,293	2,666		2,527		2,497		603			
- Clinical informatics	10	6		4							
- Emergency medical services	87	87									
- Medical toxicology	72	39		33							
- Pediatric emergency medicine	134	53		48		33					
- Sports medicine	17	17									
- Undersea and hyperbaric medicine	10	10									
Family medicine	13,725	4,737		4,594		4,347		47			
- Clinical informatics	10	4		6							
- Geriatric medicine	38	38									
- Hospice and palliative medicine (multidisciplinary)	374	374									
- Sports medicine	261	261									
Internal medicine	29,243	9,242	2,192	9,079	4	8,725	1				
- Adult congenital heart disease	25	13		12							
- Advanced heart failure and transplant cardiology	109	109									
- Cardiovascular disease	3,105	1,078		1,041		986					
- Clinical cardiac electrophysiology	255	143		112							
- Clinical informatics	36	16		20							
- Critical care medicine	264	157		107							
- Endocrinology, diabetes, and metabolism	675	348		327							
- Gastroenterology	1,792	612		611		569					
- Geriatric medicine	261	261									
- Hematology	17	9		8							
- Hematology and medical oncology	1,843	628		621		594					
- Infectious disease	762	378		384							
- Interventional cardiology	350	350									
- Nephrology	828	420		408							
- Medical oncology	35	18		17							
- Pulmonary disease	73	38		35							
- Pulmonary disease and critical care medicine	1,999	713		679		607					
- Rheumatology	515	259		256							
- Sleep medicine (multidisciplinary)	182	182									
- Transplant hepatology	52	52									
Medical genetics and genomics	60	37		23							
- Medical biochemical genetics	16	16									
- Molecular genetic pathology (multidisciplinary)	56	56									
Neurological surgery	1,515	231		223		221		213	220	205	202
- Endovascular surgical neuroradiology	1	1									

TABLE C.5 *Continued***Number of Active Residents by Specialty and Subspecialty, Position Type, and Resident Year**

Specialty	Total Residents	Resident Year									
		1		2		3		4	5	6	7
		Cat #	Prel #	Cat #	Prel #	Cat #	Prel #	Cat #	Cat #	Cat #	Cat #
Neurology	3,062	868		875		823		496			
- Brain injury medicine	1	1									
- Clinical neurophysiology	163	163									
- Epilepsy	126	126									
- Endovascular surgical neuroradiology	2	2									
- Neurodevelopmental disabilities	24	7		5		5		7			
- Neuromuscular medicine	73	73									
- Vascular neurology	128	128									
Child neurology	401	140		132		129					
Nuclear medicine	78	39		18		21					
Obstetrics and gynecology	5,677	1,442	18	1,427		1,408		1,382			
- Female pelvic medicine and reconstructive surgery	149	51		45		53					
- Gynecologic oncology	210	73		71		66					
- Maternal-fetal medicine	368	131		120		117					
- Reproductive endocrinology and infertility	167	58		53		56					
Ophthalmology	1,512	504		502		506					
- Ophthalmic plastic and reconstructive surgery	3	1		2							
Orthopaedic surgery	4,342	883		889		871		855	844		
- Adult reconstructive orthopaedics	46	46									
- Foot and ankle orthopaedics	16	16									
- Hand surgery	154	154									
- Musculoskeletal oncology	17	17									
- Orthopaedic sports medicine	215	215									
- Orthopaedic surgery of the spine	34	34									
- Orthopaedic trauma	20	20									
- Pediatric orthopaedics	37	37									
Osteopathic neuromusculoskeletal medicine	53	3		17		33					
Otolaryngology - head and neck surgery	1,689	350		345		335		329	330		
- Neurotology	35	21		14							
- Pediatric otolaryngology	36	36									
Pathology-anatomic and clinical	2,324	611		604		601		508			
- Blood banking/transfusion medicine	50	50									
- Clinical informatics	16	11		5							
- Chemical pathology	2	2									
- Cytopathology	125	125									
- Forensic pathology	54	54									
- Hematopathology	135	135									
- Medical microbiology	9	9									
- Neuropathology	59	32		27							
- Pediatric pathology	23	23									
- Selective pathology	167	167									
Pediatrics	9,323	3,139	88	3,085	59	2,951	1				
- Adolescent medicine	94	39		30		25					
- Child abuse pediatrics	47	19		14		14					
- Clinical informatics	15	7		8							
- Developmental-behavioral pediatrics	119	45		36		38					
- Neonatal-perinatal medicine	772	265		260		247					
- Pediatric cardiology	457	167		151		139					
- Pediatric critical care medicine	557	200		185		172					
- Pediatric emergency medicine	424	154		133		137					
- Pediatric endocrinology	227	77		75		75					
- Pediatric gastroenterology	322	112		111		99					
- Pediatric hematology/oncology	485	166		154		165					

TABLE C.5 *Continued***Number of Active Residents by Specialty and Subspecialty, Position Type, and Resident Year**

Specialty	Total Residents	Resident Year									
		1		2		3		4	5	6	7
		Cat #	Prel #	Cat #	Prel #	Cat #	Prel #	Cat #	Cat #	Cat #	Cat #
- Pediatric infectious diseases	169	53		56		60					
- Pediatric nephrology	110	36		42		32					
- Pediatric pulmonology	168	63		57		48					
- Pediatric rheumatology	90	28		29		33					
- Pediatric sports medicine	26	26									
- Pediatric transplant hepatology	10	10									
- Pediatric hospital medicine	71	40		31							
Physical medicine and rehabilitation	1,453	412		444		441		156			
- Brain injury medicine	18	18									
- Neuromuscular medicine	1	1									
- Spinal cord injury medicine	21	21									
- Pediatric rehabilitation	38	19		19							
- Sports medicine	32	32									
Plastic surgery	226	71		77		78					
Plastic surgery - integrated	961	172		174		168		158	152	137	
- Craniofacial surgery	5	5									
- Hand surgery	23	23									
Preventive medicine	347	175		171		1					
- Medical toxicology	4	2		2							
- Undersea and hyperbaric medicine	1	1									
Psychiatry	6,618	1,875		1,833		1,708		1,202			
- Addiction medicine (multidisciplinary)	79	79									
- Addiction psychiatry	78	76		2							
- Child and adolescent psychiatry	889	481		408							
- Forensic psychiatry	80	80									
- Geriatric psychiatry	42	42									
- Consultation-liaison psychiatry	86	86									
Radiation oncology	771	192		196		192		191			
Radiology-diagnostic	4,551	1,142		1,126		1,161		1,116	6		
- Abdominal radiology	49	49									
- Endovascular surgical neuroradiology	5	5									
- Musculoskeletal radiology	35	35									
- Neuroradiology	280	280									
- Nuclear radiology	12	12									
- Pediatric radiology	58	58									
- Vascular and interventional radiology	256	256									
Interventional radiology - independent	0										
Interventional radiology - integrated	424	139		122		68		70	25		
Surgery	8,809	1,524	1,181	1,519	215	1,523		1,424	1,423		
- Complex general surgical oncology	115	59		56							
- Hand surgery	8	8									
- Pediatric surgery	85	46		39							
- Surgical critical care	290	290									
- Vascular surgery	244	120		124							
Vascular surgery - integrated	309	68		62		64		60	55		
Thoracic surgery	236	101		104		31					
- Congenital cardiac surgery	8	8									
Thoracic surgery - integrated	193	36		35		37		31	29	25	
Urology	1,734	372		360		350		338	314		
- Female pelvic medicine and reconstructive surgery	35	10		13		12					
- Pediatric urology	20	20									
Transitional year	1,597	1,597									
Internal medicine/Pediatrics	1,511	388		378		366		379			

Note: Pipeline specialties are highlighted.

Abbreviations: Cat, categorical resident positions; Prel, preliminary resident positions.

TABLE C.6							
Number of Active Residents by Specialty and Subspecialty and Academic Year, 2015-2016 to 2019-2020							
Specialty	Academic Year					5-Year Change	
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	#	%
	#	#	#	#	#		
OVERALL	124,409	129,720	135,326	140,391	144,988	20,579	16.5%
TOTAL PIPELINE	100,761	105,297	109,822	113,823	117,496	16,735	16.6%
Allergy and immunology	287	287	296	304	308	21	7.3%
Anesthesiology	6,051	6,207	6,346	6,507	6,698	647	10.7%
- Adult cardiothoracic anesthesiology	183	193	207	215	220	37	20.2%
- Clinical informatics *		1	2	1	1	0	0.0%
- Critical care medicine	175	183	181	182	191	16	9.1%
- Regional anesthesiology and acute pain medicine *		20	48	58	72	52	260.0%
- Obstetric anesthesiology	38	39	39	44	38	0	0.0%
- Pain medicine (multidisciplinary)	337	354	361	372	386	49	14.5%
- Pediatric anesthesiology	205	205	205	199	192	-13	-6.3%
Colon and rectal surgery	94	95	97	101	106	12	12.8%
Dermatology	1,323	1,424	1,517	1,563	1,594	271	20.5%
- Dermatopathology (multidisciplinary)	76	71	72	67	69	-7	-9.2%
- Micrographic surgery and dermatologic oncology	73	83	83	82	88	15	20.5%
Emergency medicine	6,244	6,885	7,461	7,940	8,293	2,049	32.8%
- Clinical informatics *	3	4	4	5	10	7	233.3%
- Emergency medical services	50	62	46	62	87	37	74.0%
- Medical toxicology	61	63	63	72	72	11	18.0%
- Pediatric emergency medicine	101	113	119	129	134	33	32.7%
- Sports medicine	11	14	16	16	17	6	54.5%
- Undersea and hyperbaric medicine	9	13	8	9	10	1	11.1%
Family medicine	10,762	11,277	12,161	13,116	13,725	2,963	27.5%
- Clinical informatics *	2	7	8	12	10	8	400.0%
- Geriatric medicine	49	44	41	46	38	-11	-22.4%
- Hospice and palliative medicine (multidisciplinary)	274	304	333	355	374	100	36.5%
- Sports medicine	210	217	229	239	261	51	24.3%
Internal medicine	24,983	26,301	27,647	28,420	29,243	4,260	17.1%
- Adult congenital heart disease *	5	15	14	25	25	20	400.0%
- Advanced heart failure and transplant cardiology	82	94	98	105	109	27	32.9%
- Cardiovascular disease	2,670	2,746	2,918	3,017	3,105	435	16.3%
- Clinical cardiac electrophysiology	154	142	185	259	255	101	65.6%
- Clinical informatics *	5	19	34	36	36	31	620.0%
- Critical care medicine	208	217	238	253	264	56	26.9%
- Endocrinology, diabetes, and metabolism	613	624	645	660	675	62	10.1%
- Gastroenterology	1,505	1,565	1,656	1,741	1,792	287	19.1%
- Geriatric medicine	239	260	274	258	261	22	9.2%
- Hematology	22	15	16	18	17	-5	-22.7%
- Hematology and medical oncology	1,660	1,713	1,745	1,776	1,843	183	11.0%
- Infectious disease	724	694	715	760	762	38	5.2%
- Interventional cardiology	309	315	318	339	350	41	13.3%
- Nephrology	863	844	808	805	828	-35	-4.1%
- Medical oncology	59	34	34	39	35	-24	-40.7%
- Pulmonary disease	75	74	73	70	73	-2	-2.7%
- Pulmonary disease and critical care medicine	1,630	1,702	1,812	1,898	1,999	369	22.6%
- Rheumatology	445	458	477	503	515	70	15.7%
- Sleep medicine (multidisciplinary)	165	163	164	177	182	17	10.3%
- Transplant hepatology	40	39	46	47	52	12	30.0%
Medical genetics and genomics	73	71	70	69	60	-13	-17.8%
- Medical biochemical genetics	9	9	12	14	16	7	77.8%
- Molecular genetic pathology (multidisciplinary)	53	53	56	61	56	3	5.7%
Neurological surgery	1,325	1,375	1,408	1,462	1,515	190	14.3%
- Endovascular surgical neuroradiology	2	1	3	1	1	-1	-50.0%

TABLE C.6 Continued

Number of Active Residents by Specialty and Subspecialty and Academic Year, 2015-2016 to 2019-2020

Specialty	Academic Year					5-Year Change	
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	#	%
	#	#	#	#	#		
Neurology	2,413	2,544	2,750	2,893	3,062	649	26.9%
- Brain injury medicine *			1	1	1	0	0.0%
- Clinical neurophysiology	200	169	171	163	163	-37	-18.5%
- Epilepsy *	53	74	101	112	126	73	137.7%
- Endovascular surgical neuroradiology	1	2	1	1	2	1	100.0%
- Neurodevelopmental disabilities	23	27	28	25	24	1	4.3%
- Neuromuscular medicine	63	60	55	67	73	10	15.9%
- Vascular neurology	112	126	115	129	128	16	14.3%
Child neurology	360	360	373	383	401	41	11.4%
Nuclear medicine	84	74	71	75	78	-6	-7.1%
Obstetrics and gynecology	5,187	5,372	5,473	5,571	5,677	490	9.4%
- Female pelvic medicine and reconstructive surgery	132	139	142	145	149	17	12.9%
- Gynecologic oncology *		172	187	197	210	38	22.1%
- Maternal-fetal medicine *		268	322	350	368	100	37.3%
- Reproductive endocrinology and infertility *		120	160	163	167	47	39.2%
Ophthalmology	1,432	1,446	1,474	1,473	1,512	80	5.6%
- Ophthalmic plastic and reconstructive surgery	6	6	5	5	3	-3	-50.0%
Orthopaedic surgery	3,684	3,760	3,941	4,125	4,342	658	17.9%
- Adult reconstructive orthopaedics	44	41	40	47	46	2	4.5%
- Foot and ankle orthopaedics	16	15	14	15	16	0	0.0%
- Hand surgery	144	146	151	154	154	10	6.9%
- Musculoskeletal oncology	15	16	17	14	17	2	13.3%
- Orthopaedic sports medicine	203	217	204	205	215	12	5.9%
- Orthopaedic surgery of the spine	31	32	32	28	34	3	9.7%
- Orthopaedic trauma	17	14	18	19	20	3	17.6%
- Pediatric orthopaedics	43	38	39	37	37	-6	-14.0%
Osteopathic neuromusculoskeletal medicine *	3	8	21	34	53	50	1666.7%
Otolaryngology - head and neck surgery	1,517	1,541	1,592	1,651	1,689	172	11.3%
- Neurotology	30	28	29	32	35	5	16.7%
- Pediatric otolaryngology	33	33	34	35	36	3	9.1%
Pathology-anatomic and clinical	2,318	2,334	2,341	2,329	2,324	6	0.3%
- Blood banking/transfusion medicine	48	47	49	57	50	2	4.2%
- Clinical informatics *	3	10	11	9	16	13	433.3%
- Chemical pathology	2	1	1	1	2	0	0.0%
- Cytopathology	141	139	138	134	125	-16	-11.3%
- Forensic pathology	50	46	43	44	54	4	8.0%
- Hematopathology	132	132	125	131	135	3	2.3%
- Medical microbiology	10	12	10	12	9	-1	-10.0%
- Neuropathology	50	55	48	50	59	9	18.0%
- Pediatric pathology	22	23	17	23	23	1	4.5%
- Selective pathology	154	154	168	166	167	13	8.4%
Pediatrics	8,933	9,063	9,159	9,221	9,323	390	4.4%
- Adolescent medicine	79	89	88	87	94	15	19.0%
- Child abuse pediatrics	37	35	34	38	47	10	27.0%
- Clinical informatics *	7	9	10	12	15	8	114.3%
- Developmental-behavioral pediatrics	102	92	108	102	119	17	16.7%
- Neonatal-perinatal medicine	738	759	759	761	772	34	4.6%
- Pediatric cardiology	422	432	434	444	457	35	8.3%
- Pediatric critical care medicine	496	507	518	534	557	61	12.3%
- Pediatric emergency medicine	373	385	392	408	424	51	13.7%
- Pediatric endocrinology	243	243	241	241	227	-16	-6.6%
- Pediatric gastroenterology	282	290	300	311	322	40	14.2%
- Pediatric hematology/oncology	476	488	501	484	485	9	1.9%

TABLE C.6 *Continued***Number of Active Residents by Specialty and Subspecialty and Academic Year, 2015-2016 to 2019-2020**

Specialty	Academic Year					5-Year Change	
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	#	%
	#	#	#	#	#		
- Pediatric infectious diseases	162	164	171	177	169	7	4.3%
- Pediatric nephrology	101	102	101	116	110	9	8.9%
- Pediatric pulmonology	159	167	158	162	168	9	5.7%
- Pediatric rheumatology	76	81	86	91	90	14	18.4%
- Pediatric sports medicine	24	23	26	26	26	2	8.3%
- Pediatric transplant hepatology	6	8	12	9	10	4	66.7%
- Pediatric hospital medicine *					71	N/A	N/A
Physical medicine and rehabilitation	1,293	1,324	1,351	1,395	1,453	160	12.4%
- Brain injury medicine	7	9	13	17	18	11	157.1%
- Neuromuscular medicine	1			1	1	0	0.0%
- Spinal cord injury medicine	16	16	21	20	21	5	31.3%
- Pediatric rehabilitation	25	26	27	38	38	13	52.0%
- Sports medicine	24	22	28	30	32	8	33.3%
Plastic surgery	363	316	266	243	226	-137	-37.7%
Plastic surgery - integrated	663	748	829	901	961	298	44.9%
- Craniofacial surgery	9	9	4	8	5	-4	-44.4%
- Hand surgery	23	24	23	22	23	0	0.0%
Preventive medicine	355	353	351	357	347	-8	-2.3%
- Medical toxicology	3	5	4	4	4	1	33.3%
- Undersea and hyperbaric medicine	3	3	2	2	1	-2	-66.7%
Psychiatry	5,358	5,619	5,907	6,247	6,618	1,260	23.5%
- Addiction medicine (multidisciplinary) *				39	79	40	102.6%
- Addiction psychiatry	80	77	74	83	78	-2	-2.5%
- Child and adolescent psychiatry	826	840	865	869	889	63	7.6%
- Forensic psychiatry	72	63	79	66	80	8	11.1%
- Geriatric psychiatry	58	56	53	52	42	-16	-27.6%
- Consultation-liaison psychiatry	79	80	86	71	86	7	8.9%
Radiation oncology	733	749	767	774	771	38	5.2%
Radiology-diagnostic	4,740	4,769	4,760	4,671	4,551	-189	-4.0%
- Abdominal radiology	45	46	44	41	49	4	8.9%
- Endovascular surgical neuroradiology	5	6	6	5	5	0	0.0%
- Musculoskeletal radiology	30	33	32	32	35	5	16.7%
- Neuroradiology	256	265	269	259	280	24	9.4%
- Nuclear radiology	13	12	11	11	12	-1	-7.7%
- Pediatric radiology	79	65	55	55	58	-21	-26.6%
- Vascular and interventional radiology	275	284	290	274	256	-19	-6.9%
Interventional radiology - independent *						N/A	N/A
Interventional radiology - integrated *		13	60	246	424	411	3161.5%
Surgery	7,834	8,184	8,475	8,844	8,809	975	12.4%
- Complex general surgical oncology	101	105	107	111	115	14	13.9%
- Hand surgery	8	8	8	8	8	0	0.0%
- Pediatric surgery	82	83	80	83	85	3	3.7%
- Surgical critical care	236	248	253	284	290	54	22.9%
- Vascular surgery	233	241	246	248	244	11	4.7%
Vascular surgery - integrated	234	260	272	292	309	75	32.1%
Thoracic surgery	223	224	223	232	236	13	5.8%
- Congenital cardiac surgery	10	5	9	8	8	-2	-20.0%
Thoracic surgery - integrated	138	161	183	189	193	55	39.9%
Urology	1,254	1,276	1,304	1,331	1,734	480	38.3%
- Female pelvic medicine and reconstructive surgery	28	29	34	37	35	7	25.0%
- Pediatric urology	25	25	24	20	20	-5	-20.0%
Transitional year	1,077	1,110	1,320	1,532	1,597	520	48.3%
Internal medicine/Pediatrics	1,464	1,483	1,492	1,501	1,511	47	3.2%

Notes: Pipeline specialties are highlighted. Asterisks (*) indicate specialties and subspecialties added within the last five years. For these specialties and subspecialties, the number and percent change are calculated from the first year of having active residents.

TABLE C.7

Number of Active Part-Time Residents by Specialty and Subspecialty

Specialty	Total Residents	Number of Part-Time Residents	Percent of All Residents in Specialty	Percent of All Part-Time Residents
OVERALL	144,988	208	0.1%	100.0%
TOTAL PIPELINE	117,496	144	0.1%	69.2%
Allergy and immunology	308	4	1.3%	1.9%
Anesthesiology	6,698	17	0.3%	8.2%
- Adult cardiothoracic anesthesiology	220	0	0.0%	0.0%
- Clinical informatics	1	0	0.0%	0.0%
- Critical care medicine	191	0	0.0%	0.0%
- Regional anesthesiology and acute pain medicine	72	0	0.0%	0.0%
- Obstetric anesthesiology	38	0	0.0%	0.0%
- Pain medicine (multidisciplinary)	386	0	0.0%	0.0%
- Pediatric anesthesiology	192	0	0.0%	0.0%
Colon and rectal surgery	106	0	0.0%	0.0%
Dermatology	1,594	2	0.1%	1.0%
- Dermatopathology (multidisciplinary)	69	0	0.0%	0.0%
- Micrographic surgery and dermatologic oncology	88	0	0.0%	0.0%
Emergency medicine	8,293	8	0.1%	3.8%
- Clinical informatics	10	0	0.0%	0.0%
- Emergency medical services	87	2	2.3%	1.0%
- Medical toxicology	72	0	0.0%	0.0%
- Pediatric emergency medicine	134	0	0.0%	0.0%
- Sports medicine	17	0	0.0%	0.0%
- Undersea and hyperbaric medicine	10	0	0.0%	0.0%
Family medicine	13,725	17	0.1%	8.2%
- Clinical informatics	10	0	0.0%	0.0%
- Geriatric medicine	38	2	5.3%	1.0%
- Hospice and palliative medicine (multidisciplinary)	374	6	1.6%	2.9%
- Sports medicine	261	1	0.4%	0.5%
Internal medicine	29,243	32	0.1%	15.4%
- Adult congenital heart disease	25	0	0.0%	0.0%
- Advanced heart failure and transplant cardiology	109	0	0.0%	0.0%
- Cardiovascular disease	3,105	1	0.0%	0.5%
- Clinical cardiac electrophysiology	255	1	0.4%	0.5%
- Clinical informatics	36	0	0.0%	0.0%
- Critical care medicine	264	1	0.4%	0.5%
- Endocrinology, diabetes, and metabolism	675	0	0.0%	0.0%
- Gastroenterology	1,792	5	0.3%	2.4%
- Geriatric medicine	261	4	1.5%	1.9%
- Hematology	17	0	0.0%	0.0%
- Hematology and medical oncology	1,843	5	0.3%	2.4%
- Infectious disease	762	0	0.0%	0.0%
- Interventional cardiology	350	1	0.3%	0.5%
- Nephrology	828	0	0.0%	0.0%
- Medical oncology	35	0	0.0%	0.0%
- Pulmonary disease	73	0	0.0%	0.0%
- Pulmonary disease and critical care medicine	1,999	4	0.2%	1.9%
- Rheumatology	515	1	0.2%	0.5%
- Sleep medicine (multidisciplinary)	182	2	1.1%	1.0%
- Transplant hepatology	52	0	0.0%	0.0%
Medical genetics and genomics	60	0	0.0%	0.0%
- Medical biochemical genetics	16	0	0.0%	0.0%
- Molecular genetic pathology (multidisciplinary)	56	2	3.6%	1.0%
Neurological surgery	1,515	1	0.1%	0.5%
- Endovascular surgical neuroradiology	1	0	0.0%	0.0%

TABLE C.7 Continued

Number of Active Part-Time Residents by Specialty and Subspecialty

Specialty	Total Residents	Number of Part-Time Residents	Percent of All Residents in Specialty	Percent of All Part-Time Residents
Neurology	3,062	4	0.1%	1.9%
- Brain injury medicine	1	0	0.0%	0.0%
- Clinical neurophysiology	163	0	0.0%	0.0%
- Epilepsy	126	0	0.0%	0.0%
- Endovascular surgical neuroradiology	2	0	0.0%	0.0%
- Neurodevelopmental disabilities	24	0	0.0%	0.0%
- Neuromuscular medicine	73	0	0.0%	0.0%
- Vascular neurology	128	0	0.0%	0.0%
Child neurology	401	0	0.0%	0.0%
Nuclear medicine	78	0	0.0%	0.0%
Obstetrics and gynecology	5,677	9	0.2%	4.3%
- Female pelvic medicine and reconstructive surgery	149	0	0.0%	0.0%
- Gynecologic oncology	210	0	0.0%	0.0%
- Maternal-fetal medicine	368	0	0.0%	0.0%
- Reproductive endocrinology and infertility	167	0	0.0%	0.0%
Ophthalmology	1,512	2	0.1%	1.0%
- Ophthalmic plastic and reconstructive surgery	3	0	0.0%	0.0%
Orthopaedic surgery	4,342	5	0.1%	2.4%
- Adult reconstructive orthopaedics	46	0	0.0%	0.0%
- Foot and ankle orthopaedics	16	0	0.0%	0.0%
- Hand surgery	154	0	0.0%	0.0%
- Musculoskeletal oncology	17	0	0.0%	0.0%
- Orthopaedic sports medicine	215	0	0.0%	0.0%
- Orthopaedic surgery of the spine	34	0	0.0%	0.0%
- Orthopaedic trauma	20	0	0.0%	0.0%
- Pediatric orthopaedics	37	0	0.0%	0.0%
Osteopathic neuromusculoskeletal medicine	53	2	3.8%	1.0%
Otolaryngology - head and neck surgery	1,689	0	0.0%	0.0%
- Neurotology	35	0	0.0%	0.0%
- Pediatric otolaryngology	36	0	0.0%	0.0%
Pathology-anatomic and clinical	2,324	4	0.2%	1.9%
- Blood banking/transfusion medicine	50	0	0.0%	0.0%
- Clinical informatics	16	0	0.0%	0.0%
- Chemical pathology	2	0	0.0%	0.0%
- Cytopathology	125	0	0.0%	0.0%
- Forensic pathology	54	0	0.0%	0.0%
- Hematopathology	135	0	0.0%	0.0%
- Medical microbiology	9	0	0.0%	0.0%
- Neuropathology	59	0	0.0%	0.0%
- Pediatric pathology	23	0	0.0%	0.0%
- Selective pathology	167	0	0.0%	0.0%
Pediatrics	9,323	7	0.1%	3.4%
- Adolescent medicine	94	0	0.0%	0.0%
- Child abuse pediatrics	47	0	0.0%	0.0%
- Clinical informatics	15	0	0.0%	0.0%
- Developmental-behavioral pediatrics	119	1	0.8%	0.5%
- Neonatal-perinatal medicine	772	0	0.0%	0.0%
- Pediatric cardiology	457	1	0.2%	0.5%
- Pediatric critical care medicine	557	2	0.4%	1.0%
- Pediatric emergency medicine	424	1	0.2%	0.5%
- Pediatric endocrinology	227	1	0.4%	0.5%
- Pediatric gastroenterology	322	0	0.0%	0.0%
- Pediatric hematology/oncology	485	0	0.0%	0.0%

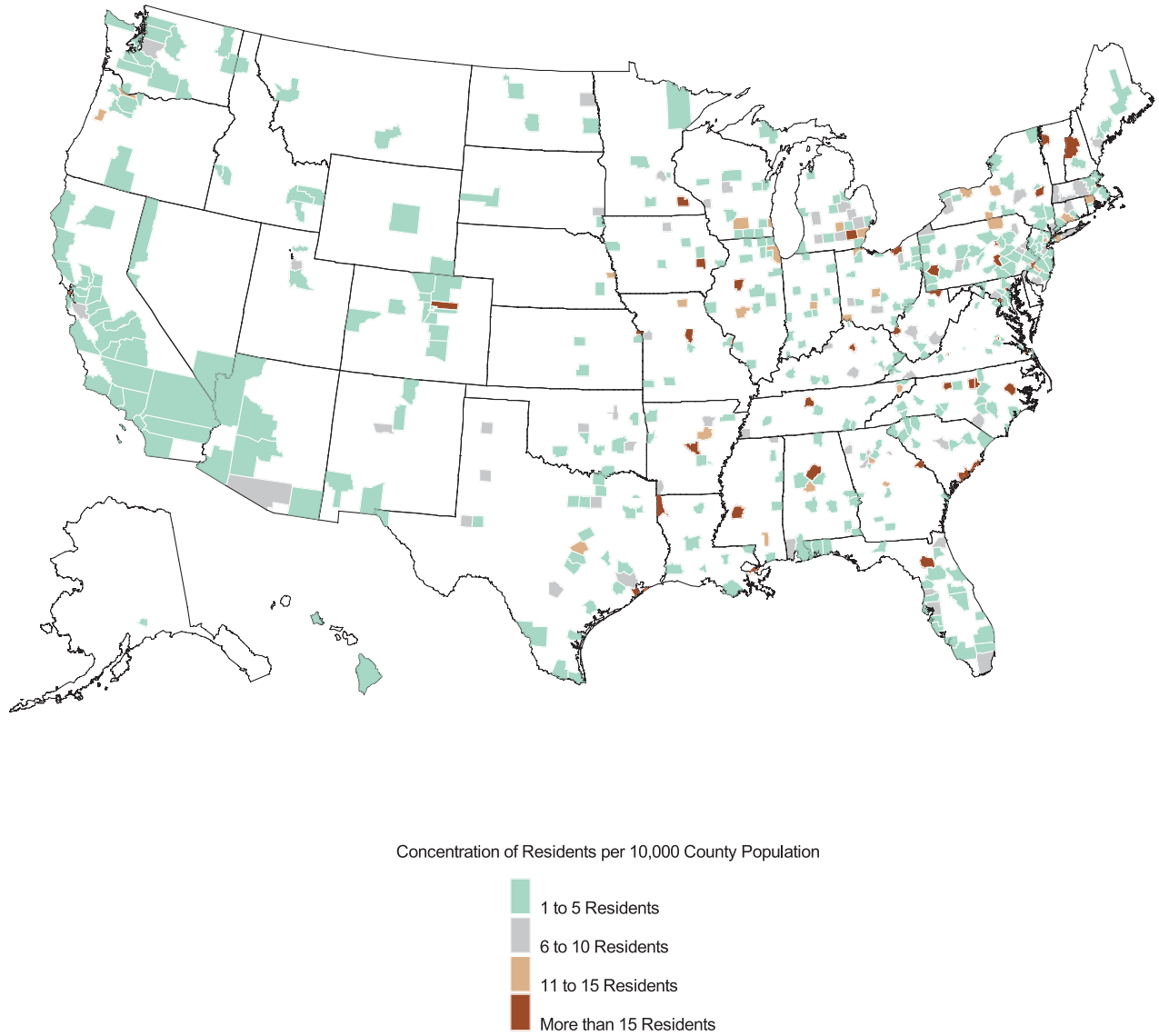
TABLE C.7 *Continued***Number of Active Part-Time Residents by Specialty and Subspecialty**

Specialty	Total Residents	Number of Part-Time Residents	Percent of All Residents in Specialty	Percent of All Part-Time Residents
- Pediatric infectious diseases	169	0	0.0%	0.0%
- Pediatric nephrology	110	1	0.9%	0.5%
- Pediatric pulmonology	168	1	0.6%	0.5%
- Pediatric rheumatology	90	0	0.0%	0.0%
- Pediatric sports medicine	26	1	3.8%	0.5%
- Pediatric transplant hepatology	10	0	0.0%	0.0%
- Pediatric hospital medicine	71	0	0.0%	0.0%
Physical medicine and rehabilitation	1,453	1	0.1%	0.5%
- Brain injury medicine	18	0	0.0%	0.0%
- Neuromuscular medicine	1	0	0.0%	0.0%
- Spinal cord injury medicine	21	0	0.0%	0.0%
- Pediatric rehabilitation	38	0	0.0%	0.0%
- Sports medicine	32	0	0.0%	0.0%
Plastic surgery	226	0	0.0%	0.0%
Plastic surgery - integrated	961	1	0.1%	0.5%
- Craniofacial surgery	5	0	0.0%	0.0%
- Hand surgery	23	0	0.0%	0.0%
Preventive medicine	347	0	0.0%	0.0%
- Medical toxicology	4	0	0.0%	0.0%
- Undersea and hyperbaric medicine	1	0	0.0%	0.0%
Psychiatry	6,618	14	0.2%	6.7%
- Addiction medicine (multidisciplinary)	79	2	2.5%	1.0%
- Addiction psychiatry	78	1	1.3%	0.5%
- Child and adolescent psychiatry	889	6	0.7%	2.9%
- Forensic psychiatry	80	0	0.0%	0.0%
- Geriatric psychiatry	42	0	0.0%	0.0%
- Consultation-liaison psychiatry	86	0	0.0%	0.0%
Radiation oncology	771	1	0.1%	0.5%
Radiology-diagnostic	4,551	4	0.1%	1.9%
- Abdominal radiology	49	0	0.0%	0.0%
- Endovascular surgical neuroradiology	5	0	0.0%	0.0%
- Musculoskeletal radiology	35	0	0.0%	0.0%
- Neuroradiology	280	0	0.0%	0.0%
- Nuclear radiology	12	0	0.0%	0.0%
- Pediatric radiology	58	0	0.0%	0.0%
- Vascular and interventional radiology	256	0	0.0%	0.0%
Interventional radiology - independent		0		0.0%
Interventional radiology - integrated	424	0	0.0%	0.0%
Surgery	8,809	9	0.1%	4.3%
- Complex general surgical oncology	115	1	0.9%	0.5%
- Hand surgery	8	0	0.0%	0.0%
- Pediatric surgery	85	0	0.0%	0.0%
- Surgical critical care	290	0	0.0%	0.0%
- Vascular surgery	244	0	0.0%	0.0%
Vascular surgery - integrated	309	2	0.6%	1.0%
Thoracic surgery	236	0	0.0%	0.0%
- Congenital cardiac surgery	8	0	0.0%	0.0%
Thoracic surgery - integrated	193	0	0.0%	0.0%
Urology	1,734	0	0.0%	0.0%
- Female pelvic medicine and reconstructive surgery	35	0	0.0%	0.0%
- Pediatric urology	20	0	0.0%	0.0%
Transitional year	1,597	3	0.2%	1.4%
Internal medicine/Pediatrics	1,511	2	0.1%	1.0%

Note: Pipeline specialties are highlighted.

FIGURE C.8

Geographic Distribution of Active Residents



Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020; SAS Enterprise Guide Software, Version 7.1.

TABLE C.9

Number of Active Residents and Active Resident Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Residents	Percent of All Residents	Residents per 100,000 Pop
OVERALL	-	331,433,217	144,988	100.0%	43.75
Alabama	AL	4,903,185	1,584	1.1%	32.31
Alaska	AK	731,545	37	0.0%	5.06
Arizona	AZ	7,278,717	1,999	1.4%	27.46
Arkansas	AR	3,017,804	978	0.7%	32.41
California	CA	39,512,223	13,188	9.1%	33.38
Colorado	CO	5,758,736	1,690	1.2%	29.35
Connecticut	CT	3,565,287	2,478	1.7%	69.50
Delaware	DE	973,764	369	0.3%	37.89
District of Columbia	DC	705,749	1,736	1.2%	245.98
Florida	FL	21,477,737	7,040	4.9%	32.78
Georgia	GA	10,617,423	2,900	2.0%	27.31
Hawaii	HI	1,415,872	467	0.3%	32.98
Idaho	ID	1,787,065	148	0.1%	8.28
Illinois	IL	12,671,821	6,830	4.7%	53.90
Indiana	IN	6,732,219	1,532	1.1%	22.76
Iowa	IA	3,155,070	1,022	0.7%	32.39
Kansas	KS	2,913,314	874	0.6%	30.00
Kentucky	KY	4,467,673	1,509	1.0%	33.78
Louisiana	LA	4,648,794	2,225	1.5%	47.86
Maine	ME	1,344,212	343	0.2%	25.52
Maryland	MD	6,045,680	3,337	2.3%	55.20
Massachusetts	MA	6,892,503	5,839	4.0%	84.72
Michigan	MI	9,986,857	7,326	5.1%	73.36
Minnesota	MN	5,639,632	2,394	1.7%	42.45
Mississippi	MS	2,976,149	827	0.6%	27.79
Missouri	MO	6,137,428	3,145	2.2%	51.24
Montana	MT	1,068,778	83	0.1%	7.77
Nebraska	NE	1,934,408	840	0.6%	43.42
Nevada	NV	3,080,156	795	0.5%	25.81
New Hampshire	NH	1,359,711	436	0.3%	32.07
New Jersey	NJ	8,882,190	3,857	2.7%	43.42
New Mexico	NM	2,096,829	671	0.5%	32.00
New York	NY	19,453,561	18,547	12.8%	95.34
North Carolina	NC	10,488,084	3,847	2.7%	36.68
North Dakota	ND	762,062	175	0.1%	22.96
Ohio	OH	11,689,100	7,261	5.0%	62.12
Oklahoma	OK	3,956,971	1,227	0.8%	31.01
Oregon	OR	4,217,737	1,060	0.7%	25.13
Pennsylvania	PA	12,801,989	9,224	6.4%	72.05
Puerto Rico	PR	3,193,694	960	0.7%	30.06
Rhode Island	RI	1,059,361	880	0.6%	83.07
South Carolina	SC	5,148,714	1,616	1.1%	31.39
South Dakota	SD	884,659	161	0.1%	18.20
Tennessee	TN	6,829,174	2,677	1.8%	39.20
Texas	TX	28,995,881	9,515	6.6%	32.82
Utah	UT	3,205,958	847	0.6%	26.42
Vermont	VT	623,989	325	0.2%	52.08
Virginia	VA	8,535,519	2,901	2.0%	33.99
Washington	WA	7,614,893	2,195	1.5%	28.83
West Virginia	WV	1,792,147	957	0.7%	53.40
Wisconsin	WI	5,822,434	2,071	1.4%	35.57
Wyoming	WY	578,759	43	0.0%	7.43

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE C.10

Number of Active Specialty Residents and Active Specialty Resident Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Specialty Residents	Percent of All Specialty Residents	Specialty Residents per 100,000 Pop
OVERALL	-	331,433,217	119,743	100.0%	36.13
Alabama	AL	4,903,185	1,319	1.1%	26.90
Alaska	AK	731,545	36	0.0%	4.92
Arizona	AZ	7,278,717	1,697	1.4%	23.31
Arkansas	AR	3,017,804	850	0.7%	28.17
California	CA	39,512,223	10,751	9.0%	27.21
Colorado	CO	5,758,736	1,368	1.1%	23.76
Connecticut	CT	3,565,287	2,021	1.7%	56.69
Delaware	DE	973,764	314	0.3%	32.25
District of Columbia	DC	705,749	1,371	1.1%	194.26
Florida	FL	21,477,737	5,993	5.0%	27.90
Georgia	GA	10,617,423	2,436	2.0%	22.94
Hawaii	HI	1,415,872	434	0.4%	30.65
Idaho	ID	1,787,065	146	0.1%	8.17
Illinois	IL	12,671,821	5,772	4.8%	45.55
Indiana	IN	6,732,219	1,298	1.1%	19.28
Iowa	IA	3,155,070	849	0.7%	26.91
Kansas	KS	2,913,314	768	0.6%	26.36
Kentucky	KY	4,467,673	1,255	1.0%	28.09
Louisiana	LA	4,648,794	1,911	1.6%	41.11
Maine	ME	1,344,212	313	0.3%	23.29
Maryland	MD	6,045,680	2,561	2.1%	42.36
Massachusetts	MA	6,892,503	4,432	3.7%	64.30
Michigan	MI	9,986,857	6,346	5.3%	63.54
Minnesota	MN	5,639,632	1,844	1.5%	32.70
Mississippi	MS	2,976,149	718	0.6%	24.13
Missouri	MO	6,137,428	2,507	2.1%	40.85
Montana	MT	1,068,778	83	0.1%	7.77
Nebraska	NE	1,934,408	702	0.6%	36.29
Nevada	NV	3,080,156	726	0.6%	23.57
New Hampshire	NH	1,359,711	348	0.3%	25.59
New Jersey	NJ	8,882,190	3,383	2.8%	38.09
New Mexico	NM	2,096,829	552	0.5%	26.33
New York	NY	19,453,561	15,288	12.8%	78.59
North Carolina	NC	10,488,084	3,085	2.6%	29.41
North Dakota	ND	762,062	172	0.1%	22.57
Ohio	OH	11,689,100	5,928	5.0%	50.71
Oklahoma	OK	3,956,971	1,087	0.9%	27.47
Oregon	OR	4,217,737	872	0.7%	20.67
Pennsylvania	PA	12,801,989	7,460	6.2%	58.27
Puerto Rico	PR	3,193,694	833	0.7%	26.08
Rhode Island	RI	1,059,361	701	0.6%	66.17
South Carolina	SC	5,148,714	1,383	1.2%	26.86
South Dakota	SD	884,659	150	0.1%	16.96
Tennessee	TN	6,829,174	2,144	1.8%	31.39
Texas	TX	28,995,881	7,690	6.4%	26.52
Utah	UT	3,205,958	652	0.5%	20.34
Vermont	VT	623,989	262	0.2%	41.99
Virginia	VA	8,535,519	2,497	2.1%	29.25
Washington	WA	7,614,893	1,831	1.5%	24.04
West Virginia	WV	1,792,147	855	0.7%	47.71
Wisconsin	WI	5,822,434	1,707	1.4%	29.32
Wyoming	WY	578,759	42	0.0%	7.26

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE C.11

Number of Active Subspecialty Residents and Active Subspecialty Resident Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Subspecialty Residents	Percent of All Subspecialty Residents	Subspecialty Residents per 100,000 Pop
OVERALL	-	331,433,217	25,245	100.0%	7.62
Alabama	AL	4,903,185	265	1.0%	5.40
Alaska	AK	731,545	1	0.0%	0.14
Arizona	AZ	7,278,717	302	1.2%	4.15
Arkansas	AR	3,017,804	128	0.5%	4.24
California	CA	39,512,223	2,437	9.7%	6.17
Colorado	CO	5,758,736	322	1.3%	5.59
Connecticut	CT	3,565,287	457	1.8%	12.82
Delaware	DE	973,764	55	0.2%	5.65
District of Columbia	DC	705,749	365	1.4%	51.72
Florida	FL	21,477,737	1,047	4.1%	4.87
Georgia	GA	10,617,423	464	1.8%	4.37
Hawaii	HI	1,415,872	33	0.1%	2.33
Idaho	ID	1,787,065	2	0.0%	0.11
Illinois	IL	12,671,821	1,058	4.2%	8.35
Indiana	IN	6,732,219	234	0.9%	3.48
Iowa	IA	3,155,070	173	0.7%	5.48
Kansas	KS	2,913,314	106	0.4%	3.64
Kentucky	KY	4,467,673	254	1.0%	5.69
Louisiana	LA	4,648,794	314	1.2%	6.75
Maine	ME	1,344,212	30	0.1%	2.23
Maryland	MD	6,045,680	776	3.1%	12.84
Massachusetts	MA	6,892,503	1,407	5.6%	20.41
Michigan	MI	9,986,857	980	3.9%	9.81
Minnesota	MN	5,639,632	550	2.2%	9.75
Mississippi	MS	2,976,149	109	0.4%	3.66
Missouri	MO	6,137,428	638	2.5%	10.40
Montana	MT	1,068,778	0	0.0%	0.00
Nebraska	NE	1,934,408	138	0.5%	7.13
Nevada	NV	3,080,156	69	0.3%	2.24
New Hampshire	NH	1,359,711	88	0.3%	6.47
New Jersey	NJ	8,882,190	474	1.9%	5.34
New Mexico	NM	2,096,829	119	0.5%	5.68
New York	NY	19,453,561	3,259	12.9%	16.75
North Carolina	NC	10,488,084	762	3.0%	7.27
North Dakota	ND	762,062	3	0.0%	0.39
Ohio	OH	11,689,100	1,333	5.3%	11.40
Oklahoma	OK	3,956,971	140	0.6%	3.54
Oregon	OR	4,217,737	188	0.7%	4.46
Pennsylvania	PA	12,801,989	1,764	7.0%	13.78
Puerto Rico	PR	3,193,694	127	0.5%	3.98
Rhode Island	RI	1,059,361	179	0.7%	16.90
South Carolina	SC	5,148,714	233	0.9%	4.53
South Dakota	SD	884,659	11	0.0%	1.24
Tennessee	TN	6,829,174	533	2.1%	7.80
Texas	TX	28,995,881	1,825	7.2%	6.29
Utah	UT	3,205,958	195	0.8%	6.08
Vermont	VT	623,989	63	0.2%	10.10
Virginia	VA	8,535,519	404	1.6%	4.73
Washington	WA	7,614,893	364	1.4%	4.78
West Virginia	WV	1,792,147	102	0.4%	5.69
Wisconsin	WI	5,822,434	364	1.4%	6.25
Wyoming	WY	578,759	1	0.0%	0.17

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE C.12

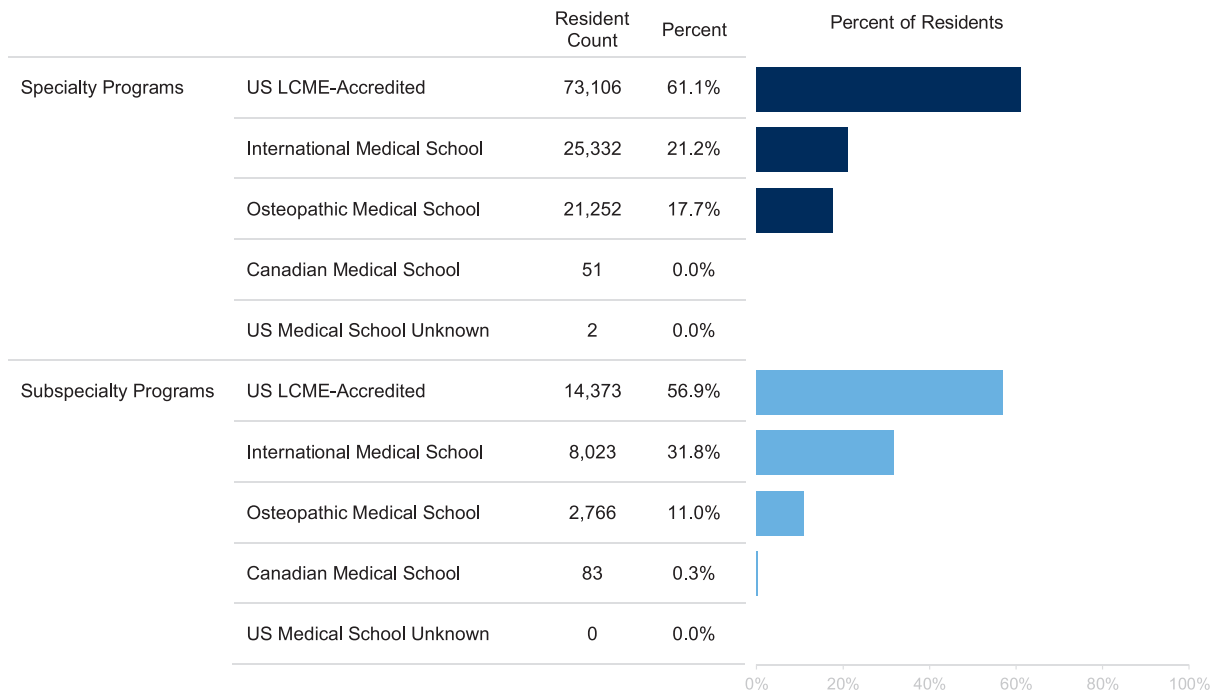
Number of Active Pipeline Residents and Active Pipeline Resident Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Pipeline Residents	Percent of All Pipeline Residents	Pipeline Residents per 100,000 Pop
OVERALL	-	331,433,217	117,496	100.0%	35.45
Alabama	AL	4,903,185	1,292	1.1%	26.35
Alaska	AK	731,545	36	0.0%	4.92
Arizona	AZ	7,278,717	1,670	1.4%	22.94
Arkansas	AR	3,017,804	838	0.7%	27.77
California	CA	39,512,223	10,580	9.0%	26.78
Colorado	CO	5,758,736	1,327	1.1%	23.04
Connecticut	CT	3,565,287	2,009	1.7%	56.35
Delaware	DE	973,764	305	0.3%	31.32
District of Columbia	DC	705,749	1,370	1.2%	194.12
Florida	FL	21,477,737	5,800	4.9%	27.00
Georgia	GA	10,617,423	2,336	2.0%	22.00
Hawaii	HI	1,415,872	422	0.4%	29.80
Idaho	ID	1,787,065	146	0.1%	8.17
Illinois	IL	12,671,821	5,675	4.8%	44.78
Indiana	IN	6,732,219	1,249	1.1%	18.55
Iowa	IA	3,155,070	836	0.7%	26.50
Kansas	KS	2,913,314	762	0.6%	26.16
Kentucky	KY	4,467,673	1,238	1.1%	27.71
Louisiana	LA	4,648,794	1,894	1.6%	40.74
Maine	ME	1,344,212	313	0.3%	23.29
Maryland	MD	6,045,680	2,497	2.1%	41.30
Massachusetts	MA	6,892,503	4,342	3.7%	63.00
Michigan	MI	9,986,857	6,151	5.2%	61.59
Minnesota	MN	5,639,632	1,803	1.5%	31.97
Mississippi	MS	2,976,149	701	0.6%	23.55
Missouri	MO	6,137,428	2,478	2.1%	40.38
Montana	MT	1,068,778	83	0.1%	7.77
Nebraska	NE	1,934,408	700	0.6%	36.19
Nevada	NV	3,080,156	700	0.6%	22.73
New Hampshire	NH	1,359,711	348	0.3%	25.59
New Jersey	NJ	8,882,190	3,323	2.8%	37.41
New Mexico	NM	2,096,829	546	0.5%	26.04
New York	NY	19,453,561	15,079	12.8%	77.51
North Carolina	NC	10,488,084	3,039	2.6%	28.98
North Dakota	ND	762,062	164	0.1%	21.52
Ohio	OH	11,689,100	5,827	5.0%	49.85
Oklahoma	OK	3,956,971	1,081	0.9%	27.32
Oregon	OR	4,217,737	868	0.7%	20.58
Pennsylvania	PA	12,801,989	7,320	6.2%	57.18
Puerto Rico	PR	3,193,694	793	0.7%	24.83
Rhode Island	RI	1,059,361	699	0.6%	65.98
South Carolina	SC	5,148,714	1,358	1.2%	26.38
South Dakota	SD	884,659	144	0.1%	16.28
Tennessee	TN	6,829,174	2,124	1.8%	31.10
Texas	TX	28,995,881	7,567	6.4%	26.10
Utah	UT	3,205,958	636	0.5%	19.84
Vermont	VT	623,989	262	0.2%	41.99
Virginia	VA	8,535,519	2,445	2.1%	28.65
Washington	WA	7,614,893	1,781	1.5%	23.39
West Virginia	WV	1,792,147	837	0.7%	46.70
Wisconsin	WI	5,822,434	1,660	1.4%	28.51
Wyoming	WY	578,759	42	0.0%	7.26

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

FIGURE C.13

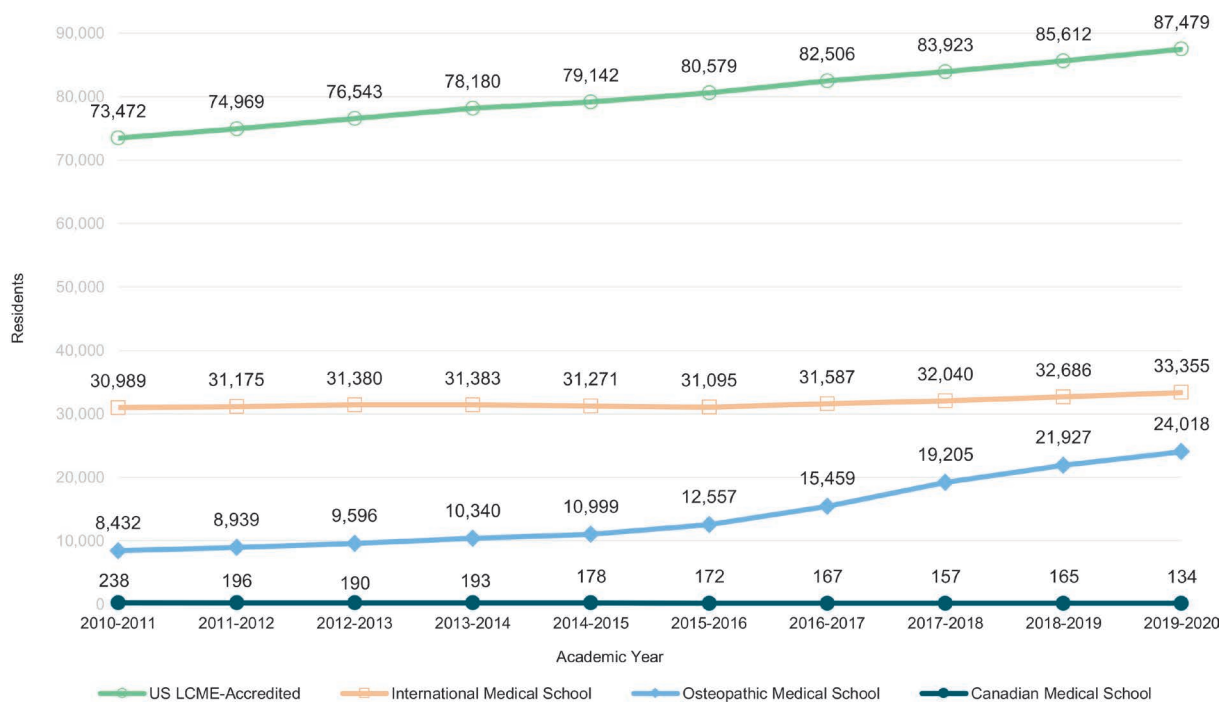
Number of Active Residents by Medical School Type



Notes: Total number of active residents in specialty programs = 119,743. Total number of active residents in subspecialty programs = 25,245.

FIGURE C.14

Number of Active Residents by Medical School Type and Academic Year, 2010-2011 to 2019-2020



Note: Not shown are those graduates for which the specific U.S. medical school is unknown. This number has been fewer than 10 per year for the past five years. Abbreviations: LCME, Liaison Committee on Medical Education.

TABLE C.15

Number of Active Residents by Specialty and Subspecialty and Medical School Type

Specialty	Total Residents	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
OVERALL	144,988	87,479	60.3%	33,355	23.0%	24,018	16.6%	134	0.1%	2	0.0%
TOTAL PIPELINE	117,496	71,642	61.0%	25,040	21.3%	20,765	17.7%	47	0.0%	2	0.0%
Allergy and immunology	308	215	69.8%	59	19.2%	33	10.7%	1	0.3%	0	0.0%
Anesthesiology	6,698	4,678	69.8%	892	13.3%	1,127	16.8%	1	0.0%	0	0.0%
- Adult cardiothoracic anesthesiology	220	164	74.5%	25	11.4%	30	13.6%	1	0.5%	0	0.0%
- Clinical informatics	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	191	136	71.2%	33	17.3%	22	11.5%	0	0.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	72	57	79.2%	10	13.9%	5	6.9%	0	0.0%	0	0.0%
- Obstetric anesthesiology	38	29	76.3%	7	18.4%	2	5.3%	0	0.0%	0	0.0%
- Pain medicine (multidisciplinary)	386	252	65.3%	70	18.1%	64	16.6%	0	0.0%	0	0.0%
- Pediatric anesthesiology	192	134	69.8%	39	20.3%	18	9.4%	1	0.5%	0	0.0%
Colon and rectal surgery	106	79	74.5%	21	19.8%	4	3.8%	2	1.9%	0	0.0%
Dermatology	1,594	1,359	85.3%	56	3.5%	177	11.1%	2	0.1%	0	0.0%
- Dermatopathology (multidisciplinary)	69	50	72.5%	14	20.3%	5	7.2%	0	0.0%	0	0.0%
- Micrographic surgery and dermatologic oncology	88	75	85.2%	3	3.4%	9	10.2%	1	1.1%	0	0.0%
Emergency medicine	8,293	5,615	67.7%	405	4.9%	2,270	27.4%	3	0.0%	0	0.0%
- Clinical informatics	10	9	90.0%	0	0.0%	1	10.0%	0	0.0%	0	0.0%
- Emergency medical services	87	62	71.3%	7	8.0%	18	20.7%	0	0.0%	0	0.0%
- Medical toxicology	72	60	83.3%	3	4.2%	8	11.1%	1	1.4%	0	0.0%
- Pediatric emergency medicine	134	77	57.5%	40	29.9%	17	12.7%	0	0.0%	0	0.0%
- Sports medicine	17	12	70.6%	4	23.5%	1	5.9%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	10	7	70.0%	2	20.0%	1	10.0%	0	0.0%	0	0.0%
Family medicine	13,725	5,698	41.5%	3,494	25.5%	4,530	33.0%	2	0.0%	1	0.0%
- Clinical informatics	10	8	80.0%	2	20.0%	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	38	14	36.8%	16	42.1%	8	21.1%	0	0.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	374	216	57.8%	106	28.3%	50	13.4%	2	0.5%	0	0.0%
- Sports medicine	261	119	45.6%	38	14.6%	104	39.8%	0	0.0%	0	0.0%
Internal medicine	29,243	12,992	44.4%	11,342	38.8%	4,899	16.8%	10	0.0%	0	0.0%
- Adult congenital heart disease	25	20	80.0%	5	20.0%	0	0.0%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	109	59	54.1%	38	34.9%	11	10.1%	1	0.9%	0	0.0%
- Cardiovascular disease	3,105	1,604	51.7%	1,161	37.4%	336	10.8%	4	0.1%	0	0.0%
- Clinical cardiac electrophysiology	255	130	51.0%	108	42.4%	15	5.9%	2	0.8%	0	0.0%
- Clinical informatics	36	22	61.1%	11	30.6%	2	5.6%	1	2.8%	0	0.0%
- Critical care medicine	264	85	32.2%	126	47.7%	51	19.3%	2	0.8%	0	0.0%
- Endocrinology, diabetes, and metabolism	675	269	39.9%	340	50.4%	65	9.6%	1	0.1%	0	0.0%
- Gastroenterology	1,792	1,037	57.9%	549	30.6%	203	11.3%	3	0.2%	0	0.0%
- Geriatric medicine	261	76	29.1%	156	59.8%	28	10.7%	1	0.4%	0	0.0%
- Hematology	17	14	82.4%	3	17.6%	0	0.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	1,843	1,066	57.8%	660	35.8%	116	6.3%	1	0.1%	0	0.0%
- Infectious disease	762	357	46.9%	305	40.0%	99	13.0%	1	0.1%	0	0.0%
- Interventional cardiology	350	129	36.9%	185	52.9%	35	10.0%	1	0.3%	0	0.0%
- Nephrology	828	200	24.2%	530	64.0%	98	11.8%	0	0.0%	0	0.0%
- Medical oncology	35	17	48.6%	16	45.7%	2	5.7%	0	0.0%	0	0.0%
- Pulmonary disease	73	5	6.8%	60	82.2%	8	11.0%	0	0.0%	0	0.0%
- Pulmonary disease and critical care medicine	1,999	984	49.2%	766	38.3%	248	12.4%	1	0.1%	0	0.0%
- Rheumatology	515	273	53.0%	170	33.0%	71	13.8%	1	0.2%	0	0.0%
- Sleep medicine (multidisciplinary)	182	63	34.6%	94	51.6%	24	13.2%	1	0.5%	0	0.0%
- Transplant hepatology	52	38	73.1%	13	25.0%	0	0.0%	1	1.9%	0	0.0%
Medical genetics and genomics	60	33	55.0%	23	38.3%	4	6.7%	0	0.0%	0	0.0%
- Medical biochemical genetics	16	11	68.8%	4	25.0%	1	6.3%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	56	27	48.2%	25	44.6%	3	5.4%	1	1.8%	0	0.0%
Neurological surgery	1,515	1,347	88.9%	104	6.9%	62	4.1%	2	0.1%	0	0.0%
- Endovascular surgical neuroradiology	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

TABLE C.15 Continued

Number of Active Residents by Specialty and Subspecialty and Medical School Type											
Specialty	Total Residents	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
Neurology	3,062	1,665	54.4%	972	31.7%	423	13.8%	2	0.1%	0	0.0%
- Brain injury medicine	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Clinical neurophysiology	163	84	51.5%	61	37.4%	16	9.8%	2	1.2%	0	0.0%
- Epilepsy	126	70	55.6%	41	32.5%	14	11.1%	1	0.8%	0	0.0%
- Endovascular surgical neuroradiology	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	24	20	83.3%	2	8.3%	1	4.2%	1	4.2%	0	0.0%
- Neuromuscular medicine	73	47	64.4%	22	30.1%	4	5.5%	0	0.0%	0	0.0%
- Vascular neurology	128	58	45.3%	58	45.3%	11	8.6%	1	0.8%	0	0.0%
Child neurology	401	290	72.3%	78	19.5%	33	8.2%	0	0.0%	0	0.0%
Nuclear medicine	78	20	25.6%	55	70.5%	3	3.8%	0	0.0%	0	0.0%
Obstetrics and gynecology	5,677	4,303	75.8%	445	7.8%	927	16.3%	1	0.0%	1	0.0%
- Female pelvic medicine and reconstructive surgery	149	127	85.2%	11	7.4%	11	7.4%	0	0.0%	0	0.0%
- Gynecologic oncology	210	173	82.4%	11	5.2%	24	11.4%	2	1.0%	0	0.0%
- Maternal-fetal medicine	368	292	79.3%	48	13.0%	28	7.6%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	167	140	83.8%	18	10.8%	9	5.4%	0	0.0%	0	0.0%
Ophthalmology	1,512	1,372	90.7%	61	4.0%	77	5.1%	2	0.1%	0	0.0%
- Ophthalmic plastic and reconstructive surgery	3	2	66.7%	1	33.3%	0	0.0%	0	0.0%	0	0.0%
Orthopaedic surgery	4,342	3,696	85.1%	66	1.5%	580	13.4%	0	0.0%	0	0.0%
- Adult reconstructive orthopaedics	46	34	73.9%	5	10.9%	4	8.7%	3	6.5%	0	0.0%
- Foot and ankle orthopaedics	16	14	87.5%	2	12.5%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	154	145	94.2%	1	0.6%	7	4.5%	1	0.6%	0	0.0%
- Musculoskeletal oncology	17	16	94.1%	0	0.0%	0	0.0%	1	5.9%	0	0.0%
- Orthopaedic sports medicine	215	170	79.1%	14	6.5%	24	11.2%	7	3.3%	0	0.0%
- Orthopaedic surgery of the spine	34	28	82.4%	1	2.9%	5	14.7%	0	0.0%	0	0.0%
- Orthopaedic trauma	20	13	65.0%	3	15.0%	1	5.0%	3	15.0%	0	0.0%
- Pediatric orthopaedics	37	26	70.3%	5	13.5%	4	10.8%	2	5.4%	0	0.0%
Osteopathic neuromusculoskeletal medicine	53	4	7.5%	0	0.0%	49	92.5%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	1,689	1,544	91.4%	33	2.0%	112	6.6%	0	0.0%	0	0.0%
- Neurotology	35	31	88.6%	4	11.4%	0	0.0%	0	0.0%	0	0.0%
- Pediatric otolaryngology	36	31	86.1%	1	2.8%	2	5.6%	2	5.6%	0	0.0%
Pathology-anatomic and clinical	2,324	1,005	43.2%	1,100	47.3%	216	9.3%	3	0.1%	0	0.0%
- Blood banking/transfusion medicine	50	25	50.0%	21	42.0%	4	8.0%	0	0.0%	0	0.0%
- Clinical informatics	16	6	37.5%	10	62.5%	0	0.0%	0	0.0%	0	0.0%
- Chemical pathology	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
- Cytopathology	125	39	31.2%	77	61.6%	9	7.2%	0	0.0%	0	0.0%
- Forensic pathology	54	27	50.0%	15	27.8%	12	22.2%	0	0.0%	0	0.0%
- Hematopathology	135	62	45.9%	61	45.2%	12	8.9%	0	0.0%	0	0.0%
- Medical microbiology	9	7	77.8%	2	22.2%	0	0.0%	0	0.0%	0	0.0%
- Neuropathology	59	34	57.6%	15	25.4%	8	13.6%	2	3.4%	0	0.0%
- Pediatric pathology	23	7	30.4%	12	52.2%	3	13.0%	1	4.3%	0	0.0%
- Selective pathology	167	69	41.3%	90	53.9%	7	4.2%	1	0.6%	0	0.0%
Pediatrics	9,323	5,954	63.9%	1,913	20.5%	1,452	15.6%	4	0.0%	0	0.0%
- Adolescent medicine	94	69	73.4%	12	12.8%	13	13.8%	0	0.0%	0	0.0%
- Child abuse pediatrics	47	32	68.1%	7	14.9%	8	17.0%	0	0.0%	0	0.0%
- Clinical informatics	15	13	86.7%	1	6.7%	1	6.7%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	119	71	59.7%	33	27.7%	15	12.6%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	772	458	59.3%	218	28.2%	95	12.3%	1	0.1%	0	0.0%
- Pediatric cardiology	457	333	72.9%	91	19.9%	30	6.6%	3	0.7%	0	0.0%
- Pediatric critical care medicine	557	372	66.8%	140	25.1%	45	8.1%	0	0.0%	0	0.0%
- Pediatric emergency medicine	424	310	73.1%	67	15.8%	47	11.1%	0	0.0%	0	0.0%
- Pediatric endocrinology	227	123	54.2%	84	37.0%	20	8.8%	0	0.0%	0	0.0%
- Pediatric gastroenterology	322	207	64.3%	85	26.4%	30	9.3%	0	0.0%	0	0.0%
- Pediatric hematology/oncology	485	329	67.8%	104	21.4%	51	10.5%	1	0.2%	0	0.0%

TABLE C.15 Continued

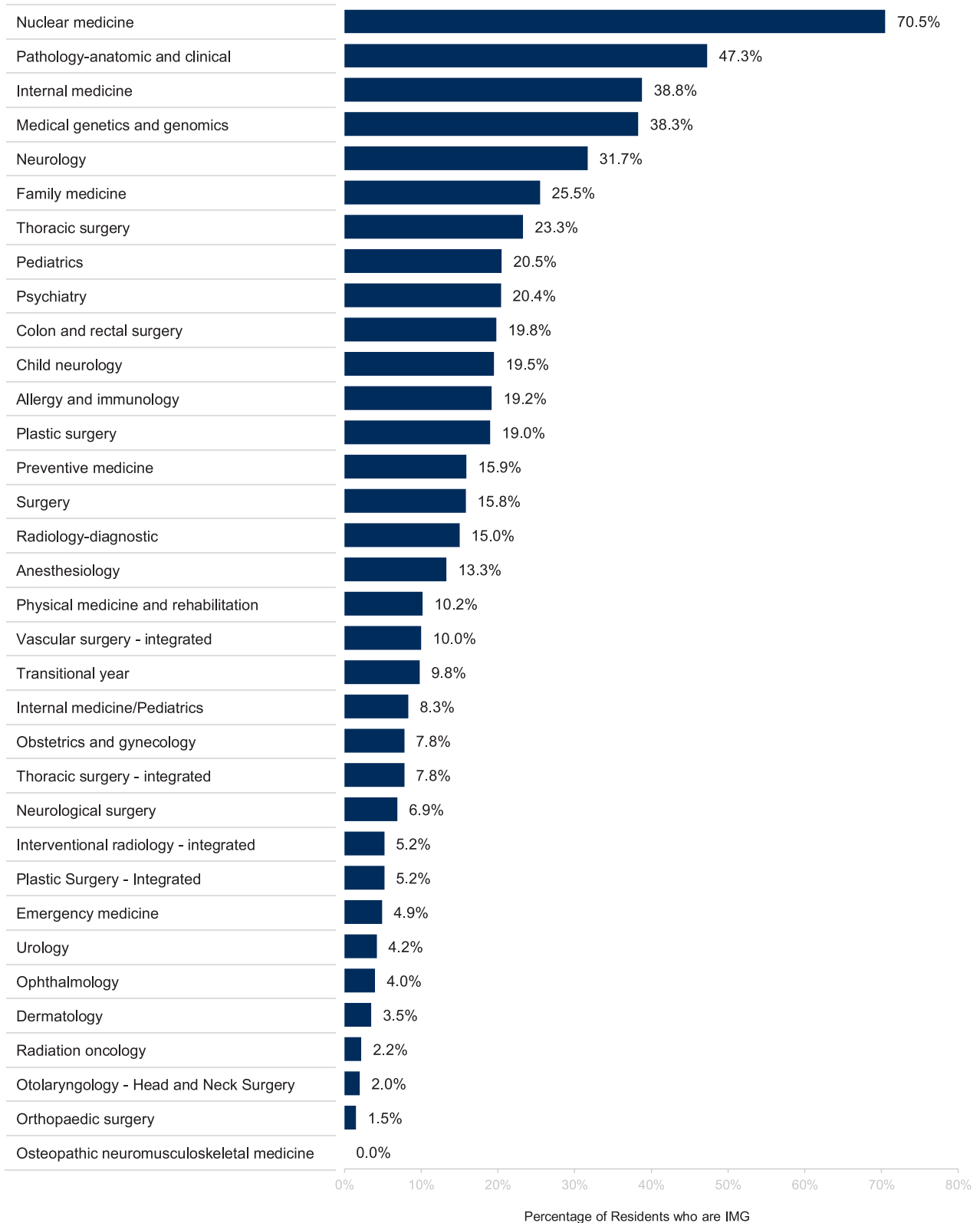
Number of Active Residents by Specialty and Subspecialty and Medical School Type

Specialty	Total Residents	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
- Pediatric infectious diseases	169	103	60.9%	48	28.4%	18	10.7%	0	0.0%	0	0.0%
- Pediatric nephrology	110	70	63.6%	32	29.1%	8	7.3%	0	0.0%	0	0.0%
- Pediatric pulmonology	168	83	49.4%	66	39.3%	19	11.3%	0	0.0%	0	0.0%
- Pediatric rheumatology	90	61	67.8%	19	21.1%	10	11.1%	0	0.0%	0	0.0%
- Pediatric sports medicine	26	15	57.7%	6	23.1%	5	19.2%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	10	5	50.0%	5	50.0%	0	0.0%	0	0.0%	0	0.0%
- Pediatric hospital medicine	71	61	85.9%	5	7.0%	5	7.0%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	1,453	834	57.4%	148	10.2%	471	32.4%	0	0.0%	0	0.0%
- Brain injury medicine	18	8	44.4%	4	22.2%	6	33.3%	0	0.0%	0	0.0%
- Neuromuscular medicine	1	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
- Spinal cord injury medicine	21	10	47.6%	2	9.5%	9	42.9%	0	0.0%	0	0.0%
- Pediatric rehabilitation	38	23	60.5%	2	5.3%	13	34.2%	0	0.0%	0	0.0%
- Sports medicine	32	17	53.1%	4	12.5%	11	34.4%	0	0.0%	0	0.0%
Plastic surgery	226	158	69.9%	43	19.0%	25	11.1%	0	0.0%	0	0.0%
Plastic surgery - integrated	961	903	94.0%	50	5.2%	8	0.8%	0	0.0%	0	0.0%
- Craniofacial surgery	5	5	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	23	20	87.0%	0	0.0%	0	0.0%	3	13.0%	0	0.0%
Preventive medicine	347	228	65.7%	55	15.9%	61	17.6%	3	0.9%	0	0.0%
- Medical toxicology	4	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Psychiatry	6,618	4,074	61.6%	1,347	20.4%	1,195	18.1%	2	0.0%	0	0.0%
- Addiction medicine (multidisciplinary)	79	52	65.8%	15	19.0%	10	12.7%	2	2.5%	0	0.0%
- Addiction psychiatry	78	45	57.7%	30	38.5%	3	3.8%	0	0.0%	0	0.0%
- Child and adolescent psychiatry	889	490	55.1%	255	28.7%	142	16.0%	2	0.2%	0	0.0%
- Forensic psychiatry	80	58	72.5%	16	20.0%	6	7.5%	0	0.0%	0	0.0%
- Geriatric psychiatry	42	13	31.0%	23	54.8%	6	14.3%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	86	56	65.1%	25	29.1%	4	4.7%	1	1.2%	0	0.0%
Radiation oncology	771	741	96.1%	17	2.2%	13	1.7%	0	0.0%	0	0.0%
Radiology-diagnostic	4,551	3,287	72.2%	683	15.0%	580	12.7%	1	0.0%	0	0.0%
- Abdominal radiology	49	20	40.8%	22	44.9%	5	10.2%	2	4.1%	0	0.0%
- Endovascular surgical neuroradiology	5	4	80.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%
- Musculoskeletal radiology	35	29	82.9%	4	11.4%	2	5.7%	0	0.0%	0	0.0%
- Neuroradiology	280	204	72.9%	51	18.2%	20	7.1%	5	1.8%	0	0.0%
- Nuclear radiology	12	3	25.0%	8	66.7%	1	8.3%	0	0.0%	0	0.0%
- Pediatric radiology	58	26	44.8%	22	37.9%	10	17.2%	0	0.0%	0	0.0%
- Vascular and interventional radiology	256	191	74.6%	44	17.2%	21	8.2%	0	0.0%	0	0.0%
Interventional radiology - independent	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	424	373	88.0%	22	5.2%	29	6.8%	0	0.0%	0	0.0%
Surgery	8,809	6,229	70.7%	1,393	15.8%	1,179	13.4%	8	0.1%	0	0.0%
- Complex general surgical oncology	115	90	78.3%	22	19.1%	2	1.7%	1	0.9%	0	0.0%
- Hand surgery	8	5	62.5%	1	12.5%	2	25.0%	0	0.0%	0	0.0%
- Pediatric surgery	85	79	92.9%	4	4.7%	2	2.4%	0	0.0%	0	0.0%
- Surgical critical care	290	212	73.1%	33	11.4%	44	15.2%	1	0.3%	0	0.0%
- Vascular surgery	244	170	69.7%	48	19.7%	24	9.8%	2	0.8%	0	0.0%
Vascular surgery - integrated	309	265	85.8%	31	10.0%	13	4.2%	0	0.0%	0	0.0%
Thoracic surgery	236	169	71.6%	55	23.3%	11	4.7%	1	0.4%	0	0.0%
- Congenital cardiac surgery	8	6	75.0%	2	25.0%	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery - integrated	193	172	89.1%	15	7.8%	6	3.1%	0	0.0%	0	0.0%
Urology	1,734	1,547	89.2%	72	4.2%	115	6.6%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	35	32	91.4%	2	5.7%	1	2.9%	0	0.0%	0	0.0%
- Pediatric urology	20	17	85.0%	1	5.0%	2	10.0%	0	0.0%	0	0.0%
Transitional year	1,597	1,001	62.7%	157	9.8%	439	27.5%	0	0.0%	0	0.0%
Internal medicine/Pediatrics	1,511	1,256	83.1%	125	8.3%	129	8.5%	1	0.1%	0	0.0%

Note: Pipeline specialties are highlighted.
Abbreviations: LCME, Liaison Committee on Medical Education.

FIGURE C.16

Specialties Organized by Largest Percentages of Active Residents who are International Medical Graduates



Abbreviations: IMG, international medical school graduates.

TABLE C.17

Number of Active Residents by Medical School Type and State

State Name	State Abbreviation	Total Residents	Medical School Type				
			US LCME-Accredited Medical School	International Medical School	Osteopathic Medical School	Canadian Medical School	US Medical School Unknown
OVERALL	-	144,988	87,479	33,355	24,018	134	2
Alabama	AL	1,584	1,071	325	187	1	0
Alaska	AK	37	27	1	9	0	0
Arizona	AZ	1,999	1,185	366	447	1	0
Arkansas	AR	978	534	322	122	0	0
California	CA	13,188	10,182	1,454	1,536	16	0
Colorado	CO	1,690	1,325	70	295	0	0
Connecticut	CT	2,478	1,355	884	238	1	0
Delaware	DE	369	190	62	117	0	0
District of Columbia	DC	1,736	1,134	493	109	0	0
Florida	FL	7,040	3,276	2,199	1,562	3	0
Georgia	GA	2,900	1,810	719	370	1	0
Hawaii	HI	467	297	83	85	2	0
Idaho	ID	148	82	21	45	0	0
Illinois	IL	6,830	4,052	1,664	1,107	7	0
Indiana	IN	1,532	983	235	314	0	0
Iowa	IA	1,022	595	220	207	0	0
Kansas	KS	874	549	158	167	0	0
Kentucky	KY	1,509	884	286	339	0	0
Louisiana	LA	2,225	1,418	648	157	2	0
Maine	ME	343	201	42	99	1	0
Maryland	MD	3,337	2,369	697	264	7	0
Massachusetts	MA	5,839	4,258	1,216	339	26	0
Michigan	MI	7,326	3,070	2,007	2,246	3	0
Minnesota	MN	2,394	1,788	408	195	3	0
Mississippi	MS	827	448	163	216	0	0
Missouri	MO	3,145	2,055	613	475	2	0
Montana	MT	83	46	11	26	0	0
Nebraska	NE	840	444	252	144	0	0
Nevada	NV	795	301	204	290	0	0
New Hampshire	NH	436	318	83	35	0	0
New Jersey	NJ	3,857	1,103	1,687	1,066	1	0
New Mexico	NM	671	406	143	122	0	0
New York	NY	18,547	9,261	7,015	2,246	23	2
North Carolina	NC	3,847	2,875	384	585	3	0
North Dakota	ND	175	83	82	10	0	0
Ohio	OH	7,261	3,908	1,551	1,797	5	0
Oklahoma	OK	1,227	484	187	554	2	0
Oregon	OR	1,060	789	69	201	1	0
Pennsylvania	PA	9,224	5,146	1,982	2,090	6	0
Puerto Rico	PR	960	605	355	0	0	0
Rhode Island	RI	880	636	159	83	2	0
South Carolina	SC	1,616	1,145	144	327	0	0
South Dakota	SD	161	79	42	40	0	0
Tennessee	TN	2,677	1,960	442	272	3	0
Texas	TX	9,515	6,320	1,865	1,326	4	0
Utah	UT	847	730	50	66	1	0
Vermont	VT	325	259	42	24	0	0
Virginia	VA	2,901	1,822	483	595	1	0
Washington	WA	2,195	1,746	113	331	5	0
West Virginia	WV	957	435	303	219	0	0
Wisconsin	WI	2,071	1,435	340	295	1	0
Wyoming	WY	43	5	11	27	0	0

Abbreviations: LCME, Liaison Committee on Medical Education.

TABLE C.18

Mean Age of Year 1 Residents by Specialty and Subspecialty and Medical School Type

Specialty	OVERALL Age (Avg)	Medical School Type				
		US LCME - Accredited Medical School	International Medical School	Osteopathic Medical School	Canadian Medical School	US Medical School Unknown
OVERALL	30.7	30.2	32.4	30.4	33.8	31.0
TOTAL PIPELINE	29.8	29.2	31.3	29.8	31.6	31.0
Allergy and immunology	32.2	31.7	33.9	33.1		
Anesthesiology	29.6	29.1	32.0	30.0		
- Adult cardiothoracic anesthesiology	33.2	33.1	35.0	32.6	32.0	
- Clinical informatics	32.0	32.0				
- Critical care medicine	33.9	33.3	35.6	34.6		
- Regional anesthesiology and acute pain medicine	33.3	32.6	37.4	33.8		
- Obstetric anesthesiology	33.2	33.0	34.7	31.5		
- Pain medicine (multidisciplinary)	33.8	33.3	35.3	34.4		
- Pediatric anesthesiology	33.3	32.9	34.4	33.8	32.0	
Colon and rectal surgery	34.3	34.2	34.2	36.5	35.0	
Dermatology	30.4	30.1	33.5	31.4	35.5	
- Dermatopathology (multidisciplinary)	34.2	33.4	36.2	36.4		
- Micrographic surgery and dermatologic oncology	33.8	33.5	36.3	35.0	36.0	
Emergency medicine	29.6	29.3	31.7	29.9	32.0	
- Clinical informatics	35.5	35.5				
- Emergency medical services	33.4	32.9	34.7	34.6		
- Medical toxicology	32.4	32.5	33.0	31.8		
- Pediatric emergency medicine	31.7	31.2	32.4	32.1		
- Sports medicine	32.1	32.4	31.3	32.0		
- Undersea and hyperbaric medicine	37.6	38.4	36.5	34.0		
Family medicine	30.6	29.8	32.4	30.1	29.0	31.0
- Clinical informatics	36.5	36.5				
- Geriatric medicine	33.4	31.6	35.4	32.6		
- Hospice and palliative medicine (multidisciplinary)	35.5	35.7	35.1	35.0	43.0	
- Sports medicine	32.6	32.1	33.3	33.0		
Internal medicine	29.6	28.9	30.6	29.5	27.5	
- Adult congenital heart disease	35.4	35.5	34.5			
- Advanced heart failure and transplant cardiology	34.8	34.4	35.5	34.6	33.0	
- Cardiovascular disease	32.2	31.7	32.8	32.4	33.3	
- Clinical cardiac electrophysiology	35.6	35.1	36.3	37.6	30.0	
- Clinical informatics	33.6	32.6	34.2	37.0		
- Critical care medicine	34.0	34.0	34.6	32.2	36.0	
- Endocrinology, diabetes, and metabolism	32.9	31.9	33.7	32.1	49.0	
- Gastroenterology	32.0	31.4	33.2	31.9	32.0	
- Geriatric medicine	34.2	32.6	35.0	33.9	41.0	
- Hematology	32.4	32.0	36.0			
- Hematology and medical oncology	32.5	32.1	33.4	32.0		
- Infectious disease	33.2	32.4	34.5	32.5	35.0	
- Interventional cardiology	35.4	34.5	36.1	35.0	32.0	
- Nephrology	33.8	32.1	34.6	32.8		
- Medical oncology	33.6	32.8	34.1	36.0		
- Pulmonary disease	33.2	34.0	33.1	33.8		
- Pulmonary disease and critical care medicine	32.2	31.9	32.5	32.5		
- Rheumatology	32.3	31.7	33.1	32.2		
- Sleep medicine (multidisciplinary)	35.5	35.6	35.6	34.2	56.0	
- Transplant hepatology	34.4	34.0	35.6		33.0	
Medical genetics and genomics	34.7	33.8	35.9	35.0		
- Medical biochemical genetics	34.0	34.1	34.3	32.0		
- Molecular genetic pathology (multidisciplinary)	38.2	36.7	40.4	33.3	39.0	
Neurological surgery	28.8	28.6	34.0	29.0		
- Endovascular surgical neuroradiology	41.0	41.0				

TABLE C.18 <i>Continued</i>						
Mean Age of Year 1 Residents by Specialty and Subspecialty and Medical School Type						
Specialty	OVERALL Age (Avg)	Medical School Type				
		US LCME - Accredited Medical School	International Medical School	Osteopathic Medical School	Canadian Medical School	US Medical School Unknown
Neurology	30.2	29.8	31.3	29.8		
- Brain injury medicine	34.0	34.0				
- Clinical neurophysiology	34.0	33.1	35.5	32.9	38.0	
- Epilepsy	34.1	34.1	34.3	33.9	33.0	
- Endovascular surgical neuroradiology	33.0		33.0			
- Neurodevelopmental disabilities	31.6	31.3			33.0	
- Neuromuscular medicine	34.0	33.1	36.1	32.5		
- Vascular neurology	34.1	33.5	34.9	33.3	30.0	
Child neurology	31.0	30.7	32.2	31.4		
Nuclear medicine	35.2	33.3	35.8	44.0		
Obstetrics and gynecology	28.7	28.4	30.4	29.1		
- Female pelvic medicine and reconstructive surgery	32.7	32.7	33.0	33.0		
- Gynecologic oncology	32.7	32.7		32.5	36.0	
- Maternal-fetal medicine	32.6	32.5	34.5	31.5		
- Reproductive endocrinology and infertility	32.6	32.2	35.4	36.0		
Ophthalmology	29.6	29.3	35.0	30.3	33.0	
- Ophthalmic plastic and reconstructive surgery	36.0		36.0			
Orthopaedic surgery	28.5	28.4	31.9	29.3		
- Adult reconstructive orthopaedics	34.1	33.9	37.0	34.0	32.0	
- Foot and ankle orthopaedics	33.4	33.2	35.0			
- Hand surgery	33.8	33.8	31.0	33.4	34.0	
- Musculoskeletal oncology	32.7	32.8			32.0	
- Orthopaedic sports medicine	33.8	33.5	37.8	33.7	33.1	
- Orthopaedic surgery of the spine	33.8	33.6	34.0	34.6		
- Orthopaedic trauma	33.8	33.2	34.0	43.0	33.0	
- Pediatric orthopaedics	34.1	33.2	38.8	34.8	33.0	
Osteopathic neuromusculoskeletal medicine	37.3	28.0		56.0		
Otolaryngology - head and neck surgery	28.4	28.3	30.7	28.9		
- Neurotology	33.3	33.1	35.5			
- Pediatric otolaryngology	33.9	34.1	31.0	34.5	31.5	
Pathology-anatomic and clinical	32.4	31.0	33.9	31.0	30.0	
- Blood banking/transfusion medicine	36.8	35.4	39.1	33.5		
- Clinical informatics	34.3	31.3	35.4			
- Chemical pathology	38.5	40.0	37.0			
- Cytopathology	37.3	35.3	38.6	34.4		
- Forensic pathology	33.8	33.0	35.0	34.3		
- Hematopathology	36.4	34.4	38.2	38.1		
- Medical microbiology	33.6	34.7	29.5			
- Neuropathology	34.9	33.8	38.0	35.4	30.0	
- Pediatric pathology	37.4	33.7	39.2	37.0	43.0	
- Selective pathology	36.5	34.4	38.3	33.6	34.0	
Pediatrics	29.0	28.6	30.2	28.9	32.5	
- Adolescent medicine	32.2	32.3	31.8	32.0		
- Child abuse pediatrics	31.0	31.0	31.0	31.0		
- Clinical informatics	33.6	34.2		30.0		
- Developmental-behavioral pediatrics	33.3	33.6	33.5	31.7		
- Neonatal-perinatal medicine	32.0	31.5	33.2	31.9	28.0	
- Pediatric cardiology	31.6	31.4	31.8	32.5		
- Pediatric critical care medicine	32.1	31.7	33.4	31.9		
- Pediatric emergency medicine	32.2	32.0	32.9	32.7		
- Pediatric endocrinology	32.8	31.5	35.3	30.7		
- Pediatric gastroenterology	31.7	31.1	33.2	31.0		
- Pediatric hematology/oncology	31.9	32.0	32.1	31.0		

TABLE C.18 *Continued***Mean Age of Year 1 Residents by Specialty and Subspecialty and Medical School Type**

Specialty	OVERALL Age (Avg)	Medical School Type				
		US LCME - Accredited Medical School	International Medical School	Osteopathic Medical School	Canadian Medical School	US Medical School Unknown
- Pediatric infectious diseases	33.3	32.7	35.1	33.0		
- Pediatric nephrology	31.9	31.3	33.4	32.0		
- Pediatric pulmonology	32.9	32.1	34.8	31.8		
- Pediatric rheumatology	33.0	32.4	35.1	31.7		
- Pediatric sports medicine	33.3	32.9	34.0	34.0		
- Pediatric transplant hepatology	34.6	35.8	33.4			
- Pediatric hospital medicine	31.0	30.9		32.3		
Physical medicine and rehabilitation	30.5	30.2	32.9	30.5		
- Brain injury medicine	32.1	31.3	32.5	32.8		
- Neuromuscular medicine	32.0			32.0		
- Spinal cord injury medicine	34.9	34.1	34.5	35.9		
- Pediatric rehabilitation	32.6	32.8		32.2		
- Sports medicine	33.4	33.2	34.5	33.4		
Plastic surgery	34.1	34.0	34.3	33.9		
Plastic surgery - integrated	28.6	28.5	32.0	28.3		
- Craniofacial surgery	34.4	34.4				
- Hand surgery	34.3	34.6			32.0	
Preventive medicine	36.8	36.7	39.6	34.8	32.0	
- Medical toxicology	31.0	31.0				
- Undersea and hyperbaric medicine	33.0	33.0				
Psychiatry	30.4	29.9	33.0	29.7	29.0	
- Addiction medicine (multidisciplinary)	38.7	38.9	39.0	38.7	29.5	
- Addiction psychiatry	35.3	33.4	37.0	47.0		
- Child and adolescent psychiatry	33.2	32.6	34.6	32.9	30.0	
- Forensic psychiatry	34.2	33.9	35.2	35.3		
- Geriatric psychiatry	36.0	33.4	38.7	31.8		
- Consultation-liaison psychiatry	33.6	32.3	36.0	36.3	32.0	
Radiation oncology	30.6	30.5	35.7	32.0		
Radiology-diagnostic	30.4	29.9	32.2	31.3		
- Abdominal radiology	34.8	33.7	35.5	37.2	34.0	
- Endovascular surgical neuroradiology	34.8	33.8	39.0			
- Musculoskeletal radiology	33.5	33.4	32.5	38.0		
- Neuroradiology	34.6	34.1	36.1	35.0	36.4	
- Nuclear radiology	34.5	34.7	34.4	35.0		
- Pediatric radiology	35.8	35.3	36.6	35.2		
- Vascular and interventional radiology	34.3	34.1	35.1	35.0		
Interventional radiology - independent						
Interventional radiology - integrated	29.7	29.5	33.2	29.3		
Surgery	29.3	28.9	30.8	29.6	35.3	
- Complex general surgical oncology	34.9	35.1	34.1	35.0		
- Hand surgery	35.9	37.6	32.0	33.5		
- Pediatric surgery	36.0	35.6	40.7	37.0		
- Surgical critical care	35.3	35.4	36.0	34.4	33.0	
- Vascular surgery	34.5	34.5	35.0	33.9		
Vascular surgery - integrated	28.7	28.7	29.3	28.6		
Thoracic surgery	34.5	34.5	34.4	35.6		
- Congenital cardiac surgery	35.8	35.8	35.5			
Thoracic surgery - integrated	28.6	28.6	28.5			
Urology	28.5	28.3	30.7	29.9		
- Female pelvic medicine and reconstructive surgery	34.2	33.6	36.0	37.0		
- Pediatric urology	34.0	33.8	36.0	34.5		
Transitional year	29.3	28.6	32.3	29.8		
Internal medicine/Pediatrics	28.8	28.5	30.8	30.2		

Note: Pipeline specialties are highlighted.

Abbreviations: LCME, Liaison Committee on Medical Education.

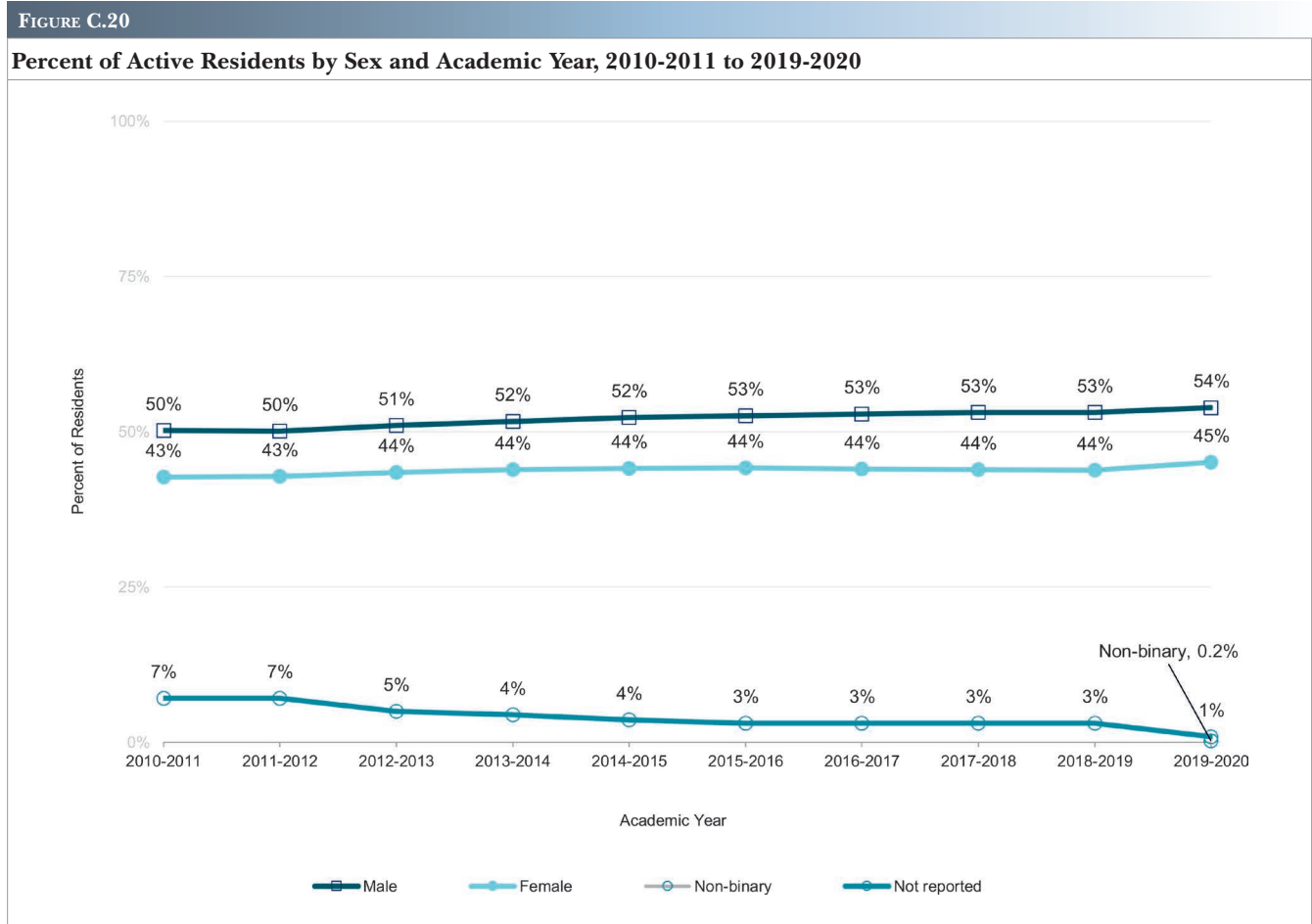
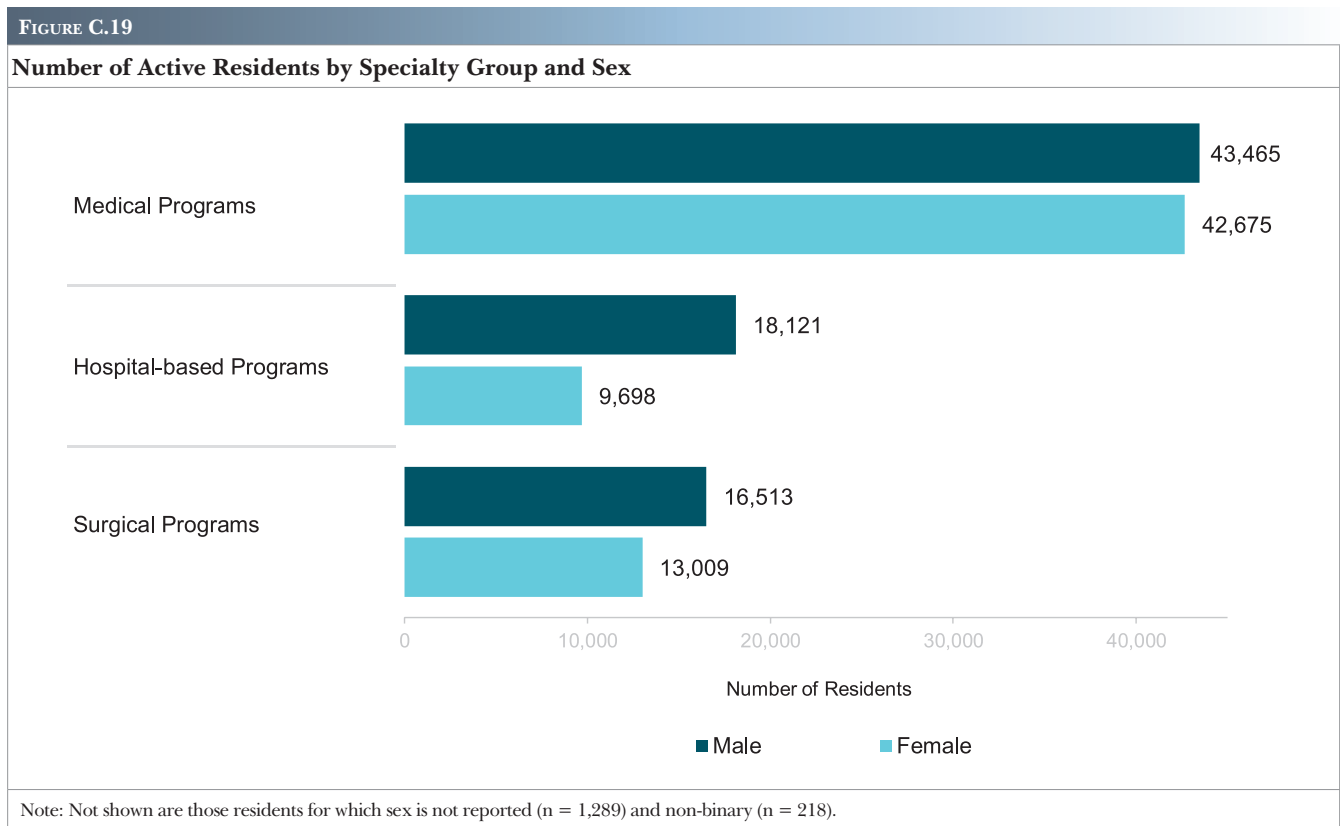


TABLE C.21

Number of Active Residents by Specialty and Subspecialty and Sex

Specialty	Total Programs	Total Residents	Sex							
			Female		Male		Non-binary		Not Reported	
			#	%	#	%	#	%	#	%
OVERALL	12,092	144,988	65,382	45.1%	78,099	53.9%	218	0.2%	1,289	0.9%
TOTAL PIPELINE	4,985	117,496	53,285	45.4%	62,829	53.5%	128	0.1%	1,254	1.1%
Allergy and immunology	81	308	205	66.6%	99	32.1%	4	1.3%	0	0.0%
Anesthesiology	160	6,698	2,199	32.8%	4,433	66.2%	2	0.0%	64	1.0%
- Adult cardiothoracic anesthesiology	71	220	72	32.7%	144	65.5%	4	1.8%	0	0.0%
- Clinical informatics	1	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%
- Critical care medicine	63	191	75	39.3%	116	60.7%	0	0.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	35	72	30	41.7%	42	58.3%	0	0.0%	0	0.0%
- Obstetric anesthesiology	41	38	21	55.3%	17	44.7%	0	0.0%	0	0.0%
- Pain medicine (multidisciplinary)	108	386	88	22.8%	298	77.2%	0	0.0%	0	0.0%
- Pediatric anesthesiology	60	192	86	44.8%	106	55.2%	0	0.0%	0	0.0%
Colon and rectal surgery	65	106	45	42.5%	61	57.5%	0	0.0%	0	0.0%
Dermatology	144	1,594	939	58.9%	650	40.8%	2	0.1%	3	0.2%
- Dermatopathology (multidisciplinary)	56	69	33	47.8%	36	52.2%	0	0.0%	0	0.0%
- Micrographic surgery and dermatologic oncology	78	88	45	51.1%	43	48.9%	0	0.0%	0	0.0%
Emergency medicine	265	8,293	2,988	36.0%	5,252	63.3%	1	0.0%	52	0.6%
- Clinical informatics	5	10	1	10.0%	9	90.0%	0	0.0%	0	0.0%
- Emergency medical services	71	87	29	33.3%	58	66.7%	0	0.0%	0	0.0%
- Medical toxicology	26	72	28	38.9%	44	61.1%	0	0.0%	0	0.0%
- Pediatric emergency medicine	26	134	92	68.7%	42	31.3%	0	0.0%	0	0.0%
- Sports medicine	8	17	5	29.4%	12	70.6%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	8	10	1	10.0%	9	90.0%	0	0.0%	0	0.0%
Family medicine	701	13,725	7,341	53.5%	6,332	46.1%	5	0.0%	47	0.3%
- Clinical informatics	6	10	2	20.0%	8	80.0%	0	0.0%	0	0.0%
- Geriatric medicine	50	38	31	81.6%	7	18.4%	0	0.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	167	374	224	59.9%	148	39.6%	2	0.5%	0	0.0%
- Sports medicine	151	261	68	26.1%	193	73.9%	0	0.0%	0	0.0%
Internal medicine	569	29,243	12,297	42.1%	16,328	55.8%	46	0.2%	572	2.0%
- Adult congenital heart disease	24	25	11	44.0%	14	56.0%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	80	109	38	34.9%	70	64.2%	1	0.9%	0	0.0%
- Cardiovascular disease	250	3,105	775	25.0%	2,312	74.5%	11	0.4%	7	0.2%
- Clinical cardiac electrophysiology	110	255	28	11.0%	221	86.7%	4	1.6%	2	0.8%
- Clinical informatics	17	36	8	22.2%	28	77.8%	0	0.0%	0	0.0%
- Critical care medicine	45	264	73	27.7%	191	72.3%	0	0.0%	0	0.0%
- Endocrinology, diabetes, and metabolism	151	675	475	70.4%	198	29.3%	0	0.0%	2	0.3%
- Gastroenterology	207	1,792	600	33.5%	1,178	65.7%	6	0.3%	8	0.4%
- Geriatric medicine	111	261	164	62.8%	96	36.8%	0	0.0%	1	0.4%
- Hematology	2	17	14	82.4%	3	17.6%	0	0.0%	0	0.0%
- Hematology and medical oncology	167	1,843	807	43.8%	1,027	55.7%	9	0.5%	0	0.0%
- Infectious disease	154	762	399	52.4%	355	46.6%	8	1.0%	0	0.0%
- Interventional cardiology	166	350	44	12.6%	301	86.0%	5	1.4%	0	0.0%
- Nephrology	151	828	305	36.8%	521	62.9%	2	0.2%	0	0.0%
- Medical oncology	7	35	14	40.0%	21	60.0%	0	0.0%	0	0.0%
- Pulmonary disease	22	73	18	24.7%	55	75.3%	0	0.0%	0	0.0%
- Pulmonary disease and critical care medicine	181	1,999	680	34.0%	1,315	65.8%	4	0.2%	0	0.0%
- Rheumatology	125	515	325	63.1%	189	36.7%	0	0.0%	1	0.2%
- Sleep medicine (multidisciplinary)	88	182	89	48.9%	93	51.1%	0	0.0%	0	0.0%
- Transplant hepatology	57	52	26	50.0%	26	50.0%	0	0.0%	0	0.0%
Medical genetics and genomics	47	60	33	55.0%	27	45.0%	0	0.0%	0	0.0%
- Medical biochemical genetics	19	16	7	43.8%	9	56.3%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	42	56	20	35.7%	36	64.3%	0	0.0%	0	0.0%
Neurological surgery	118	1,515	293	19.3%	1,215	80.2%	0	0.0%	7	0.5%
- Endovascular surgical neuroradiology	2	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%

TABLE C.21 *Continued*

Number of Active Residents by Specialty and Subspecialty and Sex

Specialty	Total Programs	Total Residents	Sex							
			Female		Male		Non-binary		Not Reported	
			#	%	#	%	#	%	#	%
Neurology	160	3,062	1,381	45.1%	1,634	53.4%	0	0.0%	47	1.5%
- Brain injury medicine	1	1	0	0.0%	0	0.0%	0	0.0%	1	100.0%
- Clinical neurophysiology	92	163	66	40.5%	97	59.5%	0	0.0%	0	0.0%
- Epilepsy	81	126	63	50.0%	63	50.0%	0	0.0%	0	0.0%
- Endovascular surgical neuroradiology	2	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	8	24	15	62.5%	9	37.5%	0	0.0%	0	0.0%
- Neuromuscular medicine	52	73	34	46.6%	39	53.4%	0	0.0%	0	0.0%
- Vascular neurology	106	128	48	37.5%	80	62.5%	0	0.0%	0	0.0%
Child neurology	76	401	268	66.8%	133	33.2%	0	0.0%	0	0.0%
Nuclear medicine	38	78	32	41.0%	46	59.0%	0	0.0%	0	0.0%
Obstetrics and gynecology	285	5,677	4,742	83.5%	909	16.0%	1	0.0%	25	0.4%
- Female pelvic medicine and reconstructive surgery	54	149	113	75.8%	36	24.2%	0	0.0%	0	0.0%
- Gynecologic oncology	63	210	157	74.8%	53	25.2%	0	0.0%	0	0.0%
- Maternal-fetal medicine	97	368	293	79.6%	75	20.4%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	51	167	131	78.4%	36	21.6%	0	0.0%	0	0.0%
Ophthalmology	124	1,512	614	40.6%	897	59.3%	0	0.0%	1	0.1%
- Ophthalmic plastic and reconstructive surgery	4	3	0	0.0%	3	100.0%	0	0.0%	0	0.0%
Orthopaedic surgery	197	4,342	700	16.1%	3,623	83.4%	0	0.0%	19	0.4%
- Adult reconstructive orthopaedics	24	46	5	10.9%	41	89.1%	0	0.0%	0	0.0%
- Foot and ankle orthopaedics	7	16	6	37.5%	10	62.5%	0	0.0%	0	0.0%
- Hand surgery	74	154	40	26.0%	114	74.0%	0	0.0%	0	0.0%
- Musculoskeletal oncology	12	17	4	23.5%	13	76.5%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	90	215	23	10.7%	192	89.3%	0	0.0%	0	0.0%
- Orthopaedic surgery of the spine	18	34	2	5.9%	32	94.1%	0	0.0%	0	0.0%
- Orthopaedic trauma	11	20	2	10.0%	18	90.0%	0	0.0%	0	0.0%
- Pediatric orthopaedics	25	37	10	27.0%	27	73.0%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	27	53	30	56.6%	23	43.4%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	124	1,689	631	37.4%	1,047	62.0%	0	0.0%	11	0.7%
- Neurotology	24	35	8	22.9%	27	77.1%	0	0.0%	0	0.0%
- Pediatric otolaryngology	30	36	16	44.4%	20	55.6%	0	0.0%	0	0.0%
Pathology-anatomic and clinical	142	2,324	1,196	51.5%	1,127	48.5%	0	0.0%	1	0.0%
- Blood banking/transfusion medicine	51	50	28	56.0%	22	44.0%	0	0.0%	0	0.0%
- Clinical informatics	10	16	2	12.5%	14	87.5%	0	0.0%	0	0.0%
- Chemical pathology	4	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%
- Cytopathology	93	125	62	49.6%	62	49.6%	1	0.8%	0	0.0%
- Forensic pathology	45	54	29	53.7%	25	46.3%	0	0.0%	0	0.0%
- Hematopathology	86	135	67	49.6%	68	50.4%	0	0.0%	0	0.0%
- Medical microbiology	15	9	3	33.3%	6	66.7%	0	0.0%	0	0.0%
- Neuropathology	37	59	25	42.4%	34	57.6%	0	0.0%	0	0.0%
- Pediatric pathology	28	23	11	47.8%	12	52.2%	0	0.0%	0	0.0%
- Selective pathology	101	167	82	49.1%	85	50.9%	0	0.0%	0	0.0%
Pediatrics	211	9,323	6,481	69.5%	2,497	26.8%	63	0.7%	282	3.0%
- Adolescent medicine	32	94	77	81.9%	17	18.1%	0	0.0%	0	0.0%
- Child abuse pediatrics	31	47	42	89.4%	5	10.6%	0	0.0%	0	0.0%
- Clinical informatics	7	15	3	20.0%	12	80.0%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	43	119	102	85.7%	17	14.3%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	103	772	584	75.6%	188	24.4%	0	0.0%	0	0.0%
- Pediatric cardiology	63	457	234	51.2%	222	48.6%	0	0.0%	1	0.2%
- Pediatric critical care medicine	72	557	322	57.8%	230	41.3%	0	0.0%	5	0.9%
- Pediatric emergency medicine	53	424	280	66.0%	143	33.7%	0	0.0%	1	0.2%
- Pediatric endocrinology	72	227	192	84.6%	35	15.4%	0	0.0%	0	0.0%
- Pediatric gastroenterology	65	322	206	64.0%	116	36.0%	0	0.0%	0	0.0%
- Pediatric hematology/oncology	75	485	345	71.1%	140	28.9%	0	0.0%	0	0.0%

TABLE C.21 Continued

Number of Active Residents by Specialty and Subspecialty and Sex

Specialty	Total Programs	Total Residents	Sex							
			Female		Male		Non-binary		Not Reported	
			#	%	#	%	#	%	#	%
- Pediatric infectious diseases	64	169	103	60.9%	66	39.1%	0	0.0%	0	0.0%
- Pediatric nephrology	47	110	86	78.2%	24	21.8%	0	0.0%	0	0.0%
- Pediatric pulmonology	56	168	100	59.5%	68	40.5%	0	0.0%	0	0.0%
- Pediatric rheumatology	36	90	65	72.2%	25	27.8%	0	0.0%	0	0.0%
- Pediatric sports medicine	17	26	8	30.8%	18	69.2%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	16	10	7	70.0%	3	30.0%	0	0.0%	0	0.0%
- Pediatric hospital medicine	33	71	55	77.5%	16	22.5%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	94	1,453	519	35.7%	931	64.1%	0	0.0%	3	0.2%
- Brain injury medicine	23	18	10	55.6%	8	44.4%	0	0.0%	0	0.0%
- Neuromuscular medicine	1	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%
- Spinal cord injury medicine	24	21	12	57.1%	9	42.9%	0	0.0%	0	0.0%
- Pediatric rehabilitation	22	38	27	71.1%	11	28.9%	0	0.0%	0	0.0%
- Sports medicine	20	32	12	37.5%	20	62.5%	0	0.0%	0	0.0%
Plastic surgery	53	226	71	31.4%	155	68.6%	0	0.0%	0	0.0%
Plastic surgery - integrated	82	961	403	41.9%	551	57.3%	4	0.4%	3	0.3%
- Craniofacial surgery	8	5	2	40.0%	3	60.0%	0	0.0%	0	0.0%
- Hand surgery	17	23	8	34.8%	15	65.2%	0	0.0%	0	0.0%
Preventive medicine	72	347	166	47.8%	180	51.9%	0	0.0%	1	0.3%
- Medical toxicology	1	4	2	50.0%	2	50.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	1	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%
Psychiatry	269	6,618	3,236	48.9%	3,340	50.5%	1	0.0%	41	0.6%
- Addiction medicine (multidisciplinary)	78	79	39	49.4%	40	50.6%	0	0.0%	0	0.0%
- Addiction psychiatry	53	78	32	41.0%	46	59.0%	0	0.0%	0	0.0%
- Child and adolescent psychiatry	141	889	505	56.8%	379	42.6%	0	0.0%	5	0.6%
- Forensic psychiatry	48	80	47	58.8%	33	41.2%	0	0.0%	0	0.0%
- Geriatric psychiatry	62	42	29	69.0%	13	31.0%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	63	86	49	57.0%	37	43.0%	0	0.0%	0	0.0%
Radiation oncology	91	771	231	30.0%	537	69.6%	0	0.0%	3	0.4%
Radiology-diagnostic	197	4,551	1,206	26.5%	3,337	73.3%	1	0.0%	7	0.2%
- Abdominal radiology	14	49	19	38.8%	30	61.2%	0	0.0%	0	0.0%
- Endovascular surgical neuroradiology	3	5	1	20.0%	4	80.0%	0	0.0%	0	0.0%
- Musculoskeletal radiology	20	35	6	17.1%	29	82.9%	0	0.0%	0	0.0%
- Neuroradiology	87	280	52	18.6%	228	81.4%	0	0.0%	0	0.0%
- Nuclear radiology	17	12	5	41.7%	7	58.3%	0	0.0%	0	0.0%
- Pediatric radiology	47	58	21	36.2%	37	63.8%	0	0.0%	0	0.0%
- Vascular and interventional radiology	92	256	35	13.7%	220	85.9%	0	0.0%	1	0.4%
Interventional radiology - independent	2	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	89	424	78	18.4%	346	81.6%	0	0.0%	0	0.0%
Surgery	330	8,809	3,696	42.0%	5,058	57.4%	1	0.0%	54	0.6%
- Complex general surgical oncology	29	115	43	37.4%	72	62.6%	0	0.0%	0	0.0%
- Hand surgery	1	8	1	12.5%	7	87.5%	0	0.0%	0	0.0%
- Pediatric surgery	49	85	46	54.1%	39	45.9%	0	0.0%	0	0.0%
- Surgical critical care	139	290	110	37.9%	179	61.7%	1	0.3%	0	0.0%
- Vascular surgery	116	244	71	29.1%	173	70.9%	0	0.0%	0	0.0%
Vascular surgery - integrated	64	309	106	34.3%	203	65.7%	0	0.0%	0	0.0%
Thoracic surgery	74	236	52	22.0%	184	78.0%	0	0.0%	0	0.0%
- Congenital cardiac surgery	14	8	1	12.5%	7	87.5%	0	0.0%	0	0.0%
Thoracic surgery - integrated	30	193	54	28.0%	139	72.0%	0	0.0%	0	0.0%
Urology	145	1,734	471	27.2%	1,262	72.8%	1	0.1%	0	0.0%
- Female pelvic medicine and reconstructive surgery	15	35	26	74.3%	9	25.7%	0	0.0%	0	0.0%
- Pediatric urology	26	20	13	65.0%	7	35.0%	0	0.0%	0	0.0%
Transitional year	166	1,597	563	35.3%	1,006	63.0%	28	1.8%	0	0.0%
Internal medicine/Pediatrics	79	1,511	883	58.4%	617	40.8%	0	0.0%	11	0.7%

Note: Pipeline specialties are highlighted.

FIGURE C.22

Specialties Organized by Largest Percentages of Active Female Residents

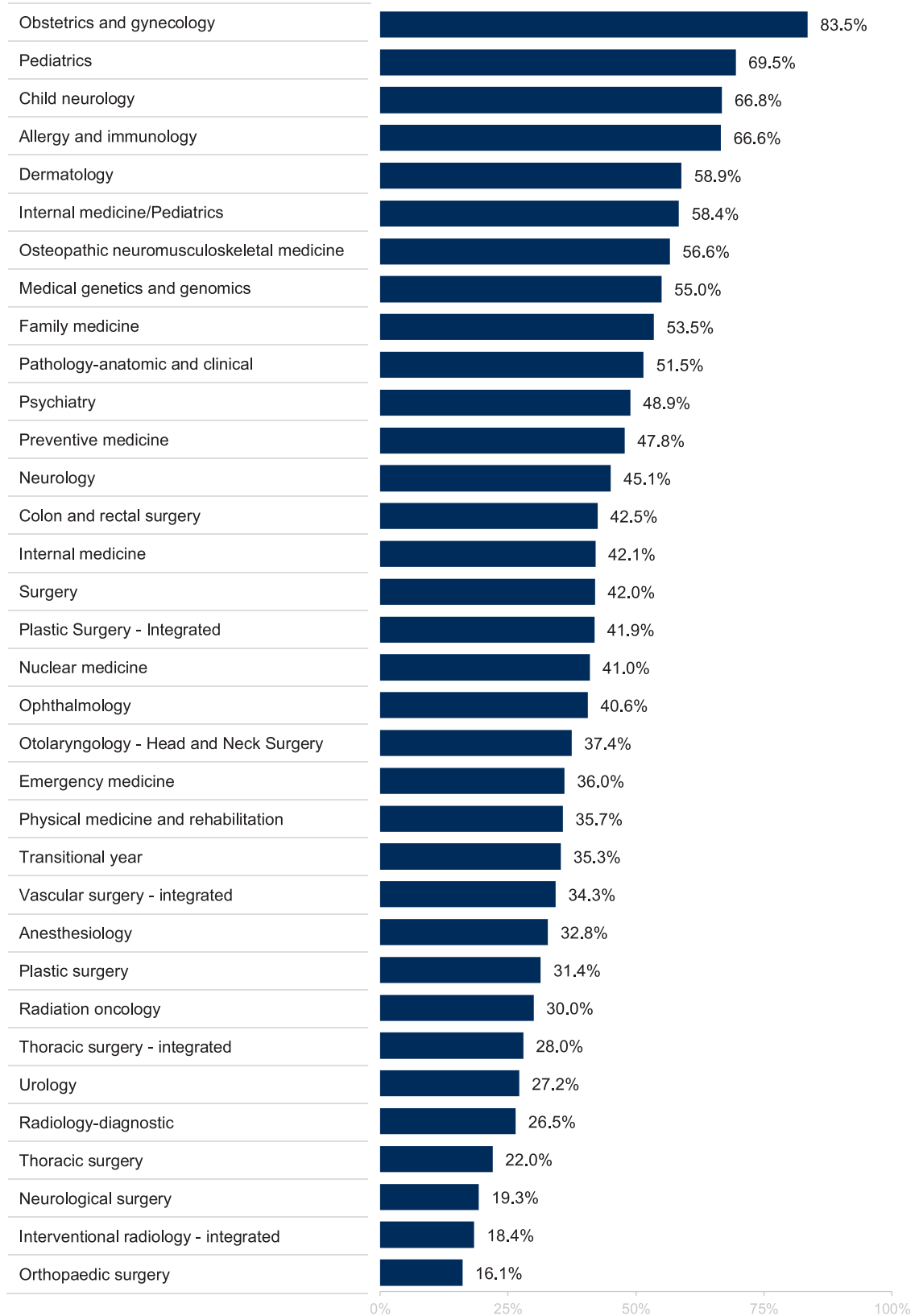


TABLE C.23

Number of Active Residents by Specialty and Subspecialty and Ethnicity

Specialty	Ethnicity							Unknown
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Other	
OVERALL	68,835	29,256	8,891	7,376	428	231	9,615	20,356
TOTAL PIPELINE	56,077	22,752	7,291	6,153	356	175	7,255	17,437
Allergy and immunology	138	78	16	5	1	1	22	47
Anesthesiology	3,321	1,252	344	318	25	7	346	1,085
- Adult cardiothoracic anesthesiology	135	36	7	6	0	1	8	27
- Clinical informatics	1	0	0	0	0	0	0	0
- Critical care medicine	114	27	13	7	1	3	11	15
- Regional anesthesiology and acute pain medicine	34	17	3	3	0	0	6	9
- Obstetric anesthesiology	22	7	1	3	0	0	0	5
- Pain medicine (multidisciplinary)	179	106	16	23	0	3	30	29
- Pediatric anesthesiology	88	35	4	10	5	0	12	38
Colon and rectal surgery	60	21	4	6	0	0	6	9
Dermatology	920	275	61	62	3	1	102	170
- Dermatopathology (multidisciplinary)	43	8	4	2	0	1	2	9
- Micrographic surgery and dermatologic oncology	56	12	3	0	0	0	5	12
Emergency medicine	5,208	1,004	432	367	29	8	336	909
- Clinical informatics	7	0	0	0	0	0	1	2
- Emergency medical services	63	4	4	2	0	0	3	11
- Medical toxicology	51	9	1	2	0	0	1	8
- Pediatric emergency medicine	68	27	12	7	0	0	8	12
- Sports medicine	11	3	0	1	0	0	1	1
- Undersea and hyperbaric medicine	2	2	0	1	0	0	1	4
Family medicine	7,120	2,736	1,025	1,043	59	27	738	977
- Clinical informatics	3	3	0	0	0	0	2	2
- Geriatric medicine	17	12	3	0	0	0	4	2
- Hospice and palliative medicine (multidisciplinary)	205	68	23	15	1	0	15	47
- Sports medicine	171	27	13	17	0	0	9	24
Internal medicine	9,589	7,369	1,856	1,488	54	57	2,467	6,363
- Adult congenital heart disease	14	6	1	0	0	0	1	3
- Advanced heart failure and transplant cardiology	32	37	5	2	1	2	15	15
- Cardiovascular disease	1,209	805	163	158	11	8	425	326
- Clinical cardiac electrophysiology	98	78	7	14	4	1	27	26
- Clinical informatics	13	11	3	4	0	0	3	2
- Critical care medicine	119	53	14	8	0	1	32	37
- Endocrinology, diabetes, and metabolism	207	239	55	23	0	0	88	63
- Gastroenterology	684	577	83	82	1	5	195	165
- Geriatric medicine	85	85	19	21	0	0	20	31
- Hematology	4	10	1	1	0	0	1	0
- Hematology and medical oncology	729	566	92	60	4	1	165	226
- Infectious disease	328	178	61	40	1	0	61	93
- Interventional cardiology	126	87	13	9	3	3	62	47
- Nephrology	228	292	75	39	3	0	98	93
- Medical oncology	6	22	2	1	0	0	4	0
- Pulmonary disease	11	29	9	5	0	0	11	8
- Pulmonary disease and critical care medicine	935	527	111	59	7	3	175	182
- Rheumatology	242	146	34	20	0	0	33	40
- Sleep medicine (multidisciplinary)	59	61	13	4	1	0	25	19
- Transplant hepatology	18	16	3	2	2	0	6	5
Medical genetics and genomics	32	13	8	0	0	0	5	2
- Medical biochemical genetics	11	0	1	1	0	0	2	1
- Molecular genetic pathology (multidisciplinary)	23	20	1	0	0	1	1	10
Neurological surgery	842	259	88	73	2	0	117	134
- Endovascular surgical neuroradiology	1	0	0	0	0	0	0	0

TABLE C.23 Continued

Number of Active Residents by Specialty and Subspecialty and Ethnicity

Specialty	Ethnicity							
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Other	Unknown
Neurology	1,295	685	199	127	7	2	264	483
- Brain injury medicine	0	0	0	0	0	0	0	1
- Clinical neurophysiology	66	43	7	5	2	2	14	24
- Epilepsy	51	35	5	4	1	0	5	25
- Endovascular surgical neuroradiology	0	2	0	0	0	0	0	0
- Neurodevelopmental disabilities	18	2	0	2	0	0	2	0
- Neuromuscular medicine	27	18	4	4	0	0	5	15
- Vascular neurology	46	38	7	7	0	1	14	15
Child neurology	198	73	36	11	1	1	30	51
Nuclear medicine	28	21	6	4	0	0	12	7
Obstetrics and gynecology	3,160	676	402	457	20	12	222	728
- Female pelvic medicine and reconstructive surgery	80	24	17	10	0	0	8	10
- Gynecologic oncology	144	21	15	13	0	0	8	9
- Maternal-fetal medicine	215	44	34	39	0	0	15	21
- Reproductive endocrinology and infertility	106	18	5	11	0	0	11	16
Ophthalmology	760	371	61	32	2	1	93	192
- Ophthalmic plastic and reconstructive surgery	3	0	0	0	0	0	0	0
Orthopaedic surgery	2,874	432	165	153	11	4	150	553
- Adult reconstructive orthopaedics	26	2	4	0	0	0	1	13
- Foot and ankle orthopaedics	5	3	0	1	0	0	0	7
- Hand surgery	100	17	2	3	0	0	7	25
- Musculoskeletal oncology	14	1	0	0	0	0	1	1
- Orthopaedic sports medicine	146	16	6	4	0	2	11	30
- Orthopaedic surgery of the spine	12	4	1	3	0	0	5	9
- Orthopaedic trauma	15	1	0	0	0	0	0	4
- Pediatric orthopaedics	26	2	2	0	0	0	4	3
Osteopathic neuromusculoskeletal medicine	39	3	0	1	0	0	2	8
Otolaryngology - head and neck surgery	968	274	75	42	9	0	100	221
- Neurotology	17	8	1	0	0	0	5	4
- Pediatric otolaryngology	26	5	0	1	0	0	0	4
Pathology-anatomic and clinical	1,059	550	146	100	4	6	204	255
- Blood banking/transfusion medicine	22	10	3	2	1	0	3	9
- Clinical informatics	4	4	1	0	0	0	1	6
- Chemical pathology	1	1	0	0	0	0	0	0
- Cytopathology	43	36	5	3	1	1	15	21
- Forensic pathology	33	5	0	4	0	0	1	11
- Hematopathology	65	29	5	2	0	1	15	18
- Medical microbiology	7	0	0	0	0	0	0	2
- Neuropathology	34	9	2	0	0	0	4	10
- Pediatric pathology	14	1	2	0	0	0	1	5
- Selective pathology	66	33	7	3	0	0	17	41
Pediatrics	4,001	1,533	782	499	35	17	361	2,095
- Adolescent medicine	51	11	7	16	1	0	4	4
- Child abuse pediatrics	29	6	5	2	0	0	3	2
- Clinical informatics	8	4	0	0	0	0	2	1
- Developmental-behavioral pediatrics	62	23	10	6	0	0	9	9
- Neonatal-perinatal medicine	395	159	61	47	2	0	49	59
- Pediatric cardiology	249	92	31	15	0	2	33	35
- Pediatric critical care medicine	299	99	45	13	0	1	41	59
- Pediatric emergency medicine	265	65	18	28	1	1	30	16
- Pediatric endocrinology	104	54	24	13	0	0	19	13
- Pediatric gastroenterology	151	84	23	15	2	0	30	17
- Pediatric hematology/oncology	278	85	30	15	1	1	24	51

TABLE C.23 Continued

Number of Active Residents by Specialty and Subspecialty and Ethnicity

Specialty	Ethnicity							
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Other	Unknown
- Pediatric infectious diseases	108	23	12	3	0	0	6	17
- Pediatric nephrology	51	32	5	8	1	1	9	3
- Pediatric pulmonology	86	30	18	6	0	0	13	15
- Pediatric rheumatology	57	12	7	2	0	0	8	4
- Pediatric sports medicine	16	6	0	4	0	0	0	0
- Pediatric transplant hepatology	5	1	1	0	0	0	3	0
- Pediatric hospital medicine	45	16	3	3	0	0	0	4
Physical medicine and rehabilitation	757	314	77	57	5	0	105	138
- Brain injury medicine	6	4	1	0	0	0	5	2
- Neuromuscular medicine	0	0	0	0	0	0	1	0
- Spinal cord injury medicine	11	4	1	1	0	0	1	3
- Pediatric rehabilitation	25	5	3	4	0	0	0	1
- Sports medicine	14	8	3	2	0	0	1	4
Plastic surgery	124	28	13	10	1	1	21	28
Plastic surgery - integrated	526	148	32	24	3	2	39	187
- Craniofacial surgery	2	2	0	0	1	0	0	0
- Hand surgery	12	4	1	2	0	0	0	4
Preventive medicine	181	60	13	48	1	3	13	28
- Medical toxicology	1	0	0	0	0	0	2	1
- Undersea and hyperbaric medicine	1	0	0	0	0	0	0	0
Psychiatry	3,157	1,396	458	426	25	9	437	710
- Addiction medicine (multidisciplinary)	44	7	9	4	0	0	5	10
- Addiction psychiatry	33	13	9	8	1	0	10	4
- Child and adolescent psychiatry	380	230	45	66	3	1	53	111
- Forensic psychiatry	48	11	5	4	0	0	2	10
- Geriatric psychiatry	13	9	3	3	0	0	7	7
- Consultation-liaison psychiatry	40	12	8	2	0	0	8	16
Radiation oncology	409	201	24	26	1	0	34	76
Radiology-diagnostic	2,330	1,036	215	172	14	2	289	493
- Abdominal radiology	23	12	2	3	1	0	3	5
- Endovascular surgical neuroradiology	2	2	0	0	0	0	0	1
- Musculoskeletal radiology	17	10	1	1	0	0	2	4
- Neuroradiology	161	54	9	9	0	1	20	26
- Nuclear radiology	6	2	1	0	0	0	3	0
- Pediatric radiology	30	5	5	1	0	1	7	9
- Vascular and interventional radiology	132	61	16	10	1	2	14	20
Interventional radiology - independent	0	0	0	0	0	0	0	0
Interventional radiology - integrated	247	93	18	6	1	1	17	41
Surgery	4,793	1,290	579	440	36	10	521	1,140
- Complex general surgical oncology	74	15	4	2	0	0	3	17
- Hand surgery	0	0	0	0	0	0	0	8
- Pediatric surgery	54	11	6	6	0	0	4	4
- Surgical critical care	193	34	15	13	0	1	13	21
- Vascular surgery	138	44	10	10	1	0	22	19
Vascular surgery - integrated	153	62	14	11	3	0	30	36
Thoracic surgery	133	39	7	10	0	0	25	22
- Congenital cardiac surgery	4	2	0	1	0	0	1	0
Thoracic surgery - integrated	118	38	9	4	0	0	17	7
Urology	1,040	309	75	64	3	2	114	127
- Female pelvic medicine and reconstructive surgery	22	4	2	5	0	0	1	1
- Pediatric urology	11	5	0	1	0	0	0	3
Transitional year	787	314	106	75	5	3	94	213
Internal medicine/Pediatrics	828	251	78	88	2	2	69	193

Notes: Pipeline specialties are highlighted. Unknown ethnicity includes both unknown and blank, while 'Other' indicates a known ethnicity other than the ones available for selection.

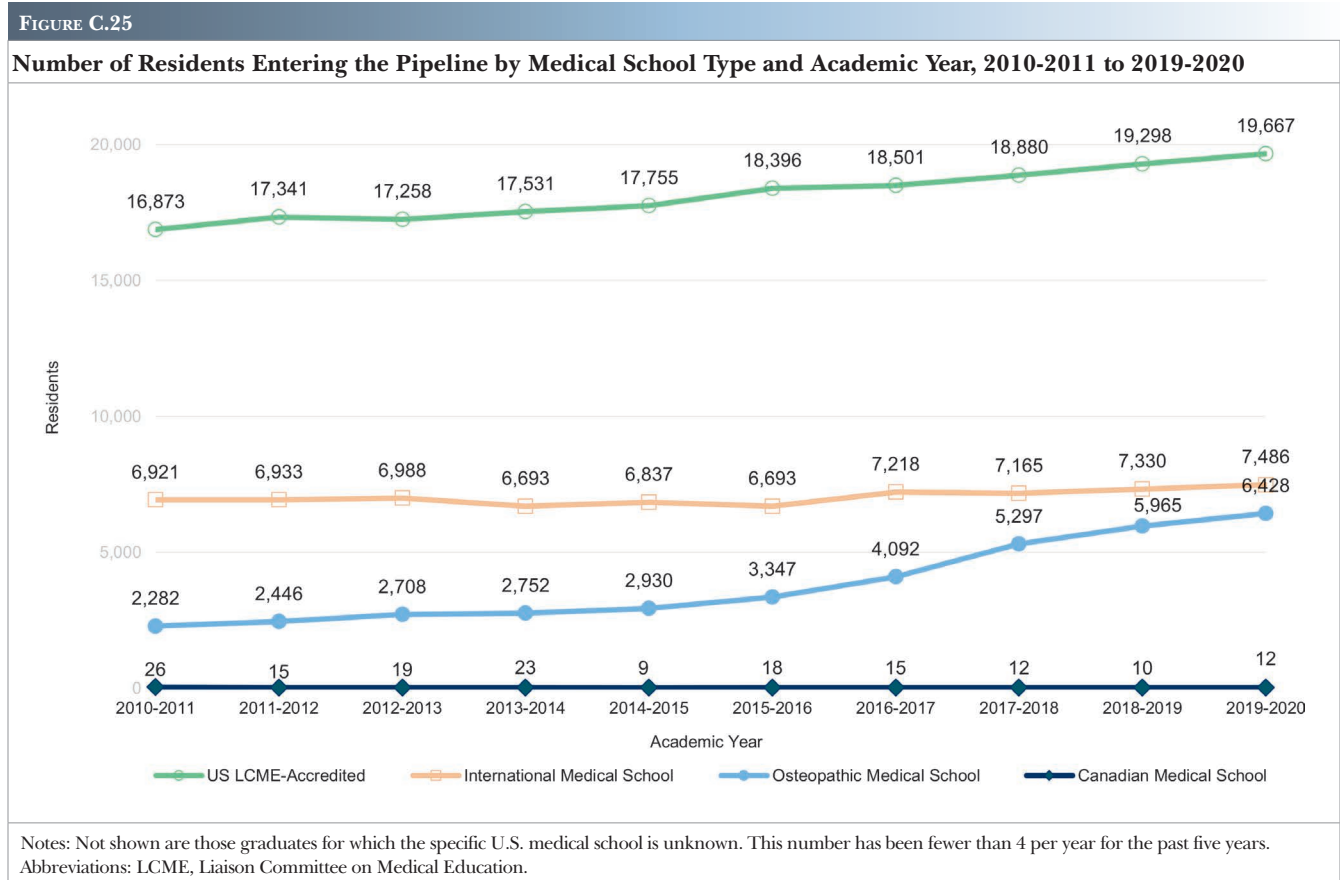
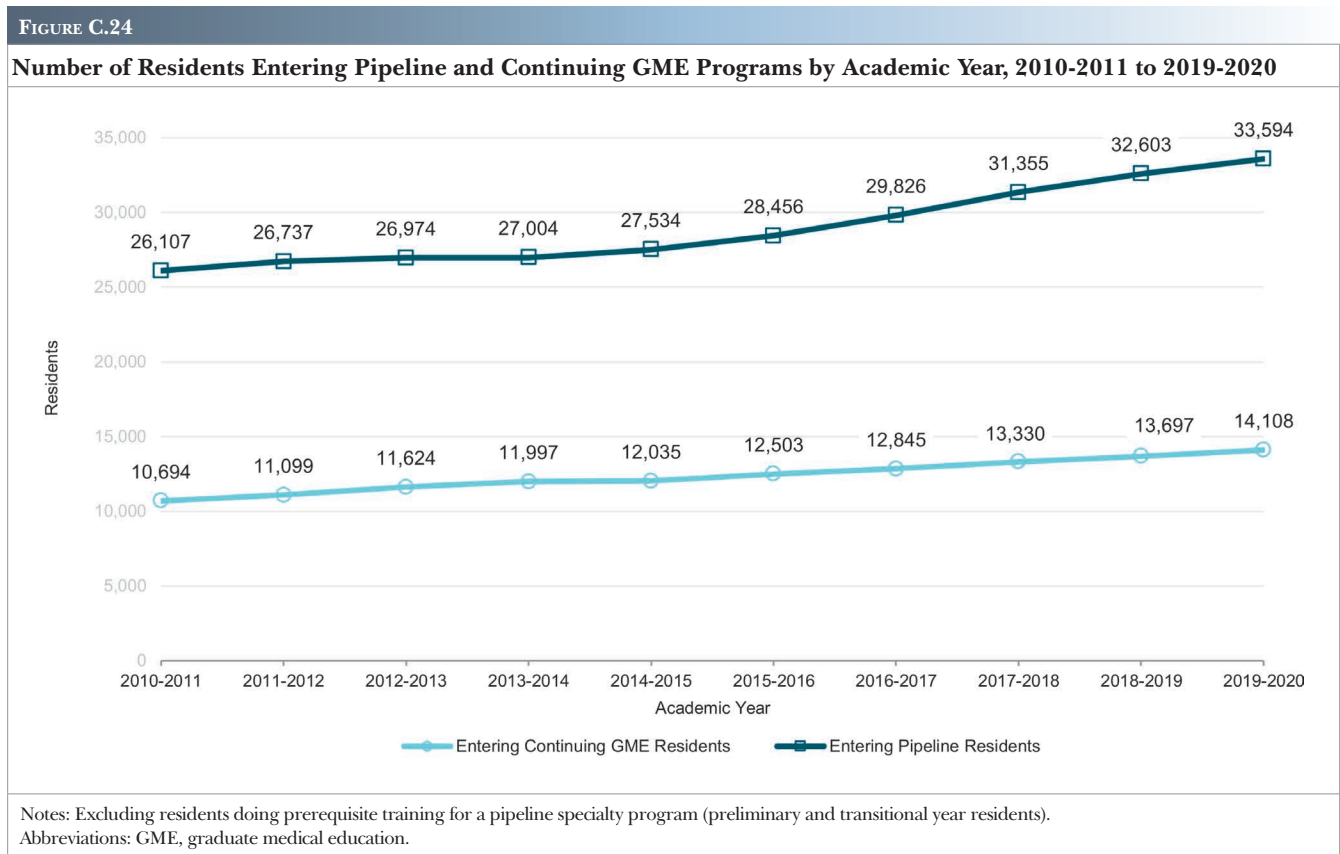


TABLE C.26

Number of Residents Entering the GME Pipeline by Specialty and Medical School Type

Specialty	Total Residents	Medical School Type									
		US LCME-Accredited		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
OVERALL	33,594	19,667	58.5%	7,486	22.3%	6,428	19.1%	12	0.0%	1	0.0%
Anesthesiology	1,602	1,091	68.1%	194	12.1%	317	19.8%	0	0.0%	0	0.0%
Dermatology	534	458	85.8%	22	4.1%	52	9.7%	2	0.4%	0	0.0%
Emergency medicine	2,666	1,769	66.4%	150	5.6%	746	28.0%	1	0.0%	0	0.0%
Family medicine	4,737	1,969	41.6%	1,230	26.0%	1,536	32.4%	1	0.0%	1	0.0%
Internal medicine	9,242	3,923	42.4%	3,697	40.0%	1,620	17.5%	2	0.0%	0	0.0%
Medical genetics and genomics	37	20	54.1%	16	43.2%	1	2.7%	0	0.0%	0	0.0%
Neurological surgery	231	217	93.9%	9	3.9%	5	2.2%	0	0.0%	0	0.0%
Neurology	868	477	55.0%	276	31.8%	115	13.2%	0	0.0%	0	0.0%
Child neurology	140	102	72.9%	24	17.1%	14	10.0%	0	0.0%	0	0.0%
Nuclear medicine	39	13	33.3%	25	64.1%	1	2.6%	0	0.0%	0	0.0%
Obstetrics and gynecology	1,442	1,099	76.2%	88	6.1%	255	17.7%	0	0.0%	0	0.0%
Ophthalmology	504	453	89.9%	22	4.4%	28	5.6%	1	0.2%	0	0.0%
Orthopaedic surgery	883	756	85.6%	11	1.2%	116	13.1%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	3	2	66.7%	0	0.0%	1	33.3%	0	0.0%	0	0.0%
Otolaryngology - Head and Neck Surgery	350	322	92.0%	7	2.0%	21	6.0%	0	0.0%	0	0.0%
Pathology-anatomic and clinical	611	255	41.7%	295	48.3%	60	9.8%	1	0.2%	0	0.0%
Pediatrics	3,139	1,940	61.8%	651	20.7%	546	17.4%	2	0.1%	0	0.0%
Physical medicine and rehabilitation	412	226	54.9%	39	9.5%	147	35.7%	0	0.0%	0	0.0%
Plastic surgery	71	46	64.8%	18	25.4%	7	9.9%	0	0.0%	0	0.0%
Plastic Surgery - Integrated	172	166	96.5%	3	1.7%	3	1.7%	0	0.0%	0	0.0%
Preventive medicine	175	114	65.1%	27	15.4%	33	18.9%	1	0.6%	0	0.0%
Psychiatry	1,875	1,180	62.9%	334	17.8%	360	19.2%	1	0.1%	0	0.0%
Radiation oncology	192	186	96.9%	3	1.6%	3	1.6%	0	0.0%	0	0.0%
Radiology-diagnostic	1,142	852	74.6%	129	11.3%	161	14.1%	0	0.0%	0	0.0%
Interventional radiology - integrated	139	130	93.5%	5	3.6%	4	2.9%	0	0.0%	0	0.0%
Surgery	1,524	1,153	75.7%	155	10.2%	216	14.2%	0	0.0%	0	0.0%
Vascular surgery - integrated	68	56	82.4%	7	10.3%	5	7.4%	0	0.0%	0	0.0%
Thoracic surgery - integrated	36	34	94.4%	2	5.6%	0	0.0%	0	0.0%	0	0.0%
Urology	372	334	89.8%	14	3.8%	24	6.5%	0	0.0%	0	0.0%
Internal medicine/Pediatrics	388	324	83.5%	33	8.5%	31	8.0%	0	0.0%	0	0.0%

Abbreviations: GME, graduate medical education; LCME, Liaison Committee on Medical Education.

TABLE C.27

Hospital-Based Specialty Residents Entering the GME Pipeline by Specialty and State

State Name	State Abbreviation	AN	EM	MG	NM	PTH	GPM	RO	DR	IRI	Total
OVERALL	-	1,602	2,666	37	39	611	175	192	1,142	139	6,603
Alabama	AL	21	18	0	0	8	4	3	12	2	68
Alaska	AK	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	16	41	0	0	4	0	2	21	1	85
Arkansas	AR	13	16	0	0	5	0	1	8	1	44
California	CA	151	239	6	3	61	24	22	108	17	631
Colorado	CO	4	17	2	0	8	4	2	9	2	48
Connecticut	CT	23	35	0	0	13	4	3	26	3	107
Delaware	DE	0	13	0	0	0	0	0	2	1	16
District of Columbia	DC	15	20	0	0	10	0	1	8	2	56
Florida	FL	84	184	1	1	20	14	9	56	7	376
Georgia	GA	28	57	1	2	11	5	4	25	4	137
Hawaii	HI	0	0	0	0	2	0	0	6	0	8
Idaho	ID	0	0	0	0	0	0	0	0	0	0
Illinois	IL	87	132	0	2	29	8	7	53	10	328
Indiana	IN	25	21	1	0	5	0	2	11	2	67
Iowa	IA	15	9	0	0	5	0	3	7	1	40
Kansas	KS	13	10	0	0	4	0	2	9	1	39
Kentucky	KY	22	23	0	0	8	4	3	10	0	70
Louisiana	LA	29	32	0	0	8	2	0	19	2	92
Maine	ME	5	10	0	0	0	3	0	2	1	21
Maryland	MD	42	24	4	5	24	21	8	25	5	158
Massachusetts	MA	77	70	1	3	38	6	10	59	7	271
Michigan	MI	71	225	2	0	17	3	9	52	5	384
Minnesota	MN	28	32	1	0	11	4	4	22	3	105
Mississippi	MS	8	21	0	0	4	0	2	7	0	42
Missouri	MO	37	48	0	3	18	0	3	34	3	146
Montana	MT	0	0	0	0	0	0	0	0	0	0
Nebraska	NE	8	11	0	0	5	0	1	8	0	33
Nevada	NV	7	18	0	0	0	0	0	0	0	25
New Hampshire	NH	7	6	0	0	3	6	0	3	2	27
New Jersey	NJ	33	85	0	0	10	4	2	30	0	164
New Mexico	NM	6	12	0	0	4	3	0	7	0	32
New York	NY	224	361	3	6	73	15	25	137	16	860
North Carolina	NC	38	74	2	0	18	6	7	30	4	179
North Dakota	ND	0	0	0	0	0	0	0	0	0	0
Ohio	OH	70	143	1	0	28	2	8	46	2	300
Oklahoma	OK	15	33	0	1	4	0	2	14	0	69
Oregon	OR	10	10	0	0	4	0	2	6	1	33
Pennsylvania	PA	91	202	3	1	40	6	12	64	12	431
Puerto Rico	PR	3	17	0	1	3	0	0	4	0	28
Rhode Island	RI	12	20	0	0	4	0	0	6	2	44
South Carolina	SC	21	45	2	1	5	0	2	12	2	90
South Dakota	SD	0	0	0	0	3	0	0	0	0	3
Tennessee	TN	26	35	0	2	10	5	2	23	3	106
Texas	TX	110	152	3	2	46	8	17	76	7	421
Utah	UT	3	9	0	0	5	3	4	8	1	33
Vermont	VT	6	6	0	0	4	0	0	7	0	23
Virginia	VA	26	56	1	0	9	0	3	24	2	121
Washington	WA	35	24	2	5	9	7	1	18	3	104
West Virginia	WV	7	16	0	0	3	2	1	6	0	35
Wisconsin	WI	30	34	1	1	8	2	3	22	2	103
Wyoming	WY	0	0	0	0	0	0	0	0	0	0

Abbreviations: GME, graduate medical education; AN, Anesthesiology; EM, Emergency medicine; MG, Medical genetics and genomics; NM, Nuclear medicine; PTH, Pathology-anatomic and clinical; GPM, Preventive medicine; RO, Radiation oncology; DR, Radiology-diagnostic; IRI, Interventional radiology - integrated.

TABLE C.28

Medical Specialty Residents Entering the GME Pipeline by Specialty and State

State Name	State Abbreviation	D	FM	IM	N	CHN	ONM	PD	PM	P	IP	Total
OVERALL	-	534	4,737	9,242	868	140	3	3,139	412	1,875	388	21,338
Alabama	AL	5	69	90	11	2	0	38	4	13	6	238
Alaska	AK	0	12	0	0	0	0	0	0	0	0	12
Arizona	AZ	7	63	137	20	3	0	51	2	24	6	313
Arkansas	AR	3	74	77	5	1	0	25	4	12	5	206
California	CA	55	535	747	73	14	0	300	29	182	18	1,953
Colorado	CO	6	85	81	14	3	0	33	5	21	4	252
Connecticut	CT	8	28	217	17	0	0	42	0	32	4	348
Delaware	DE	0	14	13	0	1	0	23	0	10	4	65
District of Columbia	DC	9	6	112	12	5	0	48	6	25	4	227
Florida	FL	38	210	590	51	2	0	166	23	109	11	1,200
Georgia	GA	11	112	227	16	4	0	63	6	34	0	473
Hawaii	HI	0	17	37	0	0	0	15	0	15	0	84
Idaho	ID	0	37	20	0	0	0	0	0	0	0	57
Illinois	IL	23	253	497	35	5	0	137	18	62	25	1,055
Indiana	IN	0	116	57	8	1	0	34	3	16	14	249
Iowa	IA	6	58	47	8	1	0	22	0	15	0	157
Kansas	KS	5	41	46	8	0	0	5	4	12	3	124
Kentucky	KY	2	54	70	9	3	0	36	7	18	11	210
Louisiana	LA	10	63	130	12	1	0	43	6	35	16	316
Maine	ME	0	35	13	0	0	0	6	0	5	4	63
Maryland	MD	16	32	192	17	3	0	58	16	42	8	384
Massachusetts	MA	20	49	391	50	11	0	85	11	84	20	721
Michigan	MI	25	245	463	33	6	0	114	26	72	30	1,014
Minnesota	MN	15	84	112	15	2	0	39	12	25	10	314
Mississippi	MS	3	30	57	4	0	0	17	0	10	5	126
Missouri	MO	16	73	154	25	8	0	74	6	41	9	406
Montana	MT	0	17	8	0	0	0	0	0	0	0	25
Nebraska	NE	0	44	44	7	0	0	15	4	9	4	127
Nevada	NV	0	49	83	2	0	0	13	5	20	0	172
New Hampshire	NH	4	8	19	4	0	0	7	0	8	0	50
New Jersey	NJ	8	96	373	16	1	0	86	12	45	4	641
New Mexico	NM	2	26	39	5	1	0	16	0	12	0	101
New York	NY	56	286	1,438	94	14	3	447	75	283	22	2,718
North Carolina	NC	16	138	196	19	4	0	73	14	54	18	532
North Dakota	ND	0	28	8	0	0	0	0	0	6	0	42
Ohio	OH	22	191	477	52	9	0	184	12	67	27	1,041
Oklahoma	OK	3	80	40	6	0	0	37	0	22	3	191
Oregon	OR	7	38	77	4	0	0	18	0	12	0	156
Pennsylvania	PA	29	328	571	63	11	0	159	30	89	17	1,297
Puerto Rico	PR	2	26	80	3	1	0	31	6	12	2	163
Rhode Island	RI	6	17	65	6	0	0	15	0	9	4	122
South Carolina	SC	4	87	65	12	1	0	41	0	27	9	246
South Dakota	SD	0	17	8	0	0	0	5	0	7	0	37
Tennessee	TN	9	70	133	14	4	0	66	4	25	19	344
Texas	TX	48	314	501	62	12	0	231	32	127	20	1,347
Utah	UT	4	29	33	6	2	0	20	7	9	3	113
Vermont	VT	3	6	15	4	0	0	7	0	5	0	40
Virginia	VA	11	124	157	17	1	0	79	11	47	5	452
Washington	WA	4	151	95	10	3	0	47	3	23	0	336
West Virginia	WV	2	59	56	8	0	0	20	0	18	6	169
Wisconsin	WI	11	99	84	11	0	0	48	9	25	8	295
Wyoming	WY	0	14	0	0	0	0	0	0	0	0	14

Abbreviations: GME, graduate medical education; D, Dermatology; FM, Family medicine; IM, Internal medicine; N, Neurology; CHN, Child neurology; ONM, Osteopathic neuromusculoskeletal medicine; PD, Pediatrics; PM, Physical medicine and rehabilitation; P, Psychiatry; IP, Internal medicine/Pediatrics.

TABLE C.29

Surgical Specialty Residents Entering the GME Pipeline by Specialty and State

State Name	State Abbreviation	NS	OBG	OPH	ORS	OTO	PS	PSI	GS	VSI	TSI	U	Total
OVERALL	-	231	1,442	504	883	350	71	172	1,524	68	36	372	5,653
Alabama	AL	3	12	4	10	4	3	0	18	1	0	2	57
Alaska	AK	0	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	5	22	4	10	3	0	1	35	1	0	5	86
Arkansas	AR	3	5	3	5	3	0	0	5	1	0	2	27
California	CA	21	117	45	79	36	2	20	114	7	6	33	480
Colorado	CO	2	15	6	7	4	2	2	23	0	0	3	64
Connecticut	CT	2	33	5	10	5	0	3	24	2	2	6	92
Delaware	DE	0	7	0	0	0	0	0	6	0	0	0	13
District of Columbia	DC	4	22	13	12	4	0	4	19	2	0	8	88
Florida	FL	9	54	22	31	10	5	6	82	2	0	14	235
Georgia	GA	4	30	9	16	6	2	2	38	1	1	6	115
Hawaii	HI	0	9	0	5	2	0	0	8	0	0	1	25
Idaho	ID	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	IL	13	63	23	34	15	3	8	60	2	1	19	241
Indiana	IN	2	15	6	6	3	1	2	13	1	1	4	54
Iowa	IA	2	5	5	5	5	1	0	14	1	1	3	42
Kansas	KS	2	9	3	8	4	0	2	16	0	0	4	48
Kentucky	KY	4	14	8	11	5	2	2	19	0	1	5	71
Louisiana	LA	5	27	16	12	10	2	2	27	2	0	9	112
Maine	ME	0	4	0	0	0	0	0	4	1	0	1	10
Maryland	MD	8	25	15	20	9	1	4	25	0	1	6	114
Massachusetts	MA	10	38	18	26	10	6	6	56	5	1	15	191
Michigan	MI	10	101	27	60	19	4	6	93	2	2	24	348
Minnesota	MN	6	14	9	21	9	0	6	22	1	0	8	96
Mississippi	MS	2	5	4	4	3	1	1	10	0	0	2	32
Missouri	MO	6	23	17	26	10	0	7	23	2	0	7	121
Montana	MT	0	0	0	0	0	0	0	0	0	0	0	0
Nebraska	NE	1	8	2	5	3	1	0	10	0	0	3	33
Nevada	NV	0	10	0	6	1	0	1	13	0	0	0	31
New Hampshire	NH	1	4	0	4	1	1	0	4	1	0	2	18
New Jersey	NJ	2	56	5	28	3	2	4	55	2	0	8	165
New Mexico	NM	0	6	0	5	2	0	1	6	0	0	0	20
New York	NY	19	177	63	100	33	3	18	181	9	6	48	657
North Carolina	NC	8	48	14	23	11	0	7	39	2	2	11	165
North Dakota	ND	0	0	0	3	0	0	0	4	0	0	0	7
Ohio	OH	11	86	24	60	21	4	9	79	5	3	18	320
Oklahoma	OK	1	16	5	8	4	2	0	13	0	0	4	53
Oregon	OR	3	6	5	8	3	0	2	15	0	0	3	45
Pennsylvania	PA	19	90	29	63	25	6	10	102	6	4	23	377
Puerto Rico	PR	2	12	4	4	2	0	0	8	0	0	2	34
Rhode Island	RI	1	8	4	6	0	0	2	7	0	0	2	30
South Carolina	SC	2	16	7	11	4	1	2	21	1	1	3	69
South Dakota	SD	0	0	0	0	0	0	0	3	0	0	0	3
Tennessee	TN	6	32	10	18	9	5	2	36	0	0	10	128
Texas	TX	16	117	40	62	22	8	13	88	5	1	23	395
Utah	UT	2	6	4	6	3	2	2	6	0	0	3	34
Vermont	VT	1	3	0	3	1	0	0	4	0	0	1	13
Virginia	VA	6	34	9	13	9	1	6	29	0	1	6	114
Washington	WA	3	11	7	11	6	0	4	16	1	1	5	65
West Virginia	WV	1	9	4	7	2	0	0	13	1	0	4	41
Wisconsin	WI	3	18	6	11	6	0	5	18	1	0	6	74
Wyoming	WY	0	0	0	0	0	0	0	0	0	0	0	0

Abbreviations: GME, graduate medical education; NS, Neurological surgery; OBG, Obstetrics and gynecology; OPH, Ophthalmology; ORS, Orthopaedic surgery; OTO, Otolaryngology - head and neck surgery; PS, Plastic surgery; PSI, Plastic surgery - integrated; GS, Surgery; VSI, Vascular surgery - integrated; TSI, Thoracic surgery - integrated; U, Urology.

TABLE C.30

Number of Residents Entering GME and the GME Pipeline by Specialty

Specialty	PGY1 Residents	PGY1 Residents as % of Total	PGY1 Residents with No Prior Training	PGY1 Residents with No Prior Training as % of Total	Entering Pipeline Residents	Entering Pipeline Residents as % of Total
OVERALL	36,443	100.0%	33,593	100.0%	33,594	100.0%
Anesthesiology	1,602	4.4%	1,268	3.8%	1,602	4.8%
Dermatology	534	1.5%	41	0.1%	534	1.6%
Emergency medicine	2,666	7.3%	2,543	7.6%	2,666	7.9%
Family medicine	4,737	13.0%	4,548	13.5%	4,737	14.1%
Internal medicine	11,434	31.4%	11,012	32.8%	9,242	27.5%
Medical genetics and genomics	37	0.1%	3	0.0%	37	0.1%
Neurological surgery	231	0.6%	225	0.7%	231	0.7%
Neurology	868	2.4%	525	1.6%	868	2.6%
Child neurology	0	0.0%	0	0.0%	140	0.4%
Nuclear medicine	0	0.0%	0	0.0%	39	0.1%
Obstetrics and gynecology	1,460	4.0%	1,413	4.2%	1,442	4.3%
Ophthalmology	0	0.0%	0	0.0%	504	1.5%
Orthopaedic surgery	883	2.4%	847	2.5%	883	2.6%
Osteopathic neuromusculoskeletal medicine	3	0.0%	3	0.0%	3	0.0%
Otolaryngology - head and neck surgery	350	1.0%	346	1.0%	350	1.0%
Pathology-anatomic and clinical	611	1.7%	574	1.7%	611	1.8%
Pediatrics	3,227	8.9%	3,166	9.4%	3,139	9.3%
Physical medicine and rehabilitation	412	1.1%	146	0.4%	412	1.2%
Plastic surgery	0	0.0%	0	0.0%	71	0.2%
Plastic surgery - integrated	172	0.5%	165	0.5%	172	0.5%
Preventive medicine	175	0.5%	11	0.0%	175	0.5%
Psychiatry	1,875	5.1%	1,817	5.4%	1,875	5.6%
Radiation oncology	0	0.0%	0	0.0%	192	0.6%
Radiology-diagnostic	0	0.0%	0	0.0%	1,142	3.4%
Interventional radiology - integrated	0	0.0%	0	0.0%	139	0.4%
Surgery	2,705	7.4%	2,568	7.6%	1,524	4.5%
Vascular surgery - integrated	68	0.2%	65	0.2%	68	0.2%
Thoracic surgery - integrated	36	0.1%	35	0.1%	36	0.1%
Urology	372	1.0%	335	1.0%	372	1.1%
Transitional year	1,597	4.4%	1,553	4.6%	0	0.0%
Internal medicine/Pediatrics	388	1.1%	384	1.1%	388	1.2%

Abbreviations: GME, graduate medical education; PGY1, post graduate year 1.

TABLE C.31

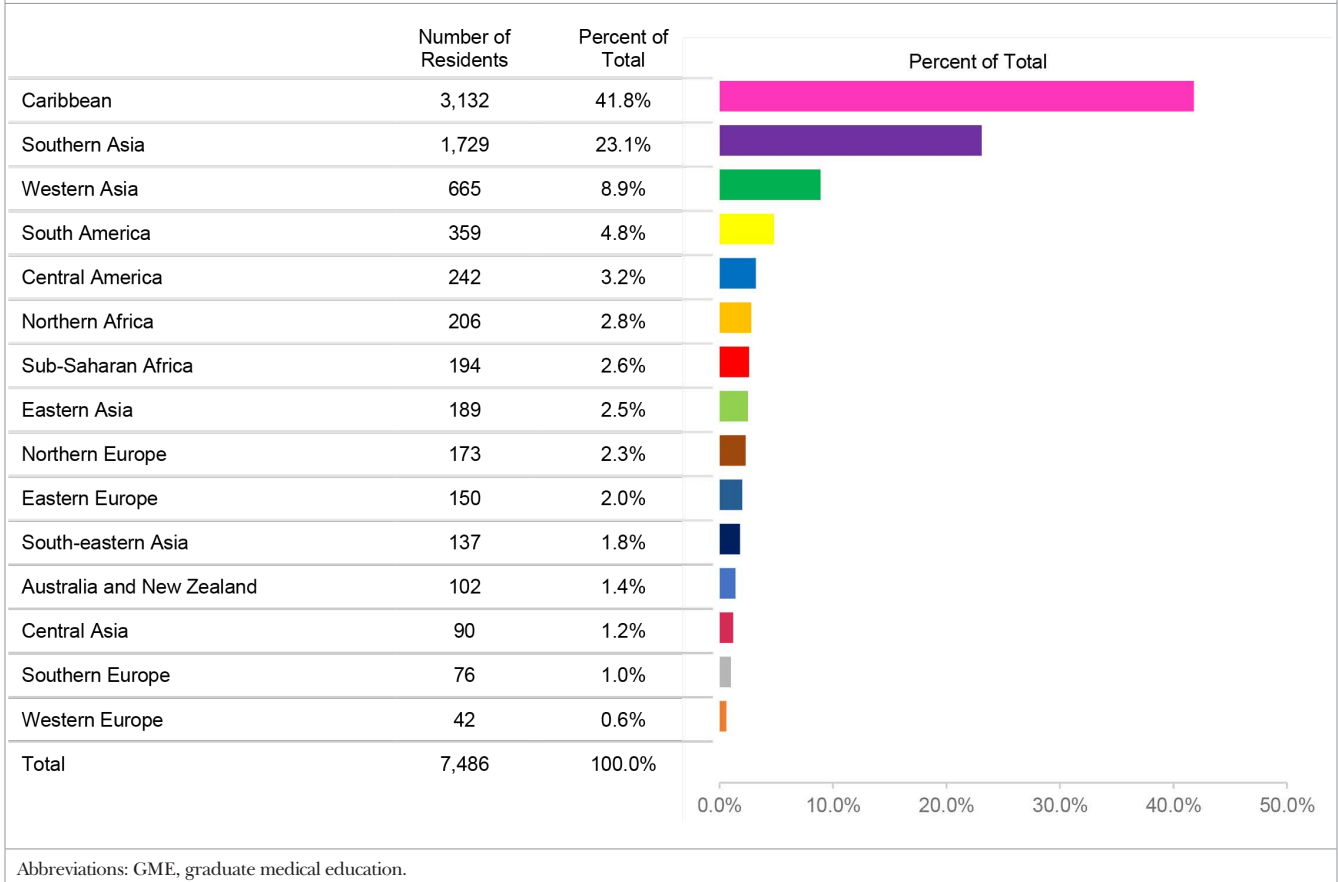
Number of Residents Entering GME and the GME Pipeline by State

State Name	PGY1 Residents	PGY1 Residents as % of Total	PGY1 Residents with No Prior Training	PGY1 Residents with No Prior Training as % of Total	Entering Pipeline Residents	Entering Pipeline Residents as % of Total
OVERALL	36,443	100.0%	33,593	100.0%	33,594	100.0%
Alabama	385	1.1%	363	1.1%	363	1.1%
Alaska	12	0.0%	12	0.0%	12	0.0%
Arizona	535	1.5%	491	1.5%	484	1.4%
Arkansas	284	0.8%	277	0.8%	277	0.8%
California	3,321	9.1%	3,073	9.1%	3,064	9.1%
Colorado	406	1.1%	379	1.1%	364	1.1%
Connecticut	598	1.6%	553	1.6%	547	1.6%
Delaware	96	0.3%	92	0.3%	94	0.3%
District of Columbia	399	1.1%	369	1.1%	371	1.1%
Florida	2,028	5.6%	1,847	5.5%	1,811	5.4%
Georgia	813	2.2%	723	2.2%	725	2.2%
Hawaii	131	0.4%	124	0.4%	117	0.3%
Idaho	61	0.2%	60	0.2%	57	0.2%
Illinois	1,759	4.8%	1,643	4.9%	1,624	4.8%
Indiana	416	1.1%	368	1.1%	370	1.1%
Iowa	245	0.7%	234	0.7%	239	0.7%
Kansas	218	0.6%	198	0.6%	211	0.6%
Kentucky	376	1.0%	360	1.1%	351	1.0%
Louisiana	539	1.5%	505	1.5%	520	1.5%
Maine	96	0.3%	92	0.3%	94	0.3%
Maryland	770	2.1%	654	1.9%	656	2.0%
Massachusetts	1,273	3.5%	1,137	3.4%	1,183	3.5%
Michigan	1,882	5.2%	1,758	5.2%	1,746	5.2%
Minnesota	538	1.5%	473	1.4%	515	1.5%
Mississippi	227	0.6%	218	0.6%	200	0.6%
Missouri	680	1.9%	642	1.9%	673	2.0%
Montana	29	0.1%	25	0.1%	25	0.1%
Nebraska	197	0.5%	193	0.6%	193	0.6%
Nevada	274	0.8%	253	0.8%	228	0.7%
New Hampshire	99	0.3%	83	0.2%	95	0.3%
New Jersey	1,064	2.9%	957	2.8%	970	2.9%
New Mexico	170	0.5%	150	0.4%	153	0.5%
New York	4,733	13.0%	4,355	13.0%	4,235	12.6%
North Carolina	910	2.5%	837	2.5%	876	2.6%
North Dakota	60	0.2%	57	0.2%	49	0.1%
Ohio	1,747	4.8%	1,660	4.9%	1,661	4.9%
Oklahoma	315	0.9%	300	0.9%	313	0.9%
Oregon	245	0.7%	234	0.7%	234	0.7%
Pennsylvania	2,257	6.2%	2,015	6.0%	2,105	6.3%
Puerto Rico	282	0.8%	253	0.8%	225	0.7%
Rhode Island	206	0.6%	178	0.5%	196	0.6%
South Carolina	440	1.2%	423	1.3%	405	1.2%
South Dakota	51	0.1%	50	0.1%	43	0.1%
Tennessee	610	1.7%	573	1.7%	578	1.7%
Texas	2,278	6.3%	2,138	6.4%	2,163	6.4%
Utah	191	0.5%	172	0.5%	180	0.5%
Vermont	73	0.2%	68	0.2%	76	0.2%
Virginia	772	2.1%	722	2.1%	687	2.0%
Washington	556	1.5%	510	1.5%	505	1.5%
West Virginia	278	0.8%	260	0.8%	245	0.7%
Wisconsin	504	1.4%	468	1.4%	472	1.4%
Wyoming	14	0.0%	14	0.0%	14	0.0%

Abbreviations: GME, graduate medical education; PGY1, post graduate year 1.

FIGURE C.32

Number of Residents who are International Medical School Graduates Entering the GME Pipeline by Region, 2019-2020





Graduating Residents and Residents Leaving Prior to Completion

This section summarizes the characteristics of both graduating residents who successfully completed all accredited education, and residents who left their program prior to successful completion. Resident completion status for the 2018-2019 academic year was reported during the fall of the 2019-2020 academic year, therefore, the following data includes only those residents who graduated or left their programs between September 1, 2018 and August 31, 2019.

Graduating Residents

Of the 45,101 residents graduating from ACGME-accredited programs in the 2018-2019 academic year, 62.1% graduated from a medical program, 20.0% graduated from a hospital-based program, and 14.9% graduated from a surgical program. From the 2009-2010 academic year to the 2018-2019 academic year, there was a 26.7% increase in graduating residents (a 24.6% increase in specialty program graduates and a 32.3% increase in subspecialty program graduates). The specialties with the highest number of graduating residents in the 2018-2019 academic year include:

- Internal medicine (8,481)
- Family medicine (4,110)
- Pediatrics (3,037)

International medical school graduates account for 11,315 (25.1%) of all graduating residents.

Residents Completing Preliminary Education and Training and Transitional Year Graduates

There were 3,575 residents who completed preliminary education and training and 1,545 residents graduating from transitional year programs during the 2018-2019 academic year, for a total of 5,120 residents completing the necessary prerequisite education and training for specialty programs that require a clinical base year. Of the 3,575 preliminary education and training graduates, 2,105 (58.9%) were in internal medicine, 1,380 (38.6%) were in surgery, 81 (2.3%) were in pediatrics, and nine (0.3%) were in obstetrics and gynecology.

Over the last 10 years, the total number of preliminary graduates has fluctuated, with a high of 3,612 in the 2009-2010 academic year, and a low of 3,118 in 2011-2012. The number of transitional year graduates has remained fairly constant, with approximately 1,200 residents completing transitional year programs every year.

Geographic Distribution of Graduates

There were approximately 13.61 graduating residents per 100,000 population, including Puerto Rico, during the 2018-2019 academic year (9.72 specialty graduates and 3.88 subspecialty graduates). The following states have the highest total number of graduating residents:

- New York (5,775)
- California (4,068)
- Texas (2,956)
- Pennsylvania (2,857)

The concentration of specialty graduates ranges from 1.78 per 100,000 population in Alaska to 76.66 per 100,000 population in the District of Columbia.

Residents Leaving Prior to Completion

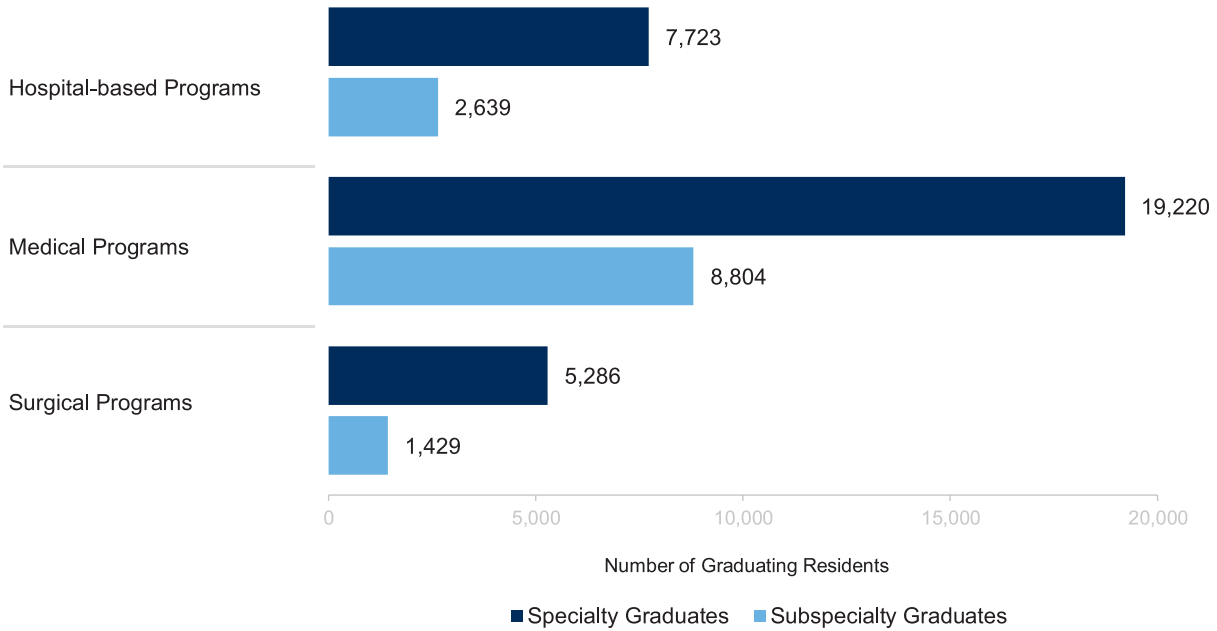
In the 2018-2019 academic year, 2,161 left their programs prior to successful completion with statuses of either deceased (1.5%), dismissed (10.6%), transferred (50.5%), unsuccessfully completed program (0.5%) or withdrawn (36.9%). The following specialties have the highest number of transferring residents:

- Psychiatry (369)
- Surgery (131)
- Internal medicine (111)

Overall, of the 1,043 transfers that occurred among residents in specialty programs during the 2018-2019 academic year, 371 (35.6%) occurred during the first year of the program, 211 (20.2%) occurred during the second year of the program, 406 (38.9%) occurred during the third year of the program, and 55 (5.3%) occurred in the fourth, fifth, or sixth year of the program. ↖

FIGURE D.1

Number of Graduating Residents by Specialty Group, 2018-2019 AY



Note: Total number of graduating residents = 45,101.
Abbreviations: AY, academic year.

FIGURE D.2

Number of Graduating Residents by Academic Year, 2009-2010 to 2018-2019

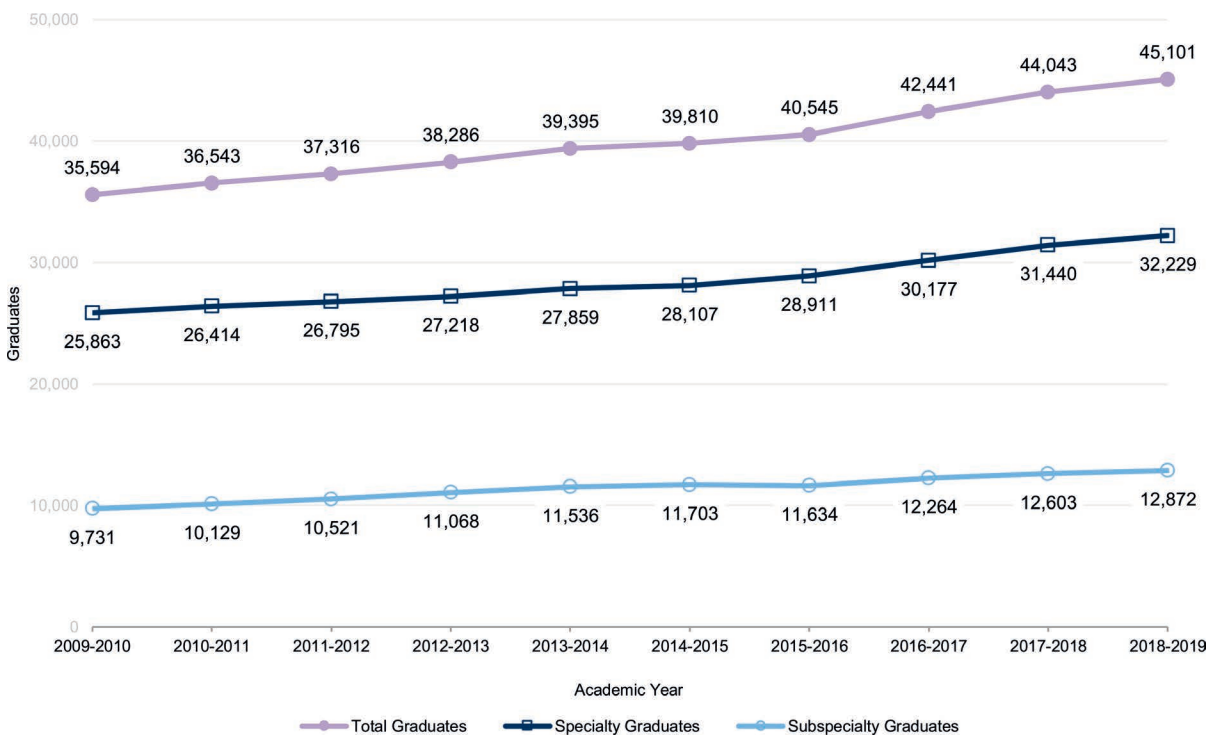
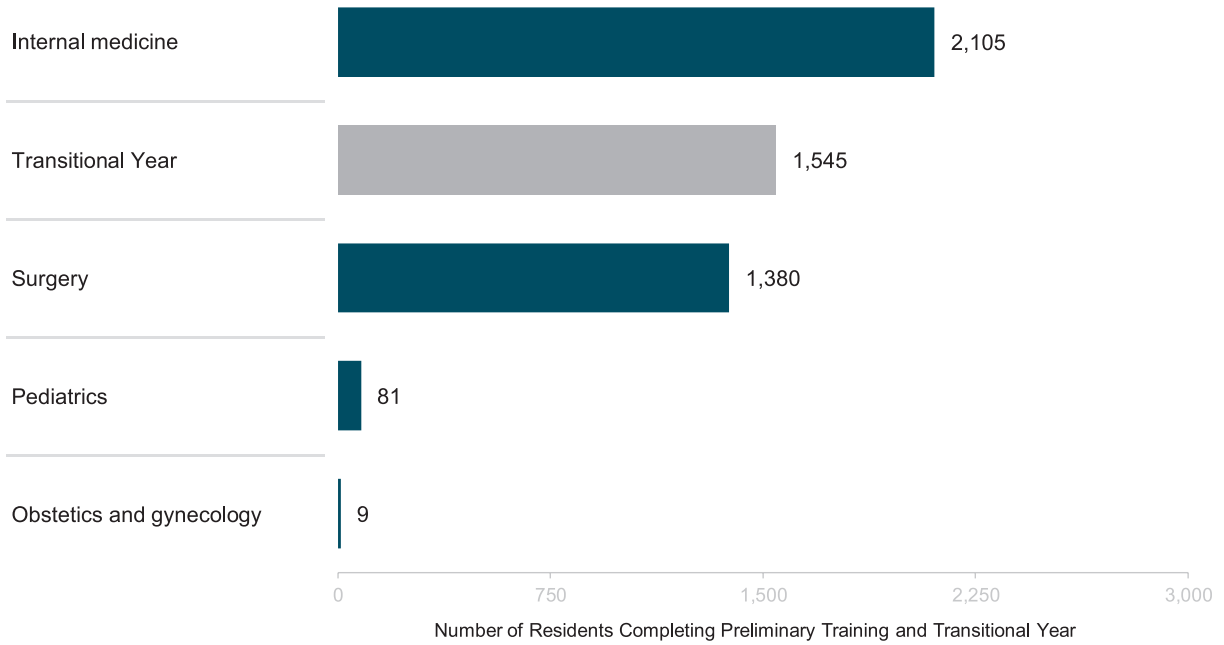


FIGURE D.3

Number of Residents Completing Preliminary Training and Transitional Year by Specialty, 2018-2019 AY



Notes: Total number of residents completing preliminary training = 3,575. Total number of residents completing transitional year programs = 1,545. Abbreviations: AY, academic year

FIGURE D.4

Number of Residents Completing Preliminary Training and Transitional Year by Academic Year, 2009-2010 to 2018-2019



TABLE D.5
Number of Graduating Residents and Residents Completing Preliminary Training by Specialty and Subspecialty, 2018-2019 AY

Specialty	Total Graduates	Percent of Total Graduates	Number of Residents Completing Preliminary Training	Percent of Total Residents Completing Preliminary Training
OVERALL	45,101	100.0%	3,575	100.0%
TOTAL PIPELINE	30,334	67.3%	3,575	100.0%
Allergy and immunology	153	0.3%	0	0.0%
Anesthesiology	1,677	3.7%	0	0.0%
- Adult cardiothoracic anesthesiology	227	0.5%	0	0.0%
- Clinical informatics	1	0.0%	0	0.0%
- Critical care medicine	182	0.4%	0	0.0%
- Regional anesthesiology and acute pain medicine	65	0.1%	0	0.0%
- Obstetric anesthesiology	46	0.1%	0	0.0%
- Pain medicine (multidisciplinary)	385	0.9%	0	0.0%
- Pediatric anesthesiology	205	0.5%	0	0.0%
Colon and rectal surgery	101	0.2%	0	0.0%
Dermatology	512	1.1%	0	0.0%
- Dermatopathology (multidisciplinary)	68	0.2%	0	0.0%
- Micrographic surgery and dermatologic oncology	81	0.2%	0	0.0%
Emergency medicine	2,272	5.0%	0	0.0%
- Clinical informatics	1	0.0%	0	0.0%
- Emergency medical services	66	0.1%	0	0.0%
- Medical toxicology	33	0.1%	0	0.0%
- Pediatric emergency medicine	35	0.1%	0	0.0%
- Sports medicine	14	0.0%	0	0.0%
- Undersea and hyperbaric medicine	9	0.0%	0	0.0%
Family medicine	4,110	9.1%	0	0.0%
- Clinical informatics	6	0.0%	0	0.0%
- Geriatric medicine	49	0.1%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	359	0.8%	0	0.0%
- Sports medicine	243	0.5%	0	0.0%
Internal medicine	8,481	18.8%	2,105	58.9%
- Adult congenital heart disease	8	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	106	0.2%	0	0.0%
- Cardiovascular disease	959	2.1%	0	0.0%
- Clinical cardiac electrophysiology	135	0.3%	0	0.0%
- Clinical informatics	15	0.0%	0	0.0%
- Critical care medicine	143	0.3%	0	0.0%
- Endocrinology, diabetes, and metabolism	338	0.7%	0	0.0%
- Gastroenterology	563	1.2%	0	0.0%
- Geriatric medicine	263	0.6%	0	0.0%
- Hematology	10	0.0%	0	0.0%
- Hematology and medical oncology	569	1.3%	0	0.0%
- Infectious disease	374	0.8%	0	0.0%
- Interventional cardiology	338	0.7%	0	0.0%
- Nephrology	391	0.9%	0	0.0%
- Medical oncology	14	0.0%	0	0.0%
- Pulmonary disease	28	0.1%	0	0.0%
- Pulmonary disease and critical care medicine	612	1.4%	0	0.0%
- Rheumatology	241	0.5%	0	0.0%
- Sleep medicine (multidisciplinary)	177	0.4%	0	0.0%
- Transplant hepatology	48	0.1%	0	0.0%
Medical genetics and genomics	42	0.1%	0	0.0%
- Medical biochemical genetics	15	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	61	0.1%	0	0.0%
Neurological surgery	166	0.4%	0	0.0%
- Endovascular surgical neuroradiology	1	0.0%	0	0.0%

TABLE D.5 *Continued*
Number of Graduating Residents and Residents Completing Preliminary Training by Specialty and Subspecialty, 2018-2019 AY

Specialty	Total Graduates	Percent of Total Graduates	Number of Residents Completing Preliminary Training	Percent of Total Residents Completing Preliminary Training
Neurology	744	1.6%	0	0.0%
- Brain injury medicine	1	0.0%	0	0.0%
- Clinical neurophysiology	160	0.4%	0	0.0%
- Epilepsy	116	0.3%	0	0.0%
- Endovascular surgical neuroradiology	1	0.0%	0	0.0%
- Neurodevelopmental disabilities	9	0.0%	0	0.0%
- Neuromuscular medicine	71	0.2%	0	0.0%
- Vascular neurology	132	0.3%	0	0.0%
Child neurology	123	0.3%	0	0.0%
Nuclear medicine	36	0.1%	0	0.0%
Obstetrics and gynecology	1,360	3.0%	9	0.3%
- Female pelvic medicine and reconstructive surgery	45	0.1%	0	0.0%
- Gynecologic oncology	63	0.1%	0	0.0%
- Maternal-fetal medicine	114	0.3%	0	0.0%
- Reproductive endocrinology and infertility	55	0.1%	0	0.0%
Ophthalmology	477	1.1%	0	0.0%
- Ophthalmic plastic and reconstructive surgery	2	0.0%	0	0.0%
Orthopaedic surgery	821	1.8%	0	0.0%
- Adult reconstructive orthopaedics	47	0.1%	0	0.0%
- Foot and ankle orthopaedics	16	0.0%	0	0.0%
- Hand surgery	156	0.3%	0	0.0%
- Musculoskeletal oncology	13	0.0%	0	0.0%
- Orthopaedic sports medicine	201	0.4%	0	0.0%
- Orthopaedic surgery of the spine	28	0.1%	0	0.0%
- Orthopaedic trauma	19	0.0%	0	0.0%
- Pediatric orthopaedics	35	0.1%	0	0.0%
Osteopathic neuromusculoskeletal medicine	29	0.1%	0	0.0%
Otolaryngology - head and neck surgery	315	0.7%	0	0.0%
- Neurotology	16	0.0%	0	0.0%
- Pediatric otolaryngology	36	0.1%	0	0.0%
Pathology-anatomic and clinical	579	1.3%	0	0.0%
- Blood banking/transfusion medicine	59	0.1%	0	0.0%
- Clinical informatics	4	0.0%	0	0.0%
- Chemical pathology	2	0.0%	0	0.0%
- Cytopathology	134	0.3%	0	0.0%
- Forensic pathology	43	0.1%	0	0.0%
- Hematopathology	134	0.3%	0	0.0%
- Medical microbiology	14	0.0%	0	0.0%
- Neuropathology	22	0.0%	0	0.0%
- Pediatric pathology	24	0.1%	0	0.0%
- Selective pathology	171	0.4%	0	0.0%
Pediatrics	3,037	6.7%	81	2.3%
- Adolescent medicine	27	0.1%	0	0.0%
- Child abuse pediatrics	7	0.0%	0	0.0%
- Clinical informatics	4	0.0%	0	0.0%
- Developmental-behavioral pediatrics	27	0.1%	0	0.0%
- Neonatal-perinatal medicine	253	0.6%	0	0.0%
- Pediatric cardiology	148	0.3%	0	0.0%
- Pediatric critical care medicine	173	0.4%	0	0.0%
- Pediatric emergency medicine	141	0.3%	0	0.0%
- Pediatric endocrinology	86	0.2%	0	0.0%
- Pediatric gastroenterology	101	0.2%	0	0.0%
- Pediatric hematology/oncology	160	0.4%	0	0.0%

TABLE D.5 Continued

Number of Graduating Residents and Residents Completing Preliminary Training by Specialty and Subspecialty, 2018-2019 AY

Specialty	Total Graduates	Percent of Total Graduates	Number of Residents Completing Preliminary Training	Percent of Total Residents Completing Preliminary Training
- Pediatric infectious diseases	56	0.1%	0	0.0%
- Pediatric nephrology	32	0.1%	0	0.0%
- Pediatric pulmonology	57	0.1%	0	0.0%
- Pediatric rheumatology	29	0.1%	0	0.0%
- Pediatric sports medicine	26	0.1%	0	0.0%
- Pediatric transplant hepatology	10	0.0%	0	0.0%
- Pediatric hospital medicine	1	0.0%	0	0.0%
Physical medicine and rehabilitation	415	0.9%	0	0.0%
- Brain injury medicine	17	0.0%	0	0.0%
- Neuromuscular medicine	1	0.0%	0	0.0%
- Spinal cord injury medicine	21	0.0%	0	0.0%
- Pediatric rehabilitation	18	0.0%	0	0.0%
- Sports medicine	31	0.1%	0	0.0%
Plastic surgery	84	0.2%	0	0.0%
Plastic surgery - integrated	124	0.3%	0	0.0%
- Craniofacial surgery	8	0.0%	0	0.0%
- Hand surgery	22	0.0%	0	0.0%
Preventive medicine	194	0.4%	0	0.0%
- Medical toxicology	2	0.0%	0	0.0%
- Undersea and hyperbaric medicine	2	0.0%	0	0.0%
Psychiatry	1,243	2.8%	0	0.0%
- Addiction medicine (multidisciplinary)	40	0.1%	0	0.0%
- Addiction psychiatry	82	0.2%	0	0.0%
- Child and adolescent psychiatry	434	1.0%	0	0.0%
- Forensic psychiatry	67	0.1%	0	0.0%
- Geriatric psychiatry	54	0.1%	0	0.0%
- Consultation-liaison psychiatry	73	0.2%	0	0.0%
Radiation oncology	189	0.4%	0	0.0%
Radiology-diagnostic	1,174	2.6%	0	0.0%
- Abdominal radiology	42	0.1%	0	0.0%
- Endovascular surgical neuroradiology	5	0.0%	0	0.0%
- Musculoskeletal radiology	33	0.1%	0	0.0%
- Neuroradiology	263	0.6%	0	0.0%
- Nuclear radiology	11	0.0%	0	0.0%
- Pediatric radiology	56	0.1%	0	0.0%
- Vascular and interventional radiology	272	0.6%	0	0.0%
Interventional radiology - independent	1	0.0%	0	0.0%
Interventional radiology - integrated	15	0.0%	0	0.0%
Surgery	1,336	3.0%	1,380	38.6%
- Complex general surgical oncology	55	0.1%	0	0.0%
- Hand surgery	8	0.0%	0	0.0%
- Pediatric surgery	42	0.1%	0	0.0%
- Surgical critical care	281	0.6%	0	0.0%
- Vascular surgery	121	0.3%	0	0.0%
Vascular surgery - integrated	56	0.1%	0	0.0%
Thoracic surgery	97	0.2%	0	0.0%
- Congenital cardiac surgery	10	0.0%	0	0.0%
Thoracic surgery - integrated	26	0.1%	0	0.0%
Urology	323	0.7%	0	0.0%
- Female pelvic medicine and reconstructive surgery	15	0.0%	0	0.0%
- Pediatric urology	20	0.0%	0	0.0%
Transitional year	1,545	3.4%	0	0.0%
Internal medicine/Pediatrics	373	0.8%	0	0.0%

Note: Pipeline specialties are highlighted.
Abbreviations: AY, academic year.

TABLE D.6

Number of Graduating Residents by Specialty and Subspecialty and Medical School Type, 2018-2019 AY

Specialty	Total Graduates	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
OVERALL	45,101	26,730	59.3%	11,315	25.1%	6,938	15.4%	115	0.3%	3	0.0%
TOTAL PIPELINE	30,334	18,124	59.7%	7,044	23.2%	5,149	17.0%	16	0.1%	1	0.0%
Allergy and immunology	153	110	71.9%	24	15.7%	19	12.4%	0	0.0%	0	0.0%
Anesthesiology	1,677	1,231	73.4%	215	12.8%	228	13.6%	2	0.1%	1	0.1%
- Adult cardiothoracic anesthesiology	227	168	74.0%	34	15.0%	23	10.1%	2	0.9%	0	0.0%
- Clinical informatics	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	182	124	68.1%	44	24.2%	14	7.7%	0	0.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	65	47	72.3%	12	18.5%	6	9.2%	0	0.0%	0	0.0%
- Obstetric anesthesiology	46	34	73.9%	8	17.4%	4	8.7%	0	0.0%	0	0.0%
- Pain medicine (multidisciplinary)	385	269	69.9%	60	15.6%	55	14.3%	1	0.3%	0	0.0%
- Pediatric anesthesiology	205	157	76.6%	31	15.1%	15	7.3%	2	1.0%	0	0.0%
Colon and rectal surgery	101	76	75.2%	17	16.8%	5	5.0%	3	3.0%	0	0.0%
Dermatology	512	427	83.4%	22	4.3%	63	12.3%	0	0.0%	0	0.0%
- Dermatopathology (multidisciplinary)	68	45	66.2%	14	20.6%	8	11.8%	1	1.5%	0	0.0%
- Micrographic surgery and dermatologic oncology	81	73	90.1%	2	2.5%	6	7.4%	0	0.0%	0	0.0%
Emergency medicine	2,272	1,585	69.8%	128	5.6%	559	24.6%	0	0.0%	0	0.0%
- Clinical informatics	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Emergency medical services	66	46	69.7%	6	9.1%	14	21.2%	0	0.0%	0	0.0%
- Medical toxicology	33	23	69.7%	5	15.2%	4	12.1%	1	3.0%	0	0.0%
- Pediatric emergency medicine	35	20	57.1%	11	31.4%	4	11.4%	0	0.0%	0	0.0%
- Sports medicine	14	6	42.9%	1	7.1%	7	50.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	9	6	66.7%	1	11.1%	2	22.2%	0	0.0%	0	0.0%
Family medicine	4,110	1,717	41.8%	1,122	27.3%	1,269	30.9%	2	0.0%	0	0.0%
- Clinical informatics	6	1	16.7%	4	66.7%	1	16.7%	0	0.0%	0	0.0%
- Geriatric medicine	49	19	38.8%	23	46.9%	7	14.3%	0	0.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	359	219	61.0%	80	22.3%	60	16.7%	0	0.0%	0	0.0%
- Sports medicine	243	120	49.4%	28	11.5%	95	39.1%	0	0.0%	0	0.0%
Internal medicine	8,481	3,773	44.5%	3,449	40.7%	1,255	14.8%	4	0.0%	0	0.0%
- Adult congenital heart disease	8	6	75.0%	1	12.5%	0	0.0%	1	12.5%	0	0.0%
- Advanced heart failure and transplant cardiology	106	64	60.4%	34	32.1%	5	4.7%	3	2.8%	0	0.0%
- Cardiovascular disease	959	478	49.8%	376	39.2%	103	10.7%	2	0.2%	0	0.0%
- Clinical cardiac electrophysiology	135	68	50.4%	50	37.0%	15	11.1%	2	1.5%	0	0.0%
- Clinical informatics	15	7	46.7%	6	40.0%	2	13.3%	0	0.0%	0	0.0%
- Critical care medicine	143	35	24.5%	77	53.8%	30	21.0%	1	0.7%	0	0.0%
- Endocrinology, diabetes, and metabolism	338	127	37.6%	190	56.2%	21	6.2%	0	0.0%	0	0.0%
- Gastroenterology	563	339	60.2%	153	27.2%	71	12.6%	0	0.0%	0	0.0%
- Geriatric medicine	263	88	33.5%	150	57.0%	24	9.1%	1	0.4%	0	0.0%
- Hematology	10	8	80.0%	2	20.0%	0	0.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	569	291	51.1%	245	43.1%	32	5.6%	1	0.2%	0	0.0%
- Infectious disease	374	180	48.1%	152	40.6%	41	11.0%	1	0.3%	0	0.0%
- Interventional cardiology	338	152	45.0%	157	46.4%	28	8.3%	1	0.3%	0	0.0%
- Nephrology	391	85	21.7%	265	67.8%	40	10.2%	1	0.3%	0	0.0%
- Medical oncology	14	8	57.1%	6	42.9%	0	0.0%	0	0.0%	0	0.0%
- Pulmonary disease	28	1	3.6%	25	89.3%	2	7.1%	0	0.0%	0	0.0%
- Pulmonary disease and critical care medicine	612	302	49.3%	242	39.5%	68	11.1%	0	0.0%	0	0.0%
- Rheumatology	241	117	48.5%	86	35.7%	37	15.4%	1	0.4%	0	0.0%
- Sleep medicine (multidisciplinary)	177	78	44.1%	77	43.5%	21	11.9%	1	0.6%	0	0.0%
- Transplant hepatology	48	33	68.8%	11	22.9%	2	4.2%	2	4.2%	0	0.0%
Medical genetics and genomics	42	27	64.3%	11	26.2%	4	9.5%	0	0.0%	0	0.0%
- Medical biochemical genetics	15	6	40.0%	8	53.3%	0	0.0%	1	6.7%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	61	32	52.5%	25	41.0%	3	4.9%	1	1.6%	0	0.0%
Neurological surgery	166	138	83.1%	20	12.0%	8	4.8%	0	0.0%	0	0.0%
- Endovascular surgical neuroradiology	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

TABLE D.6 Continued

Number of Graduating Residents by Specialty and Subspecialty and Medical School Type, 2018-2019 AY

Specialty	Total Graduates	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
Neurology	744	423	56.9%	238	32.0%	83	11.2%	0	0.0%	0	0.0%
- Brain injury medicine	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Clinical neurophysiology	160	81	50.6%	59	36.9%	20	12.5%	0	0.0%	0	0.0%
- Epilepsy	116	63	54.3%	47	40.5%	4	3.4%	1	0.9%	1	0.9%
- Endovascular surgical neuroradiology	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	9	6	66.7%	3	33.3%	0	0.0%	0	0.0%	0	0.0%
- Neuromuscular medicine	71	38	53.5%	22	31.0%	10	14.1%	1	1.4%	0	0.0%
- Vascular neurology	132	61	46.2%	60	45.5%	10	7.6%	1	0.8%	0	0.0%
Child neurology	123	90	73.2%	26	21.1%	7	5.7%	0	0.0%	0	0.0%
Nuclear medicine	36	13	36.1%	21	58.3%	1	2.8%	1	2.8%	0	0.0%
Obstetrics and gynecology	1,360	1,016	74.7%	132	9.7%	212	15.6%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	45	40	88.9%	2	4.4%	3	6.7%	0	0.0%	0	0.0%
- Gynecologic oncology	63	55	87.3%	3	4.8%	4	6.3%	1	1.6%	0	0.0%
- Maternal-fetal medicine	114	90	78.9%	17	14.9%	7	6.1%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	55	46	83.6%	7	12.7%	1	1.8%	1	1.8%	0	0.0%
Ophthalmology	477	431	90.4%	21	4.4%	25	5.2%	0	0.0%	0	0.0%
- Ophthalmic plastic and reconstructive surgery	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
Orthopaedic surgery	821	703	85.6%	12	1.5%	106	12.9%	0	0.0%	0	0.0%
- Adult reconstructive orthopaedics	47	44	93.6%	3	6.4%	0	0.0%	0	0.0%	0	0.0%
- Foot and ankle orthopaedics	16	12	75.0%	3	18.8%	1	6.3%	0	0.0%	0	0.0%
- Hand surgery	156	144	92.3%	3	1.9%	8	5.1%	1	0.6%	0	0.0%
- Musculoskeletal oncology	13	10	76.9%	3	23.1%	0	0.0%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	201	156	77.6%	15	7.5%	26	12.9%	4	2.0%	0	0.0%
- Orthopaedic surgery of the spine	28	16	57.1%	8	28.6%	3	10.7%	1	3.6%	0	0.0%
- Orthopaedic trauma	19	16	84.2%	0	0.0%	1	5.3%	2	10.5%	0	0.0%
- Pediatric orthopaedics	35	28	80.0%	4	11.4%	3	8.6%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	29	0	0.0%	0	0.0%	29	100.0%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	315	289	91.7%	7	2.2%	19	6.0%	0	0.0%	0	0.0%
- Neurotology	16	14	87.5%	0	0.0%	0	0.0%	2	12.5%	0	0.0%
- Pediatric otolaryngology	36	26	72.2%	4	11.1%	1	2.8%	5	13.9%	0	0.0%
Pathology-anatomic and clinical	579	302	52.2%	229	39.6%	47	8.1%	1	0.2%	0	0.0%
- Blood banking/transfusion medicine	59	36	61.0%	18	30.5%	5	8.5%	0	0.0%	0	0.0%
- Clinical informatics	4	1	25.0%	2	50.0%	1	25.0%	0	0.0%	0	0.0%
- Chemical pathology	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
- Cytopathology	134	62	46.3%	66	49.3%	6	4.5%	0	0.0%	0	0.0%
- Forensic pathology	43	22	51.2%	11	25.6%	9	20.9%	1	2.3%	0	0.0%
- Hematopathology	134	60	44.8%	54	40.3%	16	11.9%	4	3.0%	0	0.0%
- Medical microbiology	14	10	71.4%	3	21.4%	1	7.1%	0	0.0%	0	0.0%
- Neuropathology	22	11	50.0%	10	45.5%	1	4.5%	0	0.0%	0	0.0%
- Pediatric pathology	24	13	54.2%	7	29.2%	3	12.5%	1	4.2%	0	0.0%
- Selective pathology	171	56	32.7%	95	55.6%	15	8.8%	5	2.9%	0	0.0%
Pediatrics	3,037	2,017	66.4%	577	19.0%	441	14.5%	2	0.1%	0	0.0%
- Adolescent medicine	27	26	96.3%	1	3.7%	0	0.0%	0	0.0%	0	0.0%
- Child abuse pediatrics	7	5	71.4%	0	0.0%	2	28.6%	0	0.0%	0	0.0%
- Clinical informatics	4	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	27	19	70.4%	4	14.8%	4	14.8%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	253	135	53.4%	82	32.4%	35	13.8%	1	0.4%	0	0.0%
- Pediatric cardiology	148	109	73.6%	28	18.9%	10	6.8%	1	0.7%	0	0.0%
- Pediatric critical care medicine	173	114	65.9%	39	22.5%	19	11.0%	1	0.6%	0	0.0%
- Pediatric emergency medicine	141	109	77.3%	20	14.2%	12	8.5%	0	0.0%	0	0.0%
- Pediatric endocrinology	86	44	51.2%	39	45.3%	2	2.3%	1	1.2%	0	0.0%
- Pediatric gastroenterology	101	63	62.4%	29	28.7%	9	8.9%	0	0.0%	0	0.0%
- Pediatric hematology/oncology	160	123	76.9%	27	16.9%	10	6.3%	0	0.0%	0	0.0%

TABLE D.6 Continued

Number of Graduating Residents by Specialty and Subspecialty and Medical School Type, 2018-2019 AY											
Specialty	Total Graduates	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
- Pediatric infectious diseases	56	34	60.7%	19	33.9%	3	5.4%	0	0.0%	0	0.0%
- Pediatric nephrology	32	20	62.5%	11	34.4%	1	3.1%	0	0.0%	0	0.0%
- Pediatric pulmonology	57	34	59.6%	18	31.6%	5	8.8%	0	0.0%	0	0.0%
- Pediatric rheumatology	29	19	65.5%	7	24.1%	3	10.3%	0	0.0%	0	0.0%
- Pediatric sports medicine	26	16	61.5%	1	3.8%	8	30.8%	1	3.8%	0	0.0%
- Pediatric transplant hepatology	10	6	60.0%	2	20.0%	1	10.0%	1	10.0%	0	0.0%
- Pediatric hospital medicine	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	415	208	50.1%	44	10.6%	163	39.3%	0	0.0%	0	0.0%
- Brain injury medicine	17	6	35.3%	3	17.6%	8	47.1%	0	0.0%	0	0.0%
- Neuromuscular medicine	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Spinal cord injury medicine	21	13	61.9%	5	23.8%	3	14.3%	0	0.0%	0	0.0%
- Pediatric rehabilitation	18	13	72.2%	1	5.6%	4	22.2%	0	0.0%	0	0.0%
- Sports medicine	31	20	64.5%	2	6.5%	9	29.0%	0	0.0%	0	0.0%
Plastic surgery	84	53	63.1%	24	28.6%	7	8.3%	0	0.0%	0	0.0%
Plastic surgery - integrated	124	119	96.0%	5	4.0%	0	0.0%	0	0.0%	0	0.0%
- Craniofacial surgery	8	7	87.5%	1	12.5%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	22	19	86.4%	0	0.0%	1	4.5%	2	9.1%	0	0.0%
Preventive medicine	194	120	61.9%	32	16.5%	39	20.1%	3	1.5%	0	0.0%
- Medical toxicology	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	2	1	50.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%
Psychiatry	1,243	738	59.4%	308	24.8%	197	15.8%	0	0.0%	0	0.0%
- Addiction medicine (multidisciplinary)	40	26	65.0%	8	20.0%	6	15.0%	0	0.0%	0	0.0%
- Addiction psychiatry	82	43	52.4%	32	39.0%	6	7.3%	1	1.2%	0	0.0%
- Child and adolescent psychiatry	434	230	53.0%	148	34.1%	55	12.7%	1	0.2%	0	0.0%
- Forensic psychiatry	67	38	56.7%	18	26.9%	10	14.9%	1	1.5%	0	0.0%
- Geriatric psychiatry	54	25	46.3%	24	44.4%	4	7.4%	0	0.0%	1	1.9%
- Consultation-liaison psychiatry	73	39	53.4%	25	34.2%	7	9.6%	2	2.7%	0	0.0%
Radiation oncology	189	181	95.8%	2	1.1%	6	3.2%	0	0.0%	0	0.0%
Radiology-diagnostic	1,174	885	75.4%	154	13.1%	134	11.4%	1	0.1%	0	0.0%
- Abdominal radiology	42	16	38.1%	18	42.9%	3	7.1%	5	11.9%	0	0.0%
- Endovascular surgical neuroradiology	5	3	60.0%	1	20.0%	0	0.0%	1	20.0%	0	0.0%
- Musculoskeletal radiology	33	28	84.8%	2	6.1%	1	3.0%	2	6.1%	0	0.0%
- Neuroradiology	263	190	72.2%	53	20.2%	18	6.8%	2	0.8%	0	0.0%
- Nuclear radiology	11	6	54.5%	5	45.5%	0	0.0%	0	0.0%	0	0.0%
- Pediatric radiology	56	41	73.2%	11	19.6%	3	5.4%	1	1.8%	0	0.0%
- Vascular and interventional radiology	272	213	78.3%	39	14.3%	20	7.4%	0	0.0%	0	0.0%
Interventional radiology - independent	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	15	14	93.3%	1	6.7%	0	0.0%	0	0.0%	0	0.0%
Surgery	1,336	941	70.4%	209	15.6%	186	13.9%	0	0.0%	0	0.0%
- Complex general surgical oncology	55	48	87.3%	4	7.3%	0	0.0%	3	5.5%	0	0.0%
- Hand surgery	8	5	62.5%	3	37.5%	0	0.0%	0	0.0%	0	0.0%
- Pediatric surgery	42	37	88.1%	3	7.1%	0	0.0%	2	4.8%	0	0.0%
- Surgical critical care	281	205	73.0%	43	15.3%	27	9.6%	6	2.1%	0	0.0%
- Vascular surgery	121	86	71.1%	29	24.0%	6	5.0%	0	0.0%	0	0.0%
Vascular surgery - integrated	56	46	82.1%	6	10.7%	4	7.1%	0	0.0%	0	0.0%
Thoracic surgery	97	73	75.3%	16	16.5%	6	6.2%	2	2.1%	0	0.0%
- Congenital cardiac surgery	10	9	90.0%	0	0.0%	1	10.0%	0	0.0%	0	0.0%
Thoracic surgery - integrated	26	24	92.3%	2	7.7%	0	0.0%	0	0.0%	0	0.0%
Urology	323	296	91.6%	6	1.9%	21	6.5%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	15	14	93.3%	0	0.0%	1	6.7%	0	0.0%	0	0.0%
- Pediatric urology	20	19	95.0%	0	0.0%	0	0.0%	1	5.0%	0	0.0%
Transitional year	1,545	960	62.1%	173	11.2%	412	26.7%	0	0.0%	0	0.0%
Internal medicine/Pediatrics	373	316	84.7%	21	5.6%	36	9.7%	0	0.0%	0	0.0%

Note: Pipeline specialties are highlighted.
Abbreviations: AY, academic year; LCME, Liaison Committee on Medical Education.

TABLE D.7
Number of Graduating Residents and Graduate Concentration per 100,000 Population by State, 2018-2019 AY

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Graduates	Percent of All Graduates	Graduates per 100,000 Pop
OVERALL	-	331,433,217	45,101	100.0%	13.61
Alabama	AL	4,903,185	490	1.1%	9.99
Alaska	AK	731,545	13	0.0%	1.78
Arizona	AZ	7,278,717	599	1.3%	8.23
Arkansas	AR	3,017,804	270	0.6%	8.95
California	CA	39,512,223	4,068	9.0%	10.30
Colorado	CO	5,758,736	533	1.2%	9.26
Connecticut	CT	3,565,287	773	1.7%	21.68
Delaware	DE	973,764	122	0.3%	12.53
District of Columbia	DC	705,749	541	1.2%	76.66
Florida	FL	21,477,737	2,115	4.7%	9.85
Georgia	GA	10,617,423	945	2.1%	8.90
Hawaii	HI	1,415,872	142	0.3%	10.03
Idaho	ID	1,787,065	43	0.1%	2.41
Illinois	IL	12,671,821	2,118	4.7%	16.71
Indiana	IN	6,732,219	489	1.1%	7.26
Iowa	IA	3,155,070	316	0.7%	10.02
Kansas	KS	2,913,314	242	0.5%	8.31
Kentucky	KY	4,467,673	442	1.0%	9.89
Louisiana	LA	4,648,794	620	1.4%	13.34
Maine	ME	1,344,212	111	0.2%	8.26
Maryland	MD	6,045,680	1,133	2.5%	18.74
Massachusetts	MA	6,892,503	1,982	4.4%	28.76
Michigan	MI	9,986,857	2,302	5.1%	23.05
Minnesota	MN	5,639,632	820	1.8%	14.54
Mississippi	MS	2,976,149	243	0.5%	8.16
Missouri	MO	6,137,428	979	2.2%	15.95
Montana	MT	1,068,778	25	0.1%	2.34
Nebraska	NE	1,934,408	253	0.6%	13.08
Nevada	NV	3,080,156	228	0.5%	7.40
New Hampshire	NH	1,359,711	149	0.3%	10.96
New Jersey	NJ	8,882,190	1,115	2.5%	12.55
New Mexico	NM	2,096,829	206	0.5%	9.82
New York	NY	19,453,561	5,775	12.8%	29.69
North Carolina	NC	10,488,084	1,222	2.7%	11.65
North Dakota	ND	762,062	48	0.1%	6.30
Ohio	OH	11,689,100	2,312	5.1%	19.78
Oklahoma	OK	3,956,971	348	0.8%	8.79
Oregon	OR	4,217,737	326	0.7%	7.73
Pennsylvania	PA	12,801,989	2,857	6.3%	22.32
Puerto Rico	PR	3,193,694	300	0.7%	9.39
Rhode Island	RI	1,059,361	266	0.6%	25.11
South Carolina	SC	5,148,714	458	1.0%	8.90
South Dakota	SD	884,659	49	0.1%	5.54
Tennessee	TN	6,829,174	803	1.8%	11.76
Texas	TX	28,995,881	2,956	6.6%	10.19
Utah	UT	3,205,958	297	0.7%	9.26
Vermont	VT	623,989	96	0.2%	15.38
Virginia	VA	8,535,519	879	1.9%	10.30
Washington	WA	7,614,893	753	1.7%	9.89
West Virginia	WV	1,792,147	274	0.6%	15.29
Wisconsin	WI	5,822,434	642	1.4%	11.03
Wyoming	WY	578,759	13	0.0%	2.25

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.
 Abbreviations: AY, academic year.

TABLE D.8

Number of Specialty Graduates and Specialty Graduate Concentration per 100,000 Population by State, 2018-2019 AY

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Specialty Graduates	Percent of All Specialty Graduates	Specialty Graduates per 100,000 Pop
OVERALL	-	331,433,217	32,229	100.0%	9.72
Alabama	AL	4,903,185	350	1.1%	7.14
Alaska	AK	731,545	12	0.0%	1.64
Arizona	AZ	7,278,717	454	1.4%	6.24
Arkansas	AR	3,017,804	212	0.7%	7.02
California	CA	39,512,223	2,802	8.7%	7.09
Colorado	CO	5,758,736	363	1.1%	6.30
Connecticut	CT	3,565,287	548	1.7%	15.37
Delaware	DE	973,764	94	0.3%	9.65
District of Columbia	DC	705,749	364	1.1%	51.58
Florida	FL	21,477,737	1,594	4.9%	7.42
Georgia	GA	10,617,423	697	2.2%	6.56
Hawaii	HI	1,415,872	124	0.4%	8.76
Idaho	ID	1,787,065	40	0.1%	2.24
Illinois	IL	12,671,821	1,592	4.9%	12.56
Indiana	IN	6,732,219	377	1.2%	5.60
Iowa	IA	3,155,070	229	0.7%	7.26
Kansas	KS	2,913,314	190	0.6%	6.52
Kentucky	KY	4,467,673	317	1.0%	7.10
Louisiana	LA	4,648,794	474	1.5%	10.20
Maine	ME	1,344,212	92	0.3%	6.84
Maryland	MD	6,045,680	724	2.2%	11.98
Massachusetts	MA	6,892,503	1,210	3.8%	17.56
Michigan	MI	9,986,857	1,816	5.6%	18.18
Minnesota	MN	5,639,632	513	1.6%	9.10
Mississippi	MS	2,976,149	183	0.6%	6.15
Missouri	MO	6,137,428	658	2.0%	10.72
Montana	MT	1,068,778	24	0.1%	2.25
Nebraska	NE	1,934,408	185	0.6%	9.56
Nevada	NV	3,080,156	198	0.6%	6.43
New Hampshire	NH	1,359,711	96	0.3%	7.06
New Jersey	NJ	8,882,190	928	2.9%	10.45
New Mexico	NM	2,096,829	137	0.4%	6.53
New York	NY	19,453,561	4,114	12.8%	21.15
North Carolina	NC	10,488,084	799	2.5%	7.62
North Dakota	ND	762,062	44	0.1%	5.77
Ohio	OH	11,689,100	1,640	5.1%	14.03
Oklahoma	OK	3,956,971	290	0.9%	7.33
Oregon	OR	4,217,737	228	0.7%	5.41
Pennsylvania	PA	12,801,989	1,968	6.1%	15.37
Puerto Rico	PR	3,193,694	245	0.8%	7.67
Rhode Island	RI	1,059,361	190	0.6%	17.94
South Carolina	SC	5,148,714	346	1.1%	6.72
South Dakota	SD	884,659	44	0.1%	4.97
Tennessee	TN	6,829,174	549	1.7%	8.04
Texas	TX	28,995,881	2,011	6.2%	6.94
Utah	UT	3,205,958	194	0.6%	6.05
Vermont	VT	623,989	68	0.2%	10.90
Virginia	VA	8,535,519	663	2.1%	7.77
Washington	WA	7,614,893	537	1.7%	7.05
West Virginia	WV	1,792,147	234	0.7%	13.06
Wisconsin	WI	5,822,434	455	1.4%	7.81
Wyoming	WY	578,759	13	0.0%	2.25

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

Abbreviations: AY, academic year.

TABLE D.9
Number of Subspecialty Graduates and Subspecialty Graduate Concentration per 100,000 Population by State, 2018-2019 AY

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Subspecialty Graduates	Percent of All Subspecialty Graduates	Subspecialty Graduates per 100,000 Pop
OVERALL	-	331,433,217	12,872	100.0%	3.88
Alabama	AL	4,903,185	140	1.1%	2.86
Alaska	AK	731,545	1	0.0%	0.14
Arizona	AZ	7,278,717	145	1.1%	1.99
Arkansas	AR	3,017,804	58	0.5%	1.92
California	CA	39,512,223	1,266	9.8%	3.20
Colorado	CO	5,758,736	170	1.3%	2.95
Connecticut	CT	3,565,287	225	1.7%	6.31
Delaware	DE	973,764	28	0.2%	2.88
District of Columbia	DC	705,749	177	1.4%	25.08
Florida	FL	21,477,737	521	4.0%	2.43
Georgia	GA	10,617,423	248	1.9%	2.34
Hawaii	HI	1,415,872	18	0.1%	1.27
Idaho	ID	1,787,065	3	0.0%	0.17
Illinois	IL	12,671,821	526	4.1%	4.15
Indiana	IN	6,732,219	112	0.9%	1.66
Iowa	IA	3,155,070	87	0.7%	2.76
Kansas	KS	2,913,314	52	0.4%	1.78
Kentucky	KY	4,467,673	125	1.0%	2.80
Louisiana	LA	4,648,794	146	1.1%	3.14
Maine	ME	1,344,212	19	0.1%	1.41
Maryland	MD	6,045,680	409	3.2%	6.77
Massachusetts	MA	6,892,503	772	6.0%	11.20
Michigan	MI	9,986,857	486	3.8%	4.87
Minnesota	MN	5,639,632	307	2.4%	5.44
Mississippi	MS	2,976,149	60	0.5%	2.02
Missouri	MO	6,137,428	321	2.5%	5.23
Montana	MT	1,068,778	1	0.0%	0.09
Nebraska	NE	1,934,408	68	0.5%	3.52
Nevada	NV	3,080,156	30	0.2%	0.97
New Hampshire	NH	1,359,711	53	0.4%	3.90
New Jersey	NJ	8,882,190	187	1.5%	2.11
New Mexico	NM	2,096,829	69	0.5%	3.29
New York	NY	19,453,561	1,661	12.9%	8.54
North Carolina	NC	10,488,084	423	3.3%	4.03
North Dakota	ND	762,062	4	0.0%	0.52
Ohio	OH	11,689,100	672	5.2%	5.75
Oklahoma	OK	3,956,971	58	0.5%	1.47
Oregon	OR	4,217,737	98	0.8%	2.32
Pennsylvania	PA	12,801,989	889	6.9%	6.94
Puerto Rico	PR	3,193,694	55	0.4%	1.72
Rhode Island	RI	1,059,361	76	0.6%	7.17
South Carolina	SC	5,148,714	112	0.9%	2.18
South Dakota	SD	884,659	5	0.0%	0.57
Tennessee	TN	6,829,174	254	2.0%	3.72
Texas	TX	28,995,881	945	7.3%	3.26
Utah	UT	3,205,958	103	0.8%	3.21
Vermont	VT	623,989	28	0.2%	4.49
Virginia	VA	8,535,519	216	1.7%	2.53
Washington	WA	7,614,893	216	1.7%	2.84
West Virginia	WV	1,792,147	40	0.3%	2.23
Wisconsin	WI	5,822,434	187	1.5%	3.21
Wyoming	WY	578,759	0	0.0%	0.00

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.
 Abbreviations: AY, academic year.

TABLE D.10

Number of Pipeline Graduates and Pipeline Graduate Concentration per 100,000 Population by State, 2018-2019 AY

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Pipeline Graduates	Percent of All Pipeline Graduates	Pipeline Graduates per 100,000 Pop
OVERALL	-	331,433,217	30,334	100.0%	9.15
Alabama	AL	4,903,185	329	1.1%	6.71
Alaska	AK	731,545	12	0.0%	1.64
Arizona	AZ	7,278,717	430	1.4%	5.91
Arkansas	AR	3,017,804	207	0.7%	6.86
California	CA	39,512,223	2,668	8.8%	6.75
Colorado	CO	5,758,736	335	1.1%	5.82
Connecticut	CT	3,565,287	535	1.8%	15.01
Delaware	DE	973,764	89	0.3%	9.14
District of Columbia	DC	705,749	364	1.2%	51.58
Florida	FL	21,477,737	1,419	4.7%	6.61
Georgia	GA	10,617,423	606	2.0%	5.71
Hawaii	HI	1,415,872	109	0.4%	7.70
Idaho	ID	1,787,065	40	0.1%	2.24
Illinois	IL	12,671,821	1,512	5.0%	11.93
Indiana	IN	6,732,219	331	1.1%	4.92
Iowa	IA	3,155,070	218	0.7%	6.91
Kansas	KS	2,913,314	188	0.6%	6.45
Kentucky	KY	4,467,673	314	1.0%	7.03
Louisiana	LA	4,648,794	463	1.5%	9.96
Maine	ME	1,344,212	92	0.3%	6.84
Maryland	MD	6,045,680	680	2.2%	11.25
Massachusetts	MA	6,892,503	1,141	3.8%	16.55
Michigan	MI	9,986,857	1,625	5.4%	16.27
Minnesota	MN	5,639,632	481	1.6%	8.53
Mississippi	MS	2,976,149	169	0.6%	5.68
Missouri	MO	6,137,428	639	2.1%	10.41
Montana	MT	1,068,778	24	0.1%	2.25
Nebraska	NE	1,934,408	183	0.6%	9.46
Nevada	NV	3,080,156	172	0.6%	5.58
New Hampshire	NH	1,359,711	96	0.3%	7.06
New Jersey	NJ	8,882,190	878	2.9%	9.88
New Mexico	NM	2,096,829	131	0.4%	6.25
New York	NY	19,453,561	3,950	13.0%	20.30
North Carolina	NC	10,488,084	754	2.5%	7.19
North Dakota	ND	762,062	36	0.1%	4.72
Ohio	OH	11,689,100	1,546	5.1%	13.23
Oklahoma	OK	3,956,971	284	0.9%	7.18
Oregon	OR	4,217,737	226	0.7%	5.36
Pennsylvania	PA	12,801,989	1,852	6.1%	14.47
Puerto Rico	PR	3,193,694	206	0.7%	6.45
Rhode Island	RI	1,059,361	188	0.6%	17.75
South Carolina	SC	5,148,714	321	1.1%	6.23
South Dakota	SD	884,659	38	0.1%	4.30
Tennessee	TN	6,829,174	536	1.8%	7.85
Texas	TX	28,995,881	1,931	6.4%	6.66
Utah	UT	3,205,958	180	0.6%	5.61
Vermont	VT	623,989	68	0.2%	10.90
Virginia	VA	8,535,519	617	2.0%	7.23
Washington	WA	7,614,893	482	1.6%	6.33
West Virginia	WV	1,792,147	218	0.7%	12.16
Wisconsin	WI	5,822,434	408	1.3%	7.01
Wyoming	WY	578,759	13	0.0%	2.25

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

Abbreviations: AY, academic year.

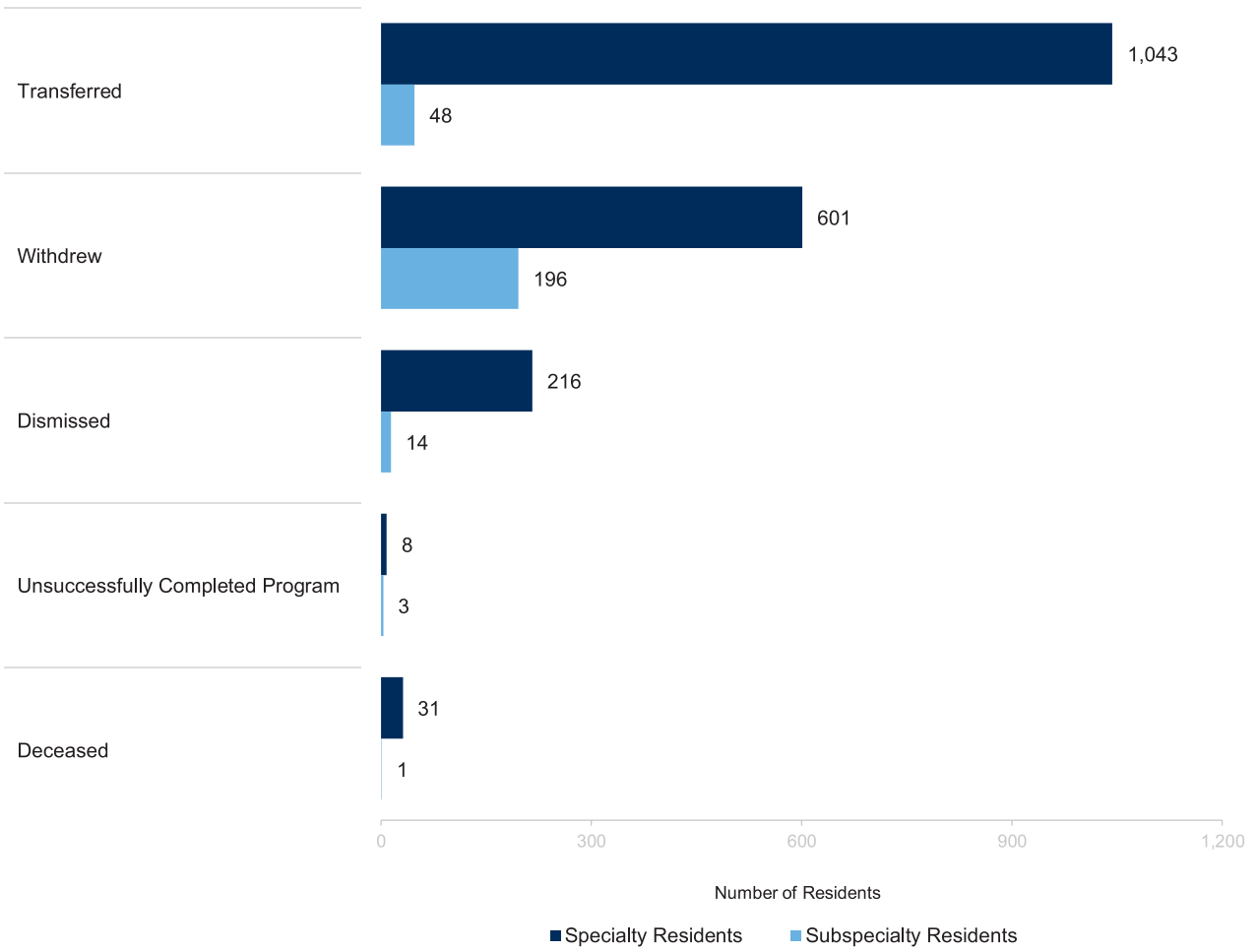
TABLE D.11
Number of Graduating Residents by State and Medical School Type, 2018-2019 AY

State Name	State Abbreviation	Total Graduates	Medical School Type				
			US LCME-Accredited Medical School	International Medical School	Osteopathic Medical School	Canadian Medical School	US Medical School Unknown
OVERALL	-	45,101	26,730	11,315	6,938	115	3
Alabama	AL	490	328	121	40	0	1
Alaska	AK	13	7	0	6	0	0
Arizona	AZ	599	328	137	134	0	0
Arkansas	AR	270	138	86	46	0	0
California	CA	4,068	3,136	490	418	24	0
Colorado	CO	533	428	19	86	0	0
Connecticut	CT	773	387	296	85	5	0
Delaware	DE	122	65	16	41	0	0
District of Columbia	DC	541	327	179	35	0	0
Florida	FL	2,115	996	668	450	1	0
Georgia	GA	945	575	268	100	2	0
Hawaii	HI	142	84	24	34	0	0
Idaho	ID	43	27	5	11	0	0
Illinois	IL	2,118	1,238	568	307	5	0
Indiana	IN	489	354	80	54	1	0
Iowa	IA	316	176	72	68	0	0
Kansas	KS	242	146	54	42	0	0
Kentucky	KY	442	267	94	81	0	0
Louisiana	LA	620	378	193	49	0	0
Maine	ME	111	60	14	37	0	0
Maryland	MD	1,133	783	263	85	2	0
Massachusetts	MA	1,982	1,430	457	79	16	0
Michigan	MI	2,302	970	669	663	0	0
Minnesota	MN	820	568	174	71	7	0
Mississippi	MS	243	134	40	69	0	0
Missouri	MO	979	628	205	144	2	0
Montana	MT	25	10	9	6	0	0
Nebraska	NE	253	138	78	36	1	0
Nevada	NV	228	94	71	63	0	0
New Hampshire	NH	149	98	33	18	0	0
New Jersey	NJ	1,115	290	499	326	0	0
New Mexico	NM	206	119	50	36	1	0
New York	NY	5,775	2,724	2,335	703	12	1
North Carolina	NC	1,222	868	174	178	2	0
North Dakota	ND	48	23	23	2	0	0
Ohio	OH	2,312	1,173	607	525	7	0
Oklahoma	OK	348	137	62	149	0	0
Oregon	OR	326	240	30	56	0	0
Pennsylvania	PA	2,857	1,613	635	595	14	0
Puerto Rico	PR	300	197	103	0	0	0
Rhode Island	RI	266	186	53	27	0	0
South Carolina	SC	458	343	59	55	1	0
South Dakota	SD	49	32	10	7	0	0
Tennessee	TN	803	545	173	83	2	0
Texas	TX	2,956	1,913	661	379	2	1
Utah	UT	297	248	26	23	0	0
Vermont	VT	96	73	14	8	1	0
Virginia	VA	879	553	144	180	2	0
Washington	WA	753	592	56	101	4	0
West Virginia	WV	274	129	82	63	0	0
Wisconsin	WI	642	433	129	79	1	0
Wyoming	WY	13	1	7	5	0	0

Abbreviations: AY, academic year; LCME, Liaison Committee on Medical Education.

FIGURE D.12

Number of Residents Leaving Prior to Completion of a Program by Status, 2018-2019 AY



Abbreviations: AY, academic year.

TABLE D.13
Number of Residents Leaving Prior to Completion of a Program by Specialty and Subspecialty and Status, 2018-2019 AY

Specialty	Number of Residents Not Graduating	Resident Status				
		Transferred	Withdrew	Dismissed	Unsuccessfully Completed Program	Deceased
OVERALL	2,161	1,091	797	230	11	32
TOTAL PIPELINE	1,875	1,026	595	215	8	31
Allergy and immunology	2	0	1	1	0	0
Anesthesiology	76	16	44	11	0	5
- Adult cardiothoracic anesthesiology	1	0	1	0	0	0
- Clinical informatics	0	0	0	0	0	0
- Critical care medicine	4	0	4	0	0	0
- Regional anesthesiology and acute pain medicine	0	0	0	0	0	0
- Obstetric anesthesiology	0	0	0	0	0	0
- Pain medicine (multidisciplinary)	3	0	3	0	0	0
- Pediatric anesthesiology	5	0	5	0	0	0
Colon and rectal surgery	0	0	0	0	0	0
Dermatology	6	5	0	1	0	0
- Dermatopathology (multidisciplinary)	1	0	1	0	0	0
- Micrographic surgery and dermatologic oncology	0	0	0	0	0	0
Emergency medicine	45	17	17	9	1	1
- Clinical informatics	0	0	0	0	0	0
- Emergency medical services	1	0	0	1	0	0
- Medical toxicology	3	0	3	0	0	0
- Pediatric emergency medicine	2	0	2	0	0	0
- Sports medicine	0	0	0	0	0	0
- Undersea and hyperbaric medicine	0	0	0	0	0	0
Family medicine	246	77	115	50	0	4
- Clinical informatics	0	0	0	0	0	0
- Geriatric medicine	2	0	2	0	0	0
- Hospice and palliative medicine (multidisciplinary)	7	1	6	0	0	0
- Sports medicine	1	0	1	0	0	0
Internal medicine	251	111	77	50	3	10
- Adult congenital heart disease	1	1	0	0	0	0
- Advanced heart failure and transplant cardiology	1	0	1	0	0	0
- Cardiovascular disease	19	7	10	1	0	1
- Clinical cardiac electrophysiology	7	2	4	1	0	0
- Clinical informatics	1	0	1	0	0	0
- Critical care medicine	4	2	2	0	0	0
- Endocrinology, diabetes, and metabolism	4	0	4	0	0	0
- Gastroenterology	5	1	3	1	0	0
- Geriatric medicine	5	0	5	0	0	0
- Hematology	0	0	0	0	0	0
- Hematology and medical oncology	8	1	5	2	0	0
- Infectious disease	6	0	6	0	0	0
- Interventional cardiology	2	0	1	1	0	0
- Nephrology	28	8	19	0	1	0
- Medical oncology	2	2	0	0	0	0
- Pulmonary disease	0	0	0	0	0	0
- Pulmonary disease and critical care medicine	8	2	5	1	0	0
- Rheumatology	1	1	0	0	0	0
- Sleep medicine (multidisciplinary)	0	0	0	0	0	0
- Transplant hepatology	0	0	0	0	0	0
Medical genetics and genomics	1	0	1	0	0	0
- Medical biochemical genetics	0	0	0	0	0	0
- Molecular genetic pathology (multidisciplinary)	0	0	0	0	0	0
Neurological surgery	37	13	14	10	0	0
- Endovascular surgical neuroradiology	0	0	0	0	0	0

TABLE D.13 *Continued*
Number of Residents Leaving Prior to Completion of a Program by Specialty and Subspecialty and Status, 2018-2019 AY

Specialty	Number of Residents Not Graduating	Resident Status				
		Transferred	Withdrew	Dismissed	Unsuccessfully Completed Program	Deceased
Neurology	29	9	13	7	0	0
- Brain injury medicine	0	0	0	0	0	0
- Clinical neurophysiology	0	0	0	0	0	0
- Epilepsy	2	0	2	0	0	0
- Endovascular surgical neuroradiology	0	0	0	0	0	0
- Neurodevelopmental disabilities	0	0	0	0	0	0
- Neuromuscular medicine	0	0	0	0	0	0
- Vascular neurology	1	0	0	0	1	0
Child neurology	7	2	3	2	0	0
Nuclear medicine	8	6	2	0	0	0
Obstetrics and gynecology	73	34	30	9	0	0
- Female pelvic medicine and reconstructive surgery	2	0	2	0	0	0
- Gynecologic oncology	0	0	0	0	0	0
- Maternal-fetal medicine	3	2	0	1	0	0
- Reproductive endocrinology and infertility	1	1	0	0	0	0
Ophthalmology	8	2	6	0	0	0
- Ophthalmic plastic and reconstructive surgery	0	0	0	0	0	0
Orthopaedic surgery	26	6	14	5	0	1
- Adult reconstructive orthopaedics	0	0	0	0	0	0
- Foot and ankle orthopaedics	0	0	0	0	0	0
- Hand surgery	1	0	1	0	0	0
- Musculoskeletal oncology	0	0	0	0	0	0
- Orthopaedic sports medicine	1	0	0	1	0	0
- Orthopaedic surgery of the spine	1	0	1	0	0	0
- Orthopaedic trauma	0	0	0	0	0	0
- Pediatric orthopaedics	1	0	1	0	0	0
Osteopathic neuromusculoskeletal medicine	2	2	0	0	0	0
Otolaryngology - head and neck surgery	12	5	6	1	0	0
- Neurotology	0	0	0	0	0	0
- Pediatric otolaryngology	0	0	0	0	0	0
Pathology-anatomic and clinical	60	33	23	4	0	0
- Blood banking/transfusion medicine	0	0	0	0	0	0
- Clinical informatics	1	0	1	0	0	0
- Chemical pathology	0	0	0	0	0	0
- Cytopathology	1	0	1	0	0	0
- Forensic pathology	3	0	3	0	0	0
- Hematopathology	1	0	1	0	0	0
- Medical microbiology	0	0	0	0	0	0
- Neuropathology	0	0	0	0	0	0
- Pediatric pathology	0	0	0	0	0	0
- Selective pathology	3	0	3	0	0	0
Pediatrics	98	53	33	9	1	2
- Adolescent medicine	0	0	0	0	0	0
- Child abuse pediatrics	1	0	1	0	0	0
- Clinical informatics	1	0	1	0	0	0
- Developmental-behavioral pediatrics	4	1	3	0	0	0
- Neonatal-perinatal medicine	15	4	11	0	0	0
- Pediatric cardiology	3	0	2	1	0	0
- Pediatric critical care medicine	4	0	4	0	0	0
- Pediatric emergency medicine	2	0	2	0	0	0
- Pediatric endocrinology	3	0	3	0	0	0
- Pediatric gastroenterology	1	0	1	0	0	0
- Pediatric hematology/oncology	12	2	10	0	0	0

TABLE D.13 Continued
Number of Residents Leaving Prior to Completion of a Program by Specialty and Subspecialty and Status, 2018-2019 AY

Specialty	Number of Residents Not Graduating	Resident Status				
		Transferred	Withdrew	Dismissed	Unsuccessfully Completed Program	Deceased
- Pediatric infectious diseases	9	2	6	1	0	0
- Pediatric nephrology	7	2	5	0	0	0
- Pediatric pulmonology	2	0	2	0	0	0
- Pediatric rheumatology	1	0	1	0	0	0
- Pediatric sports medicine	0	0	0	0	0	0
- Pediatric transplant hepatology	0	0	0	0	0	0
- Pediatric hospital medicine	1	0	1	0	0	0
Physical medicine and rehabilitation	15	11	2	2	0	0
- Brain injury medicine	0	0	0	0	0	0
- Neuromuscular medicine	0	0	0	0	0	0
- Spinal cord injury medicine	0	0	0	0	0	0
- Pediatric rehabilitation	0	0	0	0	0	0
- Sports medicine	0	0	0	0	0	0
Plastic surgery	3	0	2	0	0	1
Plastic surgery - integrated	5	1	4	0	0	0
- Craniofacial surgery	0	0	0	0	0	0
- Hand surgery	0	0	0	0	0	0
Preventive medicine	4	1	2	1	0	0
- Medical toxicology	0	0	0	0	0	0
- Undersea and hyperbaric medicine	0	0	0	0	0	0
Psychiatry	417	369	27	14	2	5
- Addiction medicine (multidisciplinary)	3	0	3	0	0	0
- Addiction psychiatry	0	0	0	0	0	0
- Child and adolescent psychiatry	22	5	16	0	1	0
- Forensic psychiatry	3	0	3	0	0	0
- Geriatric psychiatry	2	0	2	0	0	0
- Consultation-liaison psychiatry	0	0	0	0	0	0
Radiation oncology	8	5	3	0	0	0
Radiology-diagnostic	126	100	21	4	0	1
- Abdominal radiology	0	0	0	0	0	0
- Endovascular surgical neuroradiology	0	0	0	0	0	0
- Musculoskeletal radiology	0	0	0	0	0	0
- Neuroradiology	3	1	1	1	0	0
- Nuclear radiology	0	0	0	0	0	0
- Pediatric radiology	1	0	1	0	0	0
- Vascular and interventional radiology	1	0	0	1	0	0
Interventional radiology - independent	0	0	0	0	0	0
Interventional radiology - integrated	8	7	1	0	0	0
Surgery	273	131	116	24	1	1
- Complex general surgical oncology	0	0	0	0	0	0
- Hand surgery	0	0	0	0	0	0
- Pediatric surgery	0	0	0	0	0	0
- Surgical critical care	3	0	3	0	0	0
- Vascular surgery	3	0	3	0	0	0
Vascular surgery - integrated	6	1	5	0	0	0
Thoracic surgery	2	0	2	0	0	0
- Congenital cardiac surgery	0	0	0	0	0	0
Thoracic surgery - integrated	4	0	4	0	0	0
Urology	10	3	6	1	0	0
- Female pelvic medicine and reconstructive surgery	1	0	1	0	0	0
- Pediatric urology	0	0	0	0	0	0
Transitional year	20	17	3	0	0	0
Internal medicine/Pediatrics	11	6	4	1	0	0

Note: Pipeline specialties are highlighted.
Abbreviations: AY, academic year.

TABLE D.14

Number of Transferring Residents by Specialty and Resident Year, 2018-2019 AY

Specialty	Number of Transferring Residents	Resident Year						
		1	2	3	4	5	6	7
OVERALL	1,043	371	211	406	51	3	1	
Allergy and immunology	0							
Anesthesiology	16	9	7					
Colon and rectal surgery	0							
Dermatology	5	4	1					
Emergency medicine	17	13	4					
Family medicine	77	58	16	3				
Internal medicine	111	80	29	2				
Medical genetics and genomics	0							
Neurological surgery	13	3	6	1	1	1	1	
Neurology	9	6	1	2				
Child neurology	2	1		1				
Nuclear medicine	6	3	3					
Obstetrics and gynecology	34	18	13	3				
Ophthalmology	2	2						
Orthopaedic surgery	6	1	2	2	1			
Osteopathic neuromusculoskeletal medicine	2	2						
Otolaryngology - Head and Neck Surgery	5	2		1	2			
Pathology-anatomic and clinical	33	8	11	12	2			
Pediatrics	53	31	22					
Physical medicine and rehabilitation	11	8	3					
Plastic surgery	0							
Plastic Surgery - Integrated	1			1				
Preventive medicine	1		1					
Psychiatry	369	18	20	311	20			
Radiation oncology	5	4	1					
Radiology-diagnostic	100	19	28	31	22			
Interventional radiology - integrated	7	3		4				
Surgery	131	55	41	30	3	2		
Vascular surgery - integrated	1	1						
Thoracic surgery	0							
Thoracic surgery - integrated	0							
Urology	3	2		1				
Transitional year	17	17						
Internal medicine/Pediatrics	6	3	2	1				

Abbreviations: AY, academic year.

TABLE D.15

Number of Pipeline Graduates who Subspecialize, 2018-2019 AY

Specialty	Total Pipeline Graduates	Subspecialized	
		#	%
TOTAL PIPELINE	30,334	9,459	31.2%
Anesthesiology	1,677	822	49.0%
Dermatology	512	90	17.6%
Emergency medicine	2,272	226	9.9%
Family medicine	4,110	333	8.1%
Internal medicine	8,481	3,417	40.3%
Medical genetics and genomics	42	12	28.6%
Neurological surgery	166	3	1.8%
Neurology	744	367	49.3%
Child neurology	123	56	45.5%
Nuclear medicine	36	2	5.6%
Obstetrics and gynecology	1,360	257	18.9%
Ophthalmology	477	0	0.0%
Orthopaedic surgery	821	429	52.3%
Osteopathic neuromusculoskeletal medicine	29	2	6.9%
Otolaryngology - head and neck surgery	315	46	14.6%
Pathology-anatomic and clinical	579	417	72.0%
Pediatrics	3,037	1,106	36.4%
Physical medicine and rehabilitation	415	175	42.2%
Plastic surgery	84	7	8.3%
Plastic Surgery - integrated	124	32	25.8%
Preventive medicine	194	6	3.1%
Psychiatry	1,243	365	29.4%
Radiation oncology	189	0	0.0%
Radiology-diagnostic	1,174	578	49.2%
Interventional radiology - independent	1	0	0.0%
Interventional radiology - integrated	15	0	0.0%
Surgery	1,336	585	43.8%
Vascular surgery - integrated	56	2	3.6%
Thoracic surgery - integrated	26	2	7.7%
Urology	323	19	5.9%
Internal medicine/Pediatrics	373	103	27.6%

Abbreviations: AY, academic year.

E Sponsoring Institutions

This section describes characteristics of ACGME-accredited Sponsoring Institutions. It includes the distribution of accreditation status decisions, information on sponsor size, geographic location, institution type, and designated institutional official (DIO) changes that occurred throughout the 2019-2020 academic year.

Accredited Sponsors by Status

Of the 865 total ACGME-accredited Sponsoring Institutions, 122 (14.1%) are in the initial phase of accreditation, 722 (83.5%) have a status of Continued Accreditation, 16 (1.8%) have a status of Continued Accreditation with Warning, and five (0.6%) are on Withdrawal of Accreditation. Overall, there has been a 25.9% increase in number of sponsors since the 2012-2013 academic year (at that time the total number of Sponsoring Institutions was 687). Effective July 1, 2013, new policies required Sponsoring Institutions to become accredited prior to applying for program accreditation. Prior to that, the accreditation of the program and its Sponsoring Institution occurred simultaneously. This change, combined with Sponsoring Institutions seeking accreditation through the transition to a single GME accreditation system, has led to the recent upward trend in total accredited Sponsoring Institutions.

Distribution by Sponsor Size

Sponsoring Institutions with one program and those with two to five programs account for the majority of all Sponsoring Institutions (28.9% and 25.9%, respectively). The remaining Sponsoring Institutions with accredited programs all have more than five programs: 21.3% have between six and 25 programs; 11.5% have between 26 and 75 programs; 3.5% have between 76 and 100 programs; and 1.5% have more than 100 programs. There are 65 (7.5%) Sponsoring Institutions that currently do not have any accredited programs.

Geographic Distribution

There are ACGME-accredited Sponsoring Institutions in all 50 states, the District of Columbia, and Puerto Rico.

The following states have the highest total number of Sponsoring Institutions:

- California (99)
- New York (69)
- Florida (53)

The following states have the highest total number of multi-program Sponsoring Institutions:

- California (53)
- New York (49)
- Ohio (33)
- Pennsylvania (33)

Finally, the following states have the highest total number of single-program Sponsoring Institutions:

- California (38)
- Florida (18)
- New York (16)

Sponsors that do not yet have ACGME-accredited programs (65) are located in 30 states, with the highest number of these (eight) located in California.

Distribution by Institution Type

The type of institution is self-reported by Sponsoring Institutions. Approximately half of Sponsoring Institutions with ACGME-accredited programs are General/Teaching Hospitals (363, 45.4%); the next largest group is Academic Medical Centers/Medical Schools, with 122 (15.3%) in this category. Though a much smaller percentage of total Sponsoring Institutions, Academic Medical Centers/Medical Schools account for 18.0% more programs than General/Teaching Hospitals; however, these have almost the same number of residents.

DIO Changes

Each year between 10% and 16% of Sponsoring Institutions have a change in leadership in the DIO role (excluding Sponsoring Institutions with no accredited programs and any Sponsoring Institutions newly accredited in the academic year). In the 2019-2020 academic year, 113 (14.2%) Sponsoring Institutions had a single DIO change, and five (0.6%) had more than one DIO change. ♪

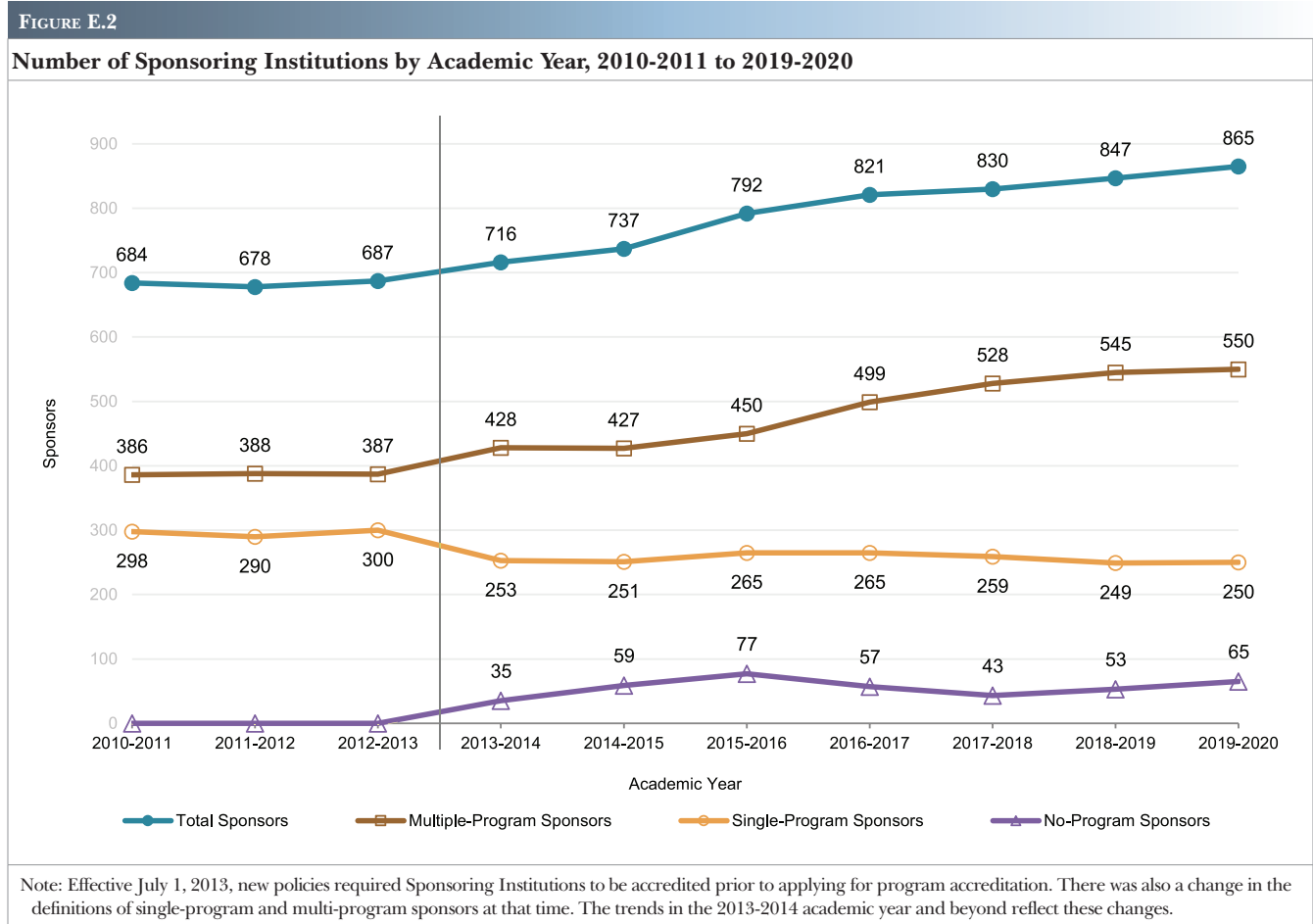
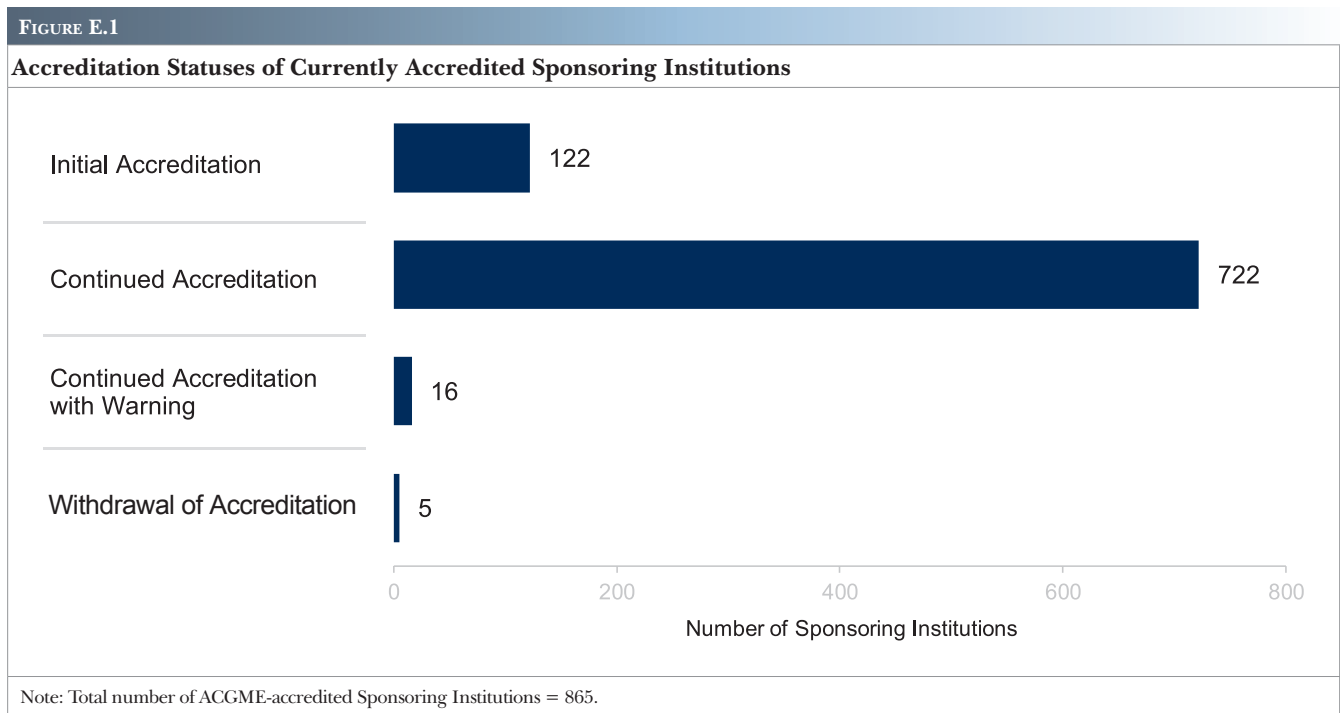


FIGURE E.3

Number of Sponsoring Institutions by Size of Sponsor

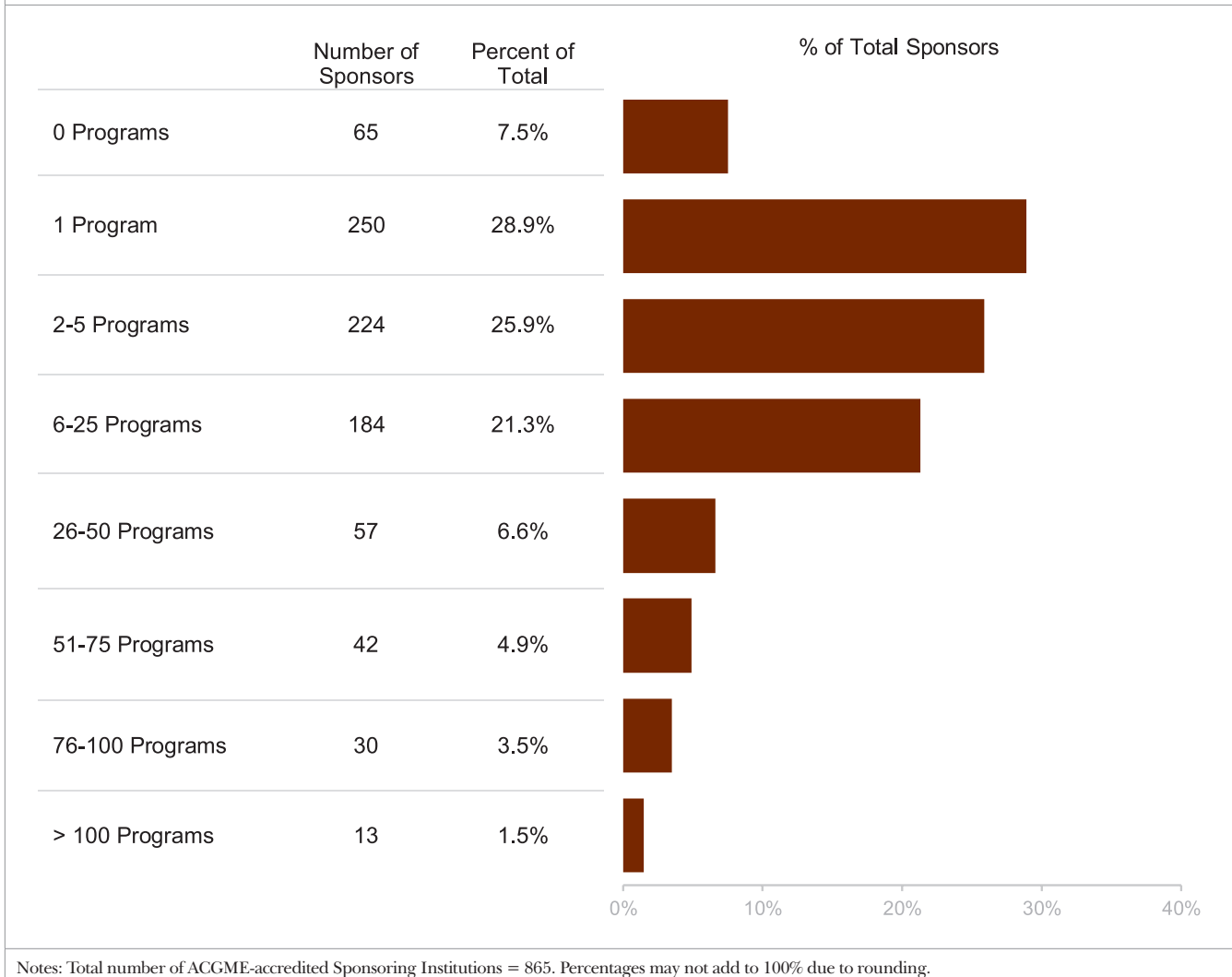


TABLE E.4					
Number of Sponsoring Institutions and Sponsoring Institution Concentration per 100,000 Population by State					
State Name	State Abbreviation	State Population - Census Estimate 2019	Total Sponsors	Percent of All Sponsors	Sponsors per 100,000 Pop
OVERALL	-	331,433,217	865	100.0%	0.26
Alabama	AL	4,903,185	19	2.2%	0.39
Alaska	AK	731,545	1	0.1%	0.14
Arizona	AZ	7,278,717	12	1.4%	0.16
Arkansas	AR	3,017,804	9	1.0%	0.30
California	CA	39,512,223	99	11.4%	0.25
Colorado	CO	5,758,736	14	1.6%	0.24
Connecticut	CT	3,565,287	16	1.8%	0.45
Delaware	DE	973,764	4	0.5%	0.41
District of Columbia	DC	705,749	5	0.6%	0.71
Florida	FL	21,477,737	53	6.1%	0.25
Georgia	GA	10,617,423	25	2.9%	0.24
Hawaii	HI	1,415,872	4	0.5%	0.28
Idaho	ID	1,787,065	6	0.7%	0.34
Illinois	IL	12,671,821	34	3.9%	0.27
Indiana	IN	6,732,219	13	1.5%	0.19
Iowa	IA	3,155,070	10	1.2%	0.32
Kansas	KS	2,913,314	2	0.2%	0.07
Kentucky	KY	4,467,673	7	0.8%	0.16
Louisiana	LA	4,648,794	9	1.0%	0.19
Maine	ME	1,344,212	4	0.5%	0.30
Maryland	MD	6,045,680	15	1.7%	0.25
Massachusetts	MA	6,892,503	25	2.9%	0.36
Michigan	MI	9,986,857	41	4.7%	0.41
Minnesota	MN	5,639,632	10	1.2%	0.18
Mississippi	MS	2,976,149	12	1.4%	0.40
Missouri	MO	6,137,428	14	1.6%	0.23
Montana	MT	1,068,778	3	0.3%	0.28
Nebraska	NE	1,934,408	4	0.5%	0.21
Nevada	NV	3,080,156	7	0.8%	0.23
New Hampshire	NH	1,359,711	3	0.3%	0.22
New Jersey	NJ	8,882,190	28	3.2%	0.32
New Mexico	NM	2,096,829	8	0.9%	0.38
New York	NY	19,453,561	69	8.0%	0.35
North Carolina	NC	10,488,084	17	2.0%	0.16
North Dakota	ND	762,062	2	0.2%	0.26
Ohio	OH	11,689,100	44	5.1%	0.38
Oklahoma	OK	3,956,971	9	1.0%	0.23
Oregon	OR	4,217,737	5	0.6%	0.12
Pennsylvania	PA	12,801,989	46	5.3%	0.36
Puerto Rico	PR	3,193,694	12	1.4%	0.38
Rhode Island	RI	1,059,361	5	0.6%	0.47
South Carolina	SC	5,148,714	10	1.2%	0.19
South Dakota	SD	884,659	3	0.3%	0.34
Tennessee	TN	6,829,174	9	1.0%	0.13
Texas	TX	28,995,881	50	5.8%	0.17
Utah	UT	3,205,958	6	0.7%	0.19
Vermont	VT	623,989	1	0.1%	0.16
Virginia	VA	8,535,519	20	2.3%	0.23
Washington	WA	7,614,893	23	2.7%	0.30
West Virginia	WV	1,792,147	8	0.9%	0.45
Wisconsin	WI	5,822,434	9	1.0%	0.15
Wyoming	WY	578,759	1	0.1%	0.17

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popst/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE E.5

Number of Multiple-Program Sponsoring Institutions and Multiple-Program Sponsoring Institution Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Multiple-Program Sponsors	Percent of All Multiple-Program Sponsors	Multiple-Program Sponsors per 100,000 Pop
OVERALL	-	331,433,217	550	100.0%	0.17
Alabama	AL	4,903,185	7	1.3%	0.14
Alaska	AK	731,545	1	0.2%	0.14
Arizona	AZ	7,278,717	8	1.5%	0.11
Arkansas	AR	3,017,804	4	0.7%	0.13
California	CA	39,512,223	53	9.6%	0.13
Colorado	CO	5,758,736	8	1.5%	0.14
Connecticut	CT	3,565,287	12	2.2%	0.34
Delaware	DE	973,764	2	0.4%	0.21
District of Columbia	DC	705,749	4	0.7%	0.57
Florida	FL	21,477,737	30	5.5%	0.14
Georgia	GA	10,617,423	13	2.4%	0.12
Hawaii	HI	1,415,872	2	0.4%	0.14
Idaho	ID	1,787,065	3	0.5%	0.17
Illinois	IL	12,671,821	24	4.4%	0.19
Indiana	IN	6,732,219	7	1.3%	0.10
Iowa	IA	3,155,070	5	0.9%	0.16
Kansas	KS	2,913,314	2	0.4%	0.07
Kentucky	KY	4,467,673	4	0.7%	0.09
Louisiana	LA	4,648,794	6	1.1%	0.13
Maine	ME	1,344,212	3	0.5%	0.22
Maryland	MD	6,045,680	12	2.2%	0.20
Massachusetts	MA	6,892,503	18	3.3%	0.26
Michigan	MI	9,986,857	33	6.0%	0.33
Minnesota	MN	5,639,632	5	0.9%	0.09
Mississippi	MS	2,976,149	5	0.9%	0.17
Missouri	MO	6,137,428	9	1.6%	0.15
Montana	MT	1,068,778	1	0.2%	0.09
Nebraska	NE	1,934,408	2	0.4%	0.10
Nevada	NV	3,080,156	4	0.7%	0.13
New Hampshire	NH	1,359,711	2	0.4%	0.15
New Jersey	NJ	8,882,190	19	3.5%	0.21
New Mexico	NM	2,096,829	3	0.5%	0.14
New York	NY	19,453,561	49	8.9%	0.25
North Carolina	NC	10,488,084	13	2.4%	0.12
North Dakota	ND	762,062	2	0.4%	0.26
Ohio	OH	11,689,100	33	6.0%	0.28
Oklahoma	OK	3,956,971	6	1.1%	0.15
Oregon	OR	4,217,737	4	0.7%	0.09
Pennsylvania	PA	12,801,989	33	6.0%	0.26
Puerto Rico	PR	3,193,694	8	1.5%	0.25
Rhode Island	RI	1,059,361	5	0.9%	0.47
South Carolina	SC	5,148,714	7	1.3%	0.14
South Dakota	SD	884,659	2	0.4%	0.23
Tennessee	TN	6,829,174	8	1.5%	0.12
Texas	TX	28,995,881	30	5.5%	0.10
Utah	UT	3,205,958	2	0.4%	0.06
Vermont	VT	623,989	1	0.2%	0.16
Virginia	VA	8,535,519	12	2.2%	0.14
Washington	WA	7,614,893	11	2.0%	0.14
West Virginia	WV	1,792,147	5	0.9%	0.28
Wisconsin	WI	5,822,434	7	1.3%	0.12
Wyoming	WY	578,759	1	0.2%	0.17

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE E.6

Number of Single-Program Sponsoring Institutions and Single-Program Sponsoring Institution Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	Total Single-Program Sponsors	Percent of All Sponsors	Single-Program Sponsors per 100,000 Pop
OVERALL	-	331,433,217	250	100.0%	0.08
Alabama	AL	4,903,185	10	4.0%	0.20
Alaska	AK	731,545	0	0.0%	0.00
Arizona	AZ	7,278,717	2	0.8%	0.03
Arkansas	AR	3,017,804	3	1.2%	0.10
California	CA	39,512,223	38	15.2%	0.10
Colorado	CO	5,758,736	5	2.0%	0.09
Connecticut	CT	3,565,287	3	1.2%	0.08
Delaware	DE	973,764	2	0.8%	0.21
District of Columbia	DC	705,749	0	0.0%	0.00
Florida	FL	21,477,737	19	7.6%	0.09
Georgia	GA	10,617,423	11	4.4%	0.10
Hawaii	HI	1,415,872	2	0.8%	0.14
Idaho	ID	1,787,065	1	0.4%	0.06
Illinois	IL	12,671,821	9	3.6%	0.07
Indiana	IN	6,732,219	4	1.6%	0.06
Iowa	IA	3,155,070	5	2.0%	0.16
Kansas	KS	2,913,314	0	0.0%	0.00
Kentucky	KY	4,467,673	2	0.8%	0.04
Louisiana	LA	4,648,794	3	1.2%	0.06
Maine	ME	1,344,212	1	0.4%	0.07
Maryland	MD	6,045,680	2	0.8%	0.03
Massachusetts	MA	6,892,503	7	2.8%	0.10
Michigan	MI	9,986,857	6	2.4%	0.06
Minnesota	MN	5,639,632	4	1.6%	0.07
Mississippi	MS	2,976,149	4	1.6%	0.13
Missouri	MO	6,137,428	5	2.0%	0.08
Montana	MT	1,068,778	2	0.8%	0.19
Nebraska	NE	1,934,408	2	0.8%	0.10
Nevada	NV	3,080,156	2	0.8%	0.06
New Hampshire	NH	1,359,711	1	0.4%	0.07
New Jersey	NJ	8,882,190	7	2.8%	0.08
New Mexico	NM	2,096,829	3	1.2%	0.14
New York	NY	19,453,561	17	6.8%	0.09
North Carolina	NC	10,488,084	3	1.2%	0.03
North Dakota	ND	762,062	0	0.0%	0.00
Ohio	OH	11,689,100	7	2.8%	0.06
Oklahoma	OK	3,956,971	3	1.2%	0.08
Oregon	OR	4,217,737	0	0.0%	0.00
Pennsylvania	PA	12,801,989	9	3.6%	0.07
Puerto Rico	PR	3,193,694	4	1.6%	0.13
Rhode Island	RI	1,059,361	0	0.0%	0.00
South Carolina	SC	5,148,714	2	0.8%	0.04
South Dakota	SD	884,659	1	0.4%	0.11
Tennessee	TN	6,829,174	1	0.4%	0.01
Texas	TX	28,995,881	13	5.2%	0.04
Utah	UT	3,205,958	4	1.6%	0.12
Vermont	VT	623,989	0	0.0%	0.00
Virginia	VA	8,535,519	6	2.4%	0.07
Washington	WA	7,614,893	11	4.4%	0.14
West Virginia	WV	1,792,147	3	1.2%	0.17
Wisconsin	WI	5,822,434	1	0.4%	0.02
Wyoming	WY	578,759	0	0.0%	0.00

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

TABLE E.7

Number of No-Program Sponsoring Institutions and No-Program Sponsoring Institution Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2019	No-Program Sponsors	Percent of All No-Program Sponsors	No-Program Sponsors per 100,000 Pop
OVERALL	-	331,433,217	65	100.0%	0.02
Alabama	AL	4,903,185	2	3.1%	0.04
Alaska	AK	731,545	0	0.0%	0.00
Arizona	AZ	7,278,717	2	3.1%	0.03
Arkansas	AR	3,017,804	2	3.1%	0.07
California	CA	39,512,223	8	12.3%	0.02
Colorado	CO	5,758,736	1	1.5%	0.02
Connecticut	CT	3,565,287	1	1.5%	0.03
Delaware	DE	973,764	0	0.0%	0.00
District of Columbia	DC	705,749	1	1.5%	0.14
Florida	FL	21,477,737	4	6.2%	0.02
Georgia	GA	10,617,423	1	1.5%	0.01
Hawaii	HI	1,415,872	0	0.0%	0.00
Idaho	ID	1,787,065	2	3.1%	0.11
Illinois	IL	12,671,821	1	1.5%	0.01
Indiana	IN	6,732,219	2	3.1%	0.03
Iowa	IA	3,155,070	0	0.0%	0.00
Kansas	KS	2,913,314	0	0.0%	0.00
Kentucky	KY	4,467,673	1	1.5%	0.02
Louisiana	LA	4,648,794	0	0.0%	0.00
Maine	ME	1,344,212	0	0.0%	0.00
Maryland	MD	6,045,680	1	1.5%	0.02
Massachusetts	MA	6,892,503	0	0.0%	0.00
Michigan	MI	9,986,857	2	3.1%	0.02
Minnesota	MN	5,639,632	1	1.5%	0.02
Mississippi	MS	2,976,149	3	4.6%	0.10
Missouri	MO	6,137,428	0	0.0%	0.00
Montana	MT	1,068,778	0	0.0%	0.00
Nebraska	NE	1,934,408	0	0.0%	0.00
Nevada	NV	3,080,156	1	1.5%	0.03
New Hampshire	NH	1,359,711	0	0.0%	0.00
New Jersey	NJ	8,882,190	2	3.1%	0.02
New Mexico	NM	2,096,829	2	3.1%	0.10
New York	NY	19,453,561	3	4.6%	0.02
North Carolina	NC	10,488,084	1	1.5%	0.01
North Dakota	ND	762,062	0	0.0%	0.00
Ohio	OH	11,689,100	4	6.2%	0.03
Oklahoma	OK	3,956,971	0	0.0%	0.00
Oregon	OR	4,217,737	1	1.5%	0.02
Pennsylvania	PA	12,801,989	4	6.2%	0.03
Puerto Rico	PR	3,193,694	0	0.0%	0.00
Rhode Island	RI	1,059,361	0	0.0%	0.00
South Carolina	SC	5,148,714	1	1.5%	0.02
South Dakota	SD	884,659	0	0.0%	0.00
Tennessee	TN	6,829,174	0	0.0%	0.00
Texas	TX	28,995,881	7	10.8%	0.02
Utah	UT	3,205,958	0	0.0%	0.00
Vermont	VT	623,989	0	0.0%	0.00
Virginia	VA	8,535,519	2	3.1%	0.02
Washington	WA	7,614,893	1	1.5%	0.01
West Virginia	WV	1,792,147	0	0.0%	0.00
Wisconsin	WI	5,822,434	1	1.5%	0.02
Wyoming	WY	578,759	0	0.0%	0.00

Source: U.S. Census Bureau, Population Division. Annual Population Estimates, Estimated Components of Resident Population Change, and Rates of the Components of Resident Population Change for the United States, States, and Puerto Rico: April 1, 2010 to July 1, 2019. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/counties/totals/co-est2019-alldata.csv>. Published March, 2020. Accessed July 7, 2020.

FIGURE E.8

Number of Sponsoring Institutions by Institution Type

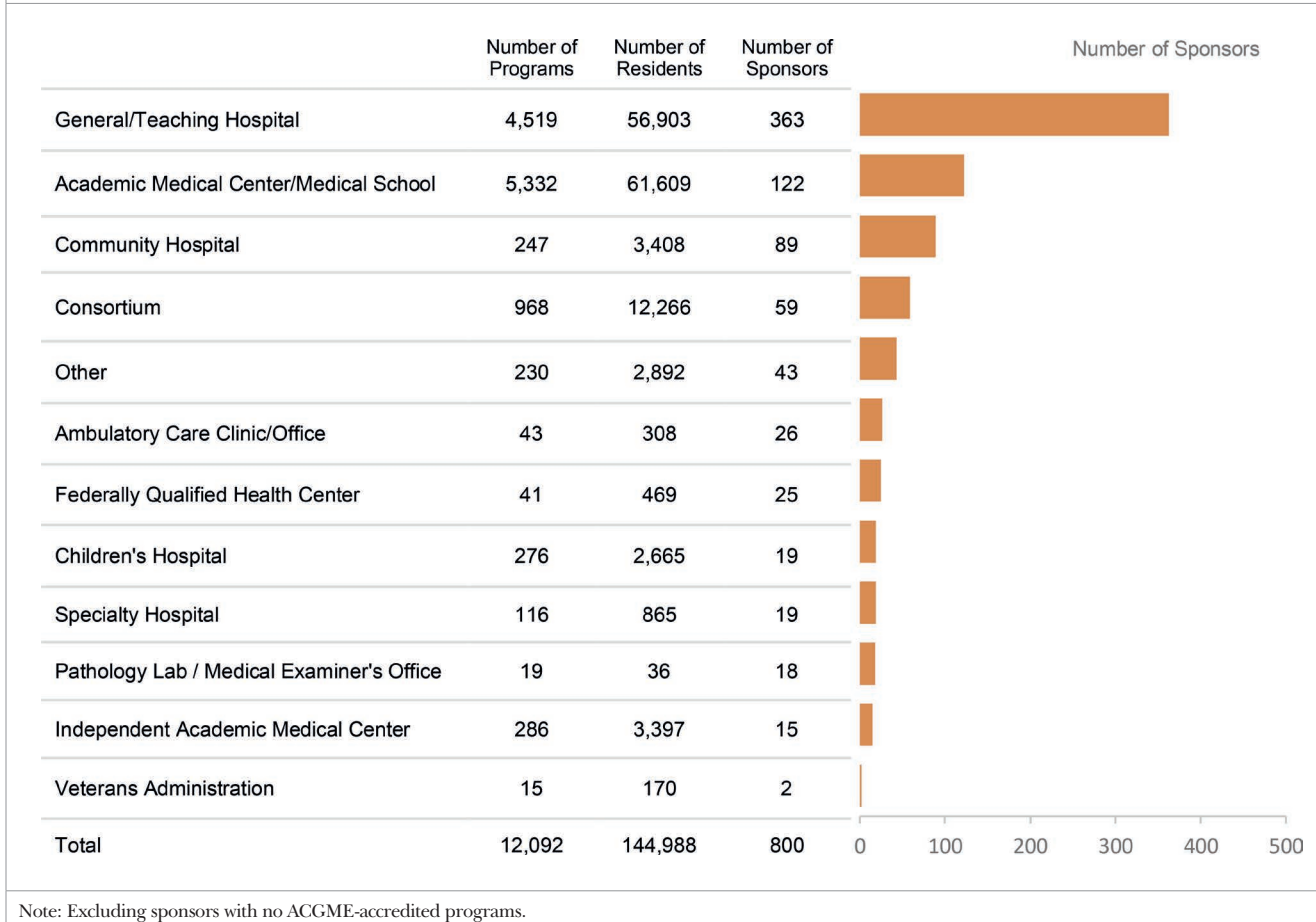
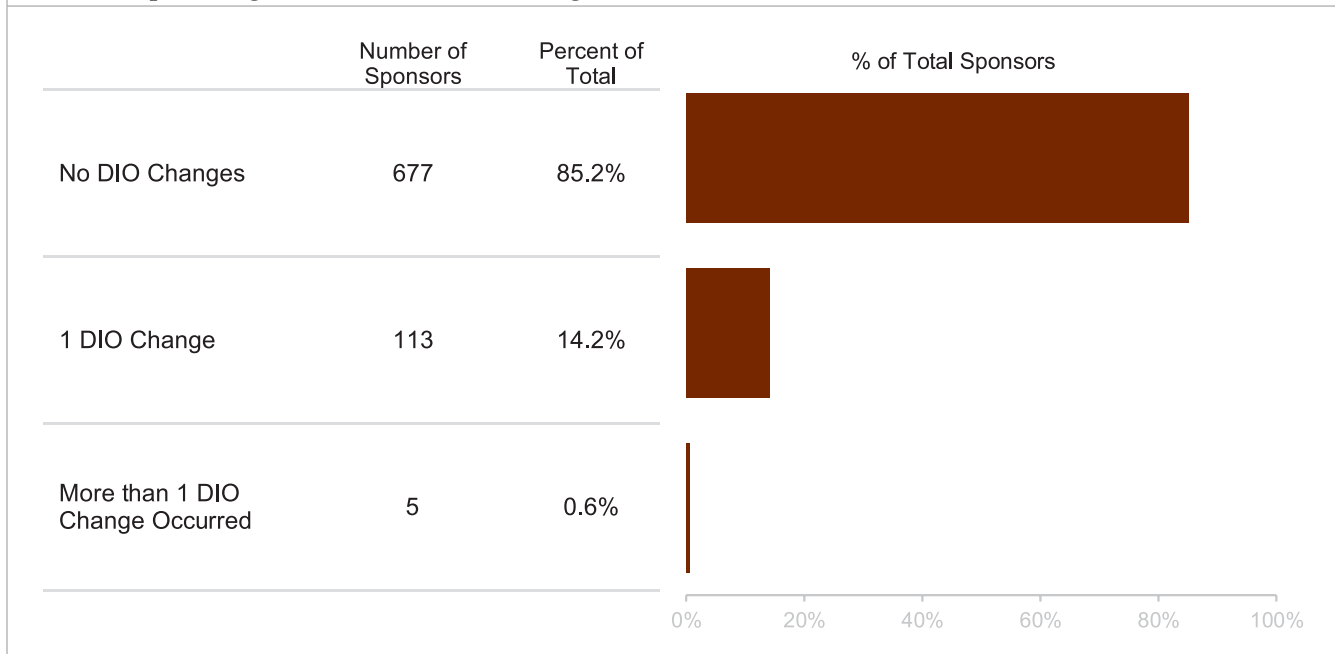


FIGURE E.9

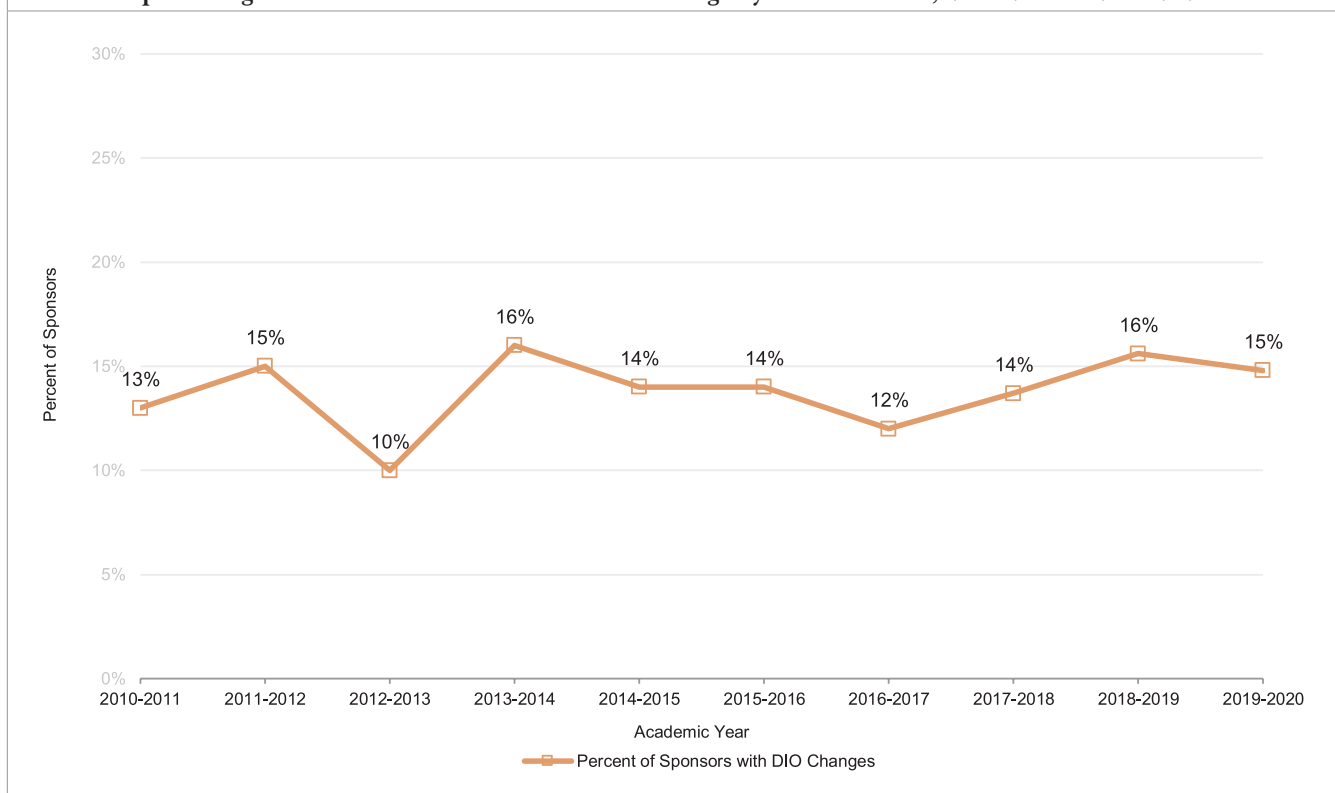
Number of Sponsoring Institutions with DIO Changes



Notes: Excluding sponsors with no ACGME-accredited programs and any sponsors newly accredited in the 2019-2020 academic year. Total number of sponsors included = 795. Percentages may not add to 100% due to rounding.
Abbreviations: DIO, designated institutional official.

FIGURE E.10

Percent of Sponsoring Institutions with at Least One DIO Change by Academic Year, 2010-2011 to 2019-2020



Note: Excluding sponsors with no ACGME-accredited programs and any sponsors newly accredited in the academic year. Total number of sponsors included = 795.
Abbreviations: DIO, designated institutional official.

F

Participating Sites

This section includes information and trends on the number of unique participating sites to which residents rotate. The total and average number of sites used by programs in each specialty and subspecialty are also reported.

Distribution by Institution Type

There was a total of 7,689 unique participating sites to which residents rotated during the 2019-2020 academic year. The highest number of sites were in the following categories:

- Ambulatory Care Clinic/Office (2,888)
- General/Teaching Hospital (1,625)
- Other (931)

Since the 2010-2011 academic year, there has been a 93.8% increase in the total number of sites listed by programs as places of rotation. This increase is primarily driven by increases in the following institution type groupings during that time:

- Ambulatory Care Clinic/FQHC (306.4% increase)
- General Teaching/Community Hospital (54.4% increase)
- Specialty Hospital (39.8% increase)

The number of Academic Medical Centers listed as participating sites also increased by 88.0%. With only 188 unique sites in this category in the 2019-2020 academic year, however, this change had a relatively small impact on the overall increase in participating sites.

Number of Sites per Program

Overall, the average number of participating sites listed per program is 3.1. Among pipeline specialty programs, the average number of participating sites per program

is 4.0. The pipeline specialties with the highest average number of participating sites include:

- Preventive medicine (6.4)
- Orthopaedic surgery (5.5)
- Plastic surgery – integrated (5.4)
- Physical medicine and rehabilitation (5.3)
- Psychiatry (5.3)

The pipeline specialties with the highest maximum number of participating sites per program include:

- Family medicine (39)
- Physical medicine and rehabilitation (23)
- Preventive medicine (23)
- Internal medicine (17)
- Psychiatry (17)
- Internal medicine/Pediatrics (17)

The subspecialty with the highest average number of participating sites per program is family medicine subspecialty of sports medicine at 15. Emergency medical services, the family medicine subspecialty of geriatric medicine, and orthopaedic sports medicine has the highest maximum number of participating sites per program at 13.

Number of Sites by Specialty and Subspecialty

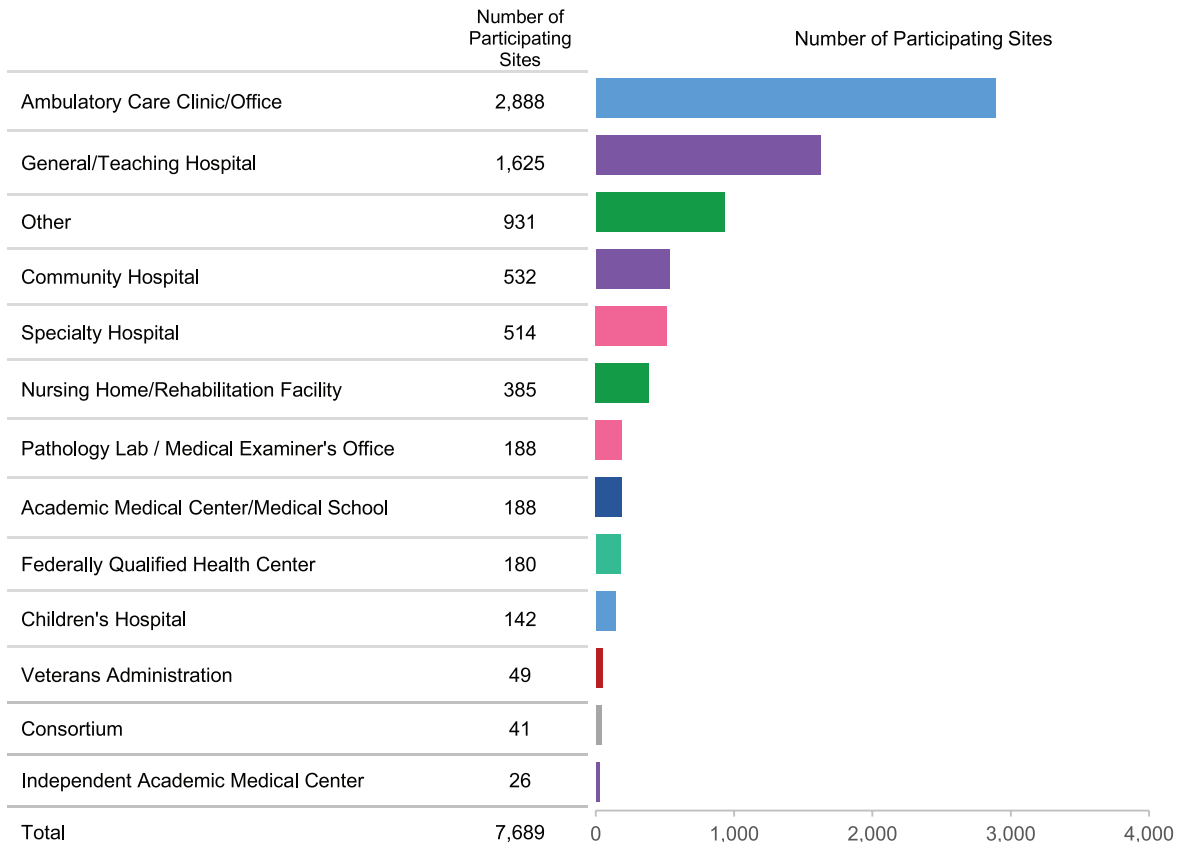
The specialties with the highest number of unique participating sites to which residents rotate include:

- Family medicine (2,326)
- Internal medicine (1,484)
- Psychiatry (1,244)
- Surgery (1,095)

Sponsors account for 7.4% of all participating sites with 568 Sponsoring Institutions listed as participating sites to which residents rotate. ♪

FIGURE F.1

Number of Unique Participating Sites Where Residents Rotate by Institution Type



Notes: Bar color denotes institution type groupings. See Appendix C for complete list of institution type groups.

FIGURE F.2

Number of Unique Participating Sites Where Residents Rotate by Academic Year, 2010-2011 to 2019-2020

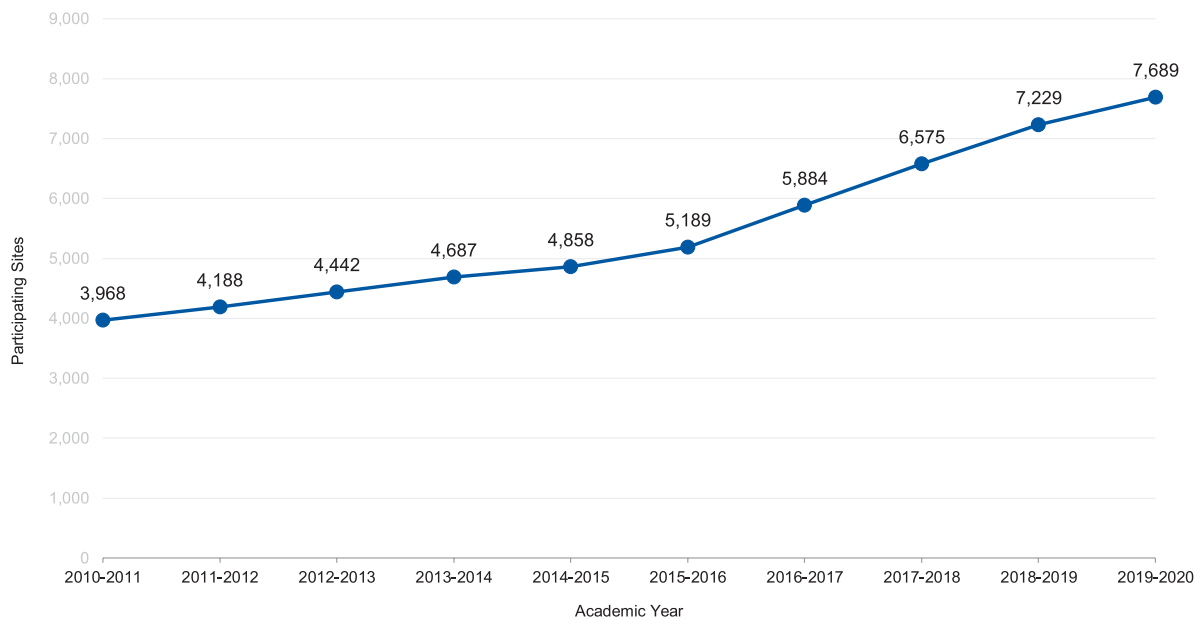
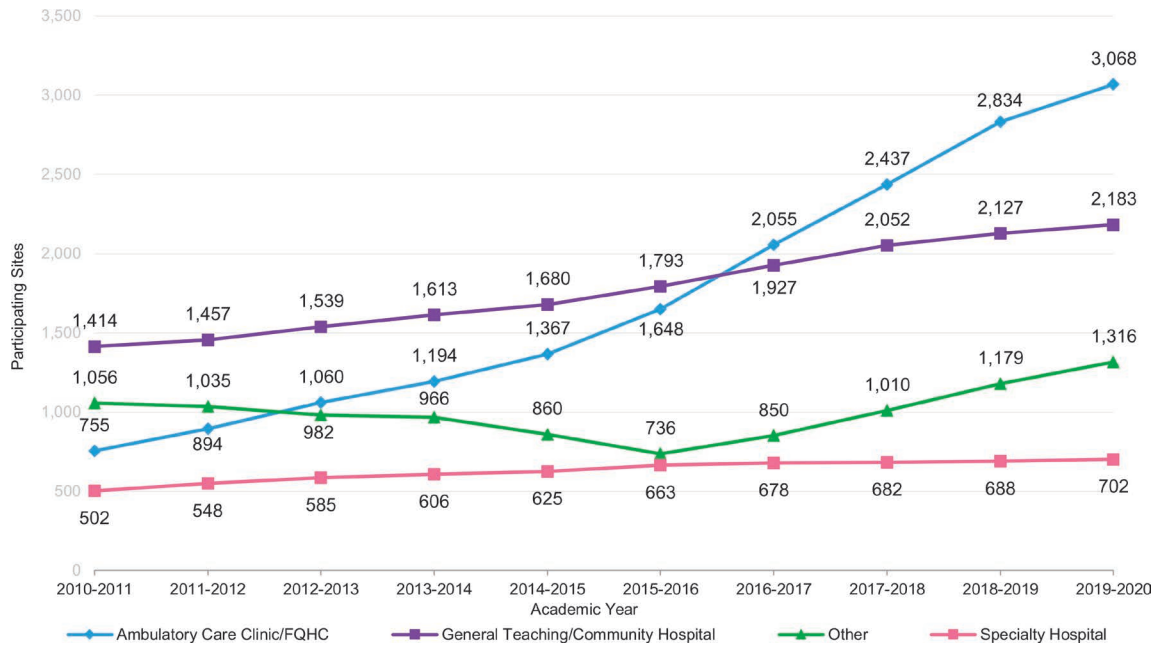


FIGURE F.3

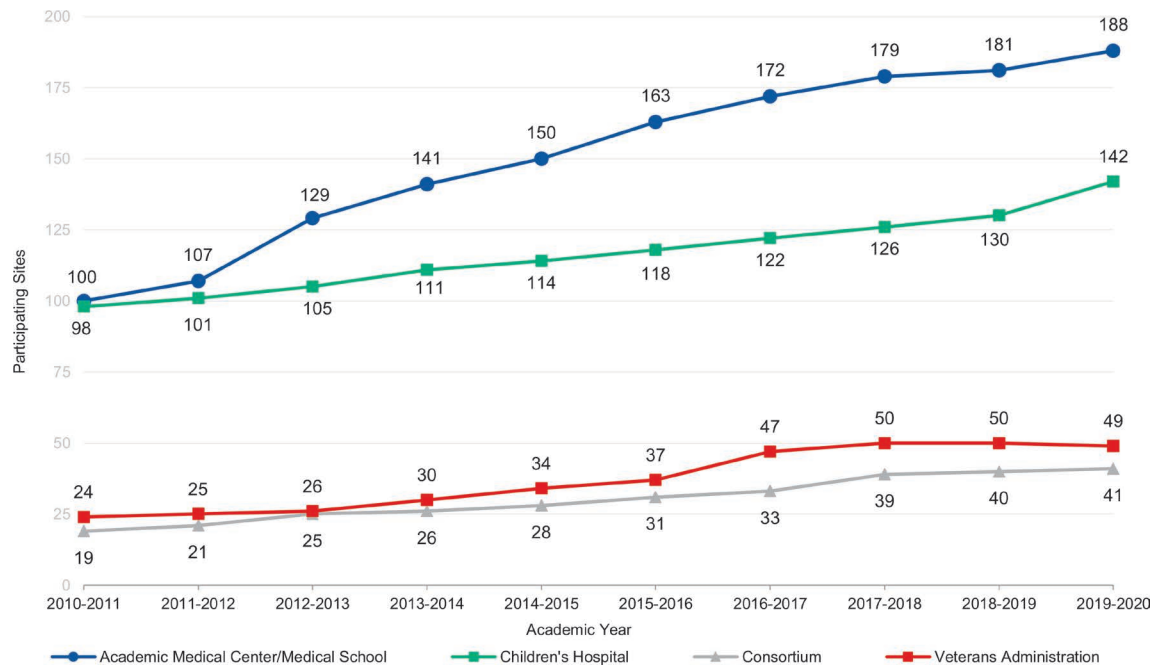
Number of Participating Sites where Residents Rotate by Institution Type Groups (Largest Groups Only) and Academic Year, 2010-2011 to 2019-2020



Note: See Appendix C for list of institution type groups.
Abbreviation: FQHC, Federally Qualified Health Center.

FIGURE F.4

Number of Participating Sites where Residents Rotate by Institution Type Groups (Smallest Groups Only) and Academic Year, 2010-2011 to 2019-2020



Note: See Appendix C for list of institution type groups.

TABLE F.5					
Mean Number of Participating Sites per Program where Residents Rotate by Specialty and Subspecialty					
Specialty	Total Programs	Number of Participating Sites per Program			
		AVG	STD	MIN	MAX
OVERALL	12,092	3.1	2.2	0	39
TOTAL PIPELINE	4,985	4.0	2.6	1	39
Allergy and immunology	81	2.7	1.3	1	6
Anesthesiology	160	4.0	1.8	1	9
- Adult cardiothoracic anesthesiology	71	1.8	1.0	1	5
- Clinical informatics	1	1.0	0.0	1	1
- Critical care medicine	63	1.8	0.9	1	4
- Regional anesthesiology and acute pain medicine	35	2.1	1.3	1	6
- Obstetric anesthesiology	41	1.4	0.6	1	3
- Pain medicine (multidisciplinary)	108	2.6	1.4	1	7
- Pediatric anesthesiology	60	1.5	0.9	1	4
Colon and rectal surgery	65	2.9	1.7	1	9
Dermatology	144	4.2	2.6	1	13
- Dermatopathology (multidisciplinary)	56	1.9	1.0	1	5
- Micrographic surgery and dermatologic oncology	78	2.1	1.2	1	7
Emergency medicine	265	4.1	2.0	1	13
- Clinical informatics	5	4.0	2.5	2	8
- Emergency medical services	71	3.2	2.6	1	13
- Medical toxicology	26	3.0	1.2	1	6
- Pediatric emergency medicine	26	2.6	1.3	1	5
- Sports medicine	8	5.3	4.1	1	12
- Undersea and hyperbaric medicine	8	1.5	0.5	1	2
Family medicine	701	4.2	3.7	1	39
- Clinical informatics	6	4.2	3.2	1	11
- Geriatric medicine	50	4.2	2.6	1	13
- Hospice and palliative medicine (multidisciplinary)	167	4.3	1.8	1	11
- Sports medicine	151	3.6	2.9	1	15
Internal medicine	569	3.1	2.5	1	17
- Adult congenital heart disease	24	1.8	0.7	1	3
- Advanced heart failure and transplant cardiology	80	1.4	0.6	1	3
- Cardiovascular disease	250	2.6	1.3	1	9
- Clinical cardiac electrophysiology	110	1.7	0.8	1	5
- Clinical informatics	17	2.0	1.6	1	5
- Critical care medicine	45	2.5	1.3	1	7
- Endocrinology, diabetes, and metabolism	151	2.7	1.3	1	8
- Gastroenterology	207	2.8	1.3	1	9
- Geriatric medicine	111	3.7	1.8	1	9
- Hematology	2	2.5	0.5	2	3
- Hematology and medical oncology	167	2.8	1.4	1	8
- Infectious disease	154	2.8	1.2	1	7
- Interventional cardiology	166	1.7	0.9	1	6
- Nephrology	151	2.9	1.3	1	7
- Medical oncology	7	2.3	0.7	1	3
- Pulmonary disease	22	2.5	1.1	1	5
- Pulmonary disease and critical care medicine	181	3.2	1.5	1	8
- Rheumatology	125	2.6	1.2	1	6
- Sleep medicine (multidisciplinary)	88	2.5	1.1	1	6
- Transplant hepatology	57	1.4	0.6	1	3
Medical genetics and genomics	47	3.2	1.9	1	8
- Medical biochemical genetics	19	2.3	1.2	1	5
- Molecular genetic pathology (multidisciplinary)	42	1.9	1.2	1	6
Neurological surgery	118	3.6	1.7	1	12
- Endovascular surgical neuroradiology	2	2.0	1.0	1	3

TABLE F.5 *Continued*

Mean Number of Participating Sites per Program where Residents Rotate by Specialty and Subspecialty					
Specialty	Total Programs	Number of Participating Sites per Program			
		AVG	STD	MIN	MAX
Neurology	160	3.4	1.7	1	11
- Brain injury medicine	1	1.0	0.0	1	1
- Clinical neurophysiology	92	2.1	1.1	1	6
- Epilepsy	81	2.0	0.9	1	5
- Endovascular surgical neuroradiology	2	1.5	0.5	1	2
- Neurodevelopmental disabilities	8	4.1	0.9	3	5
- Neuromuscular medicine	52	2.2	1.1	0	5
- Vascular neurology	106	1.7	0.9	1	5
Child neurology	76	2.8	1.3	1	6
Nuclear medicine	38	2.4	1.3	1	6
Obstetrics and gynecology	285	3.8	2.1	1	13
- Female pelvic medicine and reconstructive surgery	54	2.6	1.2	1	6
- Gynecologic oncology	63	2.2	1.1	1	5
- Maternal-fetal medicine	97	2.0	1.0	1	5
- Reproductive endocrinology and infertility	51	2.7	1.9	1	9
Ophthalmology	124	3.9	1.9	1	12
- Ophthalmic plastic and reconstructive surgery	4	5.3	4.0	2	12
Orthopaedic surgery	197	5.5	2.4	1	15
- Adult reconstructive orthopaedics	24	2.4	1.2	1	4
- Foot and ankle orthopaedics	7	2.6	1.4	1	4
- Hand surgery	74	3.7	2.1	1	11
- Musculoskeletal oncology	12	2.0	0.9	1	4
- Orthopaedic sports medicine	90	3.0	2.1	1	13
- Orthopaedic surgery of the spine	18	2.1	1.1	1	5
- Orthopaedic trauma	11	1.6	1.0	1	4
- Pediatric orthopaedics	25	1.5	0.8	1	3
Osteopathic neuromusculoskeletal medicine	27	4.1	3.2	1	13
Otolaryngology - head and neck surgery	124	4.2	2.2	1	16
- Neurotology	24	2.3	1.1	1	4
- Pediatric otolaryngology	30	1.3	0.5	1	2
Pathology-anatomic and clinical	142	4.0	1.9	1	10
- Blood banking/transfusion medicine	51	2.9	1.4	1	6
- Clinical informatics	10	1.8	1.2	1	5
- Chemical pathology	4	1.3	0.4	1	2
- Cytopathology	93	1.4	0.6	1	3
- Forensic pathology	45	1.3	0.8	1	4
- Hematopathology	86	1.8	0.9	1	5
- Medical microbiology	15	1.9	1.0	1	4
- Neuropathology	37	2.2	1.2	1	6
- Pediatric pathology	28	2.2	1.0	1	5
- Selective pathology	101	1.4	0.7	1	3
Pediatrics	211	2.8	1.6	1	11
- Adolescent medicine	32	2.8	2.3	1	10
- Child abuse pediatrics	31	2.8	1.7	1	9
- Clinical informatics	7	2.3	1.4	1	5
- Developmental-behavioral pediatrics	43	2.0	1.1	1	5
- Neonatal-perinatal medicine	103	2.1	1.0	1	6
- Pediatric cardiology	63	1.6	0.8	1	4
- Pediatric critical care medicine	72	1.5	0.8	1	5
- Pediatric emergency medicine	53	2.9	1.0	1	5
- Pediatric endocrinology	72	1.6	0.8	1	5
- Pediatric gastroenterology	65	1.5	0.7	1	3
- Pediatric hematology/oncology	75	1.8	0.9	1	4

TABLE F.5 <i>Continued</i>					
Mean Number of Participating Sites per Program where Residents Rotate by Specialty and Subspecialty					
Specialty	Total Programs	Number of Participating Sites per Program			
		AVG	STD	MIN	MAX
- Pediatric infectious diseases	64	2.1	1.1	1	6
- Pediatric nephrology	47	1.5	0.9	1	5
- Pediatric pulmonology	56	1.5	0.8	1	5
- Pediatric rheumatology	36	1.6	0.7	1	3
- Pediatric sports medicine	17	3.2	1.9	1	7
- Pediatric transplant hepatology	16	1.7	0.6	1	3
- Pediatric hospital medicine	33	2.6	0.6	2	4
Physical medicine and rehabilitation	94	5.3	3.0	1	23
- Brain injury medicine	23	2.5	0.7	1	4
- Neuromuscular medicine	1	4.0	0.0	4	4
- Spinal cord injury medicine	24	2.9	0.7	2	4
- Pediatric rehabilitation	22	2.1	0.9	1	4
- Sports medicine	20	3.0	1.0	1	5
Plastic surgery	53	5.1	2.2	1	12
Plastic surgery - integrated	82	5.4	2.3	1	11
- Craniofacial surgery	8	1.9	1.3	1	5
- Hand surgery	17	3.0	1.6	1	7
Preventive medicine	72	6.4	4.3	1	23
- Medical toxicology	1	4.0	0.0	4	4
- Undersea and hyperbaric medicine	1	1.0	0.0	1	1
Psychiatry	269	5.3	2.8	1	17
- Addiction medicine (multidisciplinary)	78	3.9	2.2	1	10
- Addiction psychiatry	53	3.1	1.3	1	6
- Child and adolescent psychiatry	141	4.7	2.9	1	14
- Forensic psychiatry	48	4.0	1.6	1	9
- Geriatric psychiatry	62	3.6	2.1	1	11
- Consultation-liaison psychiatry	63	2.1	1.0	1	6
Radiation oncology	91	2.8	1.5	1	8
Radiology-diagnostic	197	3.2	1.8	1	13
- Abdominal radiology	14	1.8	0.9	1	4
- Endovascular surgical neuroradiology	3	1.0	0.0	1	1
- Musculoskeletal radiology	20	1.7	0.9	1	4
- Neuroradiology	87	2.0	1.1	1	6
- Nuclear radiology	17	1.6	1.1	1	5
- Pediatric radiology	47	1.3	0.6	1	4
- Vascular and interventional radiology	92	2.2	1.3	1	8
Interventional radiology - independent	2	1.5	0.5	1	2
Interventional radiology - integrated	89	3.1	1.4	1	9
Surgery	330	4.8	2.0	1	15
- Complex general surgical oncology	29	2.2	1.3	1	6
- Hand surgery	1	5.0	0.0	5	5
- Pediatric surgery	49	1.6	0.8	1	3
- Surgical critical care	139	1.6	0.9	1	5
- Vascular surgery	116	2.4	1.1	1	6
Vascular surgery - integrated	64	3.7	1.5	1	7
Thoracic surgery	74	2.6	1.2	1	6
- Congenital cardiac surgery	14	1.4	0.5	1	2
Thoracic surgery - integrated	30	4.1	1.8	2	8
Urology	145	3.9	1.6	1	9
- Female pelvic medicine and reconstructive surgery	15	2.3	1.4	1	6
- Pediatric urology	26	1.4	0.6	1	3
Transitional year	166	2.2	1.8	1	15
Internal medicine/Pediatrics	79	3.8	2.3	1	17

Note: Pipeline specialties are highlighted.

TABLE F.6

Total Number of Participating Sites and Number of Sponsoring Institutions where Residents Rotate by Specialty and Subspecialty

Specialty	Total Participating Sites	Sponsors	
		#	%
OVERALL	7,689	568	7.4%
TOTAL PIPELINE	5,720	509	8.9%
Allergy and immunology	194	39	20.1%
Anesthesiology	517	70	13.5%
- Adult cardiothoracic anesthesiology	124	38	30.6%
- Clinical informatics	1	1	100.0%
- Critical care medicine	112	32	28.6%
- Regional anesthesiology and acute pain medicine	68	18	26.5%
- Obstetric anesthesiology	56	21	37.5%
- Pain medicine (multidisciplinary)	260	54	20.8%
- Pediatric anesthesiology	83	22	26.5%
Colon and rectal surgery	179	30	16.8%
Dermatology	553	60	10.8%
- Dermatopathology (multidisciplinary)	104	28	26.9%
- Micrographic surgery and dermatologic oncology	161	40	24.8%
Emergency medicine	778	123	15.8%
- Clinical informatics	19	2	10.5%
- Emergency medical services	224	31	13.8%
- Medical toxicology	75	7	9.3%
- Pediatric emergency medicine	62	12	19.4%
- Sports medicine	42	0	0.0%
- Undersea and hyperbaric medicine	12	5	41.7%
Family medicine	2,326	312	13.4%
- Clinical informatics	25	2	8.0%
- Geriatric medicine	204	25	12.3%
- Hospice and palliative medicine (multidisciplinary)	603	77	12.8%
- Sports medicine	528	72	13.6%
Internal medicine	1,484	282	19.0%
- Adult congenital heart disease	44	11	25.0%
- Advanced heart failure and transplant cardiology	107	35	32.7%
- Cardiovascular disease	523	106	20.3%
- Clinical cardiac electrophysiology	181	53	29.3%
- Clinical informatics	34	8	23.5%
- Critical care medicine	105	21	20.0%
- Endocrinology, diabetes, and metabolism	377	69	18.3%
- Gastroenterology	481	97	20.2%
- Geriatric medicine	401	49	12.2%
- Hematology	5	1	20.0%
- Hematology and medical oncology	389	81	20.8%
- Infectious disease	367	69	18.8%
- Interventional cardiology	276	75	27.2%
- Nephrology	388	74	19.1%
- Medical oncology	16	2	12.5%
- Pulmonary disease	55	14	25.5%
- Pulmonary disease and critical care medicine	477	85	17.8%
- Rheumatology	301	58	19.3%
- Sleep medicine (multidisciplinary)	213	38	17.8%
- Transplant hepatology	78	26	33.3%
Medical genetics and genomics	133	24	18.0%
- Medical biochemical genetics	42	10	23.8%
- Molecular genetic pathology (multidisciplinary)	75	20	26.7%
Neurological surgery	354	52	14.7%
- Endovascular surgical neuroradiology	4	0	0.0%

TABLE F.6 Continued
Total Number of Participating Sites and Number of Sponsoring Institutions where Residents Rotate by Specialty and Subspecialty

Specialty	Total Participating Sites	Sponsors	
		#	%
Neurology	485	67	13.8%
- Brain injury medicine	1	0	0.0%
- Clinical neurophysiology	185	41	22.2%
- Epilepsy	136	33	24.3%
- Endovascular surgical neuroradiology	3	0	0.0%
- Neurodevelopmental disabilities	33	4	12.1%
- Neuromuscular medicine	113	28	24.8%
- Vascular neurology	179	49	27.4%
Child neurology	208	34	16.3%
Nuclear medicine	90	17	18.9%
Obstetrics and gynecology	931	146	15.7%
- Female pelvic medicine and reconstructive surgery	142	27	19.0%
- Gynecologic oncology	137	30	21.9%
- Maternal-fetal medicine	192	41	21.4%
- Reproductive endocrinology and infertility	136	22	16.2%
Ophthalmology	438	50	11.4%
- Ophthalmic plastic and reconstructive surgery	21	1	4.8%
Orthopaedic surgery	847	87	10.3%
- Adult reconstructive orthopaedics	52	7	13.5%
- Foot and ankle orthopaedics	18	5	27.8%
- Hand surgery	248	34	13.7%
- Musculoskeletal oncology	24	7	29.2%
- Orthopaedic sports medicine	266	47	17.7%
- Orthopaedic surgery of the spine	37	10	27.0%
- Orthopaedic trauma	18	6	33.3%
- Pediatric orthopaedics	38	10	26.3%
Osteopathic neuromusculoskeletal medicine	107	11	10.3%
Otolaryngology - head and neck surgery	452	53	11.7%
- Neurotology	55	13	23.6%
- Pediatric otolaryngology	39	12	30.8%
Pathology-anatomic and clinical	471	66	14.0%
- Blood banking/transfusion medicine	140	29	20.7%
- Clinical informatics	18	3	16.7%
- Chemical pathology	5	3	60.0%
- Cytopathology	124	44	35.5%
- Forensic pathology	59	22	37.3%
- Hematopathology	142	42	29.6%
- Medical microbiology	28	9	32.1%
- Neuropathology	74	18	24.3%
- Pediatric pathology	61	13	21.3%
- Selective pathology	73	20	27.4%
Pediatrics	474	104	21.9%
- Adolescent medicine	87	13	14.9%
- Child abuse pediatrics	85	13	15.3%
- Clinical informatics	16	5	31.3%
- Developmental-behavioral pediatrics	81	21	25.9%
- Neonatal-perinatal medicine	207	45	21.7%
- Pediatric cardiology	95	28	29.5%
- Pediatric critical care medicine	98	32	32.7%
- Pediatric emergency medicine	140	22	15.7%
- Pediatric endocrinology	113	32	28.3%
- Pediatric gastroenterology	95	29	30.5%
- Pediatric hematology/oncology	123	32	26.0%

TABLE E.6 *Continued***Total Number of Participating Sites and Number of Sponsoring Institutions where Residents Rotate by Specialty and Subspecialty**

Specialty	Total Participating Sites	Sponsors	
		#	%
- Pediatric infectious diseases	123	29	23.6%
- Pediatric nephrology	70	20	28.6%
- Pediatric pulmonology	81	24	29.6%
- Pediatric rheumatology	57	13	22.8%
- Pediatric sports medicine	55	11	20.0%
- Pediatric transplant hepatology	27	5	18.5%
- Pediatric hospital medicine	87	15	17.2%
Physical medicine and rehabilitation	451	41	9.1%
- Brain injury medicine	56	9	16.1%
- Neuromuscular medicine	4	0	0.0%
- Spinal cord injury medicine	67	8	11.9%
- Pediatric rehabilitation	45	7	15.6%
- Sports medicine	57	3	5.3%
Plastic surgery	247	24	9.7%
Plastic surgery - integrated	406	36	8.9%
- Craniofacial surgery	15	3	20.0%
- Hand surgery	51	8	15.7%
Preventive medicine	376	33	8.8%
- Medical toxicology	4	1	25.0%
- Undersea and hyperbaric medicine	1	1	100.0%
Psychiatry	1,244	129	10.4%
- Addiction medicine (multidisciplinary)	293	35	11.9%
- Addiction psychiatry	156	19	12.2%
- Child and adolescent psychiatry	627	59	9.4%
- Forensic psychiatry	183	18	9.8%
- Geriatric psychiatry	225	21	9.3%
- Consultation-liaison psychiatry	134	31	23.1%
Radiation oncology	222	40	18.0%
Radiology-diagnostic	484	93	19.2%
- Abdominal radiology	25	6	24.0%
- Endovascular surgical neuroradiology	3	2	66.7%
- Musculoskeletal radiology	34	10	29.4%
- Neuroradiology	166	40	24.1%
- Nuclear radiology	28	11	39.3%
- Pediatric radiology	60	19	31.7%
- Vascular and interventional radiology	199	43	21.6%
Interventional radiology - independent	3	1	33.3%
Interventional radiology - integrated	257	39	15.2%
Surgery	1,095	159	14.5%
- Complex general surgical oncology	63	13	20.6%
- Hand surgery	5	0	0.0%
- Pediatric surgery	74	16	21.6%
- Surgical critical care	211	62	29.4%
- Vascular surgery	274	53	19.3%
Vascular surgery - integrated	228	30	13.2%
Thoracic surgery	177	39	22.0%
- Congenital cardiac surgery	19	6	31.6%
Thoracic surgery - integrated	123	15	12.2%
Urology	507	66	13.0%
- Female pelvic medicine and reconstructive surgery	33	9	27.3%
- Pediatric urology	36	9	25.0%
Transitional year	356	86	24.2%
Internal medicine/Pediatrics	286	33	11.5%

Notes: The same institution can be counted by programs across specialties. Pipeline specialties are highlighted.



Program Coordinators and Faculty

This section includes information and trends regarding program director turnover, tenure, and hours spent in key areas related to the program. Statistics on the total number of faculty members, faculty members per program, and the hours faculty members spend in key areas are also included.

Program Director Changes

A total of 764 specialty programs (14.3%) and 876 subspecialty programs (13.1%) had at least one program director change. Of these, a small number (30 specialty programs and 31 subspecialty programs) had more than one program director change during the academic year. Overall, 1,704 distinct program director changes occurred in 1,640 programs. The specialties with the highest percentage of program director turnover include:

- Plastic surgery – integrated (20.7%)
- Medical genetics and genomics (21.3%)
- Pathology-anatomic and clinical (22.5%)
- Interventional radiology – integrated (23.6%)

The specialties with the highest total number of program director changes include:

- Family medicine (97)
- Internal medicine (77)
- Obstetrics and gynecology (45)

The specialties with the lowest percentage of program director turnover include:

- Colon and rectal surgery (4.6%)
- Child neurology (6.6%)
- Otolaryngology - Head and Neck Surgery (8.1%)
- Vascular surgery – integrated (10.9%)

Historically, between 11% and 14% of programs have a change in the program director role each year.

Program Director Tenure

On average, program directors of ACGME-accredited specialty programs spend approximately seven years in this role. Among all past program directors in specialty programs since July 1, 2009, allergy and immunology program directors have had the highest average tenure at 9.9 years, while interventional radiology – integrated program directors have had the lowest tenure at 1.2 years.

Program Director Years Teaching in Specialty

In general, new program directors have spent less time teaching in their specialty than program directors who

are not new to their role (continuing program directors). The mean length in years that new program directors have taught in their specialty is 12.5 years among medical specialty programs, 10.2 years among hospital-based specialty programs, and 13.2 years among surgical specialty programs. In each group, the years that subspecialty program directors have taught in their subspecialty is 10.0 years, 9.9 years, and 12.7 years in medical, hospital-based, and surgical subspecialty programs, respectively. The mean length in years that continuing program directors have taught in their specialty is 18.0 years among medical specialty programs, 15.6 years among hospital-based specialty programs, and 17.4 years among surgical specialty programs.

Physician Faculty Members

A total of 190,090 physician faculty members were listed as active at the time of the Academic Year 2019-2020 snapshot. Note that these are not necessarily distinct people, as an individual may be listed as a faculty member for multiple programs. The average number of physician faculty members listed per program was 15.7 overall. The specialties with the highest average number of faculty members per program include:

- Anesthesiology (55.4)
- Pediatrics (46.9)
- Radiology – diagnostic (34.1)

The subspecialties with the highest average number of faculty members per program include:

- Pediatric emergency medicine (20.0)
- Neurodevelopmental disabilities (18.9)
- Pediatric cardiology (18.2)

Core Faculty

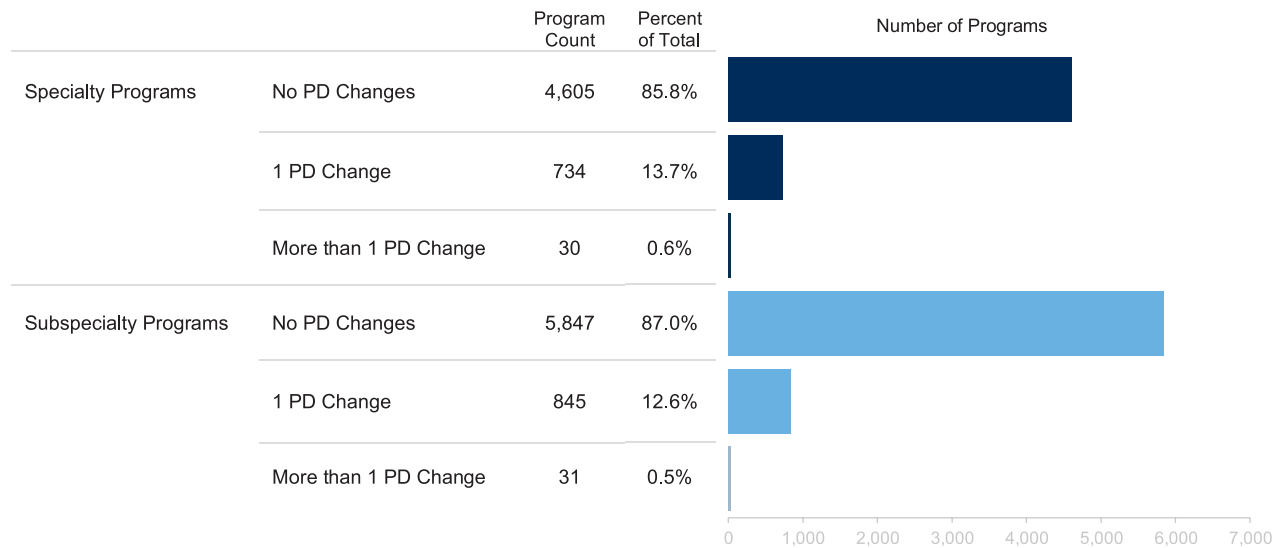
A total of 69,626 core faculty members were listed as active in specialty programs at the time of the Academic Year 2019-2020 snapshot. The specialties with the highest average number of core faculty members per program include:

- Anesthesiology (26.8)
- Pediatrics (25.3)
- Radiology – diagnostic (21.7)

A small number of programs had over 100 core faculty members listed on their Faculty Roster. ♪

FIGURE G.1

Number of Programs with Program Director Changes during the Academic Year



Notes: Total number of programs = 12,092. Total number of distinct program director changes = 1,704.
Abbreviations: PD, program director.

FIGURE G.2

Percent of Programs with at Least One Program Director Change by Academic Year, 2010-2011 to 2019-2020

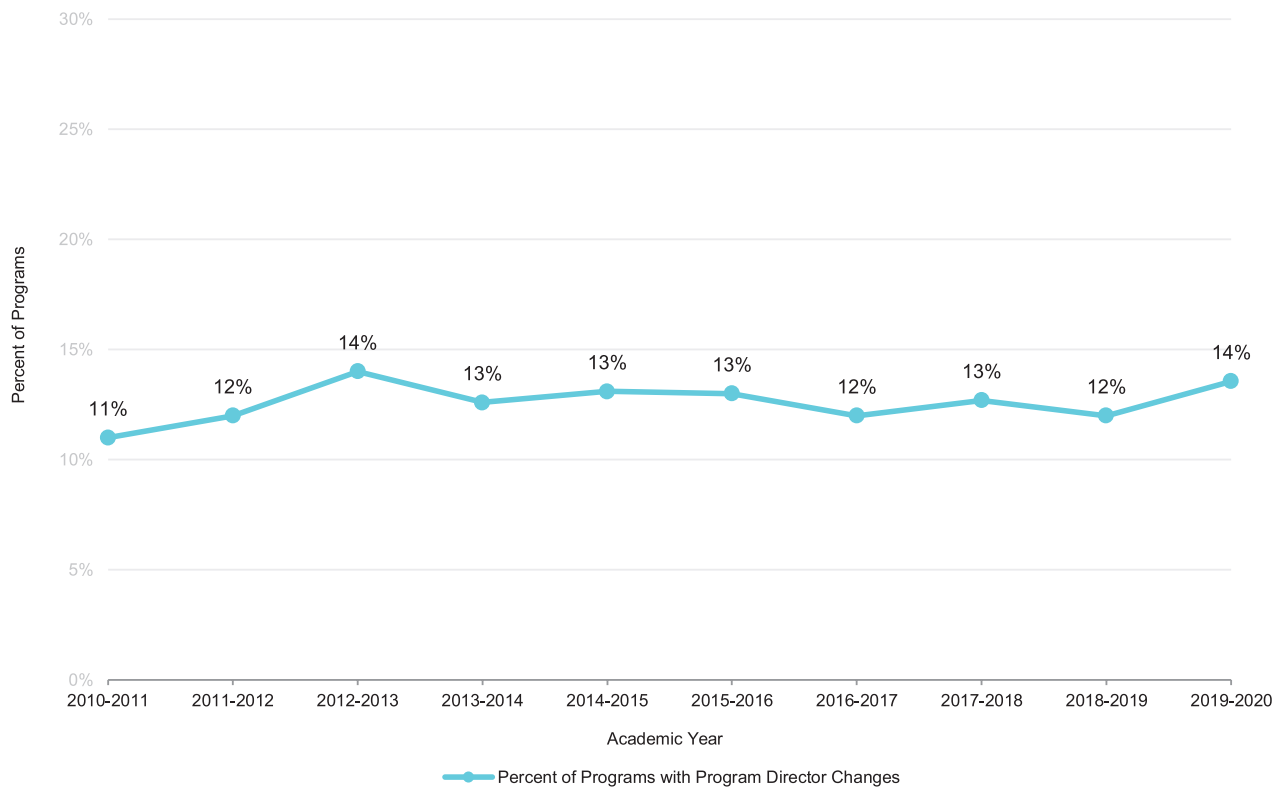


TABLE G.3

Number of Programs with New Program Directors and Number of Distinct Program Director Changes during the Academic Year by Specialty and Subspecialty

Specialty	Total Programs	Programs with New PDs		Number of Distinct PD Changes
		#	%	
OVERALL	12,092	1,640	13.6%	1,704
TOTAL PIPELINE	4,985	709	14.2%	741
Allergy and immunology	81	12	14.8%	13
Anesthesiology	160	24	15.0%	24
- Adult cardiothoracic anesthesiology	71	17	23.9%	18
- Clinical informatics	1	1	100.0%	1
- Critical care medicine	63	12	19.0%	14
- Regional anesthesiology and acute pain medicine	35	3	8.6%	3
- Obstetric anesthesiology	41	7	17.1%	9
- Pain medicine (multidisciplinary)	108	10	9.3%	12
- Pediatric anesthesiology	60	6	10.0%	6
Colon and rectal surgery	65	3	4.6%	3
Dermatology	144	18	12.5%	19
- Dermatopathology (multidisciplinary)	56	7	12.5%	8
- Micrographic surgery and dermatologic oncology	78	4	5.1%	4
Emergency medicine	265	38	14.3%	38
- Clinical informatics	5	0	0.0%	0
- Emergency medical services	71	15	21.1%	16
- Medical toxicology	26	0	0.0%	0
- Pediatric emergency medicine	26	5	19.2%	5
- Sports medicine	8	1	12.5%	1
- Undersea and hyperbaric medicine	8	1	12.5%	1
Family medicine	701	92	13.1%	97
- Clinical informatics	6	0	0.0%	0
- Geriatric medicine	50	5	10.0%	5
- Hospice and palliative medicine (multidisciplinary)	167	22	13.2%	22
- Sports medicine	151	18	11.9%	18
Internal medicine	569	74	13.0%	77
- Adult congenital heart disease	24	0	0.0%	0
- Advanced heart failure and transplant cardiology	80	12	15.0%	13
- Cardiovascular disease	250	30	12.0%	30
- Clinical cardiac electrophysiology	110	9	8.2%	9
- Clinical informatics	17	2	11.8%	2
- Critical care medicine	45	8	17.8%	8
- Endocrinology, diabetes, and metabolism	151	15	9.9%	16
- Gastroenterology	207	21	10.1%	21
- Geriatric medicine	111	14	12.6%	16
- Hematology	2	1	50.0%	1
- Hematology and medical oncology	167	19	11.4%	19
- Infectious disease	154	30	19.5%	32
- Interventional cardiology	166	20	12.0%	21
- Nephrology	151	17	11.3%	17
- Medical oncology	7	1	14.3%	1
- Pulmonary disease	22	2	9.1%	2
- Pulmonary disease and critical care medicine	181	24	13.3%	24
- Rheumatology	125	15	12.0%	16
- Sleep medicine (multidisciplinary)	88	11	12.5%	11
- Transplant hepatology	57	8	14.0%	8
Medical genetics and genomics	47	10	21.3%	11
- Medical biochemical genetics	19	0	0.0%	0
- Molecular genetic pathology (multidisciplinary)	42	5	11.9%	5
Neurological surgery	118	18	15.3%	18
- Endovascular surgical neuroradiology	2	0	0.0%	0

TABLE G.3 Continued

Number of Programs with New Program Directors and Number of Distinct Program Director Changes during the Academic Year by Specialty and Subspecialty

Specialty	Total Programs	Programs with New PDs		Number of Distinct PD Changes
		#	%	
Neurology	160	19	11.9%	19
- Brain injury medicine	1	0	0.0%	0
- Clinical neurophysiology	92	10	10.9%	10
- Epilepsy	81	7	8.6%	7
- Endovascular surgical neuroradiology	2	0	0.0%	0
- Neurodevelopmental disabilities	8	1	12.5%	1
- Neuromuscular medicine	52	7	13.5%	7
- Vascular neurology	106	17	16.0%	17
Child neurology	76	5	6.6%	5
Nuclear medicine	38	7	18.4%	7
Obstetrics and gynecology	285	42	14.7%	45
- Female pelvic medicine and reconstructive surgery	54	9	16.7%	9
- Gynecologic oncology	63	14	22.2%	14
- Maternal-fetal medicine	97	19	19.6%	20
- Reproductive endocrinology and infertility	51	10	19.6%	10
Ophthalmology	124	19	15.3%	19
- Ophthalmic plastic and reconstructive surgery	4	0	0.0%	0
Orthopaedic surgery	197	22	11.2%	23
- Adult reconstructive orthopaedics	24	3	12.5%	3
- Foot and ankle orthopaedics	7	1	14.3%	1
- Hand surgery	74	4	5.4%	4
- Musculoskeletal oncology	12	2	16.7%	2
- Orthopaedic sports medicine	90	11	12.2%	11
- Orthopaedic surgery of the spine	18	2	11.1%	2
- Orthopaedic trauma	11	3	27.3%	3
- Pediatric orthopaedics	25	3	12.0%	3
Osteopathic neuromusculoskeletal medicine	27	3	11.1%	5
Otolaryngology - head and neck surgery	124	10	8.1%	11
- Neurotology	24	1	4.2%	1
- Pediatric otolaryngology	30	2	6.7%	3
Pathology-anatomic and clinical	142	32	22.5%	33
- Blood banking/transfusion medicine	51	7	13.7%	9
- Clinical informatics	10	1	10.0%	1
- Chemical pathology	4	1	25.0%	1
- Cytopathology	93	13	14.0%	14
- Forensic pathology	45	11	24.4%	12
- Hematopathology	86	10	11.6%	11
- Medical microbiology	15	2	13.3%	2
- Neuropathology	37	4	10.8%	4
- Pediatric pathology	28	6	21.4%	6
- Selective pathology	101	8	7.9%	8
Pediatrics	211	36	17.1%	37
- Adolescent medicine	32	3	9.4%	3
- Child abuse pediatrics	31	3	9.7%	3
- Clinical informatics	7	1	14.3%	1
- Developmental-behavioral pediatrics	43	6	14.0%	6
- Neonatal-perinatal medicine	103	17	16.5%	17
- Pediatric cardiology	63	8	12.7%	8
- Pediatric critical care medicine	72	12	16.7%	12
- Pediatric emergency medicine	53	11	20.8%	11
- Pediatric endocrinology	72	5	6.9%	5
- Pediatric gastroenterology	65	7	10.8%	7
- Pediatric hematology/oncology	75	11	14.7%	11

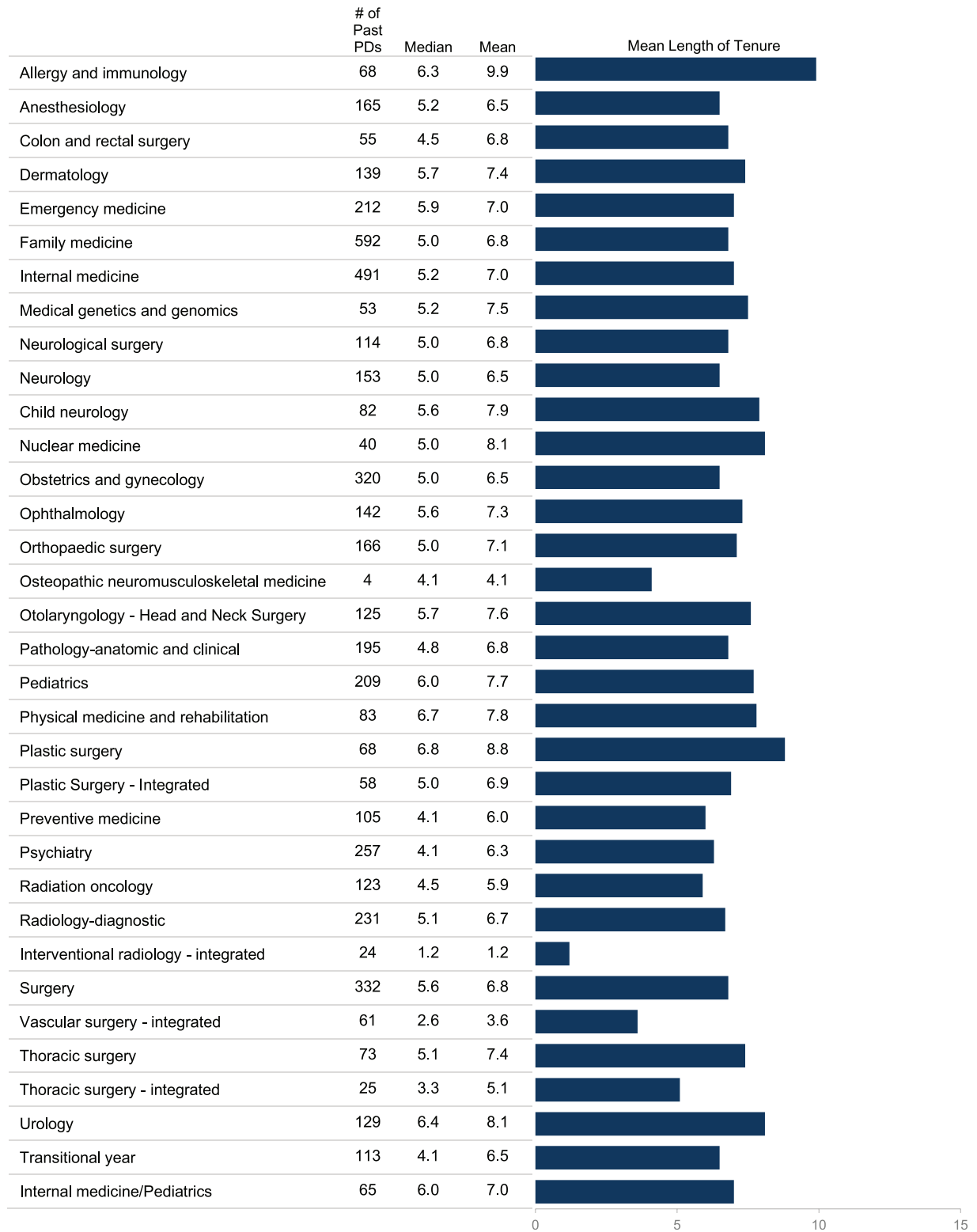
TABLE G.3 *Continued***Number of Programs with New Program Directors and Number of Distinct Program Director Changes during the Academic Year by Specialty and Subspecialty**

Specialty	Total Programs	Programs with New PDs		Number of Distinct PD Changes
		#	%	
- Pediatric infectious diseases	64	5	7.8%	5
- Pediatric nephrology	47	4	8.5%	4
- Pediatric pulmonology	56	9	16.1%	9
- Pediatric rheumatology	36	4	11.1%	5
- Pediatric sports medicine	17	1	5.9%	1
- Pediatric transplant hepatology	16	1	6.3%	1
- Pediatric hospital medicine	33	0	0.0%	0
Physical medicine and rehabilitation	94	15	16.0%	16
- Brain injury medicine	23	4	17.4%	4
- Neuromuscular medicine	1	0	0.0%	0
- Spinal cord injury medicine	24	5	20.8%	5
- Pediatric rehabilitation	22	3	13.6%	3
- Sports medicine	20	3	15.0%	3
Plastic surgery	53	6	11.3%	6
Plastic surgery - integrated	82	17	20.7%	17
- Craniofacial surgery	8	2	25.0%	2
- Hand surgery	17	3	17.6%	3
Preventive medicine	72	10	13.9%	13
- Medical toxicology	1	0	0.0%	0
- Undersea and hyperbaric medicine	1	0	0.0%	0
Psychiatry	269	34	12.6%	36
- Addiction medicine (multidisciplinary)	78	11	14.1%	12
- Addiction psychiatry	53	9	17.0%	10
- Child and adolescent psychiatry	141	22	15.6%	24
- Forensic psychiatry	48	4	8.3%	4
- Geriatric psychiatry	62	7	11.3%	7
- Consultation-liaison psychiatry	63	6	9.5%	6
Radiation oncology	91	18	19.8%	18
Radiology-diagnostic	197	37	18.8%	37
- Abdominal radiology	14	1	7.1%	1
- Endovascular surgical neuroradiology	3	1	33.3%	1
- Musculoskeletal radiology	20	4	20.0%	4
- Neuroradiology	87	11	12.6%	11
- Nuclear radiology	17	2	11.8%	2
- Pediatric radiology	47	10	21.3%	10
- Vascular and interventional radiology	92	14	15.2%	14
Interventional radiology - independent	2	0	0.0%	0
Interventional radiology - integrated	89	21	23.6%	22
Surgery	330	41	12.4%	44
- Complex general surgical oncology	29	5	17.2%	5
- Hand surgery	1	0	0.0%	0
- Pediatric surgery	49	9	18.4%	9
- Surgical critical care	139	23	16.5%	24
- Vascular surgery	116	18	15.5%	19
Vascular surgery - integrated	64	7	10.9%	8
Thoracic surgery	74	11	14.9%	11
- Congenital cardiac surgery	14	1	7.1%	1
Thoracic surgery - integrated	30	5	16.7%	5
Urology	145	20	13.8%	21
- Female pelvic medicine and reconstructive surgery	15	2	13.3%	2
- Pediatric urology	26	1	3.8%	1
Transitional year	166	29	17.5%	29
Internal medicine/Pediatrics	79	9	11.4%	10

Notes: Total number of distinct program director changes = 1,704 (797 in specialty programs and 907 in subspecialty programs). Pipeline specialties are highlighted. Abbreviations: PD, program director.

FIGURE G.4

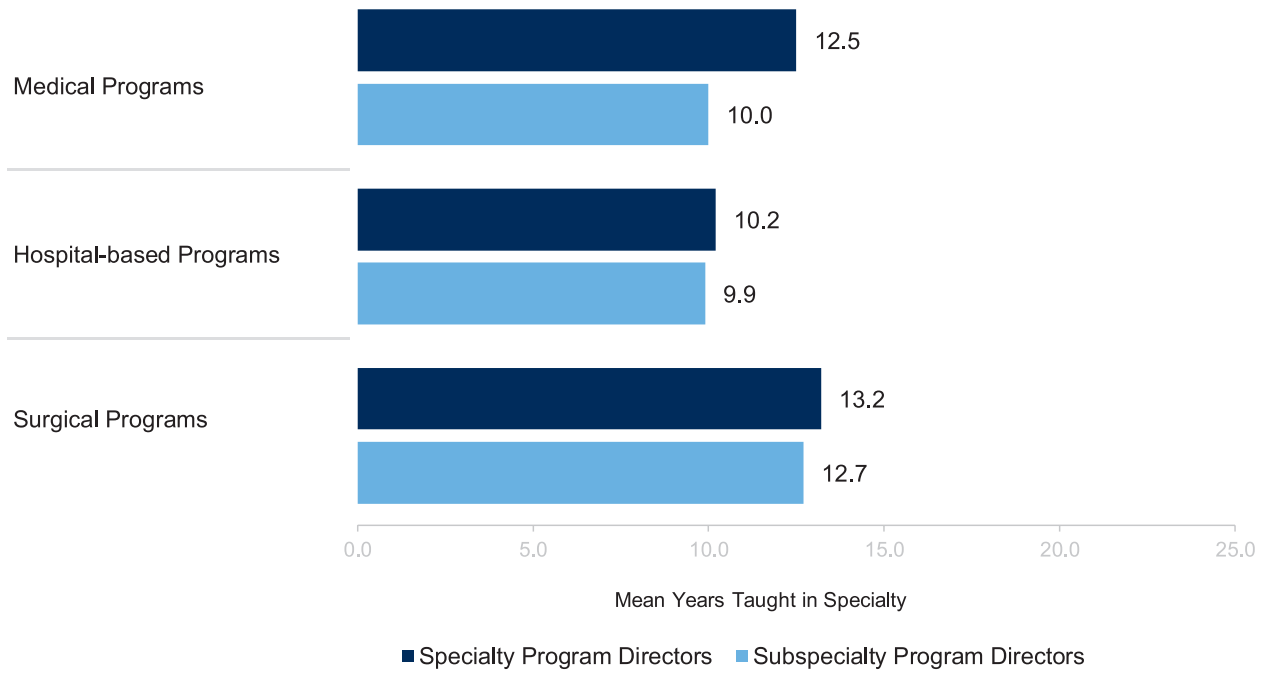
Mean Length in Years of Past Program Director Tenure by Specialty



Notes: Data are based on program director changes since 7/1/2010 (n = 5,072). Overall mean length in tenure = 6.7 years. Abbreviations: PD, program director.

FIGURE G.5

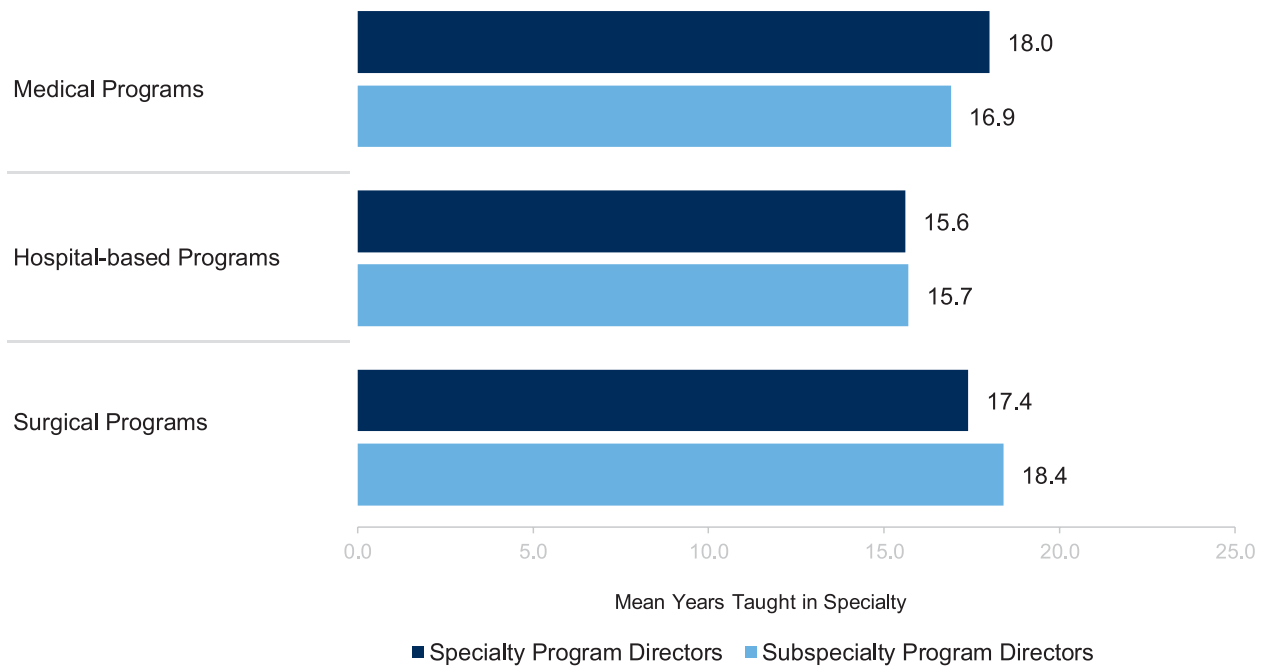
Mean Length in Years New Program Directors Have Taught in Their Specialty by Specialty Group



Notes: Total number of new program directors in specialty programs = 764. Total number of new program directors in subspecialty programs = 876.

FIGURE G.6

Mean Length in Years Continuing Program Directors Have Taught in Their Specialty by Specialty Group



Notes: Total number of continuing program directors in specialty programs = 4,409. Total number of continuing program directors in subspecialty programs = 5,553.

FIGURE G.7

Mean Number of Hours per Week Spent by Program Directors in Key Areas by Specialty



Notes: Sum of individual means may not add to overall mean due to rounding.

TABLE G.8

Number of Physician Faculty Members and Mean Number of Physician Faculty Members per Program by Specialty and Subspecialty

Specialty	Total Programs	Total Number of Physician Faculty	Mean	MIN	MAX
OVERALL	12,092	190,090	15.7	0	317
TOTAL PIPELINE	4,985	126,098	25.3	0	317
Allergy and immunology	81	811	10.0	2	29
Anesthesiology	160	8,871	55.4	8	164
- Adult cardiothoracic anesthesiology	71	914	12.9	5	32
- Clinical informatics	1	7	7.0	7	7
- Critical care medicine	63	850	13.5	3	35
- Regional anesthesiology and acute pain medicine	35	380	10.9	3	33
- Obstetric anesthesiology	41	385	9.4	3	22
- Pain medicine (multidisciplinary)	108	993	9.2	2	31
- Pediatric anesthesiology	60	954	15.9	4	49
Colon and rectal surgery	65	436	6.7	2	21
Dermatology	144	2,314	16.1	3	71
- Dermatopathology (multidisciplinary)	56	376	6.7	2	24
- Micrographic surgery and dermatologic oncology	78	302	3.9	0	15
Emergency medicine	265	5,854	22.1	4	92
- Clinical informatics	5	41	8.2	5	13
- Emergency medical services	71	290	4.1	1	9
- Medical toxicology	26	140	5.4	2	12
- Pediatric emergency medicine	26	259	10.0	2	23
- Sports medicine	8	43	5.4	2	10
- Undersea and hyperbaric medicine	8	25	3.1	1	6
Family medicine	701	17,936	25.6	3	102
- Clinical informatics	6	43	7.2	3	11
- Geriatric medicine	50	369	7.4	1	17
- Hospice and palliative medicine (multidisciplinary)	167	1,412	8.5	1	22
- Sports medicine	151	1,140	7.5	2	24
Internal medicine	569	12,011	21.1	3	157
- Adult congenital heart disease	24	123	5.1	1	15
- Advanced heart failure and transplant cardiology	80	405	5.1	1	14
- Cardiovascular disease	250	3,437	13.7	3	68
- Clinical cardiac electrophysiology	110	538	4.9	0	17
- Clinical informatics	17	125	7.4	2	11
- Critical care medicine	45	489	10.9	2	35
- Endocrinology, diabetes, and metabolism	151	1,146	7.6	1	24
- Gastroenterology	207	2,411	11.6	2	51
- Geriatric medicine	111	798	7.2	1	18
- Hematology	2	18	9.0	9	9
- Hematology and medical oncology	167	2,281	13.7	3	61
- Infectious disease	154	1,506	9.8	2	37
- Interventional cardiology	166	822	5.0	1	20
- Nephrology	151	1,448	9.6	2	31
- Medical oncology	7	64	9.1	3	21
- Pulmonary disease	22	135	6.1	2	15
- Pulmonary disease and critical care medicine	181	2,512	13.9	4	41
- Rheumatology	125	895	7.2	1	22
- Sleep medicine (multidisciplinary)	88	547	6.2	2	16
- Transplant hepatology	57	328	5.8	1	11
Medical genetics and genomics	47	502	10.7	1	49
- Medical biochemical genetics	19	112	5.9	3	11
- Molecular genetic pathology (multidisciplinary)	42	230	5.5	1	12
Neurological surgery	118	2,072	17.6	5	44
- Endovascular surgical neuroradiology	2	3	1.5	1	2

TABLE G.8 Continued

Number of Physician Faculty Members and Mean Number of Physician Faculty Members per Program by Specialty and Subspecialty

Specialty	Total Programs	Total Number of Physician Faculty	Mean	MIN	MAX
Neurology	160	4,831	30.2	5	95
- Brain injury medicine	1	2	2.0	2	2
- Clinical neurophysiology	92	884	9.6	2	23
- Epilepsy	81	699	8.6	3	23
- Endovascular surgical neuroradiology	2	7	3.5	2	5
- Neurodevelopmental disabilities	8	151	18.9	3	25
- Neuromuscular medicine	52	360	6.9	1	18
- Vascular neurology	106	709	6.7	1	21
Child neurology	76	1,242	16.3	2	47
Nuclear medicine	38	215	5.7	1	14
Obstetrics and gynecology	285	8,184	28.7	3	96
- Female pelvic medicine and reconstructive surgery	54	359	6.6	2	12
- Gynecologic oncology	63	589	9.3	2	23
- Maternal-fetal medicine	97	1,173	12.1	1	28
- Reproductive endocrinology and infertility	51	421	8.3	2	24
Ophthalmology	124	3,185	25.7	7	70
- Ophthalmic plastic and reconstructive surgery	4	16	4.0	2	6
Orthopaedic surgery	197	5,925	30.1	7	87
- Adult reconstructive orthopaedics	24	138	5.8	1	18
- Foot and ankle orthopaedics	7	31	4.4	3	8
- Hand surgery	74	496	6.7	2	18
- Musculoskeletal oncology	12	34	2.8	1	6
- Orthopaedic sports medicine	90	576	6.4	1	27
- Orthopaedic surgery of the spine	18	102	5.7	2	11
- Orthopaedic trauma	11	49	4.5	2	8
- Pediatric orthopaedics	25	243	9.7	3	22
Osteopathic neuromusculoskeletal medicine	27	195	7.2	2	21
Otolaryngology - head and neck surgery	124	2,696	21.7	5	50
- Neurotology	24	127	5.3	2	12
- Pediatric otolaryngology	30	272	9.1	4	24
Pathology-anatomic and clinical	142	4,080	28.7	6	91
- Blood banking/transfusion medicine	51	285	5.6	1	13
- Clinical informatics	10	65	6.5	4	9
- Chemical pathology	4	7	1.8	1	3
- Cytopathology	93	510	5.5	2	15
- Forensic pathology	45	279	6.2	1	26
- Hematopathology	86	544	6.3	0	25
- Medical microbiology	15	37	2.5	0	6
- Neuropathology	37	164	4.4	1	9
- Pediatric pathology	28	200	7.1	1	16
- Selective pathology	101	740	7.3	1	31
Pediatrics	211	9,886	46.9	17	317
- Adolescent medicine	32	198	6.2	2	17
- Child abuse pediatrics	31	127	4.1	1	13
- Clinical informatics	7	50	7.1	2	12
- Developmental-behavioral pediatrics	43	278	6.5	2	18
- Neonatal-perinatal medicine	103	1,553	15.1	3	46
- Pediatric cardiology	63	1,147	18.2	3	55
- Pediatric critical care medicine	72	1,049	14.6	6	72
- Pediatric emergency medicine	53	1,058	20.0	6	47
- Pediatric endocrinology	72	563	7.8	1	29
- Pediatric gastroenterology	65	652	10.0	2	30
- Pediatric hematology/oncology	75	1,180	15.7	4	49

TABLE G.8 *Continued***Number of Physician Faculty Members and Mean Number of Physician Faculty Members per Program by Specialty and Subspecialty**

Specialty	Total Programs	Total Number of Physician Faculty	Mean	MIN	MAX
- Pediatric infectious diseases	64	506	7.9	2	22
- Pediatric nephrology	47	283	6.0	2	18
- Pediatric pulmonology	56	479	8.6	3	24
- Pediatric rheumatology	36	169	4.7	1	9
- Pediatric sports medicine	17	121	7.1	3	18
- Pediatric transplant hepatology	16	89	5.6	3	11
- Pediatric hospital medicine	33	513	15.5	5	33
Physical medicine and rehabilitation	94	2,028	21.6	5	58
- Brain injury medicine	23	135	5.9	1	16
- Neuromuscular medicine	1	5	5.0	5	5
- Spinal cord injury medicine	24	159	6.6	4	16
- Pediatric rehabilitation	22	141	6.4	2	14
- Sports medicine	20	145	7.3	3	22
Plastic surgery	53	745	14.1	1	34
Plastic surgery - integrated	82	1,659	20.2	6	57
- Craniofacial surgery	8	21	2.6	1	5
- Hand surgery	17	101	5.9	2	11
Preventive medicine	72	737	10.2	0	34
- Medical toxicology	1	5	5.0	5	5
- Undersea and hyperbaric medicine	1	5	5.0	5	5
Psychiatry	269	6,092	22.6	0	80
- Addiction medicine (multidisciplinary)	78	639	8.2	2	17
- Addiction psychiatry	53	376	7.1	1	14
- Child and adolescent psychiatry	141	1,365	9.7	2	33
- Forensic psychiatry	48	267	5.6	1	14
- Geriatric psychiatry	62	384	6.2	1	13
- Consultation-liaison psychiatry	63	401	6.4	1	25
Radiation oncology	91	1,142	12.5	4	54
Radiology-diagnostic	197	6,715	34.1	7	104
- Abdominal radiology	14	149	10.6	5	20
- Endovascular surgical neuroradiology	3	10	3.3	2	5
- Musculoskeletal radiology	20	140	7.0	2	20
- Neuroradiology	87	841	9.7	1	33
- Nuclear radiology	17	74	4.4	1	14
- Pediatric radiology	47	535	11.4	2	40
- Vascular and interventional radiology	92	713	7.8	1	22
Interventional radiology - independent	2	10	5.0	4	6
Interventional radiology - integrated	89	2,133	24.0	5	72
Surgery	330	10,163	30.8	4	148
- Complex general surgical oncology	29	462	15.9	7	29
- Hand surgery	1	9	9.0	9	9
- Pediatric surgery	49	466	9.5	3	19
- Surgical critical care	139	1,335	9.6	2	26
- Vascular surgery	116	835	7.2	2	18
Vascular surgery - integrated	64	823	12.9	3	37
Thoracic surgery	74	1,005	13.6	4	34
- Congenital cardiac surgery	14	58	4.1	2	9
Thoracic surgery - integrated	30	662	22.1	8	86
Urology	145	2,536	17.5	5	47
- Female pelvic medicine and reconstructive surgery	15	114	7.6	2	13
- Pediatric urology	26	131	5.0	2	11
Transitional year	166	2,139	12.9	4	77
Internal medicine/Pediatrics	79	654	8.3	1	21

Notes: Excluding program directors. Total number of physician faculty does not represent the count of distinct people as individuals may be listed in more than one program. Total number of distinct physician faculty across all programs= 155,269. Pipeline specialties are highlighted.

TABLE G.9

Total Number of Core Faculty Members and Core Faculty Members per Program by Specialty

Specialty	Total Programs	Total Number of Core Faculty	Mean	MIN	MAX
OVERALL	5,369	69,626	13.0	0	119
Allergy and immunology	81	428	5.3	1	15
Anesthesiology	160	4,283	26.8	3	119
Colon and rectal surgery	65	321	4.9	1	14
Dermatology	144	1,332	9.3	1	26
Emergency medicine	265	3,511	13.2	4	69
Family medicine	701	4,795	6.8	0	27
Internal medicine	569	6,401	11.2	3	56
Medical genetics and genomics	47	238	5.1	1	18
Neurological surgery	118	1,453	12.3	3	29
Neurology	160	2,511	15.7	2	63
Child neurology	76	772	10.2	2	35
Nuclear medicine	38	162	4.3	0	10
Obstetrics and gynecology	285	4,793	16.8	2	61
Ophthalmology	124	1,699	13.7	3	36
Orthopaedic surgery	197	3,718	18.9	2	58
Osteopathic neuromusculoskeletal medicine	27	64	2.4	0	8
Otolaryngology - Head and Neck Surgery	124	1,863	15.0	3	46
Pathology-anatomic and clinical	142	2,456	17.3	3	58
Pediatrics	211	5,337	25.3	4	82
Physical medicine and rehabilitation	94	1,338	14.2	3	42
Plastic surgery	53	488	9.2	1	31
Plastic Surgery - Integrated	82	830	10.1	3	31
Preventive medicine	72	263	3.7	0	7
Psychiatry	269	3,156	11.7	0	49
Radiation oncology	91	877	9.6	3	41
Radiology-diagnostic	197	4,284	21.7	6	86
Interventional radiology - integrated	89	1,603	18.0	5	46
Surgery	330	5,624	17.0	2	70
Vascular surgery - integrated	64	549	8.6	0	34
Thoracic surgery	74	831	11.2	3	30
Thoracic surgery - integrated	30	390	13.0	5	30
Urology	145	1,678	11.6	3	36
Transitional year	166	1,116	6.7	0	21
Internal medicine/Pediatrics	79	462	5.8	0	15

Notes: Excluding program directors. Total number of core faculty does not represent the count of distinct people as individuals may be listed in more than one program. Total number of distinct core faculty in specialty programs = 65,967.

FIGURE G.10

Specialties Organized by Largest Mean Number of Core Faculty Members per Program

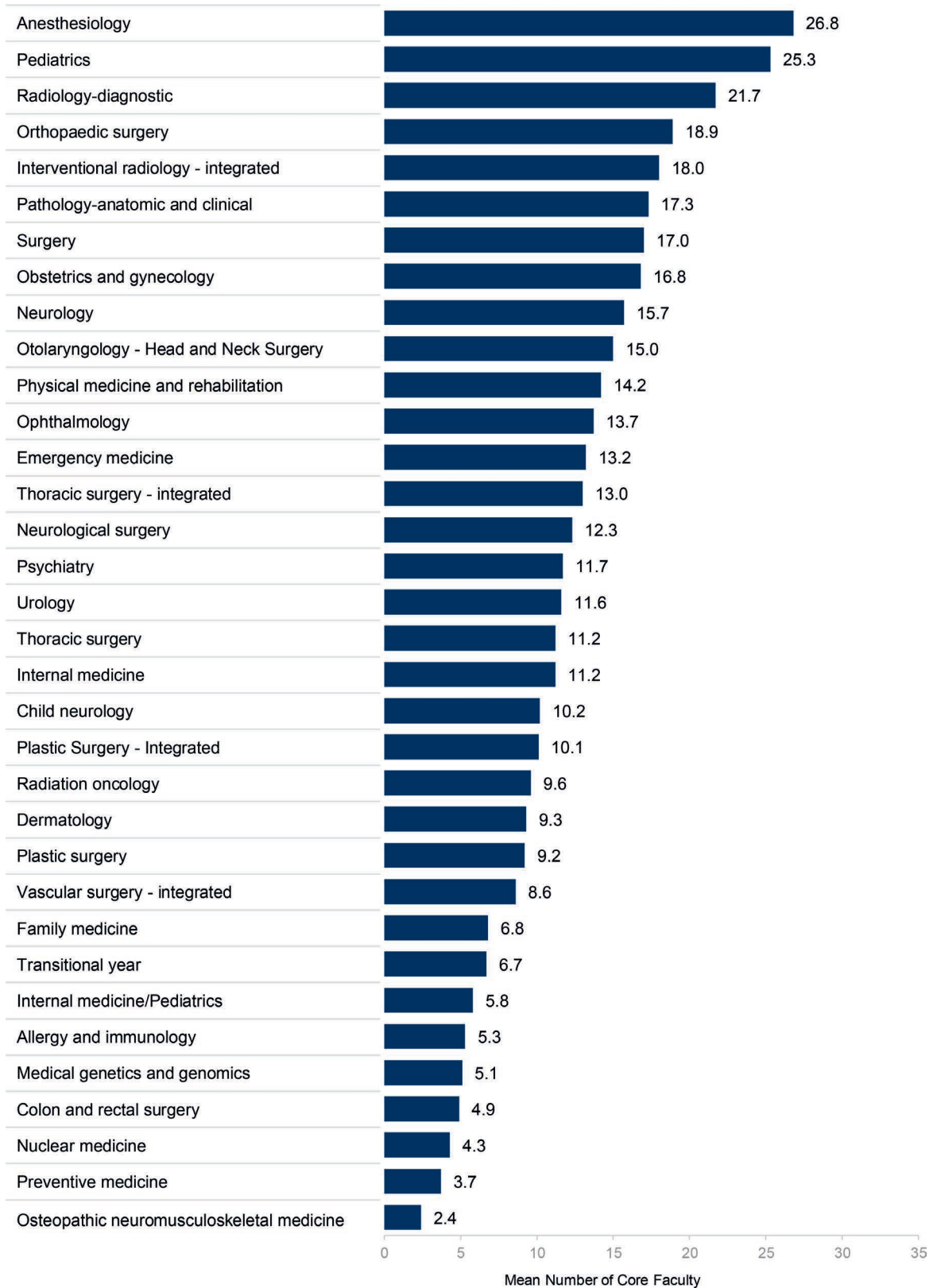


FIGURE G.11

Mean Number of Hours per Week Core Faculty Members Spent in Key Areas by Specialty

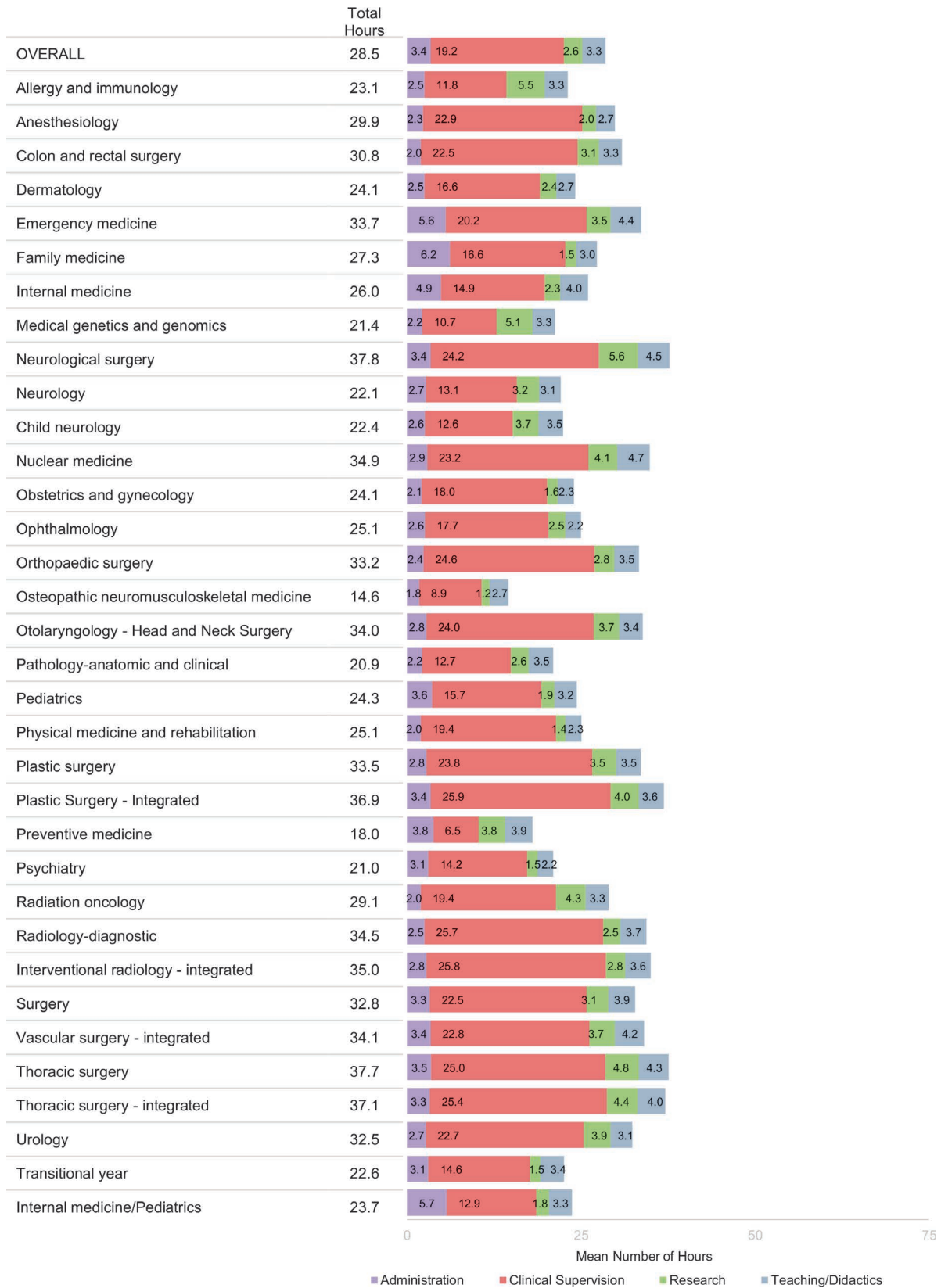


TABLE G.12

Number and Percent of Program Coordinator Changes

Specialty	Total Programs	Number of Programs with Multiple Program Coordinators				Number of Programs with Program Coordinator Changes		Number of New Program Coordinators
		No		Yes		N	%	
		N	%	N	%			
OVERALL	12,092	8,544	70.7%	3,548	29.3%	1,556	13.0%	1,801
TOTAL PIPELINE	4,985	3,554	71.0%	1,431	28.7%	584	11.7%	689
Allergy and immunology	81	57	70.4%	24	29.6%	13	16.0%	13
Anesthesiology	160	100	62.5%	60	37.5%	20	13.0%	23
- Adult cardiothoracic anesthesiology	71	44	62.0%	27	38.0%	12	17.0%	14
- Clinical informatics	1	0	0.0%	1	100.0%	0	0.0%	0
- Critical care medicine	63	37	58.7%	26	41.3%	11	17.0%	12
- Regional anesthesiology and acute pain medicine	35	21	60.0%	14	40.0%	7	20.0%	7
- Obstetric anesthesiology	41	23	56.1%	18	43.9%	9	22.0%	9
- Pain medicine (multidisciplinary)	108	76	70.4%	32	29.6%	17	16.0%	17
- Pediatric anesthesiology	60	39	65.0%	21	35.0%	7	12.0%	7
Colon and rectal surgery	65	50	76.9%	15	23.1%	8	12.0%	9
Dermatology	144	113	78.5%	31	21.5%	15	10.0%	18
- Dermatopathology (multidisciplinary)	56	43	76.8%	13	23.2%	5	9.0%	5
- Micrographic surgery and dermatologic oncology	78	63	80.8%	15	19.2%	6	8.0%	7
Emergency medicine	265	170	64.2%	95	35.8%	37	14.0%	44
- Clinical informatics	5	4	80.0%	1	20.0%	1	20.0%	1
- Emergency medical services	71	51	71.8%	20	28.2%	14	20.0%	16
- Medical toxicology	26	20	76.9%	6	23.1%	7	27.0%	7
- Pediatric emergency medicine	26	18	69.2%	8	30.8%	6	23.0%	7
- Sports medicine	8	4	50.0%	4	50.0%	1	13.0%	1
- Undersea and hyperbaric medicine	8	5	62.5%	3	37.5%	1	13.0%	1
Family medicine	701	543	77.5%	158	22.5%	84	12.0%	95
- Clinical informatics	6	5	83.3%	1	16.7%	1	17.0%	1
- Geriatric medicine	50	45	90.0%	5	10.0%	6	12.0%	7
- Hospice and palliative medicine (multidisciplinary)	167	137	82.0%	30	18.0%	26	16.0%	28
- Sports medicine	151	127	84.1%	24	15.9%	20	13.0%	23
Internal medicine	569	386	67.8%	183	32.2%	62	11.0%	76
- Adult congenital heart disease	24	13	54.2%	11	45.8%	1	4.0%	1
- Advanced heart failure and transplant cardiology	80	44	55.0%	36	45.0%	8	10.0%	9
- Cardiovascular disease	250	182	72.8%	68	27.2%	35	14.0%	41
- Clinical cardiac electrophysiology	110	74	67.3%	36	32.7%	12	11.0%	13
- Clinical informatics	17	12	70.6%	5	29.4%	4	24.0%	4
- Critical care medicine	45	37	82.2%	8	17.8%	5	11.0%	6
- Endocrinology, diabetes, and metabolism	151	114	75.5%	37	24.5%	23	15.0%	30
- Gastroenterology	207	159	76.8%	48	23.2%	32	15.0%	39
- Geriatric medicine	111	81	73.0%	30	27.0%	14	13.0%	16
- Hematology	2	1	50.0%	1	50.0%	0	0.0%	0
- Hematology and medical oncology	167	128	76.6%	39	23.4%	28	17.0%	34
- Infectious disease	154	115	74.7%	39	25.3%	20	13.0%	24
- Interventional cardiology	166	122	73.5%	44	26.5%	17	10.0%	18
- Nephrology	151	115	76.2%	36	23.8%	22	15.0%	26
- Medical oncology	7	5	71.4%	2	28.6%	1	14.0%	2
- Pulmonary disease	22	16	72.7%	6	27.3%	4	18.0%	5
- Pulmonary disease and critical care medicine	181	135	74.6%	46	25.4%	22	12.0%	24
- Rheumatology	125	88	70.4%	37	29.6%	21	17.0%	24
- Sleep medicine (multidisciplinary)	88	62	70.5%	26	29.5%	8	9.0%	10
- Transplant hepatology	57	42	73.7%	15	26.3%	6	11.0%	6
Medical genetics and genomics	47	33	70.2%	14	29.8%	10	21.0%	13
- Medical biochemical genetics	19	14	73.7%	5	26.3%	5	26.0%	6
- Molecular genetic pathology (multidisciplinary)	42	24	57.1%	18	42.9%	6	14.0%	6
Neurological surgery	118	81	68.6%	37	31.4%	13	11.0%	14
- Endovascular surgical neuroradiology	2	2	100.0%	0	0.0%	1	50.0%	2

TABLE G.12 Continued

Number and Percent of Program Coordinator Changes								
Specialty	Total Programs	Number of Programs with Multiple Program Coordinators				Number of Programs with Program Coordinator Changes		Number of New Program Coordinators
		No		Yes		N	%	
		N	%	N	%			
Neurology	160	118	73.8%	42	26.3%	15	9.0%	20
- Brain injury medicine	1	0	0.0%	1	100.0%	0	0.0%	0
- Clinical neurophysiology	92	67	72.8%	25	27.2%	12	13.0%	13
- Epilepsy	81	56	69.1%	25	30.9%	9	11.0%	9
- Endovascular surgical neuroradiology	2	1	50.0%	1	50.0%	1	50.0%	1
- Neurodevelopmental disabilities	8	5	62.5%	3	37.5%	1	13.0%	1
- Neuromuscular medicine	52	37	71.2%	15	28.8%	9	17.0%	11
- Vascular neurology	106	74	69.8%	32	30.2%	15	14.0%	15
Child neurology	76	56	73.7%	20	26.3%	8	11.0%	8
Nuclear medicine	38	30	78.9%	8	21.1%	5	13.0%	7
Obstetrics and gynecology	285	220	77.2%	65	22.8%	27	9.0%	31
- Female pelvic medicine and reconstructive surgery	54	37	68.5%	17	31.5%	4	7.0%	5
- Gynecologic oncology	63	41	65.1%	22	34.9%	7	11.0%	8
- Maternal-fetal medicine	97	64	66.0%	33	34.0%	16	16.0%	20
- Reproductive endocrinology and infertility	51	30	58.8%	21	41.2%	4	8.0%	6
Ophthalmology	124	96	77.4%	28	22.6%	14	11.0%	14
- Ophthalmic plastic and reconstructive surgery	4	3	75.0%	1	25.0%	1	25.0%	1
Orthopaedic surgery	197	133	67.5%	64	32.5%	20	10.0%	22
- Adult reconstructive orthopaedics	24	17	70.8%	7	29.2%	0	0.0%	0
- Foot and ankle orthopaedics	7	5	71.4%	2	28.6%	1	14.0%	1
- Hand surgery	74	49	66.2%	25	33.8%	8	11.0%	8
- Musculoskeletal oncology	12	7	58.3%	5	41.7%	1	8.0%	1
- Orthopaedic sports medicine	90	64	71.1%	26	28.9%	5	6.0%	5
- Orthopaedic surgery of the spine	18	14	77.8%	4	22.2%	3	17.0%	3
- Orthopaedic trauma	11	7	63.6%	4	36.4%	2	18.0%	2
- Pediatric orthopaedics	25	18	72.0%	7	28.0%	4	16.0%	4
Osteopathic neuromusculoskeletal medicine	27	21	77.8%	6	22.2%	4	15.0%	6
Otolaryngology - head and neck surgery	124	97	78.2%	27	21.8%	14	11.0%	17
- Neurotology	24	22	91.7%	2	8.3%	3	13.0%	4
- Pediatric otolaryngology	30	22	73.3%	8	26.7%	2	7.0%	2
Pathology-anatomic and clinical	142	103	72.5%	39	27.5%	18	13.0%	24
- Blood banking/transfusion medicine	51	38	74.5%	13	25.5%	4	8.0%	4
- Clinical informatics	10	7	70.0%	3	30.0%	0	0.0%	0
- Chemical pathology	4	4	100.0%	0	0.0%	0	0.0%	0
- Cytopathology	93	65	69.9%	28	30.1%	11	12.0%	12
- Forensic pathology	45	32	71.1%	13	28.9%	6	13.0%	6
- Hematopathology	86	61	70.9%	25	29.1%	10	12.0%	10
- Medical microbiology	15	11	73.3%	4	26.7%	0	0.0%	0
- Neuropathology	37	25	67.6%	12	32.4%	2	5.0%	2
- Pediatric pathology	28	18	64.3%	10	35.7%	4	14.0%	6
- Selective pathology	101	64	63.4%	37	36.6%	8	8.0%	11
Pediatrics	211	136	64.5%	75	35.5%	28	13.0%	37
- Adolescent medicine	32	20	62.5%	12	37.5%	5	16.0%	8
- Child abuse pediatrics	31	23	74.2%	8	25.8%	3	10.0%	3
- Clinical informatics	7	4	57.1%	3	42.9%	1	14.0%	2
- Developmental-behavioral pediatrics	43	34	79.1%	9	20.9%	6	14.0%	7
- Neonatal-perinatal medicine	103	67	65.0%	36	35.0%	18	17.0%	19
- Pediatric cardiology	63	34	54.0%	29	46.0%	11	17.0%	16
- Pediatric critical care medicine	72	47	65.3%	25	34.7%	8	11.0%	8
- Pediatric emergency medicine	53	38	71.7%	15	28.3%	7	13.0%	9
- Pediatric endocrinology	72	43	59.7%	29	40.3%	12	17.0%	15
- Pediatric gastroenterology	65	39	60.0%	26	40.0%	17	26.0%	18
- Pediatric hematology/oncology	75	44	58.7%	31	41.3%	12	16.0%	14

TABLE G.12 *Continued*

Number and Percent of Program Coordinator Changes

Specialty	Total Programs	Number of Programs with Multiple Program Coordinators				Number of Programs with Program Coordinator Changes		Number of New Program Coordinators
		No		Yes		N	%	
		N	%	N	%			
- Pediatric infectious diseases	64	37	57.8%	27	42.2%	16	25.0%	18
- Pediatric nephrology	47	22	46.8%	25	53.2%	9	19.0%	9
- Pediatric pulmonology	56	38	67.9%	18	32.1%	13	23.0%	15
- Pediatric rheumatology	36	19	52.8%	17	47.2%	6	17.0%	8
- Pediatric sports medicine	17	11	64.7%	6	35.3%	5	29.0%	5
- Pediatric transplant hepatology	16	12	75.0%	4	25.0%	4	25.0%	5
- Pediatric hospital medicine	33	22	66.7%	11	33.3%	2	6.0%	3
Physical medicine and rehabilitation	94	73	77.7%	21	22.3%	14	15.0%	18
- Brain injury medicine	23	18	78.3%	5	21.7%	5	22.0%	5
- Neuromuscular medicine	1	1	100.0%	0	0.0%	0	0.0%	0
- Spinal cord injury medicine	24	21	87.5%	3	12.5%	3	13.0%	3
- Pediatric rehabilitation	22	12	54.5%	10	45.5%	2	9.0%	2
- Sports medicine	20	13	65.0%	7	35.0%	5	25.0%	5
Plastic surgery	53	41	77.4%	12	22.6%	7	13.0%	8
Plastic surgery - integrated	82	56	68.3%	26	31.7%	8	10.0%	8
- Craniofacial surgery	8	3	37.5%	5	62.5%	1	13.0%	2
- Hand surgery	17	11	64.7%	6	35.3%	0	0.0%	0
Preventive medicine	72	60	83.3%	12	16.7%	5	7.0%	6
- Medical toxicology	1	0	0.0%	1	100.0%	0	0.0%	0
- Undersea and hyperbaric medicine	1	1	100.0%	0	0.0%	0	0.0%	0
Psychiatry	269	206	76.6%	63	23.4%	31	12.0%	35
- Addiction medicine (multidisciplinary)	78	56	71.8%	22	28.2%	12	15.0%	15
- Addiction psychiatry	53	32	60.4%	21	39.6%	5	9.0%	5
- Child and adolescent psychiatry	141	112	79.4%	29	20.6%	24	17.0%	28
- Forensic psychiatry	48	33	68.8%	15	31.3%	3	6.0%	3
- Geriatric psychiatry	62	44	71.0%	18	29.0%	2	3.0%	2
- Consultation-liaison psychiatry	63	47	74.6%	16	25.4%	4	6.0%	5
Radiation oncology	91	75	82.4%	16	17.6%	7	8.0%	8
Radiology-diagnostic	197	122	61.9%	75	38.1%	25	13.0%	31
- Abdominal radiology	14	8	57.1%	6	42.9%	1	7.0%	2
- Endovascular surgical neuroradiology	3	1	33.3%	2	66.7%	0	0.0%	0
- Musculoskeletal radiology	20	7	35.0%	13	65.0%	3	15.0%	3
- Neuroradiology	87	57	65.5%	30	34.5%	12	14.0%	15
- Nuclear radiology	17	7	41.2%	10	58.8%	2	12.0%	3
- Pediatric radiology	47	35	74.5%	12	25.5%	8	17.0%	9
- Vascular and interventional radiology	92	56	60.9%	36	39.1%	6	7.0%	8
Interventional radiology - independent	2	2	100.0%	0	0.0%	0	0.0%	0
Interventional radiology - integrated	89	47	52.8%	42	47.2%	9	10.0%	10
Surgery	330	211	63.9%	119	36.1%	44	13.0%	49
- Complex general surgical oncology	29	17	58.6%	12	41.4%	3	10.0%	4
- Hand surgery	1	1	100.0%	0	0.0%	0	0.0%	0
- Pediatric surgery	49	26	53.1%	23	46.9%	9	18.0%	10
- Surgical critical care	139	97	69.8%	42	30.2%	20	14.0%	23
- Vascular surgery	116	83	71.6%	33	28.4%	16	14.0%	20
Vascular surgery - integrated	64	43	67.2%	21	32.8%	8	13.0%	9
Thoracic surgery	74	47	63.5%	27	36.5%	13	18.0%	14
- Congenital cardiac surgery	14	9	64.3%	5	35.7%	1	7.0%	1
Thoracic surgery - integrated	30	18	60.0%	12	40.0%	4	13.0%	6
Urology	145	108	74.5%	37	25.5%	16	11.0%	18
- Female pelvic medicine and reconstructive surgery	15	13	86.7%	2	13.3%	2	13.0%	2
- Pediatric urology	26	16	61.5%	10	38.5%	6	23.0%	7
Transitional year	166	133	80.1%	33	19.9%	23	14.0%	25
Internal medicine/Pediatrics	79	56	70.9%	23	29.1%	12	15.0%	14

Note: Pipeline specialties are highlighted.



Program Activities

This section summarizes use of ambulatory and/or non-hospital settings by specialty and subspecialty programs during the 2019-2020 academic year.

Use of Ambulatory and/or Non-Hospital Settings

Across all programs, 92.7% of programs reported using ambulatory and/or non-hospital settings. The following ambulatory and/or non-hospital settings were used by the highest percentage of specialty programs:

- Ambulatory/outpatient settings (76.8%)

- Hospital-based continuity clinic (61.5%)
- Faculty ambulatory practice (61.2%)
- Private physician's offices (54.4%)

The percentage of programs using each type of setting varies significantly across pipeline specialties. For example, of those programs that use ambulatory/non-hospital settings, 13.8% of pathology-anatomic and clinical programs reported using a hospital-based continuity clinic while 97.1% of child neurology programs reported using a hospital-based continuity clinic. ↘

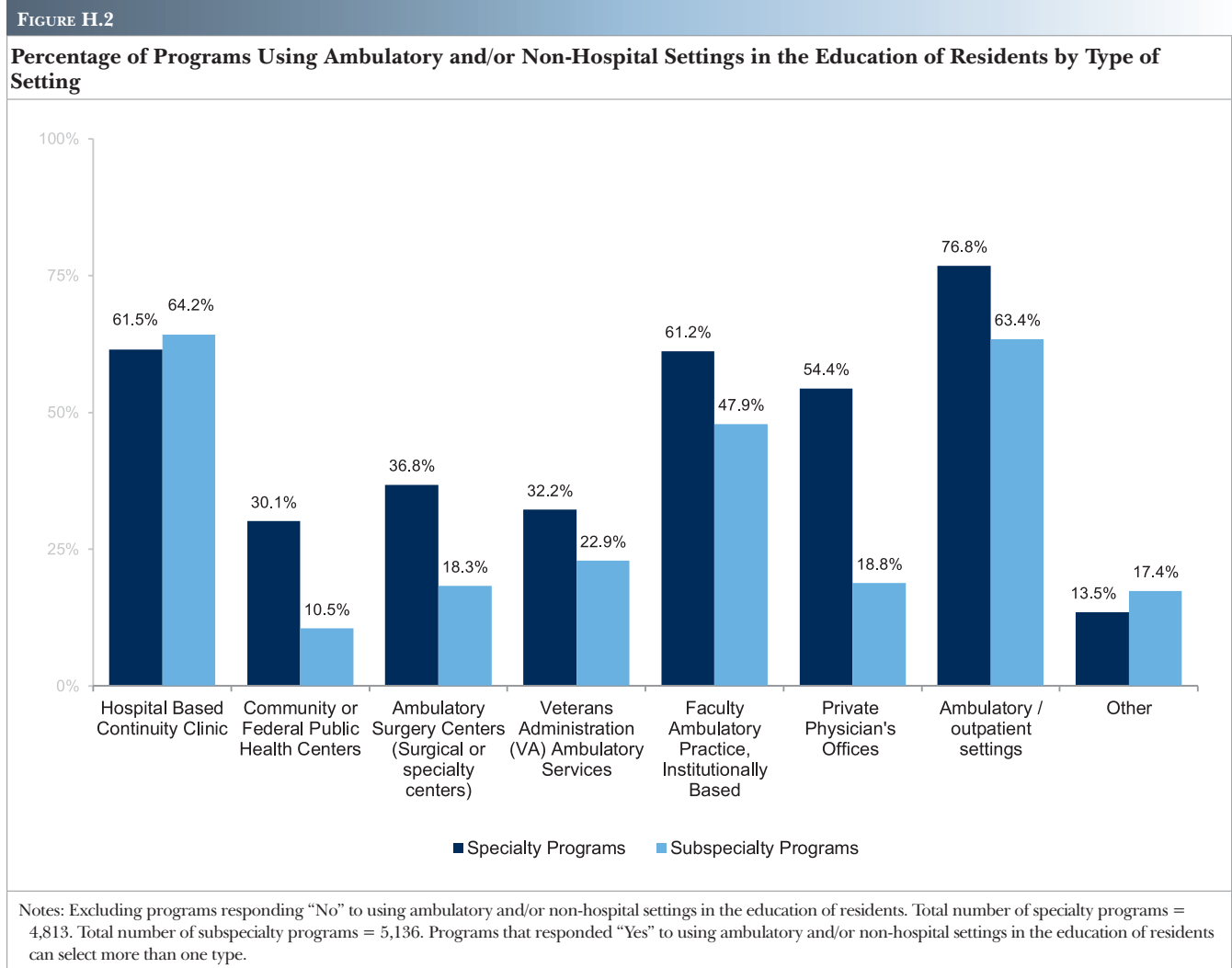
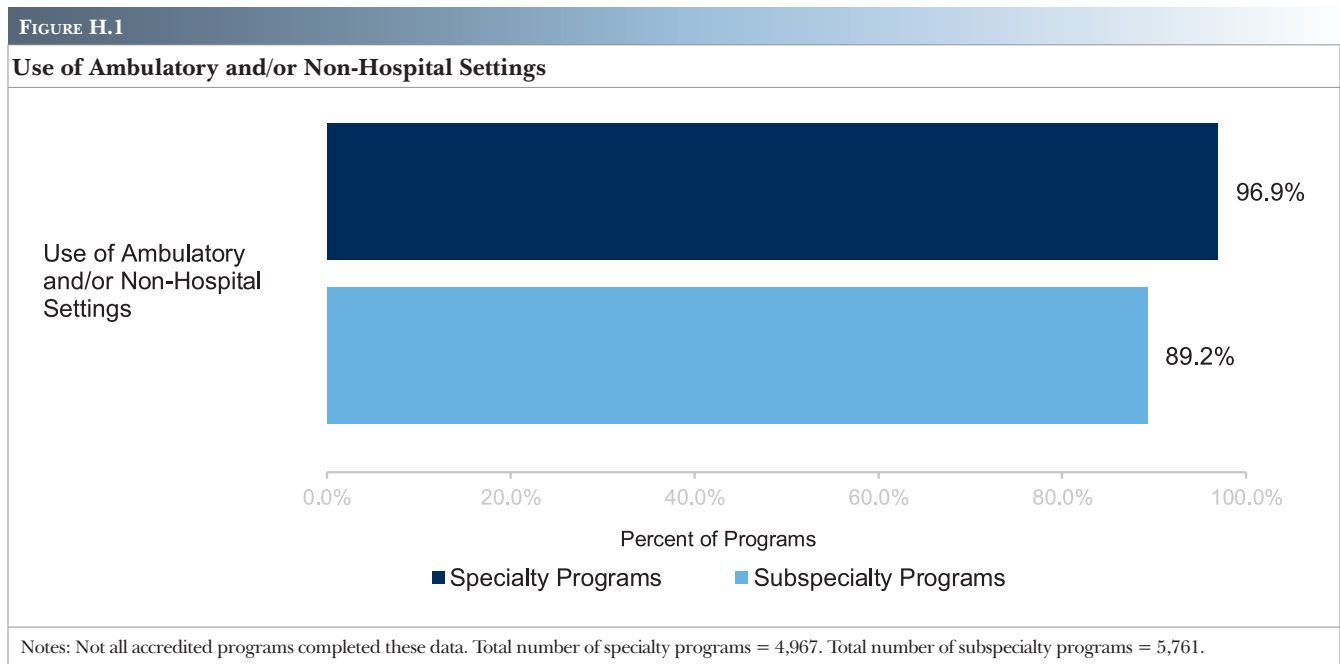


TABLE H.3

Use of Ambulatory and/or Non-Hospital Settings by Specialty and Subspecialty

Specialty	Total Programs	Use Ambulatory and/or Non-Hospital Settings			
		Yes	%	No	%
OVERALL	10,728	9,949	92.7%	779	7.3%
TOTAL PIPELINE	4,756	4,609	96.9%	147	3.1%
Allergy and immunology	79	77	97.5%	2	2.5%
Anesthesiology	153	146	95.4%	7	4.6%
- Adult cardiothoracic anesthesiology	67	13	19.4%	54	80.6%
- Clinical informatics	1	1	100.0%	0	0.0%
- Critical care medicine	53	3	5.7%	50	94.3%
- Regional anesthesiology and acute pain medicine	26	24	92.3%	2	7.7%
- Obstetric anesthesiology	25	19	76.0%	6	24.0%
- Pain medicine (multidisciplinary)	103	102	99.0%	1	1.0%
- Pediatric anesthesiology	51	40	78.4%	11	21.6%
Colon and rectal surgery	63	62	98.4%	1	1.6%
Dermatology	142	141	99.3%	1	0.7%
- Dermatopathology (multidisciplinary)	48	40	83.3%	8	16.7%
- Micrographic surgery and dermatologic oncology	69	67	97.1%	2	2.9%
Emergency medicine	243	185	76.1%	58	23.9%
- Clinical informatics	4	3	75.0%	1	25.0%
- Emergency medical services	53	52	98.1%	1	1.9%
- Medical toxicology	25	25	100.0%	0	0.0%
- Pediatric emergency medicine	25	22	88.0%	3	12.0%
- Sports medicine	8	8	100.0%	0	0.0%
- Undersea and hyperbaric medicine	4	4	100.0%	0	0.0%
Family medicine	660	660	100.0%	0	0.0%
- Clinical informatics	3	3	100.0%	0	0.0%
- Geriatric medicine	30	30	100.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	135	135	100.0%	0	0.0%
- Sports medicine	138	138	100.0%	0	0.0%
Internal medicine	535	535	100.0%	0	0.0%
- Adult congenital heart disease	18	18	100.0%	0	0.0%
- Advanced heart failure and transplant cardiology	63	61	96.8%	2	3.2%
- Cardiovascular disease	240	238	99.2%	2	0.8%
- Clinical cardiac electrophysiology	91	89	97.8%	2	2.2%
- Clinical informatics	13	13	100.0%	0	0.0%
- Critical care medicine	43	9	20.9%	34	79.1%
- Endocrinology, diabetes, and metabolism	145	145	100.0%	0	0.0%
- Gastroenterology	200	200	100.0%	0	0.0%
- Geriatric medicine	84	84	100.0%	0	0.0%
- Hematology	2	2	100.0%	0	0.0%
- Hematology and medical oncology	155	155	100.0%	0	0.0%
- Infectious disease	144	144	100.0%	0	0.0%
- Interventional cardiology	161	159	98.8%	2	1.2%
- Nephrology	142	142	100.0%	0	0.0%
- Medical oncology	6	6	100.0%	0	0.0%
- Pulmonary disease	20	20	100.0%	0	0.0%
- Pulmonary disease and critical care medicine	172	172	100.0%	0	0.0%
- Rheumatology	120	120	100.0%	0	0.0%
- Sleep medicine (multidisciplinary)	80	79	98.8%	1	1.3%
- Transplant hepatology	39	39	100.0%	0	0.0%
Medical genetics and genomics	31	31	100.0%	0	0.0%
- Medical biochemical genetics	12	12	100.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	37	25	67.6%	12	32.4%
Neurological surgery	115	115	100.0%	0	0.0%
- Endovascular surgical neuroradiology	1	1	100.0%	0	0.0%

TABLE H.3 <i>Continued</i>					
Use of Ambulatory and/or Non-Hospital Settings by Specialty and Subspecialty					
Specialty	Total Programs	Use Ambulatory and/or Non-Hospital Settings			
		Yes	%	No	%
Neurology	156	156	100.0%	0	0.0%
- Brain injury medicine	1	1	100.0%	0	0.0%
- Clinical neurophysiology	71	69	97.2%	2	2.8%
- Epilepsy	62	61	98.4%	1	1.6%
- Endovascular surgical neuroradiology	2	2	100.0%	0	0.0%
- Neurodevelopmental disabilities	6	6	100.0%	0	0.0%
- Neuromuscular medicine	36	36	100.0%	0	0.0%
- Vascular neurology	69	69	100.0%	0	0.0%
Child neurology	71	69	97.2%	2	2.8%
Nuclear medicine	28	21	75.0%	7	25.0%
Obstetrics and gynecology	279	278	99.6%	1	0.4%
- Female pelvic medicine and reconstructive surgery	51	51	100.0%	0	0.0%
- Gynecologic oncology	58	57	98.3%	1	1.7%
- Maternal-fetal medicine	93	92	98.9%	1	1.1%
- Reproductive endocrinology and infertility	50	50	100.0%	0	0.0%
Ophthalmology	123	122	99.2%	1	0.8%
- Ophthalmic plastic and reconstructive surgery	3	3	100.0%	0	0.0%
Orthopaedic surgery	196	195	99.5%	1	0.5%
- Adult reconstructive orthopaedics	23	21	91.3%	2	8.7%
- Foot and ankle orthopaedics	7	7	100.0%	0	0.0%
- Hand surgery	70	70	100.0%	0	0.0%
- Musculoskeletal oncology	12	11	91.7%	1	8.3%
- Orthopaedic sports medicine	84	83	98.8%	1	1.2%
- Orthopaedic surgery of the spine	16	16	100.0%	0	0.0%
- Orthopaedic trauma	11	11	100.0%	0	0.0%
- Pediatric orthopaedics	22	17	77.3%	5	22.7%
Osteopathic neuromusculoskeletal medicine	23	23	100.0%	0	0.0%
Otolaryngology - head and neck surgery	122	121	99.2%	1	0.8%
- Neurotology	24	23	95.8%	1	4.2%
- Pediatric otolaryngology	24	24	100.0%	0	0.0%
Pathology-anatomic and clinical	142	116	81.7%	26	18.3%
- Blood banking/transfusion medicine	37	33	89.2%	4	10.8%
- Clinical informatics	7	6	85.7%	1	14.3%
- Chemical pathology	2	0	0.0%	2	100.0%
- Cytopathology	79	49	62.0%	30	38.0%
- Forensic pathology	30	15	50.0%	15	50.0%
- Hematopathology	77	34	44.2%	43	55.8%
- Medical microbiology	9	3	33.3%	6	66.7%
- Neuropathology	31	10	32.3%	21	67.7%
- Pediatric pathology	18	9	50.0%	9	50.0%
- Selective pathology	72	25	34.7%	47	65.3%
Pediatrics	211	210	99.5%	1	0.5%
- Adolescent medicine	29	29	100.0%	0	0.0%
- Child abuse pediatrics	27	27	100.0%	0	0.0%
- Clinical informatics	6	6	100.0%	0	0.0%
- Developmental-behavioral pediatrics	39	39	100.0%	0	0.0%
- Neonatal-perinatal medicine	100	99	99.0%	1	1.0%
- Pediatric cardiology	59	59	100.0%	0	0.0%
- Pediatric critical care medicine	68	9	13.2%	59	86.8%
- Pediatric emergency medicine	53	45	84.9%	8	15.1%
- Pediatric endocrinology	64	63	98.4%	1	1.6%
- Pediatric gastroenterology	62	59	95.2%	3	4.8%
- Pediatric hematology/oncology	72	71	98.6%	1	1.4%

TABLE H.3 *Continued*

Use of Ambulatory and/or Non-Hospital Settings by Specialty and Subspecialty

Specialty	Total Programs	Use Ambulatory and/or Non-Hospital Settings			
		Yes	%	No	%
- Pediatric infectious diseases	51	50	98.0%	1	2.0%
- Pediatric nephrology	34	34	100.0%	0	0.0%
- Pediatric pulmonology	49	49	100.0%	0	0.0%
- Pediatric rheumatology	33	33	100.0%	0	0.0%
- Pediatric sports medicine	15	15	100.0%	0	0.0%
- Pediatric transplant hepatology	10	10	100.0%	0	0.0%
- Pediatric hospital medicine	2	2	100.0%	0	0.0%
Physical medicine and rehabilitation	91	91	100.0%	0	0.0%
- Brain injury medicine	17	17	100.0%	0	0.0%
- Neuromuscular medicine	1	1	100.0%	0	0.0%
- Spinal cord injury medicine	16	13	81.3%	3	18.8%
- Pediatric rehabilitation	19	19	100.0%	0	0.0%
- Sports medicine	19	19	100.0%	0	0.0%
Plastic surgery	51	51	100.0%	0	0.0%
Plastic surgery - integrated	81	81	100.0%	0	0.0%
- Craniofacial surgery	5	3	60.0%	2	40.0%
- Hand surgery	15	15	100.0%	0	0.0%
Preventive medicine	69	69	100.0%	0	0.0%
- Medical toxicology	1	1	100.0%	0	0.0%
- Undersea and hyperbaric medicine	1	1	100.0%	0	0.0%
Psychiatry	250	249	99.6%	1	0.4%
- Addiction medicine (multidisciplinary)	40	40	100.0%	0	0.0%
- Addiction psychiatry	35	35	100.0%	0	0.0%
- Child and adolescent psychiatry	134	134	100.0%	0	0.0%
- Forensic psychiatry	35	35	100.0%	0	0.0%
- Geriatric psychiatry	24	24	100.0%	0	0.0%
- Consultation-liaison psychiatry	44	44	100.0%	0	0.0%
Radiation oncology	90	86	95.6%	4	4.4%
Radiology-diagnostic	191	165	86.4%	26	13.6%
- Abdominal radiology	12	7	58.3%	5	41.7%
- Endovascular surgical neuroradiology	3	2	66.7%	1	33.3%
- Musculoskeletal radiology	15	13	86.7%	2	13.3%
- Neuroradiology	74	53	71.6%	21	28.4%
- Nuclear radiology	8	4	50.0%	4	50.0%
- Pediatric radiology	25	18	72.0%	7	28.0%
- Vascular and interventional radiology	89	87	97.8%	2	2.2%
Interventional radiology - independent	0	0	N/A	0	N/A
Interventional radiology - integrated	74	71	95.9%	3	4.1%
Surgery	323	318	98.5%	5	1.5%
- Complex general surgical oncology	25	25	100.0%	0	0.0%
- Hand surgery	1	1	100.0%	0	0.0%
- Pediatric surgery	49	46	93.9%	3	6.1%
- Surgical critical care	125	21	16.8%	104	83.2%
- Vascular surgery	103	99	96.1%	4	3.9%
Vascular surgery - integrated	57	56	98.2%	1	1.8%
Thoracic surgery	69	65	94.2%	4	5.8%
- Congenital cardiac surgery	8	2	25.0%	6	75.0%
Thoracic surgery - integrated	26	25	96.2%	1	3.8%
Urology	144	144	100.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	13	13	100.0%	0	0.0%
- Pediatric urology	19	19	100.0%	0	0.0%
Transitional year	0	0	N/A	0	N/A
Internal medicine/Pediatrics	79	79	100.0%	0	0.0%

Notes: Pipeline specialties are highlighted. Not all accredited programs completed these data. Total number of specialty programs = 4,967. Total number of subspecialty programs = 5,761.

TABLE H.4
Use of Ambulatory and/or Non-Hospital Settings by Type of Setting (Most Common Selections) by Pipeline Specialty

Pipeline Specialty	Total Programs Using Ambulatory and/or Non-Hospital Settings	Type of Setting							
		Ambulatory / Outpatient Settings		Hospital Based Continuity Clinic		Faculty Ambulatory Practice		Private Physician's Office	
		#	%	#	%	#	%	#	%
TOTAL PIPELINE	4,609	3,565	77.3%	2,836	61.5%	2,826	61.3%	2,540	55.1%
Anesthesiology	146	106	72.6%	32	21.9%	48	32.9%	26	17.8%
Dermatology	141	111	78.7%	99	70.2%	94	66.7%	79	56.0%
Emergency medicine	185	73	39.5%	41	22.2%	50	27.0%	50	27.0%
Family medicine	660	628	95.2%	418	63.3%	355	53.8%	596	90.3%
Internal medicine	535	444	83.0%	412	77.0%	369	69.0%	387	72.3%
Medical genetics and genomics	31	25	80.6%	23	74.2%	14	45.2%	1	3.2%
Neurological surgery	115	68	59.1%	63	54.8%	82	71.3%	27	23.5%
Neurology	156	107	68.6%	132	84.6%	118	75.6%	51	32.7%
Child neurology	69	57	82.6%	67	97.1%	46	66.7%	11	15.9%
Nuclear medicine	21	16	76.2%	11	52.4%	6	28.6%	1	4.8%
Obstetrics and gynecology	278	210	75.5%	243	87.4%	226	81.3%	186	66.9%
Ophthalmology	122	90	73.8%	82	67.2%	88	72.1%	67	54.9%
Orthopaedic surgery	195	148	75.9%	100	51.3%	138	70.8%	136	69.7%
Osteopathic neuromusculoskeletal medicine	23	18	78.3%	10	43.5%	16	69.6%	21	91.3%
Otolaryngology - Head and Neck Surgery	121	91	75.2%	61	50.4%	87	71.9%	64	52.9%
Pathology-anatomic and clinical	116	35	30.2%	16	13.8%	13	11.2%	21	18.1%
Pediatrics	210	191	91.0%	158	75.2%	154	73.3%	173	82.4%
Physical medicine and rehabilitation	91	85	93.4%	63	69.2%	79	86.8%	51	56.0%
Plastic surgery	51	42	82.4%	34	66.7%	37	72.5%	43	84.3%
Plastic Surgery - Integrated	81	63	77.8%	48	59.3%	60	74.1%	63	77.8%
Preventive medicine	69	63	91.3%	40	58.0%	50	72.5%	32	46.4%
Psychiatry	249	213	85.5%	173	69.5%	108	43.4%	64	25.7%
Radiation oncology	86	66	76.7%	37	43.0%	42	48.8%	6	7.0%
Radiology-diagnostic	165	128	77.6%	51	30.9%	54	32.7%	27	16.4%
Interventional radiology - independent	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	71	51	71.8%	41	57.7%	26	36.6%	14	19.7%
Surgery	318	221	69.5%	191	60.1%	233	73.3%	202	63.5%
Vascular surgery - integrated	56	34	60.7%	25	44.6%	44	78.6%	18	32.1%
Thoracic surgery - integrated	25	12	48.0%	13	52.0%	21	84.0%	4	16.0%
Urology	144	95	66.0%	85	59.0%	108	75.0%	59	41.0%
Internal medicine/Pediatrics	79	74	93.7%	67	84.8%	60	75.9%	60	75.9%

Notes: Excluding programs responding "No" to using ambulatory and/or non-hospital settings in the education of residents. Programs that responded "Yes" to using ambulatory and/or non-hospital settings in the education of residents can select more than one type.

TABLE H.5

Use of Ambulatory and/or Non-Hospital Settings by Type of Setting (Least Common Selections) by Pipeline Specialty

Pipeline Specialty	Total Programs Using Ambulatory and/or Non-Hospital Settings	Type of Setting							
		Ambulatory Surgery Centers		VA Ambulatory Services		Community or Federal Public Health Centers		Other	
		#	%	#	%	#	%	#	%
TOTAL PIPELINE	4,609	1,720	37.3%	1,498	32.5%	1,437	31.2%	648	14.1%
Anesthesiology	146	108	74.0%	33	22.6%	2	1.4%	13	8.9%
Dermatology	141	33	23.4%	80	56.7%	35	24.8%	9	6.4%
Emergency medicine	185	25	13.5%	15	8.1%	14	7.6%	110	59.5%
Family medicine	660	298	45.2%	125	18.9%	437	66.2%	124	18.8%
Internal medicine	535	32	6.0%	168	31.4%	189	35.3%	53	9.9%
Medical genetics and genomics	31	1	3.2%	2	6.5%	7	22.6%	3	9.7%
Neurological surgery	115	27	23.5%	40	34.8%	7	6.1%	8	7.0%
Neurology	156	6	3.8%	75	48.1%	21	13.5%	10	6.4%
Child neurology	69	4	5.8%	31	44.9%	13	18.8%	2	2.9%
Nuclear medicine	21	0	0.0%	7	33.3%	2	9.5%	1	4.8%
Obstetrics and gynecology	278	169	60.8%	35	12.6%	99	35.6%	22	7.9%
Ophthalmology	122	101	82.8%	90	73.8%	23	18.9%	6	4.9%
Orthopaedic surgery	195	174	89.2%	64	32.8%	18	9.2%	11	5.6%
Osteopathic neuromusculoskeletal medicine	23	7	30.4%	2	8.7%	4	17.4%	0	0.0%
Otolaryngology - head and neck surgery	121	100	82.6%	61	50.4%	17	14.0%	1	0.8%
Pathology-anatomic and clinical	116	19	16.4%	21	18.1%	10	8.6%	86	74.1%
Pediatrics	210	31	14.8%	0	0.0%	141	67.1%	35	16.7%
Physical medicine and rehabilitation	91	42	46.2%	65	71.4%	14	15.4%	6	6.6%
Plastic surgery	51	46	90.2%	24	47.1%	6	11.8%	0	0.0%
Plastic surgery - integrated	81	74	91.4%	46	56.8%	10	12.3%	1	1.2%
Preventive medicine	69	7	10.1%	36	52.2%	47	68.1%	27	39.1%
Psychiatry	249	6	2.4%	143	57.4%	195	78.3%	50	20.1%
Radiation oncology	86	11	12.8%	21	24.4%	4	4.7%	5	5.8%
Radiology-diagnostic	165	33	20.0%	46	27.9%	16	9.7%	36	21.8%
Interventional radiology - independent	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	71	18	25.4%	23	32.4%	5	7.0%	3	4.2%
Surgery	318	219	68.9%	89	28.0%	29	9.1%	12	3.8%
Vascular surgery - integrated	56	24	42.9%	32	57.1%	4	7.1%	0	0.0%
Thoracic surgery - integrated	25	5	20.0%	13	52.0%	2	8.0%	0	0.0%
Urology	144	92	63.9%	68	47.2%	18	12.5%	4	2.8%
Internal medicine/Pediatrics	79	8	10.1%	43	54.4%	48	60.8%	10	12.7%

Notes: Excluding programs responding "No" to using ambulatory and/or non-hospital settings in the education of residents. Programs that responded "Yes" to using ambulatory and/or non-hospital settings in the education of residents can select more than one type.

Appendix A

ACGME-Accredited Pipeline Specialties

Anesthesiology
Dermatology
Emergency medicine
Family medicine
Internal medicine
Medical genetics and genomics
Neurological surgery
Neurology
Child neurology
Nuclear medicine
Obstetrics and gynecology
Ophthalmology
Orthopaedic surgery
Osteopathic neuromusculoskeletal medicine
Otolaryngology – head and neck surgery
Pathology – anatomic and clinical
Pediatrics
Physical medicine and rehabilitation
Plastic surgery
Plastic surgery – integrated
Preventive medicine
Psychiatry
Radiation oncology
Radiology-diagnostic
Interventional radiology – independent
Interventional radiology – integrated
Surgery
Vascular surgery – integrated
Thoracic surgery – integrated
Urology
Internal medicine/Pediatrics

Appendix B

Specialties and Subspecialties by Specialty Group

Hospital-based Specialties and Subspecialties

Anesthesiology

- Adult cardiothoracic anesthesiology
- Clinical informatics
- Critical care medicine
- Regional anesthesiology and acute pain medicine
- Obstetric anesthesiology
- Pain medicine (multidisciplinary)
- Pediatric anesthesiology

Emergency medicine

- Clinical informatics
- Emergency medical services
- Medical toxicology
- Pediatric emergency medicine
- Sports medicine
- Undersea and hyperbaric medicine

Medical genetics and genomics

- Medical biochemical genetics
- Molecular genetic pathology (multidisciplinary)

Nuclear medicine

Pathology-anatomic and clinical

- Blood banking/transfusion medicine
- Clinical informatics
- Chemical pathology
- Cytopathology
- Forensic pathology
- Hematopathology
- Medical microbiology
- Neuropathology
- Pediatric pathology
- Selective pathology

Preventive medicine

- Medical toxicology
- Undersea and hyperbaric medicine

Radiation oncology

Radiology-diagnostic

- Abdominal radiology
- Endovascular surgical neuroradiology
- Musculoskeletal radiology
- Neuroradiology
- Nuclear radiology
- Pediatric radiology
- Vascular and interventional radiology

Interventional radiology – integrated

Transitional year

Medical Specialties and Subspecialties

Allergy and immunology

Dermatology

- Dermatopathology (multidisciplinary)
- Micrographic surgery and dermatologic oncology

Family medicine

- Clinical informatics
- Geriatric medicine
- Hospice and palliative medicine (multidisciplinary)
- Sports medicine

Internal medicine

- Adult congenital heart disease
- Advanced heart failure and transplant cardiology
- Cardiovascular disease
- Clinical cardiac electrophysiology
- Clinical informatics
- Critical care medicine
- Endocrinology, diabetes, and metabolism
- Gastroenterology
- Geriatric medicine
- Hematology
- Hematology and medical oncology
- Infectious disease
- Interventional cardiology
- Nephrology
- Medical oncology
- Pulmonary disease
- Pulmonary disease and critical care medicine
- Rheumatology
- Sleep medicine (multidisciplinary)
- Transplant hepatology

Neurology

- Brain injury medicine
- Clinical neurophysiology
- Epilepsy
- Endovascular surgical neuroradiology
- Neurodevelopmental disabilities
- Neuromuscular medicine
- Vascular neurology

Child neurology

Osteopathic neuromusculoskeletal medicine

Pediatrics

- Adolescent medicine
- Child abuse pediatrics
- Clinical informatics
- Developmental-behavioral pediatrics
- Neonatal-perinatal medicine
- Pediatric cardiology
- Pediatric critical care medicine
- Pediatric emergency medicine
- Pediatric endocrinology
- Pediatric gastroenterology
- Pediatric hematology/oncology
- Pediatric infectious diseases
- Pediatric nephrology
- Pediatric pulmonology
- Pediatric rheumatology
- Pediatric sports medicine
- Pediatric transplant hepatology
- Pediatric hospital medicine

Physical medicine and rehabilitation

- Brain injury medicine
- Neuromuscular medicine
- Spinal cord injury medicine
- Pediatric rehabilitation
- Sports medicine

Psychiatry

- Addiction medicine (multidisciplinary)
- Addiction psychiatry
- Child and adolescent psychiatry
- Forensic psychiatry
- Geriatric psychiatry
- Consultation-liaison psychiatry

Internal medicine/Pediatrics

Surgical Specialties and Subspecialties

Colon and rectal surgery

Neurological surgery

- Endovascular surgical neuroradiology

Obstetrics and gynecology

- Female pelvic medicine and reconstructive surgery
- Gynecologic oncology
- Maternal-fetal medicine
- Reproductive endocrinology and infertility

Ophthalmology

- Ophthalmic plastic and reconstructive surgery

Orthopaedic surgery

- Adult reconstructive orthopaedics
- Foot and ankle orthopaedics
- Hand surgery
- Musculoskeletal oncology
- Orthopaedic sports medicine
- Orthopaedic surgery of the spine
- Orthopaedic trauma
- Pediatric orthopaedics

Otolaryngology – head and neck surgery

- Neurotology
- Pediatric otolaryngology

Plastic surgery

Plastic surgery – integrated

- Craniofacial surgery
- Hand surgery

Surgery

- Complex general surgical oncology
- Hand surgery
- Pediatric surgery
- Surgical critical care
- Vascular surgery

Vascular surgery – integrated

Thoracic surgery

- Congenital cardiac surgery

Thoracic surgery – integrated

Urology

- Female pelvic medicine and reconstructive surgery
- Pediatric urology

Appendix C

Institution Type Groups

- Academic Medical Center/Medical School
- Ambulatory Care Clinic/Federally Qualified Health Center (FQHC)
 - Ambulatory Care Clinic/Office
 - Federally Qualified Health Center (FQHC)
- Children's Hospital
- Consortium
- General Teaching/Community Hospital
 - General/Teaching Hospital
 - Community Hospital
 - Independent Academic Medical Center
- Other
 - Other
 - Nursing Home/Rehabilitation Facility
- Specialty Hospital
 - Specialty Hospital
 - Pathology Lab / Medical Examiner's Office
- Veterans Administration



ACCREDITATION COUNCIL FOR GRADUATE MEDICAL EDUCATION

**SUITE 2000
401 NORTH MICHIGAN AVENUE
CHICAGO, IL 60611**

TELEPHONE: 312.755.5000

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