

ACCREDITATION COUNCIL FOR GRADUATE MEDICAL EDUCATION

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Data Resource Book

Academic Year 2020-2021

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



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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 enhancing the quality of resident and fellow physicians' education through advancements in accreditation and education. 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 Sponsoring 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 ACGME's proprietary 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 reporting, Case Logs, Surveys, and the application for accreditation.

ADS was originally built by the Department of Applications and Data Analysis (now part of 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 and fellows 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 must enter information on new residents/fellows, confirm the status of existing/graduating residents/fellows, 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 and fellows, schedule Milestones evaluations for all residents and fellows 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/fellows leaving their programs are reported for the previous academic year (in this edition, the 2019-2020 academic year). Up-to-date information on individual Sponsoring Institutions and programs can be found on the ADS public website at <https://apps.acgme.org/ads/public/>.

Definitions

The definitions listed below clarify use of terms in this Data Resource Book only. These reflect the 2020-2021 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.

Faculty Hours: Number of hours per week that a faculty member devotes to the program's activities in the following:

- Clinical supervision of residents – Time spent supervising/watching residents/fellows during patient care activities. Includes bedside rounds, outpatient precepting, and operative supervision.
- Administration of the program – Program oversight; curriculum development; faculty, resident, and program evaluation, career counseling.
- Research/scholarly activity with residents – Mentoring and/or working with residents, peer-reviewed funding; publication of original research or review articles in peer-reviewed journals or chapters in textbooks; publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings, participation in national committees or educational organizations.
- Didactics/teaching with residents – Lectures, simulation, case discussions, and preparation time for and participation in journal clubs, conferences, lectures, simulation, case discussions, and manuscript editing with residents.

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, institution, or facility providing educational experiences or educational assignments/rotations for residents as part of an accredited program.

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) 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. Decisions regarding withdrawal of accreditation may be made effective at any time during the academic year. Any program with a Withdrawal status effective prior to June 30, 2021 will be excluded from the count of accredited programs for Academic Year 2020-2021 in this edition of the *Data Resource Book*.



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 2011-2012 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 12,420 total accredited programs, 10,327 (4,541 specialty programs and 5,786 subspecialty programs) had a status of Continued Accreditation, accounting for 83.1% of programs. Only 154 programs (1.2%) had a status of Continued Accreditation with Warning, and an even smaller number, 17 (0.1%), had a status of Probationary Accreditation. Remaining programs had a status of either Initial Accreditation (15.2%) or Withdrawal of Accreditation (0.3%). Among specialty programs, the specialties with the highest percentage of programs with a Continued Accreditation with Warning status are:

- Colon and rectal surgery (13.6%)
- Osteopathic neuromusculoskeletal medicine (10.7%)
- Radiation oncology (7.7%)
- Thoracic surgery – integrated (6.1%)

Anesthesiology and pediatrics had two programs each issued Probationary Accreditation. Specialties and subspecialties with one program on probation include dermatology, emergency medicine, family emergency, internal medicine, neurological surgery, child neurology, obstetrics and gynecology, ophthalmology, orthopaedic surgery, plastic surgery, psychiatry, and surgery.

Trends in Accredited Programs

Since the 2016-2017 academic year, there has been a 16.4% increase in the total number of ACGME-accredited programs. This is primarily due to the 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 (170 – 121 previously AOA-approved)
- Internal medicine (117 – 93 previously AOA-approved)
- Surgery (66 – 48 previously AOA-approved)
- Emergency medicine (64 – 48 previously AOA-approved)

Newly Accredited Programs

A total of 499 programs were newly accredited during the 2020-2021 academic year. Of the newly-accredited programs, 241 (48.3%) are in medical specialties and subspecialties, 159 (31.9%) are in hospital-based specialties and subspecialties, and 99 (19.8%) are in surgical specialties and subspecialties. The specialties with the highest number of newly accredited programs are:

- Internal medicine (24)
- Family medicine (21)
- Psychiatry (18)
- Surgery (16)

Interventional radiology – independent, complex family planning, pediatric hospital medicine, hospice and palliative medicine (multidisciplinary), and critical care medicine had the highest number of new programs among all subspecialties, with 93, 26, 21, 13, and 10 programs, respectively, accounting for 32.7% of all newly accredited programs added this year. There are nine subspecialties newly accredited by the ACGME in the past five years. New programs in these nine subspecialties account for 31.0% of all new subspecialty programs.

Withdrawn Programs

Withdrawn programs are reported in three categories: those withdrawn prior to the end of the 2020-2021 academic year (which are not included in the population of accredited programs); those withdrawn at the end of the 2020-2021 academic year; and those with a future-effective withdrawal date. At the time of this report, family medicine and surgery had three withdrawn programs; internal medicine, pediatrics, and psychiatry had two withdrawn programs; followed by colon and rectal surgery, dermatology, medical genetics and genomics, neurology, obstetrics and gynecology, ophthalmology, osteopathic neuromusculoskeletal medicine, plastic surgery, plastic surgery – integrated, and radiation oncology—each with one withdrawn program during the academic year. The subspecialty of micrographic surgery and dermatologic oncology had four withdrawn programs during the academic year.

Length of Accredited Education and Training

The majority of core programs take three or four years to complete. Neurological surgery has the longest educational program length among specialty programs at sev-

en years. Among subspecialty programs, 51.8% are one year in length, with the remaining programs requiring 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 congeni-

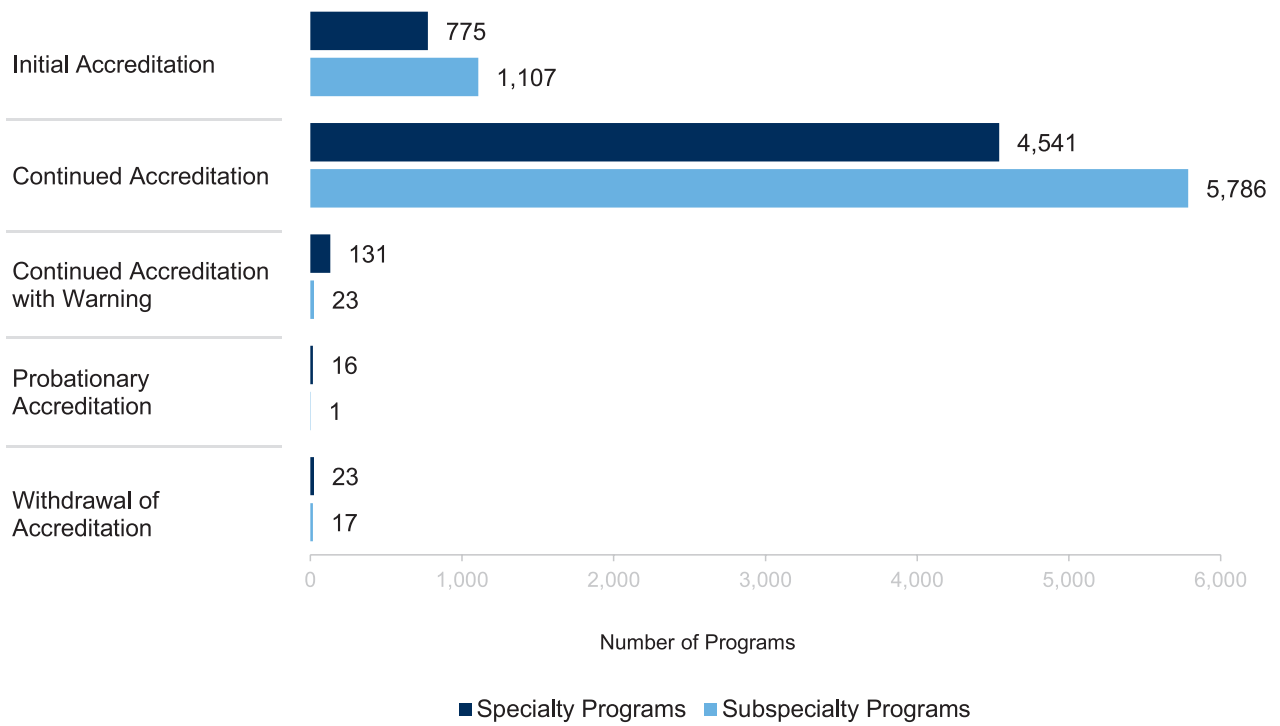
tal cardiac surgery, require six to seven total years of prior education and training before entry.

Osteopathic Recognition

The 2020-2021 academic year is the fifth year that the ACGME has recognized education and training in Osteopathic Principles and Practice in ACGME-accredited programs. Of the 259 programs with Osteopathic Recognition, 156 (60.2%) are family medicine programs and 33 (12.7%) are internal medicine programs. ¹⁶

FIGURE A.1

Accreditation Statuses of Currently Accredited Programs



Notes: Total number of accredited programs = 12,420. Excluding programs withdrawn prior to the end of the academic year (n=17).

FIGURE A.2

Number of Accredited Programs by Academic Year, 2011-2012 to 2020-2021

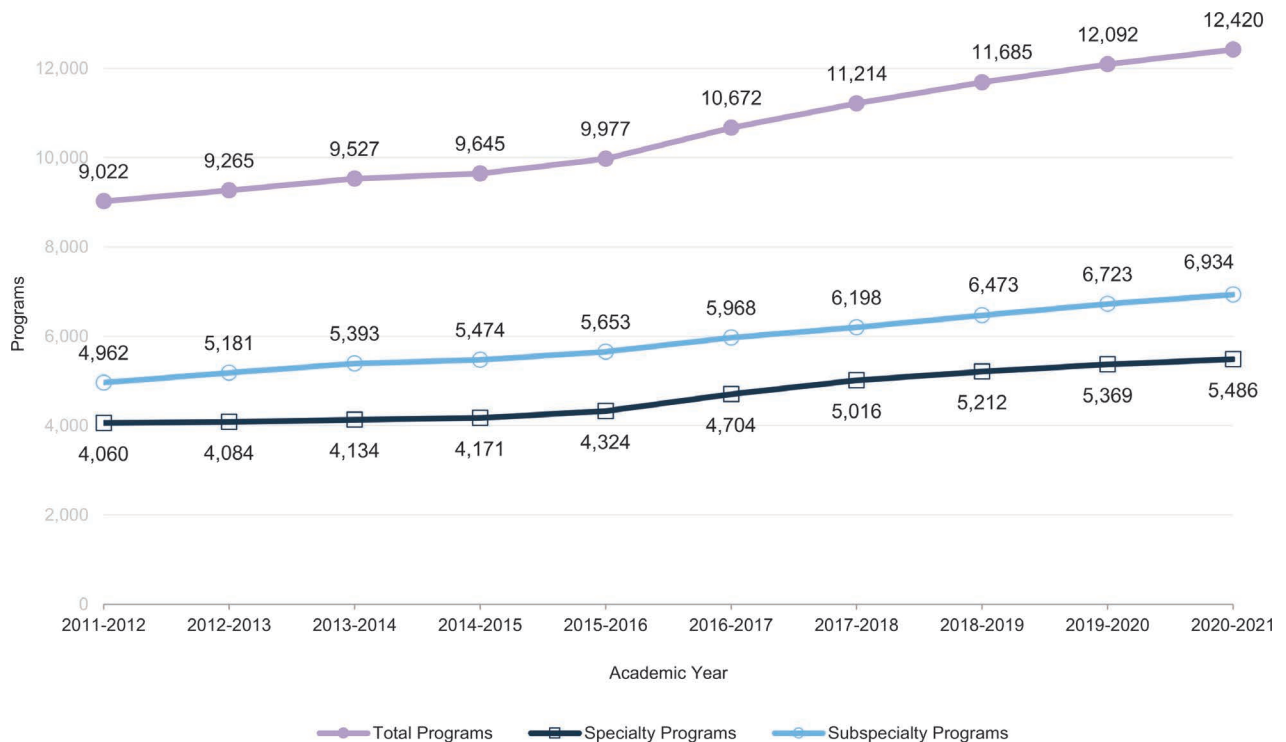


TABLE A.3
Accreditation Statuses of Currently Accredited Programs by Specialty and Subspecialty

Specialty	Total Programs	Accreditation Status									
		Initial Accreditation		Continued Accreditation		Continued Accreditation with Warning		Probationary Accreditation		Withdrawal of Accreditation	
		#	%	#	%	#	%	#	%	#	%
OVERALL	12,420	1,882	15.2%	10,327	83.1%	154	1.2%	17	0.1%	40	0.3%
TOTAL PIPELINE	5,187	807	15.6%	4,221	81.4%	120	2.3%	16	0.3%	23	0.4%
Allergy and immunology	82	3	3.7%	79	96.3%	0	0.0%	0	0.0%	0	0.0%
Anesthesiology	161	16	9.9%	139	86.3%	4	2.5%	2	1.2%	0	0.0%
- Adult cardiothoracic anesthesiology	73	6	8.2%	67	91.8%	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	64	4	6.3%	59	92.2%	0	0.0%	0	0.0%	1	1.6%
- Regional anesthesiology and acute pain medicine	38	19	50.0%	19	50.0%	0	0.0%	0	0.0%	0	0.0%
- Obstetric anesthesiology	41	8	19.5%	33	80.5%	0	0.0%	0	0.0%	0	0.0%
- Pain medicine (multidisciplinary)	111	9	8.1%	101	91.0%	1	0.9%	0	0.0%	0	0.0%
- Pediatric anesthesiology	60	4	6.7%	56	93.3%	0	0.0%	0	0.0%	0	0.0%
Colon and rectal surgery	66	7	10.6%	50	75.8%	9	13.6%	0	0.0%	0	0.0%
Dermatology	144	4	2.8%	131	91.0%	7	4.9%	1	0.7%	1	0.7%
- Dermatopathology (multidisciplinary)	58	8	13.8%	49	84.5%	0	0.0%	0	0.0%	1	1.7%
- Micrographic surgery and dermatologic oncology	78	11	14.1%	61	78.2%	3	3.8%	0	0.0%	3	3.8%
Emergency medicine	276	69	25.0%	201	72.8%	4	1.4%	1	0.4%	1	0.4%
- Clinical informatics	5	1	20.0%	4	80.0%	0	0.0%	0	0.0%	0	0.0%
- Emergency medical services	75	22	29.3%	53	70.7%	0	0.0%	0	0.0%	0	0.0%
- Medical toxicology	27	2	7.4%	25	92.6%	0	0.0%	0	0.0%	0	0.0%
- Pediatric emergency medicine	27	2	7.4%	23	85.2%	2	7.4%	0	0.0%	0	0.0%
- Sports medicine	9	2	22.2%	7	77.8%	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	710	117	16.5%	579	81.5%	8	1.1%	1	0.1%	5	0.7%
- Clinical informatics	6	3	50.0%	3	50.0%	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	49	9	18.4%	38	77.6%	0	0.0%	0	0.0%	2	4.1%
- Hospice and palliative medicine (multidisciplinary)	180	46	25.6%	134	74.4%	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	156	25	16.0%	131	84.0%	0	0.0%	0	0.0%	0	0.0%
Internal medicine	586	87	14.8%	488	83.3%	8	1.4%	1	0.2%	2	0.3%
- Adult congenital heart disease	24	11	45.8%	13	54.2%	0	0.0%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	82	13	15.9%	69	84.1%	0	0.0%	0	0.0%	0	0.0%
- Cardiovascular disease	255	28	11.0%	226	88.6%	0	0.0%	0	0.0%	1	0.4%
- Clinical cardiac electrophysiology	112	6	5.4%	106	94.6%	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	19	8	42.1%	11	57.9%	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	55	21	38.2%	34	61.8%	0	0.0%	0	0.0%	0	0.0%
- Endocrinology, diabetes, and metabolism	153	13	8.5%	140	91.5%	0	0.0%	0	0.0%	0	0.0%
- Gastroenterology	211	29	13.7%	181	85.8%	1	0.5%	0	0.0%	0	0.0%
- Geriatric medicine	114	16	14.0%	97	85.1%	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	172	26	15.1%	145	84.3%	1	0.6%	0	0.0%	0	0.0%
- Infectious disease	158	14	8.9%	144	91.1%	0	0.0%	0	0.0%	0	0.0%
- Interventional cardiology	170	20	11.8%	150	88.2%	0	0.0%	0	0.0%	0	0.0%
- Nephrology	152	8	5.3%	144	94.7%	0	0.0%	0	0.0%	0	0.0%
- Medical oncology	6	0	0.0%	5	83.3%	0	0.0%	0	0.0%	1	16.7%
- Pulmonary disease	20	5	25.0%	14	70.0%	0	0.0%	0	0.0%	1	5.0%
- Pulmonary disease and critical care medicine	188	30	16.0%	158	84.0%	0	0.0%	0	0.0%	0	0.0%
- Rheumatology	125	8	6.4%	116	92.8%	1	0.8%	0	0.0%	0	0.0%
- Sleep medicine (multidisciplinary)	89	9	10.1%	80	89.9%	0	0.0%	0	0.0%	0	0.0%
- Transplant hepatology	59	9	15.3%	50	84.7%	0	0.0%	0	0.0%	0	0.0%
Medical genetics and genomics	46	2	4.3%	43	93.5%	0	0.0%	0	0.0%	1	2.2%
- Medical biochemical genetics	20	5	25.0%	15	75.0%	0	0.0%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	42	4	9.5%	38	90.5%	0	0.0%	0	0.0%	0	0.0%
Neurological surgery	116	9	7.8%	105	90.5%	0	0.0%	1	0.9%	1	0.9%
- 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	170	21	12.4%	138	81.2%	10	5.9%	0	0.0%	1	0.6%
- Brain injury medicine	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
- Clinical neurophysiology	93	7	7.5%	85	91.4%	1	1.1%	0	0.0%	0	0.0%
- Epilepsy	85	20	23.5%	64	75.3%	1	1.2%	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	53	6	11.3%	47	88.7%	0	0.0%	0	0.0%	0	0.0%
- Vascular neurology	109	18	16.5%	91	83.5%	0	0.0%	0	0.0%	0	0.0%
Child neurology	77	4	5.2%	72	93.5%	0	0.0%	1	1.3%	0	0.0%
Nuclear medicine	37	0	0.0%	36	97.3%	1	2.7%	0	0.0%	0	0.0%
Obstetrics and gynecology	294	27	9.2%	252	85.7%	13	4.4%	1	0.3%	1	0.3%
- Female pelvic medicine and reconstructive surgery	54	4	7.4%	50	92.6%	0	0.0%	0	0.0%	0	0.0%
- Gynecologic oncology	63	13	20.6%	50	79.4%	0	0.0%	0	0.0%	0	0.0%
- Maternal-fetal medicine	100	15	15.0%	85	85.0%	0	0.0%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	49	5	10.2%	42	85.7%	0	0.0%	0	0.0%	2	4.1%
- Complex family planning	26	26	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Ophthalmology	125	9	7.2%	111	88.8%	3	2.4%	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	201	37	18.4%	154	76.6%	9	4.5%	1	0.5%	0	0.0%
- Adult reconstructive orthopaedics	25	4	16.0%	21	84.0%	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	73	7	9.6%	61	83.6%	5	6.8%	0	0.0%	0	0.0%
- Musculoskeletal oncology	12	1	8.3%	10	83.3%	1	8.3%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	93	5	5.4%	87	93.5%	1	1.1%	0	0.0%	0	0.0%
- Orthopaedic surgery of the spine	16	2	12.5%	13	81.3%	0	0.0%	0	0.0%	1	6.3%
- Orthopaedic trauma	12	3	25.0%	9	75.0%	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	28	19	67.9%	5	17.9%	3	10.7%	0	0.0%	1	3.6%
Otolaryngology - head and neck surgery	125	18	14.4%	107	85.6%	0	0.0%	0	0.0%	0	0.0%
- Neurotology	26	4	15.4%	22	84.6%	0	0.0%	0	0.0%	0	0.0%
- Pediatric otolaryngology	31	9	29.0%	22	71.0%	0	0.0%	0	0.0%	0	0.0%
Pathology-anatomic and clinical	144	3	2.1%	140	97.2%	1	0.7%	0	0.0%	0	0.0%
- Blood banking/transfusion medicine	52	2	3.8%	50	96.2%	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	11	5	45.5%	6	54.5%	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%	89	95.7%	0	0.0%	0	0.0%	1	1.1%
- Forensic pathology	45	7	15.6%	37	82.2%	0	0.0%	0	0.0%	1	2.2%
- 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	38	5	13.2%	33	86.8%	0	0.0%	0	0.0%	0	0.0%
- Pediatric pathology	28	1	3.6%	27	96.4%	0	0.0%	0	0.0%	0	0.0%
- Selective pathology	109	28	25.7%	81	74.3%	0	0.0%	0	0.0%	0	0.0%
Pediatrics	210	4	1.9%	202	96.2%	1	0.5%	2	1.0%	1	0.5%
- Adolescent medicine	32	5	15.6%	26	81.3%	1	3.1%	0	0.0%	0	0.0%
- Child abuse pediatrics	31	1	3.2%	30	96.8%	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	8	2	25.0%	6	75.0%	0	0.0%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	44	5	11.4%	39	88.6%	0	0.0%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	107	9	8.4%	96	89.7%	2	1.9%	0	0.0%	0	0.0%
- Pediatric cardiology	64	5	7.8%	59	92.2%	0	0.0%	0	0.0%	0	0.0%
- Pediatric critical care medicine	75	9	12.0%	66	88.0%	0	0.0%	0	0.0%	0	0.0%
- Pediatric emergency medicine	55	2	3.6%	53	96.4%	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	67	6	9.0%	61	91.0%	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	
		#	%	#	%	#	%	#	%	#	%
- Pediatric hematology/oncology	76	3	3.9%	72	94.7%	0	0.0%	1	1.3%	0	0.0%
- 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%	44	93.6%	0	0.0%	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	37	2	5.4%	35	94.6%	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	17	2	11.8%	15	88.2%	0	0.0%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	17	3	17.6%	14	82.4%	0	0.0%	0	0.0%	0	0.0%
- Pediatric hospital medicine	54	54	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	98	11	11.2%	86	87.8%	1	1.0%	0	0.0%	0	0.0%
- Brain injury medicine	25	11	44.0%	14	56.0%	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 medicine	22	3	13.6%	19	86.4%	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	21	2	9.5%	19	90.5%	0	0.0%	0	0.0%	0	0.0%
Plastic surgery	52	4	7.7%	44	84.6%	2	3.8%	1	1.9%	1	1.9%
Plastic surgery - integrated	86	10	11.6%	72	83.7%	2	2.3%	0	0.0%	2	2.3%
- Craniofacial surgery	8	0	0.0%	8	100.0%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	17	2	11.8%	15	88.2%	0	0.0%	0	0.0%	0	0.0%
Preventive medicine	72	4	5.6%	68	94.4%	0	0.0%	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	287	46	16.0%	232	80.8%	6	2.1%	1	0.3%	2	0.7%
- Addiction medicine (multidisciplinary)	85	82	96.5%	3	3.5%	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	146	16	11.0%	130	89.0%	0	0.0%	0	0.0%	0	0.0%
- Forensic psychiatry	49	6	12.2%	42	85.7%	0	0.0%	0	0.0%	1	2.0%
- Geriatric psychiatry	64	7	10.9%	57	89.1%	0	0.0%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	64	6	9.4%	58	90.6%	0	0.0%	0	0.0%	0	0.0%
Radiation oncology	91	3	3.3%	80	87.9%	7	7.7%	0	0.0%	1	1.1%
Radiology-diagnostic	196	6	3.1%	188	95.9%	2	1.0%	0	0.0%	0	0.0%
- Abdominal radiology	13	2	15.4%	11	84.6%	0	0.0%	0	0.0%	0	0.0%
- 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	89	5	5.6%	83	93.3%	1	1.1%	0	0.0%	0	0.0%
- Nuclear radiology	18	1	5.6%	17	94.4%	0	0.0%	0	0.0%	0	0.0%
- Pediatric radiology	48	4	8.3%	44	91.7%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - independent	95	95	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	92	91	98.9%	1	1.1%	0	0.0%	0	0.0%	0	0.0%
Surgery	344	60	17.4%	262	76.2%	20	5.8%	1	0.3%	1	0.3%
- Complex general surgical oncology	31	6	19.4%	25	80.6%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
- Pediatric surgery	51	3	5.9%	48	94.1%	0	0.0%	0	0.0%	0	0.0%
- Surgical critical care	145	27	18.6%	118	81.4%	0	0.0%	0	0.0%	0	0.0%
- Vascular surgery	115	12	10.4%	103	89.6%	0	0.0%	0	0.0%	0	0.0%
Vascular surgery - integrated	67	14	20.9%	53	79.1%	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery	74	5	6.8%	69	93.2%	0	0.0%	0	0.0%	0	0.0%
- Congenital cardiac surgery	15	4	26.7%	11	73.3%	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery - integrated	33	7	21.2%	24	72.7%	2	6.1%	0	0.0%	0	0.0%
Urology	145	9	6.2%	130	89.7%	6	4.1%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	15	3	20.0%	12	80.0%	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	172	48	27.9%	122	70.9%	2	1.2%	0	0.0%	0	0.0%
Internal medicine/Pediatrics	79	1	1.3%	78	98.7%	0	0.0%	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=17).

TABLE A.4

Number of Programs by Specialty and Subspecialty and Academic Year, 2016-2017 to 2020-2021

Specialty	Academic Year					5-Year Change	
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021		
	#	#	#	#	#	#	%
OVERALL	10,672	11,214	11,685	12,092	12,420	1,748	16.4%
TOTAL PIPELINE	4,383	4,668	4,842	4,985	5,187	804	18.3%
Allergy and immunology	79	79	78	81	82	3	3.8%
Anesthesiology	147	153	155	160	161	14	9.5%
- Adult cardiothoracic anesthesiology	66	66	69	71	73	7	10.6%
- Clinical informatics	1	1	1	1	1	0	0.0%
- Critical care medicine	57	62	64	63	64	7	12.3%
- Regional anesthesiology and acute pain medicine *	9	18	29	35	38	29	322.2%
- Obstetric anesthesiology	32	34	37	41	41	9	28.1%
- Pain medicine (multidisciplinary)	101	102	104	108	111	10	9.9%
- Pediatric anesthesiology	58	60	61	60	60	2	3.4%
Colon and rectal surgery	58	62	63	65	66	8	13.8%
Dermatology	128	138	142	144	144	16	12.5%
- Dermatopathology (multidisciplinary)	53	56	55	56	58	5	9.4%
- Micrographic surgery and dermatologic oncology	75	77	77	78	78	3	4.0%
Emergency medicine	212	231	247	265	276	64	30.2%
- Clinical informatics	4	4	4	5	5	1	25.0%
- Emergency medical services	55	61	65	71	75	20	36.4%
- Medical toxicology	27	27	27	26	27	0	0.0%
- Pediatric emergency medicine	26	26	26	26	27	1	3.8%
- Sports medicine	7	8	9	8	9	2	28.6%
- Undersea and hyperbaric medicine	7	7	7	8	8	1	14.3%
Family medicine	540	620	671	701	710	170	31.5%
- Clinical informatics	2	2	3	6	6	4	200.0%
- Geriatric medicine	44	45	48	50	49	5	11.4%
- Hospice and palliative medicine (multidisciplinary)	130	140	149	167	180	50	38.5%
- Sports medicine	132	135	143	151	156	24	18.2%
Internal medicine	469	529	545	569	586	117	24.9%
- Adult congenital heart disease	10	14	21	24	24	14	140.0%
- Advanced heart failure and transplant cardiology	71	75	76	80	82	11	15.5%
- Cardiovascular disease	210	235	245	250	255	45	21.4%
- Clinical cardiac electrophysiology	105	108	110	110	112	7	6.7%
- Clinical informatics	12	13	16	17	19	7	58.3%
- Critical care medicine	34	36	43	45	55	21	61.8%
- Endocrinology, diabetes, and metabolism	141	142	149	151	153	12	8.5%
- Gastroenterology	175	189	202	207	211	36	20.6%
- Geriatric medicine	106	107	108	111	114	8	7.5%
- Hematology	2	2	2	2	2	0	0.0%
- Hematology and medical oncology	146	149	157	167	172	26	17.8%
- Infectious disease	146	148	149	154	158	12	8.2%
- Interventional cardiology	150	155	164	166	170	20	13.3%
- Nephrology	149	150	149	151	152	3	2.0%
- Medical oncology	6	7	8	7	6	0	0.0%
- Pulmonary disease	20	22	23	22	20	0	0.0%
- Pulmonary disease and critical care medicine	151	170	178	181	188	37	24.5%
- Rheumatology	114	120	122	125	125	11	9.6%
- Sleep medicine (multidisciplinary)	84	84	86	88	89	5	6.0%
- Transplant hepatology	51	51	52	57	59	8	15.7%
Medical genetics and genomics	46	46	46	47	46	0	0.0%
- Medical biochemical genetics	16	17	19	19	20	4	25.0%
- Molecular genetic pathology (multidisciplinary)	39	41	42	42	42	3	7.7%
Neurological surgery	110	112	115	118	116	6	5.5%
- 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, 2016-2017 to 2020-2021

Specialty	Academic Year					5-Year Change	
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	#	%
	#	#	#	#	#	#	%
Neurology	144	153	159	160	170	26	18.1%
- Brain injury medicine *	1	1	1	1	1	0	0.0%
- Clinical neurophysiology	94	91	91	92	93	-1	-1.1%
- Epilepsy	61	71	77	81	85	24	39.3%
- Endovascular surgical neuroradiology	1	1	2	2	2	1	100.0%
- Neurodevelopmental disabilities	8	8	8	8	8	0	0.0%
- Neuromuscular medicine	46	49	49	52	53	7	15.2%
- Vascular neurology	93	92	99	106	109	16	17.2%
Child neurology	74	74	74	76	77	3	4.1%
Nuclear medicine	42	41	39	38	37	-5	-11.9%
Obstetrics and gynecology	269	278	282	285	294	25	9.3%
- Female pelvic medicine and reconstructive surgery	50	51	53	54	54	4	8.0%
- Gynecologic oncology *	48	56	59	63	63	15	31.3%
- Maternal-fetal medicine *	73	88	93	97	100	27	37.0%
- Reproductive endocrinology and infertility *	41	50	50	51	49	8	19.5%
- Complex family planning *					26	N/A	N/A
Ophthalmology	116	119	123	124	125	9	7.8%
- Ophthalmic plastic and reconstructive surgery	5	4	4	4	4	-1	-20.0%
Orthopaedic surgery	168	175	185	197	201	33	19.6%
- Adult reconstructive orthopaedics	23	24	24	24	25	2	8.7%
- Foot and ankle orthopaedics	6	6	7	7	7	1	16.7%
- Hand surgery	68	68	72	74	73	5	7.4%
- Musculoskeletal oncology	11	12	12	12	12	1	9.1%
- Orthopaedic sports medicine	97	96	92	90	93	-4	-4.1%
- Orthopaedic surgery of the spine	16	17	17	18	16	0	0.0%
- Orthopaedic trauma	9	11	11	11	12	3	33.3%
- Pediatric orthopaedics	25	25	26	25	25	0	0.0%
Osteopathic neuromusculoskeletal medicine	4	13	19	27	28	24	600.0%
Otolaryngology - head and neck surgery	109	117	122	124	125	16	14.7%
- Neurotology	20	23	24	24	26	6	30.0%
- Pediatric otolaryngology	22	25	29	30	31	9	40.9%
Pathology-anatomic and clinical	142	143	143	142	144	2	1.4%
- Blood banking/transfusion medicine	49	50	51	51	52	3	6.1%
- Clinical informatics	5	7	8	10	11	6	120.0%
- Chemical pathology	4	4	4	4	4	0	0.0%
- Cytopathology	92	94	94	93	93	1	1.1%
- Forensic pathology	40	39	43	45	45	5	12.5%
- Hematopathology	86	85	87	86	86	0	0.0%
- Medical microbiology	15	15	15	15	15	0	0.0%
- Neuropathology	35	34	36	37	38	3	8.6%
- Pediatric pathology	26	27	27	28	28	2	7.7%
- Selective pathology	85	83	91	101	109	24	28.2%
Pediatrics	207	210	212	211	210	3	1.4%
- Adolescent medicine	29	29	30	32	32	3	10.3%
- Child abuse pediatrics	30	32	31	31	31	1	3.3%
- Clinical informatics	5	5	5	7	8	3	60.0%
- Developmental-behavioral pediatrics	39	41	43	43	44	5	12.8%
- Neonatal-perinatal medicine	99	100	102	103	107	8	8.1%
- Pediatric cardiology	59	60	62	63	64	5	8.5%
- Pediatric critical care medicine	67	67	72	72	75	8	11.9%
- Pediatric emergency medicine	52	52	52	53	55	3	5.8%
- Pediatric endocrinology	71	72	73	72	72	1	1.4%
- Pediatric gastroenterology	63	64	65	65	67	4	6.3%

TABLE A.4 *Continued***Number of Programs by Specialty and Subspecialty and Academic Year, 2016-2017 to 2020-2021**

Specialty	Academic Year					5-Year Change	
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021		
	#	#	#	#	#	#	%
- Pediatric hematology/oncology	73	74	74	75	76	3	4.1%
- Pediatric infectious diseases	64	65	65	64	64	0	0.0%
- Pediatric nephrology	44	45	46	47	47	3	6.8%
- Pediatric pulmonology	54	54	54	56	56	2	3.7%
- Pediatric rheumatology	36	37	35	36	37	1	2.8%
- Sports medicine	18	17	17	17	17	-1	-5.6%
- Pediatric transplant hepatology	13	14	15	16	17	4	30.8%
- Pediatric hospital medicine *				33	54	21	63.6%
Physical medicine and rehabilitation	86	88	91	94	98	12	14.0%
- Brain injury medicine	13	18	20	23	25	12	92.3%
- Neuromuscular medicine	1	1	1	1	1	0	0.0%
- Spinal cord injury medicine	22	22	24	24	24	2	9.1%
- Pediatric rehabilitation medicine	20	20	20	22	22	2	10.0%
- Sports medicine	19	19	19	20	21	2	10.5%
Plastic surgery	68	61	55	53	52	-16	-23.5%
Plastic surgery - integrated	76	79	81	82	86	10	13.2%
- Craniofacial surgery	9	8	8	8	8	-1	-11.1%
- Hand surgery	16	16	17	17	17	1	6.3%
Preventive medicine	76	76	75	72	72	-4	-5.3%
- Medical toxicology	1	1	1	1	1	0	0.0%
- Undersea and hyperbaric medicine	1	1	1	1	1	0	0.0%
Psychiatry	226	248	257	269	287	61	27.0%
- Addiction medicine (multidisciplinary) *			52	78	85	33	63.5%
- Addiction psychiatry	47	49	50	53	53	6	12.8%
- Child and adolescent psychiatry	134	138	140	141	146	12	9.0%
- Forensic psychiatry	46	47	48	48	49	3	6.5%
- Geriatric psychiatry	59	60	61	62	64	5	8.5%
- Consultation-liaison psychiatry	59	61	62	63	64	5	8.5%
Radiation oncology	92	94	94	91	91	-1	-1.1%
Radiology-diagnostic	194	194	195	197	196	2	1.0%
- Abdominal radiology	12	12	13	14	13	1	8.3%
- Endovascular surgical neuroradiology	4	3	3	3	3	-1	-25.0%
- Musculoskeletal radiology	16	16	16	20	20	4	25.0%
- Neuroradiology	85	85	87	87	89	4	4.7%
- Nuclear radiology	18	17	17	17	18	0	0.0%
- Pediatric radiology	46	46	47	47	48	2	4.3%
- Vascular and interventional radiology	93	93	93	92		N/A	N/A
Interventional radiology - independent *				2	95	93	4650.0%
Interventional radiology - integrated	65	78	84	89	92	27	41.5%
Surgery	278	301	323	330	344	66	23.7%
- Complex general surgical oncology	24	25	27	29	31	7	29.2%
- Hand surgery	1	1	1	1	2	1	100.0%
- Pediatric surgery	49	50	50	49	51	2	4.1%
- Surgical critical care	117	128	136	139	145	28	23.9%
- Vascular surgery	107	106	109	116	115	8	7.5%
Vascular surgery - integrated	53	55	60	64	67	14	26.4%
Thoracic surgery	69	72	72	74	74	5	7.2%
- Congenital cardiac surgery	13	13	12	14	15	2	15.4%
Thoracic surgery - integrated	27	26	27	30	33	6	22.2%
Urology	136	138	142	145	145	9	6.6%
- Female pelvic medicine and reconstructive surgery	11	13	14	15	15	4	36.4%
- Pediatric urology	28	26	26	26	26	-2	-7.1%
Transitional year	115	135	157	166	172	57	49.6%
Internal medicine/Pediatrics	79	78	79	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.

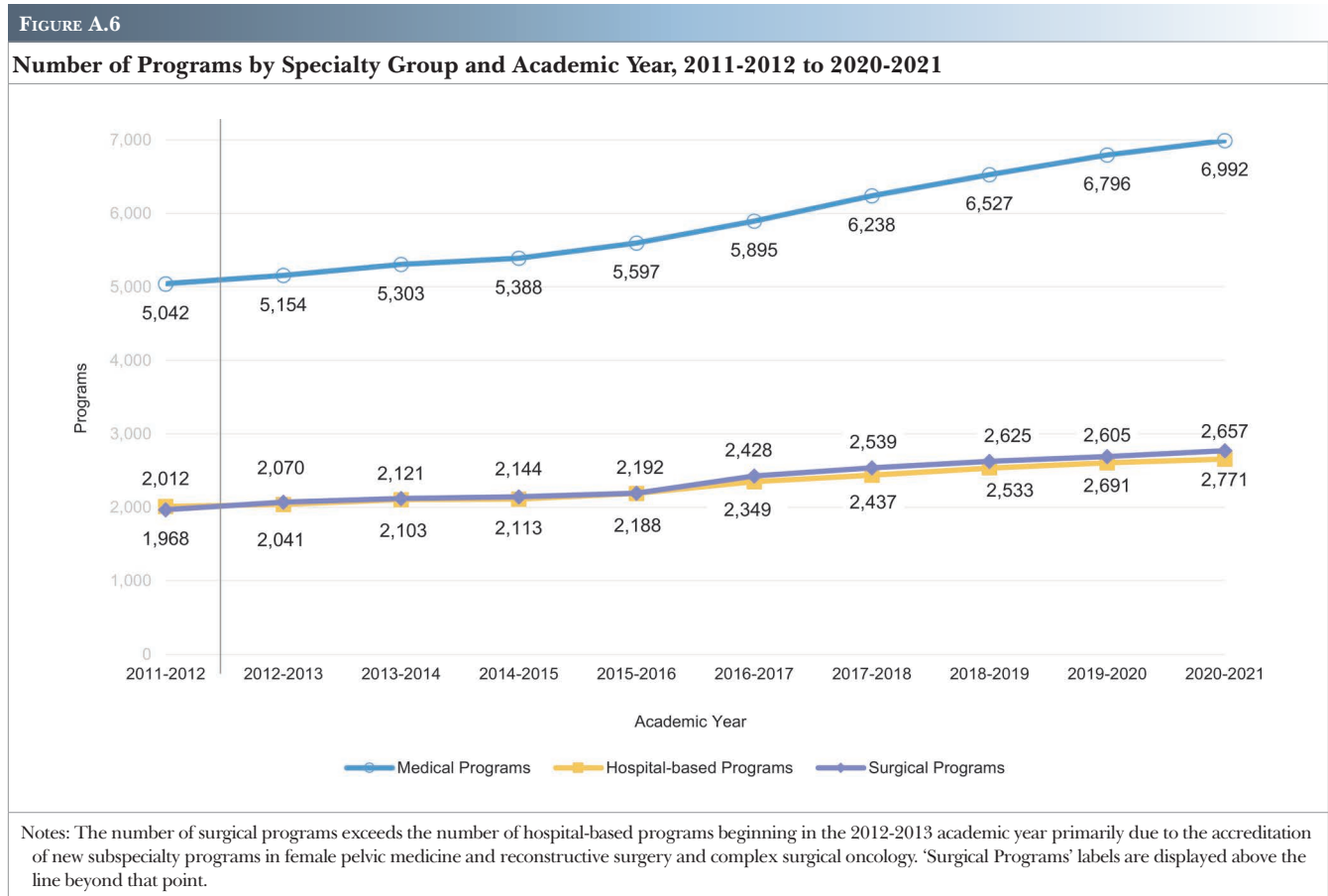
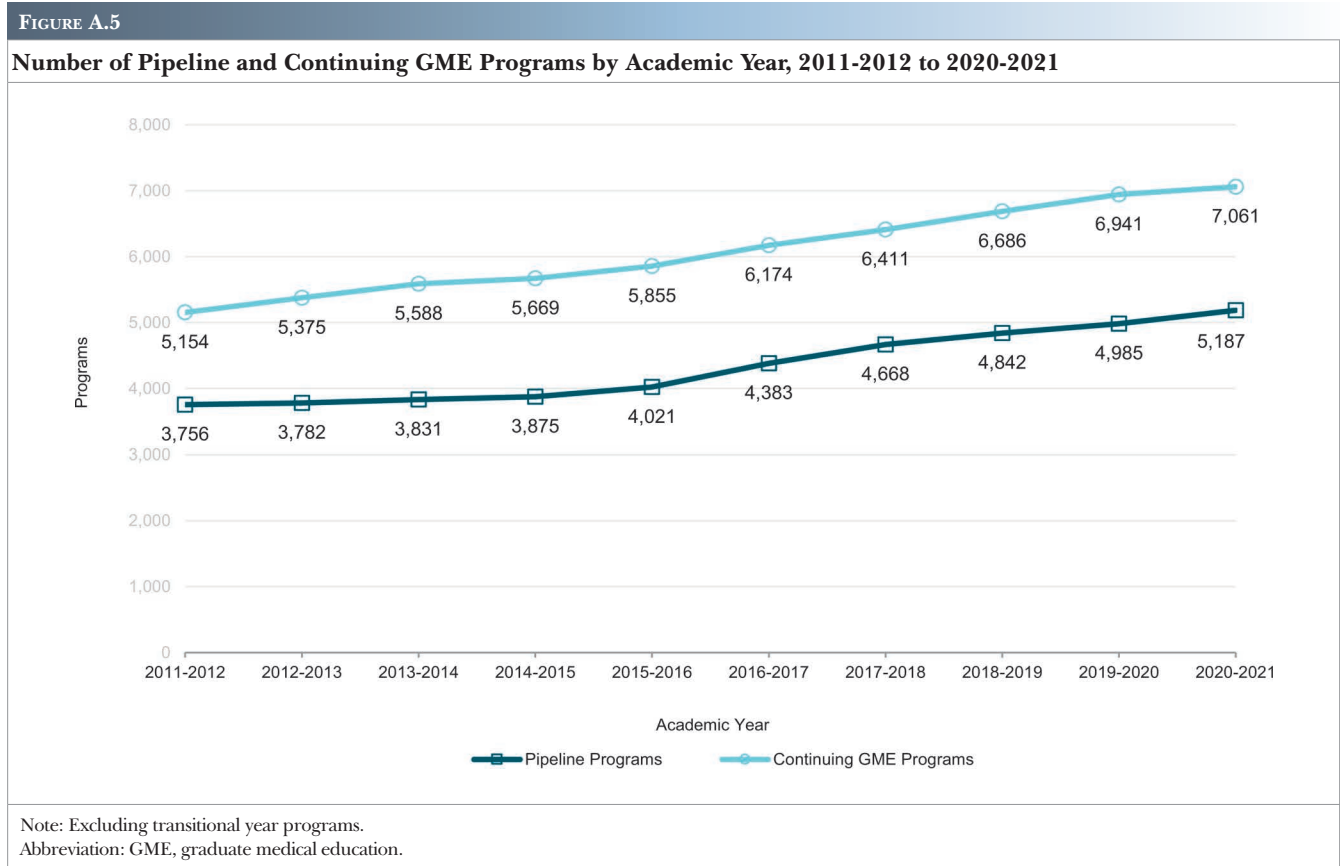


FIGURE A.7

Number of Newly Accredited Programs by Specialty Group

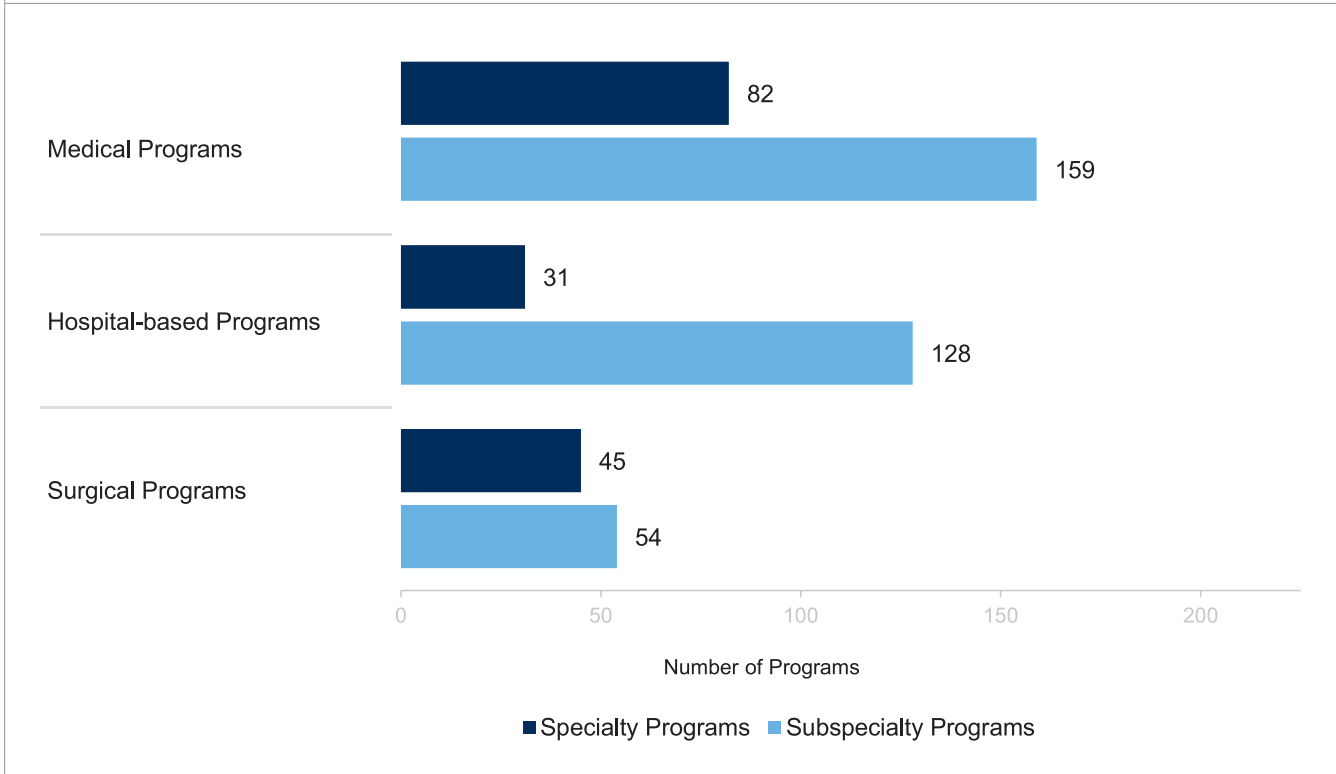


FIGURE A.8

Number of Newly Accredited Programs by Academic Year, 2011-2012 to 2020-2021

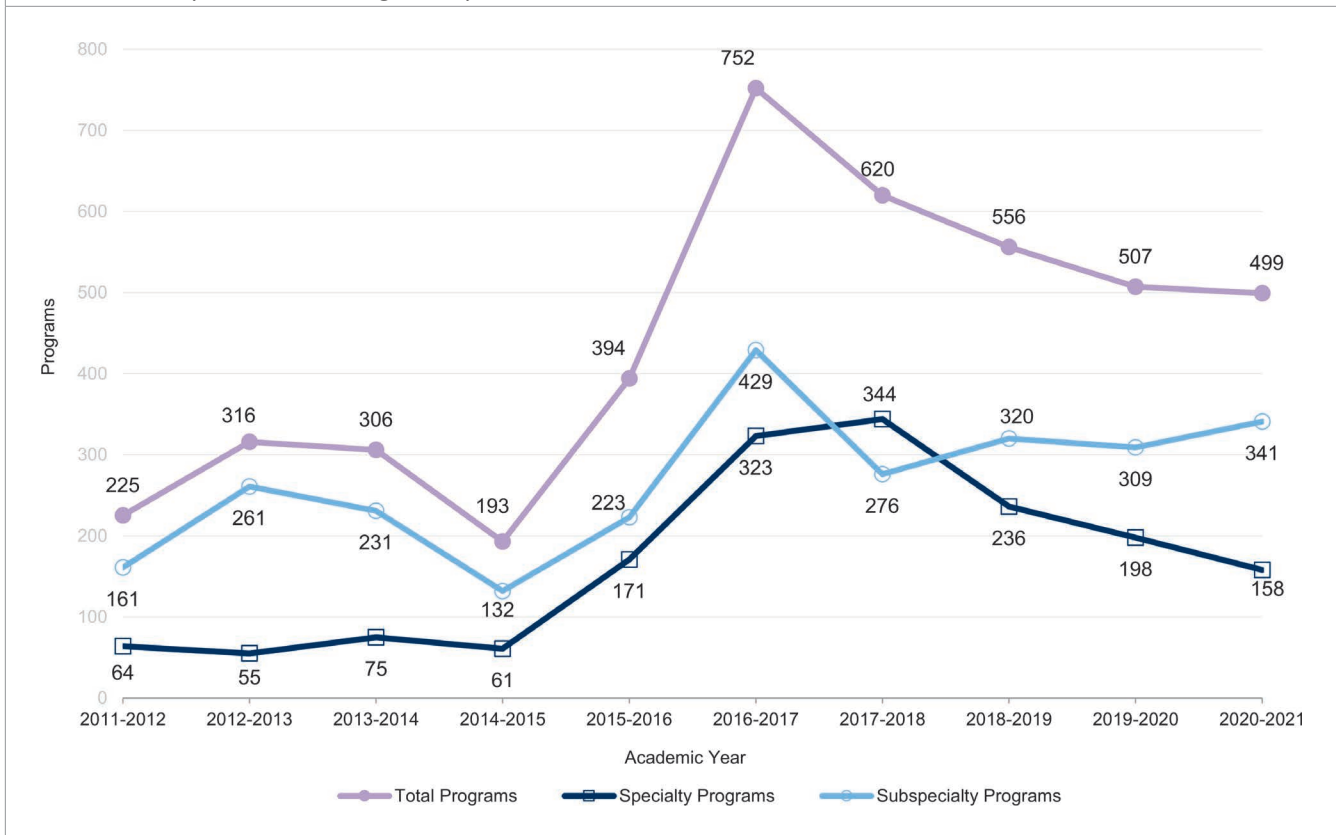


TABLE A.9				
Number of Newly Accredited Programs during the Academic Year by Specialty and Subspecialty				
Specialty	Total Programs	Newly Accredited Programs	Percentage of Specialty	Percent of All Newly Accredited Programs
OVERALL	12,420	499	4.0%	100.0%
TOTAL PIPELINE	5,187	238	4.6%	47.7%
Allergy and immunology	82	1	1.2%	0.2%
Anesthesiology	161	2	1.2%	0.4%
- Adult cardiothoracic anesthesiology	73	2	2.7%	0.4%
- Clinical informatics	1	0	0.0%	0.0%
- Critical care medicine	64	1	1.6%	0.2%
- Regional anesthesiology and acute pain medicine *	38	3	7.9%	0.6%
- Obstetric anesthesiology	41	1	2.4%	0.2%
- Pain medicine (multidisciplinary)	111	3	2.7%	0.6%
- Pediatric anesthesiology	60	0	0.0%	0.0%
Colon and rectal surgery	66	2	3.0%	0.4%
Dermatology	144	1	0.7%	0.2%
- Dermatopathology (multidisciplinary)	58	3	5.2%	0.6%
- Micrographic surgery and dermatologic oncology	78	4	5.1%	0.8%
Emergency medicine	276	12	4.3%	2.4%
- Clinical informatics	5	0	0.0%	0.0%
- Emergency medical services	75	4	5.3%	0.8%
- Medical toxicology	27	1	3.7%	0.2%
- Pediatric emergency medicine	27	1	3.7%	0.2%
- Sports medicine	9	1	11.1%	0.2%
- Undersea and hyperbaric medicine	8	0	0.0%	0.0%
Family medicine	710	21	3.0%	4.2%
- Clinical informatics	6	0	0.0%	0.0%
- Geriatric medicine	49	0	0.0%	0.0%
- Hospice and palliative medicine (multidisciplinary)	180	13	7.2%	2.6%
- Sports medicine	156	5	3.2%	1.0%
Internal medicine	586	24	4.1%	4.8%
- Adult congenital heart disease	24	0	0.0%	0.0%
- Advanced heart failure and transplant cardiology	82	2	2.4%	0.4%
- Cardiovascular disease	255	6	2.4%	1.2%
- Clinical cardiac electrophysiology	112	2	1.8%	0.4%
- Clinical informatics	19	2	10.5%	0.4%
- Critical care medicine	55	10	18.2%	2.0%
- Endocrinology, diabetes, and metabolism	153	2	1.3%	0.4%
- Gastroenterology	211	4	1.9%	0.8%
- Geriatric medicine	114	5	4.4%	1.0%
- Hematology	2	0	0.0%	0.0%
- Hematology and medical oncology	172	6	3.5%	1.2%
- Infectious disease	158	4	2.5%	0.8%
- Interventional cardiology	170	4	2.4%	0.8%
- Nephrology	152	3	2.0%	0.6%
- Medical oncology	6	0	0.0%	0.0%
- Pulmonary disease	20	0	0.0%	0.0%
- Pulmonary disease and critical care medicine	188	7	3.7%	1.4%
- Rheumatology	125	0	0.0%	0.0%
- Sleep medicine (multidisciplinary)	89	2	2.2%	0.4%
- Transplant hepatology	59	3	5.1%	0.6%
Medical genetics and genomics	46	0	0.0%	0.0%
- Medical biochemical genetics	20	1	5.0%	0.2%
- Molecular genetic pathology (multidisciplinary)	42	2	4.8%	0.4%
Neurological surgery	116	0	0.0%	0.0%
- 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	170	10	5.9%	2.0%
- Brain injury medicine *	1	0	0.0%	0.0%
- Clinical neurophysiology	93	2	2.2%	0.4%
- Epilepsy	85	4	4.7%	0.8%
- Endovascular surgical neuroradiology	2	0	0.0%	0.0%
- Neurodevelopmental disabilities	8	0	0.0%	0.0%
- Neuromuscular medicine	53	1	1.9%	0.2%
- Vascular neurology	109	4	3.7%	0.8%
Child neurology	77	1	1.3%	0.2%
Nuclear medicine	37	0	0.0%	0.0%
Obstetrics and gynecology	294	9	3.1%	1.8%
- Female pelvic medicine and reconstructive surgery	54	0	0.0%	0.0%
- Gynecologic oncology *	63	1	1.6%	0.2%
- Maternal-fetal medicine *	100	3	3.0%	0.6%
- Reproductive endocrinology and infertility *	49	0	0.0%	0.0%
- Complex family planning *	26	26	100.0%	5.2%
Ophthalmology	125	2	1.6%	0.4%
- Ophthalmic plastic and reconstructive surgery	4	0	0.0%	0.0%
Orthopaedic surgery	201	4	2.0%	0.8%
- Adult reconstructive orthopaedics	25	1	4.0%	0.2%
- Foot and ankle orthopaedics	7	0	0.0%	0.0%
- Hand surgery	73	1	1.4%	0.2%
- Musculoskeletal oncology	12	0	0.0%	0.0%
- Orthopaedic sports medicine	93	3	3.2%	0.6%
- Orthopaedic surgery of the spine	16	0	0.0%	0.0%
- Orthopaedic trauma	12	1	8.3%	0.2%
- Pediatric orthopaedics	25	0	0.0%	0.0%
Osteopathic neuromusculoskeletal medicine	28	1	3.6%	0.2%
Otolaryngology - head and neck surgery	125	1	0.8%	0.2%
- Neurotology	26	2	7.7%	0.4%
- Pediatric otolaryngology	31	1	3.2%	0.2%
Pathology-anatomic and clinical	144	2	1.4%	0.4%
- Blood banking/transfusion medicine	52	1	1.9%	0.2%
- Clinical informatics	11	1	9.1%	0.2%
- Chemical pathology	4	0	0.0%	0.0%
- Cytopathology	93	0	0.0%	0.0%
- Forensic pathology	45	0	0.0%	0.0%
- Hematopathology	86	0	0.0%	0.0%
- Medical microbiology	15	0	0.0%	0.0%
- Neuropathology	38	1	2.6%	0.2%
- Pediatric pathology	28	0	0.0%	0.0%
- Selective pathology	109	8	7.3%	1.6%
Pediatrics	210	1	0.5%	0.2%
- Adolescent medicine	32	0	0.0%	0.0%
- Child abuse pediatrics	31	0	0.0%	0.0%
- Clinical informatics	8	1	12.5%	0.2%
- Developmental-behavioral pediatrics	44	1	2.3%	0.2%
- Neonatal-perinatal medicine	107	4	3.7%	0.8%
- Pediatric cardiology	64	1	1.6%	0.2%
- Pediatric critical care medicine	75	3	4.0%	0.6%
- Pediatric emergency medicine	55	2	3.6%	0.4%
- Pediatric endocrinology	72	0	0.0%	0.0%
- Pediatric gastroenterology	67	2	3.0%	0.4%

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 hematology/oncology	76	1	1.3%	0.2%
- Pediatric infectious diseases	64	0	0.0%	0.0%
- Pediatric nephrology	47	0	0.0%	0.0%
- Pediatric pulmonology	56	0	0.0%	0.0%
- Pediatric rheumatology	37	1	2.7%	0.2%
- Sports medicine	17	1	5.9%	0.2%
- Pediatric transplant hepatology	17	1	5.9%	0.2%
- Pediatric hospital medicine *	54	21	38.9%	4.2%
Physical medicine and rehabilitation	98	4	4.1%	0.8%
- Brain injury medicine	25	2	8.0%	0.4%
- Neuromuscular medicine	1	0	0.0%	0.0%
- Spinal cord injury medicine	24	0	0.0%	0.0%
- Pediatric rehabilitation medicine	22	1	4.5%	0.2%
- Sports medicine	21	1	4.8%	0.2%
Plastic surgery	52	1	1.9%	0.2%
Plastic surgery - integrated	86	4	4.7%	0.8%
- Craniofacial surgery	8	0	0.0%	0.0%
- Hand surgery	17	1	5.9%	0.2%
Preventive medicine	72	1	1.4%	0.2%
- Medical toxicology	1	0	0.0%	0.0%
- Undersea and hyperbaric medicine	1	0	0.0%	0.0%
Psychiatry	287	18	6.3%	3.6%
- Addiction medicine (multidisciplinary) *	85	8	9.4%	1.6%
- Addiction psychiatry	53	0	0.0%	0.0%
- Child and adolescent psychiatry	146	5	3.4%	1.0%
- Forensic psychiatry	49	2	4.1%	0.4%
- Geriatric psychiatry	64	2	3.1%	0.4%
- Consultation-liaison psychiatry	64	1	1.6%	0.2%
Radiation oncology	91	0	0.0%	0.0%
Radiology-diagnostic	196	1	0.5%	0.2%
- Abdominal radiology	13	0	0.0%	0.0%
- Endovascular surgical neuroradiology	3	0	0.0%	0.0%
- Musculoskeletal radiology	20	0	0.0%	0.0%
- Neuroradiology	89	2	2.2%	0.4%
- Nuclear radiology	18	1	5.6%	0.2%
- Pediatric radiology	48	1	2.1%	0.2%
Interventional radiology - independent *	95	93	97.9%	18.6%
Interventional radiology - integrated	92	3	3.3%	0.6%
Surgery	344	16	4.7%	3.2%
- Complex general surgical oncology	31	2	6.5%	0.4%
- Hand surgery	2	1	50.0%	0.2%
- Pediatric surgery	51	2	3.9%	0.4%
- Surgical critical care	145	8	5.5%	1.6%
- Vascular surgery	115	0	0.0%	0.0%
Vascular surgery - integrated	67	3	4.5%	0.6%
Thoracic surgery	74	0	0.0%	0.0%
- Congenital cardiac surgery	15	1	6.7%	0.2%
Thoracic surgery - integrated	33	3	9.1%	0.6%
Urology	145	0	0.0%	0.0%
- Female pelvic medicine and reconstructive surgery	15	0	0.0%	0.0%
- Pediatric urology	26	0	0.0%	0.0%
Transitional year	172	10	5.8%	2.0%
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	12,420	17	0.1%	30	0.2%	8	0.1%
TOTAL PIPELINE	5,187	5	0.1%	16	0.3%	5	0.1%
Allergy and immunology	82	0	0.0%	0	0.0%	0	0.0%
Anesthesiology	161	0	0.0%	0	0.0%	0	0.0%
- Adult cardiothoracic anesthesiology	73	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	1	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	64	0	0.0%	1	1.6%	0	0.0%
- Regional anesthesiology and acute pain medicine	38	0	0.0%	0	0.0%	0	0.0%
- Obstetric anesthesiology	41	0	0.0%	0	0.0%	0	0.0%
- Pain medicine (multidisciplinary)	111	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	66	1	1.5%	0	0.0%	0	0.0%
Dermatology	144	0	0.0%	1	0.7%	0	0.0%
- Dermatopathology (multidisciplinary)	58	0	0.0%	0	0.0%	1	1.7%
- Micrographic surgery and dermatologic oncology	78	1	1.3%	3	3.8%	0	0.0%
Emergency medicine	276	0	0.0%	0	0.0%	1	0.4%
- Clinical informatics	5	0	0.0%	0	0.0%	0	0.0%
- Emergency medical services	75	0	0.0%	0	0.0%	0	0.0%
- Medical toxicology	27	0	0.0%	0	0.0%	0	0.0%
- Pediatric emergency medicine	27	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	9	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	710	1	0.1%	2	0.3%	3	0.4%
- Clinical informatics	6	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	49	0	0.0%	2	4.1%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	180	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	156	0	0.0%	0	0.0%	0	0.0%
Internal medicine	586	0	0.0%	2	0.3%	0	0.0%
- Adult congenital heart disease	24	0	0.0%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	82	0	0.0%	0	0.0%	0	0.0%
- Cardiovascular disease	255	0	0.0%	1	0.4%	0	0.0%
- Clinical cardiac electrophysiology	112	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	19	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	55	0	0.0%	0	0.0%	0	0.0%
- Endocrinology, diabetes, and metabolism	153	0	0.0%	0	0.0%	0	0.0%
- Gastroenterology	211	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	114	0	0.0%	1	0.9%	0	0.0%
- Hematology	2	0	0.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	172	0	0.0%	0	0.0%	0	0.0%
- Infectious disease	158	0	0.0%	0	0.0%	0	0.0%
- Interventional cardiology	170	0	0.0%	0	0.0%	0	0.0%
- Nephrology	152	0	0.0%	0	0.0%	0	0.0%
- Medical oncology	6	0	0.0%	1	16.7%	0	0.0%
- Pulmonary disease	20	0	0.0%	1	5.0%	0	0.0%
- Pulmonary disease and critical care medicine	188	0	0.0%	0	0.0%	0	0.0%
- Rheumatology	125	0	0.0%	0	0.0%	0	0.0%
- Sleep medicine (multidisciplinary)	89	0	0.0%	0	0.0%	0	0.0%
- Transplant hepatology	59	0	0.0%	0	0.0%	0	0.0%
Medical genetics and genomics	46	0	0.0%	1	2.2%	0	0.0%
- Medical biochemical genetics	20	0	0.0%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	42	0	0.0%	0	0.0%	0	0.0%
Neurological surgery	116	0	0.0%	0	0.0%	1	0.9%
- 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	170	0	0.0%	1	0.6%	0	0.0%
- Brain injury medicine	1	0	0.0%	0	0.0%	0	0.0%
- Clinical neurophysiology	93	0	0.0%	0	0.0%	0	0.0%
- Epilepsy	85	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	53	0	0.0%	0	0.0%	0	0.0%
- Vascular neurology	109	0	0.0%	0	0.0%	0	0.0%
Child neurology	77	0	0.0%	0	0.0%	0	0.0%
Nuclear medicine	37	0	0.0%	0	0.0%	0	0.0%
Obstetrics and gynecology	294	0	0.0%	1	0.3%	0	0.0%
- Female pelvic medicine and reconstructive surgery	54	0	0.0%	0	0.0%	0	0.0%
- Gynecologic oncology	63	0	0.0%	0	0.0%	0	0.0%
- Maternal-fetal medicine	100	0	0.0%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	49	0	0.0%	1	2.0%	1	2.0%
- Complex family planning	26	0	0.0%	0	0.0%	0	0.0%
Ophthalmology	125	0	0.0%	1	0.8%	0	0.0%
- Ophthalmic plastic and reconstructive surgery	4	0	0.0%	0	0.0%	0	0.0%
Orthopaedic surgery	201	0	0.0%	0	0.0%	0	0.0%
- Adult reconstructive orthopaedics	25	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	73	2	2.7%	0	0.0%	0	0.0%
- Musculoskeletal oncology	12	0	0.0%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	93	0	0.0%	0	0.0%	0	0.0%
- Orthopaedic surgery of the spine	16	2	12.5%	0	0.0%	1	6.3%
- Orthopaedic trauma	12	0	0.0%	0	0.0%	0	0.0%
- Pediatric orthopaedics	25	0	0.0%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	28	0	0.0%	1	3.6%	0	0.0%
Otolaryngology - head and neck surgery	125	0	0.0%	0	0.0%	0	0.0%
- Neurotology	26	0	0.0%	0	0.0%	0	0.0%
- Pediatric otolaryngology	31	0	0.0%	0	0.0%	0	0.0%
Pathology-anatomic and clinical	144	0	0.0%	0	0.0%	0	0.0%
- Blood banking/transfusion medicine	52	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	11	0	0.0%	0	0.0%	0	0.0%
- Chemical pathology	4	0	0.0%	0	0.0%	0	0.0%
- Cytopathology	93	0	0.0%	1	1.1%	0	0.0%
- Forensic pathology	45	0	0.0%	1	2.2%	0	0.0%
- Hematopathology	86	0	0.0%	0	0.0%	0	0.0%
- Medical microbiology	15	0	0.0%	0	0.0%	0	0.0%
- Neuropathology	38	0	0.0%	0	0.0%	0	0.0%
- Pediatric pathology	28	0	0.0%	0	0.0%	0	0.0%
- Selective pathology	109	0	0.0%	0	0.0%	0	0.0%
Pediatrics	210	1	0.5%	1	0.5%	0	0.0%
- Adolescent medicine	32	0	0.0%	0	0.0%	0	0.0%
- Child abuse pediatrics	31	0	0.0%	0	0.0%	0	0.0%
- Clinical informatics	8	0	0.0%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	44	0	0.0%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	107	0	0.0%	0	0.0%	0	0.0%
- Pediatric cardiology	64	0	0.0%	0	0.0%	0	0.0%
- Pediatric critical care medicine	75	0	0.0%	0	0.0%	0	0.0%
- Pediatric emergency medicine	55	0	0.0%	0	0.0%	0	0.0%
- Pediatric endocrinology	72	0	0.0%	0	0.0%	0	0.0%
- Pediatric gastroenterology	67	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 hematology/oncology	76	0	0.0%	0	0.0%	0	0.0%
- 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	37	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	17	0	0.0%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	17	0	0.0%	0	0.0%	0	0.0%
- Pediatric hospital medicine	54	0	0.0%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	98	0	0.0%	0	0.0%	0	0.0%
- Brain injury medicine	25	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 medicine	22	0	0.0%	0	0.0%	0	0.0%
- Sports medicine	21	0	0.0%	0	0.0%	0	0.0%
Plastic surgery	52	1	1.9%	0	0.0%	0	0.0%
Plastic surgery - integrated	86	0	0.0%	1	1.2%	0	0.0%
- Craniofacial surgery	8	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	17	0	0.0%	0	0.0%	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	287	0	0.0%	2	0.7%	0	0.0%
- Addiction medicine (multidisciplinary)	85	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	146	0	0.0%	0	0.0%	0	0.0%
- Forensic psychiatry	49	0	0.0%	1	2.0%	0	0.0%
- Geriatric psychiatry	64	0	0.0%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	64	0	0.0%	0	0.0%	0	0.0%
Radiation oncology	91	0	0.0%	1	1.1%	0	0.0%
Radiology-diagnostic	196	0	0.0%	0	0.0%	0	0.0%
- Abdominal radiology	13	0	0.0%	0	0.0%	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	89	0	0.0%	0	0.0%	0	0.0%
- Nuclear radiology	18	0	0.0%	0	0.0%	0	0.0%
- Pediatric radiology	48	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - independent	95	0	0.0%	0	0.0%	0	0.0%
Interventional radiology - integrated	92	0	0.0%	0	0.0%	0	0.0%
Surgery	344	2	0.6%	1	0.3%	0	0.0%
- Complex general surgical oncology	31	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	2	0	0.0%	0	0.0%	0	0.0%
- Pediatric surgery	51	0	0.0%	0	0.0%	0	0.0%
- Surgical critical care	145	1	0.7%	0	0.0%	0	0.0%
- Vascular surgery	115	1	0.9%	0	0.0%	0	0.0%
Vascular surgery - integrated	67	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery	74	0	0.0%	0	0.0%	0	0.0%
- Congenital cardiac surgery	15	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery - integrated	33	0	0.0%	0	0.0%	0	0.0%
Urology	145	0	0.0%	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	172	1	0.6%	0	0.0%	0	0.0%
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=17).

TABLE A.11
Total Number of Programs, Years of Accredited Prior Training Required, and Length of Accredited Education and Training by Specialty and Subspecialty

Specialty	MIN No. of Prior Years	Total Programs	Length of Accredited Education and Training							
			1	2	3	4	5	6	7	
			#	#	#	#	#	#	#	
Allergy and immunology	3	82		82						
Anesthesiology	1/0	161			22	139				
- Adult cardiothoracic anesthesiology	4	73	73							
- Clinical informatics	4	1		1						
- Critical care medicine	4	64	64							
- Regional anesthesiology and acute pain medicine	4	38	38							
- Obstetric anesthesiology	3/4	41	41							
- Pain medicine (multidisciplinary)	3/4	111	111							
- Pediatric anesthesiology	4	60	60							
Colon and rectal surgery	5	66	66							
Dermatology	1/0	144			139	5				
- Dermatopathology (multidisciplinary)	4	58	58							
- Micrographic surgery and dermatologic oncology	4	78	78							
Emergency medicine	0	276			216	60				
- Clinical informatics	3	5		5						
- Emergency medical services	3	75	75							
- Medical toxicology	3	27		27						
- Pediatric emergency medicine	3	27			27					
- Sports medicine	3	9	9							
- Undersea and hyperbaric medicine	3	8	8							
Family medicine	0	710			701	9				
- Clinical informatics	3	6		6						
- Geriatric medicine	3	49	49							
- Hospice and palliative medicine (multidisciplinary)	3	180	180							
- Sports medicine	3	156	156							
Internal medicine	0	586			586					
- Adult congenital heart disease	3	24		24						
- Advanced heart failure and transplant cardiology	6	82	82							
- Cardiovascular disease	3	255			255					
- Clinical cardiac electrophysiology	6	112		112						
- Clinical informatics	3	19		19						
- Critical care medicine	3	55		55						
- Endocrinology, diabetes, and metabolism	3	153		153						
- Gastroenterology	3	211			211					
- Geriatric medicine	3	114	114							
- Hematology	3	2		2						
- Hematology and medical oncology	3	172			172					
- Infectious disease	3	158		158						
- Interventional cardiology	6	170	170							
- Nephrology	3	152		152						
- Medical oncology	3	6		6						
- Pulmonary disease	3	20		20						
- Pulmonary disease and critical care medicine	3	188			188					
- Rheumatology	3	125		125						
- Sleep medicine (multidisciplinary)	3/4/5	89	89							
- Transplant hepatology	6	59	59							
Medical genetics and genomics	2/0	46		46						
- Medical biochemical genetics	4	20	20							
- Molecular genetic pathology (multidisciplinary)	4	42	42							
Neurological surgery	0	116								116
- Endovascular surgical neuroradiology	6	2	2							

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

Specialty	MIN No. of Prior Years	Total Programs	Length of Accredited Education and Training						
			1	2	3	4	5	6	7
			#	#	#	#	#	#	#
Neurology	1/0	170			49	121			
- Brain injury medicine	3/4	1	1						
- Clinical neurophysiology	4	93	93						
- Epilepsy	3	85	85						
- Endovascular surgical neuroradiology	5	2	2						
- Neurodevelopmental disabilities	2	8				8			
- Neuromuscular medicine	4	53	53						
- Vascular neurology	4	109	109						
Child neurology	2	77			77				
Nuclear medicine	1	37			37				
Obstetrics and gynecology	0	294				294			
- Female pelvic medicine and reconstructive surgery	4	54			54				
- Gynecologic oncology	4	63			63				
- Maternal-fetal medicine	4	100			100				
- Reproductive endocrinology and infertility	4	49			49				
- Complex family planning	4	26		26					
Ophthalmology	1	125			125				
- Ophthalmic plastic and reconstructive surgery	4	4		4					
Orthopaedic surgery	0	201					201		
- Adult reconstructive orthopaedics	5	25	25						
- Foot and ankle orthopaedics	5	7	7						
- Hand surgery	5	73	73						
- Musculoskeletal oncology	5	12	12						
- Orthopaedic sports medicine	5	93	93						
- Orthopaedic surgery of the spine	5	16	16						
- Orthopaedic trauma	5	12	12						
- Pediatric orthopaedics	5	25	25						
Osteopathic neuromusculoskeletal medicine	0	28			28				
Otolaryngology - head and neck surgery	0	125					125		
- Neurotology	5	26		26					
- Pediatric otolaryngology	5	31	31						
Pathology-anatomic and clinical	0	144			1	143			
- Blood banking/transfusion medicine	2	52	52						
- Clinical informatics	2	11		11					
- 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	38		38					
- Pediatric pathology	2	28	28						
- Selective pathology	2	109	109						
Pediatrics	0	210			210				
- Adolescent medicine	3	32			32				
- Child abuse pediatrics	3	31			31				
- Clinical informatics	3	8		8					
- Developmental-behavioral pediatrics	3	44			44				
- Neonatal-perinatal medicine	3	107			107				
- Pediatric cardiology	3	64			64				
- Pediatric critical care medicine	3	75			75				
- Pediatric emergency medicine	3	55			55				
- Pediatric endocrinology	3	72			72				
- Pediatric gastroenterology	3	67			67				

TABLE A.11 *Continued*

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

Specialty	MIN No. of Prior Years	Total Programs	Length of Accredited Education and Training						
			1	2	3	4	5	6	7
			#	#	#	#	#	#	#
- Pediatric hematology/oncology	3	76			76				
- Pediatric infectious diseases	3	64			64				
- Pediatric nephrology	3	47			47				
- Pediatric pulmonology	3	56			56				
- Pediatric rheumatology	3	37			37				
- Sports medicine	3	17	17						
- Pediatric transplant hepatology	6	17	17						
- Pediatric hospital medicine	3	54		54					
Physical medicine and rehabilitation	1/0	98			57	41			
- Brain injury medicine	3/4	25	25						
- Neuromuscular medicine	3/4	1	1						
- Spinal cord injury medicine	3/4	24	24						
- Pediatric rehabilitation medicine	4	22		22					
- Sports medicine	3/4	21	21						
Plastic surgery	3	52			52				
Plastic surgery - integrated	0	86						86	
- 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	287	1			286			
- Addiction medicine (multidisciplinary)	1/2/3/4	85	85						
- Addiction psychiatry	4	53	52	1					
- Child and adolescent psychiatry	3	146		146					
- Forensic psychiatry	4	49	49						
- Geriatric psychiatry	4	64	63	1					
- Consultation-liaison psychiatry	4	64	64						
Radiation oncology	1	91				91			
Radiology-diagnostic	1	196				195	1		
- Abdominal radiology	5	13	13						
- Endovascular surgical neuroradiology	5	3	3						
- Musculoskeletal radiology	5	20	20						
- Neuroradiology	5	89	89						
- Nuclear radiology	5	18	18						
- Pediatric radiology	5	48	48						
Interventional radiology - independent	4	95		95					
Interventional radiology - integrated	1	92					92		
Surgery	0	344					344		
- Complex general surgical oncology	5	31		31					
- Hand surgery	5	2	2						
- Pediatric surgery	5	51		51					
- Surgical critical care	3	145	145						
- Vascular surgery	5	115		115					
Vascular surgery - integrated	0	67					67		
Thoracic surgery	5	74		51	23				
- Congenital cardiac surgery	7	15	15						
Thoracic surgery - integrated	0	33						33	
Urology	0/1	145					145		
- Female pelvic medicine and reconstructive surgery	3/4	15			15				
- Pediatric urology	5	26	26						
Transitional year	0	172	172						
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	12,420	259	2.1%	100.0%
TOTAL PIPELINE	5,187	240	4.6%	92.7%
Allergy and immunology	82	1	1.2%	0.4%
Anesthesiology	161	4	2.5%	1.5%
Dermatology	144	4	2.8%	1.5%
Emergency medicine	276	7	2.5%	2.7%
Family medicine	710	156	22.0%	60.2%
- Hospice and palliative medicine (multidisciplinary)	180	2	1.1%	0.8%
- Sports medicine	156	3	1.9%	1.2%
Internal medicine	586	33	5.6%	12.7%
- Cardiovascular disease	255	2	0.8%	0.8%
- Geriatric medicine	114	1	0.9%	0.4%
- Interventional cardiology	170	1	0.6%	0.4%
- Medical oncology	6	1	16.7%	0.4%
- Pulmonary disease and critical care medicine	188	1	0.5%	0.4%
Neurological surgery	116	1	0.9%	0.4%
Neurology	170	1	0.6%	0.4%
Obstetrics and gynecology	294	9	3.1%	3.5%
Orthopaedic surgery	201	5	2.5%	1.9%
Osteopathic neuromusculoskeletal medicine	28	3	10.7%	1.2%
Otolaryngology - head and neck surgery	125	3	2.4%	1.2%
Pediatrics	210	3	1.4%	1.2%
- Sports medicine	17	1	5.9%	0.4%
Physical medicine and rehabilitation	98	1	1.0%	0.4%
Plastic surgery	52	1	1.9%	0.4%
Psychiatry	287	2	0.7%	0.8%
Radiology-diagnostic	196	1	0.5%	0.4%
Surgery	344	4	1.2%	1.5%
Urology	145	1	0.7%	0.4%
Transitional year	172	6	3.5%	2.3%
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 2020, there are approximately 3.73 total programs (1.65 specialty, 2.08 subspecialty) per 100,000 population, including Puerto Rico. The following states have the highest total number of programs:

- New York (1,375)
- California (1,099)
- Texas (805)
- Pennsylvania (792)

States with the lowest number of programs include Montana (4), Wyoming (4), and Alaska (3). 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 (12.9%)
- Internal medicine (10.7%)
- Surgery (6.3%)
- Obstetrics and gynecology (5.4%)

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

- Internal medicine (24.4%)
- Family medicine (11.5%)
- Pediatrics (7.6%)
- Surgery (7.4%)

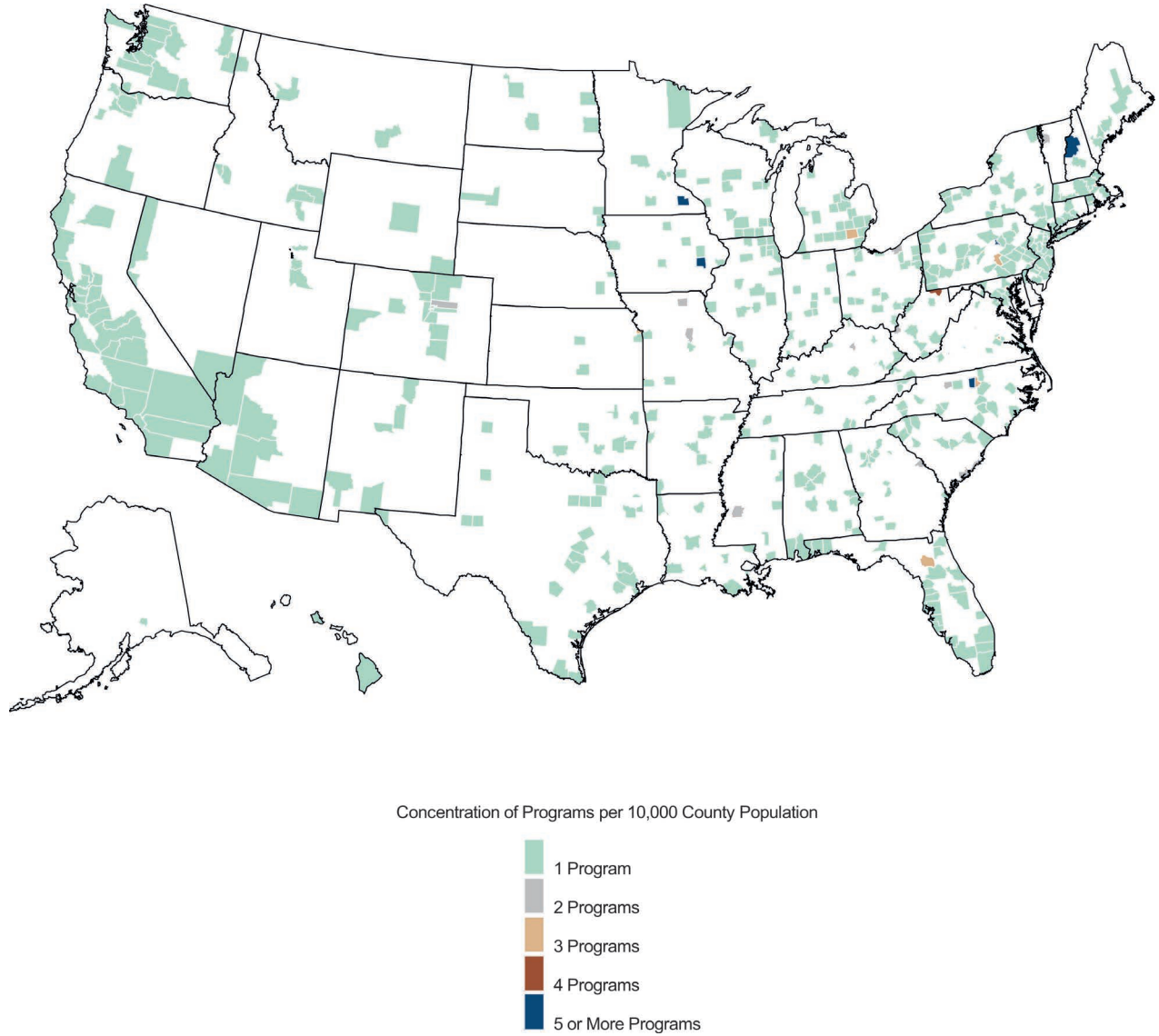
These distributions are driven by total number of programs and average program size (average number of residents per program). Internal medicine programs, for example, have an average of approximately 51 residents per program, with at least one program having 220 active residents during the 2020-2021 academic year. Pediatrics has the second highest average number of residents per program with approximately 45 residents per program. Overall, the trends in mean number of residents per program show that for specialty programs, the average number of residents per program peaked at 24 in the 2014-2015 academic year but has fallen to 22.5 in the 2020-2021 academic year. The average size of subspecialty programs has remained fairly constant over the last 10 years. In the 2020-2021 academic year, there were approximately 3.7 residents per subspecialty 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, 45.0% of programs are in medical specialties, 31.5% are in surgical specialties, and 23.5% are in hospital-based specialties. Among subspecialty programs, 65.2% of programs are in medical subspecialties, 15.0% are in surgical subspecialties, and 19.8% 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. [△]

FIGURE B.1

Geographic Distribution of Programs



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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021; SAS Enterprise Guide Software, Version 7.1.

TABLE B.2

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

State Name	State Abbreviation	State Population – Census Estimate 2020	Total Programs	Percent of All Programs	Programs per 100,000 Pop
OVERALL	-	332,643,466	12,420	100.0%	3.73
Alabama	AL	4,921,532	143	1.2%	2.91
Alaska	AK	731,158	3	0.0%	0.41
Arizona	AZ	7,421,401	197	1.6%	2.65
Arkansas	AR	3,030,522	89	0.7%	2.94
California	CA	39,368,078	1,099	8.8%	2.79
Colorado	CO	5,807,719	147	1.2%	2.53
Connecticut	CT	3,557,006	199	1.6%	5.59
Delaware	DE	986,809	39	0.3%	3.95
District of Columbia	DC	712,816	146	1.2%	20.48
Florida	FL	21,733,312	648	5.2%	2.98
Georgia	GA	10,710,017	238	1.9%	2.22
Hawaii	HI	1,407,006	33	0.3%	2.35
Idaho	ID	1,826,913	15	0.1%	0.82
Illinois	IL	12,587,530	544	4.4%	4.32
Indiana	IN	6,754,953	132	1.1%	1.95
Iowa	IA	3,163,561	104	0.8%	3.29
Kansas	KS	2,913,805	73	0.6%	2.51
Kentucky	KY	4,477,251	155	1.2%	3.46
Louisiana	LA	4,645,318	183	1.5%	3.94
Maine	ME	1,350,141	36	0.3%	2.67
Maryland	MD	6,055,802	268	2.2%	4.43
Massachusetts	MA	6,893,574	481	3.9%	6.98
Michigan	MI	9,966,555	586	4.7%	5.88
Minnesota	MN	5,657,342	232	1.9%	4.10
Mississippi	MS	2,966,786	86	0.7%	2.90
Missouri	MO	6,151,548	294	2.4%	4.78
Montana	MT	1,080,577	4	0.0%	0.37
Nebraska	NE	1,937,552	89	0.7%	4.59
Nevada	NV	3,138,259	57	0.5%	1.82
New Hampshire	NH	1,366,275	56	0.5%	4.10
New Jersey	NJ	8,882,371	323	2.6%	3.64
New Mexico	NM	2,106,319	72	0.6%	3.42
New York	NY	19,336,776	1,375	11.1%	7.11
North Carolina	NC	10,600,823	363	2.9%	3.42
North Dakota	ND	765,309	15	0.1%	1.96
Ohio	OH	11,693,217	641	5.2%	5.48
Oklahoma	OK	3,980,783	105	0.8%	2.64
Oregon	OR	4,241,507	103	0.8%	2.43
Pennsylvania	PA	12,783,254	792	6.4%	6.20
Puerto Rico	PR	3,159,343	75	0.6%	2.37
Rhode Island	RI	1,057,125	73	0.6%	6.91
South Carolina	SC	5,218,040	152	1.2%	2.91
South Dakota	SD	892,717	13	0.1%	1.46
Tennessee	TN	6,886,834	237	1.9%	3.44
Texas	TX	29,360,759	805	6.5%	2.74
Utah	UT	3,249,879	96	0.8%	2.95
Vermont	VT	623,347	40	0.3%	6.42
Virginia	VA	8,590,563	268	2.2%	3.12
Washington	WA	7,693,612	185	1.5%	2.40
West Virginia	WV	1,784,787	93	0.7%	5.21
Wisconsin	WI	5,832,655	214	1.7%	3.67
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/poppost/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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 2020	Total Specialty Programs	Percent of All Specialty Programs	Specialty Programs per 100,000 Pop
OVERALL	-	332,643,466	5,486	100.0%	1.65
Alabama	AL	4,921,532	65	1.2%	1.32
Alaska	AK	731,158	1	0.0%	0.14
Arizona	AZ	7,421,401	87	1.6%	1.17
Arkansas	AR	3,030,522	51	0.9%	1.68
California	CA	39,368,078	472	8.6%	1.20
Colorado	CO	5,807,719	58	1.1%	1.00
Connecticut	CT	3,557,006	76	1.4%	2.14
Delaware	DE	986,809	18	0.3%	1.82
District of Columbia	DC	712,816	54	1.0%	7.58
Florida	FL	21,733,312	308	5.6%	1.42
Georgia	GA	10,710,017	116	2.1%	1.08
Hawaii	HI	1,407,006	21	0.4%	1.49
Idaho	ID	1,826,913	11	0.2%	0.60
Illinois	IL	12,587,530	244	4.4%	1.94
Indiana	IN	6,754,953	58	1.1%	0.86
Iowa	IA	3,163,561	44	0.8%	1.39
Kansas	KS	2,913,805	37	0.7%	1.27
Kentucky	KY	4,477,251	67	1.2%	1.50
Louisiana	LA	4,645,318	92	1.7%	1.98
Maine	ME	1,350,141	22	0.4%	1.63
Maryland	MD	6,055,802	107	2.0%	1.77
Massachusetts	MA	6,893,574	169	3.1%	2.45
Michigan	MI	9,966,555	315	5.7%	3.16
Minnesota	MN	5,657,342	72	1.3%	1.27
Mississippi	MS	2,966,786	44	0.8%	1.48
Missouri	MO	6,151,548	110	2.0%	1.79
Montana	MT	1,080,577	3	0.1%	0.28
Nebraska	NE	1,937,552	38	0.7%	1.96
Nevada	NV	3,138,259	35	0.6%	1.12
New Hampshire	NH	1,366,275	26	0.5%	1.90
New Jersey	NJ	8,882,371	177	3.2%	1.99
New Mexico	NM	2,106,319	28	0.5%	1.33
New York	NY	19,336,776	579	10.6%	2.99
North Carolina	NC	10,600,823	147	2.7%	1.39
North Dakota	ND	765,309	12	0.2%	1.57
Ohio	OH	11,693,217	289	5.3%	2.47
Oklahoma	OK	3,980,783	61	1.1%	1.53
Oregon	OR	4,241,507	42	0.8%	0.99
Pennsylvania	PA	12,783,254	352	6.4%	2.75
Puerto Rico	PR	3,159,343	45	0.8%	1.42
Rhode Island	RI	1,057,125	24	0.4%	2.27
South Carolina	SC	5,218,040	73	1.3%	1.40
South Dakota	SD	892,717	9	0.2%	1.01
Tennessee	TN	6,886,834	99	1.8%	1.44
Texas	TX	29,360,759	335	6.1%	1.14
Utah	UT	3,249,879	33	0.6%	1.02
Vermont	VT	623,347	16	0.3%	2.57
Virginia	VA	8,590,563	120	2.2%	1.40
Washington	WA	7,693,612	86	1.6%	1.12
West Virginia	WV	1,784,787	49	0.9%	2.75
Wisconsin	WI	5,832,655	86	1.6%	1.47
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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 2020	Total Subspecialty Programs	Percent of All Subspecialty Programs	Subspecialty Programs per 100,000 Pop
OVERALL	-	332,643,466	6,934	100.0%	2.08
Alabama	AL	4,921,532	78	1.1%	1.58
Alaska	AK	731,158	2	0.0%	0.27
Arizona	AZ	7,421,401	110	1.6%	1.48
Arkansas	AR	3,030,522	38	0.5%	1.25
California	CA	39,368,078	627	9.0%	1.59
Colorado	CO	5,807,719	89	1.3%	1.53
Connecticut	CT	3,557,006	123	1.8%	3.46
Delaware	DE	986,809	21	0.3%	2.13
District of Columbia	DC	712,816	92	1.3%	12.91
Florida	FL	21,733,312	340	4.9%	1.56
Georgia	GA	10,710,017	122	1.8%	1.14
Hawaii	HI	1,407,006	12	0.2%	0.85
Idaho	ID	1,826,913	4	0.1%	0.22
Illinois	IL	12,587,530	300	4.3%	2.38
Indiana	IN	6,754,953	74	1.1%	1.10
Iowa	IA	3,163,561	60	0.9%	1.90
Kansas	KS	2,913,805	36	0.5%	1.24
Kentucky	KY	4,477,251	88	1.3%	1.97
Louisiana	LA	4,645,318	91	1.3%	1.96
Maine	ME	1,350,141	14	0.2%	1.04
Maryland	MD	6,055,802	161	2.3%	2.66
Massachusetts	MA	6,893,574	312	4.5%	4.53
Michigan	MI	9,966,555	271	3.9%	2.72
Minnesota	MN	5,657,342	160	2.3%	2.83
Mississippi	MS	2,966,786	42	0.6%	1.42
Missouri	MO	6,151,548	184	2.7%	2.99
Montana	MT	1,080,577	1	0.0%	0.09
Nebraska	NE	1,937,552	51	0.7%	2.63
Nevada	NV	3,138,259	22	0.3%	0.70
New Hampshire	NH	1,366,275	30	0.4%	2.20
New Jersey	NJ	8,882,371	146	2.1%	1.64
New Mexico	NM	2,106,319	44	0.6%	2.09
New York	NY	19,336,776	796	11.5%	4.12
North Carolina	NC	10,600,823	216	3.1%	2.04
North Dakota	ND	765,309	3	0.0%	0.39
Ohio	OH	11,693,217	352	5.1%	3.01
Oklahoma	OK	3,980,783	44	0.6%	1.11
Oregon	OR	4,241,507	61	0.9%	1.44
Pennsylvania	PA	12,783,254	440	6.3%	3.44
Puerto Rico	PR	3,159,343	30	0.4%	0.95
Rhode Island	RI	1,057,125	49	0.7%	4.64
South Carolina	SC	5,218,040	79	1.1%	1.51
South Dakota	SD	892,717	4	0.1%	0.45
Tennessee	TN	6,886,834	138	2.0%	2.00
Texas	TX	29,360,759	470	6.8%	1.60
Utah	UT	3,249,879	63	0.9%	1.94
Vermont	VT	623,347	24	0.3%	3.85
Virginia	VA	8,590,563	148	2.1%	1.72
Washington	WA	7,693,612	99	1.4%	1.29
West Virginia	WV	1,784,787	44	0.6%	2.47
Wisconsin	WI	5,832,655	128	1.8%	2.19
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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 2020	Total Pipeline Programs	Percent of All Pipeline Programs	Pipeline Programs per 100,000 Pop
OVERALL	-	332,643,466	5,187	100.0%	1.56
Alabama	AL	4,921,532	61	1.2%	1.24
Alaska	AK	731,158	1	0.0%	0.14
Arizona	AZ	7,421,401	83	1.6%	1.12
Arkansas	AR	3,030,522	48	0.9%	1.58
California	CA	39,368,078	449	8.7%	1.14
Colorado	CO	5,807,719	54	1.0%	0.93
Connecticut	CT	3,557,006	73	1.4%	2.05
Delaware	DE	986,809	17	0.3%	1.72
District of Columbia	DC	712,816	55	1.1%	7.72
Florida	FL	21,733,312	287	5.5%	1.32
Georgia	GA	10,710,017	105	2.0%	0.98
Hawaii	HI	1,407,006	20	0.4%	1.42
Idaho	ID	1,826,913	11	0.2%	0.60
Illinois	IL	12,587,530	233	4.5%	1.85
Indiana	IN	6,754,953	53	1.0%	0.78
Iowa	IA	3,163,561	41	0.8%	1.30
Kansas	KS	2,913,805	36	0.7%	1.24
Kentucky	KY	4,477,251	64	1.2%	1.43
Louisiana	LA	4,645,318	86	1.7%	1.85
Maine	ME	1,350,141	22	0.4%	1.63
Maryland	MD	6,055,802	100	1.9%	1.65
Massachusetts	MA	6,893,574	156	3.0%	2.26
Michigan	MI	9,966,555	292	5.6%	2.93
Minnesota	MN	5,657,342	68	1.3%	1.20
Mississippi	MS	2,966,786	42	0.8%	1.42
Missouri	MO	6,151,548	107	2.1%	1.74
Montana	MT	1,080,577	3	0.1%	0.28
Nebraska	NE	1,937,552	36	0.7%	1.86
Nevada	NV	3,138,259	33	0.6%	1.05
New Hampshire	NH	1,366,275	27	0.5%	1.98
New Jersey	NJ	8,882,371	168	3.2%	1.89
New Mexico	NM	2,106,319	28	0.5%	1.33
New York	NY	19,336,776	549	10.6%	2.84
North Carolina	NC	10,600,823	138	2.7%	1.30
North Dakota	ND	765,309	11	0.2%	1.44
Ohio	OH	11,693,217	270	5.2%	2.31
Oklahoma	OK	3,980,783	61	1.2%	1.53
Oregon	OR	4,241,507	41	0.8%	0.97
Pennsylvania	PA	12,783,254	330	6.4%	2.58
Puerto Rico	PR	3,159,343	40	0.8%	1.27
Rhode Island	RI	1,057,125	24	0.5%	2.27
South Carolina	SC	5,218,040	69	1.3%	1.32
South Dakota	SD	892,717	8	0.2%	0.90
Tennessee	TN	6,886,834	94	1.8%	1.36
Texas	TX	29,360,759	319	6.1%	1.09
Utah	UT	3,249,879	31	0.6%	0.95
Vermont	VT	623,347	17	0.3%	2.73
Virginia	VA	8,590,563	114	2.2%	1.33
Washington	WA	7,693,612	81	1.6%	1.05
West Virginia	WV	1,784,787	47	0.9%	2.63
Wisconsin	WI	5,832,655	81	1.6%	1.39
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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	-	161	276	46	37	144	72	91	196	92	172	1,287
Alabama	AL	1	2	1	1	3	2	1	3	1	2	17
Alaska	AK	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	2	5	0	0	1	0	2	3	3	3	19
Arkansas	AR	1	2	0	1	1	0	1	1	1	3	11
California	CA	15	24	6	6	11	8	11	18	9	11	119
Colorado	CO	1	1	1	0	2	2	1	1	1	1	11
Connecticut	CT	2	2	1	0	3	2	1	6	1	1	19
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	20	1	1	8	3	4	10	4	16	79
Georgia	GA	2	5	1	1	2	3	1	3	2	7	27
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	12	0	1	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	0	1	1	1	2	10
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	5	6	49
Michigan	MI	7	26	2	1	5	2	4	10	4	17	78
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	12	0	0	3	2	1	7	1	7	39
New Mexico	NM	1	1	0	0	1	1	0	1	0	1	6
New York	NY	18	30	4	5	17	7	13	25	10	14	143
North Carolina	NC	3	7	2	1	4	2	3	3	3	5	33
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	9	64
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	23	2	1	8	1	5	11	7	14	82
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	4	18
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	16	3	2	10	5	6	11	4	9	74
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	4	25
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	1	9
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	-	82	144	710	586	170	77	28	210	98	287	79	2,471
Alabama	AL	1	1	10	9	2	1	0	2	1	2	2	31
Alaska	AK	0	0	1	0	0	0	0	0	0	0	0	1
Arizona	AZ	2	5	11	10	4	1	1	3	1	3	1	42
Arkansas	AR	1	1	12	10	1	1	0	1	1	3	1	32
California	CA	10	12	70	49	16	7	0	17	6	26	4	217
Colorado	CO	3	1	14	4	2	1	1	1	1	2	1	31
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	41	13	2	2	13	7	21	2	147
Georgia	GA	2	3	18	16	2	2	0	5	1	6	0	55
Hawaii	HI	0	0	3	3	0	0	0	2	0	2	0	10
Idaho	ID	0	0	8	2	0	0	0	0	0	1	0	11
Illinois	IL	2	7	35	26	8	2	0	10	4	12	5	111
Indiana	IN	1	1	14	5	1	1	0	2	1	4	1	31
Iowa	IA	1	1	8	4	1	1	0	2	0	3	0	21
Kansas	KS	1	1	4	3	1	0	0	1	1	2	1	15
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	2	1	12
Maryland	MD	3	3	5	12	3	2	0	4	3	4	2	41
Massachusetts	MA	4	4	6	16	5	4	1	5	2	11	4	62
Michigan	MI	3	6	38	34	9	3	3	9	6	12	6	129
Minnesota	MN	1	3	11	4	2	1	0	2	2	3	1	30
Mississippi	MS	1	1	7	7	1	1	0	1	0	2	1	22
Missouri	MO	3	4	10	10	4	3	1	4	2	5	2	48
Montana	MT	0	0	2	1	0	0	0	0	0	0	0	3
Nebraska	NE	1	1	5	2	2	0	0	1	1	2	1	16
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	2	0	9
New Jersey	NJ	1	3	21	29	4	2	2	9	2	10	2	85
New Mexico	NM	0	1	7	2	1	1	1	1	1	1	0	16
New York	NY	9	13	39	63	16	10	2	32	16	37	5	242
North Carolina	NC	3	4	20	14	3	3	1	5	3	8	3	67
North Dakota	ND	0	0	6	1	1	0	0	0	0	1	0	9
Ohio	OH	5	8	36	33	8	4	2	9	6	11	4	126
Oklahoma	OK	0	1	13	4	1	0	1	4	0	4	2	30
Oregon	OR	0	2	8	6	1	1	1	1	0	2	0	22
Pennsylvania	PA	4	8	50	36	12	3	1	8	8	16	4	150
Puerto Rico	PR	1	1	4	8	1	1	0	4	2	2	1	25
Rhode Island	RI	0	1	1	4	1	0	0	1	0	1	1	10
South Carolina	SC	0	1	14	5	3	1	0	3	0	4	2	33
South Dakota	SD	0	0	3	1	0	0	0	1	0	1	0	6
Tennessee	TN	2	2	11	8	2	2	0	4	1	5	2	39
Texas	TX	4	12	38	34	13	4	1	13	6	18	3	146
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	15	11	3	2	2	6	3	6	1	56
Washington	WA	1	1	26	8	2	1	0	2	2	2	0	45
West Virginia	WV	0	1	8	4	2	0	1	3	0	3	2	24
Wisconsin	WI	1	3	18	5	2	2	0	3	2	4	2	42
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

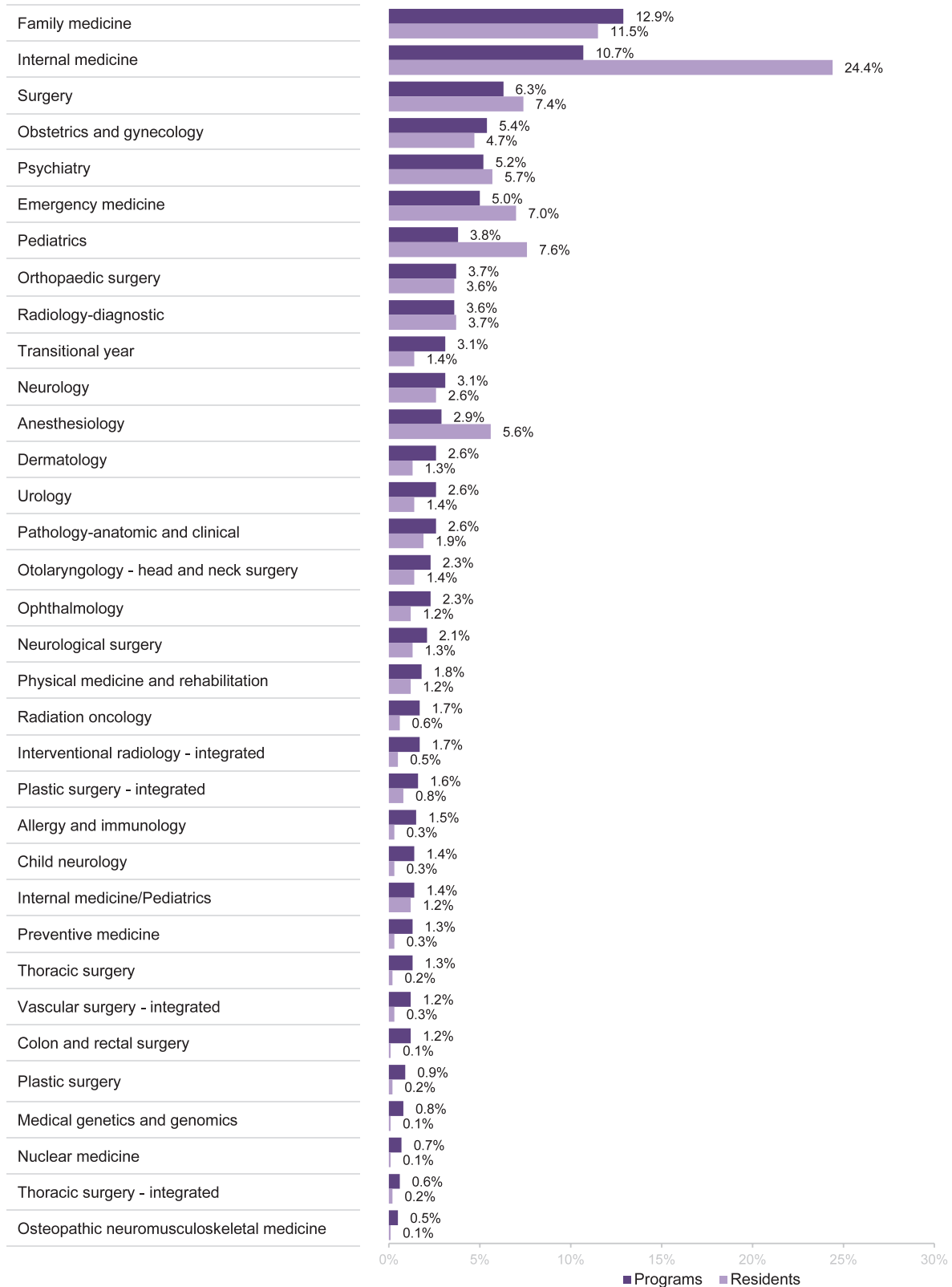
Surgical Specialty Programs by Specialty and State

State Name	State Abbreviation	CRS	NS	OBG	OPH	ORS	OTO	PS	PSI	GS	VSI	TS	TSI	U	Total
OVERALL	-	66	116	294	125	201	125	52	86	344	67	74	33	145	1,728
Alabama	AL	1	1	2	1	3	1	1	1	3	1	1	0	1	17
Alaska	AK	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	0	3	3	1	3	2	0	1	9	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	23	7	8	4	11	136
Colorado	CO	0	1	2	1	1	1	1	1	5	1	1	0	1	16
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	2	0	0	0	0	3
District of Columbia	DC	1	2	3	3	3	2	0	1	3	1	0	0	2	21
Florida	FL	5	4	13	6	9	3	3	4	24	2	2	1	6	82
Georgia	GA	2	2	7	2	4	2	1	1	8	1	1	1	2	34
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	14	6	7	6	2	5	12	4	4	1	8	79
Indiana	IN	1	1	2	1	1	1	1	1	3	1	1	1	1	16
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	2	3	0	2	1	2	24
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	5	25	6	17	8	3	2	24	2	2	1	9	108
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	15	1	8	2	2	2	13	2	1	0	5	53
New Mexico	NM	0	0	1	0	1	1	0	1	1	0	0	0	1	6
New York	NY	9	12	36	18	19	11	2	8	40	9	8	6	16	194
North Carolina	NC	0	4	9	3	4	3	1	3	9	2	3	2	4	47
North Dakota	ND	0	0	0	0	1	0	0	0	1	0	0	0	0	2
Ohio	OH	4	4	15	6	16	8	3	5	20	5	4	3	6	99
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	6	8	18	8	16	9	5	5	25	5	5	2	8	120
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	2	2	8	2	4	2	3	2	7	0	1	0	4	37
Texas	TX	3	7	23	9	13	8	4	4	21	5	6	2	10	115
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	4	6	1	2	1	3	39
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

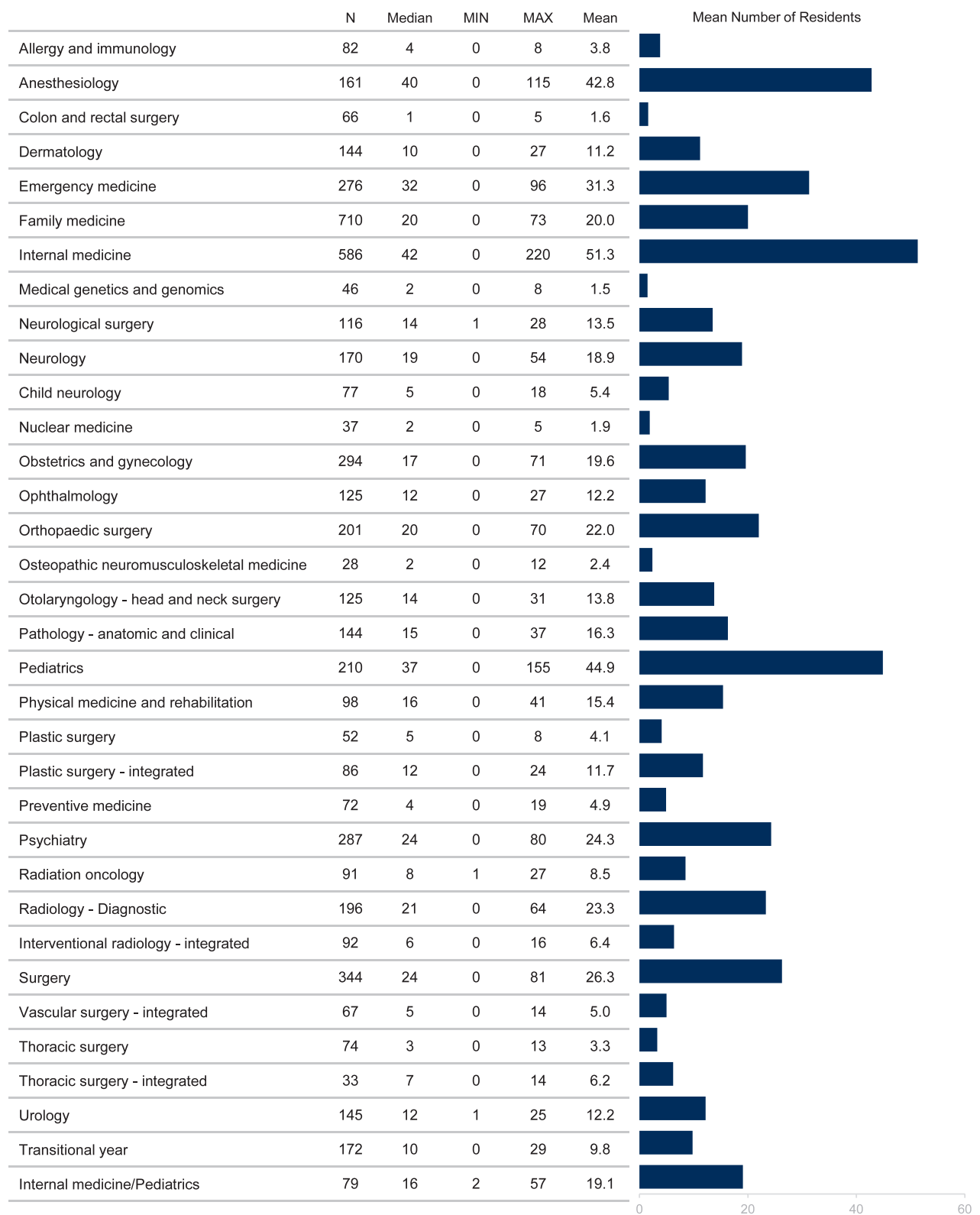
Percentage of Programs and Residents in Each Specialty



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 = 5,486. Total number of residents in specialties = 123,279.

FIGURE B.10

Mean Number of Residents per Program by Specialty



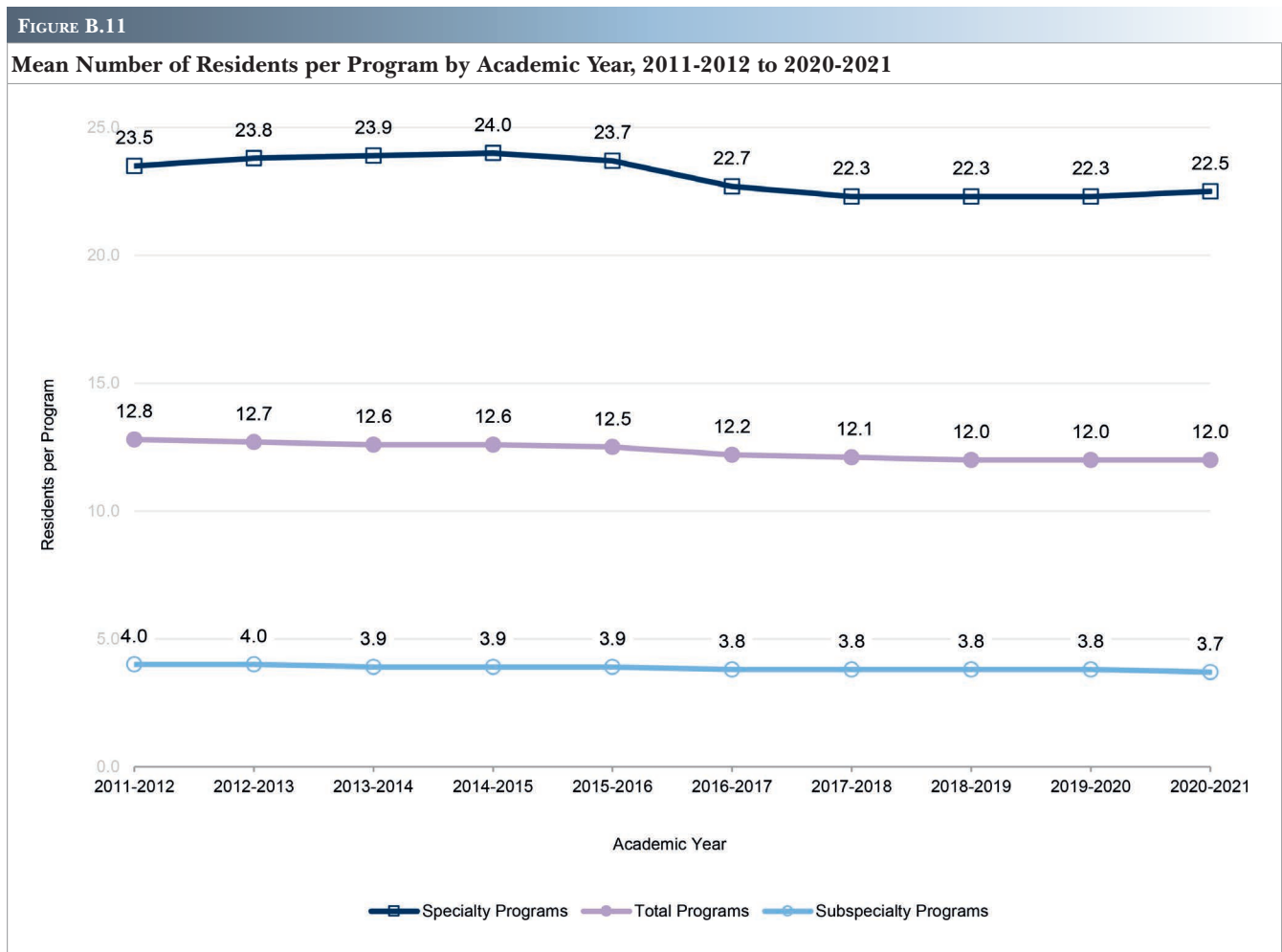
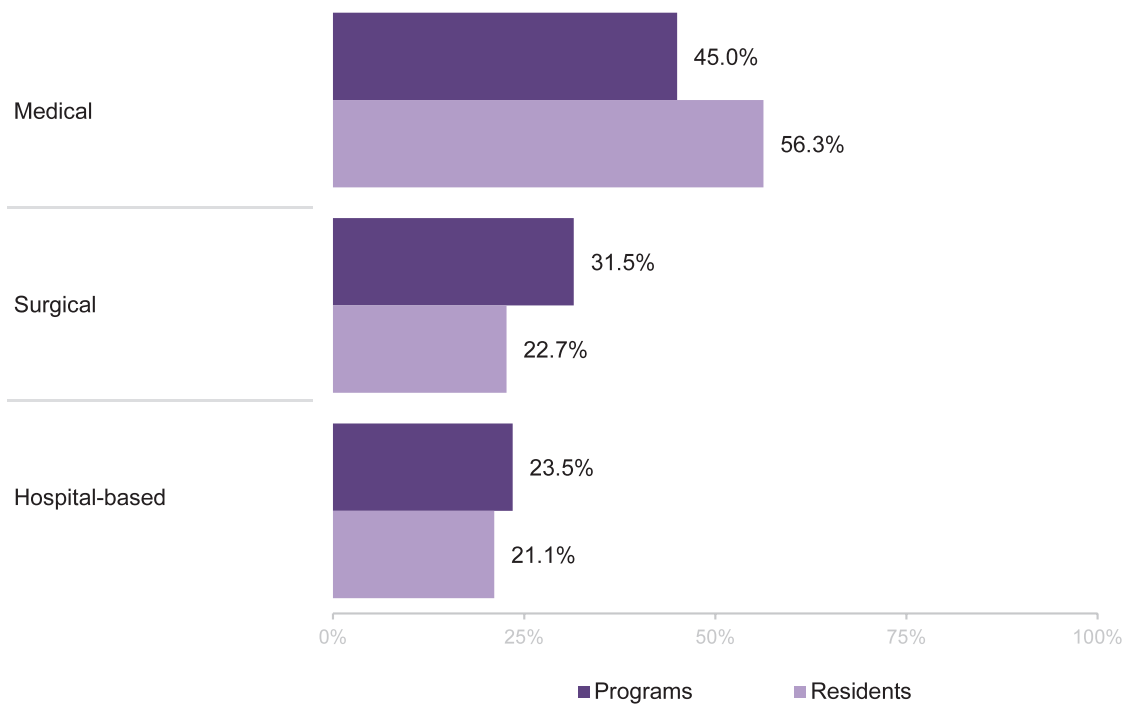


FIGURE B.12

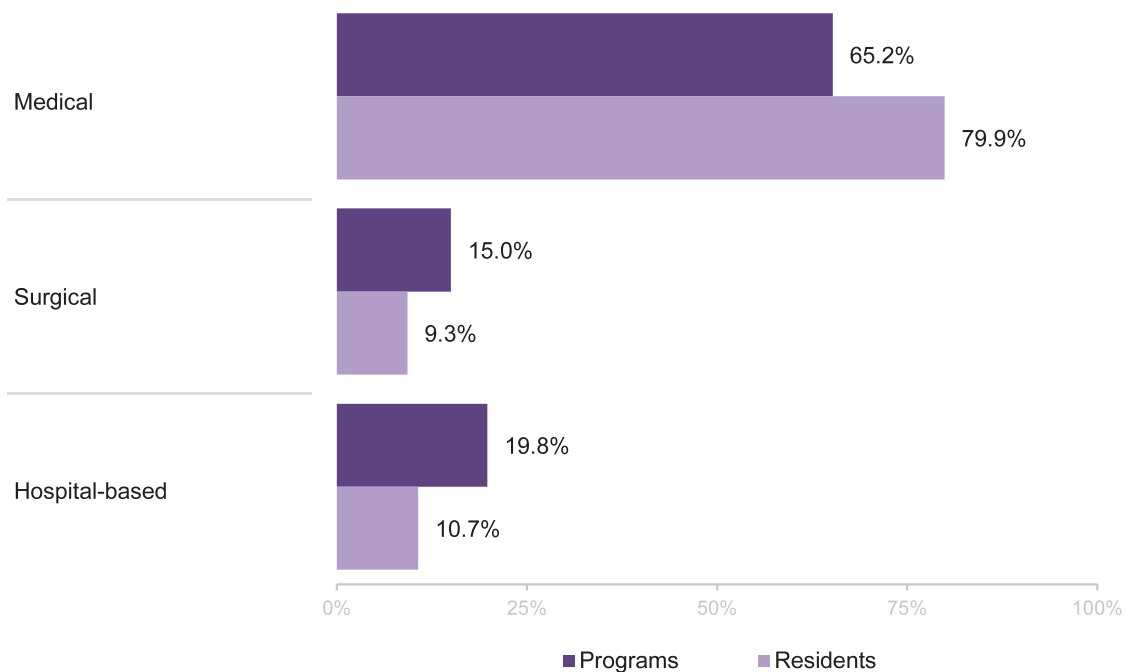
Percent of Programs and Residents in Specialties by Specialty Group



Notes: Total number of specialty programs = 5,486. Total number of residents in specialties = 123,279.

FIGURE B.13

Percent of Programs and Residents in Subspecialties by Specialty Group



Notes: Total number of subspecialty programs = 6,934. Total number of residents in subspecialties = 25,921.

C 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 race/ethnicity since the 2011-2012 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 (149,200), 123,279 (82.6%) are in specialty programs and 25,921 (17.4%) are in subspecialty programs. Only 0.2% (227) of the total number of active residents are part-time. In terms of trends, there has been a 29.4% increase in total active residents since 2011-2012, with growth in the number of specialty residents at 29.0%, and growth in the number of subspecialty residents at 31.3% over the last 10 years. Among residents in specialty programs, 56.3% (69,359) are in medical specialties, 21.1% (25,984) are in hospital-based specialties, and 22.7% (27,936) are in surgical specialties. The specialties with the highest percentage of total active residents are:

- Internal medicine (20.2%)
- Family medicine (9.5%)
- Pediatrics (6.3%)
- Surgery (6.1%)

Geographic Distribution

Based on the most recent US Census estimate for 2020, there are approximately 44.85 active residents (37.06 specialty, 7.79 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 (18,944)
- California (13,646)
- Texas (9,910)
- Pennsylvania (9,465)

Active Residents by Medical School Type

Of the 123,279 total active residents in specialty programs, 60.6% (74,724) are US allopathic medical school graduates, 21.2% (26,154) are international medical school graduates (IMGs), and 18.1% (22,336) are osteopathic medical school graduates. There are also 41 Canadian medical school graduates, and 24 residents for

whom medical school type was unknown. The distribution by medical school type is slightly different in subspecialty programs (25,921 active residents), with 56.4% of active residents being graduates of US allopathic medical schools, 31.6% being graduates of international medical schools, 11.6% being graduates of osteopathic medical schools, and less than 1% being graduates of Canadian medical schools. Over the last 10 years, there has been an 19.2% increase in US allopathic medical school graduates, a 183.5% increase in osteopathic medical school graduates, and a 10.2% increase in IMGs. The specialties with the highest percentage of IMGs include:

- Nuclear medicine (75.4%)
- Pathology – anatomic and clinical (48.7%)
- Internal medicine (38.9%)
- Medical genetics and genomics (38.2%)

While internal medicine has the third-highest percentage of IMGs, this specialty accounts for the highest number of IMGs (11,714) among all specialty programs.

Active Residents by Gender and Race/Ethnicity

The gender and race/ethnicity reported for the 2020-2021 academic year are based upon self-reported data provided by the Association of American Medical Colleges (“AAMC”). Of the 149,200 active residents, 53.4% are male, 45.5% are female, and 1.0% are not reported. The specialties with the highest percentage of female residents include:

- Obstetrics and gynecology (84.6%)
- Pediatrics (71.1%)
- Child neurology (68.7%)
- Allergy and immunology (61.9%)

The specialties with the lowest percentage of female residents include:

- Orthopaedic surgery (16.7%)
- Neurological surgery (20.4%)
- Interventional radiology – integrated (22.0%)
- Thoracic surgery (25.5%)

Overall, 49.6% of all active residents are White; 25.7% are Asian; 5.4% are Hispanic, Latino, or of Spanish origin; 5.6% are Black or African American; 0.1% are American Indian or Alaskan Native; and 0.04% are Native Hawaiian or Pacific Islander. Of all active residents, 6.9% were reported as having Multiple Race/Ethnicity. Of active residents, 2.7% were reported as “Other,” and 4.0% were reported as “Unknown.”

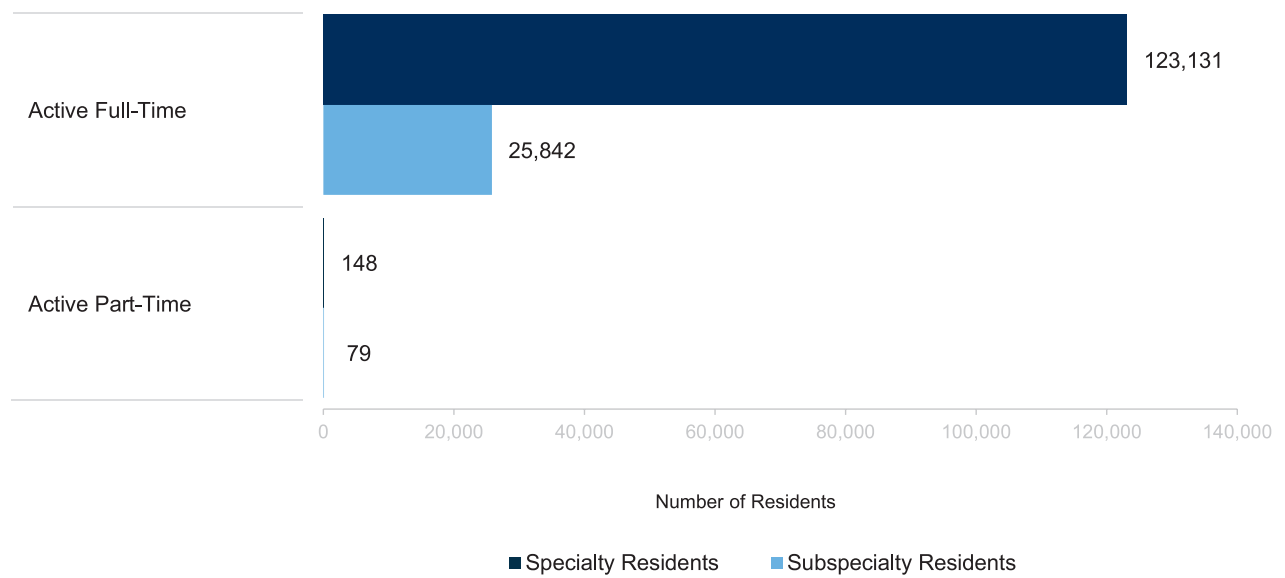
Residents Entering the Pipeline

The total number of residents entering the pipeline reached 34,754 for the 2020-2021 academic year. Since 2011-2012, there has been 30.0% increase in residents entering the pipeline, with varying patterns in growth by medical school type (16.3% increase among US Liaison Committee for Medical Education (LCME)-accredited

medical school graduates, 12.5% increase among international medical graduates (IMGs), and 176.8% increase among osteopathic medical school graduates). Among the 2020-2021 residents entering the pipeline, 58.0% (20,159) are US LCME-accredited graduates, 22.4% (7,797) are IMGs, 19.5% (6,771) are osteopathic medical school graduates, and less than one percent (11) are Canadian medical school graduates. ¹⁸

FIGURE C.1

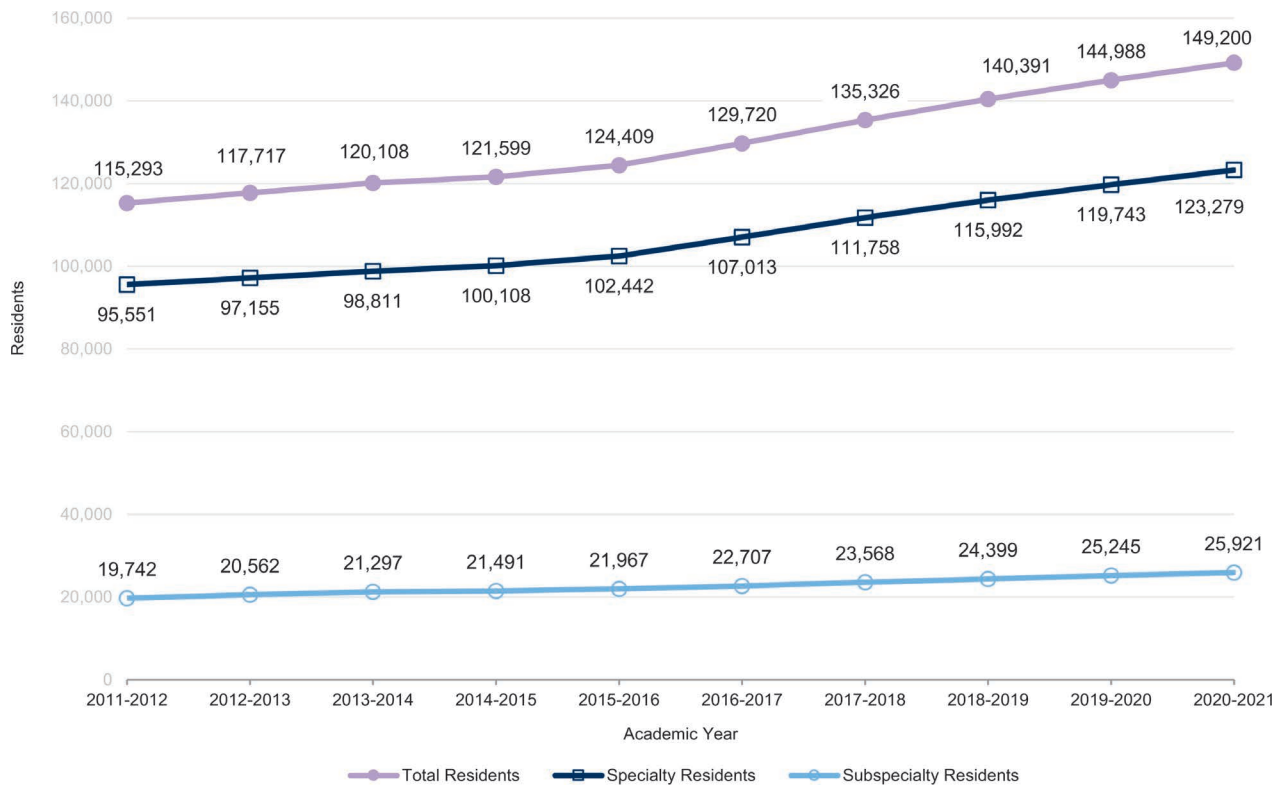
Number of Active Residents by Status



Note: Total number of active residents = 149,200.

FIGURE C.2

Number of Active Residents by Academic Year, 2011-2012 to 2020-2021



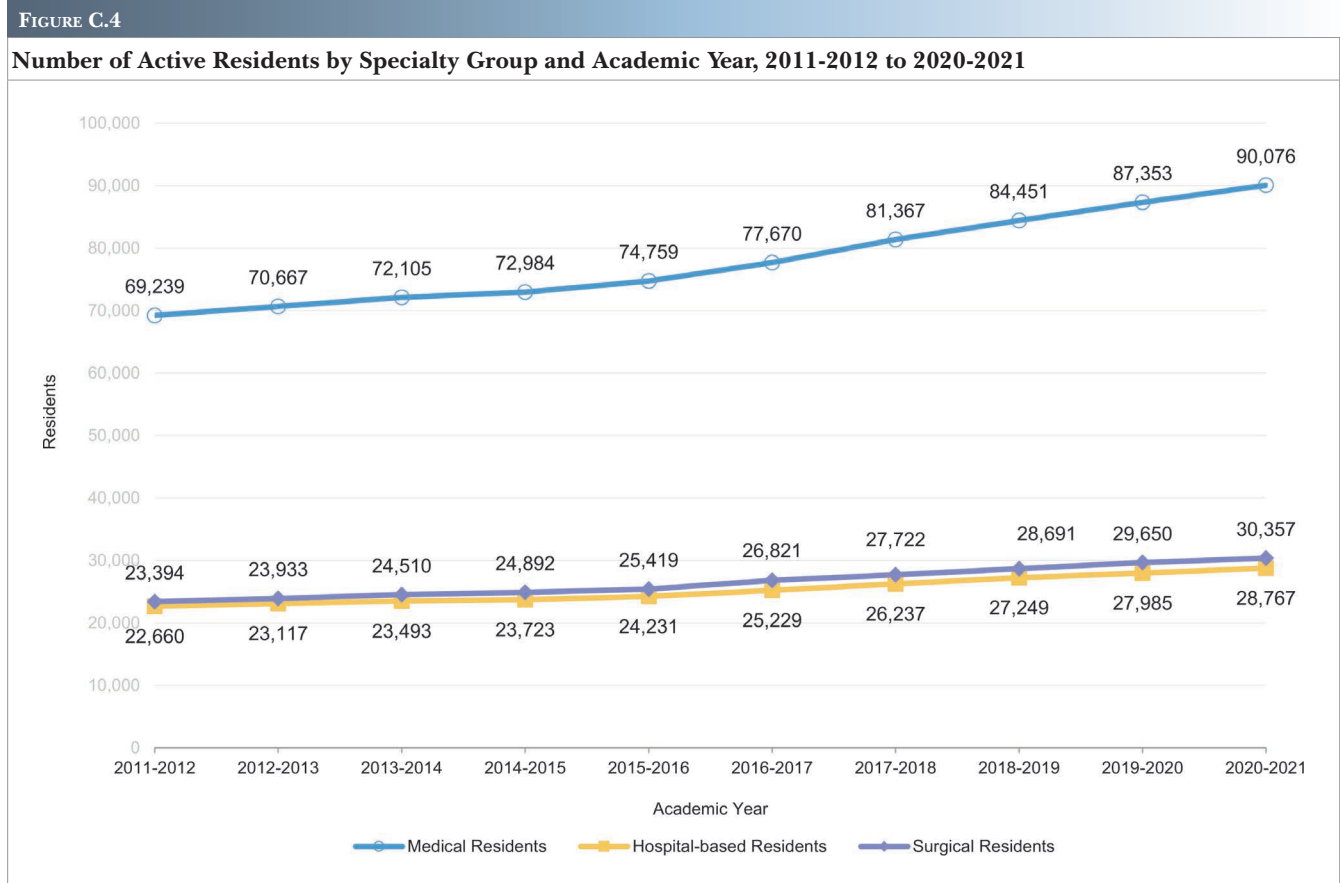
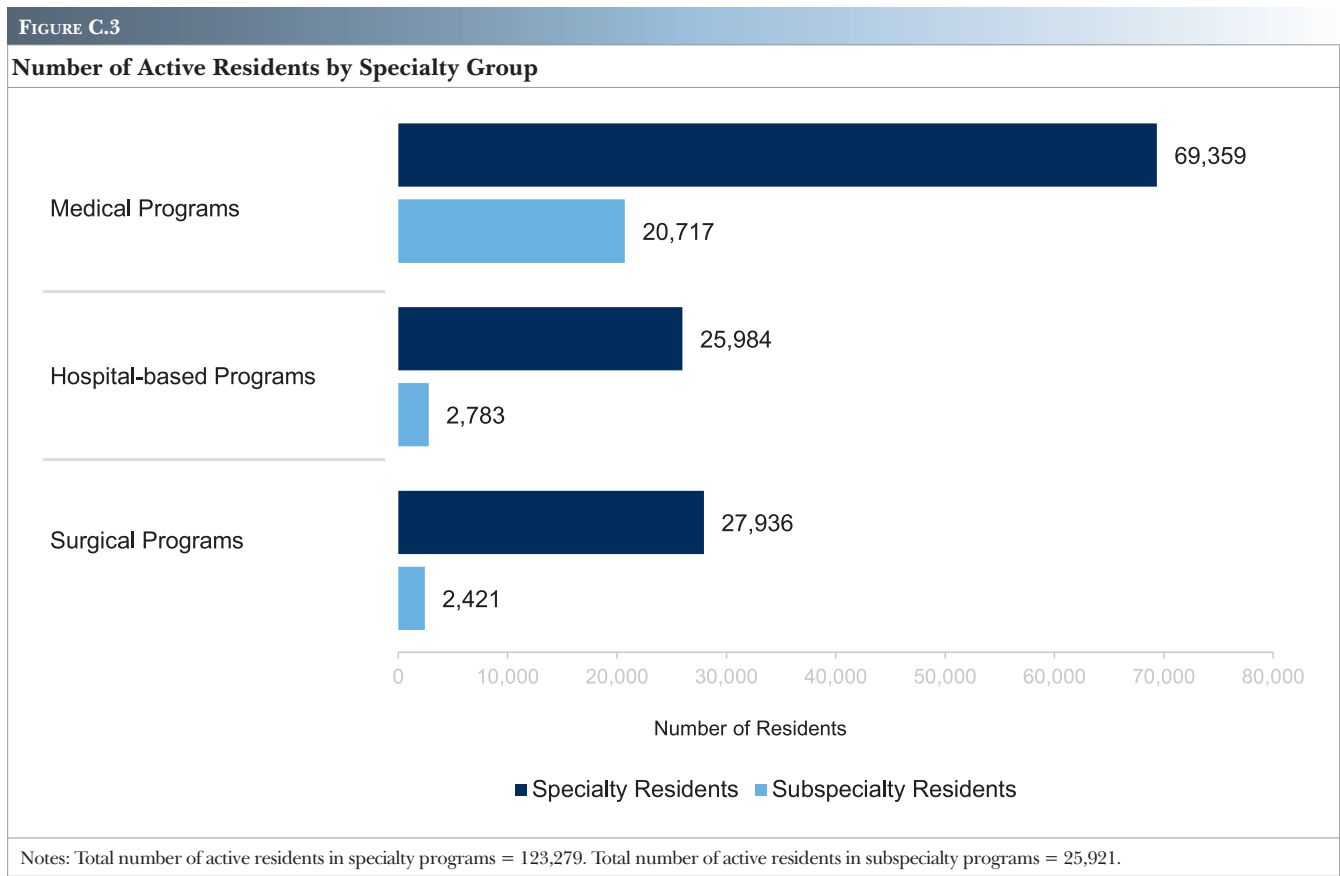


TABLE C.5

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	149,200	50,742	3,470	41,841	280	37,269	1	11,478	3,507	401	211
TOTAL PIPELINE	121,110	34,754	3,470	34,298	280	32,716	1	11,472	3,507	401	211
Allergy and immunology	312	163		149							
Anesthesiology	6,895	1,627		1,896		1,824		1,548			
- Adult cardiothoracic anesthesiology	235	235									
- Clinical informatics	1			1							
- Critical care medicine	194	194									
- Regional anesthesiology and acute pain medicine	77	77									
- Obstetric anesthesiology	48	48									
- Pain medicine (multidisciplinary)	400	400									
- Pediatric anesthesiology	185	185									
Colon and rectal surgery	105	105									
Dermatology	1,612	531		533		540		8			
- Dermatopathology (multidisciplinary)	69	69									
- Micrographic surgery and dermatologic oncology	86	86									
Emergency medicine	8,642	2,780		2,672		2,545		645			
- Clinical informatics	10	7		3							
- Emergency medical services	86	86									
- Medical toxicology	79	42		37							
- Pediatric emergency medicine	134	52		42		40					
- Sports medicine	16	16									
- Undersea and hyperbaric medicine	11	11									
Family medicine	14,225	4,925		4,724		4,538		38			
- Clinical informatics	10	6		4							
- Geriatric medicine	39	39									
- Hospice and palliative medicine (multidisciplinary)	401	401									
- Sports medicine	278	278									
Internal medicine	30,087	9,628	2,149	9,383	4	8,922	1				
- Adult congenital heart disease	28	20		8							
- Advanced heart failure and transplant cardiology	101	101									
- Cardiovascular disease	3,240	1,135		1,077		1,028					
- Clinical cardiac electrophysiology	276	156		120							
- Clinical informatics	36	21		15							
- Critical care medicine	280	170		110							
- Endocrinology, diabetes, and metabolism	689	350		339							
- Gastroenterology	1,844	642		614		588					
- Geriatric medicine	272	272									
- Hematology	18	10		8							
- Hematology and medical oncology	1,895	668		627		600					
- Infectious disease	763	396		367							
- Interventional cardiology	355	355									
- Nephrology	829	416		413							
- Medical oncology	34	20		14							
- Pulmonary disease	70	39		31							
- Pulmonary disease and critical care medicine	2,085	729		684		672					
- Rheumatology	520	272		248							
- Sleep medicine (multidisciplinary)	190	190									
- Transplant hepatology	47	47									
Medical genetics and genomics	68	32		36							
- Medical biochemical genetics	14	14									
- Molecular genetic pathology (multidisciplinary)	57	57									
Neurological surgery	1,561	233		234		225		218	217	223	211
- Endovascular surgical neuroradiology	1	1									

TABLE C.5 <i>Continued</i>											
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	3,221	924		908		872		517			
- Brain injury medicine	1	1									
- Clinical neurophysiology	143	143									
- Epilepsy	134	134									
- Endovascular surgical neuroradiology	3	3									
- Neurodevelopmental disabilities	26	8		7		5		6			
- Neuromuscular medicine	74	74									
- Vascular neurology	162	162									
Child neurology	419	141		145		133					
Nuclear medicine	69	33		22		14					
Obstetrics and gynecology	5,769	1,481	18	1,448		1,416		1,406			
- Female pelvic medicine and reconstructive surgery	146	49		51		46					
- Gynecologic oncology	221	79		72		70					
- Maternal-fetal medicine	391	131		133		127					
- Reproductive endocrinology and infertility	166	57		57		52					
- Complex family planning	32	16		16							
Ophthalmology	1,531	518		510		503					
- Ophthalmic plastic and reconstructive surgery	3	3									
Orthopaedic surgery	4,415	895		890		894		875	861		
- Adult reconstructive orthopaedics	50	50									
- Foot and ankle orthopaedics	17	17									
- Hand surgery	155	155									
- Musculoskeletal oncology	16	16									
- Orthopaedic sports medicine	211	211									
- Orthopaedic surgery of the spine	25	25									
- Orthopaedic trauma	20	20									
- Pediatric orthopaedics	34	34									
Osteopathic neuromusculoskeletal medicine	68	12		21		35					
Otolaryngology - head and neck surgery	1,723	348		350		343		338	344		
- Neurotology	36	18		18							
- Pediatric otolaryngology	34	34									
Pathology-anatomic and clinical	2,346	606		614		597		529			
- Blood banking/transfusion medicine	52	52									
- Clinical informatics	19	11		8							
- Chemical pathology	0										
- Cytopathology	127	127									
- Forensic pathology	49	49									
- Hematopathology	117	117									
- Medical microbiology	16	16									
- Neuropathology	53	27		26							
- Pediatric pathology	21	21									
- Selective pathology	176	176									
Pediatrics	9,419	3,159	82	3,137	62	2,979					
- Adolescent medicine	97	36		34		27					
- Child abuse pediatrics	44	12		16		16					
- Clinical informatics	19	13		6							
- Developmental-behavioral pediatrics	114	33		42		39					
- Neonatal-perinatal medicine	783	258		268		257					
- Pediatric cardiology	468	162		160		146					
- Pediatric critical care medicine	575	207		198		170					
- Pediatric emergency medicine	434	152		154		128					
- Pediatric endocrinology	230	86		68		76					
- Pediatric gastroenterology	329	110		114		105					

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 hematology/oncology	475	160		162		153					
- Pediatric infectious diseases	175	68		55		52					
- Pediatric nephrology	120	49		32		39					
- Pediatric pulmonology	176	63		60		53					
- Pediatric rheumatology	88	33		28		27					
- Sports medicine	26	26									
- Pediatric transplant hepatology	11	11									
- Pediatric hospital medicine	115	71		44							
Physical medicine and rehabilitation	1,510	422		465		442		181			
- Brain injury medicine	17	17									
- Neuromuscular medicine	1	1									
- Spinal cord injury medicine	19	19									
- Pediatric rehabilitation medicine	30	14		16							
- Sports medicine	33	33									
Plastic surgery	214	66		70		78					
Plastic surgery - integrated	1,009	177		177		178		169	158	150	
- Craniofacial surgery	7	7									
- Hand surgery	23	23									
Preventive medicine	350	172		172		6					
- Medical toxicology	3	1		2							
- Undersea and hyperbaric medicine	1	1									
Psychiatry	6,976	1,964		1,922		1,808		1,282			
- Addiction medicine (multidisciplinary)	129	129									
- Addiction psychiatry	86	85		1							
- Child and adolescent psychiatry	919	488		431							
- Forensic psychiatry	80	80									
- Geriatric psychiatry	44	44									
- Consultation-liaison psychiatry	82	82									
Radiation oncology	773	202		189		191		191			
Radiology-diagnostic	4,557	1,156		1,141		1,118		1,135	7		
- Abdominal radiology	46	46									
- Endovascular surgical neuroradiology	2	2									
- Musculoskeletal radiology	40	40									
- Neuroradiology	272	272									
- Nuclear radiology	7	7									
- Pediatric radiology	51	51									
Interventional radiology - independent	184	149		35							
Interventional radiology - integrated	591	154		137		129		91	80		
Surgery	9,063	1,565	1,221	1,596	214	1,551		1,493	1,423		
- Complex general surgical oncology	120	61		59							
- Hand surgery	7	7									
- Pediatric surgery	86	41		45							
- Surgical critical care	299	299									
- Vascular surgery	255	131		124							
Vascular surgery - integrated	332	76		69		66		64	57		
Thoracic surgery	243	104		110		29					
- Congenital cardiac surgery	11	11									
Thoracic surgery - integrated	203	35		38		38		32	32	28	
Urology	1,768	360		382		353		345	328		
- Female pelvic medicine and reconstructive surgery	37	14		15		8					
- Pediatric urology	18	18									
Transitional year	1,693	1,693									
Internal medicine/Pediatrics	1,510	383		382		378		367			

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, 2016-2017 to 2020-2021

Specialty	Academic Year					5-Year Change	
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	#	%
	#	#	#	#	#	#	%
OVERALL	129,720	135,326	140,391	144,988	149,200	19,480	15.0%
TOTAL PIPELINE	105,297	109,822	113,823	117,496	121,110	15,813	15.0%
Allergy and immunology	287	296	304	308	312	25	8.7%
Anesthesiology	6,207	6,346	6,507	6,698	6,895	688	11.1%
- Adult cardiothoracic anesthesiology	193	207	215	220	235	42	21.8%
- Clinical informatics	1	2	1	1	1	0	0.0%
- Critical care medicine	183	181	182	191	194	11	6.0%
- Regional anesthesiology and acute pain medicine *	20	48	58	72	77	57	285.0%
- Obstetric anesthesiology	39	39	44	38	48	9	23.1%
- Pain medicine (multidisciplinary)	354	361	372	386	400	46	13.0%
- Pediatric anesthesiology	205	205	199	192	185	-20	-9.8%
Colon and rectal surgery	95	97	101	106	105	10	10.5%
Dermatology	1,424	1,517	1,563	1,594	1,612	188	13.2%
- Dermatopathology (multidisciplinary)	71	72	67	69	69	-2	-2.8%
- Micrographic surgery and dermatologic oncology	83	83	82	88	86	3	3.6%
Emergency medicine	6,885	7,461	7,940	8,293	8,642	1,757	25.5%
- Clinical informatics	4	4	5	10	10	6	150.0%
- Emergency medical services	62	46	62	87	86	24	38.7%
- Medical toxicology	63	63	72	72	79	16	25.4%
- Pediatric emergency medicine	113	119	129	134	134	21	18.6%
- Sports medicine	14	16	16	17	16	2	14.3%
- Undersea and hyperbaric medicine	13	8	9	10	11	-2	-15.4%
Family medicine	11,277	12,161	13,116	13,725	14,225	2,948	26.1%
- Clinical informatics	7	8	12	10	10	3	42.9%
- Geriatric medicine	44	41	46	38	39	-5	-11.4%
- Hospice and palliative medicine (multidisciplinary)	304	333	355	374	401	97	31.9%
- Sports medicine	217	229	239	261	278	61	28.1%
Internal medicine	26,301	27,647	28,420	29,243	30,087	3,786	14.4%
- Adult congenital heart disease	15	14	25	25	28	13	86.7%
- Advanced heart failure and transplant cardiology	94	98	105	109	101	7	7.4%
- Cardiovascular disease	2,746	2,918	3,017	3,105	3,240	494	18.0%
- Clinical cardiac electrophysiology	142	185	259	255	276	134	94.4%
- Clinical informatics	19	34	36	36	36	17	89.5%
- Critical care medicine	217	238	253	264	280	63	29.0%
- Endocrinology, diabetes, and metabolism	624	645	660	675	689	65	10.4%
- Gastroenterology	1,565	1,656	1,741	1,792	1,844	279	17.8%
- Geriatric medicine	260	274	258	261	272	12	4.6%
- Hematology	15	16	18	17	18	3	20.0%
- Hematology and medical oncology	1,713	1,745	1,776	1,843	1,895	182	10.6%
- Infectious disease	694	715	760	762	763	69	9.9%
- Interventional cardiology	315	318	339	350	355	40	12.7%
- Nephrology	844	808	805	828	829	-15	-1.8%
- Medical oncology	34	34	39	35	34	0	0.0%
- Pulmonary disease	74	73	70	73	70	-4	-5.4%
- Pulmonary disease and critical care medicine	1,702	1,812	1,898	1,999	2,085	383	22.5%
- Rheumatology	458	477	503	515	520	62	13.5%
- Sleep medicine (multidisciplinary)	163	164	177	182	190	27	16.6%
- Transplant hepatology	39	46	47	52	47	8	20.5%
Medical genetics and genomics	71	70	69	60	68	-3	-4.2%
- Medical biochemical genetics	9	12	14	16	14	5	55.6%
- Molecular genetic pathology (multidisciplinary)	53	56	61	56	57	4	7.5%
Neurological surgery	1,375	1,408	1,462	1,515	1,561	186	13.5%
- Endovascular surgical neuroradiology	1	3	1	1	1	0	0.0%

TABLE C.6 Continued

Number of Active Residents by Specialty and Subspecialty and Academic Year, 2016-2017 to 2020-2021							
Specialty	Academic Year					5-Year Change	
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021		
	#	#	#	#	#	#	%
Neurology	2,544	2,750	2,893	3,062	3,221	677	26.6%
- Brain injury medicine *		1	1	1	1	0	0.0%
- Clinical neurophysiology	169	171	163	163	143	-26	-15.4%
- Epilepsy	74	101	112	126	134	60	81.1%
- Endovascular surgical neuroradiology	2	1	1	2	3	1	50.0%
- Neurodevelopmental disabilities	27	28	25	24	26	-1	-3.7%
- Neuromuscular medicine	60	55	67	73	74	14	23.3%
- Vascular neurology	126	115	129	128	162	36	28.6%
Child neurology	360	373	383	401	419	59	16.4%
Nuclear medicine	74	71	75	78	69	-5	-6.8%
Obstetrics and gynecology	5,372	5,473	5,571	5,677	5,769	397	7.4%
- Female pelvic medicine and reconstructive surgery	139	142	145	149	146	7	5.0%
- Gynecologic oncology *	172	187	197	210	221	49	28.5%
- Maternal-fetal medicine *	268	322	350	368	391	123	45.9%
- Reproductive endocrinology and infertility *	120	160	163	167	166	46	38.3%
- Complex family planning *					32	N/A	N/A
Ophthalmology	1,446	1,474	1,473	1,512	1,531	85	5.9%
- Ophthalmic plastic and reconstructive surgery	6	5	5	3	3	-3	-50.0%
Orthopaedic surgery	3,760	3,941	4,125	4,342	4,415	655	17.4%
- Adult reconstructive orthopaedics	41	40	47	46	50	9	22.0%
- Foot and ankle orthopaedics	15	14	15	16	17	2	13.3%
- Hand surgery	146	151	154	154	155	9	6.2%
- Musculoskeletal oncology	16	17	14	17	16	0	0.0%
- Orthopaedic sports medicine	217	204	205	215	211	-6	-2.8%
- Orthopaedic surgery of the spine	32	32	28	34	25	-7	-21.9%
- Orthopaedic trauma	14	18	19	20	20	6	42.9%
- Pediatric orthopaedics	38	39	37	37	34	-4	-10.5%
Osteopathic neuromusculoskeletal medicine	8	21	34	53	68	60	750.0%
Otolaryngology - head and neck surgery	1,541	1,592	1,651	1,689	1,723	182	11.8%
- Neurotology	28	29	32	35	36	8	28.6%
- Pediatric otolaryngology	33	34	35	36	34	1	3.0%
Pathology-anatomic and clinical	2,334	2,341	2,329	2,324	2,346	12	0.5%
- Blood banking/transfusion medicine	47	49	57	50	52	5	10.6%
- Clinical informatics	10	11	9	16	19	9	90.0%
- Chemical pathology	1	1	1	2		N/A	N/A
- Cytopathology	139	138	134	125	127	-12	-8.6%
- Forensic pathology	46	43	44	54	49	3	6.5%
- Hematopathology	132	125	131	135	117	-15	-11.4%
- Medical microbiology	12	10	12	9	16	4	33.3%
- Neuropathology	55	48	50	59	53	-2	-3.6%
- Pediatric pathology	23	17	23	23	21	-2	-8.7%
- Selective pathology	154	168	166	167	176	22	14.3%
Pediatrics	9,063	9,159	9,221	9,323	9,419	356	3.9%
- Adolescent medicine	89	88	87	94	97	8	9.0%
- Child abuse pediatrics	35	34	38	47	44	9	25.7%
- Clinical informatics	9	10	12	15	19	10	111.1%
- Developmental-behavioral pediatrics	92	108	102	119	114	22	23.9%
- Neonatal-perinatal medicine	759	759	761	772	783	24	3.2%
- Pediatric cardiology	432	434	444	457	468	36	8.3%
- Pediatric critical care medicine	507	518	534	557	575	68	13.4%
- Pediatric emergency medicine	385	392	408	424	434	49	12.7%
- Pediatric endocrinology	243	241	241	227	230	-13	-5.3%
- Pediatric gastroenterology	290	300	311	322	329	39	13.4%

TABLE C.6 <i>Continued</i>							
Number of Active Residents by Specialty and Subspecialty and Academic Year, 2016-2017 to 2020-2021							
Specialty	Academic Year					5-Year Change	
	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021		
	#	#	#	#	#	#	%
- Pediatric hematology/oncology	488	501	484	485	475	-13	-2.7%
- Pediatric infectious diseases	164	171	177	169	175	11	6.7%
- Pediatric nephrology	102	101	116	110	120	18	17.6%
- Pediatric pulmonology	167	158	162	168	176	9	5.4%
- Pediatric rheumatology	81	86	91	90	88	7	8.6%
- Sports medicine	23	26	26	26	26	3	13.0%
- Pediatric transplant hepatology	8	12	9	10	11	3	37.5%
- Pediatric hospital medicine *				71	115	44	62.0%
Physical medicine and rehabilitation	1,324	1,351	1,395	1,453	1,510	186	14.0%
- Brain injury medicine	9	13	17	18	17	8	88.9%
- Neuromuscular medicine			1	1	1	0	0.0%
- Spinal cord injury medicine	16	21	20	21	19	3	18.8%
- Pediatric rehabilitation medicine	26	27	38	38	30	4	15.4%
- Sports medicine	22	28	30	32	33	11	50.0%
Plastic surgery	316	266	243	226	214	-102	-32.3%
Plastic surgery - integrated	748	829	901	961	1,009	261	34.9%
- Craniofacial surgery	9	4	8	5	7	-2	-22.2%
- Hand surgery	24	23	22	23	23	-1	-4.2%
Preventive medicine	353	351	357	347	350	-3	-0.8%
- Medical toxicology	5	4	4	4	3	-2	-40.0%
- Undersea and hyperbaric medicine	3	2	2	1	1	-2	-66.7%
Psychiatry	5,619	5,907	6,247	6,618	6,976	1,357	24.2%
- Addiction medicine (multidisciplinary) *			39	79	129	90	230.8%
- Addiction psychiatry	77	74	83	78	86	9	11.7%
- Child and adolescent psychiatry	840	865	869	889	919	79	9.4%
- Forensic psychiatry	63	79	66	80	80	17	27.0%
- Geriatric psychiatry	56	53	52	42	44	-12	-21.4%
- Consultation-liaison psychiatry	80	86	71	86	82	2	2.5%
Radiation oncology	749	767	774	771	773	24	3.2%
Radiology-diagnostic	4,769	4,760	4,671	4,551	4,557	-212	-4.4%
- Abdominal radiology	46	44	41	49	46	0	0.0%
- Endovascular surgical neuroradiology	6	6	5	5	2	-4	-66.7%
- Musculoskeletal radiology	33	32	32	35	40	7	21.2%
- Neuroradiology	265	269	259	280	272	7	2.6%
- Nuclear radiology	12	11	11	12	7	-5	-41.7%
- Pediatric radiology	65	55	55	58	51	-14	-21.5%
Interventional radiology - independent *					184	N/A	N/A
Interventional radiology - integrated	13	60	246	424	591	578	4446.2%
Surgery	8,184	8,475	8,844	8,809	9,063	879	10.7%
- Complex general surgical oncology	105	107	111	115	120	15	14.3%
- Hand surgery	8	8	8	8	7	-1	-12.5%
- Pediatric surgery	83	80	83	85	86	3	3.6%
- Surgical critical care	248	253	284	290	299	51	20.6%
- Vascular surgery	241	246	248	244	255	14	5.8%
Vascular surgery - integrated	260	272	292	309	332	72	27.7%
Thoracic surgery	224	223	232	236	243	19	8.5%
- Congenital cardiac surgery	5	9	8	8	11	6	120.0%
Thoracic surgery - integrated	161	183	189	193	203	42	26.1%
Urology	1,276	1,304	1,331	1,734	1,768	492	38.6%
- Female pelvic medicine and reconstructive surgery	29	34	37	35	37	8	27.6%
- Pediatric urology	25	24	20	20	18	-7	-28.0%
Transitional year	1,110	1,320	1,532	1,597	1,693	583	52.5%
Internal medicine/Pediatrics	1,483	1,492	1,501	1,511	1,510	27	1.8%

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	149,200	227	0.2%	100.0%
TOTAL PIPELINE	121,110	146	0.1%	64.3%
Allergy and immunology	312	0	0.0%	0.0%
Anesthesiology	6,895	8	0.1%	3.5%
- Adult cardiothoracic anesthesiology	235	0	0.0%	0.0%
- Clinical informatics	1	0	0.0%	0.0%
- Critical care medicine	194	0	0.0%	0.0%
- Regional anesthesiology and acute pain medicine	77	0	0.0%	0.0%
- Obstetric anesthesiology	48	0	0.0%	0.0%
- Pain medicine (multidisciplinary)	400	1	0.3%	0.4%
- Pediatric anesthesiology	185	1	0.5%	0.4%
Colon and rectal surgery	105	0	0.0%	0.0%
Dermatology	1,612	2	0.1%	0.9%
- Dermatopathology (multidisciplinary)	69	0	0.0%	0.0%
- Micrographic surgery and dermatologic oncology	86	0	0.0%	0.0%
Emergency medicine	8,642	9	0.1%	4.0%
- Clinical informatics	10	0	0.0%	0.0%
- Emergency medical services	86	0	0.0%	0.0%
- Medical toxicology	79	0	0.0%	0.0%
- Pediatric emergency medicine	134	0	0.0%	0.0%
- Sports medicine	16	0	0.0%	0.0%
- Undersea and hyperbaric medicine	11	0	0.0%	0.0%
Family medicine	14,225	19	0.1%	8.4%
- Clinical informatics	10	0	0.0%	0.0%
- Geriatric medicine	39	1	2.6%	0.4%
- Hospice and palliative medicine (multidisciplinary)	401	11	2.7%	4.8%
- Sports medicine	278	2	0.7%	0.9%
Internal medicine	30,087	13	0.0%	5.7%
- Adult congenital heart disease	28	0	0.0%	0.0%
- Advanced heart failure and transplant cardiology	101	0	0.0%	0.0%
- Cardiovascular disease	3,240	3	0.1%	1.3%
- Clinical cardiac electrophysiology	276	2	0.7%	0.9%
- Clinical informatics	36	0	0.0%	0.0%
- Critical care medicine	280	0	0.0%	0.0%
- Endocrinology, diabetes, and metabolism	689	0	0.0%	0.0%
- Gastroenterology	1,844	2	0.1%	0.9%
- Geriatric medicine	272	4	1.5%	1.8%
- Hematology	18	0	0.0%	0.0%
- Hematology and medical oncology	1,895	4	0.2%	1.8%
- Infectious disease	763	1	0.1%	0.4%
- Interventional cardiology	355	0	0.0%	0.0%
- Nephrology	829	3	0.4%	1.3%
- Medical oncology	34	1	2.9%	0.4%
- Pulmonary disease	70	1	1.4%	0.4%
- Pulmonary disease and critical care medicine	2,085	5	0.2%	2.2%
- Rheumatology	520	2	0.4%	0.9%
- Sleep medicine (multidisciplinary)	190	10	5.3%	4.4%
- Transplant hepatology	47	0	0.0%	0.0%
Medical genetics and genomics	68	0	0.0%	0.0%
- Medical biochemical genetics	14	0	0.0%	0.0%
- Molecular genetic pathology (multidisciplinary)	57	1	1.8%	0.4%
Neurological surgery	1,561	2	0.1%	0.9%
- 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	3,221	9	0.3%	4.0%
- Brain injury medicine	1	0	0.0%	0.0%
- Clinical neurophysiology	143	1	0.7%	0.4%
- Epilepsy	134	1	0.7%	0.4%
- Endovascular surgical neuroradiology	3	0	0.0%	0.0%
- Neurodevelopmental disabilities	26	0	0.0%	0.0%
- Neuromuscular medicine	74	0	0.0%	0.0%
- Vascular neurology	162	1	0.6%	0.4%
Child neurology	419	1	0.2%	0.4%
Nuclear medicine	69	0	0.0%	0.0%
Obstetrics and gynecology	5,769	4	0.1%	1.8%
- Female pelvic medicine and reconstructive surgery	146	0	0.0%	0.0%
- Gynecologic oncology	221	0	0.0%	0.0%
- Maternal-fetal medicine	391	0	0.0%	0.0%
- Reproductive endocrinology and infertility	166	0	0.0%	0.0%
- Complex family planning	32	0	0.0%	0.0%
Ophthalmology	1,531	1	0.1%	0.4%
- Ophthalmic plastic and reconstructive surgery	3	0	0.0%	0.0%
Orthopaedic surgery	4,415	6	0.1%	2.6%
- Adult reconstructive orthopaedics	50	0	0.0%	0.0%
- Foot and ankle orthopaedics	17	0	0.0%	0.0%
- Hand surgery	155	0	0.0%	0.0%
- Musculoskeletal oncology	16	0	0.0%	0.0%
- Orthopaedic sports medicine	211	0	0.0%	0.0%
- Orthopaedic surgery of the spine	25	0	0.0%	0.0%
- Orthopaedic trauma	20	0	0.0%	0.0%
- Pediatric orthopaedics	34	0	0.0%	0.0%
Osteopathic neuromusculoskeletal medicine	68	2	2.9%	0.9%
Otolaryngology - head and neck surgery	1,723	2	0.1%	0.9%
- Neurotology	36	0	0.0%	0.0%
- Pediatric otolaryngology	34	0	0.0%	0.0%
Pathology-anatomic and clinical	2,346	4	0.2%	1.8%
- Blood banking/transfusion medicine	52	2	3.8%	0.9%
- Clinical informatics	19	0	0.0%	0.0%
- Chemical pathology		0		0.0%
- Cytopathology	127	1	0.8%	0.4%
- Forensic pathology	49	0	0.0%	0.0%
- Hematopathology	117	0	0.0%	0.0%
- Medical microbiology	16	0	0.0%	0.0%
- Neuropathology	53	1	1.9%	0.4%
- Pediatric pathology	21	0	0.0%	0.0%
- Selective pathology	176	1	0.6%	0.4%
Pediatrics	9,419	14	0.1%	6.2%
- Adolescent medicine	97	0	0.0%	0.0%
- Child abuse pediatrics	44	0	0.0%	0.0%
- Clinical informatics	19	0	0.0%	0.0%
- Developmental-behavioral pediatrics	114	1	0.9%	0.4%
- Neonatal-perinatal medicine	783	0	0.0%	0.0%
- Pediatric cardiology	468	0	0.0%	0.0%
- Pediatric critical care medicine	575	2	0.3%	0.9%
- Pediatric emergency medicine	434	1	0.2%	0.4%
- Pediatric endocrinology	230	0	0.0%	0.0%
- Pediatric gastroenterology	329	0	0.0%	0.0%

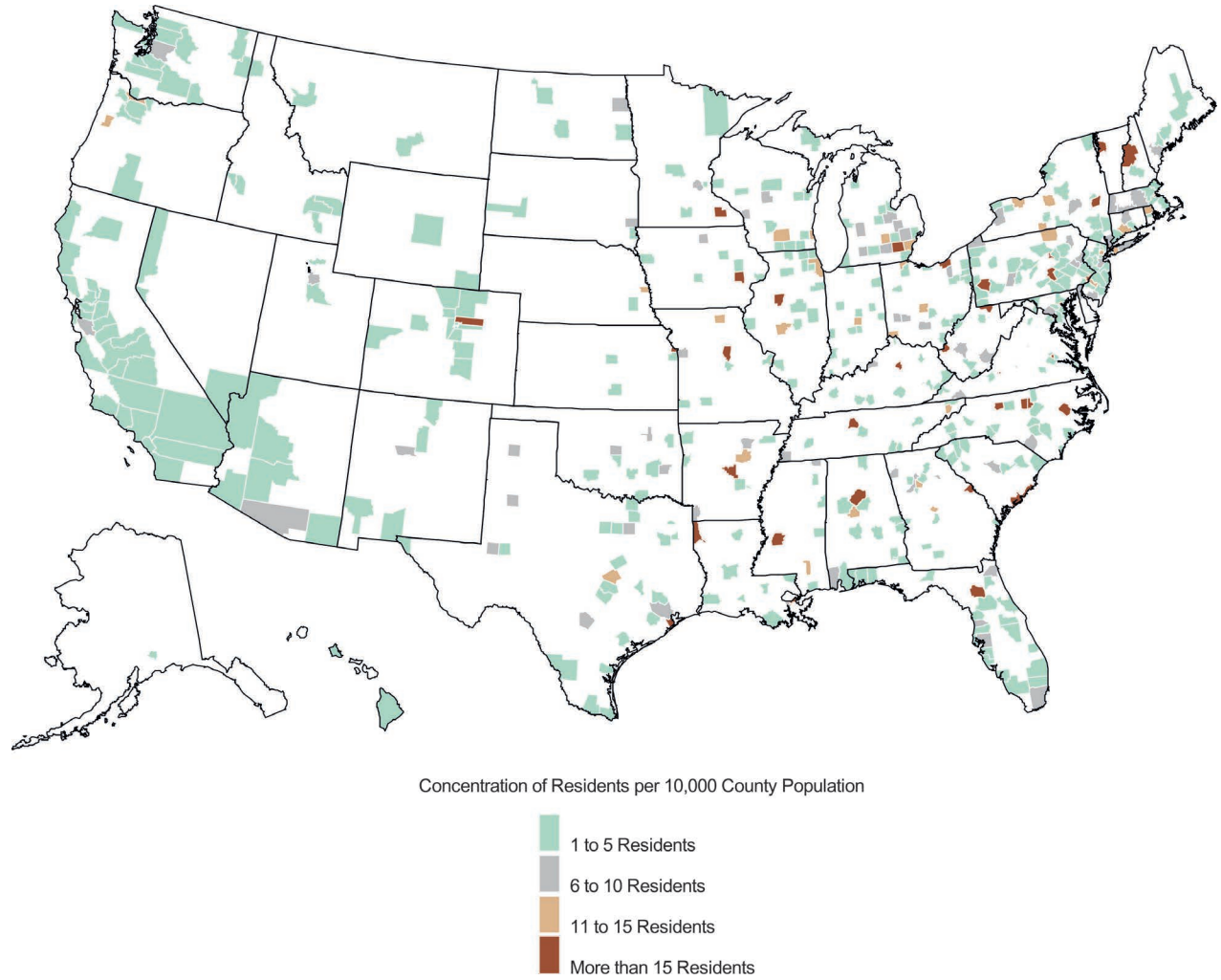
TABLE C.7 *Continued***Number of Active Part-Time Residents by Specialty and Subspecialty**

Specialty	Total Residents	Number of Part-Time Residents	Percent of All Residents in Specialty	Percent of All Part-Time Residents
- Pediatric hematology/oncology	475	2	0.4%	0.9%
- Pediatric infectious diseases	175	0	0.0%	0.0%
- Pediatric nephrology	120	0	0.0%	0.0%
- Pediatric pulmonology	176	0	0.0%	0.0%
- Pediatric rheumatology	88	0	0.0%	0.0%
- Sports medicine	26	1	3.8%	0.4%
- Pediatric transplant hepatology	11	0	0.0%	0.0%
- Pediatric hospital medicine	115	0	0.0%	0.0%
Physical medicine and rehabilitation	1,510	0	0.0%	0.0%
- Brain injury medicine	17	1	5.9%	0.4%
- Neuromuscular medicine	1	0	0.0%	0.0%
- Spinal cord injury medicine	19	0	0.0%	0.0%
- Pediatric rehabilitation medicine	30	0	0.0%	0.0%
- Sports medicine	33	0	0.0%	0.0%
Plastic surgery	214	1	0.5%	0.4%
Plastic surgery - integrated	1,009	1	0.1%	0.4%
- Craniofacial surgery	7	0	0.0%	0.0%
- Hand surgery	23	0	0.0%	0.0%
Preventive medicine	350	1	0.3%	0.4%
- Medical toxicology	3	0	0.0%	0.0%
- Undersea and hyperbaric medicine	1	0	0.0%	0.0%
Psychiatry	6,976	16	0.2%	7.0%
- Addiction medicine (multidisciplinary)	129	3	2.3%	1.3%
- Addiction psychiatry	86	1	1.2%	0.4%
- Child and adolescent psychiatry	919	0	0.0%	0.0%
- Forensic psychiatry	80	3	3.8%	1.3%
- Geriatric psychiatry	44	0	0.0%	0.0%
- Consultation-liaison psychiatry	82	0	0.0%	0.0%
Radiation oncology	773	2	0.3%	0.9%
Radiology-diagnostic	4,557	7	0.2%	3.1%
- Abdominal radiology	46	0	0.0%	0.0%
- Endovascular surgical neuroradiology	2	0	0.0%	0.0%
- Musculoskeletal radiology	40	0	0.0%	0.0%
- Neuroradiology	272	0	0.0%	0.0%
- Nuclear radiology	7	0	0.0%	0.0%
- Pediatric radiology	51	0	0.0%	0.0%
Interventional radiology - independent	184	0	0.0%	0.0%
Interventional radiology - integrated	591	0	0.0%	0.0%
Surgery	9,063	17	0.2%	7.5%
- Complex general surgical oncology	120	0	0.0%	0.0%
- Hand surgery	7	0	0.0%	0.0%
- Pediatric surgery	86	0	0.0%	0.0%
- Surgical critical care	299	1	0.3%	0.4%
- Vascular surgery	255	0	0.0%	0.0%
Vascular surgery - integrated	332	0	0.0%	0.0%
Thoracic surgery	243	0	0.0%	0.0%
- Congenital cardiac surgery	11	0	0.0%	0.0%
Thoracic surgery - integrated	203	0	0.0%	0.0%
Urology	1,768	4	0.2%	1.8%
- Female pelvic medicine and reconstructive surgery	37	0	0.0%	0.0%
- Pediatric urology	18	0	0.0%	0.0%
Transitional year	1,693	2	0.1%	0.9%
Internal medicine/Pediatrics	1,510	1	0.1%	0.4%

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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021; 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 2020	Total Residents	Percent of All Residents	Residents per 100,000 Pop
OVERALL	-	332,643,466	149,200	100.0%	44.85
Alabama	AL	4,921,532	1,669	1.1%	33.91
Alaska	AK	731,158	37	0.0%	5.06
Arizona	AZ	7,421,401	2,088	1.4%	28.13
Arkansas	AR	3,030,522	1,041	0.7%	34.35
California	CA	39,368,078	13,646	9.1%	34.66
Colorado	CO	5,807,719	1,726	1.2%	29.72
Connecticut	CT	3,557,006	2,524	1.7%	70.96
Delaware	DE	986,809	378	0.3%	38.31
District of Columbia	DC	712,816	1,773	1.2%	248.73
Florida	FL	21,733,312	7,583	5.1%	34.89
Georgia	GA	10,710,017	3,056	2.0%	28.53
Hawaii	HI	1,407,006	462	0.3%	32.84
Idaho	ID	1,826,913	174	0.1%	9.52
Illinois	IL	12,587,530	6,916	4.6%	54.94
Indiana	IN	6,754,953	1,575	1.1%	23.32
Iowa	IA	3,163,561	1,025	0.7%	32.40
Kansas	KS	2,913,805	893	0.6%	30.65
Kentucky	KY	4,477,251	1,577	1.1%	35.22
Louisiana	LA	4,645,318	2,322	1.6%	49.99
Maine	ME	1,350,141	349	0.2%	25.85
Maryland	MD	6,055,802	3,350	2.2%	55.32
Massachusetts	MA	6,893,574	5,934	4.0%	86.08
Michigan	MI	9,966,555	7,432	5.0%	74.57
Minnesota	MN	5,657,342	2,420	1.6%	42.78
Mississippi	MS	2,966,786	871	0.6%	29.36
Missouri	MO	6,151,548	3,207	2.1%	52.13
Montana	MT	1,080,577	82	0.1%	7.59
Nebraska	NE	1,937,552	870	0.6%	44.90
Nevada	NV	3,138,259	884	0.6%	28.17
New Hampshire	NH	1,366,275	461	0.3%	33.74
New Jersey	NJ	8,882,371	3,966	2.7%	44.65
New Mexico	NM	2,106,319	695	0.5%	33.00
New York	NY	19,336,776	18,944	12.7%	97.97
North Carolina	NC	10,600,823	4,010	2.7%	37.83
North Dakota	ND	765,309	178	0.1%	23.26
Ohio	OH	11,693,217	7,421	5.0%	63.46
Oklahoma	OK	3,980,783	1,242	0.8%	31.20
Oregon	OR	4,241,507	1,070	0.7%	25.23
Pennsylvania	PA	12,783,254	9,465	6.3%	74.04
Puerto Rico	PR	3,159,343	963	0.6%	30.48
Rhode Island	RI	1,057,125	899	0.6%	85.04
South Carolina	SC	5,218,040	1,691	1.1%	32.41
South Dakota	SD	892,717	161	0.1%	18.03
Tennessee	TN	6,886,834	2,687	1.8%	39.02
Texas	TX	29,360,759	9,910	6.6%	33.75
Utah	UT	3,249,879	897	0.6%	27.60
Vermont	VT	623,347	328	0.2%	52.62
Virginia	VA	8,590,563	2,992	2.0%	34.83
Washington	WA	7,693,612	2,231	1.5%	29.00
West Virginia	WV	1,784,787	989	0.7%	55.41
Wisconsin	WI	5,832,655	2,094	1.4%	35.90
Wyoming	WY	582,328	42	0.0%	7.21

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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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 2020	Total Specialty Residents	Percent of All Specialty Residents	Specialty Residents per 100,000 Pop
OVERALL	-	332,643,466	123,279	100.0%	37.06
Alabama	AL	4,921,532	1,396	1.1%	28.37
Alaska	AK	731,158	36	0.0%	4.92
Arizona	AZ	7,421,401	1,756	1.4%	23.66
Arkansas	AR	3,030,522	912	0.7%	30.09
California	CA	39,368,078	11,121	9.0%	28.25
Colorado	CO	5,807,719	1,383	1.1%	23.81
Connecticut	CT	3,557,006	2,055	1.7%	57.77
Delaware	DE	986,809	319	0.3%	32.33
District of Columbia	DC	712,816	1,395	1.1%	195.70
Florida	FL	21,733,312	6,457	5.2%	29.71
Georgia	GA	10,710,017	2,592	2.1%	24.20
Hawaii	HI	1,407,006	428	0.3%	30.42
Idaho	ID	1,826,913	172	0.1%	9.41
Illinois	IL	12,587,530	5,839	4.7%	46.39
Indiana	IN	6,754,953	1,342	1.1%	19.87
Iowa	IA	3,163,561	851	0.7%	26.90
Kansas	KS	2,913,805	786	0.6%	26.98
Kentucky	KY	4,477,251	1,309	1.1%	29.24
Louisiana	LA	4,645,318	1,988	1.6%	42.80
Maine	ME	1,350,141	314	0.3%	23.26
Maryland	MD	6,055,802	2,600	2.1%	42.93
Massachusetts	MA	6,893,574	4,517	3.7%	65.52
Michigan	MI	9,966,555	6,423	5.2%	64.45
Minnesota	MN	5,657,342	1,868	1.5%	33.02
Mississippi	MS	2,966,786	754	0.6%	25.41
Missouri	MO	6,151,548	2,542	2.1%	41.32
Montana	MT	1,080,577	81	0.1%	7.50
Nebraska	NE	1,937,552	718	0.6%	37.06
Nevada	NV	3,138,259	800	0.6%	25.49
New Hampshire	NH	1,366,275	371	0.3%	27.15
New Jersey	NJ	8,882,371	3,488	2.8%	39.27
New Mexico	NM	2,106,319	570	0.5%	27.06
New York	NY	19,336,776	15,600	12.7%	80.68
North Carolina	NC	10,600,823	3,212	2.6%	30.30
North Dakota	ND	765,309	174	0.1%	22.74
Ohio	OH	11,693,217	6,072	4.9%	51.93
Oklahoma	OK	3,980,783	1,102	0.9%	27.68
Oregon	OR	4,241,507	885	0.7%	20.87
Pennsylvania	PA	12,783,254	7,697	6.2%	60.21
Puerto Rico	PR	3,159,343	832	0.7%	26.33
Rhode Island	RI	1,057,125	722	0.6%	68.30
South Carolina	SC	5,218,040	1,457	1.2%	27.92
South Dakota	SD	892,717	150	0.1%	16.80
Tennessee	TN	6,886,834	2,159	1.8%	31.35
Texas	TX	29,360,759	8,034	6.5%	27.36
Utah	UT	3,249,879	683	0.6%	21.02
Vermont	VT	623,347	265	0.2%	42.51
Virginia	VA	8,590,563	2,559	2.1%	29.79
Washington	WA	7,693,612	1,862	1.5%	24.20
West Virginia	WV	1,784,787	860	0.7%	48.19
Wisconsin	WI	5,832,655	1,729	1.4%	29.64
Wyoming	WY	582,328	42	0.0%	7.21

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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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 2020	Total Subspecialty Residents	Percent of All Subspecialty Residents	Subspecialty Residents per 100,000 Pop
OVERALL	-	332,643,466	25,921	100.0%	7.79
Alabama	AL	4,921,532	273	1.1%	5.55
Alaska	AK	731,158	1	0.0%	0.14
Arizona	AZ	7,421,401	332	1.3%	4.47
Arkansas	AR	3,030,522	129	0.5%	4.26
California	CA	39,368,078	2,525	9.7%	6.41
Colorado	CO	5,807,719	343	1.3%	5.91
Connecticut	CT	3,557,006	469	1.8%	13.19
Delaware	DE	986,809	59	0.2%	5.98
District of Columbia	DC	712,816	378	1.5%	53.03
Florida	FL	21,733,312	1,126	4.3%	5.18
Georgia	GA	10,710,017	464	1.8%	4.33
Hawaii	HI	1,407,006	34	0.1%	2.42
Idaho	ID	1,826,913	2	0.0%	0.11
Illinois	IL	12,587,530	1,077	4.2%	8.56
Indiana	IN	6,754,953	233	0.9%	3.45
Iowa	IA	3,163,561	174	0.7%	5.50
Kansas	KS	2,913,805	107	0.4%	3.67
Kentucky	KY	4,477,251	268	1.0%	5.99
Louisiana	LA	4,645,318	334	1.3%	7.19
Maine	ME	1,350,141	35	0.1%	2.59
Maryland	MD	6,055,802	750	2.9%	12.38
Massachusetts	MA	6,893,574	1,417	5.5%	20.56
Michigan	MI	9,966,555	1,009	3.9%	10.12
Minnesota	MN	5,657,342	552	2.1%	9.76
Mississippi	MS	2,966,786	117	0.5%	3.94
Missouri	MO	6,151,548	665	2.6%	10.81
Montana	MT	1,080,577	1	0.0%	0.09
Nebraska	NE	1,937,552	152	0.6%	7.84
Nevada	NV	3,138,259	84	0.3%	2.68
New Hampshire	NH	1,366,275	90	0.3%	6.59
New Jersey	NJ	8,882,371	478	1.8%	5.38
New Mexico	NM	2,106,319	125	0.5%	5.93
New York	NY	19,336,776	3,344	12.9%	17.29
North Carolina	NC	10,600,823	798	3.1%	7.53
North Dakota	ND	765,309	4	0.0%	0.52
Ohio	OH	11,693,217	1,349	5.2%	11.54
Oklahoma	OK	3,980,783	140	0.5%	3.52
Oregon	OR	4,241,507	185	0.7%	4.36
Pennsylvania	PA	12,783,254	1,768	6.8%	13.83
Puerto Rico	PR	3,159,343	131	0.5%	4.15
Rhode Island	RI	1,057,125	177	0.7%	16.74
South Carolina	SC	5,218,040	234	0.9%	4.48
South Dakota	SD	892,717	11	0.0%	1.23
Tennessee	TN	6,886,834	528	2.0%	7.67
Texas	TX	29,360,759	1,876	7.2%	6.39
Utah	UT	3,249,879	214	0.8%	6.58
Vermont	VT	623,347	63	0.2%	10.11
Virginia	VA	8,590,563	433	1.7%	5.04
Washington	WA	7,693,612	369	1.4%	4.80
West Virginia	WV	1,784,787	129	0.5%	7.23
Wisconsin	WI	5,832,655	365	1.4%	6.26
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

TABLE C.12

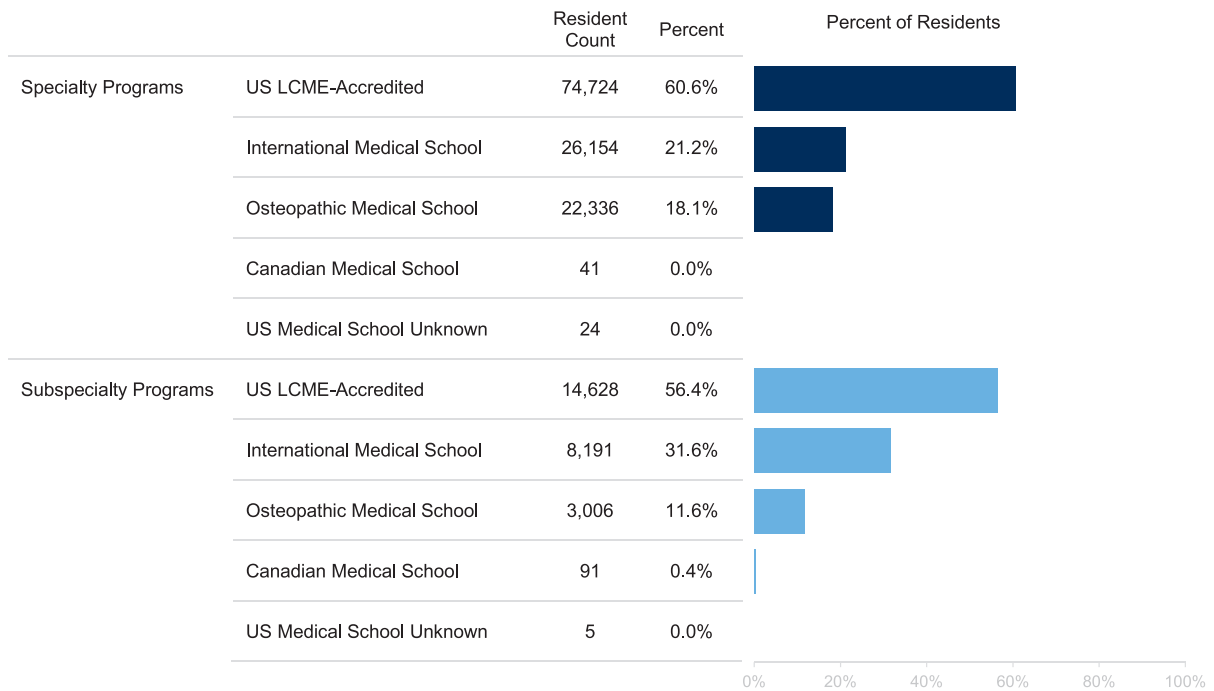
Number of Active Pipeline Residents and Active Pipeline Resident Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2020	Total Pipeline Residents	Percent of All Pipeline Residents	Pipeline Residents per 100,000 Pop
OVERALL	-	332,643,466	121,110	100.0%	36.41
Alabama	AL	4,921,532	1,375	1.1%	27.94
Alaska	AK	731,158	36	0.0%	4.92
Arizona	AZ	7,421,401	1,717	1.4%	23.14
Arkansas	AR	3,030,522	897	0.7%	29.60
California	CA	39,368,078	10,945	9.0%	27.80
Colorado	CO	5,807,719	1,357	1.1%	23.37
Connecticut	CT	3,557,006	2,044	1.7%	57.46
Delaware	DE	986,809	312	0.3%	31.62
District of Columbia	DC	712,816	1,397	1.2%	195.98
Florida	FL	21,733,312	6,274	5.2%	28.87
Georgia	GA	10,710,017	2,484	2.1%	23.19
Hawaii	HI	1,407,006	420	0.3%	29.85
Idaho	ID	1,826,913	172	0.1%	9.41
Illinois	IL	12,587,530	5,751	4.7%	45.69
Indiana	IN	6,754,953	1,296	1.1%	19.19
Iowa	IA	3,163,561	839	0.7%	26.52
Kansas	KS	2,913,805	780	0.6%	26.77
Kentucky	KY	4,477,251	1,295	1.1%	28.92
Louisiana	LA	4,645,318	1,971	1.6%	42.43
Maine	ME	1,350,141	314	0.3%	23.26
Maryland	MD	6,055,802	2,539	2.1%	41.93
Massachusetts	MA	6,893,574	4,433	3.7%	64.31
Michigan	MI	9,966,555	6,242	5.2%	62.63
Minnesota	MN	5,657,342	1,832	1.5%	32.38
Mississippi	MS	2,966,786	736	0.6%	24.81
Missouri	MO	6,151,548	2,514	2.1%	40.87
Montana	MT	1,080,577	81	0.1%	7.50
Nebraska	NE	1,937,552	715	0.6%	36.90
Nevada	NV	3,138,259	770	0.6%	24.54
New Hampshire	NH	1,366,275	372	0.3%	27.23
New Jersey	NJ	8,882,371	3,437	2.8%	38.69
New Mexico	NM	2,106,319	563	0.5%	26.73
New York	NY	19,336,776	15,393	12.7%	79.60
North Carolina	NC	10,600,823	3,165	2.6%	29.86
North Dakota	ND	765,309	166	0.1%	21.69
Ohio	OH	11,693,217	5,974	4.9%	51.09
Oklahoma	OK	3,980,783	1,097	0.9%	27.56
Oregon	OR	4,241,507	885	0.7%	20.87
Pennsylvania	PA	12,783,254	7,559	6.2%	59.13
Puerto Rico	PR	3,159,343	791	0.7%	25.04
Rhode Island	RI	1,057,125	722	0.6%	68.30
South Carolina	SC	5,218,040	1,434	1.2%	27.48
South Dakota	SD	892,717	144	0.1%	16.13
Tennessee	TN	6,886,834	2,138	1.8%	31.04
Texas	TX	29,360,759	7,898	6.5%	26.90
Utah	UT	3,249,879	669	0.6%	20.59
Vermont	VT	623,347	267	0.2%	42.83
Virginia	VA	8,590,563	2,513	2.1%	29.25
Washington	WA	7,693,612	1,811	1.5%	23.54
West Virginia	WV	1,784,787	846	0.7%	47.40
Wisconsin	WI	5,832,655	1,686	1.4%	28.91
Wyoming	WY	582,328	42	0.0%	7.21

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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

FIGURE C.13

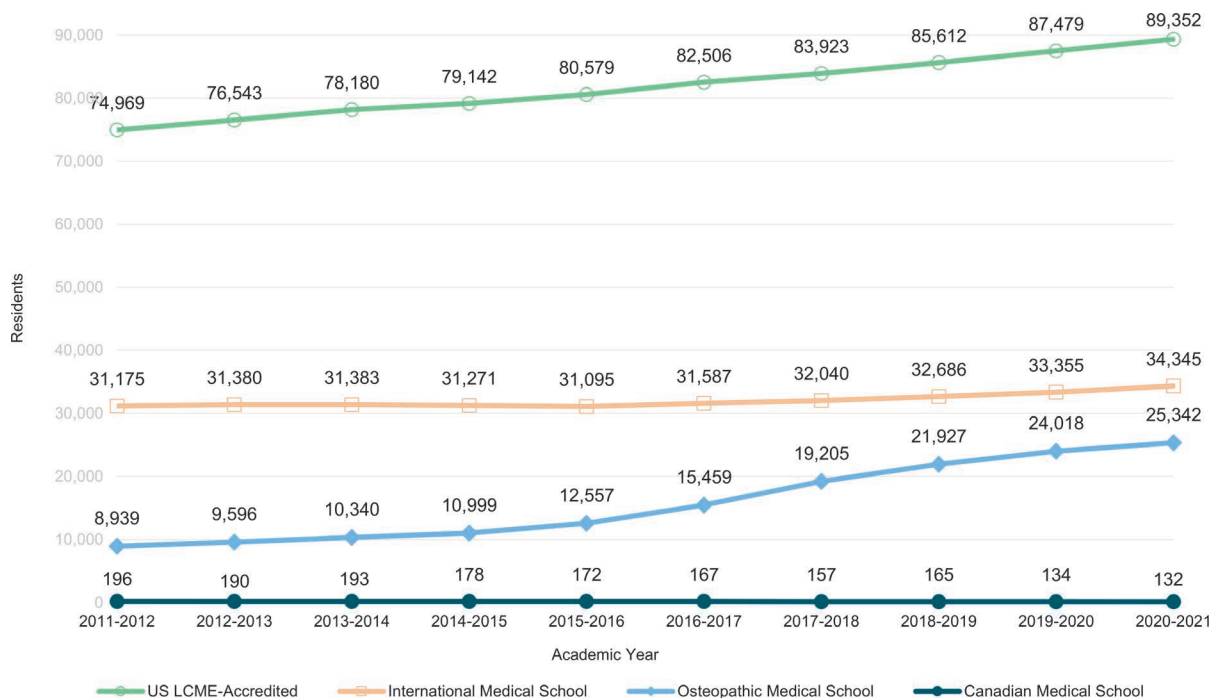
Number of Active Residents by Medical School Type



Notes: Total number of active residents in specialty programs = 123,279. Total number of active residents in subspecialty programs = 25,921.

FIGURE C.14

Number of Active Residents by Medical School Type and Academic Year, 2011-2012 to 2020-2021



Note: Not shown are those graduates for which the specific U.S. medical school is unknown. Abbreviations: LCME, Liaison Committee on Medical Education.

Specialty	Total Residents	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
OVERALL	149,200	89,352	59.9%	34,345	23.0%	25,342	17.0%	132	0.1%	29	0.0%
TOTAL PIPELINE	121,110	73,292	60.5%	25,885	21.4%	21,871	18.1%	38	0.0%	24	0.0%
Allergy and immunology	312	221	70.8%	54	17.3%	37	11.9%	0	0.0%	0	0.0%
Anesthesiology	6,895	4,745	68.8%	891	12.9%	1,254	18.2%	2	0.0%	3	0.0%
- Adult cardiothoracic anesthesiology	235	162	68.9%	38	16.2%	32	13.6%	3	1.3%	0	0.0%
- Clinical informatics	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	194	127	65.5%	41	21.1%	24	12.4%	2	1.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	77	57	74.0%	13	16.9%	7	9.1%	0	0.0%	0	0.0%
- Obstetric anesthesiology	48	32	66.7%	8	16.7%	7	14.6%	1	2.1%	0	0.0%
- Pain medicine (multidisciplinary)	400	266	66.5%	61	15.2%	70	17.5%	3	0.7%	0	0.0%
- Pediatric anesthesiology	185	117	63.2%	45	24.3%	23	12.4%	0	0.0%	0	0.0%
Colon and rectal surgery	105	82	78.1%	16	15.2%	4	3.8%	3	2.9%	0	0.0%
Dermatology	1,612	1,382	85.7%	56	3.5%	172	10.7%	2	0.1%	0	0.0%
- Dermatopathology (multidisciplinary)	69	48	69.6%	15	21.7%	5	7.2%	1	1.4%	0	0.0%
- Micrographic surgery and dermatologic oncology	86	76	88.4%	3	3.5%	7	8.1%	0	0.0%	0	0.0%
Emergency medicine	8,642	5,795	67.1%	488	5.6%	2,357	27.3%	2	0.0%	0	0.0%
- Clinical informatics	10	7	70.0%	3	30.0%	0	0.0%	0	0.0%	0	0.0%
- Emergency medical services	86	59	68.6%	10	11.6%	17	19.8%	0	0.0%	0	0.0%
- Medical toxicology	79	62	78.5%	5	6.3%	12	15.2%	0	0.0%	0	0.0%
- Pediatric emergency medicine	134	74	55.2%	37	27.6%	23	17.2%	0	0.0%	0	0.0%
- Sports medicine	16	9	56.3%	3	18.8%	4	25.0%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	11	7	63.6%	2	18.2%	2	18.2%	0	0.0%	0	0.0%
Family medicine	14,225	5,806	40.8%	3,721	26.2%	4,694	33.0%	2	0.0%	2	0.0%
- Clinical informatics	10	8	80.0%	2	20.0%	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	39	15	38.5%	19	48.7%	5	12.8%	0	0.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	401	223	55.6%	104	25.9%	73	18.2%	1	0.2%	0	0.0%
- Sports medicine	278	123	44.2%	31	11.2%	124	44.6%	0	0.0%	0	0.0%
Internal medicine	30,087	13,230	44.0%	11,714	38.9%	5,126	17.0%	6	0.0%	11	0.0%
- Adult congenital heart disease	28	19	67.9%	6	21.4%	3	10.7%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	101	46	45.5%	42	41.6%	11	10.9%	2	2.0%	0	0.0%
- Cardiovascular disease	3,240	1,667	51.5%	1,224	37.8%	345	10.6%	4	0.1%	0	0.0%
- Clinical cardiac electrophysiology	276	144	52.2%	108	39.1%	22	8.0%	2	0.7%	0	0.0%
- Clinical informatics	36	24	66.7%	7	19.4%	5	13.9%	0	0.0%	0	0.0%
- Critical care medicine	280	97	34.6%	127	45.4%	55	19.6%	1	0.4%	0	0.0%
- Endocrinology, diabetes, and metabolism	689	257	37.3%	369	53.6%	62	9.0%	1	0.1%	0	0.0%
- Gastroenterology	1,844	1,087	58.9%	546	29.6%	209	11.3%	2	0.1%	0	0.0%
- Geriatric medicine	272	76	27.9%	163	59.9%	33	12.1%	0	0.0%	0	0.0%
- Hematology	18	15	83.3%	3	16.7%	0	0.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	1,895	1,103	58.2%	656	34.6%	134	7.1%	2	0.1%	0	0.0%
- Infectious disease	763	350	45.9%	308	40.4%	101	13.2%	3	0.4%	1	0.1%
- Interventional cardiology	355	148	41.7%	173	48.7%	32	9.0%	1	0.3%	1	0.3%
- Nephrology	829	175	21.1%	543	65.5%	110	13.3%	1	0.1%	0	0.0%
- Medical oncology	34	17	50.0%	16	47.1%	1	2.9%	0	0.0%	0	0.0%
- Pulmonary disease	70	1	1.4%	57	81.4%	12	17.1%	0	0.0%	0	0.0%
- Pulmonary disease and critical care medicine	2,085	1,011	48.5%	808	38.8%	266	12.8%	0	0.0%	0	0.0%
- Rheumatology	520	251	48.3%	193	37.1%	76	14.6%	0	0.0%	0	0.0%
- Sleep medicine (multidisciplinary)	190	84	44.2%	85	44.7%	20	10.5%	1	0.5%	0	0.0%
- Transplant hepatology	47	32	68.1%	13	27.7%	2	4.3%	0	0.0%	0	0.0%
Medical genetics and genomics	68	39	57.4%	26	38.2%	3	4.4%	0	0.0%	0	0.0%
- Medical biochemical genetics	14	6	42.9%	7	50.0%	1	7.1%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	57	27	47.4%	27	47.4%	3	5.3%	0	0.0%	0	0.0%
Neurological surgery	1,561	1,378	88.3%	117	7.5%	64	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	3,221	1,713	53.2%	1,051	32.6%	455	14.1%	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	143	83	58.0%	44	30.8%	16	11.2%	0	0.0%	0	0.0%
- Epilepsy	134	73	54.5%	52	38.8%	8	6.0%	1	0.7%	0	0.0%
- Endovascular surgical neuroradiology	3	1	33.3%	2	66.7%	0	0.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	26	21	80.8%	2	7.7%	2	7.7%	1	3.8%	0	0.0%
- Neuromuscular medicine	74	51	68.9%	14	18.9%	7	9.5%	2	2.7%	0	0.0%
- Vascular neurology	162	70	43.2%	72	44.4%	18	11.1%	2	1.2%	0	0.0%
Child neurology	419	312	74.5%	72	17.2%	35	8.4%	0	0.0%	0	0.0%
Nuclear medicine	69	14	20.3%	52	75.4%	3	4.3%	0	0.0%	0	0.0%
Obstetrics and gynecology	5,769	4,409	76.4%	424	7.3%	934	16.2%	0	0.0%	2	0.0%
- Female pelvic medicine and reconstructive surgery	146	123	84.2%	12	8.2%	11	7.5%	0	0.0%	0	0.0%
- Gynecologic oncology	221	194	87.8%	7	3.2%	17	7.7%	3	1.4%	0	0.0%
- Maternal-fetal medicine	391	309	79.0%	50	12.8%	32	8.2%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	166	144	86.7%	15	9.0%	6	3.6%	1	0.6%	0	0.0%
- Complex family planning	32	30	93.8%	0	0.0%	2	6.3%	0	0.0%	0	0.0%
Ophthalmology	1,531	1,384	90.4%	68	4.4%	77	5.0%	2	0.1%	0	0.0%
- Ophthalmic plastic and reconstructive surgery	3	3	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Orthopaedic surgery	4,415	3,743	84.8%	66	1.5%	606	13.7%	0	0.0%	0	0.0%
- Adult reconstructive orthopaedics	50	40	80.0%	1	2.0%	9	18.0%	0	0.0%	0	0.0%
- Foot and ankle orthopaedics	17	14	82.4%	2	11.8%	0	0.0%	1	5.9%	0	0.0%
- Hand surgery	155	140	90.3%	0	0.0%	12	7.7%	3	1.9%	0	0.0%
- Musculoskeletal oncology	16	13	81.3%	3	18.8%	0	0.0%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	211	169	80.1%	11	5.2%	29	13.7%	2	0.9%	0	0.0%
- Orthopaedic surgery of the spine	25	18	72.0%	2	8.0%	5	20.0%	0	0.0%	0	0.0%
- Orthopaedic trauma	20	15	75.0%	1	5.0%	3	15.0%	1	5.0%	0	0.0%
- Pediatric orthopaedics	34	25	73.5%	6	17.6%	2	5.9%	1	2.9%	0	0.0%
Osteopathic neuromusculoskeletal medicine	68	3	4.4%	0	0.0%	65	95.6%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	1,723	1,571	91.2%	38	2.2%	114	6.6%	0	0.0%	0	0.0%
- Neurotology	36	33	91.7%	2	5.6%	0	0.0%	1	2.8%	0	0.0%
- Pediatric otolaryngology	34	27	79.4%	5	14.7%	1	2.9%	1	2.9%	0	0.0%
Pathology-anatomic and clinical	2,346	965	41.1%	1,143	48.7%	235	10.0%	2	0.1%	1	0.0%
- Blood banking/transfusion medicine	52	32	61.5%	16	30.8%	4	7.7%	0	0.0%	0	0.0%
- Clinical informatics	19	11	57.9%	8	42.1%	0	0.0%	0	0.0%	0	0.0%
- Chemical pathology	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Cytopathology	127	53	41.7%	61	48.0%	12	9.4%	1	0.8%	0	0.0%
- Forensic pathology	49	29	59.2%	11	22.4%	7	14.3%	2	4.1%	0	0.0%
- Hematopathology	117	48	41.0%	57	48.7%	10	8.5%	2	1.7%	0	0.0%
- Medical microbiology	16	9	56.3%	6	37.5%	1	6.3%	0	0.0%	0	0.0%
- Neuropathology	53	32	60.4%	15	28.3%	5	9.4%	1	1.9%	0	0.0%
- Pediatric pathology	21	15	71.4%	4	19.0%	1	4.8%	1	4.8%	0	0.0%
- Selective pathology	176	54	30.7%	104	59.1%	12	6.8%	6	3.4%	0	0.0%
Pediatrics	9,419	5,861	62.2%	2,000	21.2%	1,554	16.5%	3	0.0%	1	0.0%
- Adolescent medicine	97	74	76.3%	9	9.3%	14	14.4%	0	0.0%	0	0.0%
- Child abuse pediatrics	44	28	63.6%	7	15.9%	9	20.5%	0	0.0%	0	0.0%
- Clinical informatics	19	18	94.7%	0	0.0%	1	5.3%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	114	66	57.9%	32	28.1%	16	14.0%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	783	462	59.0%	230	29.4%	89	11.4%	2	0.3%	0	0.0%
- Pediatric cardiology	468	328	70.1%	103	22.0%	36	7.7%	1	0.2%	0	0.0%
- Pediatric critical care medicine	575	379	65.9%	138	24.0%	57	9.9%	0	0.0%	1	0.2%
- Pediatric emergency medicine	434	319	73.5%	57	13.1%	58	13.4%	0	0.0%	0	0.0%
- Pediatric endocrinology	230	121	52.6%	86	37.4%	23	10.0%	0	0.0%	0	0.0%
- Pediatric gastroenterology	329	217	66.0%	84	25.5%	28	8.5%	0	0.0%	0	0.0%

TABLE C.15 Continued

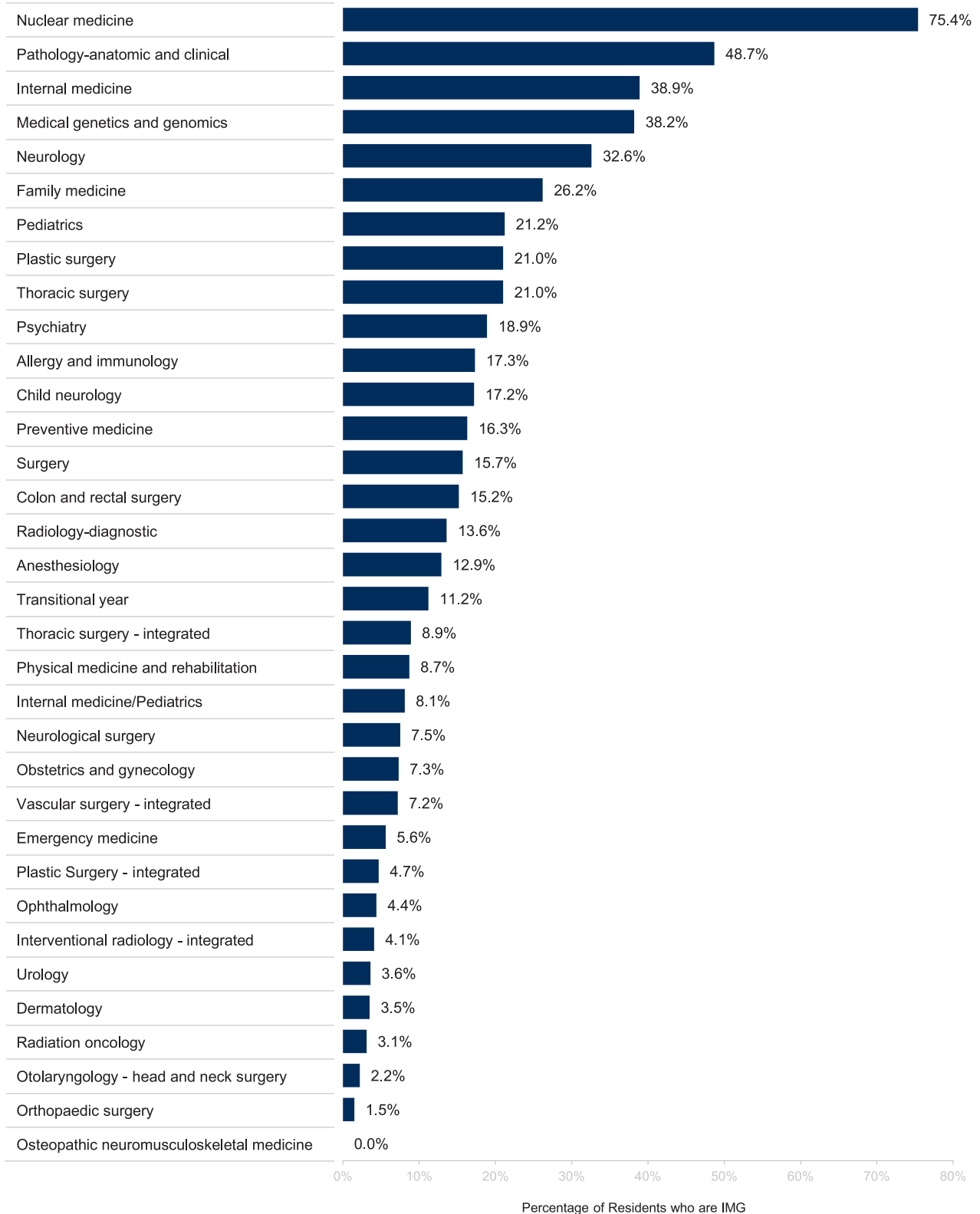
Number of Active Residents by Specialty and Subspecialty and Medical School Type

Specialty	Total Residents	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
- Pediatric hematology/oncology	475	313	65.9%	107	22.5%	54	11.4%	1	0.2%	0	0.0%
- Pediatric infectious diseases	175	106	60.6%	49	28.0%	20	11.4%	0	0.0%	0	0.0%
- Pediatric nephrology	120	80	66.7%	32	26.7%	7	5.8%	0	0.0%	1	0.8%
- Pediatric pulmonology	176	95	54.0%	62	35.2%	19	10.8%	0	0.0%	0	0.0%
- Pediatric rheumatology	88	66	75.0%	12	13.6%	10	11.4%	0	0.0%	0	0.0%
- Sports medicine	26	15	57.7%	4	15.4%	7	26.9%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	11	8	72.7%	1	9.1%	2	18.2%	0	0.0%	0	0.0%
- Pediatric hospital medicine	115	100	87.0%	4	3.5%	11	9.6%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	1,510	847	56.1%	132	8.7%	531	35.2%	0	0.0%	0	0.0%
- Brain injury medicine	17	9	52.9%	4	23.5%	4	23.5%	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	19	13	68.4%	5	26.3%	1	5.3%	0	0.0%	0	0.0%
- Pediatric rehabilitation medicine	30	20	66.7%	3	10.0%	7	23.3%	0	0.0%	0	0.0%
- Sports medicine	33	22	66.7%	5	15.2%	6	18.2%	0	0.0%	0	0.0%
Plastic surgery	214	146	68.2%	45	21.0%	23	10.7%	0	0.0%	0	0.0%
Plastic surgery - integrated	1,009	953	94.4%	47	4.7%	9	0.9%	0	0.0%	0	0.0%
- Craniofacial surgery	7	5	71.4%	2	28.6%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	23	17	73.9%	3	13.0%	0	0.0%	2	8.7%	1	4.3%
Preventive medicine	350	227	64.9%	57	16.3%	65	18.6%	1	0.3%	0	0.0%
- Medical toxicology	3	3	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	6,976	4,376	62.7%	1,318	18.9%	1,280	18.3%	2	0.0%	0	0.0%
- Addiction medicine (multidisciplinary)	129	76	58.9%	26	20.2%	26	20.2%	1	0.8%	0	0.0%
- Addiction psychiatry	86	44	51.2%	28	32.6%	13	15.1%	1	1.2%	0	0.0%
- Child and adolescent psychiatry	919	503	54.7%	261	28.4%	154	16.8%	1	0.1%	0	0.0%
- Forensic psychiatry	80	55	68.8%	16	20.0%	9	11.3%	0	0.0%	0	0.0%
- Geriatric psychiatry	44	21	47.7%	19	43.2%	4	9.1%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	82	51	62.2%	20	24.4%	10	12.2%	1	1.2%	0	0.0%
Radiation oncology	773	736	95.2%	24	3.1%	13	1.7%	0	0.0%	0	0.0%
Radiology-diagnostic	4,557	3,314	72.7%	621	13.6%	621	13.6%	1	0.0%	0	0.0%
- Abdominal radiology	46	19	41.3%	17	37.0%	1	2.2%	9	19.6%	0	0.0%
- Endovascular surgical neuroradiology	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
- Musculoskeletal radiology	40	27	67.5%	9	22.5%	3	7.5%	1	2.5%	0	0.0%
- Neuroradiology	272	171	62.9%	77	28.3%	21	7.7%	3	1.1%	0	0.0%
- Nuclear radiology	7	4	57.1%	3	42.9%	0	0.0%	0	0.0%	0	0.0%
- Pediatric radiology	51	31	60.8%	9	17.6%	11	21.6%	0	0.0%	0	0.0%
Interventional radiology - independent	184	122	66.3%	42	22.8%	19	10.3%	1	0.5%	0	0.0%
Interventional radiology - integrated	591	521	88.2%	24	4.1%	46	7.8%	0	0.0%	0	0.0%
Surgery	9,063	6,390	70.5%	1,421	15.7%	1,242	13.7%	7	0.1%	3	0.0%
- Complex general surgical oncology	120	101	84.2%	14	11.7%	4	3.3%	1	0.8%	0	0.0%
- Hand surgery	7	3	42.9%	3	42.9%	1	14.3%	0	0.0%	0	0.0%
- Pediatric surgery	86	73	84.9%	10	11.6%	3	3.5%	0	0.0%	0	0.0%
- Surgical critical care	299	217	72.6%	40	13.4%	41	13.7%	1	0.3%	0	0.0%
- Vascular surgery	255	176	69.0%	45	17.6%	34	13.3%	0	0.0%	0	0.0%
Vascular surgery - integrated	332	292	88.0%	24	7.2%	14	4.2%	1	0.3%	1	0.3%
Thoracic surgery	243	176	72.4%	51	21.0%	15	6.2%	1	0.4%	0	0.0%
- Congenital cardiac surgery	11	10	90.9%	0	0.0%	1	9.1%	0	0.0%	0	0.0%
Thoracic surgery - integrated	203	180	88.7%	18	8.9%	5	2.5%	0	0.0%	0	0.0%
Urology	1,768	1,591	90.0%	63	3.6%	114	6.4%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	37	30	81.1%	5	13.5%	2	5.4%	0	0.0%	0	0.0%
- Pediatric urology	18	16	88.9%	1	5.6%	0	0.0%	1	5.6%	0	0.0%
Transitional year	1,693	1,075	63.5%	190	11.2%	428	25.3%	0	0.0%	0	0.0%
Internal medicine/Pediatrics	1,510	1,247	82.6%	122	8.1%	141	9.3%	0	0.0%	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	-	149,200	89,352	34,345	25,342	132	29
Alabama	AL	1,669	1,089	371	208	1	0
Alaska	AK	37	23	2	12	0	0
Arizona	AZ	2,088	1,220	378	489	1	0
Arkansas	AR	1,041	539	365	137	0	0
California	CA	13,646	10,441	1,570	1,612	22	1
Colorado	CO	1,726	1,329	81	316	0	0
Connecticut	CT	2,524	1,390	877	256	1	0
Delaware	DE	378	188	59	131	0	0
District of Columbia	DC	1,773	1,152	501	120	0	0
Florida	FL	7,583	3,479	2,436	1,663	1	4
Georgia	GA	3,056	1,892	744	416	3	1
Hawaii	HI	462	294	77	91	0	0
Idaho	ID	174	87	31	56	0	0
Illinois	IL	6,916	4,107	1,662	1,141	3	3
Indiana	IN	1,575	965	247	363	0	0
Iowa	IA	1,025	616	205	204	0	0
Kansas	KS	893	555	143	195	0	0
Kentucky	KY	1,577	906	306	362	0	3
Louisiana	LA	2,322	1,457	679	184	2	0
Maine	ME	349	215	39	94	0	1
Maryland	MD	3,350	2,335	727	278	8	2
Massachusetts	MA	5,934	4,323	1,194	386	29	2
Michigan	MI	7,432	3,145	2,079	2,202	6	0
Minnesota	MN	2,420	1,778	428	209	5	0
Mississippi	MS	871	479	175	217	0	0
Missouri	MO	3,207	2,072	609	522	3	1
Montana	MT	82	43	10	29	0	0
Nebraska	NE	870	482	238	150	0	0
Nevada	NV	884	329	193	362	0	0
New Hampshire	NH	461	334	83	44	0	0
New Jersey	NJ	3,966	1,209	1,689	1,067	1	0
New Mexico	NM	695	419	139	137	0	0
New York	NY	18,944	9,465	7,188	2,269	15	7
North Carolina	NC	4,010	2,983	412	611	4	0
North Dakota	ND	178	87	77	14	0	0
Ohio	OH	7,421	3,979	1,556	1,880	3	3
Oklahoma	OK	1,242	502	168	571	1	0
Oregon	OR	1,070	770	94	206	0	0
Pennsylvania	PA	9,465	5,179	2,092	2,186	7	1
Puerto Rico	PR	963	599	363	1	0	0
Rhode Island	RI	899	656	160	82	1	0
South Carolina	SC	1,691	1,154	154	383	0	0
South Dakota	SD	161	79	41	41	0	0
Tennessee	TN	2,687	1,988	410	287	2	0
Texas	TX	9,910	6,472	1,936	1,496	6	0
Utah	UT	897	765	60	69	3	0
Vermont	VT	328	262	37	29	0	0
Virginia	VA	2,992	1,863	462	667	0	0
Washington	WA	2,231	1,766	129	333	3	0
West Virginia	WV	989	450	311	228	0	0
Wisconsin	WI	2,094	1,436	341	316	1	0
Wyoming	WY	42	5	17	20	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	30.8	30.1	32.6	30.5	32.8	32.9
TOTAL PIPELINE	29.8	29.1	31.5	29.8	30.2	32.3
Allergy and immunology	32.7	32.3	33.8	33.2		
Anesthesiology	29.5	29.1	32.4	29.6	33.0	27.5
- Adult cardiothoracic anesthesiology	33.3	32.8	35.4	33.3	32.0	
- Clinical informatics						
- Critical care medicine	34.6	34.7	34.6	33.9	34.5	
- Regional anesthesiology and acute pain medicine	32.8	32.5	34.2	32.4		
- Obstetric anesthesiology	33.4	33.2	34.0	33.7	33.0	
- Pain medicine (multidisciplinary)	33.4	32.8	35.4	34.0	33.0	
- Pediatric anesthesiology	33.5	33.3	33.7	34.0		
Colon and rectal surgery	34.2	34.0	35.4	34.0	32.0	
Dermatology	30.0	29.7	33.5	31.0		
- Dermatopathology (multidisciplinary)	34.7	33.7	37.9	35.6	30.0	
- Micrographic surgery and dermatologic oncology	34.1	34.0	39.0	33.0		
Emergency medicine	29.6	29.2	31.4	30.1		
- Clinical informatics	34.4	36.0	32.3			
- Emergency medical services	33.7	33.7	33.6	33.8		
- Medical toxicology	33.5	33.1	35.3	34.2		
- Pediatric emergency medicine	32.1	31.4	33.9	32.1		
- Sports medicine	31.3	31.0	32.0	31.5		
- Undersea and hyperbaric medicine	35.3	35.6	36.0	33.5		
Family medicine	30.6	29.6	32.7	30.1	30.0	28.0
- Clinical informatics	33.0	32.8	33.5			
- Geriatric medicine	34.4	33.9	35.5	32.0		
- Hospice and palliative medicine (multidisciplinary)	36.1	36.2	36.4	34.9	49.0	
- Sports medicine	32.9	32.3	33.5	33.3		
Internal medicine	29.6	28.8	30.8	29.4	27.3	31.1
- Adult congenital heart disease	34.6	34.7	34.3	34.7		
- Advanced heart failure and transplant cardiology	34.9	33.8	36.3	34.6	33.0	
- Cardiovascular disease	32.1	31.5	33.0	32.0		
- Clinical cardiac electrophysiology	34.9	34.5	35.9	33.7	33.0	
- Clinical informatics	33.7	32.5	39.7	33.3		
- Critical care medicine	34.1	33.6	34.8	33.1		
- Endocrinology, diabetes, and metabolism	32.9	32.1	33.4	32.7		
- Gastroenterology	31.9	31.4	32.9	32.1		
- Geriatric medicine	34.4	33.4	35.1	33.4		
- Hematology	31.1	31.3	30.5			
- Hematology and medical oncology	32.7	32.3	33.2	32.5	28.0	
- Infectious disease	33.2	32.6	33.9	33.0	33.5	29.0
- Interventional cardiology	35.2	34.6	35.7	35.2	34.0	35.0
- Nephrology	34.6	32.6	35.4	33.4	44.0	
- Medical oncology	32.7	31.8	33.6	34.0		
- Pulmonary disease	34.2	31.0	34.4	33.5		
- Pulmonary disease and critical care medicine	32.3	31.8	33.1	32.1		
- Rheumatology	32.2	31.5	32.8	32.3		
- Sleep medicine (multidisciplinary)	35.0	33.9	36.2	34.1	30.0	
- Transplant hepatology	35.1	34.8	35.6	36.5		
Medical genetics and genomics	36.4	34.9	40.0	34.0		
- Medical biochemical genetics	35.3	32.8	37.4	35.0		
- Molecular genetic pathology (multidisciplinary)	37.8	35.6	40.0	39.0		
Neurological surgery	29.2	29.0	31.3	30.5		
- Endovascular surgical neuroradiology	36.0	36.0				

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
Neurology	30.1	29.4	31.3	29.8	26.0	
- Brain injury medicine	31.0	31.0				
- Clinical neurophysiology	34.2	32.8	36.9	34.1		
- Epilepsy	34.5	34.2	35.2	33.8	29.0	
- Endovascular surgical neuroradiology	41.3	42.0	41.0			
- Neurodevelopmental disabilities	31.5	31.8	29.0	32.0		
- Neuromuscular medicine	33.4	33.5	33.6	32.7	29.0	
- Vascular neurology	34.1	34.0	34.4	33.6	31.5	
Child neurology	30.9	30.5	32.4	31.7		
Nuclear medicine	34.9	35.0	34.9			
Obstetrics and gynecology	28.7	28.4	31.0	28.7		28.0
- Female pelvic medicine and reconstructive surgery	32.6	32.3	34.4	33.0		
- Gynecologic oncology	32.5	32.4	35.7	32.3	31.0	
- Maternal-fetal medicine	32.8	32.4	34.3	34.0		
- Reproductive endocrinology and infertility	32.3	32.1	35.3	32.0	34.0	
- Complex family planning	32.4	32.3		33.5		
Ophthalmology	29.6	29.4	34.0	30.0		
- Ophthalmic plastic and reconstructive surgery	32.7	32.7				
Orthopaedic surgery	28.6	28.5	31.1	29.4		
- Adult reconstructive orthopaedics	34.1	33.7	35.0	35.7		
- Foot and ankle orthopaedics	34.6	34.4	39.0		30.0	
- Hand surgery	33.7	33.7		34.8	33.7	
- Musculoskeletal oncology	35.6	34.7	39.7			
- Orthopaedic sports medicine	33.9	33.6	37.9	34.3	34.0	
- Orthopaedic surgery of the spine	34.0	33.5	34.0	36.0		
- Orthopaedic trauma	33.7	33.7	37.0	32.7	32.0	
- Pediatric orthopaedics	33.7	32.8	37.7	33.0	36.0	
Osteopathic neuromusculoskeletal medicine	31.3			31.3		
Otolaryngology - head and neck surgery	28.4	28.3	30.6	29.4		
- Neurotology	34.7	34.8			33.0	
- Pediatric otolaryngology	34.0	33.6	36.8	32.0	31.0	
Pathology-anatomic and clinical	32.6	31.0	34.3	31.2		44.0
- Blood banking/transfusion medicine	36.2	34.9	39.2	34.3		
- Clinical informatics	38.0	38.6	35.5			
- Chemical pathology						
- Cytopathology	35.9	34.4	37.5	34.3	32.0	
- Forensic pathology	35.2	34.9	36.3	34.6	35.5	
- Hematopathology	37.0	35.2	39.1	34.4	33.5	
- Medical microbiology	34.0	34.1	33.8	34.0		
- Neuropathology	34.6	33.3	37.3	35.0		
- Pediatric pathology	34.4	32.9	41.0	32.0	33.0	
- Selective pathology	36.7	33.8	38.7	32.8	35.0	
Pediatrics	29.0	28.5	30.4	28.9	32.0	27.0
- Adolescent medicine	32.4	32.1	37.0	31.2		
- Child abuse pediatrics	31.4	32.5	30.0	30.5		
- Clinical informatics	33.6	33.6				
- Developmental-behavioral pediatrics	34.7	34.4	36.4	32.5		
- Neonatal-perinatal medicine	32.7	31.9	34.3	32.4	31.0	
- Pediatric cardiology	31.9	31.7	32.5	32.1		
- Pediatric critical care medicine	31.9	31.7	32.7	31.9		
- Pediatric emergency medicine	32.1	32.0	33.1	31.9		
- Pediatric endocrinology	32.0	31.1	33.1	32.2		
- Pediatric gastroenterology	31.5	31.4	31.6	31.5		

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 hematology/oncology	32.4	32.2	33.3	32.1		
- Pediatric infectious diseases	33.6	33.2	34.5	33.3		
- Pediatric nephrology	32.7	31.2	35.2	34.3		42.0
- Pediatric pulmonology	32.4	32.0	33.7	31.8		
- Pediatric rheumatology	31.1	31.0	29.0	31.8		
- Sports medicine	32.2	31.5	34.0	32.9		
- Pediatric transplant hepatology	34.9	34.0	44.0	34.0		
- Pediatric hospital medicine	31.2	31.1	33.0	31.0		
Physical medicine and rehabilitation	30.2	29.7	34.2	30.1		
- Brain injury medicine	33.3	32.0	36.0	33.5		
- Neuromuscular medicine	32.0	32.0				
- Spinal cord injury medicine	31.9	31.4	33.4	32.0		
- Pediatric rehabilitation medicine	33.1	31.4	42.0	33.0		
- Sports medicine	32.6	32.1	34.2	33.2		
Plastic surgery	34.5	34.0	36.5	35.0		
Plastic surgery - integrated	28.5	28.4	29.4	30.0		
- Craniofacial surgery	34.0	34.2	33.5			
- Hand surgery	34.8	34.6	37.7		31.0	37.0
Preventive medicine	37.3	37.3	39.5	35.0		
- Medical toxicology	32.0	32.0				
- Undersea and hyperbaric medicine	34.0	34.0				
Psychiatry	30.2	29.6	32.9	29.9	30.0	
- Addiction medicine (multidisciplinary)	38.2	37.8	37.2	40.5	39.0	
- Addiction psychiatry	34.7	34.1	36.1	34.2	31.0	
- Child and adolescent psychiatry	33.7	32.8	35.2	33.8		
- Forensic psychiatry	34.3	34.2	34.4	34.8		
- Geriatric psychiatry	34.9	33.8	36.2	34.5		
- Consultation-liaison psychiatry	33.4	33.0	34.7	33.3	32.0	
Radiation oncology	30.4	30.2	34.0	34.0		
Radiology-diagnostic	30.4	30.0	32.1	30.9	30.0	
- Abdominal radiology	34.4	33.7	36.1	37.0	32.4	
- Endovascular surgical neuroradiology	34.5	34.0	35.0			
- Musculoskeletal radiology	34.9	34.6	37.0	33.0	31.0	
- Neuroradiology	34.9	34.1	36.6	35.1	37.3	
- Nuclear radiology	35.9	32.5	40.3			
- Pediatric radiology	34.6	34.2	35.4	35.4		
Interventional radiology - independent	34.6	34.0	36.0	34.8	34.0	
Interventional radiology - integrated	29.8	29.8	28.0	30.0		
Surgery	29.4	29.0	31.0	29.7		37.3
- Complex general surgical oncology	35.1	35.1	36.0	36.0	32.0	
- Hand surgery	33.9	35.0	33.7	31.0		
- Pediatric surgery	35.5	35.6	34.6	38.0		
- Surgical critical care	35.4	35.2	36.0	35.7	31.0	
- Vascular surgery	34.0	33.9	34.9	33.5		
Vascular surgery - integrated	29.1	28.5	34.3	29.0	35.0	43.0
Thoracic surgery	34.9	34.9	36.4	33.2	31.0	
- Congenital cardiac surgery	36.8	37.1		34.0		
Thoracic surgery - integrated	28.5	28.3	28.5	34.0		
Urology	28.5	28.4	30.8	29.2		
- Female pelvic medicine and reconstructive surgery	33.0	32.6	34.0	34.0		
- Pediatric urology	34.4	34.4	34.0		35.0	
Transitional year	29.5	28.9	32.5	29.8		
Internal medicine/Pediatrics	28.6	28.4	30.4	29.2		

Note: Pipeline specialties are highlighted.

Abbreviations: LCME, Liaison Committee on Medical Education.

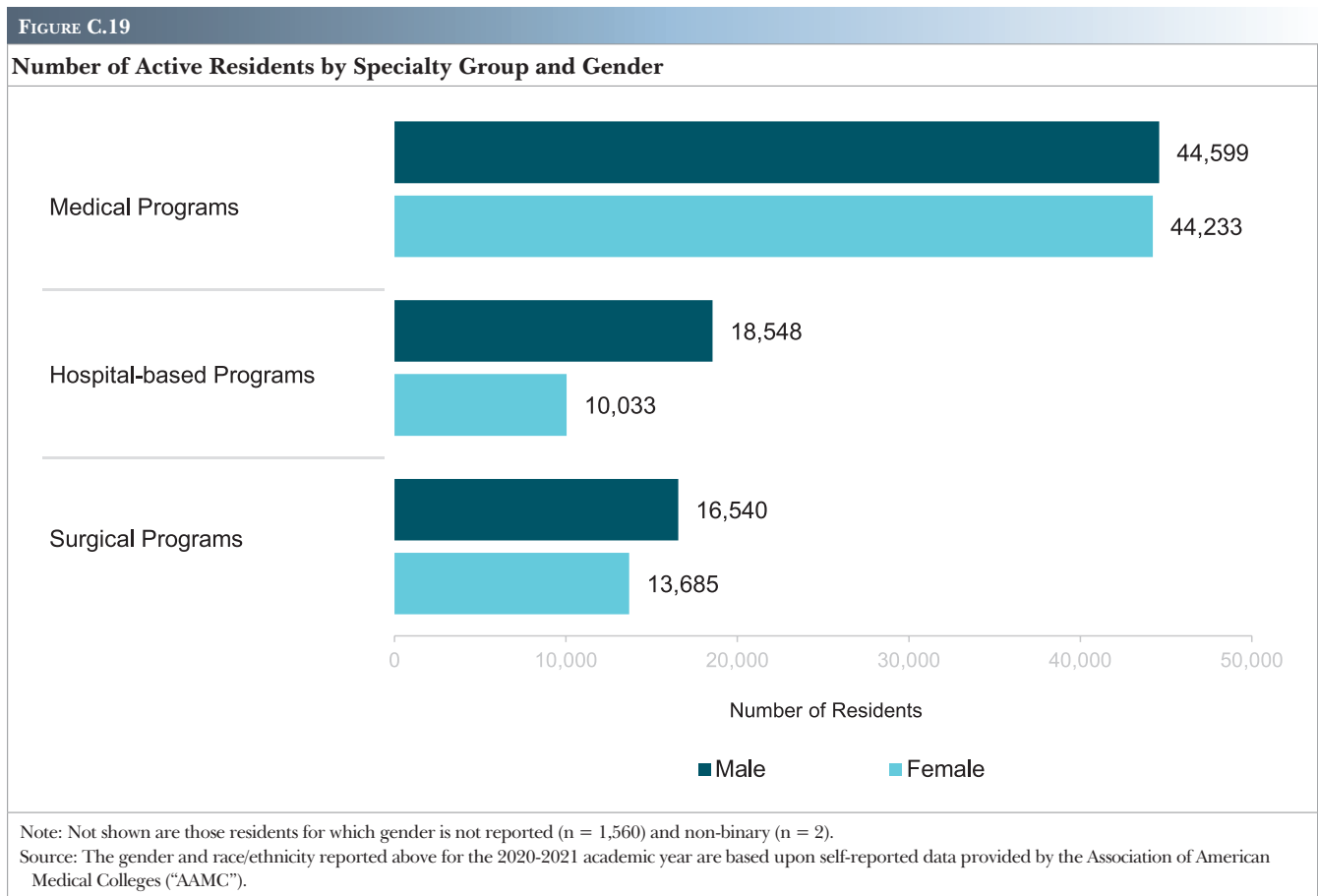
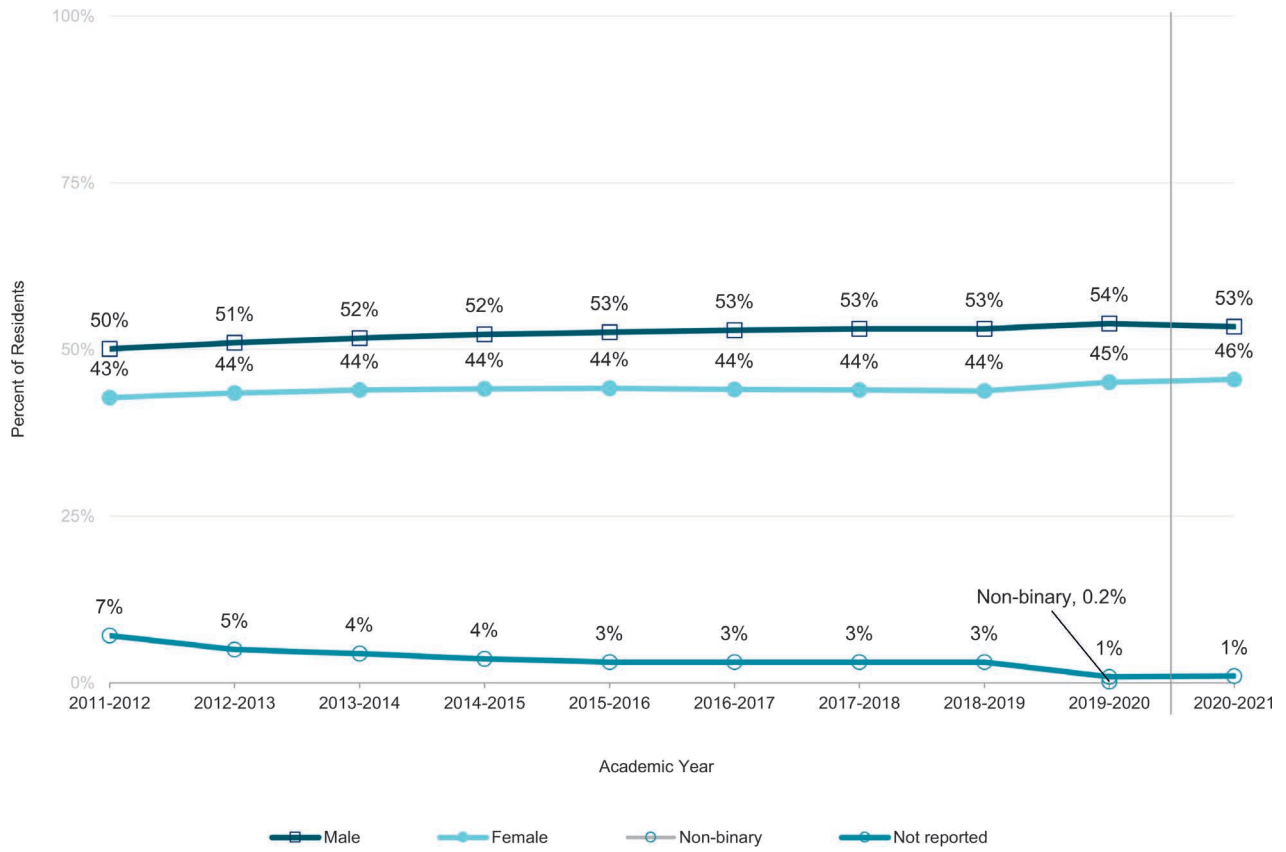


FIGURE C.20

Percent of Active Residents by Gender and Academic Year, 2011-2012 to 2020-2021



Source: The gender and race/ethnicity reported above for the 2020-2021 academic year are based upon self-reported data provided by the Association of American Medical Colleges ("AAMC").

TABLE C.21

Number of Active Residents by Specialty and Subspecialty and Gender

Specialty	Total Programs	Total Residents	Gender							
			Female		Male		Non-binary		Not Reported	
			#	%	#	%	#	%	#	%
OVERALL	12,420	149,200	67,951	45.5%	79,687	53.4%	2	0.0%	1,560	1.0%
TOTAL PIPELINE	5,187	121,110	55,459	45.8%	64,197	53.0%	1	0.0%	1,453	1.2%
Allergy and immunology	82	312	193	61.9%	118	37.8%	0	0.0%	1	0.3%
Anesthesiology	161	6,895	2,264	32.8%	4,601	66.7%	1	0.0%	29	0.4%
- Adult cardiothoracic anesthesiology	73	235	73	31.1%	161	68.5%	0	0.0%	1	0.4%
- Clinical informatics	1	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%
- Critical care medicine	64	194	65	33.5%	129	66.5%	0	0.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	38	77	26	33.8%	50	64.9%	0	0.0%	1	1.3%
- Obstetric anesthesiology	41	48	28	58.3%	19	39.6%	0	0.0%	1	2.1%
- Pain medicine (multidisciplinary)	111	400	104	26.0%	295	73.8%	0	0.0%	1	0.3%
- Pediatric anesthesiology	60	185	89	48.1%	95	51.4%	0	0.0%	1	0.5%
Colon and rectal surgery	66	105	40	38.1%	65	61.9%	0	0.0%	0	0.0%
Dermatology	144	1,612	944	58.6%	663	41.1%	0	0.0%	5	0.3%
- Dermatopathology (multidisciplinary)	58	69	37	53.6%	32	46.4%	0	0.0%	0	0.0%
- Micrographic surgery and dermatologic oncology	78	86	50	58.1%	36	41.9%	0	0.0%	0	0.0%
Emergency medicine	276	8,642	3,188	36.9%	5,400	62.5%	0	0.0%	54	0.6%
- Clinical informatics	5	10	1	10.0%	9	90.0%	0	0.0%	0	0.0%
- Emergency medical services	75	86	21	24.4%	65	75.6%	0	0.0%	0	0.0%
- Medical toxicology	27	79	27	34.2%	52	65.8%	0	0.0%	0	0.0%
- Pediatric emergency medicine	27	134	90	67.2%	42	31.3%	0	0.0%	2	1.5%
- Sports medicine	9	16	1	6.3%	15	93.8%	0	0.0%	0	0.0%
- Undersea and hyperbaric medicine	8	11	6	54.5%	5	45.5%	0	0.0%	0	0.0%
Family medicine	710	14,225	7,558	53.1%	6,489	45.6%	0	0.0%	178	1.3%
- Clinical informatics	6	10	2	20.0%	8	80.0%	0	0.0%	0	0.0%
- Geriatric medicine	49	39	23	59.0%	16	41.0%	0	0.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	180	401	247	61.6%	154	38.4%	0	0.0%	0	0.0%
- Sports medicine	156	278	90	32.4%	188	67.6%	0	0.0%	0	0.0%
Internal medicine	586	30,087	12,749	42.4%	16,645	55.3%	0	0.0%	693	2.3%
- Adult congenital heart disease	24	28	12	42.9%	15	53.6%	0	0.0%	1	3.6%
- Advanced heart failure and transplant cardiology	82	101	36	35.6%	64	63.4%	0	0.0%	1	1.0%
- Cardiovascular disease	255	3,240	781	24.1%	2,454	75.7%	0	0.0%	5	0.2%
- Clinical cardiac electrophysiology	112	276	34	12.3%	240	87.0%	0	0.0%	2	0.7%
- Clinical informatics	19	36	10	27.8%	26	72.2%	0	0.0%	0	0.0%
- Critical care medicine	55	280	82	29.3%	198	70.7%	0	0.0%	0	0.0%
- Endocrinology, diabetes, and metabolism	153	689	460	66.8%	226	32.8%	0	0.0%	3	0.4%
- Gastroenterology	211	1,844	681	36.9%	1,162	63.0%	0	0.0%	1	0.1%
- Geriatric medicine	114	272	177	65.1%	93	34.2%	0	0.0%	2	0.7%
- Hematology	2	18	9	50.0%	9	50.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	172	1,895	846	44.6%	1,045	55.1%	0	0.0%	4	0.2%
- Infectious disease	158	763	357	46.8%	403	52.8%	0	0.0%	3	0.4%
- Interventional cardiology	170	355	53	14.9%	301	84.8%	0	0.0%	1	0.3%
- Nephrology	152	829	317	38.2%	500	60.3%	0	0.0%	12	1.4%
- Medical oncology	6	34	17	50.0%	17	50.0%	0	0.0%	0	0.0%
- Pulmonary disease	20	70	28	40.0%	41	58.6%	0	0.0%	1	1.4%
- Pulmonary disease and critical care medicine	188	2,085	727	34.9%	1,357	65.1%	0	0.0%	1	0.0%
- Rheumatology	125	520	306	58.8%	213	41.0%	0	0.0%	1	0.2%
- Sleep medicine (multidisciplinary)	89	190	87	45.8%	103	54.2%	0	0.0%	0	0.0%
- Transplant hepatology	59	47	25	53.2%	22	46.8%	0	0.0%	0	0.0%
Medical genetics and genomics	46	68	38	55.9%	28	41.2%	0	0.0%	2	2.9%
- Medical biochemical genetics	20	14	8	57.1%	6	42.9%	0	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	42	57	26	45.6%	31	54.4%	0	0.0%	0	0.0%
Neurological surgery	116	1,561	318	20.4%	1,237	79.2%	0	0.0%	6	0.4%
- 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 Gender

Specialty	Total Programs	Total Residents	Gender							
			Female		Male		Non-binary		Not Reported	
			#	%	#	%	#	%	#	%
Neurology	170	3,221	1,497	46.5%	1,686	52.3%	0	0.0%	38	1.2%
- Brain injury medicine	1	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%
- Clinical neurophysiology	93	143	59	41.3%	84	58.7%	0	0.0%	0	0.0%
- Epilepsy	85	134	67	50.0%	67	50.0%	0	0.0%	0	0.0%
- Endovascular surgical neuroradiology	2	3	0	0.0%	3	100.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	8	26	14	53.8%	12	46.2%	0	0.0%	0	0.0%
- Neuromuscular medicine	53	74	27	36.5%	46	62.2%	0	0.0%	1	1.4%
- Vascular neurology	109	162	64	39.5%	97	59.9%	0	0.0%	1	0.6%
Child neurology	77	419	288	68.7%	129	30.8%	0	0.0%	2	0.5%
Nuclear medicine	37	69	23	33.3%	43	62.3%	0	0.0%	3	4.3%
Obstetrics and gynecology	294	5,769	4,878	84.6%	856	14.8%	0	0.0%	35	0.6%
- Female pelvic medicine and reconstructive surgery	54	146	111	76.0%	35	24.0%	0	0.0%	0	0.0%
- Gynecologic oncology	63	221	166	75.1%	55	24.9%	0	0.0%	0	0.0%
- Maternal-fetal medicine	100	391	308	78.8%	83	21.2%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	49	166	130	78.3%	35	21.1%	1	0.6%	0	0.0%
- Complex family planning	26	32	31	96.9%	1	3.1%	0	0.0%	0	0.0%
Ophthalmology	125	1,531	621	40.6%	908	59.3%	0	0.0%	2	0.1%
- Ophthalmic plastic and reconstructive surgery	4	3	1	33.3%	2	66.7%	0	0.0%	0	0.0%
Orthopaedic surgery	201	4,415	738	16.7%	3,663	83.0%	0	0.0%	14	0.3%
- Adult reconstructive orthopaedics	25	50	3	6.0%	47	94.0%	0	0.0%	0	0.0%
- Foot and ankle orthopaedics	7	17	3	17.6%	14	82.4%	0	0.0%	0	0.0%
- Hand surgery	73	155	49	31.6%	105	67.7%	0	0.0%	1	0.6%
- Musculoskeletal oncology	12	16	3	18.8%	13	81.3%	0	0.0%	0	0.0%
- Orthopaedic sports medicine	93	211	22	10.4%	188	89.1%	0	0.0%	1	0.5%
- Orthopaedic surgery of the spine	16	25	2	8.0%	23	92.0%	0	0.0%	0	0.0%
- Orthopaedic trauma	12	20	5	25.0%	15	75.0%	0	0.0%	0	0.0%
- Pediatric orthopaedics	25	34	14	41.2%	20	58.8%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	28	68	34	50.0%	34	50.0%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	125	1,723	643	37.3%	1,075	62.4%	0	0.0%	5	0.3%
- Neurotology	26	36	12	33.3%	24	66.7%	0	0.0%	0	0.0%
- Pediatric otolaryngology	31	34	18	52.9%	15	44.1%	0	0.0%	1	2.9%
Pathology-anatomic and clinical	144	2,346	1,184	50.5%	1,124	47.9%	0	0.0%	38	1.6%
- Blood banking/transfusion medicine	52	52	32	61.5%	20	38.5%	0	0.0%	0	0.0%
- Clinical informatics	11	19	5	26.3%	14	73.7%	0	0.0%	0	0.0%
- Chemical pathology	4	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Cytopathology	93	127	62	48.8%	64	50.4%	0	0.0%	1	0.8%
- Forensic pathology	45	49	31	63.3%	18	36.7%	0	0.0%	0	0.0%
- Hematopathology	86	117	52	44.4%	65	55.6%	0	0.0%	0	0.0%
- Medical microbiology	15	16	4	25.0%	12	75.0%	0	0.0%	0	0.0%
- Neuropathology	38	53	24	45.3%	28	52.8%	0	0.0%	1	1.9%
- Pediatric pathology	28	21	14	66.7%	7	33.3%	0	0.0%	0	0.0%
- Selective pathology	109	176	85	48.3%	89	50.6%	0	0.0%	2	1.1%
Pediatrics	210	9,419	6,698	71.1%	2,540	27.0%	0	0.0%	181	1.9%
- Adolescent medicine	32	97	79	81.4%	18	18.6%	0	0.0%	0	0.0%
- Child abuse pediatrics	31	44	40	90.9%	4	9.1%	0	0.0%	0	0.0%
- Clinical informatics	8	19	6	31.6%	13	68.4%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	44	114	98	86.0%	16	14.0%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	107	783	571	72.9%	208	26.6%	0	0.0%	4	0.5%
- Pediatric cardiology	64	468	240	51.3%	226	48.3%	0	0.0%	2	0.4%
- Pediatric critical care medicine	75	575	339	59.0%	234	40.7%	0	0.0%	2	0.3%
- Pediatric emergency medicine	55	434	296	68.2%	138	31.8%	0	0.0%	0	0.0%
- Pediatric endocrinology	72	230	194	84.3%	33	14.3%	0	0.0%	3	1.3%
- Pediatric gastroenterology	67	329	213	64.7%	115	35.0%	0	0.0%	1	0.3%

TABLE C.21 *Continued***Number of Active Residents by Specialty and Subspecialty and Gender**

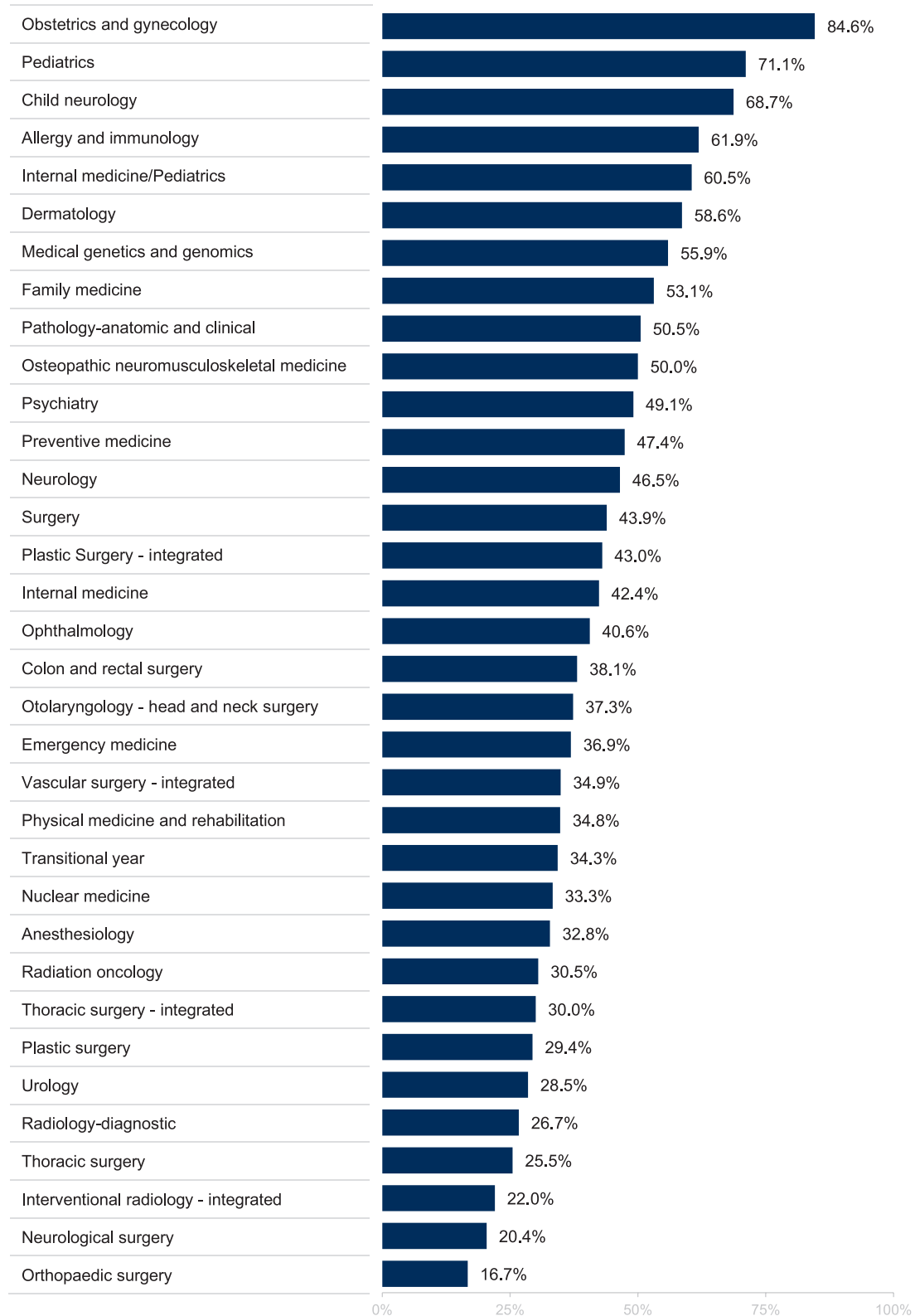
Specialty	Total Programs	Total Residents	Gender							
			Female		Male		Non-binary		Not Reported	
			#	%	#	%	#	%	#	%
- Pediatric hematology/oncology	76	475	329	69.3%	145	30.5%	0	0.0%	1	0.2%
- Pediatric infectious diseases	64	175	119	68.0%	55	31.4%	0	0.0%	1	0.6%
- Pediatric nephrology	47	120	96	80.0%	23	19.2%	0	0.0%	1	0.8%
- Pediatric pulmonology	56	176	110	62.5%	62	35.2%	0	0.0%	4	2.3%
- Pediatric rheumatology	37	88	68	77.3%	18	20.5%	0	0.0%	2	2.3%
- Sports medicine	17	26	10	38.5%	16	61.5%	0	0.0%	0	0.0%
- Pediatric transplant hepatology	17	11	7	63.6%	4	36.4%	0	0.0%	0	0.0%
- Pediatric hospital medicine	54	115	94	81.7%	21	18.3%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	98	1,510	525	34.8%	981	65.0%	0	0.0%	4	0.3%
- Brain injury medicine	25	17	13	76.5%	4	23.5%	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	19	6	31.6%	13	68.4%	0	0.0%	0	0.0%
- Pediatric rehabilitation medicine	22	30	18	60.0%	12	40.0%	0	0.0%	0	0.0%
- Sports medicine	21	33	15	45.5%	18	54.5%	0	0.0%	0	0.0%
Plastic surgery	52	214	63	29.4%	151	70.6%	0	0.0%	0	0.0%
Plastic surgery - integrated	86	1,009	434	43.0%	571	56.6%	0	0.0%	4	0.4%
- Craniofacial surgery	8	7	5	71.4%	2	28.6%	0	0.0%	0	0.0%
- Hand surgery	17	23	5	21.7%	17	73.9%	0	0.0%	1	4.3%
Preventive medicine	72	350	166	47.4%	182	52.0%	0	0.0%	2	0.6%
- Medical toxicology	1	3	1	33.3%	2	66.7%	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	287	6,976	3,428	49.1%	3,472	49.8%	0	0.0%	76	1.1%
- Addiction medicine (multidisciplinary)	85	129	59	45.7%	69	53.5%	0	0.0%	1	0.8%
- Addiction psychiatry	53	86	26	30.2%	59	68.6%	0	0.0%	1	1.2%
- Child and adolescent psychiatry	146	919	514	55.9%	405	44.1%	0	0.0%	0	0.0%
- Forensic psychiatry	49	80	47	58.8%	33	41.2%	0	0.0%	0	0.0%
- Geriatric psychiatry	64	44	32	72.7%	12	27.3%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	64	82	41	50.0%	41	50.0%	0	0.0%	0	0.0%
Radiation oncology	91	773	236	30.5%	537	69.5%	0	0.0%	0	0.0%
Radiology-diagnostic	196	4,557	1,215	26.7%	3,327	73.0%	0	0.0%	15	0.3%
- Abdominal radiology	13	46	13	28.3%	32	69.6%	0	0.0%	1	2.2%
- Endovascular surgical neuroradiology	3	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%
- Musculoskeletal radiology	20	40	8	20.0%	32	80.0%	0	0.0%	0	0.0%
- Neuroradiology	89	272	59	21.7%	207	76.1%	0	0.0%	6	2.2%
- Nuclear radiology	18	7	3	42.9%	4	57.1%	0	0.0%	0	0.0%
- Pediatric radiology	48	51	24	47.1%	27	52.9%	0	0.0%	0	0.0%
Interventional radiology - independent	95	184	27	14.7%	155	84.2%	0	0.0%	2	1.1%
Interventional radiology - integrated	92	591	130	22.0%	460	77.8%	0	0.0%	1	0.2%
Surgery	344	9,063	3,977	43.9%	5,030	55.5%	0	0.0%	56	0.6%
- Complex general surgical oncology	31	120	43	35.8%	77	64.2%	0	0.0%	0	0.0%
- Hand surgery	2	7	2	28.6%	5	71.4%	0	0.0%	0	0.0%
- Pediatric surgery	51	86	47	54.7%	39	45.3%	0	0.0%	0	0.0%
- Surgical critical care	145	299	131	43.8%	168	56.2%	0	0.0%	0	0.0%
- Vascular surgery	115	255	75	29.4%	180	70.6%	0	0.0%	0	0.0%
Vascular surgery - integrated	67	332	116	34.9%	215	64.8%	0	0.0%	1	0.3%
Thoracic surgery	74	243	62	25.5%	181	74.5%	0	0.0%	0	0.0%
- Congenital cardiac surgery	15	11	4	36.4%	7	63.6%	0	0.0%	0	0.0%
Thoracic surgery - integrated	33	203	61	30.0%	142	70.0%	0	0.0%	0	0.0%
Urology	145	1,768	504	28.5%	1,260	71.3%	0	0.0%	4	0.2%
- Female pelvic medicine and reconstructive surgery	15	37	30	81.1%	7	18.9%	0	0.0%	0	0.0%
- Pediatric urology	26	18	10	55.6%	8	44.4%	0	0.0%	0	0.0%
Transitional year	172	1,693	580	34.3%	1,092	64.5%	0	0.0%	21	1.2%
Internal medicine/Pediatrics	79	1,510	914	60.5%	593	39.3%	0	0.0%	3	0.2%

Note: Pipeline specialties are highlighted.

Source: The gender and race/ethnicity reported above for the 2020-2021 academic year are based upon self-reported data provided by the Association of American Medical Colleges ("AAMC").

FIGURE C.22

Specialties Organized by Largest Percentages of Active Female Residents



Source: The gender and race/ethnicity reported above for the 2020-2021 academic year are based upon self-reported data provided by the Association of American Medical Colleges ("AAMC").

TABLE C.23

Number of Active Residents by Specialty and Subspecialty and Race/Ethnicity

Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
OVERALL	74,025	38,394	12,552	8,305	152	61	5,702	4,050	5,959
TOTAL PIPELINE	60,618	29,720	10,282	6,918	136	51	4,801	3,135	5,449
Allergy and immunology	145	120	21	4	0	0	9	9	4
Anesthesiology	3,653	1,730	542	343	9	2	278	171	167
- Adult cardiothoracic anesthesiology	143	52	15	8	0	0	7	7	3
- Clinical informatics	1	0	0	0	0	0	0	0	0
- Critical care medicine	114	39	17	10	0	0	7	5	2
- Regional anesthesiology and acute pain medicine	43	19	6	5	0	0	2	1	1
- Obstetric anesthesiology	29	7	1	3	0	0	3	2	3
- Pain medicine (multidisciplinary)	174	150	31	19	1	0	13	9	3
- Pediatric anesthesiology	107	37	19	10	2	0	2	4	4
Colon and rectal surgery	63	20	6	5	0	0	6	1	4
Dermatology	937	350	105	78	2	0	73	41	26
- Dermatopathology (multidisciplinary)	41	15	8	1	0	0	2	1	1
- Micrographic surgery and dermatologic oncology	52	16	6	2	0	0	7	3	0
Emergency medicine	5,444	1,282	733	440	12	5	373	208	145
- Clinical informatics	5	4	0	0	0	0	1	0	0
- Emergency medical services	67	11	3	3	1	0	0	1	0
- Medical toxicology	64	7	6	1	0	0	0	1	0
- Pediatric emergency medicine	66	35	13	11	0	0	3	4	2
- Sports medicine	10	4	1	1	0	0	0	0	0
- Undersea and hyperbaric medicine	6	3	2	0	0	0	0	0	0
Family medicine	7,088	3,199	1,362	1,072	29	12	586	302	575
- Clinical informatics	4	5	0	0	0	0	1	0	0
- Geriatric medicine	15	12	6	2	0	0	3	0	1
- Hospice and palliative medicine (multidisciplinary)	231	96	28	22	0	1	10	11	2
- Sports medicine	179	45	27	15	0	0	9	2	1
Internal medicine	11,064	10,088	2,454	1,762	25	6	1,029	936	2,723
- Adult congenital heart disease	16	4	2	0	0	0	3	1	2
- Advanced heart failure and transplant cardiology	37	47	5	5	0	0	1	3	3
- Cardiovascular disease	1,305	1,243	226	188	1	0	95	138	44
- Clinical cardiac electrophysiology	111	108	12	11	0	0	9	18	7
- Clinical informatics	13	16	2	3	0	0	0	1	1
- Critical care medicine	128	85	23	14	0	0	9	15	6
- Endocrinology, diabetes, and metabolism	208	322	64	29	1	1	11	36	17
- Gastroenterology	734	762	109	91	1	2	47	77	21
- Geriatric medicine	85	102	27	20	0	0	10	13	15
- Hematology	5	10	2	1	0	0	0	0	0
- Hematology and medical oncology	834	759	113	67	0	0	49	49	24
- Infectious disease	332	223	92	40	0	0	25	27	24
- Interventional cardiology	130	154	16	20	0	0	8	22	5
- Nephrology	239	370	89	40	0	0	24	33	34
- Medical oncology	6	22	3	2	0	0	0	1	0
- Pulmonary disease	9	40	11	3	0	0	2	4	1
- Pulmonary disease and critical care medicine	981	701	145	95	1	1	66	78	17
- Rheumatology	230	185	39	17	0	0	16	24	9
- Sleep medicine (multidisciplinary)	55	85	21	8	0	0	9	9	3
- Transplant hepatology	18	17	3	3	0	0	1	3	2
Medical genetics and genomics	32	11	15	3	0	0	2	0	5
- Medical biochemical genetics	6	4	2	0	0	0	2	0	0
- Molecular genetic pathology (multidisciplinary)	25	14	8	0	0	0	6	4	0
Neurological surgery	872	353	121	71	2	0	63	50	29
- Endovascular surgical neuroradiology	1	0	0	0	0	0	0	0	0

TABLE C.23 Continued

Number of Active Residents by Specialty and Subspecialty and Race/Ethnicity									
Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
Neurology	1,371	988	292	145	2	1	105	115	202
- Brain injury medicine	1	0	0	0	0	0	0	0	0
- Clinical neurophysiology	62	47	12	6	0	1	5	7	3
- Epilepsy	71	45	12	2	0	0	2	2	0
- Endovascular surgical neuroradiology	0	1	0	0	0	0	1	0	1
- Neurodevelopmental disabilities	14	5	3	1	0	0	2	1	0
- Neuromuscular medicine	37	21	6	1	0	0	4	2	3
- Vascular neurology	72	47	17	7	0	0	7	9	3
Child neurology	229	100	42	14	1	0	15	11	7
Nuclear medicine	22	20	7	3	0	0	2	4	11
Obstetrics and gynecology	3,375	883	589	462	6	0	257	102	95
- Female pelvic medicine and reconstructive surgery	76	33	19	9	0	0	5	4	0
- Gynecologic oncology	145	31	21	14	0	0	7	3	0
- Maternal-fetal medicine	234	55	36	41	0	0	14	10	1
- Reproductive endocrinology and infertility	106	34	10	9	0	0	2	5	0
- Complex family planning	26	3	2	1	0	0	0	0	0
Ophthalmology	789	473	108	35	1	1	60	32	32
- Ophthalmic plastic and reconstructive surgery	2	1	0	0	0	0	0	0	0
Orthopaedic surgery	3,129	547	287	184	2	3	147	73	43
- Adult reconstructive orthopaedics	35	5	3	4	0	0	1	1	1
- Foot and ankle orthopaedics	11	2	2	0	0	0	0	0	2
- Hand surgery	96	35	13	0	0	0	6	3	2
- Musculoskeletal oncology	12	2	1	0	0	0	0	0	1
- Orthopaedic sports medicine	166	19	9	3	1	0	5	4	4
- Orthopaedic surgery of the spine	11	7	2	2	0	0	1	1	1
- Orthopaedic trauma	14	5	0	1	0	0	0	0	0
- Pediatric orthopaedics	18	5	4	2	0	0	2	0	3
Osteopathic neuromusculoskeletal medicine	45	8	3	4	0	0	5	2	1
Otolaryngology - head and neck surgery	1,031	387	106	49	0	0	79	53	18
- Neurotology	24	7	3	0	0	0	1	0	1
- Pediatric otolaryngology	18	11	2	0	0	0	0	1	2
Pathology-anatomic and clinical	1,084	633	181	111	2	1	86	76	172
- Blood banking/transfusion medicine	28	12	4	3	1	0	2	1	1
- Clinical informatics	8	7	2	1	0	0	0	1	0
- Chemical pathology	0	0	0	0	0	0	0	0	0
- Cytopathology	67	32	8	5	0	0	4	8	3
- Forensic pathology	32	5	4	3	0	0	4	0	1
- Hematopathology	52	40	11	3	0	0	3	5	3
- Medical microbiology	11	3	1	1	0	0	0	0	0
- Neuropathology	30	10	6	2	0	0	2	0	3
- Pediatric pathology	14	3	0	1	0	0	1	1	1
- Selective pathology	60	70	14	7	0	0	8	10	7
Pediatrics	4,780	2,006	956	602	11	4	342	196	522
- Adolescent medicine	50	13	8	20	0	0	4	2	0
- Child abuse pediatrics	28	7	5	2	0	0	1	0	1
- Clinical informatics	8	9	0	1	0	0	1	0	0
- Developmental-behavioral pediatrics	59	23	18	6	0	0	7	1	0
- Neonatal-perinatal medicine	406	200	71	49	0	0	25	17	15
- Pediatric cardiology	280	105	36	15	0	1	17	7	7
- Pediatric critical care medicine	338	118	59	17	1	0	19	19	4
- Pediatric emergency medicine	260	78	32	31	0	0	21	5	7
- Pediatric endocrinology	114	60	27	9	0	0	3	6	11
- Pediatric gastroenterology	157	97	33	18	0	0	9	8	7

TABLE C.23 *Continued***Number of Active Residents by Specialty and Subspecialty and Race/Ethnicity**

Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
- Pediatric hematology/oncology	276	113	39	15	0	0	12	10	10
- Pediatric infectious diseases	103	31	13	7	0	0	8	9	4
- Pediatric nephrology	65	30	10	6	0	0	2	3	4
- Pediatric pulmonology	101	33	17	6	1	0	6	3	9
- Pediatric rheumatology	56	9	9	4	0	1	5	2	2
- Sports medicine	17	4	0	1	0	0	2	2	0
- Pediatric transplant hepatology	6	3	2	0	0	0	0	0	0
- Pediatric hospital medicine	74	25	6	5	0	0	4	1	0
Physical medicine and rehabilitation	800	393	108	66	1	1	69	40	32
- Brain injury medicine	8	5	2	2	0	0	0	0	0
- Neuromuscular medicine	0	1	0	0	0	0	0	0	0
- Spinal cord injury medicine	8	7	3	1	0	0	0	0	0
- Pediatric rehabilitation medicine	19	6	1	1	0	0	2	1	0
- Sports medicine	20	4	6	2	0	0	1	0	0
Plastic surgery	121	44	24	8	0	1	7	9	0
Plastic surgery - integrated	611	206	70	26	0	0	51	31	14
- Craniofacial surgery	5	0	0	0	0	0	0	0	2
- Hand surgery	13	5	2	0	1	0	1	0	1
Preventive medicine	172	70	19	58	1	1	15	7	7
- Medical toxicology	1	1	1	0	0	0	0	0	0
- Undersea and hyperbaric medicine	1	0	0	0	0	0	0	0	0
Psychiatry	3,381	1,767	625	471	11	2	342	165	212
- Addiction medicine (multidisciplinary)	76	26	9	11	0	0	1	4	2
- Addiction psychiatry	47	17	9	7	0	0	2	4	0
- Child and adolescent psychiatry	379	290	92	67	0	0	51	30	10
- Forensic psychiatry	48	15	7	6	0	0	3	0	1
- Geriatric psychiatry	16	11	8	4	0	0	0	3	2
- Consultation-liaison psychiatry	43	16	11	4	0	0	3	3	2
Radiation oncology	412	239	33	27	0	0	30	21	11
Radiology-diagnostic	2,418	1,217	323	183	4	3	196	131	82
- Abdominal radiology	16	15	2	1	0	0	1	0	11
- Endovascular surgical neuroradiology	1	1	0	0	0	0	0	0	0
- Musculoskeletal radiology	22	14	0	1	0	0	1	1	1
- Neuroradiology	118	81	18	17	0	0	12	8	18
- Nuclear radiology	4	1	0	0	0	0	1	0	1
- Pediatric radiology	29	6	5	1	0	0	5	1	4
Interventional radiology - independent	87	54	12	10	0	0	9	6	6
Interventional radiology - integrated	330	168	37	13	1	0	23	16	3
Surgery	5,122	1,672	860	490	10	8	406	252	243
- Complex general surgical oncology	83	22	8	3	1	0	1	2	0
- Hand surgery	4	0	3	0	0	0	0	0	0
- Pediatric surgery	57	10	11	8	0	0	0	0	0
- Surgical critical care	194	37	27	19	0	0	13	7	2
- Vascular surgery	144	60	21	10	0	0	10	10	0
Vascular surgery - integrated	170	91	23	21	2	0	11	8	6
Thoracic surgery	154	55	15	12	0	0	4	3	0
- Congenital cardiac surgery	8	1	1	0	0	0	1	0	0
Thoracic surgery - integrated	118	50	11	3	0	0	8	8	5
Urology	1,043	394	130	65	1	0	67	41	27
- Female pelvic medicine and reconstructive surgery	25	5	3	2	0	0	1	1	0
- Pediatric urology	10	7	0	0	0	0	0	0	1
Transitional year	836	424	163	88	2	2	74	46	58
Internal medicine/Pediatrics	888	297	104	99	1	0	65	28	28

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. Source: The gender and race/ethnicity reported above for the 2020-2021 academic year are based upon self-reported data provided by the Association of American Medical Colleges ("AAMC").

TABLE C.24

Number of Active Female Residents by Specialty and Subspecialty and Race/Ethnicity

Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
OVERALL	31,951	18,759	5,904	4,760	66	29	2,739	1,633	2,110
TOTAL PIPELINE	26,202	14,808	4,831	4,016	58	23	2,309	1,288	1,924
Allergy and immunology	83	82	15	4	0	0	4	3	2
Anesthesiology	1,050	692	178	167	1	2	88	43	43
- Adult cardiothoracic anesthesiology	42	23	4	3	0	0	1	0	0
- Clinical informatics	0	0	0	0	0	0	0	0	0
- Critical care medicine	33	15	6	6	0	0	4	1	0
- Regional anesthesiology and acute pain medicine	13	9	1	2	0	0	1	0	0
- Obstetric anesthesiology	15	3	1	3	0	0	3	2	1
- Pain medicine (multidisciplinary)	41	41	9	5	1	0	5	2	0
- Pediatric anesthesiology	44	27	8	6	1	0	1	2	0
Colon and rectal surgery	24	7	2	2	0	0	2	1	2
Dermatology	533	206	59	64	0	0	41	26	15
- Dermatopathology (multidisciplinary)	21	8	4	1	0	0	1	1	1
- Micrographic surgery and dermatologic oncology	30	9	3	1	0	0	5	2	0
Emergency medicine	1,930	482	269	227	3	1	156	75	45
- Clinical informatics	1	0	0	0	0	0	0	0	0
- Emergency medical services	20	0	1	0	0	0	0	0	0
- Medical toxicology	23	1	1	1	0	0	0	1	0
- Pediatric emergency medicine	43	25	10	9	0	0	1	2	0
- Sports medicine	1	0	0	0	0	0	0	0	0
- Undersea and hyperbaric medicine	3	2	1	0	0	0	0	0	0
Family medicine	3,508	1,857	722	738	13	6	315	159	240
- Clinical informatics	1	1	0	0	0	0	0	0	0
- Geriatric medicine	5	8	4	2	0	0	3	0	1
- Hospice and palliative medicine (multidisciplinary)	138	54	20	17	0	1	6	9	2
- Sports medicine	55	10	15	5	0	0	4	0	1
Internal medicine	4,340	4,813	1,028	869	13	1	414	371	900
- Adult congenital heart disease	7	2	1	0	0	0	2	0	0
- Advanced heart failure and transplant cardiology	17	14	1	2	0	0	1	1	0
- Cardiovascular disease	269	335	52	58	0	0	30	23	14
- Clinical cardiac electrophysiology	13	15	1	2	0	0	0	2	1
- Clinical informatics	1	6	0	2	0	0	0	0	1
- Critical care medicine	40	23	5	4	0	0	4	4	2
- Endocrinology, diabetes, and metabolism	119	242	39	19	1	1	8	24	7
- Gastroenterology	222	329	47	36	0	0	22	19	6
- Geriatric medicine	52	69	18	14	0	0	6	10	8
- Hematology	3	4	1	1	0	0	0	0	0
- Hematology and medical oncology	322	389	54	38	0	0	17	17	9
- Infectious disease	143	133	37	17	0	0	12	7	8
- Interventional cardiology	23	23	1	5	0	0	1	0	0
- Nephrology	92	143	30	17	0	0	8	14	13
- Medical oncology	1	13	2	1	0	0	0	0	0
- Pulmonary disease	3	15	6	2	0	0	0	2	0
- Pulmonary disease and critical care medicine	346	234	52	38	1	0	24	26	6
- Rheumatology	125	115	28	10	0	0	9	14	5
- Sleep medicine (multidisciplinary)	22	42	10	4	0	0	2	4	3
- Transplant hepatology	11	8	2	1	0	0	1	1	1
Medical genetics and genomics	20	6	9	2	0	0	0	0	1
- Medical biochemical genetics	2	2	2	0	0	0	2	0	0
- Molecular genetic pathology (multidisciplinary)	11	5	6	0	0	0	2	2	0
Neurological surgery	171	85	18	15	0	0	18	9	2
- Endovascular surgical neuroradiology	0	0	0	0	0	0	0	0	0

TABLE C.24 <i>Continued</i>									
Number of Active Female Residents by Specialty and Subspecialty and Race/Ethnicity									
Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
Neurology	621	491	138	75	1	0	48	47	76
- Brain injury medicine	0	0	0	0	0	0	0	0	0
- Clinical neurophysiology	20	22	7	4	0	1	0	4	1
- Epilepsy	31	27	7	1	0	0	0	1	0
- Endovascular surgical neuroradiology	0	0	0	0	0	0	0	0	0
- Neurodevelopmental disabilities	6	4	1	1	0	0	1	1	0
- Neuromuscular medicine	14	7	2	0	0	0	1	1	2
- Vascular neurology	27	19	7	4	0	0	2	3	2
Child neurology	160	68	31	9	1	0	11	6	2
Nuclear medicine	8	8	0	1	0	0	0	1	5
Obstetrics and gynecology	2,858	769	486	414	5	0	220	80	46
- Female pelvic medicine and reconstructive surgery	60	26	11	7	0	0	5	2	0
- Gynecologic oncology	105	25	16	11	0	0	6	3	0
- Maternal-fetal medicine	182	47	28	35	0	0	12	4	0
- Reproductive endocrinology and infertility	83	31	5	7	0	0	1	3	0
- Complex family planning	25	3	2	1	0	0	0	0	0
Ophthalmology	247	237	48	25	0	1	33	16	14
- Ophthalmic plastic and reconstructive surgery	1	0	0	0	0	0	0	0	0
Orthopaedic surgery	521	88	48	30	0	0	37	6	8
- Adult reconstructive orthopaedics	3	0	0	0	0	0	0	0	0
- Foot and ankle orthopaedics	3	0	0	0	0	0	0	0	0
- Hand surgery	24	13	8	0	0	0	1	2	1
- Musculoskeletal oncology	3	0	0	0	0	0	0	0	0
- Orthopaedic sports medicine	16	1	2	0	0	0	1	2	0
- Orthopaedic surgery of the spine	0	0	1	0	0	0	1	0	0
- Orthopaedic trauma	4	1	0	0	0	0	0	0	0
- Pediatric orthopaedics	7	2	2	1	0	0	2	0	0
Osteopathic neuromusculoskeletal medicine	20	4	2	4	0	0	2	2	0
Otolaryngology - head and neck surgery	361	165	35	29	0	0	30	19	4
- Neurotology	8	2	1	0	0	0	0	0	1
- Pediatric otolaryngology	10	7	1	0	0	0	0	0	0
Pathology-anatomic and clinical	512	379	93	55	1	0	48	28	68
- Blood banking/transfusion medicine	16	10	2	2	0	0	0	1	1
- Clinical informatics	1	2	0	1	0	0	0	1	0
- Chemical pathology	0	0	0	0	0	0	0	0	0
- Cytopathology	33	18	2	3	0	0	3	3	0
- Forensic pathology	20	2	3	2	0	0	3	0	1
- Hematopathology	16	26	4	1	0	0	2	2	1
- Medical microbiology	1	1	1	1	0	0	0	0	0
- Neuropathology	15	4	2	1	0	0	1	0	1
- Pediatric pathology	11	1	0	1	0	0	0	1	0
- Selective pathology	26	38	9	4	0	0	4	2	2
Pediatrics	3,341	1,518	678	482	9	4	268	140	258
- Adolescent medicine	39	11	6	18	0	0	3	2	0
- Child abuse pediatrics	25	6	5	2	0	0	1	0	1
- Clinical informatics	2	3	0	0	0	0	1	0	0
- Developmental-behavioral pediatrics	50	19	15	6	0	0	7	1	0
- Neonatal-perinatal medicine	299	140	57	36	0	0	23	10	6
- Pediatric cardiology	139	60	16	12	0	1	9	1	2
- Pediatric critical care medicine	214	64	30	12	1	0	8	10	0
- Pediatric emergency medicine	170	58	22	24	0	0	15	3	4
- Pediatric endocrinology	97	52	21	8	0	0	3	6	7
- Pediatric gastroenterology	101	61	22	15	0	0	5	5	4

TABLE C.24 Continued

Number of Active Female Residents by Specialty and Subspecialty and Race/Ethnicity									
Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
- Pediatric hematology/oncology	186	82	27	11	0	0	8	7	8
- Pediatric infectious diseases	73	19	9	5	0	0	5	6	2
- Pediatric nephrology	48	27	10	5	0	0	1	2	3
- Pediatric pulmonology	59	26	7	6	1	0	6	1	4
- Pediatric rheumatology	43	8	6	4	0	1	4	2	0
- Sports medicine	7	1	0	0	0	0	1	1	0
- Pediatric transplant hepatology	5	1	1	0	0	0	0	0	0
- Pediatric hospital medicine	59	21	5	5	0	0	3	1	0
Physical medicine and rehabilitation	258	147	40	28	0	0	24	17	11
- Brain injury medicine	6	5	1	1	0	0	0	0	0
- Neuromuscular medicine	0	0	0	0	0	0	0	0	0
- Spinal cord injury medicine	3	2	1	0	0	0	0	0	0
- Pediatric rehabilitation medicine	12	3	1	1	0	0	0	1	0
- Sports medicine	11	0	3	1	0	0	0	0	0
Plastic surgery	36	12	9	3	0	0	1	2	0
Plastic surgery - integrated	247	105	28	16	0	0	25	9	4
- Craniofacial surgery	3	0	0	0	0	0	0	0	2
- Hand surgery	2	2	0	0	0	0	1	0	0
Preventive medicine	73	35	7	37	1	0	9	1	3
- Medical toxicology	0	1	0	0	0	0	0	0	0
- Undersea and hyperbaric medicine	0	0	0	0	0	0	0	0	0
Psychiatry	1,525	973	327	288	3	2	181	66	63
- Addiction medicine (multidisciplinary)	34	12	6	4	0	0	1	1	1
- Addiction psychiatry	16	4	4	1	0	0	1	0	0
- Child and adolescent psychiatry	206	152	52	49	0	0	31	20	4
- Forensic psychiatry	25	9	4	6	0	0	2	0	1
- Geriatric psychiatry	10	9	7	4	0	0	0	1	1
- Consultation-liaison psychiatry	23	9	3	4	0	0	1	1	0
Radiation oncology	109	85	11	10	0	0	10	9	2
Radiology-diagnostic	536	385	100	60	1	2	67	42	22
- Abdominal radiology	5	5	0	1	0	0	0	0	2
- Endovascular surgical neuroradiology	0	0	0	0	0	0	0	0	0
- Musculoskeletal radiology	4	2	0	0	0	0	0	1	1
- Neuroradiology	19	22	2	6	0	0	5	1	4
- Nuclear radiology	1	0	0	0	0	0	1	0	1
- Pediatric radiology	12	3	4	0	0	0	2	1	2
Interventional radiology - independent	9	9	2	3	0	0	0	1	3
Interventional radiology - integrated	69	43	4	4	0	0	5	5	0
Surgery	2,246	801	347	242	3	4	192	80	62
- Complex general surgical oncology	25	9	4	3	1	0	0	1	0
- Hand surgery	1	0	1	0	0	0	0	0	0
- Pediatric surgery	30	7	4	6	0	0	0	0	0
- Surgical critical care	78	14	19	9	0	0	9	1	1
- Vascular surgery	44	16	3	5	0	0	5	2	0
Vascular surgery - integrated	60	31	5	9	2	0	4	2	3
Thoracic surgery	41	14	2	3	0	0	1	1	0
- Congenital cardiac surgery	1	1	1	0	0	0	1	0	0
Thoracic surgery - integrated	31	17	3	1	0	0	4	3	2
Urology	271	120	44	34	0	0	20	7	8
- Female pelvic medicine and reconstructive surgery	19	5	2	2	0	0	1	1	0
- Pediatric urology	4	5	0	0	0	0	0	0	1
Transitional year	247	156	66	43	1	1	27	22	17
Internal medicine/Pediatrics	531	177	62	75	1	0	38	16	14

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. Source: The gender and race/ethnicity reported above for the 2020-2021 academic year are based upon self-reported data provided by the Association of American Medical Colleges ("AAMC").

TABLE C.25
Number of Active Male Residents by Specialty and Subspecialty and Race/Ethnicity

Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
OVERALL	42,072	19,635	6,647	3,545	86	32	2,962	2,417	2,291
TOTAL PIPELINE	34,415	14,912	5,451	2,902	78	28	2,492	1,847	2,072
Allergy and immunology	62	38	6	0	0	0	5	6	1
Anesthesiology	2,602	1,038	364	176	8	0	190	128	95
- Adult cardiothoracic anesthesiology	101	29	11	5	0	0	6	7	2
- Clinical informatics	1	0	0	0	0	0	0	0	0
- Critical care medicine	81	24	11	4	0	0	3	4	2
- Regional anesthesiology and acute pain medicine	30	10	5	3	0	0	1	1	0
- Obstetric anesthesiology	14	4	0	0	0	0	0	0	1
- Pain medicine (multidisciplinary)	133	109	22	14	0	0	8	7	2
- Pediatric anesthesiology	63	10	11	4	1	0	1	2	3
Colon and rectal surgery	39	13	4	3	0	0	4	0	2
Dermatology	404	144	46	14	2	0	32	15	6
- Dermatopathology (multidisciplinary)	20	7	4	0	0	0	1	0	0
- Micrographic surgery and dermatologic oncology	22	7	3	1	0	0	2	1	0
Emergency medicine	3,514	800	464	213	9	4	217	133	46
- Clinical informatics	4	4	0	0	0	0	1	0	0
- Emergency medical services	47	11	2	3	1	0	0	1	0
- Medical toxicology	41	6	5	0	0	0	0	0	0
- Pediatric emergency medicine	23	10	3	2	0	0	2	2	0
- Sports medicine	9	4	1	1	0	0	0	0	0
- Undersea and hyperbaric medicine	3	1	1	0	0	0	0	0	0
Family medicine	3,580	1,342	640	334	16	6	271	143	157
- Clinical informatics	3	4	0	0	0	0	1	0	0
- Geriatric medicine	10	4	2	0	0	0	0	0	0
- Hospice and palliative medicine (multidisciplinary)	93	42	8	5	0	0	4	2	0
- Sports medicine	124	35	12	10	0	0	5	2	0
Internal medicine	6,724	5,275	1,426	893	12	5	615	565	1,130
- Adult congenital heart disease	9	2	1	0	0	0	1	1	1
- Advanced heart failure and transplant cardiology	20	33	4	3	0	0	0	2	2
- Cardiovascular disease	1,036	908	174	130	1	0	65	115	25
- Clinical cardiac electrophysiology	98	93	11	9	0	0	9	16	4
- Clinical informatics	12	10	2	1	0	0	0	1	0
- Critical care medicine	88	62	18	10	0	0	5	11	4
- Endocrinology, diabetes, and metabolism	89	80	25	10	0	0	3	12	7
- Gastroenterology	512	433	62	55	1	2	25	58	14
- Geriatric medicine	33	33	9	6	0	0	4	3	5
- Hematology	2	6	1	0	0	0	0	0	0
- Hematology and medical oncology	512	370	59	29	0	0	32	32	11
- Infectious disease	189	90	55	23	0	0	13	20	13
- Interventional cardiology	107	131	15	15	0	0	7	22	4
- Nephrology	147	227	59	23	0	0	16	19	9
- Medical oncology	5	9	1	1	0	0	0	1	0
- Pulmonary disease	6	25	5	1	0	0	2	2	0
- Pulmonary disease and critical care medicine	635	467	93	57	0	1	42	52	10
- Rheumatology	105	70	11	7	0	0	7	10	3
- Sleep medicine (multidisciplinary)	33	43	11	4	0	0	7	5	0
- Transplant hepatology	7	9	1	2	0	0	0	2	1
Medical genetics and genomics	12	5	6	1	0	0	2	0	2
- Medical biochemical genetics	4	2	0	0	0	0	0	0	0
- Molecular genetic pathology (multidisciplinary)	14	9	2	0	0	0	4	2	0
Neurological surgery	701	268	103	56	2	0	45	41	21
- Endovascular surgical neuroradiology	1	0	0	0	0	0	0	0	0

TABLE C.25 Continued

Number of Active Male Residents by Specialty and Subspecialty and Race/Ethnicity									
Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
Neurology	750	497	154	70	1	1	57	68	88
- Brain injury medicine	1	0	0	0	0	0	0	0	0
- Clinical neurophysiology	42	25	5	2	0	0	5	3	2
- Epilepsy	40	18	5	1	0	0	2	1	0
- Endovascular surgical neuroradiology	0	1	0	0	0	0	1	0	1
- Neurodevelopmental disabilities	8	1	2	0	0	0	1	0	0
- Neuromuscular medicine	23	14	4	1	0	0	3	1	0
- Vascular neurology	45	28	10	3	0	0	5	6	0
Child neurology	69	32	11	5	0	0	4	5	3
Nuclear medicine	14	12	7	2	0	0	2	3	3
Obstetrics and gynecology	517	114	103	48	1	0	37	22	14
- Female pelvic medicine and reconstructive surgery	16	7	8	2	0	0	0	2	0
- Gynecologic oncology	40	6	5	3	0	0	1	0	0
- Maternal-fetal medicine	52	8	8	6	0	0	2	6	1
- Reproductive endocrinology and infertility	23	3	5	2	0	0	0	2	0
- Complex family planning	1	0	0	0	0	0	0	0	0
Ophthalmology	542	236	60	10	1	0	27	16	16
- Ophthalmic plastic and reconstructive surgery	1	1	0	0	0	0	0	0	0
Orthopaedic surgery	2,608	459	239	154	2	3	110	67	21
- Adult reconstructive orthopaedics	32	5	3	4	0	0	1	1	1
- Foot and ankle orthopaedics	8	2	2	0	0	0	0	0	2
- Hand surgery	72	22	5	0	0	0	5	1	0
- Musculoskeletal oncology	9	2	1	0	0	0	0	0	1
- Orthopaedic sports medicine	150	18	7	3	1	0	4	2	3
- Orthopaedic surgery of the spine	11	7	1	2	0	0	0	1	1
- Orthopaedic trauma	10	4	0	1	0	0	0	0	0
- Pediatric orthopaedics	11	3	2	1	0	0	0	0	3
Osteopathic neuromusculoskeletal medicine	25	4	1	0	0	0	3	0	1
Otolaryngology - head and neck surgery	670	222	71	20	0	0	49	34	9
- Neurotology	16	5	2	0	0	0	1	0	0
- Pediatric otolaryngology	8	4	1	0	0	0	0	1	1
Pathology-anatomic and clinical	572	254	88	56	1	1	38	48	66
- Blood banking/transfusion medicine	12	2	2	1	1	0	2	0	0
- Clinical informatics	7	5	2	0	0	0	0	0	0
- Chemical pathology	0	0	0	0	0	0	0	0	0
- Cytopathology	34	14	6	2	0	0	1	5	2
- Forensic pathology	12	3	1	1	0	0	1	0	0
- Hematopathology	36	14	7	2	0	0	1	3	2
- Medical microbiology	10	2	0	0	0	0	0	0	0
- Neuropathology	15	6	4	1	0	0	1	0	1
- Pediatric pathology	3	2	0	0	0	0	1	0	1
- Selective pathology	34	32	5	3	0	0	4	8	3
Pediatrics	1,439	488	278	120	2	0	74	56	83
- Adolescent medicine	11	2	2	2	0	0	1	0	0
- Child abuse pediatrics	3	1	0	0	0	0	0	0	0
- Clinical informatics	6	6	0	1	0	0	0	0	0
- Developmental-behavioral pediatrics	9	4	3	0	0	0	0	0	0
- Neonatal-perinatal medicine	107	60	14	13	0	0	2	7	5
- Pediatric cardiology	141	45	20	3	0	0	8	6	3
- Pediatric critical care medicine	124	54	28	5	0	0	11	9	3
- Pediatric emergency medicine	90	20	10	7	0	0	6	2	3
- Pediatric endocrinology	17	8	6	1	0	0	0	0	1
- Pediatric gastroenterology	56	36	11	3	0	0	4	3	2

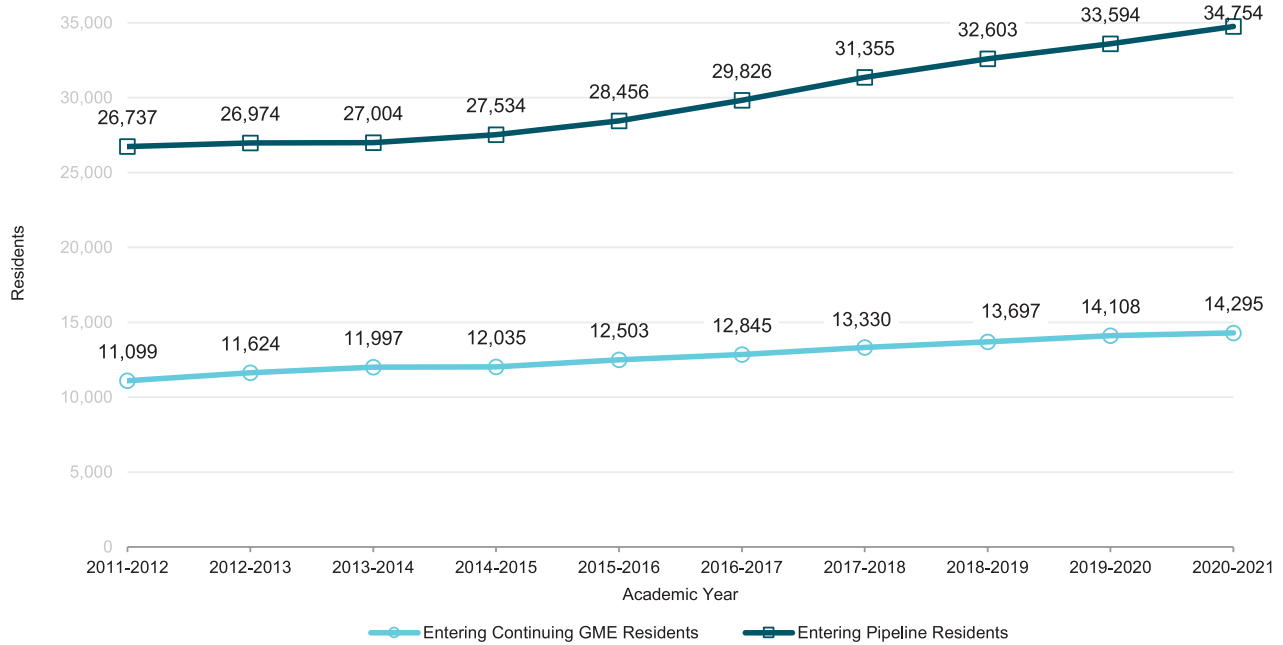
TABLE C.25 *Continued***Number of Active Male Residents by Specialty and Subspecialty and Race/Ethnicity**

Specialty	Race/Ethnicity								
	White	Asian	Hispanic, Latino or of Spanish origin	Black or African American	American Indian or Alaskan Native	Native Hawaiian or Pacific Islander	Multiple Race/Ethnicity	Other	Unknown
- Pediatric hematology/oncology	90	31	12	4	0	0	4	3	1
- Pediatric infectious diseases	30	12	4	2	0	0	3	3	1
- Pediatric nephrology	17	3	0	1	0	0	1	1	0
- Pediatric pulmonology	42	7	10	0	0	0	0	2	1
- Pediatric rheumatology	13	1	3	0	0	0	1	0	0
- Sports medicine	10	3	0	1	0	0	1	1	0
- Pediatric transplant hepatology	1	2	1	0	0	0	0	0	0
- Pediatric hospital medicine	15	4	1	0	0	0	1	0	0
Physical medicine and rehabilitation	542	246	68	38	1	1	45	23	17
- Brain injury medicine	2	0	1	1	0	0	0	0	0
- Neuromuscular medicine	0	1	0	0	0	0	0	0	0
- Spinal cord injury medicine	5	5	2	1	0	0	0	0	0
- Pediatric rehabilitation medicine	7	3	0	0	0	0	2	0	0
- Sports medicine	9	4	3	1	0	0	1	0	0
Plastic surgery	85	32	15	5	0	1	6	7	0
Plastic surgery - integrated	364	101	42	10	0	0	26	22	6
- Craniofacial surgery	2	0	0	0	0	0	0	0	0
- Hand surgery	11	3	2	0	1	0	0	0	0
Preventive medicine	99	35	12	21	0	1	6	6	2
- Medical toxicology	1	0	1	0	0	0	0	0	0
- Undersea and hyperbaric medicine	1	0	0	0	0	0	0	0	0
Psychiatry	1,856	794	298	183	8	0	161	99	73
- Addiction medicine (multidisciplinary)	42	14	3	7	0	0	0	3	0
- Addiction psychiatry	30	13	5	6	0	0	1	4	0
- Child and adolescent psychiatry	173	138	40	18	0	0	20	10	6
- Forensic psychiatry	23	6	3	0	0	0	1	0	0
- Geriatric psychiatry	6	2	1	0	0	0	0	2	1
- Consultation-liaison psychiatry	20	7	8	0	0	0	2	2	2
Radiation oncology	303	154	22	17	0	0	20	12	9
Radiology-diagnostic	1,882	832	223	123	3	1	129	89	45
- Abdominal radiology	11	10	2	0	0	0	1	0	8
- Endovascular surgical neuroradiology	1	1	0	0	0	0	0	0	0
- Musculoskeletal radiology	18	12	0	1	0	0	1	0	0
- Neuroradiology	99	59	16	11	0	0	7	7	8
- Nuclear radiology	3	1	0	0	0	0	0	0	0
- Pediatric radiology	17	3	1	1	0	0	3	0	2
Interventional radiology - independent	78	45	10	7	0	0	9	5	1
Interventional radiology - integrated	261	125	33	9	1	0	18	11	2
Surgery	2,876	871	513	248	7	4	214	172	125
- Complex general surgical oncology	58	13	4	0	0	0	1	1	0
- Hand surgery	3	0	2	0	0	0	0	0	0
- Pediatric surgery	27	3	7	2	0	0	0	0	0
- Surgical critical care	116	23	8	10	0	0	4	6	1
- Vascular surgery	100	44	18	5	0	0	5	8	0
Vascular surgery - integrated	110	60	18	12	0	0	7	6	2
Thoracic surgery	113	41	13	9	0	0	3	2	0
- Congenital cardiac surgery	7	0	0	0	0	0	0	0	0
Thoracic surgery - integrated	87	33	8	2	0	0	4	5	3
Urology	772	274	86	31	1	0	47	34	15
- Female pelvic medicine and reconstructive surgery	6	0	1	0	0	0	0	0	0
- Pediatric urology	6	2	0	0	0	0	0	0	0
Transitional year	589	268	97	45	1	1	47	24	20
Internal medicine/Pediatrics	357	120	42	24	0	0	27	12	11

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. Source: The gender and race/ethnicity reported above for the 2020-2021 academic year are based upon self-reported data provided by the Association of American Medical Colleges ("AAMC").

FIGURE C.26

Number of Residents Entering Pipeline and Continuing GME Programs by Academic Year, 2011-2012 to 2020-2021

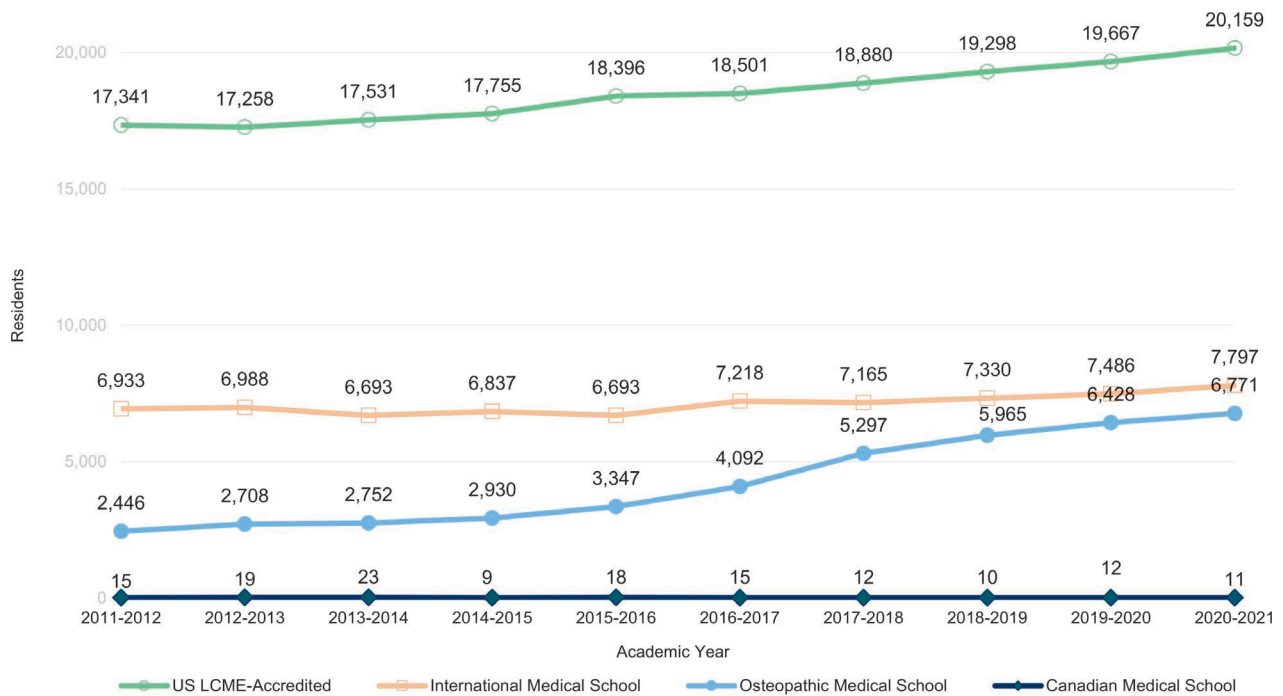


Notes: Excluding residents doing prerequisite training for a pipeline specialty program (preliminary and transitional year residents).

Abbreviations: GME, graduate medical education.

FIGURE C.27

Number of Residents Entering the Pipeline by Medical School Type and Academic Year, 2011-2012 to 2020-2021



Notes: Not shown are those graduates for which the specific U.S. medical school is unknown.

Abbreviations: LCME, Liaison Committee on Medical Education.

Specialty	Total Residents	Medical School Type									
		US LCME-Accredited		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
OVERALL	34,754	20,159	58.0%	7,797	22.4%	6,771	19.5%	11	0.0%	16	0.0%
Anesthesiology	1,627	1,117	68.7%	177	10.9%	330	20.3%	1	0.1%	2	0.1%
Dermatology	531	454	85.5%	17	3.2%	60	11.3%	0	0.0%	0	0.0%
Emergency medicine	2,780	1,848	66.5%	195	7.0%	737	26.5%	0	0.0%	0	0.0%
Family medicine	4,925	1,921	39.0%	1,326	26.9%	1,675	34.0%	2	0.0%	1	0.0%
Internal medicine	9,628	4,120	42.8%	3,793	39.4%	1,705	17.7%	2	0.0%	8	0.1%
Medical genetics and genomics	32	20	62.5%	10	31.3%	2	6.3%	0	0.0%	0	0.0%
Neurological surgery	233	213	91.4%	18	7.7%	2	0.9%	0	0.0%	0	0.0%
Neurology	924	491	53.1%	296	32.0%	136	14.7%	1	0.1%	0	0.0%
Child neurology	141	107	75.9%	22	15.6%	12	8.5%	0	0.0%	0	0.0%
Nuclear medicine	33	8	24.2%	25	75.8%	0	0.0%	0	0.0%	0	0.0%
Obstetrics and gynecology	1,481	1,147	77.4%	99	6.7%	234	15.8%	0	0.0%	1	0.1%
Ophthalmology	518	473	91.3%	19	3.7%	26	5.0%	0	0.0%	0	0.0%
Orthopaedic surgery	895	760	84.9%	11	1.2%	124	13.9%	0	0.0%	0	0.0%
Osteopathic neuromusculoskeletal medicine	12	0	0.0%	0	0.0%	12	100.0%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	348	319	91.7%	5	1.4%	24	6.9%	0	0.0%	0	0.0%
Pathology-anatomic and clinical	606	243	40.1%	290	47.9%	72	11.9%	0	0.0%	1	0.2%
Pediatrics	3,159	1,948	61.7%	667	21.1%	542	17.2%	1	0.0%	1	0.0%
Physical medicine and rehabilitation	422	215	50.9%	31	7.3%	176	41.7%	0	0.0%	0	0.0%
Plastic surgery	66	50	75.8%	11	16.7%	5	7.6%	0	0.0%	0	0.0%
Plastic Surgery - integrated	177	168	94.9%	8	4.5%	1	0.6%	0	0.0%	0	0.0%
Preventive medicine	172	113	65.7%	29	16.9%	30	17.4%	0	0.0%	0	0.0%
Psychiatry	1,964	1,242	63.2%	355	18.1%	366	18.6%	1	0.1%	0	0.0%
Radiation oncology	202	191	94.6%	7	3.5%	4	2.0%	0	0.0%	0	0.0%
Radiology-diagnostic	1,156	840	72.7%	138	11.9%	177	15.3%	1	0.1%	0	0.0%
Interventional radiology - independent	149	99	66.4%	36	24.2%	13	8.7%	1	0.7%	0	0.0%
Interventional radiology - integrated	154	138	89.6%	1	0.6%	15	9.7%	0	0.0%	0	0.0%
Surgery	1,565	1,165	74.4%	172	11.0%	227	14.5%	0	0.0%	1	0.1%
Vascular surgery - integrated	76	66	86.8%	3	3.9%	5	6.6%	1	1.3%	1	1.3%
Thoracic surgery - integrated	35	32	91.4%	2	5.7%	1	2.9%	0	0.0%	0	0.0%
Urology	360	328	91.1%	9	2.5%	23	6.4%	0	0.0%	0	0.0%
Internal medicine/Pediatrics	383	323	84.3%	25	6.5%	35	9.1%	0	0.0%	0	0.0%

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

TABLE C.29

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	IRInd	Total
OVERALL	-	1,627	2,780	32	33	606	172	202	1,156	154	149	6,911
Alabama	AL	21	16	1	0	10	4	3	16	2	4	77
Alaska	AK	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	18	50	0	0	4	0	3	21	1	5	102
Arkansas	AR	13	16	0	0	4	0	1	7	1	0	42
California	CA	165	245	7	5	56	22	26	102	16	12	656
Colorado	CO	4	17	0	0	9	5	2	8	2	2	49
Connecticut	CT	23	37	0	0	15	5	3	31	3	2	119
Delaware	DE	0	12	0	0	0	0	0	5	1	1	19
District of Columbia	DC	15	21	0	0	7	0	2	10	2	3	60
Florida	FL	91	181	1	2	16	13	10	62	7	11	394
Georgia	GA	33	58	1	0	13	5	3	22	4	6	145
Hawaii	HI	0	0	0	0	2	0	0	5	0	0	7
Idaho	ID	0	0	0	0	0	0	0	0	0	0	0
Illinois	IL	91	134	0	1	27	6	7	54	10	10	340
Indiana	IN	27	21	1	0	3	0	2	10	2	4	70
Iowa	IA	14	9	0	0	4	0	2	7	1	0	37
Kansas	KS	14	10	0	0	4	0	1	9	1	1	40
Kentucky	KY	23	25	0	0	7	3	4	12	0	1	75
Louisiana	LA	31	39	0	0	10	2	0	20	4	0	106
Maine	ME	5	11	0	0	0	2	0	3	1	0	22
Maryland	MD	42	23	5	4	20	16	6	24	4	2	146
Massachusetts	MA	72	68	0	2	45	8	10	62	7	11	285
Michigan	MI	69	226	0	1	20	5	9	51	5	5	391
Minnesota	MN	28	31	1	0	12	4	5	22	3	3	109
Mississippi	MS	8	12	0	0	4	0	1	7	1	0	33
Missouri	MO	38	48	2	4	21	0	5	29	3	3	153
Montana	MT	0	0	0	0	0	0	0	0	0	0	0
Nebraska	NE	9	12	1	0	5	0	1	8	3	0	39
Nevada	NV	7	29	0	0	0	1	0	5	0	0	42
New Hampshire	NH	7	6	0	0	2	5	1	3	2	1	27
New Jersey	NJ	21	87	0	0	11	6	1	29	1	0	156
New Mexico	NM	6	12	0	0	4	3	0	7	0	1	33
New York	NY	217	372	4	7	75	12	27	138	18	16	886
North Carolina	NC	38	80	0	0	16	6	7	28	5	5	185
North Dakota	ND	0	0	0	0	0	0	0	0	0	0	0
Ohio	OH	73	164	2	0	26	5	11	46	4	8	339
Oklahoma	OK	15	35	0	1	4	0	2	13	0	1	71
Oregon	OR	13	11	1	0	4	0	2	5	2	4	42
Pennsylvania	PA	91	207	1	0	32	8	11	66	13	11	440
Puerto Rico	PR	2	17	0	1	4	0	0	4	0	0	28
Rhode Island	RI	12	22	0	0	4	0	0	6	1	2	47
South Carolina	SC	21	58	0	0	5	2	3	11	2	0	102
South Dakota	SD	0	0	0	0	3	0	0	0	0	0	3
Tennessee	TN	29	34	0	1	12	2	3	24	3	0	108
Texas	TX	113	174	4	2	48	9	15	80	10	5	460
Utah	UT	3	9	0	0	6	4	2	7	1	2	34
Vermont	VT	6	6	0	0	4	0	0	5	0	2	23
Virginia	VA	26	71	0	0	8	0	3	26	2	2	138
Washington	WA	34	24	0	1	11	6	3	21	3	2	105
West Virginia	WV	9	16	0	0	0	1	1	6	0	0	33
Wisconsin	WI	30	24	0	1	9	2	4	19	3	1	93
Wyoming	WY	0	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; IRInd for Interventional radiology - independent.

TABLE C.30

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	-	531	4,925	9,628	924	141	12	3,159	422	1,964	383	22,089
Alabama	AL	5	74	109	12	1	0	36	4	12	6	259
Alaska	AK	0	12	0	0	0	0	0	0	0	0	12
Arizona	AZ	9	59	136	16	2	0	52	2	21	5	302
Arkansas	AR	3	81	81	4	0	0	25	4	12	5	215
California	CA	45	551	777	73	15	0	300	30	193	18	2,002
Colorado	CO	6	89	86	13	4	0	32	6	21	4	261
Connecticut	CT	8	27	227	17	0	0	42	0	31	4	356
Delaware	DE	0	15	12	0	1	0	22	0	8	4	62
District of Columbia	DC	8	6	110	15	4	0	49	6	29	4	231
Florida	FL	38	233	635	55	2	0	165	24	120	10	1,282
Georgia	GA	12	130	259	15	3	0	65	6	34	0	524
Hawaii	HI	0	19	34	0	0	0	14	0	14	0	81
Idaho	ID	0	43	19	0	0	0	0	0	0	0	62
Illinois	IL	23	244	483	42	5	0	137	19	69	24	1,046
Indiana	IN	0	114	76	8	1	0	34	4	16	14	267
Iowa	IA	5	46	50	8	1	0	22	0	16	0	148
Kansas	KS	5	41	35	5	0	0	5	4	14	3	112
Kentucky	KY	2	58	72	10	3	0	36	9	19	11	220
Louisiana	LA	10	69	134	16	0	0	42	6	36	13	326
Maine	ME	0	36	13	3	0	0	6	0	5	4	67
Maryland	MD	12	33	238	18	4	0	57	13	42	8	425
Massachusetts	MA	21	47	390	47	11	0	84	10	86	20	716
Michigan	MI	26	256	469	43	4	4	120	23	77	29	1,051
Minnesota	MN	14	78	117	15	2	0	35	12	29	10	312
Mississippi	MS	4	37	57	3	0	0	16	0	6	5	128
Missouri	MO	16	82	157	24	9	1	79	6	38	9	421
Montana	MT	0	18	8	0	0	0	0	0	0	0	26
Nebraska	NE	3	46	49	7	0	0	17	4	10	4	140
Nevada	NV	0	53	84	5	0	0	10	6	20	0	178
New Hampshire	NH	3	16	30	4	0	0	8	0	9	0	70
New Jersey	NJ	7	110	384	21	1	0	87	13	51	4	678
New Mexico	NM	4	29	39	5	1	0	17	4	12	0	111
New York	NY	58	293	1,459	107	14	4	453	79	296	24	2,787
North Carolina	NC	17	146	198	20	4	0	74	13	58	18	548
North Dakota	ND	0	30	6	0	0	0	0	0	5	0	41
Ohio	OH	25	199	477	51	13	0	188	13	71	27	1,064
Oklahoma	OK	3	81	40	6	0	0	37	0	17	3	187
Oregon	OR	7	46	76	5	0	0	19	0	12	0	165
Pennsylvania	PA	32	327	618	63	12	0	150	32	93	16	1,343
Puerto Rico	PR	3	26	81	3	0	0	30	6	12	2	163
Rhode Island	RI	6	16	66	6	0	0	17	0	9	4	124
South Carolina	SC	5	112	64	20	1	0	41	0	35	9	287
South Dakota	SD	0	17	8	0	0	0	6	0	8	0	39
Tennessee	TN	9	68	129	15	5	0	64	4	26	20	340
Texas	TX	45	338	569	66	11	0	242	31	135	21	1,458
Utah	UT	3	29	31	8	1	0	22	6	13	3	116
Vermont	VT	2	6	15	4	0	0	6	0	4	0	37
Virginia	VA	10	123	178	16	1	0	83	11	50	4	476
Washington	WA	4	148	95	9	3	0	48	3	26	0	336
West Virginia	WV	2	46	58	11	0	3	19	0	20	6	165
Wisconsin	WI	11	107	90	10	2	0	46	9	24	8	307
Wyoming	WY	0	15	0	0	0	0	0	0	0	0	15

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.31

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	-	233	1,481	518	895	348	66	177	1,565	76	35	360	5,754
Alabama	AL	3	12	5	12	4	2	0	18	1	0	0	57
Alaska	AK	0	0	0	0	0	0	0	0	0	0	0	0
Arizona	AZ	6	22	4	10	3	0	1	34	1	0	5	86
Arkansas	AR	2	5	4	5	3	0	0	5	1	0	2	27
California	CA	22	119	45	76	36	1	19	116	8	6	32	480
Colorado	CO	2	14	6	7	4	1	2	24	0	0	3	63
Connecticut	CT	4	34	5	10	6	0	3	25	1	1	5	94
Delaware	DE	0	7	0	0	0	0	0	6	0	0	0	13
District of Columbia	DC	3	22	13	12	2	0	4	20	2	0	5	83
Florida	FL	9	58	23	36	10	5	6	95	3	0	14	259
Georgia	GA	3	30	9	16	7	2	2	39	1	1	7	117
Hawaii	HI	0	10	0	5	2	0	0	8	0	0	1	26
Idaho	ID	0	0	0	0	0	0	0	0	0	0	0	0
Illinois	IL	13	62	23	35	16	3	9	60	2	1	19	243
Indiana	IN	3	15	6	6	3	3	2	14	1	1	4	58
Iowa	IA	2	5	5	6	5	1	0	14	1	1	3	43
Kansas	KS	2	14	3	8	4	0	2	16	0	0	4	53
Kentucky	KY	4	14	8	10	7	2	2	19	0	1	5	72
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	7	29	14	22	10	1	3	25	0	1	6	118
Massachusetts	MA	10	38	17	26	13	5	7	60	5	2	11	194
Michigan	MI	9	103	26	64	20	6	6	98	2	2	21	357
Minnesota	MN	6	14	9	21	4	1	5	22	2	0	8	92
Mississippi	MS	1	6	4	4	3	0	2	10	0	0	2	32
Missouri	MO	3	33	21	25	11	0	6	23	2	0	7	131
Montana	MT	0	0	0	0	0	0	0	0	0	0	0	0
Nebraska	NE	2	9	2	5	3	1	0	10	0	0	3	35
Nevada	NV	0	10	0	6	1	0	1	11	0	0	0	29
New Hampshire	NH	1	4	0	4	1	0	1	4	1	0	2	18
New Jersey	NJ	3	57	5	27	5	2	3	50	2	0	8	162
New Mexico	NM	0	6	0	5	2	0	1	6	0	0	2	22
New York	NY	24	186	71	100	30	3	18	168	11	7	45	663
North Carolina	NC	8	48	19	24	12	0	8	43	0	1	10	173
North Dakota	ND	0	0	0	3	0	0	0	4	0	0	0	7
Ohio	OH	9	84	24	60	20	4	12	82	7	3	16	321
Oklahoma	OK	2	16	5	8	3	2	0	13	0	0	4	53
Oregon	OR	3	7	5	8	3	0	3	15	0	0	3	47
Pennsylvania	PA	18	90	29	62	19	6	10	107	6	3	24	374
Puerto Rico	PR	1	12	4	4	2	0	0	8	0	0	2	33
Rhode Island	RI	2	8	3	6	0	0	2	7	0	0	2	30
South Carolina	SC	2	16	7	12	4	1	2	21	2	1	3	71
South Dakota	SD	0	0	0	0	0	0	0	2	0	0	0	2
Tennessee	TN	6	32	10	18	9	4	3	36	0	0	10	128
Texas	TX	15	117	39	63	23	6	13	102	6	1	26	411
Utah	UT	3	6	4	6	3	2	2	6	0	0	2	34
Vermont	VT	1	3	0	3	1	0	0	4	0	0	1	13
Virginia	VA	6	35	8	14	9	0	6	28	1	1	7	115
Washington	WA	3	11	7	11	6	0	4	23	2	1	6	74
West Virginia	WV	1	9	4	7	3	0	0	13	1	0	4	42
Wisconsin	WI	4	18	6	11	6	0	5	20	1	0	6	77
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.32

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	35,923	100.0%	34,602	100.0%	34,754	100.0%
Anesthesiology	1,375	3.8%	1,283	3.7%	1,627	4.7%
Dermatology	25	0.1%	2	0.0%	531	1.5%
Emergency medicine	2,766	7.7%	2,660	7.7%	2,780	8.0%
Family medicine	4,925	13.7%	4,740	13.7%	4,925	14.2%
Internal medicine	11,777	32.8%	11,397	32.9%	9,628	27.7%
Medical genetics and genomics	2	0.0%	2	0.0%	32	0.1%
Neurological surgery	233	0.6%	224	0.6%	233	0.7%
Neurology	597	1.7%	557	1.6%	924	2.7%
Child neurology	0	0.0%	0	0.0%	141	0.4%
Nuclear medicine	0	0.0%	0	0.0%	33	0.1%
Obstetrics and gynecology	1,499	4.2%	1,454	4.2%	1,481	4.3%
Ophthalmology	0	0.0%	0	0.0%	518	1.5%
Orthopaedic surgery	895	2.5%	866	2.5%	895	2.6%
Osteopathic neuromusculoskeletal medicine	12	0.0%	11	0.0%	12	0.0%
Otolaryngology - head and neck surgery	348	1.0%	338	1.0%	348	1.0%
Pathology-anatomic and clinical	606	1.7%	571	1.7%	606	1.7%
Pediatrics	3,241	9.0%	3,194	9.2%	3,159	9.1%
Physical medicine and rehabilitation	143	0.4%	139	0.4%	422	1.2%
Plastic surgery	0	0.0%	0	0.0%	66	0.2%
Plastic surgery - integrated	177	0.5%	171	0.5%	177	0.5%
Preventive medicine	5	0.0%	0	0.0%	172	0.5%
Psychiatry	1,964	5.5%	1,917	5.5%	1,964	5.7%
Radiation oncology	0	0.0%	0	0.0%	202	0.6%
Radiology-diagnostic	0	0.0%	0	0.0%	1,156	3.3%
Interventional radiology - independent	0	0.0%	0	0.0%	149	0.4%
Interventional radiology - integrated	0	0.0%	0	0.0%	154	0.4%
Surgery	2,786	7.8%	2,611	7.5%	1,565	4.5%
Vascular surgery - integrated	76	0.2%	71	0.2%	76	0.2%
Thoracic surgery - integrated	35	0.1%	33	0.1%	35	0.1%
Urology	360	1.0%	350	1.0%	360	1.0%
Transitional year	1,693	4.7%	1,633	4.7%	0	0.0%
Internal medicine/Pediatrics	383	1.1%	378	1.1%	383	1.1%

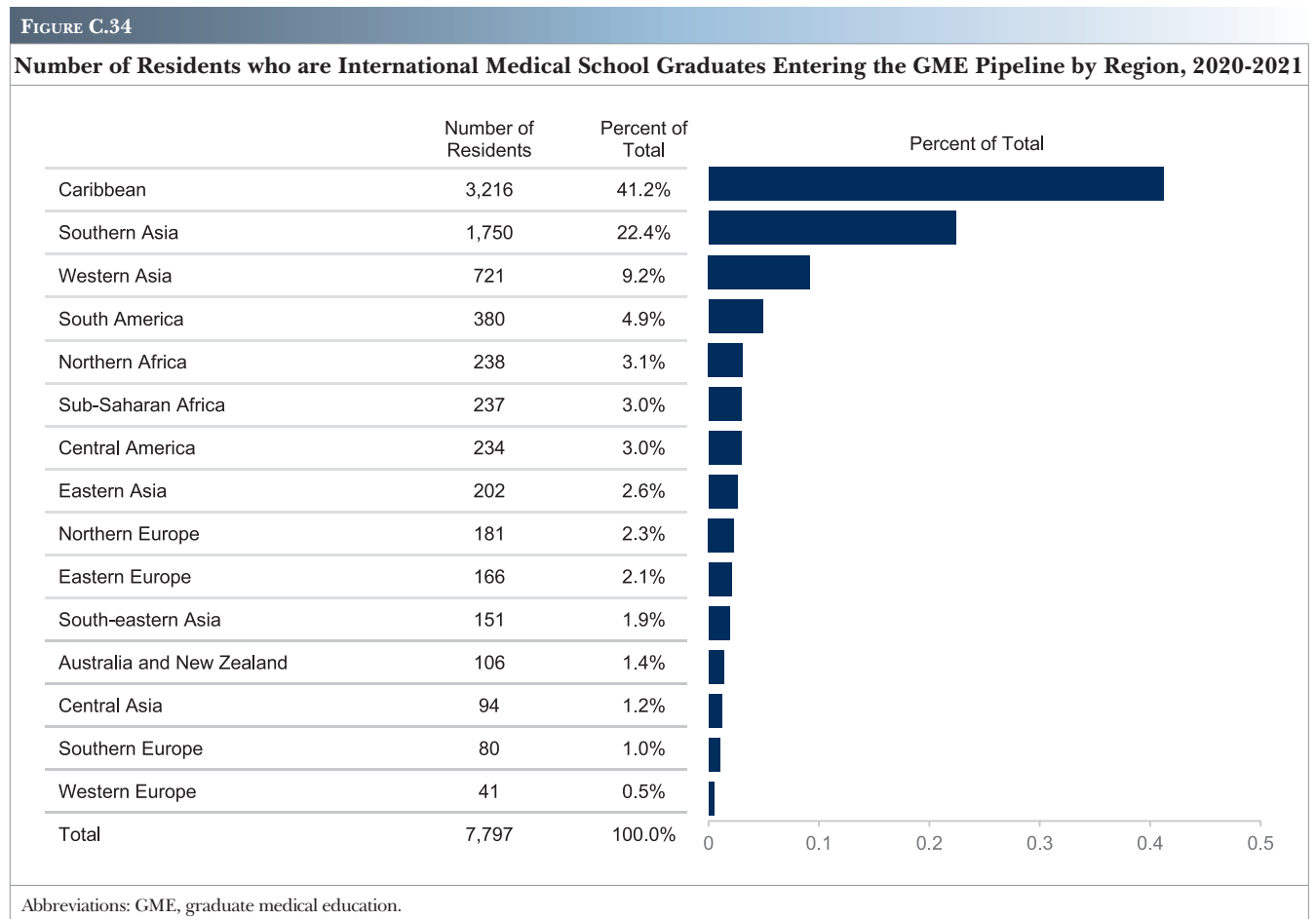
Abbreviations: GME, graduate medical education; PGY1, post graduate year 1.

TABLE C.33

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	35,923	100.0%	34,602	100.0%	34,754	100.0%
Alabama	388	1.1%	382	1.1%	393	1.1%
Alaska	12	0.0%	12	0.0%	12	0.0%
Arizona	521	1.5%	506	1.5%	490	1.4%
Arkansas	295	0.8%	283	0.8%	284	0.8%
California	3,225	9.0%	3,114	9.0%	3,138	9.0%
Colorado	382	1.1%	371	1.1%	373	1.1%
Connecticut	584	1.6%	566	1.6%	569	1.6%
Delaware	92	0.3%	89	0.3%	94	0.3%
District of Columbia	384	1.1%	375	1.1%	374	1.1%
Florida	2,026	5.6%	1,934	5.6%	1,935	5.6%
Georgia	847	2.4%	788	2.3%	786	2.3%
Hawaii	124	0.3%	116	0.3%	114	0.3%
Idaho	66	0.2%	64	0.2%	62	0.2%
Illinois	1,685	4.7%	1,634	4.7%	1,629	4.7%
Indiana	404	1.1%	399	1.2%	395	1.1%
Iowa	229	0.6%	223	0.6%	228	0.7%
Kansas	206	0.6%	203	0.6%	205	0.6%
Kentucky	381	1.1%	361	1.0%	367	1.1%
Louisiana	557	1.6%	537	1.6%	544	1.6%
Maine	98	0.3%	95	0.3%	99	0.3%
Maryland	718	2.0%	682	2.0%	689	2.0%
Massachusetts	1,179	3.3%	1,155	3.3%	1,195	3.4%
Michigan	1,871	5.2%	1,781	5.1%	1,799	5.2%
Minnesota	476	1.3%	469	1.4%	513	1.5%
Mississippi	218	0.6%	204	0.6%	193	0.6%
Missouri	685	1.9%	664	1.9%	705	2.0%
Montana	30	0.1%	28	0.1%	26	0.1%
Nebraska	212	0.6%	202	0.6%	214	0.6%
Nevada	291	0.8%	269	0.8%	249	0.7%
New Hampshire	107	0.3%	102	0.3%	115	0.3%
New Jersey	1,048	2.9%	1,004	2.9%	996	2.9%
New Mexico	167	0.5%	162	0.5%	166	0.5%
New York	4,592	12.8%	4,426	12.8%	4,336	12.5%
North Carolina	910	2.5%	874	2.5%	906	2.6%
North Dakota	60	0.2%	58	0.2%	48	0.1%
Ohio	1,787	5.0%	1,705	4.9%	1,724	5.0%
Oklahoma	307	0.9%	298	0.9%	311	0.9%
Oregon	252	0.7%	244	0.7%	254	0.7%
Pennsylvania	2,200	6.1%	2,101	6.1%	2,157	6.2%
Puerto Rico	281	0.8%	257	0.7%	224	0.6%
Rhode Island	189	0.5%	187	0.5%	201	0.6%
South Carolina	482	1.3%	465	1.3%	460	1.3%
South Dakota	52	0.1%	49	0.1%	44	0.1%
Tennessee	588	1.6%	578	1.7%	576	1.7%
Texas	2,397	6.7%	2,325	6.7%	2,329	6.7%
Utah	180	0.5%	177	0.5%	184	0.5%
Vermont	68	0.2%	68	0.2%	73	0.2%
Virginia	766	2.1%	746	2.2%	729	2.1%
Washington	539	1.5%	528	1.5%	515	1.5%
West Virginia	261	0.7%	252	0.7%	240	0.7%
Wisconsin	489	1.4%	476	1.4%	477	1.4%
Wyoming	15	0.0%	14	0.0%	15	0.0%

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





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 2019-2020 academic year was reported during the fall of the 2020-2021 academic year, therefore, the following data includes only those residents who graduated or left their programs between September 1, 2019 and August 31, 2020.

Graduating Residents

Of the 46,401 residents graduating from ACGME-accredited programs in the 2019-2020 academic year, 62.8% graduated from a program in a medical specialty or subspecialty, 22.4% graduated from a program in a hospital-based specialty or subspecialty, and 14.9% graduated from a program in a surgical specialty or subspecialty. From the 2010-2011 academic year to the 2019-2020 academic year, there was a 27.0% increase in graduating residents (a 25.8% increase in specialty program graduates and a 29.9% increase in subspecialty program graduates). The specialties with the highest number of graduating residents in the 2019-2020 academic year include:

- Internal medicine (8,779)
- Family medicine (4,364)
- Pediatrics (2,997)
- Emergency medicine (2,445)

International medical school graduates account for 11,514 (24.8%) of all graduating residents.

Residents Completing Preliminary Education and Training and Transitional Year Graduates

There were 3,337 residents who completed preliminary education and training and 1,588 residents graduating from transitional year programs during the 2019-2020 academic year, for a total of 4,925 residents completing the necessary prerequisite education and training for specialty programs that require a clinical base year. Of the 3,337 preliminary education and training graduates, 2,134 (63.9%) were in internal medicine, 1,102 (33.0%) were in surgery, 90 (2.7%) were in pediatrics,

and 11 (0.3%) were in obstetrics and gynecology. Over the last 10 years, the total number of preliminary graduates has fluctuated, with a high of 3,579 in the 2017-2018 academic year, and a low of 3,118 in 2011-2012. Since 2011-2012, there has been a 34.6% increase in the number of residents completing transitional year programs.

Geographic Distribution of Graduates

There were approximately 13.95 graduating residents per 100,000 population, including Puerto Rico, during the 2019-2020 academic year (9.99 specialty graduates and 3.96 subspecialty graduates). The following states have the highest total number of graduating residents:

- New York (5,875)
- California (4,211)
- Texas (3,053)
- Pennsylvania (2,995)

The concentration of specialty graduates ranges from 1.78 per 100,000 population in Alaska to 71.97 per 100,000 population in the District of Columbia.

Residents Leaving Prior to Completion

In the 2019-2020 academic year, 2,062 left their programs prior to successful completion with statuses of either transferred (51.7%), withdrawn (37.1%), dismissed (9.8%), unsuccessfully completed program (0.7%), or deceased (0.6%). The following specialties have the highest number of transferring residents:

- Psychiatry (366)
- Surgery (117)
- Family medicine (94)
- Internal medicine (91)

Overall, of the 1,006 transfers that occurred among residents in specialty programs during the 2019-2020 academic year, 358 (35.6%) occurred during the first year of the program, 203 (20.2%) occurred during the second year of the program, 394 (39.2%) occurred during the third year of the program, and 51 (5.1%) occurred in the fourth, fifth, or sixth year of the program. ^Λ

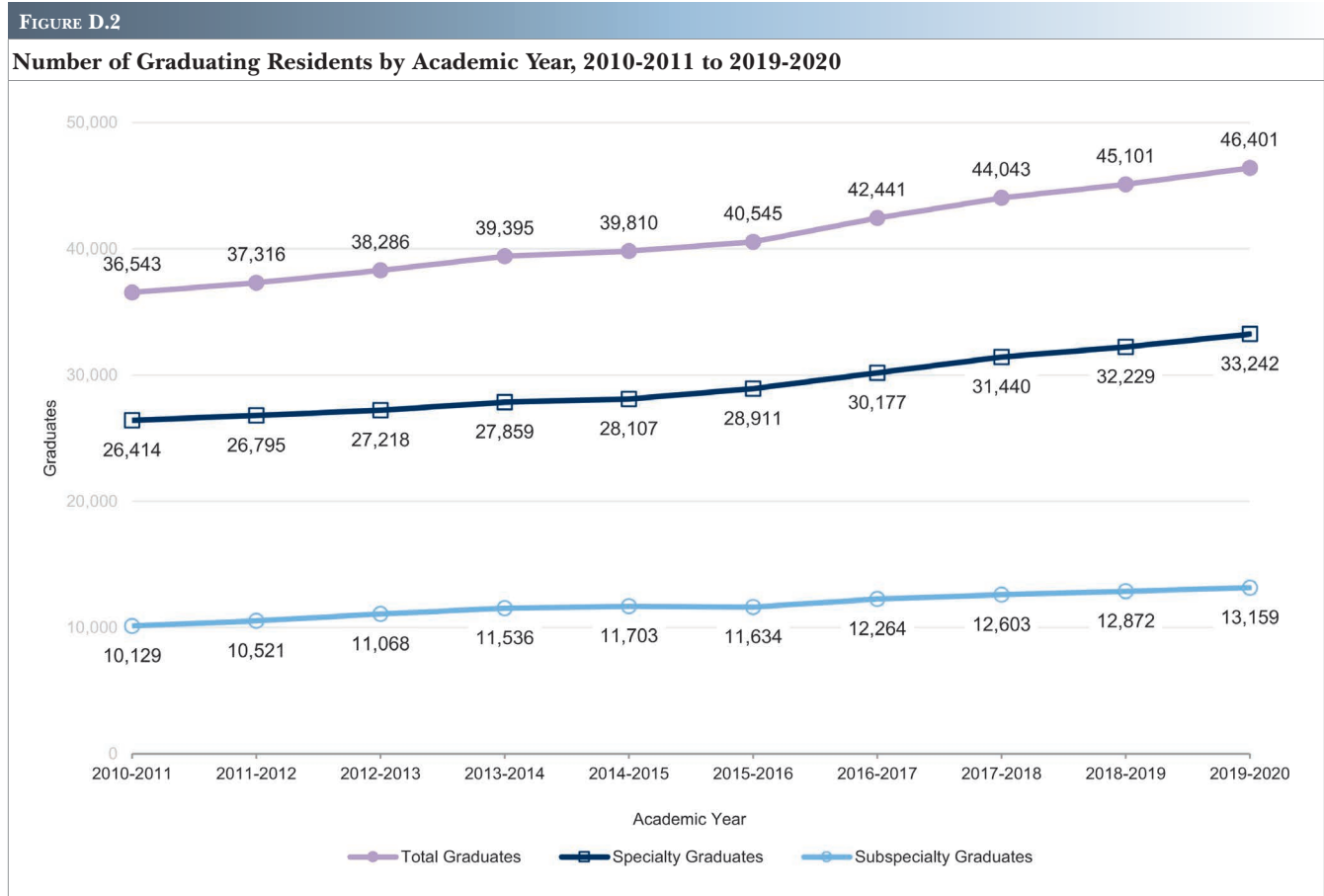
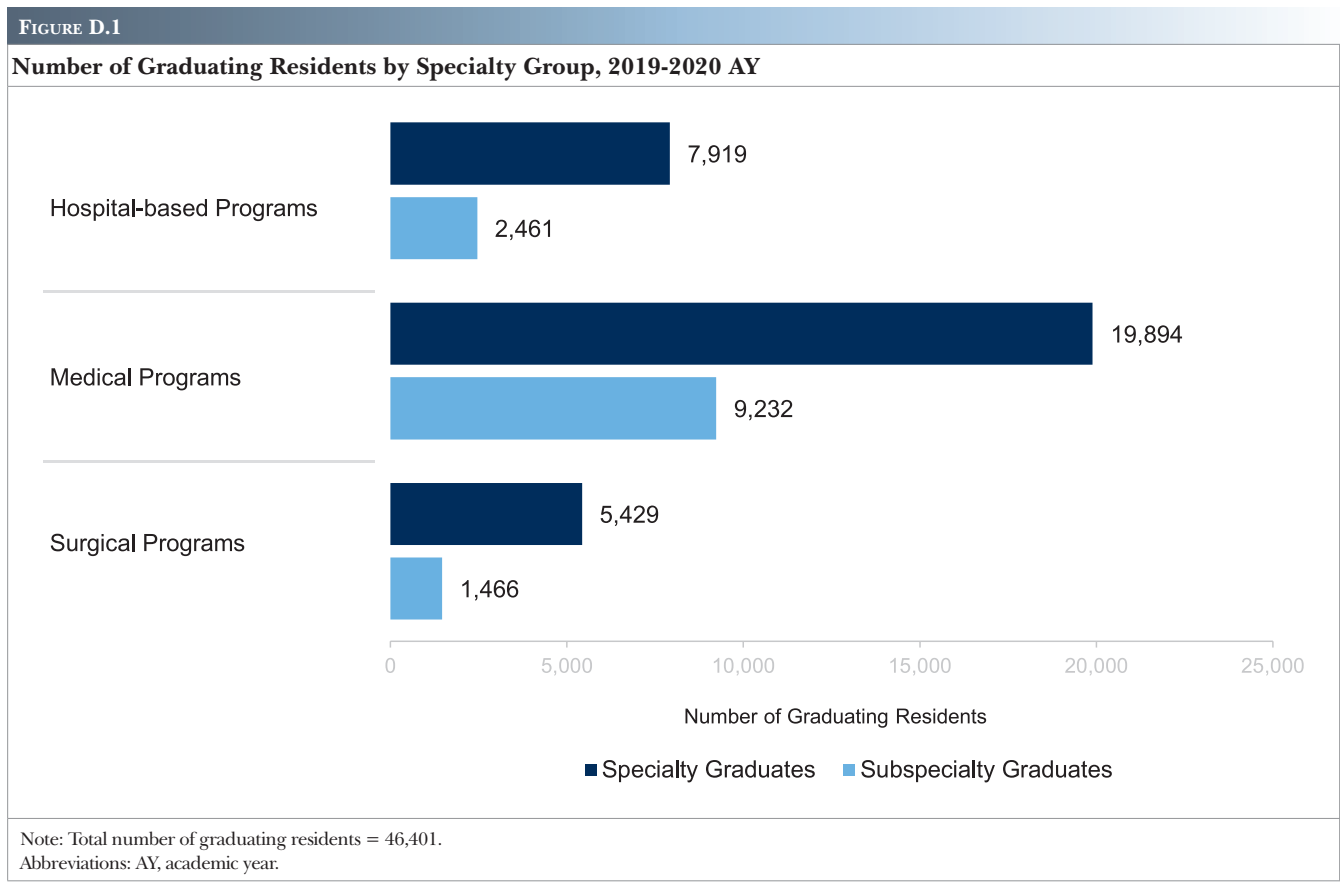
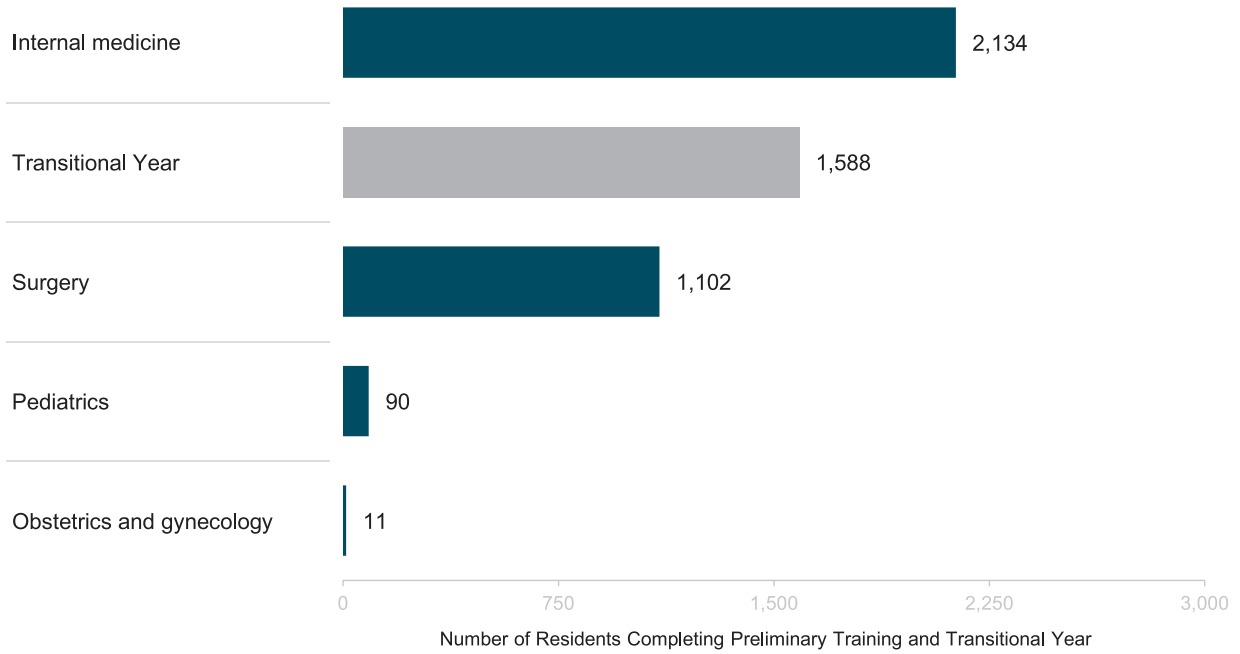


FIGURE D.3

Number of Residents Completing Preliminary Training and Transitional Year by Specialty, 2019-2020 AY



Notes: Total number of residents completing preliminary training = 3,337. Total number of residents completing transitional year programs = 1,588. Abbreviations: AY, academic year.

FIGURE D.4

Number of Residents Completing Preliminary Training and Transitional Year by Academic Year, 2010-2011 to 2019-2020

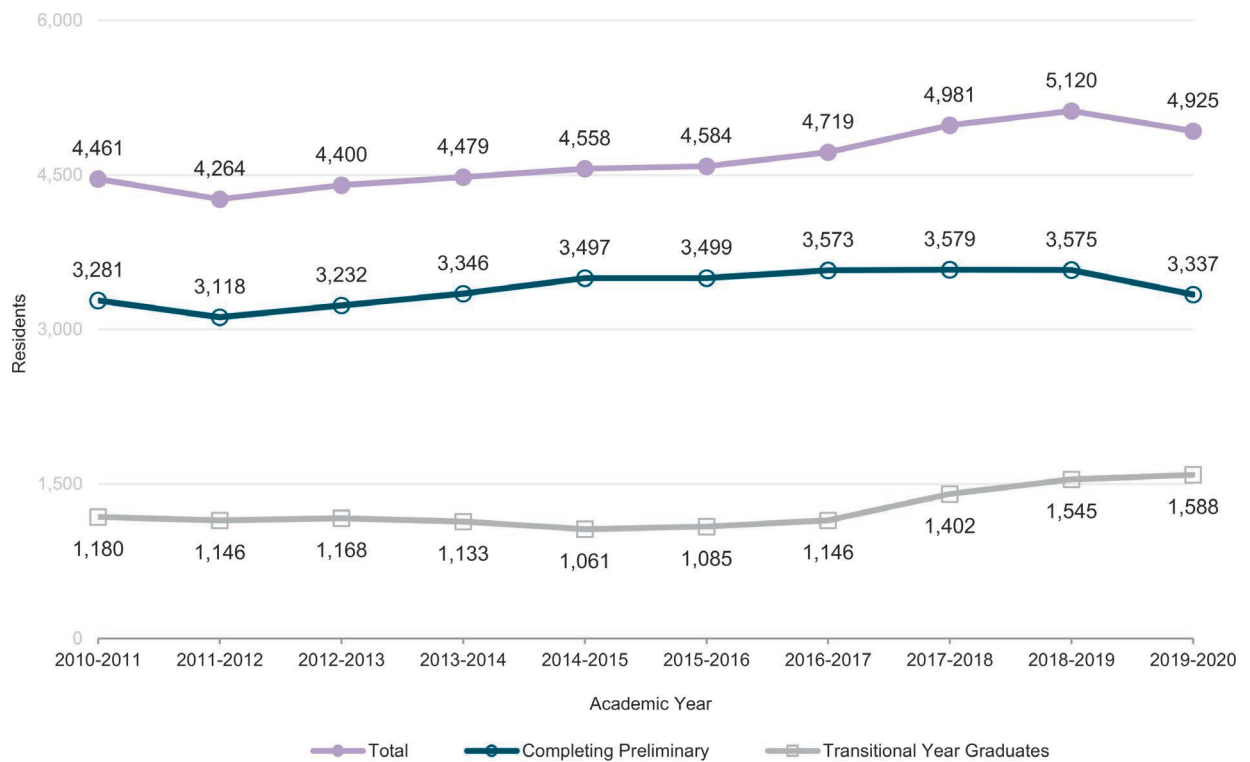


TABLE D.5				
Number of Graduating Residents and Residents Completing Preliminary Training by Specialty and Subspecialty, 2019-2020 AY				
Specialty	Total Graduates	Percent of Total Graduates	Number of Residents Completing Preliminary Training	Percent of Total Residents Completing Preliminary Training
OVERALL	46,401	100.0%	3,337	100.0%
TOTAL PIPELINE	31,295	67.4%	3,337	100.0%
Allergy and immunology	158	0.3%	0	0.0%
Anesthesiology	1,728	3.7%	0	0.0%
- Adult cardiothoracic anesthesiology	225	0.5%	0	0.0%
- Clinical informatics	0	0.0%	0	0.0%
- Critical care medicine	194	0.4%	0	0.0%
- Regional anesthesiology and acute pain medicine	76	0.2%	0	0.0%
- Obstetric anesthesiology	40	0.1%	0	0.0%
- Pain medicine (multidisciplinary)	395	0.9%	0	0.0%
- Pediatric anesthesiology	216	0.5%	0	0.0%
Colon and rectal surgery	104	0.2%	0	0.0%
Dermatology	514	1.1%	0	0.0%
- Dermatopathology (multidisciplinary)	69	0.1%	0	0.0%
- Micrographic surgery and dermatologic oncology	86	0.2%	0	0.0%
Emergency medicine	2,455	5.3%	0	0.0%
- Clinical informatics	4	0.0%	0	0.0%
- Emergency medical services	90	0.2%	0	0.0%
- Medical toxicology	36	0.1%	0	0.0%
- Pediatric emergency medicine	46	0.1%	0	0.0%
- Sports medicine	17	0.0%	0	0.0%
- Undersea and hyperbaric medicine	10	0.0%	0	0.0%
Family medicine	4,364	9.4%	0	0.0%
- Clinical informatics	6	0.0%	0	0.0%
- Geriatric medicine	41	0.1%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	377	0.8%	0	0.0%
- Sports medicine	259	0.6%	0	0.0%
Internal medicine	8,779	18.9%	2,134	63.9%
- Adult congenital heart disease	17	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	110	0.2%	0	0.0%
- Cardiovascular disease	997	2.1%	0	0.0%
- Clinical cardiac electrophysiology	127	0.3%	0	0.0%
- Clinical informatics	20	0.0%	0	0.0%
- Critical care medicine	160	0.3%	0	0.0%
- Endocrinology, diabetes, and metabolism	326	0.7%	0	0.0%
- Gastroenterology	583	1.3%	0	0.0%
- Geriatric medicine	267	0.6%	0	0.0%
- Hematology	10	0.0%	0	0.0%
- Hematology and medical oncology	620	1.3%	0	0.0%
- Infectious disease	389	0.8%	0	0.0%
- Interventional cardiology	349	0.8%	0	0.0%
- Nephrology	416	0.9%	0	0.0%
- Medical oncology	21	0.0%	0	0.0%
- Pulmonary disease	32	0.1%	0	0.0%
- Pulmonary disease and critical care medicine	647	1.4%	0	0.0%
- Rheumatology	260	0.6%	0	0.0%
- Sleep medicine (multidisciplinary)	181	0.4%	0	0.0%
- Transplant hepatology	55	0.1%	0	0.0%
Medical genetics and genomics	25	0.1%	0	0.0%
- Medical biochemical genetics	16	0.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	54	0.1%	0	0.0%
Neurological surgery	193	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, 2019-2020 AY				
Specialty	Total Graduates	Percent of Total Graduates	Number of Residents Completing Preliminary Training	Percent of Total Residents Completing Preliminary Training
Neurology	806	1.7%	0	0.0%
- Brain injury medicine	1	0.0%	0	0.0%
- Clinical neurophysiology	165	0.4%	0	0.0%
- Epilepsy	128	0.3%	0	0.0%
- Endovascular surgical neuroradiology	2	0.0%	0	0.0%
- Neurodevelopmental disabilities	6	0.0%	0	0.0%
- Neuromuscular medicine	75	0.2%	0	0.0%
- Vascular neurology	128	0.3%	0	0.0%
Child neurology	127	0.3%	0	0.0%
Nuclear medicine	39	0.1%	0	0.0%
Obstetrics and gynecology	1,361	2.9%	11	0.3%
- Female pelvic medicine and reconstructive surgery	53	0.1%	0	0.0%
- Gynecologic oncology	67	0.1%	0	0.0%
- Maternal-fetal medicine	110	0.2%	0	0.0%
- Reproductive endocrinology and infertility	55	0.1%	0	0.0%
- Complex family planning	0	0.0%	0	0.0%
Ophthalmology	501	1.1%	0	0.0%
- Ophthalmic plastic and reconstructive surgery	3	0.0%	0	0.0%
Orthopaedic surgery	842	1.8%	0	0.0%
- Adult reconstructive orthopaedics	45	0.1%	0	0.0%
- Foot and ankle orthopaedics	15	0.0%	0	0.0%
- Hand surgery	151	0.3%	0	0.0%
- Musculoskeletal oncology	18	0.0%	0	0.0%
- Orthopaedic sports medicine	216	0.5%	0	0.0%
- Orthopaedic surgery of the spine	27	0.1%	0	0.0%
- Orthopaedic trauma	20	0.0%	0	0.0%
- Pediatric orthopaedics	38	0.1%	0	0.0%
Osteopathic neuromusculoskeletal medicine	34	0.1%	0	0.0%
Otolaryngology - head and neck surgery	331	0.7%	0	0.0%
- Neurotology	16	0.0%	0	0.0%
- Pediatric otolaryngology	37	0.1%	0	0.0%
Pathology-anatomic and clinical	594	1.3%	0	0.0%
- Blood banking/transfusion medicine	50	0.1%	0	0.0%
- Clinical informatics	6	0.0%	0	0.0%
- Chemical pathology	2	0.0%	0	0.0%
- Cytopathology	129	0.3%	0	0.0%
- Forensic pathology	54	0.1%	0	0.0%
- Hematopathology	131	0.3%	0	0.0%
- Medical microbiology	9	0.0%	0	0.0%
- Neuropathology	26	0.1%	0	0.0%
- Pediatric pathology	24	0.1%	0	0.0%
- Selective pathology	171	0.4%	0	0.0%
Pediatrics	2,997	6.5%	90	2.7%
- Adolescent medicine	33	0.1%	0	0.0%
- Child abuse pediatrics	12	0.0%	0	0.0%
- Clinical informatics	7	0.0%	0	0.0%
- Developmental-behavioral pediatrics	30	0.1%	0	0.0%
- Neonatal-perinatal medicine	247	0.5%	0	0.0%
- Pediatric cardiology	144	0.3%	0	0.0%
- Pediatric critical care medicine	186	0.4%	0	0.0%
- Pediatric emergency medicine	144	0.3%	0	0.0%
- Pediatric endocrinology	76	0.2%	0	0.0%
- Pediatric gastroenterology	101	0.2%	0	0.0%

TABLE D.5 Continued				
Number of Graduating Residents and Residents Completing Preliminary Training by Specialty and Subspecialty, 2019-2020 AY				
Specialty	Total Graduates	Percent of Total Graduates	Number of Residents Completing Preliminary Training	Percent of Total Residents Completing Preliminary Training
- Pediatric hematology/oncology	162	0.3%	0	0.0%
- Pediatric infectious diseases	65	0.1%	0	0.0%
- Pediatric nephrology	37	0.1%	0	0.0%
- Pediatric pulmonology	49	0.1%	0	0.0%
- Pediatric rheumatology	34	0.1%	0	0.0%
- Sports medicine	25	0.1%	0	0.0%
- Pediatric transplant hepatology	10	0.0%	0	0.0%
- Pediatric hospital medicine	38	0.1%	0	0.0%
Physical medicine and rehabilitation	426	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	22	0.0%	0	0.0%
- Pediatric rehabilitation medicine	19	0.0%	0	0.0%
- Sports medicine	32	0.1%	0	0.0%
Plastic surgery	76	0.2%	0	0.0%
Plastic surgery - integrated	137	0.3%	0	0.0%
- Craniofacial surgery	5	0.0%	0	0.0%
- Hand surgery	22	0.0%	0	0.0%
Preventive medicine	179	0.4%	0	0.0%
- Medical toxicology	2	0.0%	0	0.0%
- Undersea and hyperbaric medicine	1	0.0%	0	0.0%
Psychiatry	1,312	2.8%	0	0.0%
- Addiction medicine (multidisciplinary)	81	0.2%	0	0.0%
- Addiction psychiatry	78	0.2%	0	0.0%
- Child and adolescent psychiatry	434	0.9%	0	0.0%
- Forensic psychiatry	82	0.2%	0	0.0%
- Geriatric psychiatry	45	0.1%	0	0.0%
- Consultation-liaison psychiatry	91	0.2%	0	0.0%
Radiation oncology	193	0.4%	0	0.0%
Radiology-diagnostic	1,093	2.4%	0	0.0%
- Abdominal radiology	46	0.1%	0	0.0%
- Endovascular surgical neuroradiology	4	0.0%	0	0.0%
- Musculoskeletal radiology	35	0.1%	0	0.0%
- Neuroradiology	282	0.6%	0	0.0%
- Nuclear radiology	13	0.0%	0	0.0%
- Pediatric radiology	57	0.1%	0	0.0%
Interventional radiology - independent	0	0.0%	0	0.0%
Interventional radiology - integrated	25	0.1%	0	0.0%
Surgery	1,381	3.0%	1,102	33.0%
- Complex general surgical oncology	56	0.1%	0	0.0%
- Hand surgery	8	0.0%	0	0.0%
- Pediatric surgery	40	0.1%	0	0.0%
- Surgical critical care	293	0.6%	0	0.0%
- Vascular surgery	125	0.3%	0	0.0%
Vascular surgery - integrated	54	0.1%	0	0.0%
Thoracic surgery	97	0.2%	0	0.0%
- Congenital cardiac surgery	9	0.0%	0	0.0%
Thoracic surgery - integrated	22	0.0%	0	0.0%
Urology	330	0.7%	0	0.0%
- Female pelvic medicine and reconstructive surgery	17	0.0%	0	0.0%
- Pediatric urology	19	0.0%	0	0.0%
Transitional year	1,588	3.4%	0	0.0%
Internal medicine/Pediatrics	377	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, 2019-2020 AY

Specialty	Total Graduates	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
OVERALL	46,401	27,091	58.4%	11,514	24.8%	7,707	16.6%	88	0.2%	1	0.0%
TOTAL PIPELINE	31,295	18,406	58.8%	7,137	22.8%	5,735	18.3%	17	0.1%		
Allergy and immunology	158	109	69.0%	31	19.6%	17	10.8%	1	0.6%	0	0.0%
Anesthesiology	1,728	1,253	72.5%	221	12.8%	254	14.7%	0	0.0%	0	0.0%
- Adult cardiothoracic anesthesiology	225	168	74.7%	26	11.6%	30	13.3%	1	0.4%	0	0.0%
- Clinical informatics	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
- Critical care medicine	194	142	73.2%	35	18.0%	17	8.8%	0	0.0%	0	0.0%
- Regional anesthesiology and acute pain medicine	76	57	75.0%	11	14.5%	8	10.5%	0	0.0%	0	0.0%
- Obstetric anesthesiology	40	30	75.0%	8	20.0%	2	5.0%	0	0.0%	0	0.0%
- Pain medicine (multidisciplinary)	395	256	64.8%	72	18.2%	67	17.0%	0	0.0%	0	0.0%
- Pediatric anesthesiology	216	154	71.3%	40	18.5%	20	9.3%	2	0.9%	0	0.0%
Colon and rectal surgery	104	78	75.0%	20	19.2%	4	3.8%	2	1.9%	0	0.0%
Dermatology	514	433	84.2%	14	2.7%	67	13.0%	0	0.0%	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	86	73	84.9%	3	3.5%	9	10.5%	1	1.2%	0	0.0%
Emergency medicine	2,455	1,670	68.0%	116	4.7%	668	27.2%	1	0.0%	0	0.0%
- Clinical informatics	4	3	75.0%	0	0.0%	1	25.0%	0	0.0%	0	0.0%
- Emergency medical services	90	64	71.1%	8	8.9%	18	20.0%	0	0.0%	0	0.0%
- Medical toxicology	36	30	83.3%	2	5.6%	3	8.3%	1	2.8%	0	0.0%
- Pediatric emergency medicine	46	29	63.0%	14	30.4%	3	6.5%	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	4,364	1,787	40.9%	1,107	25.4%	1,469	33.7%	1	0.0%	0	0.0%
- Clinical informatics	6	4	66.7%	2	33.3%	0	0.0%	0	0.0%	0	0.0%
- Geriatric medicine	41	17	41.5%	16	39.0%	8	19.5%	0	0.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	377	216	57.3%	108	28.6%	51	13.5%	2	0.5%	0	0.0%
- Sports medicine	259	116	44.8%	38	14.7%	105	40.5%	0	0.0%	0	0.0%
Internal medicine	8,779	3,789	43.2%	3,519	40.1%	1,466	16.7%	5	0.1%	0	0.0%
- Adult congenital heart disease	17	14	82.4%	3	17.6%	0	0.0%	0	0.0%	0	0.0%
- Advanced heart failure and transplant cardiology	110	59	53.6%	39	35.5%	11	10.0%	1	0.9%	0	0.0%
- Cardiovascular disease	997	510	51.2%	362	36.3%	125	12.5%	0	0.0%	0	0.0%
- Clinical cardiac electrophysiology	127	64	50.4%	54	42.5%	8	6.3%	1	0.8%	0	0.0%
- Clinical informatics	20	13	65.0%	6	30.0%	0	0.0%	1	5.0%	0	0.0%
- Critical care medicine	160	44	27.5%	88	55.0%	27	16.9%	1	0.6%	0	0.0%
- Endocrinology, diabetes, and metabolism	326	128	39.3%	164	50.3%	34	10.4%	0	0.0%	0	0.0%
- Gastroenterology	583	338	58.0%	178	30.5%	67	11.5%	0	0.0%	0	0.0%
- Geriatric medicine	267	78	29.2%	159	59.6%	28	10.5%	2	0.7%	0	0.0%
- Hematology	10	6	60.0%	4	40.0%	0	0.0%	0	0.0%	0	0.0%
- Hematology and medical oncology	620	338	54.5%	247	39.8%	35	5.6%	0	0.0%	0	0.0%
- Infectious disease	389	178	45.8%	164	42.2%	47	12.1%	0	0.0%	0	0.0%
- Interventional cardiology	349	130	37.2%	182	52.1%	36	10.3%	1	0.3%	0	0.0%
- Nephrology	416	105	25.2%	265	63.7%	46	11.1%	0	0.0%	0	0.0%
- Medical oncology	21	10	47.6%	9	42.9%	2	9.5%	0	0.0%	0	0.0%
- Pulmonary disease	32	4	12.5%	24	75.0%	4	12.5%	0	0.0%	0	0.0%
- Pulmonary disease and critical care medicine	647	321	49.6%	250	38.6%	75	11.6%	1	0.2%	0	0.0%
- Rheumatology	260	138	53.1%	82	31.5%	39	15.0%	1	0.4%	0	0.0%
- Sleep medicine (multidisciplinary)	181	65	35.9%	92	50.8%	23	12.7%	1	0.6%	0	0.0%
- Transplant hepatology	55	38	69.1%	15	27.3%	0	0.0%	2	3.6%	0	0.0%
Medical genetics and genomics	25	15	60.0%	8	32.0%	2	8.0%	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)	54	27	50.0%	23	42.6%	3	5.6%	1	1.9%	0	0.0%
Neurological surgery	193	179	92.7%	10	5.2%	4	2.1%	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, 2019-2020 AY

Specialty	Total Graduates	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
Neurology	806	451	56.0%	245	30.4%	109	13.5%	1	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	165	86	52.1%	61	37.0%	16	9.7%	2	1.2%	0	0.0%
- Epilepsy	128	69	53.9%	42	32.8%	14	10.9%	2	1.6%	1	0.8%
- Endovascular surgical neuroradiology	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%
- Neurodevelopmental disabilities	6	5	83.3%	1	16.7%	0	0.0%	0	0.0%	0	0.0%
- Neuromuscular medicine	75	47	62.7%	24	32.0%	4	5.3%	0	0.0%	0	0.0%
- Vascular neurology	128	57	44.5%	59	46.1%	11	8.6%	1	0.8%	0	0.0%
Child neurology	127	85	66.9%	32	25.2%	10	7.9%	0	0.0%	0	0.0%
Nuclear medicine	39	14	35.9%	25	64.1%	0	0.0%	0	0.0%	0	0.0%
Obstetrics and gynecology	1,361	1,021	75.0%	123	9.0%	216	15.9%	1	0.1%	0	0.0%
- Female pelvic medicine and reconstructive surgery	53	43	81.1%	5	9.4%	5	9.4%	0	0.0%	0	0.0%
- Gynecologic oncology	67	51	76.1%	8	11.9%	8	11.9%	0	0.0%	0	0.0%
- Maternal-fetal medicine	110	88	80.0%	16	14.5%	6	5.5%	0	0.0%	0	0.0%
- Reproductive endocrinology and infertility	55	44	80.0%	7	12.7%	4	7.3%	0	0.0%	0	0.0%
- Complex family planning	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Ophthalmology	501	459	91.6%	14	2.8%	28	5.6%	0	0.0%	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	842	705	83.7%	12	1.4%	125	14.8%	0	0.0%	0	0.0%
- Adult reconstructive orthopaedics	45	34	75.6%	5	11.1%	4	8.9%	2	4.4%	0	0.0%
- Foot and ankle orthopaedics	15	13	86.7%	2	13.3%	0	0.0%	0	0.0%	0	0.0%
- Hand surgery	151	141	93.4%	1	0.7%	8	5.3%	1	0.7%	0	0.0%
- Musculoskeletal oncology	18	17	94.4%	0	0.0%	0	0.0%	1	5.6%	0	0.0%
- Orthopaedic sports medicine	216	171	79.2%	14	6.5%	24	11.1%	7	3.2%	0	0.0%
- Orthopaedic surgery of the spine	27	20	74.1%	2	7.4%	5	18.5%	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	38	26	68.4%	6	15.8%	4	10.5%	2	5.3%	0	0.0%
Osteopathic neuromusculoskeletal medicine	34	2	5.9%	0	0.0%	32	94.1%	0	0.0%	0	0.0%
Otolaryngology - head and neck surgery	331	306	92.4%	1	0.3%	24	7.3%	0	0.0%	0	0.0%
- Neurotology	16	14	87.5%	2	12.5%	0	0.0%	0	0.0%	0	0.0%
- Pediatric otolaryngology	37	31	83.8%	1	2.7%	3	8.1%	2	5.4%	0	0.0%
Pathology-anatomic and clinical	594	279	47.0%	261	43.9%	53	8.9%	1	0.2%	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	6	4	66.7%	2	33.3%	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	129	41	31.8%	78	60.5%	10	7.8%	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	131	61	46.6%	59	45.0%	11	8.4%	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	26	16	61.5%	7	26.9%	2	7.7%	1	3.8%	0	0.0%
- Pediatric pathology	24	8	33.3%	12	50.0%	3	12.5%	1	4.2%	0	0.0%
- Selective pathology	171	68	39.8%	94	55.0%	8	4.7%	1	0.6%	0	0.0%
Pediatrics	2,997	2,006	66.9%	564	18.8%	425	14.2%	2	0.1%	0	0.0%
- Adolescent medicine	33	23	69.7%	7	21.2%	3	9.1%	0	0.0%	0	0.0%
- Child abuse pediatrics	12	8	66.7%	2	16.7%	2	16.7%	0	0.0%	0	0.0%
- Clinical informatics	7	6	85.7%	1	14.3%	0	0.0%	0	0.0%	0	0.0%
- Developmental-behavioral pediatrics	30	18	60.0%	7	23.3%	5	16.7%	0	0.0%	0	0.0%
- Neonatal-perinatal medicine	247	145	58.7%	65	26.3%	37	15.0%	0	0.0%	0	0.0%
- Pediatric cardiology	144	110	76.4%	25	17.4%	7	4.9%	2	1.4%	0	0.0%
- Pediatric critical care medicine	186	126	67.7%	45	24.2%	15	8.1%	0	0.0%	0	0.0%
- Pediatric emergency medicine	144	101	70.1%	28	19.4%	15	10.4%	0	0.0%	0	0.0%
- Pediatric endocrinology	76	43	56.6%	27	35.5%	6	7.9%	0	0.0%	0	0.0%
- Pediatric gastroenterology	101	61	60.4%	28	27.7%	12	11.9%	0	0.0%	0	0.0%

TABLE D.6 Continued

Number of Graduating Residents by Specialty and Subspecialty and Medical School Type, 2019-2020 AY											
Specialty	Total Graduates	US LCME - Accredited Medical School		International Medical School		Osteopathic Medical School		Canadian Medical School		US Medical School Unknown	
		#	%	#	%	#	%	#	%	#	%
- Pediatric hematology/oncology	162	115	71.0%	29	17.9%	18	11.1%	0	0.0%	0	0.0%
- Pediatric infectious diseases	65	42	64.6%	19	29.2%	4	6.2%	0	0.0%	0	0.0%
- Pediatric nephrology	37	21	56.8%	12	32.4%	4	10.8%	0	0.0%	0	0.0%
- Pediatric pulmonology	49	22	44.9%	18	36.7%	9	18.4%	0	0.0%	0	0.0%
- Pediatric rheumatology	34	24	70.6%	7	20.6%	3	8.8%	0	0.0%	0	0.0%
- Sports medicine	25	15	60.0%	6	24.0%	4	16.0%	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	38	30	78.9%	5	13.2%	3	7.9%	0	0.0%	0	0.0%
Physical medicine and rehabilitation	426	239	56.1%	54	12.7%	133	31.2%	0	0.0%	0	0.0%
- Brain injury medicine	17	8	47.1%	3	17.6%	6	35.3%	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	22	11	50.0%	2	9.1%	9	40.9%	0	0.0%	0	0.0%
- Pediatric rehabilitation medicine	19	9	47.4%	2	10.5%	8	42.1%	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	76	60	78.9%	10	13.2%	6	7.9%	0	0.0%	0	0.0%
Plastic surgery - integrated	137	127	92.7%	10	7.3%	0	0.0%	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	22	19	86.4%	0	0.0%	0	0.0%	3	13.6%	0	0.0%
Preventive medicine	179	119	66.5%	28	15.6%	30	16.8%	2	1.1%	0	0.0%
- Medical toxicology	2	2	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	1,312	764	58.2%	319	24.3%	228	17.4%	1	0.1%	0	0.0%
- Addiction medicine (multidisciplinary)	81	52	64.2%	14	17.3%	13	16.0%	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	434	224	51.6%	136	31.3%	73	16.8%	1	0.2%	0	0.0%
- Forensic psychiatry	82	59	72.0%	17	20.7%	6	7.3%	0	0.0%	0	0.0%
- Geriatric psychiatry	45	13	28.9%	26	57.8%	6	13.3%	0	0.0%	0	0.0%
- Consultation-liaison psychiatry	91	60	65.9%	26	28.6%	4	4.4%	1	1.1%	0	0.0%
Radiation oncology	193	188	97.4%	0	0.0%	5	2.6%	0	0.0%	0	0.0%
Radiology-diagnostic	1,093	761	69.6%	193	17.7%	138	12.6%	1	0.1%	0	0.0%
- Abdominal radiology	46	17	37.0%	22	47.8%	4	8.7%	3	6.5%	0	0.0%
- Endovascular surgical neuroradiology	4	4	100.0%	0	0.0%	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	282	202	71.6%	55	19.5%	20	7.1%	5	1.8%	0	0.0%
- Nuclear radiology	13	3	23.1%	9	69.2%	1	7.7%	0	0.0%	0	0.0%
- Pediatric radiology	57	27	47.4%	20	35.1%	10	17.5%	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	25	23	92.0%	1	4.0%	1	4.0%	0	0.0%	0	0.0%
Surgery	1,381	993	71.9%	199	14.4%	189	13.7%	0	0.0%	0	0.0%
- Complex general surgical oncology	56	44	78.6%	11	19.6%	0	0.0%	1	1.8%	0	0.0%
- Hand surgery	8	5	62.5%	1	12.5%	2	25.0%	0	0.0%	0	0.0%
- Pediatric surgery	40	38	95.0%	2	5.0%	0	0.0%	0	0.0%	0	0.0%
- Surgical critical care	293	214	73.0%	33	11.3%	45	15.4%	1	0.3%	0	0.0%
- Vascular surgery	125	90	72.0%	23	18.4%	10	8.0%	2	1.6%	0	0.0%
Vascular surgery - integrated	54	45	83.3%	6	11.1%	3	5.6%	0	0.0%	0	0.0%
Thoracic surgery	97	75	77.3%	17	17.5%	4	4.1%	1	1.0%	0	0.0%
- Congenital cardiac surgery	9	7	77.8%	2	22.2%	0	0.0%	0	0.0%	0	0.0%
Thoracic surgery - integrated	22	19	86.4%	2	9.1%	1	4.5%	0	0.0%	0	0.0%
Urology	330	284	86.1%	19	5.8%	27	8.2%	0	0.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	17	16	94.1%	1	5.9%	0	0.0%	0	0.0%	0	0.0%
- Pediatric urology	19	16	84.2%	1	5.3%	2	10.5%	0	0.0%	0	0.0%
Transitional year	1,588	992	62.5%	159	10.0%	437	27.5%	0	0.0%	0	0.0%
Internal medicine/Pediatrics	377	330	87.5%	24	6.4%	22	5.8%	1	0.3%	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, 2019-2020 AY

State Name	State Abbreviation	State Population - Census Estimate 2020	Total Graduates	Percent of All Graduates	Graduates per 100,000 Pop
OVERALL	-	332,643,466	46,401	100.0%	13.95
Alabama	AL	4,921,532	496	1.1%	10.08
Alaska	AK	731,158	13	0.0%	1.78
Arizona	AZ	7,421,401	601	1.3%	8.10
Arkansas	AR	3,030,522	292	0.6%	9.64
California	CA	39,368,078	4,211	9.1%	10.70
Colorado	CO	5,807,719	545	1.2%	9.38
Connecticut	CT	3,557,006	788	1.7%	22.15
Delaware	DE	986,809	114	0.2%	11.55
District of Columbia	DC	712,816	513	1.1%	71.97
Florida	FL	21,733,312	2,239	4.8%	10.30
Georgia	GA	10,710,017	951	2.0%	8.88
Hawaii	HI	1,407,006	147	0.3%	10.45
Idaho	ID	1,826,913	40	0.1%	2.19
Illinois	IL	12,587,530	2,150	4.6%	17.08
Indiana	IN	6,754,953	513	1.1%	7.59
Iowa	IA	3,163,561	312	0.7%	9.86
Kansas	KS	2,913,805	254	0.5%	8.72
Kentucky	KY	4,477,251	444	1.0%	9.92
Louisiana	LA	4,645,318	639	1.4%	13.76
Maine	ME	1,350,141	112	0.2%	8.30
Maryland	MD	6,055,802	1,146	2.5%	18.92
Massachusetts	MA	6,893,574	2,057	4.4%	29.84
Michigan	MI	9,966,555	2,386	5.1%	23.94
Minnesota	MN	5,657,342	830	1.8%	14.67
Mississippi	MS	2,966,786	247	0.5%	8.33
Missouri	MO	6,151,548	995	2.1%	16.17
Montana	MT	1,080,577	29	0.1%	2.68
Nebraska	NE	1,937,552	256	0.6%	13.21
Nevada	NV	3,138,259	229	0.5%	7.30
New Hampshire	NH	1,366,275	140	0.3%	10.25
New Jersey	NJ	8,882,371	1,205	2.6%	13.57
New Mexico	NM	2,106,319	214	0.5%	10.16
New York	NY	19,336,776	5,875	12.7%	30.38
North Carolina	NC	10,600,823	1,237	2.7%	11.67
North Dakota	ND	765,309	58	0.1%	7.58
Ohio	OH	11,693,217	2,379	5.1%	20.35
Oklahoma	OK	3,980,783	354	0.8%	8.89
Oregon	OR	4,241,507	350	0.8%	8.25
Pennsylvania	PA	12,783,254	2,995	6.5%	23.43
Puerto Rico	PR	3,159,343	322	0.7%	10.19
Rhode Island	RI	1,057,125	265	0.6%	25.07
South Carolina	SC	5,218,040	498	1.1%	9.54
South Dakota	SD	892,717	52	0.1%	5.82
Tennessee	TN	6,886,834	839	1.8%	12.18
Texas	TX	29,360,759	3,053	6.6%	10.40
Utah	UT	3,249,879	281	0.6%	8.65
Vermont	VT	623,347	91	0.2%	14.60
Virginia	VA	8,590,563	901	1.9%	10.49
Washington	WA	7,693,612	758	1.6%	9.85
West Virginia	WV	1,784,787	279	0.6%	15.63
Wisconsin	WI	5,832,655	692	1.5%	11.86
Wyoming	WY	582,328	14	0.0%	2.40

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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

Abbreviations: AY, academic year.

TABLE D.8

Number of Specialty Graduates and Specialty Graduate Concentration per 100,000 Population by State, 2019-2020 AY

State Name	State Abbreviation	State Population - Census Estimate 2020	Total Specialty Graduates	Percent of All Specialty Graduates	Specialty Graduates per 100,000 Pop
OVERALL	-	332,643,466	33,242	100.0%	9.99
Alabama	AL	4,921,532	360	1.1%	7.31
Alaska	AK	731,158	11	0.0%	1.50
Arizona	AZ	7,421,401	446	1.3%	6.01
Arkansas	AR	3,030,522	235	0.7%	7.75
California	CA	39,368,078	2,898	8.7%	7.36
Colorado	CO	5,807,719	371	1.1%	6.39
Connecticut	CT	3,557,006	544	1.6%	15.29
Delaware	DE	986,809	87	0.3%	8.82
District of Columbia	DC	712,816	337	1.0%	47.28
Florida	FL	21,733,312	1,712	5.2%	7.88
Georgia	GA	10,710,017	714	2.1%	6.67
Hawaii	HI	1,407,006	129	0.4%	9.17
Idaho	ID	1,826,913	38	0.1%	2.08
Illinois	IL	12,587,530	1,623	4.9%	12.89
Indiana	IN	6,754,953	401	1.2%	5.94
Iowa	IA	3,163,561	227	0.7%	7.18
Kansas	KS	2,913,805	192	0.6%	6.59
Kentucky	KY	4,477,251	323	1.0%	7.21
Louisiana	LA	4,645,318	493	1.5%	10.61
Maine	ME	1,350,141	96	0.3%	7.11
Maryland	MD	6,055,802	714	2.1%	11.79
Massachusetts	MA	6,893,574	1,258	3.8%	18.25
Michigan	MI	9,966,555	1,894	5.7%	19.00
Minnesota	MN	5,657,342	517	1.6%	9.14
Mississippi	MS	2,966,786	191	0.6%	6.44
Missouri	MO	6,151,548	674	2.0%	10.96
Montana	MT	1,080,577	29	0.1%	2.68
Nebraska	NE	1,937,552	192	0.6%	9.91
Nevada	NV	3,138,259	199	0.6%	6.34
New Hampshire	NH	1,366,275	90	0.3%	6.59
New Jersey	NJ	8,882,371	984	3.0%	11.08
New Mexico	NM	2,106,319	147	0.4%	6.98
New York	NY	19,336,776	4,199	12.6%	21.72
North Carolina	NC	10,600,823	820	2.5%	7.74
North Dakota	ND	765,309	55	0.2%	7.19
Ohio	OH	11,693,217	1,662	5.0%	14.21
Oklahoma	OK	3,980,783	291	0.9%	7.31
Oregon	OR	4,241,507	246	0.7%	5.80
Pennsylvania	PA	12,783,254	2,054	6.2%	16.07
Puerto Rico	PR	3,159,343	269	0.8%	8.51
Rhode Island	RI	1,057,125	180	0.5%	17.03
South Carolina	SC	5,218,040	372	1.1%	7.13
South Dakota	SD	892,717	48	0.1%	5.38
Tennessee	TN	6,886,834	578	1.7%	8.39
Texas	TX	29,360,759	2,107	6.3%	7.18
Utah	UT	3,249,879	182	0.5%	5.60
Vermont	VT	623,347	65	0.2%	10.43
Virginia	VA	8,590,563	687	2.1%	8.00
Washington	WA	7,693,612	539	1.6%	7.01
West Virginia	WV	1,784,787	241	0.7%	13.50
Wisconsin	WI	5,832,655	507	1.5%	8.69
Wyoming	WY	582,328	14	0.0%	2.40

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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

Abbreviations: AY, academic year.

TABLE D.9
Number of Subspecialty Graduates and Subspecialty Graduate Concentration per 100,000 Population by State, 2019-2020 AY

State Name	State Abbreviation	State Population - Census Estimate 2020	Total Subspecialty Graduates	Percent of All Subspecialty Graduates	Subspecialty Graduates per 100,000 Pop
OVERALL	-	332,643,466	13,159	100.0%	3.96
Alabama	AL	4,921,532	136	1.0%	2.76
Alaska	AK	731,158	2	0.0%	0.27
Arizona	AZ	7,421,401	155	1.2%	2.09
Arkansas	AR	3,030,522	57	0.4%	1.88
California	CA	39,368,078	1,313	10.0%	3.34
Colorado	CO	5,807,719	174	1.3%	3.00
Connecticut	CT	3,557,006	244	1.9%	6.86
Delaware	DE	986,809	27	0.2%	2.74
District of Columbia	DC	712,816	176	1.3%	24.69
Florida	FL	21,733,312	527	4.0%	2.42
Georgia	GA	10,710,017	237	1.8%	2.21
Hawaii	HI	1,407,006	18	0.1%	1.28
Idaho	ID	1,826,913	2	0.0%	0.11
Illinois	IL	12,587,530	527	4.0%	4.19
Indiana	IN	6,754,953	112	0.9%	1.66
Iowa	IA	3,163,561	85	0.6%	2.69
Kansas	KS	2,913,805	62	0.5%	2.13
Kentucky	KY	4,477,251	121	0.9%	2.70
Louisiana	LA	4,645,318	146	1.1%	3.14
Maine	ME	1,350,141	16	0.1%	1.19
Maryland	MD	6,055,802	432	3.3%	7.13
Massachusetts	MA	6,893,574	799	6.1%	11.59
Michigan	MI	9,966,555	492	3.7%	4.94
Minnesota	MN	5,657,342	313	2.4%	5.53
Mississippi	MS	2,966,786	56	0.4%	1.89
Missouri	MO	6,151,548	321	2.4%	5.22
Montana	MT	1,080,577	0	0.0%	0.00
Nebraska	NE	1,937,552	64	0.5%	3.30
Nevada	NV	3,138,259	30	0.2%	0.96
New Hampshire	NH	1,366,275	50	0.4%	3.66
New Jersey	NJ	8,882,371	221	1.7%	2.49
New Mexico	NM	2,106,319	67	0.5%	3.18
New York	NY	19,336,776	1,676	12.7%	8.67
North Carolina	NC	10,600,823	417	3.2%	3.93
North Dakota	ND	765,309	3	0.0%	0.39
Ohio	OH	11,693,217	717	5.4%	6.13
Oklahoma	OK	3,980,783	63	0.5%	1.58
Oregon	OR	4,241,507	104	0.8%	2.45
Pennsylvania	PA	12,783,254	941	7.2%	7.36
Puerto Rico	PR	3,159,343	53	0.4%	1.68
Rhode Island	RI	1,057,125	85	0.6%	8.04
South Carolina	SC	5,218,040	126	1.0%	2.41
South Dakota	SD	892,717	4	0.0%	0.45
Tennessee	TN	6,886,834	261	2.0%	3.79
Texas	TX	29,360,759	946	7.2%	3.22
Utah	UT	3,249,879	99	0.8%	3.05
Vermont	VT	623,347	26	0.2%	4.17
Virginia	VA	8,590,563	214	1.6%	2.49
Washington	WA	7,693,612	219	1.7%	2.85
West Virginia	WV	1,784,787	38	0.3%	2.13
Wisconsin	WI	5,832,655	185	1.4%	3.17
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.
 Abbreviations: AY, academic year.

TABLE D.10

Number of Pipeline Graduates and Pipeline Graduate Concentration per 100,000 Population by State, 2019-2020 AY

State Name	State Abbreviation	State Population - Census Estimate 2020	Total Pipeline Graduates	Percent of All Pipeline Graduates	Pipeline Graduates per 100,000 Pop
OVERALL	-	332,643,466	31,295	100.0%	9.41
Alabama	AL	4,921,532	336	1.1%	6.83
Alaska	AK	731,158	11	0.0%	1.50
Arizona	AZ	7,421,401	422	1.3%	5.69
Arkansas	AR	3,030,522	223	0.7%	7.36
California	CA	39,368,078	2,753	8.8%	6.99
Colorado	CO	5,807,719	353	1.1%	6.08
Connecticut	CT	3,557,006	534	1.7%	15.01
Delaware	DE	986,809	80	0.3%	8.11
District of Columbia	DC	712,816	336	1.1%	47.14
Florida	FL	21,733,312	1,526	4.9%	7.02
Georgia	GA	10,710,017	620	2.0%	5.79
Hawaii	HI	1,407,006	115	0.4%	8.17
Idaho	ID	1,826,913	38	0.1%	2.08
Illinois	IL	12,587,530	1,540	4.9%	12.23
Indiana	IN	6,754,953	355	1.1%	5.26
Iowa	IA	3,163,561	218	0.7%	6.89
Kansas	KS	2,913,805	190	0.6%	6.52
Kentucky	KY	4,477,251	308	1.0%	6.88
Louisiana	LA	4,645,318	483	1.5%	10.40
Maine	ME	1,350,141	96	0.3%	7.11
Maryland	MD	6,055,802	664	2.1%	10.96
Massachusetts	MA	6,893,574	1,185	3.8%	17.19
Michigan	MI	9,966,555	1,707	5.5%	17.13
Minnesota	MN	5,657,342	486	1.6%	8.59
Mississippi	MS	2,966,786	177	0.6%	5.97
Missouri	MO	6,151,548	653	2.1%	10.62
Montana	MT	1,080,577	29	0.1%	2.68
Nebraska	NE	1,937,552	191	0.6%	9.86
Nevada	NV	3,138,259	173	0.6%	5.51
New Hampshire	NH	1,366,275	90	0.3%	6.59
New Jersey	NJ	8,882,371	925	3.0%	10.41
New Mexico	NM	2,106,319	141	0.5%	6.69
New York	NY	19,336,776	4,023	12.9%	20.80
North Carolina	NC	10,600,823	788	2.5%	7.43
North Dakota	ND	765,309	47	0.2%	6.14
Ohio	OH	11,693,217	1,577	5.0%	13.49
Oklahoma	OK	3,980,783	285	0.9%	7.16
Oregon	OR	4,241,507	244	0.8%	5.75
Pennsylvania	PA	12,783,254	1,931	6.2%	15.11
Puerto Rico	PR	3,159,343	230	0.7%	7.28
Rhode Island	RI	1,057,125	178	0.6%	16.84
South Carolina	SC	5,218,040	347	1.1%	6.65
South Dakota	SD	892,717	42	0.1%	4.70
Tennessee	TN	6,886,834	565	1.8%	8.20
Texas	TX	29,360,759	2,009	6.4%	6.84
Utah	UT	3,249,879	168	0.5%	5.17
Vermont	VT	623,347	65	0.2%	10.43
Virginia	VA	8,590,563	641	2.0%	7.46
Washington	WA	7,693,612	493	1.6%	6.41
West Virginia	WV	1,784,787	227	0.7%	12.72
Wisconsin	WI	5,832,655	463	1.5%	7.94
Wyoming	WY	582,328	14	0.0%	2.40

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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

Abbreviations: AY, academic year.

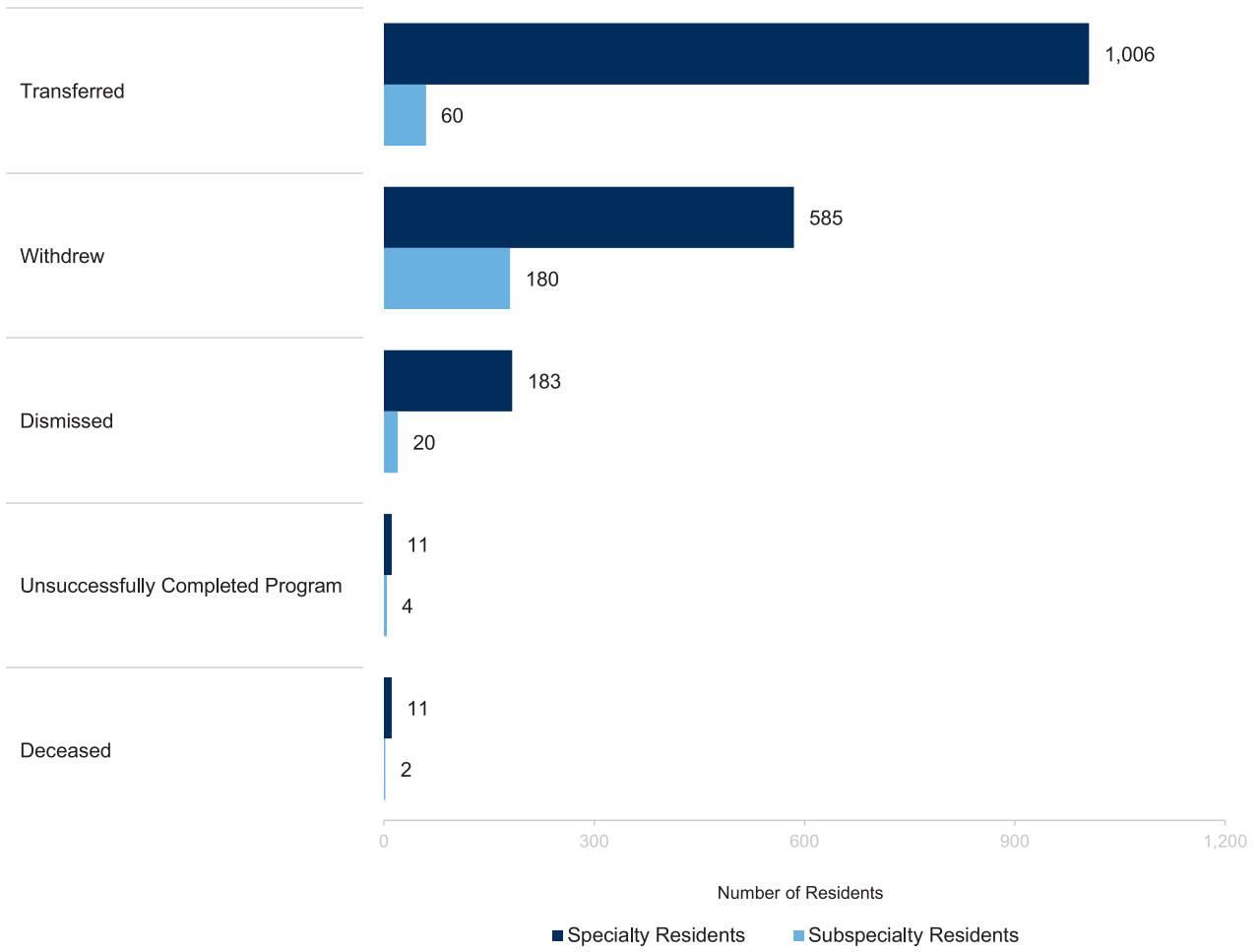
TABLE D.11
Number of Graduating Residents by State and Medical School Type, 2019-2020 AY

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	-	46,401	27,091	11,514	7,707	88	1
Alabama	AL	496	342	100	54	0	0
Alaska	AK	13	12	0	1	0	0
Arizona	AZ	601	363	102	136	0	0
Arkansas	AR	292	162	93	37	0	0
California	CA	4,211	3,178	523	498	11	1
Colorado	CO	545	425	22	98	0	0
Connecticut	CT	788	392	315	81	0	0
Delaware	DE	114	62	16	36	0	0
District of Columbia	DC	513	312	169	32	0	0
Florida	FL	2,239	1,027	665	545	2	0
Georgia	GA	951	583	249	118	1	0
Hawaii	HI	147	85	33	27	2	0
Idaho	ID	40	22	1	17	0	0
Illinois	IL	2,150	1,239	562	343	6	0
Indiana	IN	513	331	89	93	0	0
Iowa	IA	312	178	67	67	0	0
Kansas	KS	254	150	59	45	0	0
Kentucky	KY	444	251	90	103	0	0
Louisiana	LA	639	395	203	41	0	0
Maine	ME	112	49	20	42	1	0
Maryland	MD	1,146	780	249	114	3	0
Massachusetts	MA	2,057	1,458	485	97	17	0
Michigan	MI	2,386	975	687	723	1	0
Minnesota	MN	830	589	160	78	3	0
Mississippi	MS	247	125	49	73	0	0
Missouri	MO	995	633	221	140	1	0
Montana	MT	29	15	5	9	0	0
Nebraska	NE	256	129	86	41	0	0
Nevada	NV	229	85	71	72	1	0
New Hampshire	NH	140	93	36	11	0	0
New Jersey	NJ	1,205	268	556	381	0	0
New Mexico	NM	214	123	51	40	0	0
New York	NY	5,875	2,779	2,350	729	17	0
North Carolina	NC	1,237	896	145	194	2	0
North Dakota	ND	58	27	27	4	0	0
Ohio	OH	2,379	1,249	555	570	5	0
Oklahoma	OK	354	140	64	149	1	0
Oregon	OR	350	259	23	67	1	0
Pennsylvania	PA	2,995	1,638	715	639	3	0
Puerto Rico	PR	322	201	121	0	0	0
Rhode Island	RI	265	175	64	25	1	0
South Carolina	SC	498	347	63	88	0	0
South Dakota	SD	52	27	15	10	0	0
Tennessee	TN	839	558	175	104	2	0
Texas	TX	3,053	1,938	688	424	3	0
Utah	UT	281	230	23	28	0	0
Vermont	VT	91	64	19	8	0	0
Virginia	VA	901	558	159	183	1	0
Washington	WA	758	575	61	119	3	0
West Virginia	WV	279	119	88	72	0	0
Wisconsin	WI	692	478	123	91	0	0
Wyoming	WY	14	2	2	10	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, 2019-2020 AY



Abbreviations: AY, academic year.

TABLE D.13
Number of Residents Leaving Prior to Completion of a Program by Specialty and Subspecialty and Status, 2019-2020 AY

Specialty	Number of Residents Not Graduating	Resident Status				
		Transferred	Withdrew	Dismissed	Unsuccessfully Completed Program	Deceased
OVERALL	2,062	1,066	765	203	15	13
TOTAL PIPELINE	1,774	997	576	180	10	11
Allergy and immunology	4	2	2	0	0	0
Anesthesiology	70	19	34	16	0	1
- Adult cardiothoracic anesthesiology	2	0	2	0	0	0
- Clinical informatics	0	0	0	0	0	0
- Critical care medicine	2	1	1	0	0	0
- Regional anesthesiology and acute pain medicine	0	0	0	0	0	0
- Obstetric anesthesiology	1	0	0	0	1	0
- Pain medicine (multidisciplinary)	3	0	2	1	0	0
- Pediatric anesthesiology	4	0	3	1	0	0
Colon and rectal surgery	0	0	0	0	0	0
Dermatology	3	2	1	0	0	0
- Dermatopathology (multidisciplinary)	1	0	0	1	0	0
- Micrographic surgery and dermatologic oncology	0	0	0	0	0	0
Emergency medicine	46	26	16	3	1	0
- Clinical informatics	1	0	1	0	0	0
- Emergency medical services	0	0	0	0	0	0
- Medical toxicology	0	0	0	0	0	0
- Pediatric emergency medicine	1	1	0	0	0	0
- Sports medicine	0	0	0	0	0	0
- Undersea and hyperbaric medicine	0	0	0	0	0	0
Family medicine	230	94	93	41	1	1
- Clinical informatics	0	0	0	0	0	0
- Geriatric medicine	2	0	2	0	0	0
- Hospice and palliative medicine (multidisciplinary)	7	0	7	0	0	0
- Sports medicine	3	0	2	1	0	0
Internal medicine	222	91	92	29	7	3
- Adult congenital heart disease	0	0	0	0	0	0
- Advanced heart failure and transplant cardiology	1	1	0	0	0	0
- Cardiovascular disease	12	3	7	1	0	1
- Clinical cardiac electrophysiology	4	2	1	1	0	0
- Clinical informatics	1	0	1	0	0	0
- Critical care medicine	5	4	1	0	0	0
- Endocrinology, diabetes, and metabolism	8	1	7	0	0	0
- Gastroenterology	6	1	4	1	0	0
- Geriatric medicine	6	0	6	0	0	0
- Hematology	0	0	0	0	0	0
- Hematology and medical oncology	9	4	5	0	0	0
- Infectious disease	13	1	11	1	0	0
- Interventional cardiology	2	0	2	0	0	0
- Nephrology	20	6	10	4	0	0
- Medical oncology	1	0	1	0	0	0
- Pulmonary disease	0	0	0	0	0	0
- Pulmonary disease and critical care medicine	11	2	7	1	0	1
- Rheumatology	3	1	2	0	0	0
- Sleep medicine (multidisciplinary)	3	0	2	1	0	0
- Transplant hepatology	0	0	0	0	0	0
Medical genetics and genomics	0	0	0	0	0	0
- Medical biochemical genetics	0	0	0	0	0	0
- Molecular genetic pathology (multidisciplinary)	0	0	0	0	0	0
Neurological surgery	16	5	7	4	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, 2019-2020 AY

Specialty	Number of Residents Not Graduating	Resident Status				
		Transferred	Withdrew	Dismissed	Unsuccessfully Completed Program	Deceased
Neurology	39	14	15	10	0	0
- Brain injury medicine	0	0	0	0	0	0
- Clinical neurophysiology	2	0	2	0	0	0
- Epilepsy	0	0	0	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	3	0	2	1	0	0
Child neurology	4	2	1	1	0	0
Nuclear medicine	8	6	2	0	0	0
Obstetrics and gynecology	99	43	52	4	0	0
- Female pelvic medicine and reconstructive surgery	1	1	0	0	0	0
- Gynecologic oncology	3	0	3	0	0	0
- Maternal-fetal medicine	2	0	1	1	0	0
- Reproductive endocrinology and infertility	0	0	0	0	0	0
- Complex family planning	0	0	0	0	0	0
Ophthalmology	8	1	7	0	0	0
- Ophthalmic plastic and reconstructive surgery	0	0	0	0	0	0
Orthopaedic surgery	29	9	16	4	0	0
- 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	1	0	0	0
- Orthopaedic surgery of the spine	0	0	0	0	0	0
- Orthopaedic trauma	0	0	0	0	0	0
- Pediatric orthopaedics	1	0	1	0	0	0
Osteopathic neuromusculoskeletal medicine	3	1	2	0	0	0
Otolaryngology - head and neck surgery	10	1	7	2	0	0
- Neurotology	0	0	0	0	0	0
- Pediatric otolaryngology	0	0	0	0	0	0
Pathology-anatomic and clinical	51	24	24	2	0	1
- Blood banking/transfusion medicine	1	0	1	0	0	0
- Clinical informatics	1	1	0	0	0	0
- Chemical pathology	0	0	0	0	0	0
- Cytopathology	1	0	1	0	0	0
- Forensic pathology	4	0	4	0	0	0
- Hematopathology	5	0	3	1	1	0
- Medical microbiology	0	0	0	0	0	0
- Neuropathology	1	1	0	0	0	0
- Pediatric pathology	0	0	0	0	0	0
- Selective pathology	2	1	1	0	0	0
Pediatrics	88	49	26	12	0	1
- Adolescent medicine	1	0	1	0	0	0
- Child abuse pediatrics	1	0	1	0	0	0
- Clinical informatics	0	0	0	0	0	0
- Developmental-behavioral pediatrics	2	1	1	0	0	0
- Neonatal-perinatal medicine	9	6	3	0	0	0
- Pediatric cardiology	1	0	1	0	0	0
- Pediatric critical care medicine	6	2	4	0	0	0
- Pediatric emergency medicine	2	0	2	0	0	0
- Pediatric endocrinology	8	3	5	0	0	0
- Pediatric gastroenterology	1	0	1	0	0	0

TABLE D.13 Continued

Number of Residents Leaving Prior to Completion of a Program by Specialty and Subspecialty and Status, 2019-2020 AY

Specialty	Number of Residents Not Graduating	Resident Status				
		Transferred	Withdrew	Dismissed	Unsuccessfully Completed Program	Deceased
- Pediatric hematology/oncology	6	1	5	0	0	0
- Pediatric infectious diseases	8	2	6	0	0	0
- Pediatric nephrology	2	1	1	0	0	0
- Pediatric pulmonology	2	1	1	0	0	0
- Pediatric rheumatology	1	0	1	0	0	0
- Sports medicine	0	0	0	0	0	0
- Pediatric transplant hepatology	0	0	0	0	0	0
- Pediatric hospital medicine	3	3	0	0	0	0
Physical medicine and rehabilitation	14	10	3	1	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 medicine	0	0	0	0	0	0
- Sports medicine	0	0	0	0	0	0
Plastic surgery	2	1	0	1	0	0
Plastic surgery - integrated	15	3	11	1	0	0
- Craniofacial surgery	0	0	0	0	0	0
- Hand surgery	0	0	0	0	0	0
Preventive medicine	8	0	5	3	0	0
- Medical toxicology	0	0	0	0	0	0
- Undersea and hyperbaric medicine	0	0	0	0	0	0
Psychiatry	403	366	23	13	1	0
- Addiction medicine (multidisciplinary)	4	0	3	1	0	0
- Addiction psychiatry	0	0	0	0	0	0
- Child and adolescent psychiatry	27	6	21	0	0	0
- Forensic psychiatry	0	0	0	0	0	0
- Geriatric psychiatry	1	0	1	0	0	0
- Consultation-liaison psychiatry	3	1	2	0	0	0
Radiation oncology	5	3	2	0	0	0
Radiology-diagnostic	103	86	11	5	0	1
- Abdominal radiology	1	0	1	0	0	0
- Endovascular surgical neuroradiology	1	0	0	0	1	0
- Musculoskeletal radiology	0	0	0	0	0	0
- Neuroradiology	2	0	2	0	0	0
- Nuclear radiology	0	0	0	0	0	0
- Pediatric radiology	3	0	2	0	1	0
Interventional radiology - independent	0	0	0	0	0	0
Interventional radiology - integrated	10	9	0	1	0	0
Surgery	251	117	108	24	0	2
- Complex general surgical oncology	1	0	1	0	0	0
- Hand surgery	0	0	0	0	0	0
- Pediatric surgery	0	0	0	0	0	0
- Surgical critical care	2	0	2	0	0	0
- Vascular surgery	7	1	4	2	0	0
Vascular surgery - integrated	5	1	4	0	0	0
Thoracic surgery	8	0	6	1	1	0
- Congenital cardiac surgery	0	0	0	0	0	0
Thoracic surgery - integrated	6	0	5	1	0	0
Urology	12	3	6	2	0	1
- Female pelvic medicine and reconstructive surgery	0	0	0	0	0	0
- Pediatric urology	0	0	0	0	0	0
Transitional year	10	7	1	2	0	0
Internal medicine/Pediatrics	14	11	3	0	0	0

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

TABLE D.14

Number of Transferring Residents by Specialty and Resident Year, 2019-2020 AY

Specialty	Number of Transferring Residents	Resident Year						
		1	2	3	4	5	6	7
OVERALL	1,006	358	203	394	50	1		
Allergy and immunology	2	2						
Anesthesiology	19	6	8	5				
Colon and rectal surgery	0							
Dermatology	2	2						
Emergency medicine	26	21	5					
Family medicine	94	68	24	2				
Internal medicine	91	68	23					
Medical genetics and genomics	0							
Neurological surgery	5	2	1	1	1			
Neurology	14	7	6	1				
Child neurology	2	1	1					
Nuclear medicine	6	3	3					
Obstetrics and gynecology	43	24	13	4	2			
Ophthalmology	1		1					
Orthopaedic surgery	9	4	3	2				
Osteopathic neuromusculoskeletal medicine	1	1						
Otolaryngology - head and neck surgery	1				1			
Pathology-anatomic and clinical	24	7	10	6	1			
Pediatrics	49	25	21	3				
Physical medicine and rehabilitation	10	4	6					
Plastic surgery	1	1						
Plastic Surgery - integrated	3		1	2				
Preventive medicine	0							
Psychiatry	366	17	20	311	18			
Radiation oncology	3	2	1					
Radiology-diagnostic	86	31	17	22	16			
Interventional radiology - integrated	9	3	1	1	4			
Surgery	117	45	34	31	6	1		
Vascular surgery - integrated	1	1						
Thoracic surgery	0							
Thoracic surgery - integrated	0							
Urology	3	1		1	1			
Transitional year	7	7						
Internal medicine/Pediatrics	11	5	4	2				

Abbreviations: AY, academic year.

TABLE D.15			
Number of Pipeline Graduates who Subspecialize, 2019-2020 AY			
Specialty	Total Pipeline Graduates	Subspecialized	
		#	%
TOTAL PIPELINE	31,295	9,516	30.4%
Anesthesiology	1,728	830	48.0%
Dermatology	514	81	15.8%
Emergency medicine	2,455	234	9.5%
Family medicine	4,364	411	9.4%
Internal medicine	8,779	3,480	39.6%
Medical genetics and genomics	25	11	44.0%
Neurological surgery	193	2	1.0%
Neurology	806	409	50.7%
Child neurology	127	56	44.1%
Nuclear medicine	39	2	5.1%
Obstetrics and gynecology	1,361	288	21.2%
Ophthalmology	501	3	0.6%
Orthopaedic surgery	842	429	51.0%
Osteopathic neuromusculoskeletal medicine	34	0	0.0%
Otolaryngology - head and neck surgery	331	42	12.7%
Pathology-anatomic and clinical	594	404	68.0%
Pediatrics	2,997	1,125	37.5%
Physical medicine and rehabilitation	426	174	40.8%
Plastic surgery	76	11	14.5%
Plastic Surgery - integrated	137	32	23.4%
Preventive medicine	179	11	6.1%
Psychiatry	1,312	390	29.7%
Radiation oncology	193	1	0.5%
Radiology-diagnostic	1,093	328	30.0%
Interventional radiology - integrated	25	1	4.0%
Surgery	1,381	618	44.8%
Vascular surgery - integrated	54	1	1.9%
Thoracic surgery - integrated	22	6	27.3%
Urology	330	20	6.1%
Internal medicine/Pediatrics	377	116	30.8%

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 2020-2021 academic year.

Accredited Sponsors by Status

Of the 862 total ACGME-accredited Sponsoring Institutions, 138 (16.0%) are in the initial phase of accreditation, 701 (81.3%) have a status of Continued Accreditation, 12 (1.4%) have a status of Continued Accreditation with Warning, five (0.6%) are on probation, and six (0.7%) have a status of Withdrawal of Accreditation. Overall, there has been a 25.5% 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 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 (26.9% and 28.0%, respectively). The remaining Sponsoring Institutions with accredited programs all have more than five programs: 21.2% have between six and 25 programs; 11.3% have between 26 and 75 programs; 3.4% have between 76 and 100 programs; and 1.7% 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 (101)
- New York (69)
- Florida (54)
- Texas (51)

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

- California (56)
- New York (49)
- Florida (34)
- Ohio (34)

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

- California (38)
- Florida (16)
- New York (15)
- Texas (12)

Sponsors that do not yet have ACGME-accredited programs (65) are located in 31 states, with the highest number of these located in California and New Jersey, with seven recorded in each.

Distribution by Institution Type

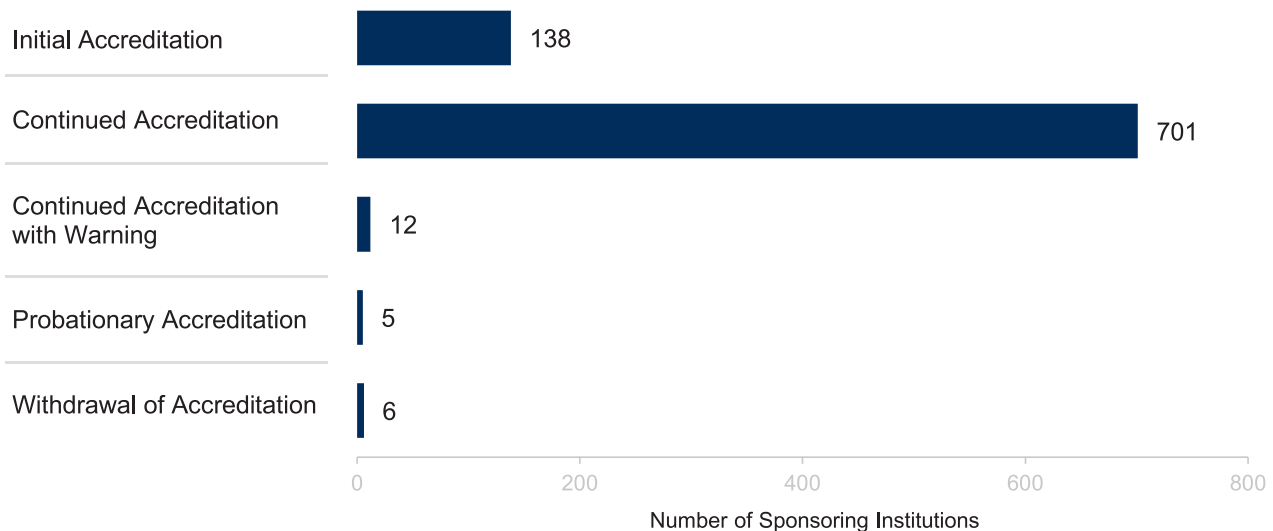
The type of institution is self-reported by Sponsoring Institutions. Approximately half of Sponsoring Institutions with ACGME-accredited programs are General/Teaching Hospitals (351, 44.0%); the next largest group is Academic Medical Centers/Medical Schools, with 124 (15.6%) in this category. Though a much smaller percentage of total Sponsoring Institutions, Academic Medical Centers/Medical Schools account for 25.9% 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 2020-2021 academic year, 100 (12.7%) Sponsoring Institutions had a single DIO change, and 12 (1.5%) had more than one DIO change. ♪

FIGURE E.1

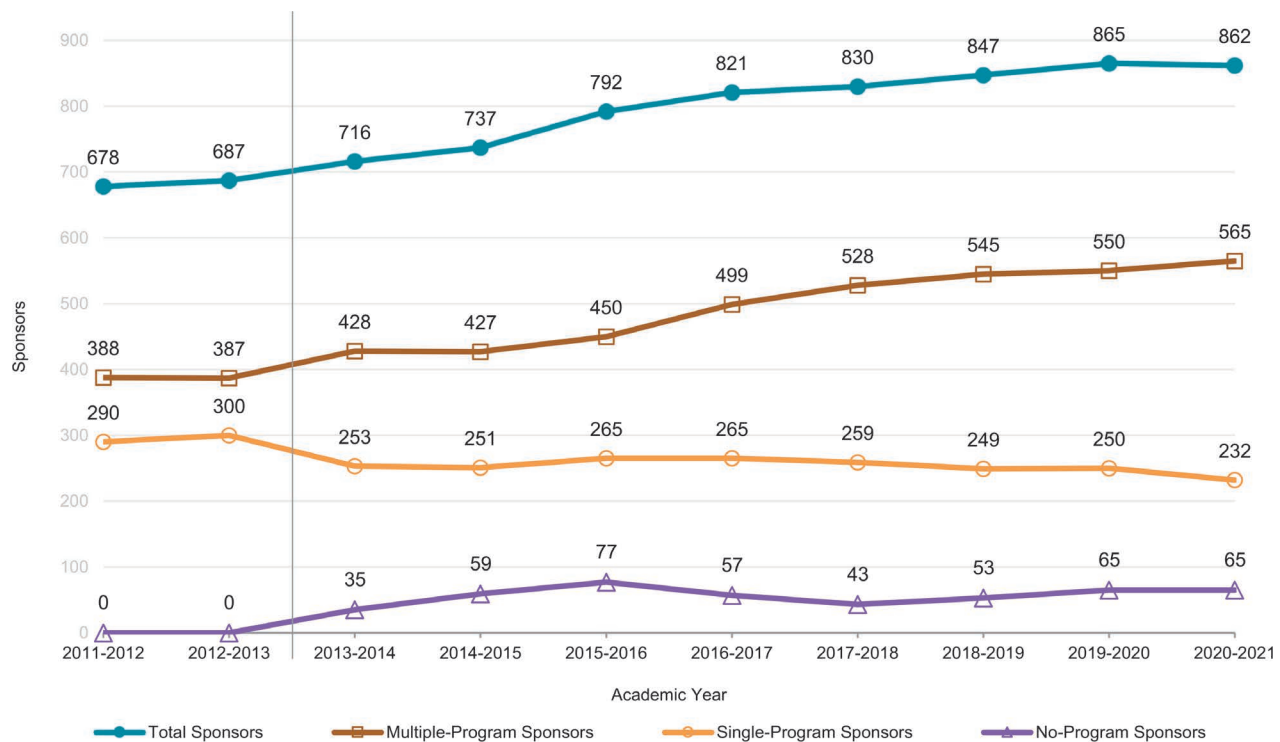
Accreditation Statuses of Currently Accredited Sponsoring Institutions



Note: Total number of ACGME-accredited Sponsoring Institutions = 862.

FIGURE E.2

Number of Sponsoring Institutions by Academic Year, 2011-2012 to 2020-2021



Note: Effective July 1, 2013, new policies required Sponsoring Institutions to be accredited prior to applying for program accreditation. There was also a change in the definitions of single-program and multi-program sponsors at that time. The trends in the 2013-2014 academic year and beyond reflect these changes.

FIGURE E.3

Number of Sponsoring Institutions by Size of Sponsor

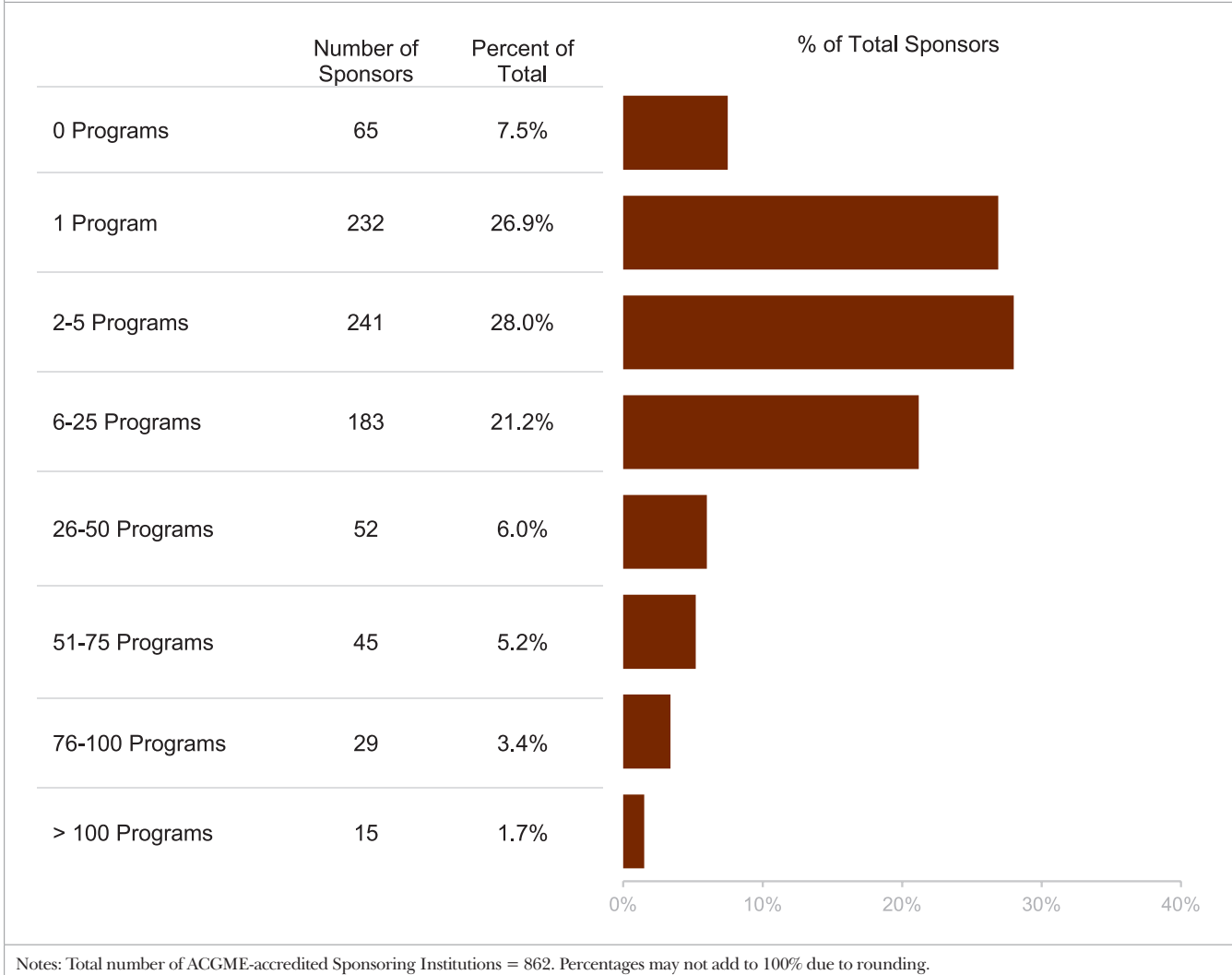


TABLE E.4					
Number of Sponsoring Institutions and Sponsoring Institution Concentration per 100,000 Population by State					
State Name	State Abbreviation	State Population - Census Estimate 2020	Total Sponsors	Percent of All Sponsors	Sponsors per 100,000 Pop
OVERALL	-	332,643,466	862	100.0%	0.26
Alabama	AL	4,921,532	19	2.2%	0.39
Alaska	AK	731,158	1	0.1%	0.14
Arizona	AZ	7,421,401	13	1.5%	0.18
Arkansas	AR	3,030,522	9	1.0%	0.30
California	CA	39,368,078	101	11.7%	0.26
Colorado	CO	5,807,719	13	1.5%	0.22
Connecticut	CT	3,557,006	15	1.7%	0.42
Delaware	DE	986,809	5	0.6%	0.51
District of Columbia	DC	712,816	5	0.6%	0.70
Florida	FL	21,733,312	54	6.3%	0.25
Georgia	GA	10,710,017	28	3.2%	0.26
Hawaii	HI	1,407,006	4	0.5%	0.28
Idaho	ID	1,826,913	5	0.6%	0.27
Illinois	IL	12,587,530	30	3.5%	0.24
Indiana	IN	6,754,953	13	1.5%	0.19
Iowa	IA	3,163,561	9	1.0%	0.28
Kansas	KS	2,913,805	2	0.2%	0.07
Kentucky	KY	4,477,251	7	0.8%	0.16
Louisiana	LA	4,645,318	11	1.3%	0.24
Maine	ME	1,350,141	4	0.5%	0.30
Maryland	MD	6,055,802	16	1.9%	0.26
Massachusetts	MA	6,893,574	26	3.0%	0.38
Michigan	MI	9,966,555	40	4.6%	0.40
Minnesota	MN	5,657,342	10	1.2%	0.18
Mississippi	MS	2,966,786	12	1.4%	0.40
Missouri	MO	6,151,548	14	1.6%	0.23
Montana	MT	1,080,577	3	0.3%	0.28
Nebraska	NE	1,937,552	4	0.5%	0.21
Nevada	NV	3,138,259	7	0.8%	0.22
New Hampshire	NH	1,366,275	4	0.5%	0.29
New Jersey	NJ	8,882,371	27	3.1%	0.30
New Mexico	NM	2,106,319	7	0.8%	0.33
New York	NY	19,336,776	69	8.0%	0.36
North Carolina	NC	10,600,823	17	2.0%	0.16
North Dakota	ND	765,309	2	0.2%	0.26
Ohio	OH	11,693,217	42	4.9%	0.36
Oklahoma	OK	3,980,783	8	0.9%	0.20
Oregon	OR	4,241,507	5	0.6%	0.12
Pennsylvania	PA	12,783,254	40	4.6%	0.31
Puerto Rico	PR	3,159,343	12	1.4%	0.38
Rhode Island	RI	1,057,125	5	0.6%	0.47
South Carolina	SC	5,218,040	11	1.3%	0.21
South Dakota	SD	892,717	3	0.3%	0.34
Tennessee	TN	6,886,834	10	1.2%	0.15
Texas	TX	29,360,759	51	5.9%	0.17
Utah	UT	3,249,879	6	0.7%	0.18
Vermont	VT	623,347	1	0.1%	0.16
Virginia	VA	8,590,563	19	2.2%	0.22
Washington	WA	7,693,612	23	2.7%	0.30
West Virginia	WV	1,784,787	10	1.2%	0.56
Wisconsin	WI	5,832,655	9	1.0%	0.15
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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 2020	Total Multiple-Program Sponsors	Percent of All Multiple-Program Sponsors	Multiple-Program Sponsors per 100,000 Pop
OVERALL	-	332,643,466	565	100.0%	0.17
Alabama	AL	4,921,532	8	1.4%	0.16
Alaska	AK	731,158	1	0.2%	0.14
Arizona	AZ	7,421,401	9	1.6%	0.12
Arkansas	AR	3,030,522	6	1.1%	0.20
California	CA	39,368,078	56	9.9%	0.14
Colorado	CO	5,807,719	8	1.4%	0.14
Connecticut	CT	3,557,006	12	2.1%	0.34
Delaware	DE	986,809	2	0.4%	0.20
District of Columbia	DC	712,816	4	0.7%	0.56
Florida	FL	21,733,312	34	6.0%	0.16
Georgia	GA	10,710,017	15	2.7%	0.14
Hawaii	HI	1,407,006	2	0.4%	0.14
Idaho	ID	1,826,913	3	0.5%	0.16
Illinois	IL	12,587,530	21	3.7%	0.17
Indiana	IN	6,754,953	8	1.4%	0.12
Iowa	IA	3,163,561	5	0.9%	0.16
Kansas	KS	2,913,805	2	0.4%	0.07
Kentucky	KY	4,477,251	4	0.7%	0.09
Louisiana	LA	4,645,318	6	1.1%	0.13
Maine	ME	1,350,141	3	0.5%	0.22
Maryland	MD	6,055,802	12	2.1%	0.20
Massachusetts	MA	6,893,574	18	3.2%	0.26
Michigan	MI	9,966,555	33	5.8%	0.33
Minnesota	MN	5,657,342	5	0.9%	0.09
Mississippi	MS	2,966,786	5	0.9%	0.17
Missouri	MO	6,151,548	9	1.6%	0.15
Montana	MT	1,080,577	1	0.2%	0.09
Nebraska	NE	1,937,552	2	0.4%	0.10
Nevada	NV	3,138,259	4	0.7%	0.13
New Hampshire	NH	1,366,275	2	0.4%	0.15
New Jersey	NJ	8,882,371	17	3.0%	0.19
New Mexico	NM	2,106,319	3	0.5%	0.14
New York	NY	19,336,776	49	8.7%	0.25
North Carolina	NC	10,600,823	13	2.3%	0.12
North Dakota	ND	765,309	2	0.4%	0.26
Ohio	OH	11,693,217	34	6.0%	0.29
Oklahoma	OK	3,980,783	6	1.1%	0.15
Oregon	OR	4,241,507	4	0.7%	0.09
Pennsylvania	PA	12,783,254	31	5.5%	0.24
Puerto Rico	PR	3,159,343	8	1.4%	0.25
Rhode Island	RI	1,057,125	5	0.9%	0.47
South Carolina	SC	5,218,040	7	1.2%	0.13
South Dakota	SD	892,717	2	0.4%	0.22
Tennessee	TN	6,886,834	8	1.4%	0.12
Texas	TX	29,360,759	33	5.8%	0.11
Utah	UT	3,249,879	3	0.5%	0.09
Vermont	VT	623,347	1	0.2%	0.16
Virginia	VA	8,590,563	13	2.3%	0.15
Washington	WA	7,693,612	12	2.1%	0.16
West Virginia	WV	1,784,787	5	0.9%	0.28
Wisconsin	WI	5,832,655	8	1.4%	0.14
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

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 2020	Total Single-Program Sponsors	Percent of All Sponsors	Single-Program Sponsors per 100,000 Pop
OVERALL	-	332,643,466	232	100.0%	0.07
Alabama	AL	4,921,532	9	3.9%	0.18
Alaska	AK	731,158	0	0.0%	0.00
Arizona	AZ	7,421,401	1	0.4%	0.01
Arkansas	AR	3,030,522	3	1.3%	0.10
California	CA	39,368,078	38	16.4%	0.10
Colorado	CO	5,807,719	4	1.7%	0.07
Connecticut	CT	3,557,006	3	1.3%	0.08
Delaware	DE	986,809	2	0.9%	0.20
District of Columbia	DC	712,816	0	0.0%	0.00
Florida	FL	21,733,312	16	6.9%	0.07
Georgia	GA	10,710,017	10	4.3%	0.09
Hawaii	HI	1,407,006	2	0.9%	0.14
Idaho	ID	1,826,913	1	0.4%	0.05
Illinois	IL	12,587,530	7	3.0%	0.06
Indiana	IN	6,754,953	4	1.7%	0.06
Iowa	IA	3,163,561	3	1.3%	0.09
Kansas	KS	2,913,805	0	0.0%	0.00
Kentucky	KY	4,477,251	2	0.9%	0.04
Louisiana	LA	4,645,318	3	1.3%	0.06
Maine	ME	1,350,141	1	0.4%	0.07
Maryland	MD	6,055,802	3	1.3%	0.05
Massachusetts	MA	6,893,574	8	3.4%	0.12
Michigan	MI	9,966,555	6	2.6%	0.06
Minnesota	MN	5,657,342	4	1.7%	0.07
Mississippi	MS	2,966,786	6	2.6%	0.20
Missouri	MO	6,151,548	5	2.2%	0.08
Montana	MT	1,080,577	2	0.9%	0.19
Nebraska	NE	1,937,552	2	0.9%	0.10
Nevada	NV	3,138,259	2	0.9%	0.06
New Hampshire	NH	1,366,275	1	0.4%	0.07
New Jersey	NJ	8,882,371	3	1.3%	0.03
New Mexico	NM	2,106,319	3	1.3%	0.14
New York	NY	19,336,776	15	6.5%	0.08
North Carolina	NC	10,600,823	4	1.7%	0.04
North Dakota	ND	765,309	0	0.0%	0.00
Ohio	OH	11,693,217	7	3.0%	0.06
Oklahoma	OK	3,980,783	2	0.9%	0.05
Oregon	OR	4,241,507	0	0.0%	0.00
Pennsylvania	PA	12,783,254	7	3.0%	0.05
Puerto Rico	PR	3,159,343	4	1.7%	0.13
Rhode Island	RI	1,057,125	0	0.0%	0.00
South Carolina	SC	5,218,040	2	0.9%	0.04
South Dakota	SD	892,717	1	0.4%	0.11
Tennessee	TN	6,886,834	1	0.4%	0.01
Texas	TX	29,360,759	12	5.2%	0.04
Utah	UT	3,249,879	2	0.9%	0.06
Vermont	VT	623,347	0	0.0%	0.00
Virginia	VA	8,590,563	4	1.7%	0.05
Washington	WA	7,693,612	11	4.7%	0.14
West Virginia	WV	1,784,787	5	2.2%	0.28
Wisconsin	WI	5,832,655	1	0.4%	0.02
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

TABLE E.7

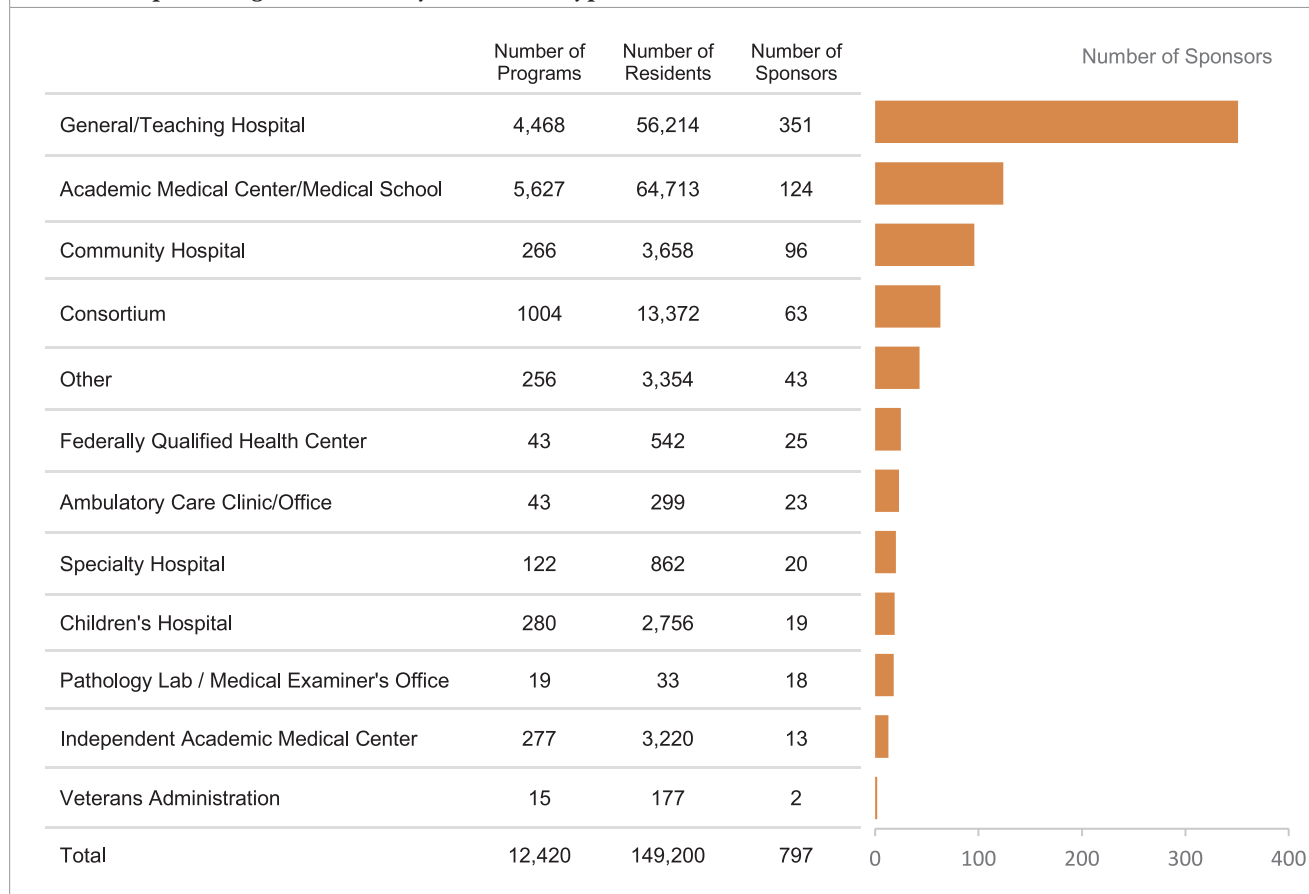
Number of No-Program Sponsoring Institutions and No-Program Sponsoring Institution Concentration per 100,000 Population by State

State Name	State Abbreviation	State Population - Census Estimate 2020	No-Program Sponsors	Percent of All No-Program Sponsors	No-Program Sponsors per 100,000 Pop
OVERALL	-	332,643,466	65	100.0%	0.02
Alabama	AL	4,921,532	2	3.1%	0.04
Alaska	AK	731,158	0	0.0%	0.00
Arizona	AZ	7,421,401	3	4.6%	0.04
Arkansas	AR	3,030,522	0	0.0%	0.00
California	CA	39,368,078	7	10.8%	0.02
Colorado	CO	5,807,719	1	1.5%	0.02
Connecticut	CT	3,557,006	0	0.0%	0.00
Delaware	DE	986,809	1	1.5%	0.10
District of Columbia	DC	712,816	1	1.5%	0.14
Florida	FL	21,733,312	4	6.2%	0.02
Georgia	GA	10,710,017	3	4.6%	0.03
Hawaii	HI	1,407,006	0	0.0%	0.00
Idaho	ID	1,826,913	1	1.5%	0.05
Illinois	IL	12,587,530	2	3.1%	0.02
Indiana	IN	6,754,953	1	1.5%	0.01
Iowa	IA	3,163,561	1	1.5%	0.03
Kansas	KS	2,913,805	0	0.0%	0.00
Kentucky	KY	4,477,251	1	1.5%	0.02
Louisiana	LA	4,645,318	2	3.1%	0.04
Maine	ME	1,350,141	0	0.0%	0.00
Maryland	MD	6,055,802	1	1.5%	0.02
Massachusetts	MA	6,893,574	0	0.0%	0.00
Michigan	MI	9,966,555	1	1.5%	0.01
Minnesota	MN	5,657,342	1	1.5%	0.02
Mississippi	MS	2,966,786	1	1.5%	0.03
Missouri	MO	6,151,548	0	0.0%	0.00
Montana	MT	1,080,577	0	0.0%	0.00
Nebraska	NE	1,937,552	0	0.0%	0.00
Nevada	NV	3,138,259	1	1.5%	0.03
New Hampshire	NH	1,366,275	1	1.5%	0.07
New Jersey	NJ	8,882,371	7	10.8%	0.08
New Mexico	NM	2,106,319	1	1.5%	0.05
New York	NY	19,336,776	5	7.7%	0.03
North Carolina	NC	10,600,823	0	0.0%	0.00
North Dakota	ND	765,309	0	0.0%	0.00
Ohio	OH	11,693,217	1	1.5%	0.01
Oklahoma	OK	3,980,783	0	0.0%	0.00
Oregon	OR	4,241,507	1	1.5%	0.02
Pennsylvania	PA	12,783,254	2	3.1%	0.02
Puerto Rico	PR	3,159,343	0	0.0%	0.00
Rhode Island	RI	1,057,125	0	0.0%	0.00
South Carolina	SC	5,218,040	2	3.1%	0.04
South Dakota	SD	892,717	0	0.0%	0.00
Tennessee	TN	6,886,834	1	1.5%	0.01
Texas	TX	29,360,759	6	9.2%	0.02
Utah	UT	3,249,879	1	1.5%	0.03
Vermont	VT	623,347	0	0.0%	0.00
Virginia	VA	8,590,563	2	3.1%	0.02
Washington	WA	7,693,612	0	0.0%	0.00
West Virginia	WV	1,784,787	0	0.0%	0.00
Wisconsin	WI	5,832,655	0	0.0%	0.00
Wyoming	WY	582,328	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, 2020. <https://www2.census.gov/programs-surveys/popest/datasets/2010-2020/counties/totals/co-est2020-alldata.csv>. Published May, 2021. Accessed June 24, 2021.

FIGURE E.8

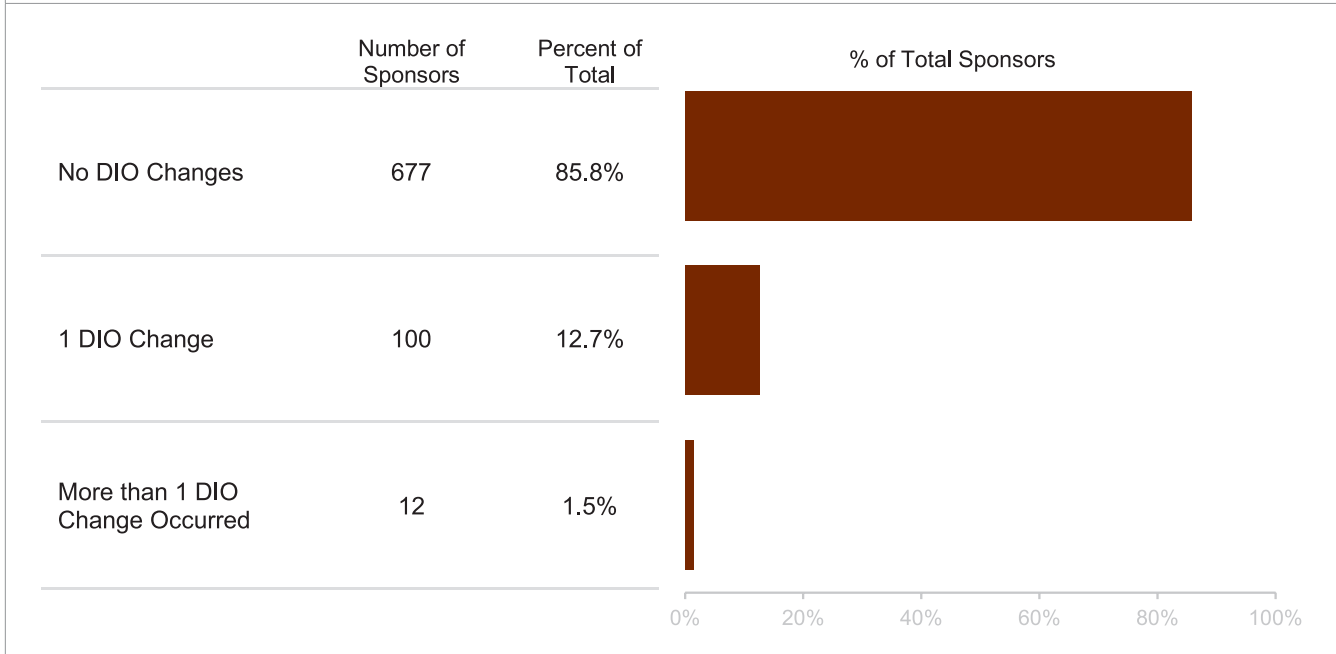
Number of Sponsoring Institutions by Institution Type



Note: Excluding sponsors with no ACGME-accredited programs.

FIGURE E.9

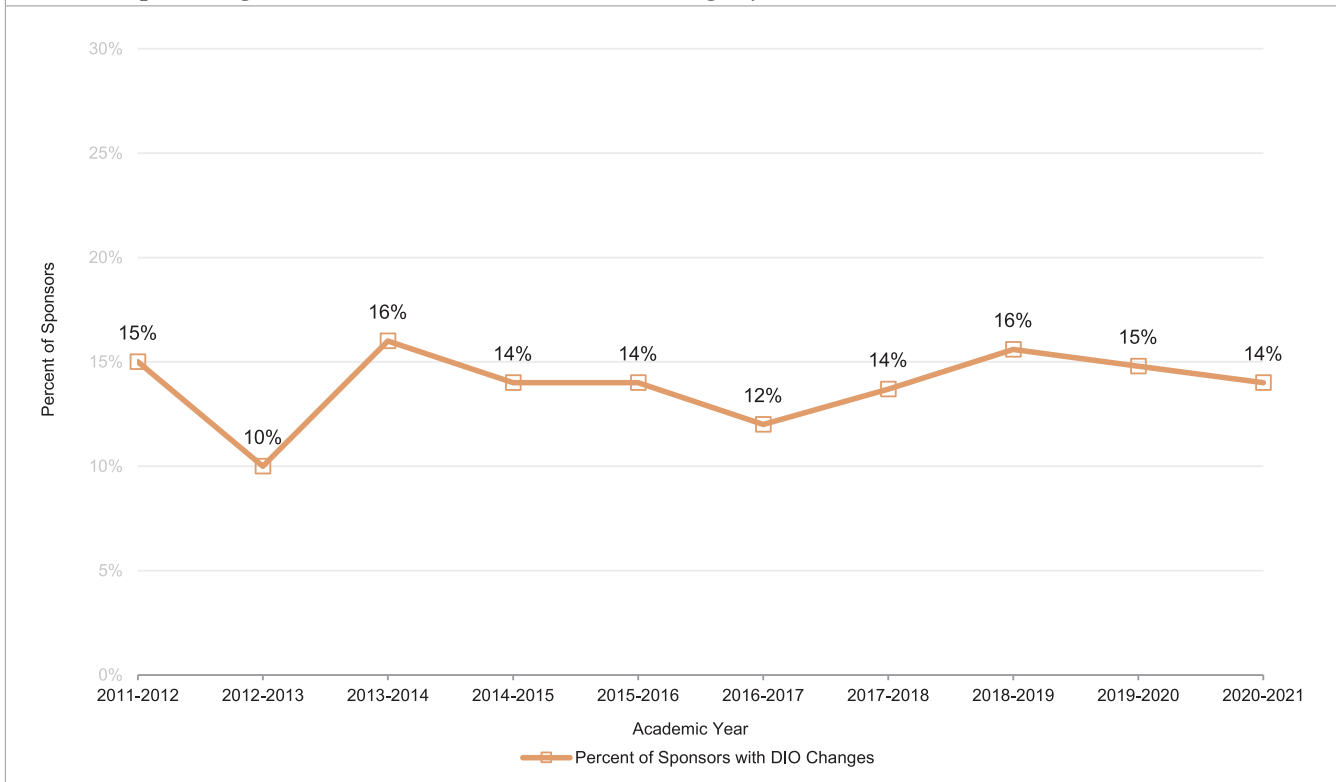
Number of Sponsoring Institutions with DIO Changes



Notes: Excluding sponsors with no ACGME-accredited programs and any sponsors newly accredited in the 2020-2021 academic year. Total number of sponsors included = 789. 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, 2011-2012 to 2020-2021



Note: Excluding sponsors with no ACGME-accredited programs and any sponsors newly accredited in the academic year. Total number of sponsors included = 789.
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 8,165 unique participating sites to which residents rotated during the 2020-2021 academic year. The highest number of sites were in the following categories:

- Ambulatory Care Clinic/Office (3,155)
- General/Teaching Hospital (1,651)
- Other (1,027)

Since the 2011-2012 academic year, there has been a 95.0% 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 (273.8% increase)
- General Teaching/Community Hospital (53.5% increase)
- Other (38.7% increase)

The number of Academic Medical Centers listed as participating sites also increased by 85.0%. With only 198 unique sites in this category in the 2020-2021 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 4.1. The pipeline specialties with the highest average number of participating sites include:

- Preventive medicine (6.5)
- Orthopaedic surgery (5.6)
- Plastic surgery – integrated (5.6)

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)

The subspecialty with the highest average number of participating sites per program is the surgical subspecialty of hand surgery at 6.5. The family medicine subspecialty of sports medicine, and the orthopaedic surgery subspecialty of orthopaedic sports medicine have the highest maximum number of participating sites per program at 15.

Number of Sites by Specialty and Subspecialty

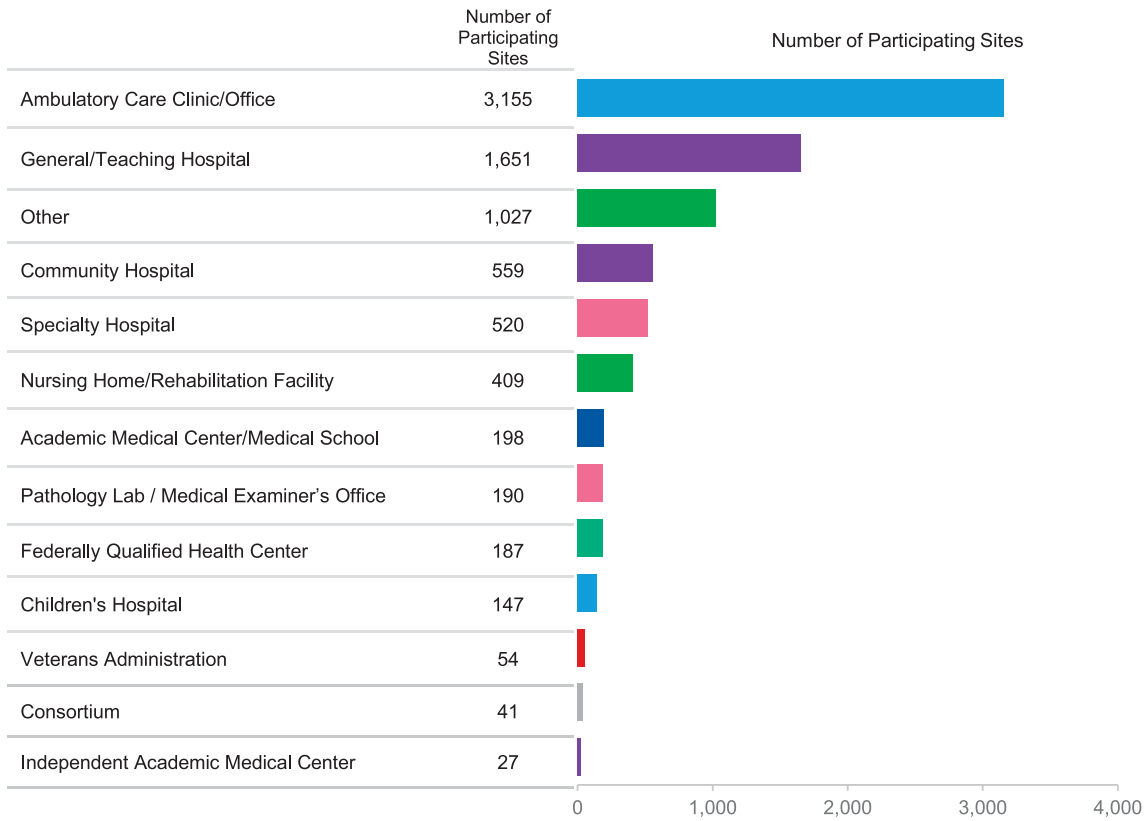
The specialties with the highest number of unique participating sites to which residents rotate include:

- Family medicine (2,412)
- Internal medicine (1,560)
- Psychiatry (1,364)

Sponsoring Institutions account for 6.8% of all participating sites with 559 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, 2011-2012 to 2020-2021

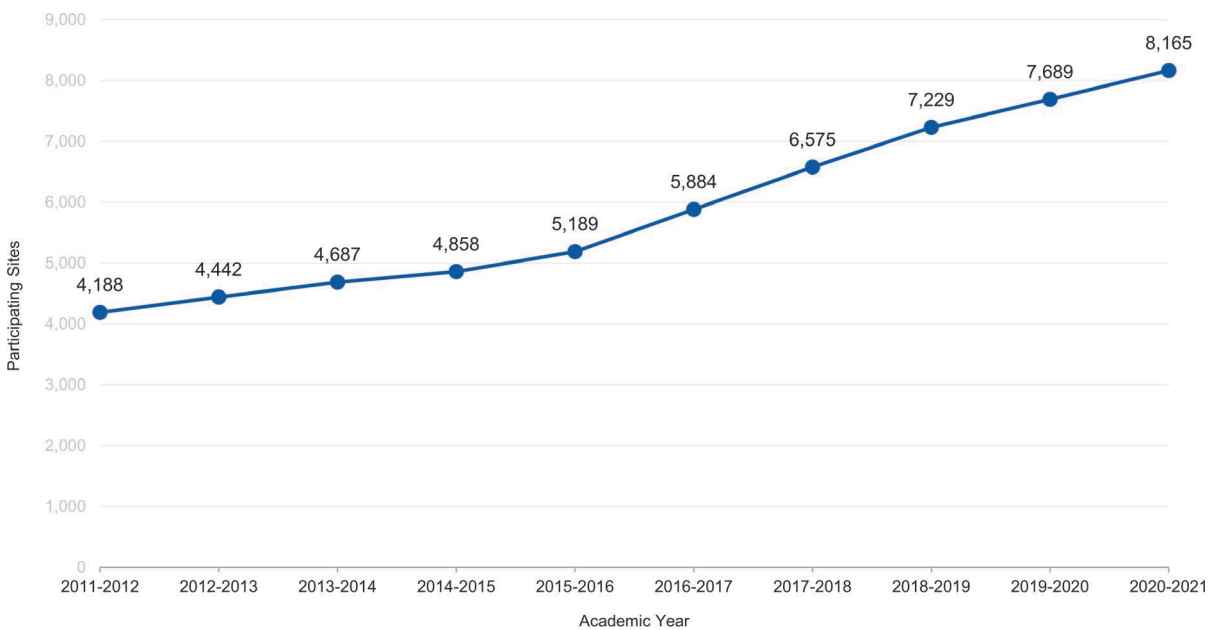
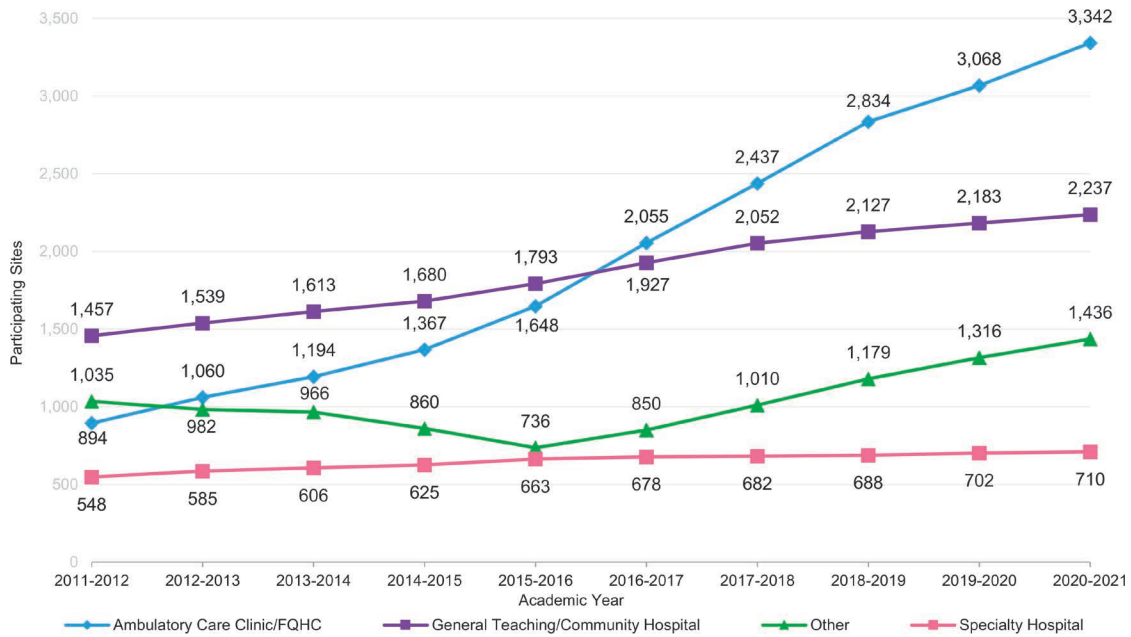


FIGURE F.3

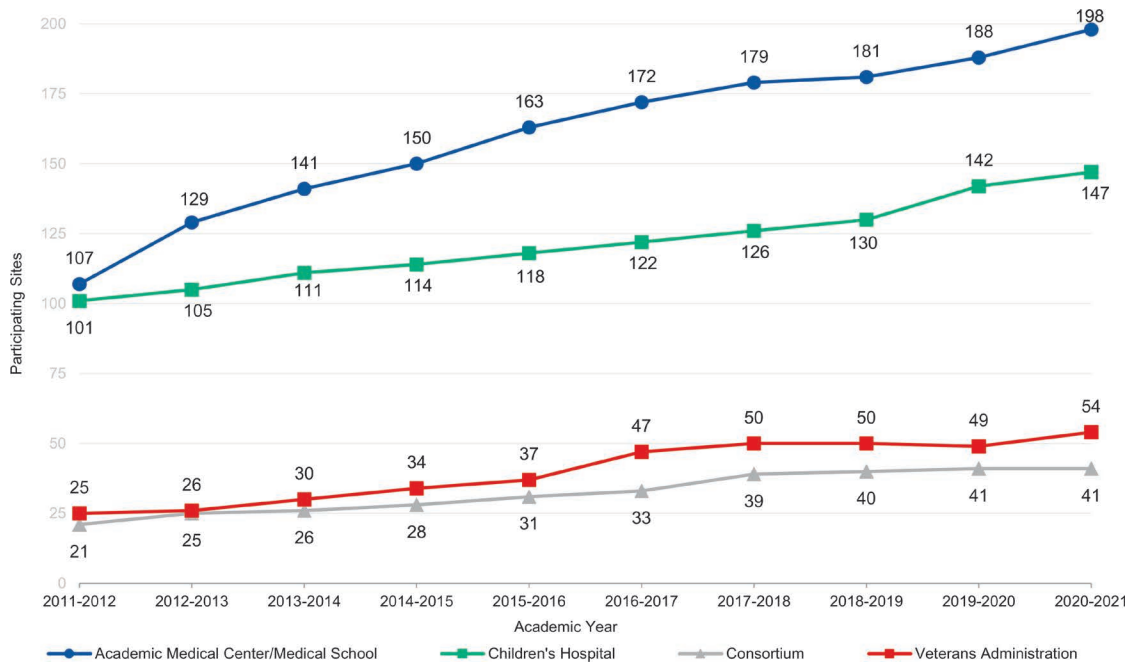
Number of Participating Sites where Residents Rotate by Institution Type Groups (Largest Groups Only) and Academic Year, 2011-2012 to 2020-2021



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, 2011-2012 to 2020-2021



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

Specialty	Total Programs	Number of Participating Sites per Program			
		AVG	STD	MIN	MAX
OVERALL	12,420	3.1	2.3	1	39
TOTAL PIPELINE	5,187	4.1	2.6	1	39
Allergy and immunology	82	2.7	1.4	1	6
Anesthesiology	161	4.1	1.9	1	9
- Adult cardiothoracic anesthesiology	73	1.8	0.9	1	5
- Clinical informatics	1	1.0	0.0	1	1
- Critical care medicine	64	1.8	0.9	1	4
- Regional anesthesiology and acute pain medicine	38	2.1	1.3	1	6
- Obstetric anesthesiology	41	1.3	0.6	1	3
- Pain medicine (multidisciplinary)	111	2.6	1.6	1	9
- Pediatric anesthesiology	60	1.6	0.9	1	4
Colon and rectal surgery	66	2.8	1.6	1	8
Dermatology	144	4.4	3.0	1	18
- Dermatopathology (multidisciplinary)	58	1.9	0.9	1	4
- Micrographic surgery and dermatologic oncology	78	2.2	1.3	1	7
Emergency medicine	276	4.1	2.0	1	15
- Clinical informatics	5	4.0	2.5	2	8
- Emergency medical services	75	3.3	2.6	1	12
- Medical toxicology	27	3.1	1.3	1	6
- Pediatric emergency medicine	27	2.6	1.3	1	5
- Sports medicine	9	4.8	3.8	1	11
- Undersea and hyperbaric medicine	8	1.6	0.5	1	2
Family medicine	710	4.3	3.6	1	39
- Clinical informatics	6	4.0	3.3	1	11
- Geriatric medicine	49	4.2	2.5	1	10
- Hospice and palliative medicine (multidisciplinary)	180	4.2	1.7	1	10
- Sports medicine	156	3.6	2.8	1	15
Internal medicine	586	3.2	2.6	1	17
- Adult congenital heart disease	24	1.8	0.7	1	3
- Advanced heart failure and transplant cardiology	82	1.4	0.6	1	3
- Cardiovascular disease	255	2.5	1.3	1	8
- Clinical cardiac electrophysiology	112	1.7	0.9	1	6
- Clinical informatics	19	2.1	1.5	1	6
- Critical care medicine	55	2.4	1.2	1	7
- Endocrinology, diabetes, and metabolism	153	2.7	1.3	1	6
- Gastroenterology	211	2.9	1.4	1	9
- Geriatric medicine	114	3.7	1.7	1	9
- Hematology	2	2.5	0.5	2	3
- Hematology and medical oncology	172	2.8	1.4	1	9
- Infectious disease	158	2.8	1.2	1	7
- Interventional cardiology	170	1.7	1.0	1	6
- Nephrology	152	2.9	1.3	1	7
- Medical oncology	6	2.3	0.9	1	4
- Pulmonary disease	20	2.5	1.0	1	4
- Pulmonary disease and critical care medicine	188	3.1	1.4	1	7
- Rheumatology	125	2.5	1.1	1	6
- Sleep medicine (multidisciplinary)	89	2.6	1.1	1	6
- Transplant hepatology	59	1.3	0.5	1	3
Medical genetics and genomics	46	3.2	1.9	1	8
- Medical biochemical genetics	20	2.3	1.2	1	5
- Molecular genetic pathology (multidisciplinary)	42	1.9	1.2	1	6
Neurological surgery	116	3.7	1.5	1	9
- 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	170	3.5	1.9	1	12
- Brain injury medicine	1	1.0	0.0	1	1
- Clinical neurophysiology	93	2.1	1.1	1	6
- Epilepsy	85	2.1	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	53	2.2	1.0	1	5
- Vascular neurology	109	1.8	1.0	1	5
Child neurology	77	2.8	1.3	1	6
Nuclear medicine	37	2.5	1.3	1	6
Obstetrics and gynecology	294	4.0	2.3	1	13
- Female pelvic medicine and reconstructive surgery	54	2.7	1.4	1	8
- Gynecologic oncology	63	2.2	1.1	1	5
- Maternal-fetal medicine	100	2.0	1.0	1	5
- Reproductive endocrinology and infertility	49	2.8	2.0	1	9
- Complex family planning	26	2.8	1.0	1	6
Ophthalmology	125	4.0	2.1	1	13
- Ophthalmic plastic and reconstructive surgery	4	4.0	2.9	2	9
Orthopaedic surgery	201	5.6	2.5	1	15
- Adult reconstructive orthopaedics	25	2.4	1.2	1	4
- Foot and ankle orthopaedics	7	2.6	1.4	1	4
- Hand surgery	73	3.8	2.3	1	14
- Musculoskeletal oncology	12	2.0	0.9	1	4
- Orthopaedic sports medicine	93	3.2	2.6	1	15
- Orthopaedic surgery of the spine	16	2.1	0.9	1	4
- Orthopaedic trauma	12	1.7	1.1	1	4
- Pediatric orthopaedics	25	1.5	0.8	1	3
Osteopathic neuromusculoskeletal medicine	28	4.0	3.3	1	15
Otolaryngology - head and neck surgery	125	4.3	2.2	1	16
- Neurotology	26	2.5	1.3	1	6
- Pediatric otolaryngology	31	1.3	0.5	1	3
Pathology-anatomic and clinical	144	4.0	2.0	1	10
- Blood banking/transfusion medicine	52	2.9	1.4	1	6
- Clinical informatics	11	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	1.7	0.9	1	5
- Medical microbiology	15	1.9	1.0	1	4
- Neuropathology	38	2.2	1.2	1	6
- Pediatric pathology	28	2.3	1.1	1	5
- Selective pathology	109	1.4	0.6	1	3
Pediatrics	210	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	8	2.1	1.1	1	4
- Developmental-behavioral pediatrics	44	1.9	1.1	1	5
- Neonatal-perinatal medicine	107	2.1	1.0	1	6
- Pediatric cardiology	64	1.6	0.8	1	4
- Pediatric critical care medicine	75	1.5	0.8	1	5
- Pediatric emergency medicine	55	3.1	1.2	1	6
- Pediatric endocrinology	72	1.6	0.8	1	5
- Pediatric gastroenterology	67	1.6	0.7	1	4

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
- Pediatric hematology/oncology	76	1.8	0.9	1	4
- Pediatric infectious diseases	64	2.0	1.2	1	6
- Pediatric nephrology	47	1.6	0.9	1	5
- Pediatric pulmonology	56	1.5	0.8	1	5
- Pediatric rheumatology	37	1.6	0.7	1	3
- Sports medicine	17	3.3	1.8	1	7
- Pediatric transplant hepatology	17	1.7	0.6	1	3
- Pediatric hospital medicine	54	2.6	0.7	1	4
Physical medicine and rehabilitation	98	5.4	3.0	1	23
- Brain injury medicine	25	2.5	0.6	2	4
- Neuromuscular medicine	1	4.0	0.0	4	4
- Spinal cord injury medicine	24	2.9	0.7	2	4
- Pediatric rehabilitation medicine	22	2.1	0.9	1	4
- Sports medicine	21	3.2	1.3	1	6
Plastic surgery	52	5.1	2.1	1	12
Plastic surgery - integrated	86	5.6	2.4	1	13
- Craniofacial surgery	8	1.9	1.3	1	5
- Hand surgery	17	2.7	1.2	1	5
Preventive medicine	72	6.5	4.2	1	23
- Medical toxicology	1	4.0	0.0	4	4
- Undersea and hyperbaric medicine	1	1.0	0.0	1	1
Psychiatry	287	5.5	3.0	1	18
- Addiction medicine (multidisciplinary)	85	4.2	2.4	1	10
- Addiction psychiatry	53	3.2	1.4	1	6
- Child and adolescent psychiatry	146	4.7	2.9	1	12
- Forensic psychiatry	49	3.9	1.4	2	8
- Geriatric psychiatry	64	3.7	2.0	1	11
- Consultation-liaison psychiatry	64	2.2	1.0	1	6
Radiation oncology	91	2.8	1.5	1	9
Radiology-diagnostic	196	3.2	1.8	1	13
- Abdominal radiology	13	1.7	0.9	1	4
- Endovascular surgical neuroradiology	3	1.0	0.0	1	1
- Musculoskeletal radiology	20	1.7	0.9	1	4
- Neuroradiology	89	2.1	1.1	1	6
- Nuclear radiology	18	1.7	1.2	1	6
- Pediatric radiology	48	1.3	0.7	1	4
Interventional radiology - independent	95	2.5	1.3	1	8
Interventional radiology - integrated	92	3.2	1.4	1	9
Surgery	344	4.9	2.0	1	15
- Complex general surgical oncology	31	2.3	1.3	1	6
- Hand surgery	2	8.5	3.5	5	12
- Pediatric surgery	51	1.6	0.7	1	3
- Surgical critical care	145	1.7	0.9	1	5
- Vascular surgery	115	2.4	1.1	1	6
Vascular surgery - integrated	67	3.7	1.6	1	8
Thoracic surgery	74	2.7	1.2	1	6
- Congenital cardiac surgery	15	1.4	0.5	1	2
Thoracic surgery - integrated	33	4.1	1.7	2	8
Urology	145	4.0	1.6	1	9
- Female pelvic medicine and reconstructive surgery	15	2.3	1.7	1	6
- Pediatric urology	26	1.4	0.6	1	3
Transitional year	172	2.3	2.0	1	19
Internal medicine/Pediatrics	79	3.8	2.3	1	18

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	8,165	559	6.8%
TOTAL PIPELINE	6,103	501	8.2%
Allergy and immunology	202	39	19.3%
Anesthesiology	528	69	13.1%
- Adult cardiothoracic anesthesiology	122	39	32.0%
- Clinical informatics	1	1	100.0%
- Critical care medicine	114	32	28.1%
- Regional anesthesiology and acute pain medicine	75	19	25.3%
- Obstetric anesthesiology	55	21	38.2%
- Pain medicine (multidisciplinary)	267	55	20.6%
- Pediatric anesthesiology	85	22	25.9%
Colon and rectal surgery	179	32	17.9%
Dermatology	586	58	9.9%
- Dermatopathology (multidisciplinary)	105	29	27.6%
- Micrographic surgery and dermatologic oncology	169	39	23.1%
Emergency medicine	823	125	15.2%
- Clinical informatics	19	2	10.5%
- Emergency medical services	245	32	13.1%
- Medical toxicology	82	7	8.5%
- Pediatric emergency medicine	64	12	18.8%
- Sports medicine	43	0	0.0%
- Undersea and hyperbaric medicine	13	5	38.5%
Family medicine	2,412	313	13.0%
- Clinical informatics	24	2	8.3%
- Geriatric medicine	200	24	12.0%
- Hospice and palliative medicine (multidisciplinary)	635	86	13.5%
- Sports medicine	544	73	13.4%
Internal medicine	1,560	279	17.9%
- Adult congenital heart disease	44	11	25.0%
- Advanced heart failure and transplant cardiology	109	34	31.2%
- Cardiovascular disease	530	108	20.4%
- Clinical cardiac electrophysiology	187	52	27.8%
- Clinical informatics	39	9	23.1%
- Critical care medicine	122	28	23.0%
- Endocrinology, diabetes, and metabolism	385	69	17.9%
- Gastroenterology	503	96	19.1%
- Geriatric medicine	404	49	12.1%
- Hematology	5	1	20.0%
- Hematology and medical oncology	396	82	20.7%
- Infectious disease	380	71	18.7%
- Interventional cardiology	288	73	25.3%
- Nephrology	396	72	18.2%
- Medical oncology	14	2	14.3%
- Pulmonary disease	49	13	26.5%
- Pulmonary disease and critical care medicine	484	87	18.0%
- Rheumatology	294	55	18.7%
- Sleep medicine (multidisciplinary)	221	39	17.6%
- Transplant hepatology	79	28	35.4%
Medical genetics and genomics	130	24	18.5%
- Medical biochemical genetics	44	11	25.0%
- Molecular genetic pathology (multidisciplinary)	75	20	26.7%
Neurological surgery	361	52	14.4%
- 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	520	73	14.0%
- Brain injury medicine	1	0	0.0%
- Clinical neurophysiology	183	42	23.0%
- Epilepsy	143	36	25.2%
- Endovascular surgical neuroradiology	3	0	0.0%
- Neurodevelopmental disabilities	33	4	12.1%
- Neuromuscular medicine	112	29	25.9%
- Vascular neurology	190	50	26.3%
Child neurology	211	34	16.1%
Nuclear medicine	88	16	18.2%
Obstetrics and gynecology	1,008	142	14.1%
- Female pelvic medicine and reconstructive surgery	147	27	18.4%
- Gynecologic oncology	141	29	20.6%
- Maternal-fetal medicine	198	42	21.2%
- Reproductive endocrinology and infertility	136	21	15.4%
- Complex family planning	73	10	13.7%
Ophthalmology	457	51	11.2%
- Ophthalmic plastic and reconstructive surgery	16	1	6.3%
Orthopaedic surgery	875	85	9.7%
- Adult reconstructive orthopaedics	55	7	12.7%
- Foot and ankle orthopaedics	18	5	27.8%
- Hand surgery	256	33	12.9%
- Musculoskeletal oncology	24	7	29.2%
- Orthopaedic sports medicine	277	46	16.6%
- Orthopaedic surgery of the spine	33	9	27.3%
- Orthopaedic trauma	20	6	30.0%
- Pediatric orthopaedics	38	10	26.3%
Osteopathic neuromusculoskeletal medicine	109	13	11.9%
Otolaryngology - head and neck surgery	462	54	11.7%
- Neurotology	66	14	21.2%
- Pediatric otolaryngology	40	12	30.0%
Pathology-anatomic and clinical	476	64	13.4%
- Blood banking/transfusion medicine	141	29	20.6%
- Clinical informatics	20	4	20.0%
- Chemical pathology	5	3	60.0%
- Cytopathology	124	44	35.5%
- Forensic pathology	59	22	37.3%
- Hematopathology	139	42	30.2%
- Medical microbiology	28	9	32.1%
- Neuropathology	75	19	25.3%
- Pediatric pathology	63	13	20.6%
- Selective pathology	75	23	30.7%
Pediatrics	482	104	21.6%
- Adolescent medicine	89	13	14.6%
- Child abuse pediatrics	85	13	15.3%
- Clinical informatics	17	6	35.3%
- Developmental-behavioral pediatrics	81	20	24.7%
- Neonatal-perinatal medicine	212	45	21.2%
- Pediatric cardiology	98	28	28.6%
- Pediatric critical care medicine	102	32	31.4%
- Pediatric emergency medicine	152	23	15.1%
- Pediatric endocrinology	112	32	28.6%
- Pediatric gastroenterology	99	30	30.3%

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	
		#	%
- Pediatric hematology/oncology	123	32	26.0%
- Pediatric infectious diseases	123	29	23.6%
- Pediatric nephrology	72	20	27.8%
- Pediatric pulmonology	82	24	29.3%
- Pediatric rheumatology	59	13	22.0%
- Sports medicine	56	11	19.6%
- Pediatric transplant hepatology	29	5	17.2%
- Pediatric hospital medicine	137	20	14.6%
Physical medicine and rehabilitation	474	42	8.9%
- Brain injury medicine	61	9	14.8%
- Neuromuscular medicine	4	0	0.0%
- Spinal cord injury medicine	66	8	12.1%
- Pediatric rehabilitation medicine	46	7	15.2%
- Sports medicine	65	3	4.6%
Plastic surgery	242	23	9.5%
Plastic surgery - integrated	442	38	8.6%
- Craniofacial surgery	15	3	20.0%
- Hand surgery	46	8	17.4%
Preventive medicine	387	31	8.0%
- Medical toxicology	4	1	25.0%
- Undersea and hyperbaric medicine	1	1	100.0%
Psychiatry	1,364	135	9.9%
- Addiction medicine (multidisciplinary)	337	38	11.3%
- Addiction psychiatry	162	19	11.7%
- Child and adolescent psychiatry	656	63	9.6%
- Forensic psychiatry	181	19	10.5%
- Geriatric psychiatry	233	22	9.4%
- Consultation-liaison psychiatry	138	31	22.5%
Radiation oncology	224	40	17.9%
Radiology-diagnostic	493	88	17.8%
- Abdominal radiology	22	6	27.3%
- Endovascular surgical neuroradiology	3	2	66.7%
- Musculoskeletal radiology	34	10	29.4%
- Neuroradiology	172	41	23.8%
- Nuclear radiology	31	11	35.5%
- Pediatric radiology	61	20	32.8%
Interventional radiology - independent	229	42	18.3%
Interventional radiology - integrated	267	40	15.0%
Surgery	1,143	156	13.6%
- Complex general surgical oncology	68	14	20.6%
- Hand surgery	17	1	5.9%
- Pediatric surgery	79	18	22.8%
- Surgical critical care	226	64	28.3%
- Vascular surgery	277	52	18.8%
Vascular surgery - integrated	241	30	12.4%
Thoracic surgery	183	38	20.8%
- Congenital cardiac surgery	21	7	33.3%
Thoracic surgery - integrated	133	17	12.8%
Urology	517	66	12.8%
- Female pelvic medicine and reconstructive surgery	33	9	27.3%
- Pediatric urology	36	9	25.0%
Transitional year	377	85	22.5%
Internal medicine/Pediatrics	290	32	11.0%

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



Program Directors 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 703 specialty programs (12.8%) and 797 subspecialty programs (11.5%) had at least one program director change during the academic year. Of these, a small number (33 specialty programs and 29 subspecialty programs) had more than one program director change during the academic year. Overall, 1,567 distinct program director changes occurred in 1,500 programs during the academic year. The specialties with the highest percentage of program director turnover include:

- Radiation oncology (18.7%)
- Child neurology (18.2%)
- Preventive medicine (18.1%)
- Anesthesiology (18.0%)

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

- Family medicine (103)
- Internal medicine (76)
- Obstetrics and gynecology (53)
- Psychiatry (52)

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

- Orthopaedic surgery (8.5%)
- Pediatrics (8.6%)
- Medical genetics and genomics (8.7%)
- Internal medicine/Pediatrics (8.9%)

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, 2011, allergy and immunology program directors have had the highest average tenure at 10.4 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 12.4 years among medical specialty programs, 9.3 years among hospital-based specialty programs, and 11.9 years among surgical specialty programs. In each group, the mean length in years that subspecialty program directors have taught in their subspecialty is 10.1 years, 10.0 years, and 12.2 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 17.8 years among medical specialty programs, 15.2 years among hospital-based specialty programs, and 17.3 years among surgical specialty programs.

Physician Faculty Members

A total of 195,095 physician faculty members were listed as active at the time of the Academic Year 2020-2021 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 (55.7)
- Pediatrics (42.7)
- Radiology – diagnostic (34.4)
- Surgery – general (31.2)

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

- Pediatric emergency medicine (20.2)
- Neurodevelopmental disabilities (19.0)
- Complex general surgical oncology (17.0)
- Pediatric cardiology (16.9)

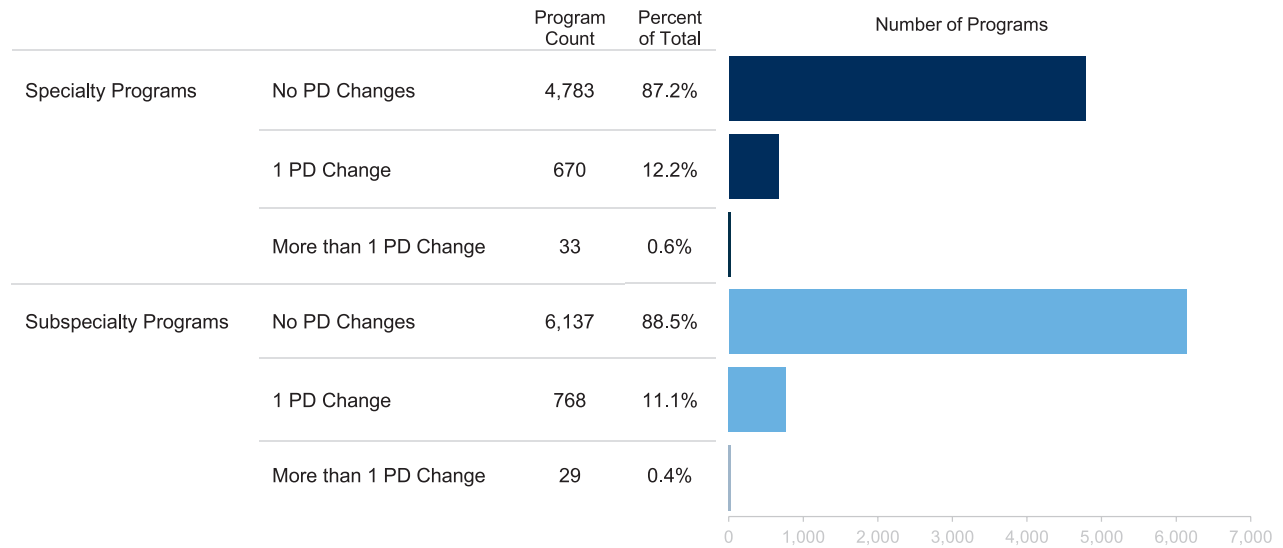
Core Faculty

A total of 70,806 core faculty members were listed as active in specialty programs at the time of the Academic Year 2020-2021 snapshot. The specialties with the highest average number of core faculty members per program include:

- Anesthesiology (25.5)
- Pediatrics (24.6)
- Radiology – diagnostic (20.9)
- Orthopaedic surgery (18.6)

FIGURE G.1

Number of Programs with Program Director Changes during the Academic Year



Notes: Total number of programs = 12,420. Total number of distinct program director changes = 1,567.
Abbreviations: PD, program director.

FIGURE G.2

Percent of Programs with at Least One Program Director Change by Academic Year, 2011-2012 to 2020-2021

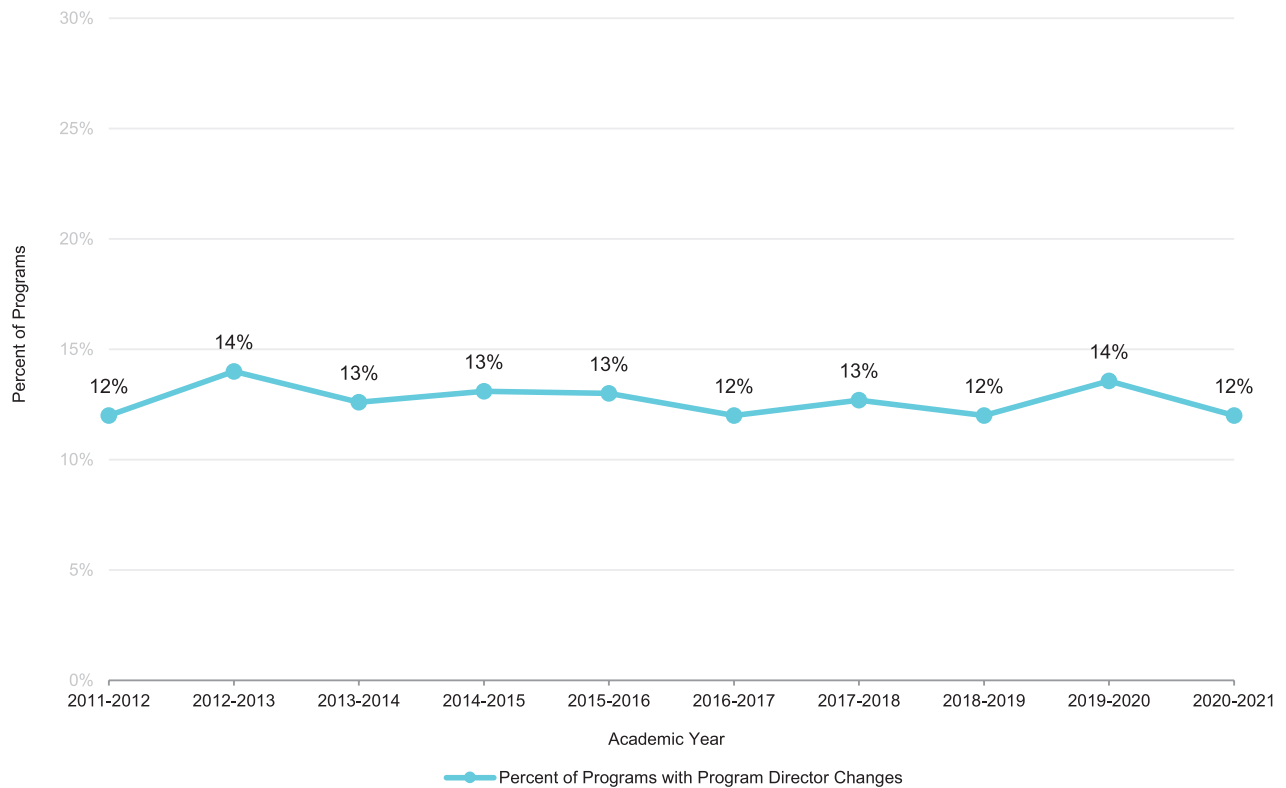


TABLE G.3

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	12,420	1,500	12.1%	1,567
TOTAL PIPELINE	5,187	669	12.9%	705
Allergy and immunology	82	9	11.0%	9
Anesthesiology	161	29	18.0%	29
- Adult cardiothoracic anesthesiology	73	11	15.1%	11
- Clinical informatics	1	0	0.0%	0
- Critical care medicine	64	16	25.0%	17
- Regional anesthesiology and acute pain medicine	38	5	13.2%	6
- Obstetric anesthesiology	41	7	17.1%	8
- Pain medicine (multidisciplinary)	111	11	9.9%	11
- Pediatric anesthesiology	60	4	6.7%	4
Colon and rectal surgery	66	9	13.6%	9
Dermatology	144	23	16.0%	26
- Dermatopathology (multidisciplinary)	58	4	6.9%	4
- Micrographic surgery and dermatologic oncology	78	5	6.4%	5
Emergency medicine	276	29	10.5%	31
- Clinical informatics	5	1	20.0%	1
- Emergency medical services	75	13	17.3%	13
- Medical toxicology	27	2	7.4%	2
- Pediatric emergency medicine	27	5	18.5%	5
- Sports medicine	9	2	22.2%	2
- Undersea and hyperbaric medicine	8	1	12.5%	1
Family medicine	710	96	13.5%	103
- Clinical informatics	6	0	0.0%	0
- Geriatric medicine	49	6	12.2%	6
- Hospice and palliative medicine (multidisciplinary)	180	16	8.9%	16
- Sports medicine	156	13	8.3%	14
Internal medicine	586	73	12.5%	76
- Adult congenital heart disease	24	2	8.3%	2
- Advanced heart failure and transplant cardiology	82	12	14.6%	13
- Cardiovascular disease	255	28	11.0%	29
- Clinical cardiac electrophysiology	112	8	7.1%	8
- Clinical informatics	19	3	15.8%	3
- Critical care medicine	55	11	20.0%	11
- Endocrinology, diabetes, and metabolism	153	15	9.8%	15
- Gastroenterology	211	30	14.2%	32
- Geriatric medicine	114	15	13.2%	16
- Hematology	2	0	0.0%	0
- Hematology and medical oncology	172	22	12.8%	22
- Infectious disease	158	17	10.8%	18
- Interventional cardiology	170	22	12.9%	22
- Nephrology	152	15	9.9%	15
- Medical oncology	6	1	16.7%	1
- Pulmonary disease	20	5	25.0%	6
- Pulmonary disease and critical care medicine	188	25	13.3%	27
- Rheumatology	125	13	10.4%	14
- Sleep medicine (multidisciplinary)	89	6	6.7%	6
- Transplant hepatology	59	9	15.3%	9
Medical genetics and genomics	46	4	8.7%	4
- Medical biochemical genetics	20	3	15.0%	3
- Molecular genetic pathology (multidisciplinary)	42	7	16.7%	8
Neurological surgery	116	11	9.5%	12
- Endovascular surgical neuroradiology	2	1	50.0%	1

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	170	22	12.9%	22
- Brain injury medicine	1	0	0.0%	0
- Clinical neurophysiology	93	2	2.2%	2
- Epilepsy	85	9	10.6%	9
- Endovascular surgical neuroradiology	2	0	0.0%	0
- Neurodevelopmental disabilities	8	2	25.0%	2
- Neuromuscular medicine	53	3	5.7%	3
- Vascular neurology	109	10	9.2%	10
Child neurology	77	14	18.2%	14
Nuclear medicine	37	6	16.2%	6
Obstetrics and gynecology	294	48	16.3%	53
- Female pelvic medicine and reconstructive surgery	54	7	13.0%	7
- Gynecologic oncology	63	9	14.3%	9
- Maternal-fetal medicine	100	17	17.0%	17
- Reproductive endocrinology and infertility	49	7	14.3%	7
- Complex family planning	26	3	11.5%	3
Ophthalmology	125	13	10.4%	13
- Ophthalmic plastic and reconstructive surgery	4	1	25.0%	1
Orthopaedic surgery	201	17	8.5%	17
- Adult reconstructive orthopaedics	25	3	12.0%	3
- Foot and ankle orthopaedics	7	0	0.0%	0
- Hand surgery	73	5	6.8%	6
- Musculoskeletal oncology	12	1	8.3%	1
- Orthopaedic sports medicine	93	9	9.7%	9
- Orthopaedic surgery of the spine	16	3	18.8%	3
- Orthopaedic trauma	12	2	16.7%	2
- Pediatric orthopaedics	25	0	0.0%	0
Osteopathic neuromusculoskeletal medicine	28	5	17.9%	5
Otolaryngology - head and neck surgery	125	13	10.4%	13
- Neurotology	26	0	0.0%	0
- Pediatric otolaryngology	31	7	22.6%	7
Pathology-anatomic and clinical	144	16	11.1%	17
- Blood banking/transfusion medicine	52	7	13.5%	7
- Clinical informatics	11	0	0.0%	0
- Chemical pathology	4	0	0.0%	0
- Cytopathology	93	13	14.0%	13
- Forensic pathology	45	3	6.7%	3
- Hematopathology	86	10	11.6%	11
- Medical microbiology	15	1	6.7%	1
- Neuropathology	38	6	15.8%	7
- Pediatric pathology	28	3	10.7%	3
- Selective pathology	109	11	10.1%	13
Pediatrics	210	18	8.6%	18
- Adolescent medicine	32	1	3.1%	1
- Child abuse pediatrics	31	3	9.7%	3
- Clinical informatics	8	0	0.0%	0
- Developmental-behavioral pediatrics	44	5	11.4%	5
- Neonatal-perinatal medicine	107	11	10.3%	11
- Pediatric cardiology	64	6	9.4%	6
- Pediatric critical care medicine	75	15	20.0%	16
- Pediatric emergency medicine	55	5	9.1%	5
- Pediatric endocrinology	72	2	2.8%	2
- Pediatric gastroenterology	67	7	10.4%	8

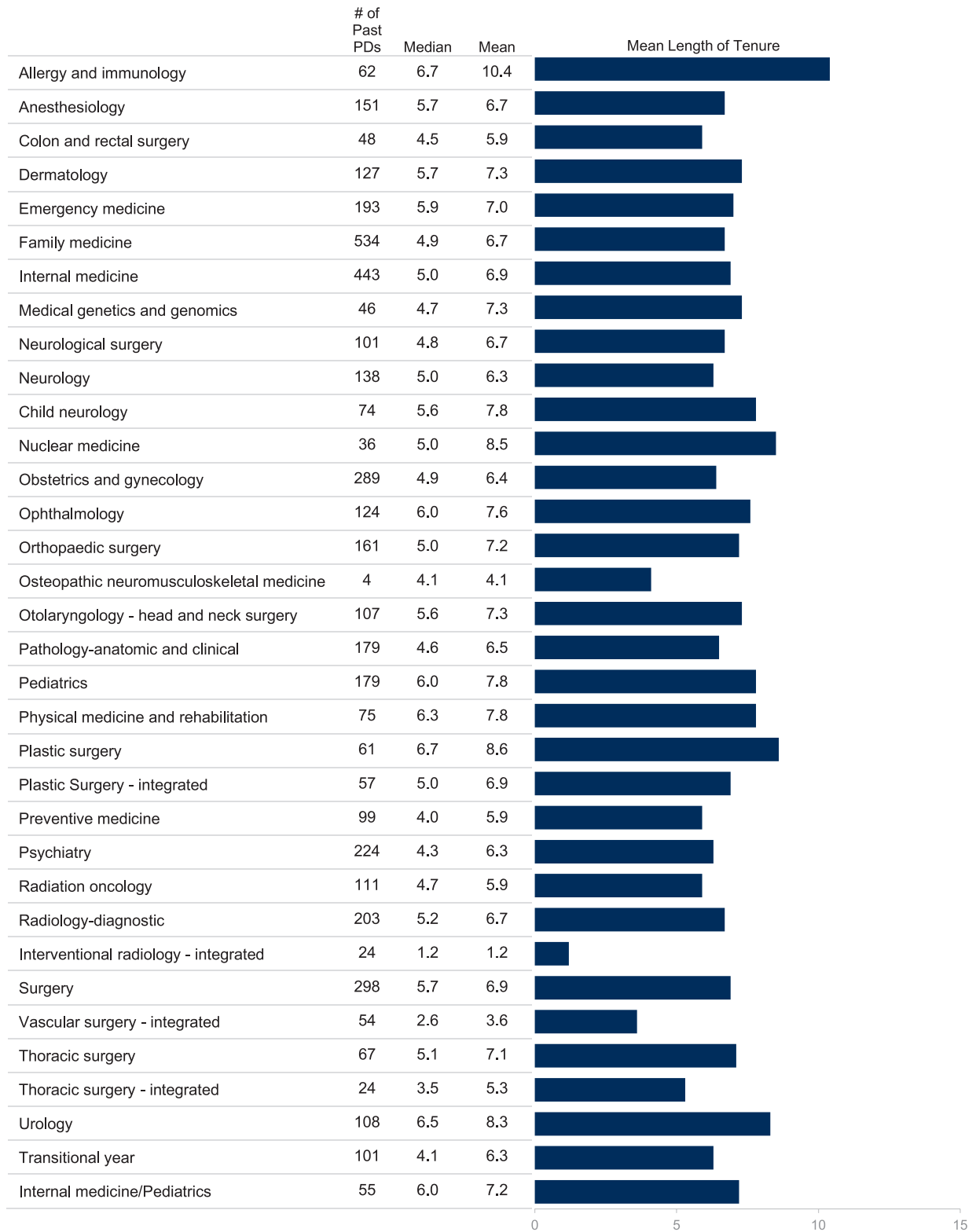
TABLE G.3 *Continued***Number of Programs with New Program Directors and Number of Distinct Program Director Changes during the Academic Year by Specialty and Subspecialty**

Specialty	Total Programs	Programs with New PDs		Number of Distinct PD Changes
		#	%	
- Pediatric hematology/oncology	76	11	14.5%	11
- Pediatric infectious diseases	64	6	9.4%	6
- Pediatric nephrology	47	9	19.1%	9
- Pediatric pulmonology	56	6	10.7%	6
- Pediatric rheumatology	37	3	8.1%	3
- Sports medicine	17	2	11.8%	3
- Pediatric transplant hepatology	17	1	5.9%	1
- Pediatric hospital medicine A74	54	4	7.4%	4
Physical medicine and rehabilitation	98	13	13.3%	13
- Brain injury medicine	25	0	0.0%	0
- Neuromuscular medicine	1	0	0.0%	0
- Spinal cord injury medicine	24	1	4.2%	1
- Pediatric rehabilitation medicine	22	3	13.6%	3
- Sports medicine	21	1	4.8%	1
Plastic surgery	52	6	11.5%	7
Plastic surgery - integrated	86	12	14.0%	12
- Craniofacial surgery	8	2	25.0%	2
- Hand surgery	17	1	5.9%	1
Preventive medicine	72	13	18.1%	16
- Medical toxicology	1	0	0.0%	0
- Undersea and hyperbaric medicine	1	1	100.0%	1
Psychiatry	287	48	16.7%	52
- Addiction medicine (multidisciplinary)	85	4	4.7%	4
- Addiction psychiatry	53	6	11.3%	7
- Child and adolescent psychiatry	146	16	11.0%	17
- Forensic psychiatry	49	5	10.2%	5
- Geriatric psychiatry	64	5	7.8%	7
- Consultation-liaison psychiatry	64	8	12.5%	8
Radiation oncology	91	17	18.7%	17
Radiology-diagnostic	196	21	10.7%	21
- Abdominal radiology	13	4	30.8%	4
- Endovascular surgical neuroradiology	3	0	0.0%	0
- Musculoskeletal radiology	20	3	15.0%	3
- Neuroradiology	89	9	10.1%	9
- Nuclear radiology	18	5	27.8%	5
- Pediatric radiology	48	9	18.8%	10
Interventional radiology - independent	95	18	18.9%	19
Interventional radiology - integrated	92	12	13.0%	12
Surgery	344	38	11.0%	42
- Complex general surgical oncology	31	2	6.5%	2
- Hand surgery	2	0	0.0%	0
- Pediatric surgery	51	8	15.7%	8
- Surgical critical care	145	17	11.7%	18
- Vascular surgery	115	17	14.8%	17
Vascular surgery - integrated	67	9	13.4%	9
Thoracic surgery	74	12	16.2%	14
- Congenital cardiac surgery	15	4	26.7%	4
Thoracic surgery - integrated	33	3	9.1%	4
Urology	145	15	10.3%	15
- Female pelvic medicine and reconstructive surgery	15	1	6.7%	1
- Pediatric urology	26	4	15.4%	4
Transitional year	172	22	12.8%	22
Internal medicine/Pediatrics	79	7	8.9%	7

Notes: Total number of distinct program director changes = 1,567 (740 in specialty programs and 827 in subspecialty programs). Pipeline specialties are highlighted. Abbreviations: PD, program director.

FIGURE G.4

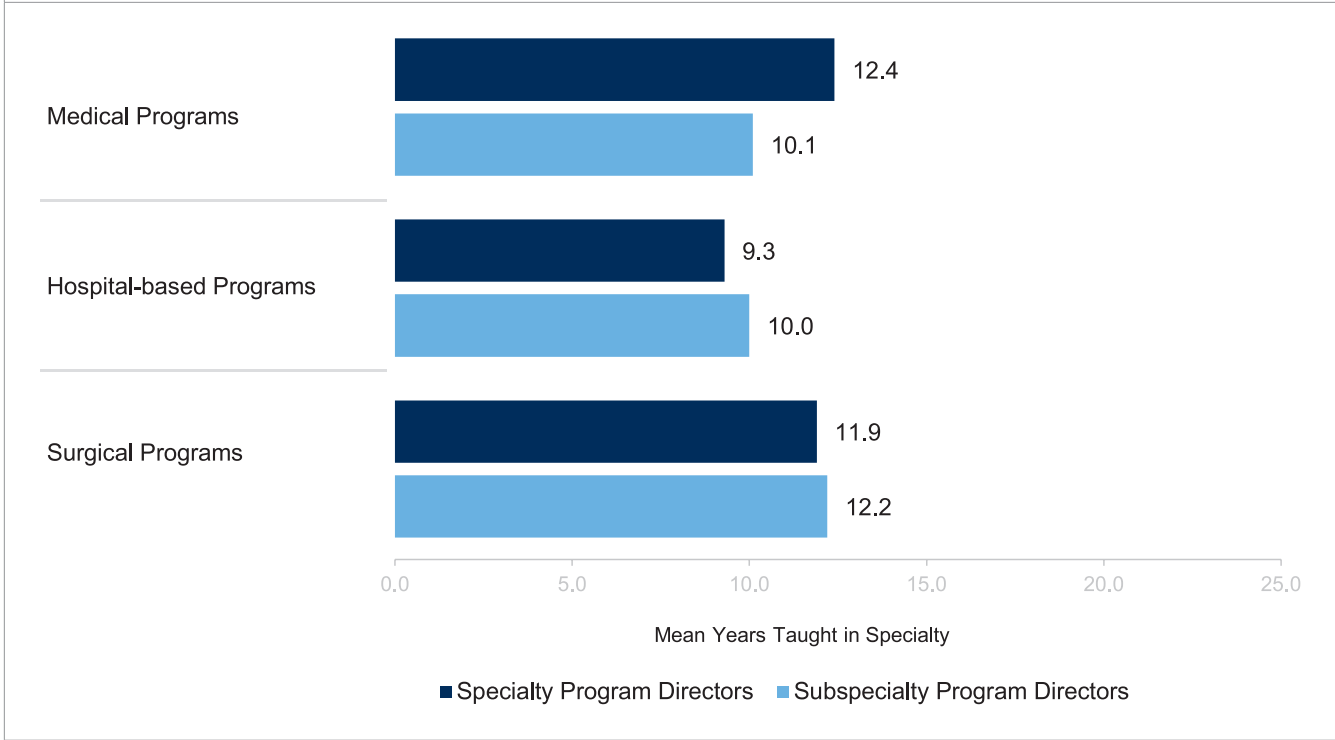
Mean Length in Years of Past Program Director Tenure by Specialty



Notes: Data are based on program director changes since 7/1/2011 (n = 4,557). Overall mean length in tenure = 6.8 years.
Abbreviations: PD, program director.

FIGURE G.5

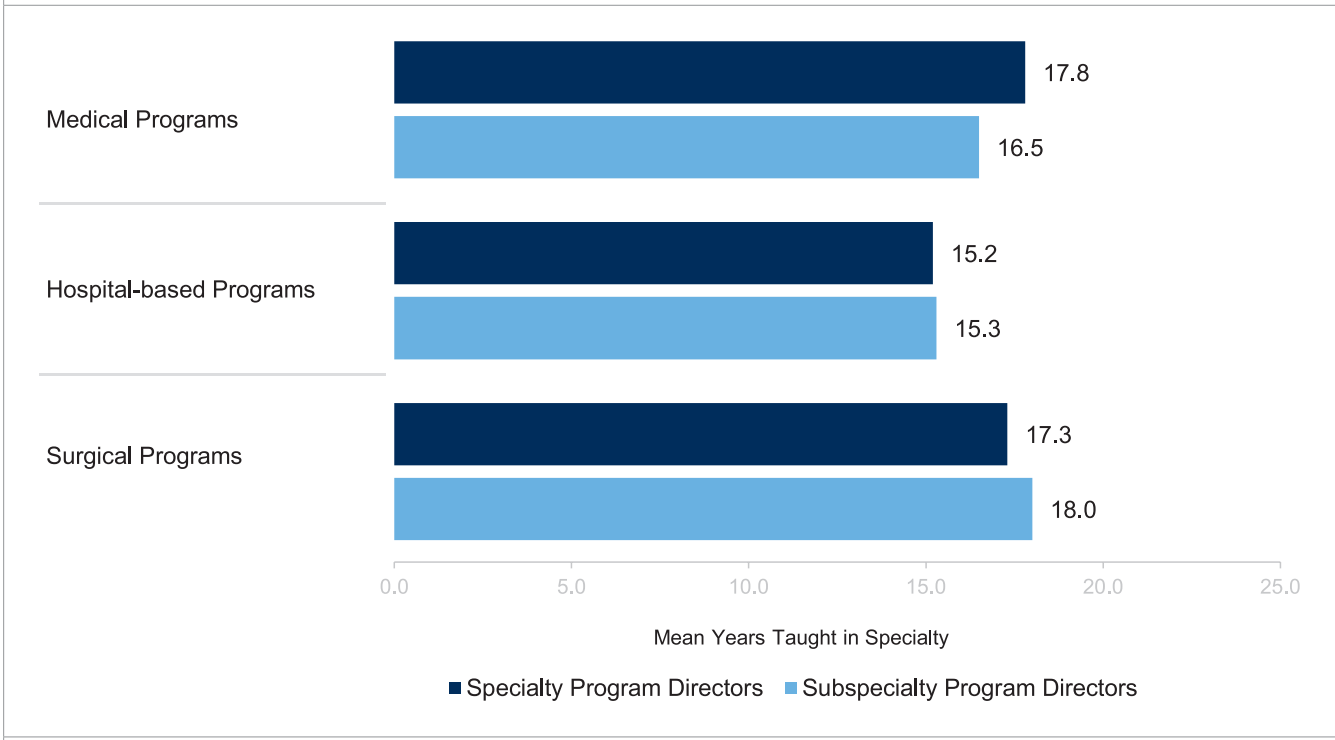
Mean Length in Years New Program Directors Have Taught in Their Specialty by Specialty Group



Notes: Total number of new program directors in specialty programs = 844. Total number of new program directors in subspecialty programs = 1,098.

FIGURE G.6

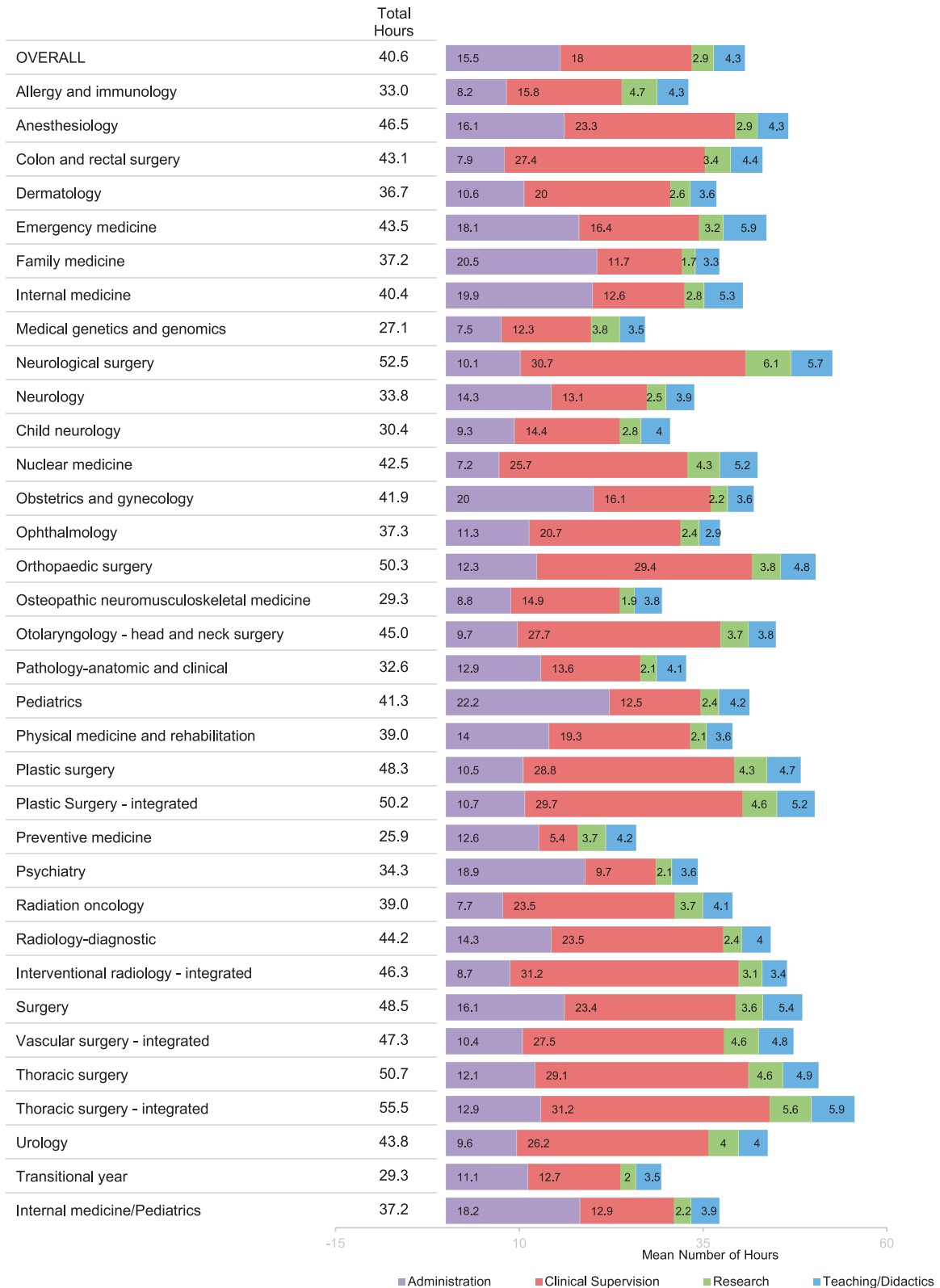
Mean Length in Years Continuing Program Directors Have Taught in Their Specialty by Specialty Group



Notes: Total number of continuing program directors in specialty programs = 4,642. Total number of continuing program directors in subspecialty programs = 5,836.

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	12,420	195,095	15.7	0	306
TOTAL PIPELINE	5,187	128,796	24.8	1	306
Allergy and immunology	82	824	10.0	2	28
Anesthesiology	161	8,972	55.7	8	161
- Adult cardiothoracic anesthesiology	73	1,016	13.9	4	33
- Clinical informatics	1	6	6.0	6	6
- Critical care medicine	64	874	13.7	4	39
- Regional anesthesiology and acute pain medicine	38	426	11.2	3	35
- Obstetric anesthesiology	41	379	9.2	2	19
- Pain medicine (multidisciplinary)	111	1,053	9.5	2	29
- Pediatric anesthesiology	60	942	15.7	4	45
Colon and rectal surgery	66	453	6.9	3	21
Dermatology	144	2,260	15.7	3	49
- Dermatopathology (multidisciplinary)	58	369	6.4	1	23
- Micrographic surgery and dermatologic oncology	78	307	3.9	1	13
Emergency medicine	276	6,073	22.0	4	99
- Clinical informatics	5	44	8.8	7	12
- Emergency medical services	75	337	4.5	1	18
- Medical toxicology	27	155	5.7	2	12
- Pediatric emergency medicine	27	287	10.6	2	25
- Sports medicine	9	48	5.3	3	11
- Undersea and hyperbaric medicine	8	23	2.9	1	7
Family medicine	710	17,546	24.7	2	103
- Clinical informatics	6	45	7.5	3	12
- Geriatric medicine	49	341	7.0	1	17
- Hospice and palliative medicine (multidisciplinary)	180	1,547	8.6	2	22
- Sports medicine	156	1,140	7.3	2	22
Internal medicine	586	12,382	21.1	4	174
- Adult congenital heart disease	24	133	5.5	2	13
- Advanced heart failure and transplant cardiology	82	441	5.4	1	15
- Cardiovascular disease	255	3,576	14.0	3	64
- Clinical cardiac electrophysiology	112	587	5.2	1	17
- Clinical informatics	19	144	7.6	2	13
- Critical care medicine	55	579	10.5	2	29
- Endocrinology, diabetes, and metabolism	153	1,227	8.0	1	27
- Gastroenterology	211	2,489	11.8	1	50
- Geriatric medicine	114	828	7.3	1	19
- Hematology	2	23	11.5	10	13
- Hematology and medical oncology	172	2,415	14.0	3	54
- Infectious disease	158	1,568	9.9	1	38
- Interventional cardiology	170	871	5.1	1	17
- Nephrology	152	1,505	9.9	2	35
- Medical oncology	6	55	9.2	3	20
- Pulmonary disease	20	122	6.1	2	15
- Pulmonary disease and critical care medicine	188	2,607	13.9	4	47
- Rheumatology	125	922	7.4	1	24
- Sleep medicine (multidisciplinary)	89	573	6.4	2	15
- Transplant hepatology	59	348	5.9	1	12
Medical genetics and genomics	46	477	10.4	1	51
- Medical biochemical genetics	20	120	6.0	2	18
- Molecular genetic pathology (multidisciplinary)	42	240	5.7	1	12
Neurological surgery	116	2,134	18.4	6	45
- Endovascular surgical neuroradiology	2	5	2.5	2	3

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	170	5,233	30.8	7	96
- Brain injury medicine	1	3	3.0	3	3
- Clinical neurophysiology	93	903	9.7	2	24
- Epilepsy	85	736	8.7	3	22
- Endovascular surgical neuroradiology	2	7	3.5	2	5
- Neurodevelopmental disabilities	8	152	19.0	2	30
- Neuromuscular medicine	53	377	7.1	1	19
- Vascular neurology	109	740	6.8	1	19
Child neurology	77	1,294	16.8	2	46
Nuclear medicine	37	218	5.9	2	16
Obstetrics and gynecology	294	8,431	28.7	8	94
- Female pelvic medicine and reconstructive surgery	54	367	6.8	2	13
- Gynecologic oncology	63	538	8.5	1	19
- Maternal-fetal medicine	100	1,188	11.9	3	28
- Reproductive endocrinology and infertility	49	410	8.4	2	22
- Complex family planning	26	128	4.9	2	10
Ophthalmology	125	3,196	25.6	8	70
- Ophthalmic plastic and reconstructive surgery	4	9	2.3	1	4
Orthopaedic surgery	201	6,009	29.9	8	84
- Adult reconstructive orthopaedics	25	165	6.6	2	17
- Foot and ankle orthopaedics	7	33	4.7	3	8
- Hand surgery	73	507	6.9	2	19
- Musculoskeletal oncology	12	36	3.0	1	6
- Orthopaedic sports medicine	93	620	6.7	1	27
- Orthopaedic surgery of the spine	16	86	5.4	3	11
- Orthopaedic trauma	12	58	4.8	2	11
- Pediatric orthopaedics	25	248	9.9	3	21
Osteopathic neuromusculoskeletal medicine	28	227	8.1	2	18
Otolaryngology - head and neck surgery	125	2,765	22.1	5	53
- Neurotology	26	135	5.2	1	10
- Pediatric otolaryngology	31	279	9.0	4	21
Pathology-anatomic and clinical	144	4,176	29.0	9	88
- Blood banking/transfusion medicine	52	298	5.7	1	14
- Clinical informatics	11	73	6.6	4	10
- Chemical pathology	4	8	2.0	1	4
- Cytopathology	93	536	5.8	2	16
- Forensic pathology	45	290	6.4	1	25
- Hematopathology	86	551	6.4	1	26
- Medical microbiology	15	40	2.7	0	7
- Neuropathology	38	175	4.6	2	9
- Pediatric pathology	28	211	7.5	1	16
- Selective pathology	109	787	7.2	1	30
Pediatrics	210	8,963	42.7	16	306
- Adolescent medicine	32	210	6.6	2	16
- Child abuse pediatrics	31	140	4.5	1	20
- Clinical informatics	8	53	6.6	2	10
- Developmental-behavioral pediatrics	44	280	6.4	1	15
- Neonatal-perinatal medicine	107	1,611	15.1	3	46
- Pediatric cardiology	64	1,081	16.9	4	52
- Pediatric critical care medicine	75	1,127	15.0	6	56
- Pediatric emergency medicine	55	1,111	20.2	6	59
- Pediatric endocrinology	72	571	7.9	2	28
- Pediatric gastroenterology	67	688	10.3	3	33

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 hematology/oncology	76	1,202	15.8	5	55
- Pediatric infectious diseases	64	535	8.4	1	29
- Pediatric nephrology	47	305	6.5	2	18
- Pediatric pulmonology	56	482	8.6	3	25
- Pediatric rheumatology	37	180	4.9	1	10
- Sports medicine	17	125	7.4	2	18
- Pediatric transplant hepatology	17	92	5.4	2	11
- Pediatric hospital medicine	54	777	14.4	3	31
Physical medicine and rehabilitation	98	2,117	21.6	5	56
- Brain injury medicine	25	153	6.1	2	16
- Neuromuscular medicine	1	5	5.0	5	5
- Spinal cord injury medicine	24	150	6.3	4	12
- Pediatric rehabilitation medicine	22	148	6.7	3	14
- Sports medicine	21	146	7.0	3	16
Plastic surgery	52	763	14.7	4	33
Plastic surgery - integrated	86	1,679	19.5	4	58
- Craniofacial surgery	8	23	2.9	0	5
- Hand surgery	17	101	5.9	3	13
Preventive medicine	72	754	10.5	2	35
- Medical toxicology	1	6	6.0	6	6
- Undersea and hyperbaric medicine	1	5	5.0	5	5
Psychiatry	287	6,348	22.1	4	74
- Addiction medicine (multidisciplinary)	85	730	8.6	2	17
- Addiction psychiatry	53	371	7.0	2	17
- Child and adolescent psychiatry	146	1,463	10.0	1	35
- Forensic psychiatry	49	289	5.9	1	13
- Geriatric psychiatry	64	407	6.4	1	13
- Consultation-liaison psychiatry	64	415	6.5	2	29
Radiation oncology	91	1,184	13.0	4	57
Radiology-diagnostic	196	6,742	34.4	8	108
- Abdominal radiology	13	137	10.5	4	21
- Endovascular surgical neuroradiology	3	9	3.0	2	4
- Musculoskeletal radiology	20	138	6.9	2	20
- Neuroradiology	89	864	9.7	1	33
- Nuclear radiology	18	96	5.3	1	19
- Pediatric radiology	48	579	12.1	2	38
Interventional radiology - independent	95	822	8.7	3	26
Interventional radiology - integrated	92	2,396	26.0	6	90
Surgery	344	10,719	31.2	4	139
- Complex general surgical oncology	31	527	17.0	8	34
- Hand surgery	2	23	11.5	10	13
- Pediatric surgery	51	487	9.5	3	22
- Surgical critical care	145	1,410	9.7	2	24
- Vascular surgery	115	852	7.4	2	19
Vascular surgery - integrated	67	900	13.4	3	39
Thoracic surgery	74	1,036	14.0	4	33
- Congenital cardiac surgery	15	61	4.1	1	10
Thoracic surgery - integrated	33	751	22.8	9	90
Urology	145	2,570	17.7	5	46
- Female pelvic medicine and reconstructive surgery	15	118	7.9	3	14
- Pediatric urology	26	134	5.2	2	11
Transitional year	172	2,158	12.5	2	64
Internal medicine/Pediatrics	79	695	8.8	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= 157,390. 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	5,486	70,806	12.9	0	97
Allergy and immunology	82	447	5.5	1	14
Anesthesiology	161	4,102	25.5	4	97
Colon and rectal surgery	66	340	5.2	2	16
Dermatology	144	1,393	9.7	1	25
Emergency medicine	276	3,667	13.3	3	70
Family medicine	710	4,912	6.9	1	27
Internal medicine	586	6,489	11.1	2	57
Medical genetics and genomics	46	253	5.5	1	22
Neurological surgery	116	1,489	12.8	4	27
Neurology	170	2,733	16.1	3	73
Child neurology	77	791	10.3	2	35
Nuclear medicine	37	164	4.4	0	10
Obstetrics and gynecology	294	4,847	16.5	2	62
Ophthalmology	125	1,744	14.0	3	38
Orthopaedic surgery	201	3,736	18.6	2	54
Osteopathic neuromusculoskeletal medicine	28	68	2.4	0	5
Otolaryngology - head and neck surgery	125	1,917	15.3	3	43
Pathology-anatomic and clinical	144	2,457	17.1	3	65
Pediatrics	210	5,168	24.6	4	67
Physical medicine and rehabilitation	98	1,409	14.4	4	43
Plastic surgery	52	502	9.7	3	33
Plastic Surgery - integrated	86	861	10.0	3	33
Preventive medicine	72	296	4.1	0	9
Psychiatry	287	3,351	11.7	2	47
Radiation oncology	91	913	10.0	2	44
Radiology-diagnostic	196	4,094	20.9	5	81
Interventional radiology - integrated	92	1,696	18.4	5	43
Surgery	344	5,726	16.6	2	66
Vascular surgery - integrated	67	581	8.7	3	33
Thoracic surgery	74	826	11.2	3	30
Thoracic surgery - integrated	33	458	13.9	6	29
Urology	145	1,726	11.9	2	35
Transitional year	172	1,135	6.6	1	21
Internal medicine/Pediatrics	79	515	6.5	1	18

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 = 66,943.

FIGURE G.10

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

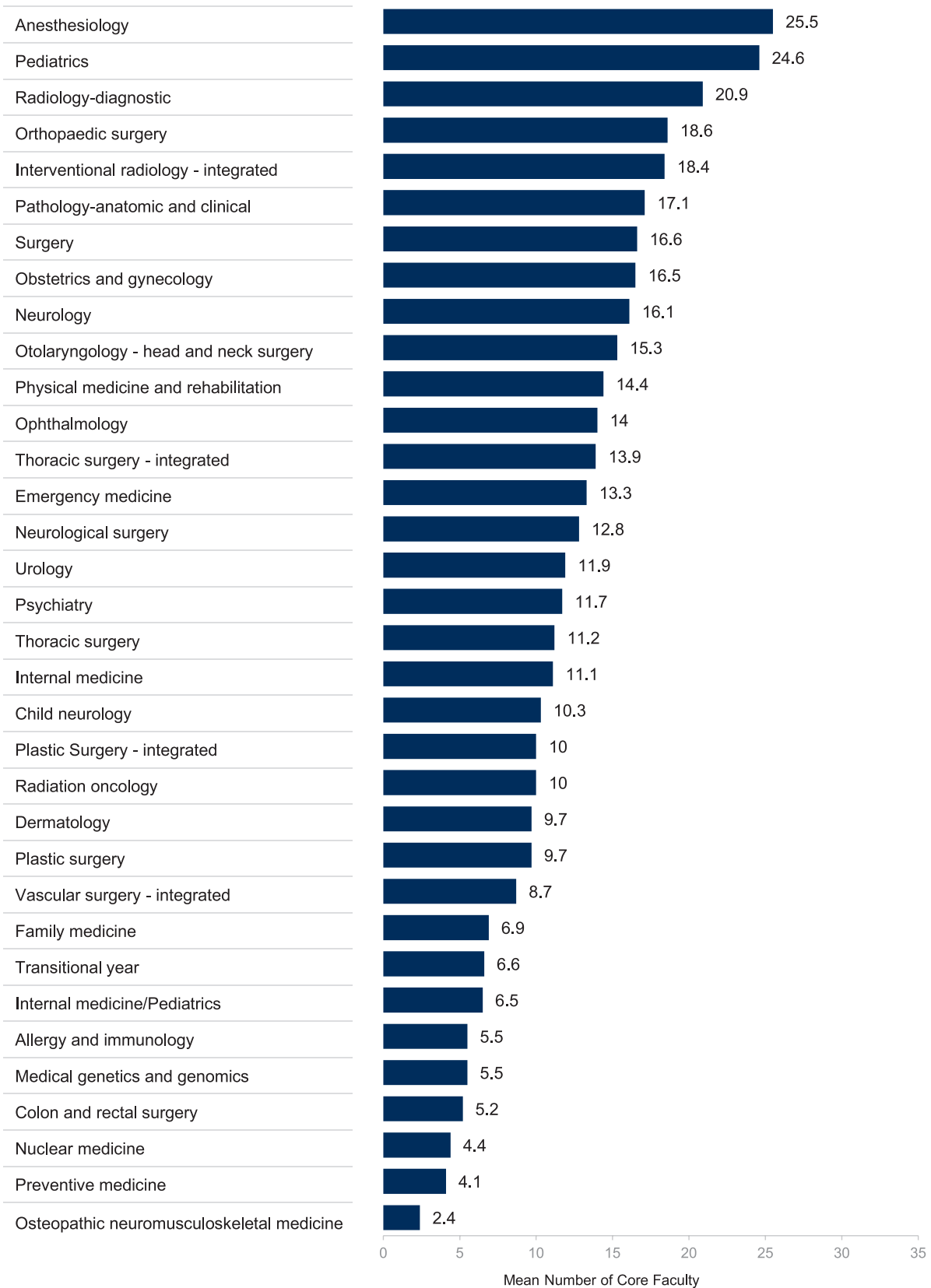
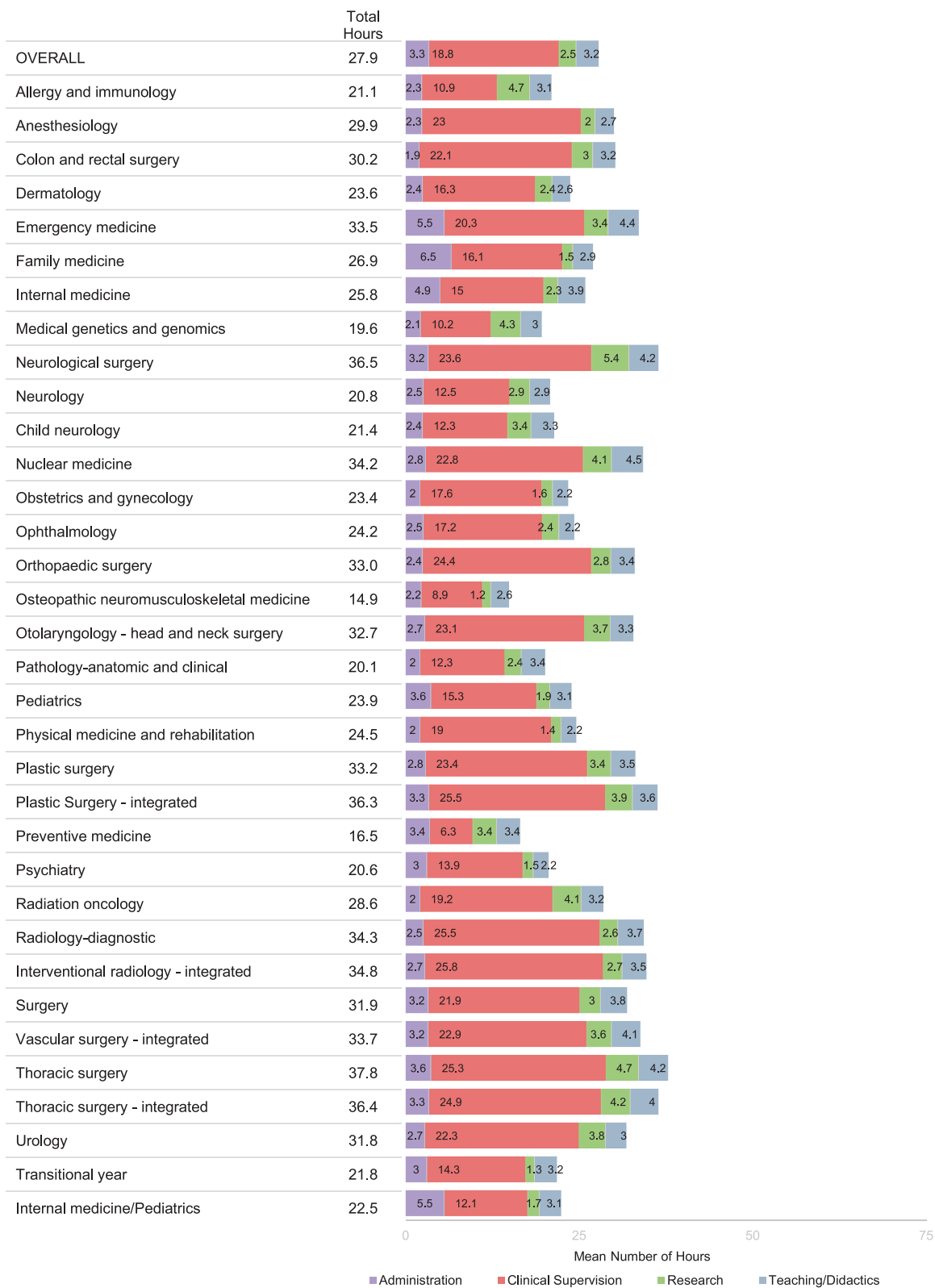


FIGURE G.11
Mean Number of Hours per Week Core Faculty Members Spent in Key Areas by Specialty



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



Program Activities

This section summarizes the use of ambulatory and/or non-hospital settings, as well as what residents are taught about pain management, including the recognition of the signs of addiction, by specialty and subspecialty programs during the 2020-2021 academic year.

Use of Ambulatory and/or Non-Hospital Settings

Across all programs, 92.8% 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 (78.4%)
- Faculty ambulatory practice (62.6%)
- Hospital-based continuity clinic (61.4%)
- Private physician's offices (54.2%)

The percentage of programs using each type of setting varies significantly across pipeline specialties. For exam-

ple, of those programs that use ambulatory/non-hospital settings, 14.7% of pathology-anatomic and clinical programs reported using a hospital-based continuity clinic while 94.4 % of child neurology programs reported using a hospital-based continuity clinic.

Pain Management and Recognition of Addiction

The following education types were offered to manage pain and recognize addiction by the highest percentage of specialty programs:

- Opioid prescribing (87.9%)
- Pharmacologic pain management (87.7%)
- Recognition of dependence and addiction (86.9%)
- Non-pharmacologic pain management (80.9%)

A similar trend can be seen in subspecialty programs. ↗

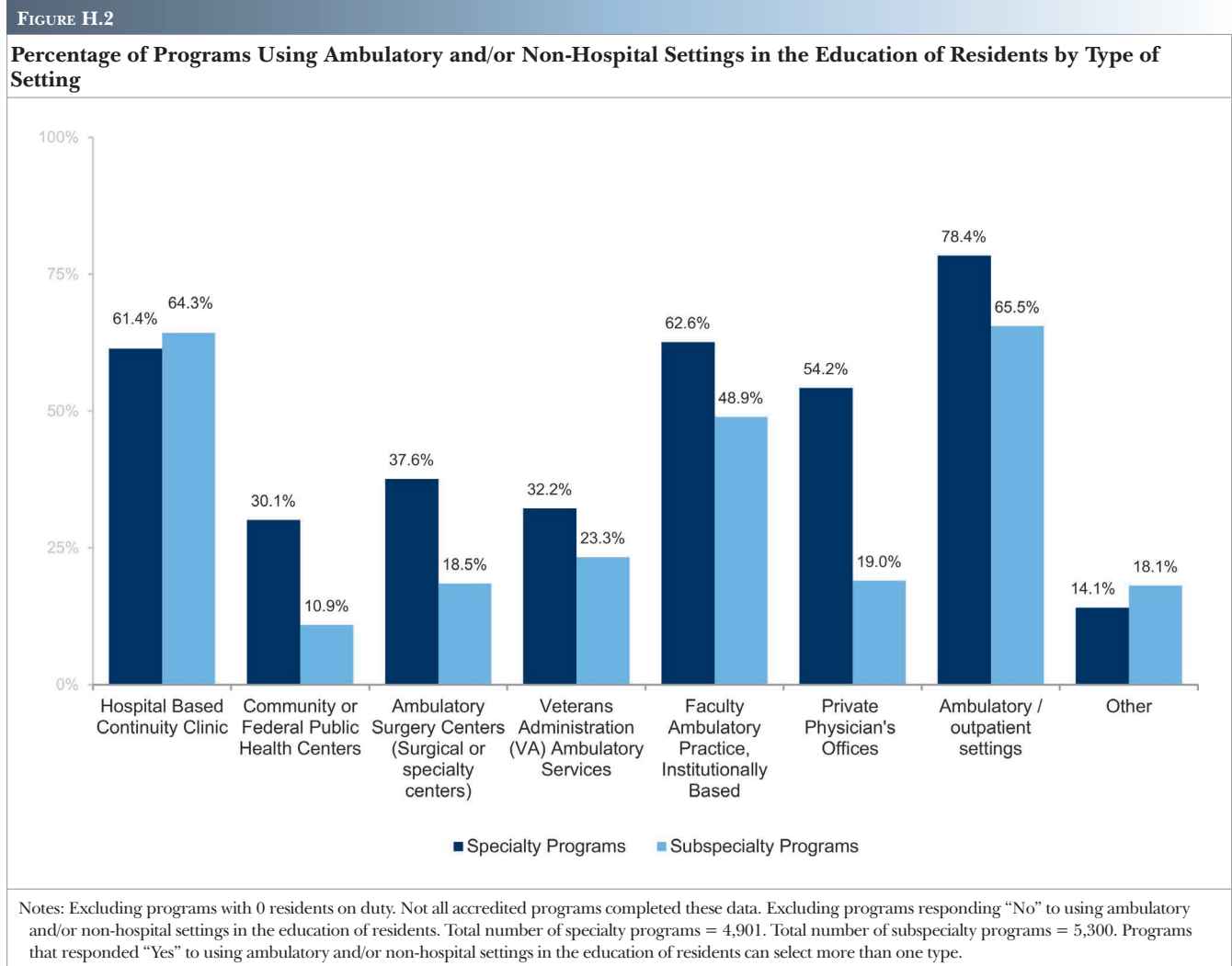
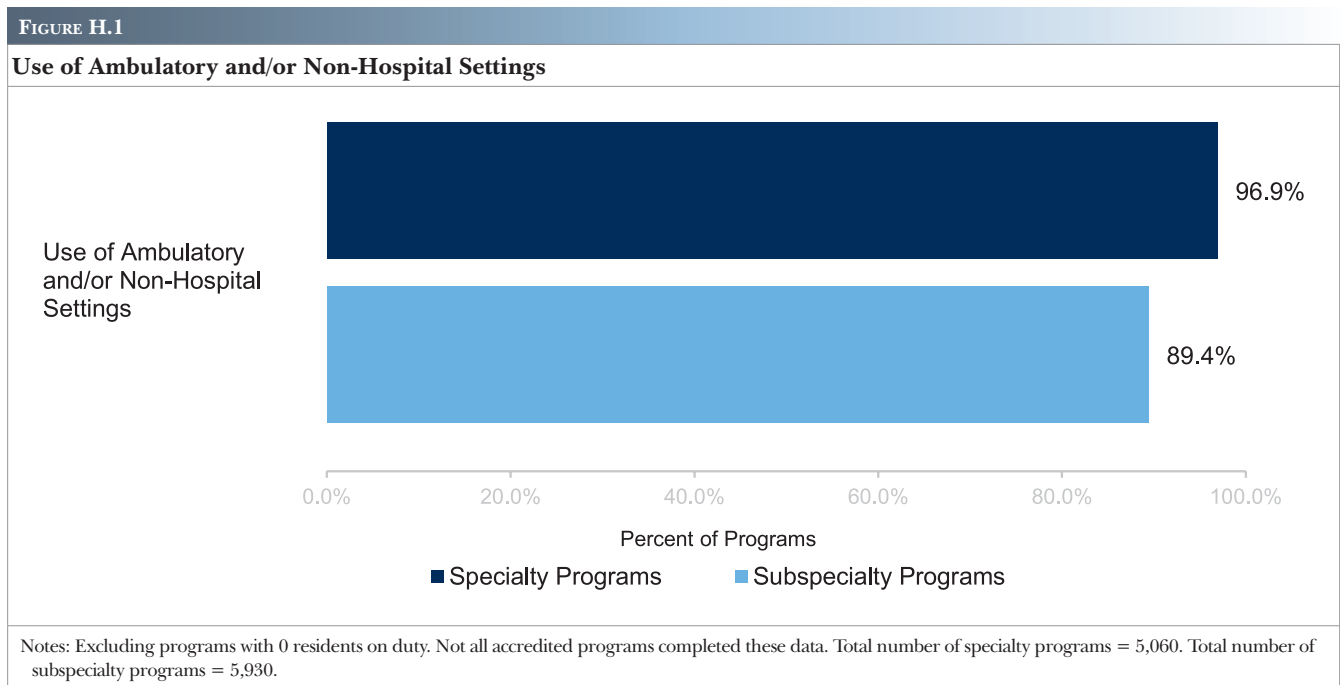


TABLE H.3

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	10,990	10,201	92.8%	789	7.2%
TOTAL PIPELINE	4,930	4,772	96.8%	158	3.2%
Allergy and immunology	80	78	97.5%	2	2.5%
Anesthesiology	159	151	95.0%	8	5.0%
- Adult cardiothoracic anesthesiology	69	11	15.9%	58	84.1%
- Clinical informatics	1	1	100.0%	0	0.0%
- Critical care medicine	55	4	7.3%	51	92.7%
- Regional anesthesiology and acute pain medicine	29	26	89.7%	3	10.3%
- Obstetric anesthesiology	34	26	76.5%	8	23.5%
- Pain medicine (multidisciplinary)	107	107	100.0%	0	0.0%
- Pediatric anesthesiology	49	39	79.6%	10	20.4%
Colon and rectal surgery	63	62	98.4%	1	1.6%
Dermatology	143	142	99.3%	1	0.7%
- Dermatopathology (multidisciplinary)	49	41	83.7%	8	16.3%
- Micrographic surgery and dermatologic oncology	72	70	97.2%	2	2.8%
Emergency medicine	255	187	73.3%	68	26.7%
- Clinical informatics	5	4	80.0%	1	20.0%
- Emergency medical services	58	56	96.6%	2	3.4%
- Medical toxicology	26	26	100.0%	0	0.0%
- Pediatric emergency medicine	26	23	88.5%	3	11.5%
- Sports medicine	8	8	100.0%	0	0.0%
- Undersea and hyperbaric medicine	7	7	100.0%	0	0.0%
Family medicine	678	677	99.9%	1	0.1%
- Clinical informatics	3	3	100.0%	0	0.0%
- Geriatric medicine	27	27	100.0%	0	0.0%
- Hospice and palliative medicine (multidisciplinary)	144	144	100.0%	0	0.0%
- Sports medicine	143	143	100.0%	0	0.0%
Internal medicine	548	548	100.0%	0	0.0%
- Adult congenital heart disease	18	18	100.0%	0	0.0%
- Advanced heart failure and transplant cardiology	57	56	98.2%	1	1.8%
- Cardiovascular disease	247	245	99.2%	2	0.8%
- Clinical cardiac electrophysiology	96	94	97.9%	2	2.1%
- Clinical informatics	13	13	100.0%	0	0.0%
- Critical care medicine	45	10	22.2%	35	77.8%
- Endocrinology, diabetes, and metabolism	148	148	100.0%	0	0.0%
- Gastroenterology	204	204	100.0%	0	0.0%
- Geriatric medicine	94	94	100.0%	0	0.0%
- Hematology	2	2	100.0%	0	0.0%
- Hematology and medical oncology	163	163	100.0%	0	0.0%
- Infectious disease	142	142	100.0%	0	0.0%
- Interventional cardiology	162	160	98.8%	2	1.2%
- Nephrology	143	143	100.0%	0	0.0%
- Medical oncology	6	6	100.0%	0	0.0%
- Pulmonary disease	19	19	100.0%	0	0.0%
- Pulmonary disease and critical care medicine	178	177	99.4%	1	0.6%
- Rheumatology	122	122	100.0%	0	0.0%
- Sleep medicine (multidisciplinary)	80	79	98.8%	1	1.3%
- Transplant hepatology	32	32	100.0%	0	0.0%
Medical genetics and genomics	33	33	100.0%	0	0.0%
- Medical biochemical genetics	10	10	100.0%	0	0.0%
- Molecular genetic pathology (multidisciplinary)	34	23	67.6%	11	32.4%
Neurological surgery	116	116	100.0%	0	0.0%
- Endovascular surgical neuroradiology	1	1	100.0%	0	0.0%

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	%
Neurology	159	159	100.0%	0	0.0%
- Brain injury medicine	1	1	100.0%	0	0.0%
- Clinical neurophysiology	64	62	96.9%	2	3.1%
- Epilepsy	63	62	98.4%	1	1.6%
- Endovascular surgical neuroradiology	2	2	100.0%	0	0.0%
- Neurodevelopmental disabilities	7	7	100.0%	0	0.0%
- Neuromuscular medicine	38	36	94.7%	2	5.3%
- Vascular neurology	81	81	100.0%	0	0.0%
Child neurology	72	71	98.6%	1	1.4%
Nuclear medicine	26	21	80.8%	5	19.2%
Obstetrics and gynecology	284	284	100.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	51	51	100.0%	0	0.0%
- Gynecologic oncology	60	60	100.0%	0	0.0%
- Maternal-fetal medicine	94	93	98.9%	1	1.1%
- Reproductive endocrinology and infertility	49	49	100.0%	0	0.0%
- Complex family planning	2	2	100.0%	0	0.0%
Ophthalmology	122	121	99.2%	1	0.8%
- Ophthalmic plastic and reconstructive surgery	3	3	100.0%	0	0.0%
Orthopaedic surgery	199	198	99.5%	1	0.5%
- Adult reconstructive orthopaedics	24	22	91.7%	2	8.3%
- Foot and ankle orthopaedics	7	7	100.0%	0	0.0%
- Hand surgery	70	70	100.0%	0	0.0%
- Musculoskeletal oncology	11	10	90.9%	1	9.1%
- Orthopaedic sports medicine	87	86	98.9%	1	1.1%
- Orthopaedic surgery of the spine	15	15	100.0%	0	0.0%
- Orthopaedic trauma	11	11	100.0%	0	0.0%
- Pediatric orthopaedics	19	16	84.2%	3	15.8%
Osteopathic neuromusculoskeletal medicine	19	19	100.0%	0	0.0%
Otolaryngology - head and neck surgery	124	123	99.2%	1	0.8%
- Neurotology	24	23	95.8%	1	4.2%
- Pediatric otolaryngology	23	23	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	0	0	N/A	0	N/A
- Cytopathology	80	49	61.3%	31	38.8%
- Forensic pathology	28	16	57.1%	12	42.9%
- Hematopathology	69	31	44.9%	38	55.1%
- Medical microbiology	14	7	50.0%	7	50.0%
- Neuropathology	32	12	37.5%	20	62.5%
- Pediatric pathology	15	8	53.3%	7	46.7%
- Selective pathology	78	34	43.6%	44	56.4%
Pediatrics	209	209	100.0%	0	0.0%
- Adolescent medicine	31	31	100.0%	0	0.0%
- Child abuse pediatrics	27	27	100.0%	0	0.0%
- Clinical informatics	7	7	100.0%	0	0.0%
- Developmental-behavioral pediatrics	38	38	100.0%	0	0.0%
- Neonatal-perinatal medicine	101	100	99.0%	1	1.0%
- Pediatric cardiology	61	61	100.0%	0	0.0%
- Pediatric critical care medicine	72	9	12.5%	63	87.5%
- Pediatric emergency medicine	53	46	86.8%	7	13.2%
- Pediatric endocrinology	65	64	98.5%	1	1.5%
- Pediatric gastroenterology	64	62	96.9%	2	3.1%

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 hematology/oncology	71	71	100.0%	0	0.0%
- Pediatric infectious diseases	55	54	98.2%	1	1.8%
- Pediatric nephrology	38	38	100.0%	0	0.0%
- Pediatric pulmonology	49	49	100.0%	0	0.0%
- Pediatric rheumatology	32	32	100.0%	0	0.0%
- Sports medicine	15	15	100.0%	0	0.0%
- Pediatric transplant hepatology	11	11	100.0%	0	0.0%
- Pediatric hospital medicine	35	21	60.0%	14	40.0%
Physical medicine and rehabilitation	91	91	100.0%	0	0.0%
- Brain injury medicine	16	16	100.0%	0	0.0%
- Neuromuscular medicine	1	1	100.0%	0	0.0%
- Spinal cord injury medicine	15	13	86.7%	2	13.3%
- Pediatric rehabilitation medicine	19	19	100.0%	0	0.0%
- Sports medicine	19	19	100.0%	0	0.0%
Plastic surgery	49	49	100.0%	0	0.0%
Plastic surgery - integrated	82	82	100.0%	0	0.0%
- Craniofacial surgery	6	4	66.7%	2	33.3%
- Hand surgery	16	16	100.0%	0	0.0%
Preventive medicine	66	66	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	263	262	99.6%	1	0.4%
- Addiction medicine (multidisciplinary)	64	64	100.0%	0	0.0%
- Addiction psychiatry	41	41	100.0%	0	0.0%
- Child and adolescent psychiatry	138	138	100.0%	0	0.0%
- Forensic psychiatry	35	35	100.0%	0	0.0%
- Geriatric psychiatry	28	28	100.0%	0	0.0%
- Consultation-liaison psychiatry	44	44	100.0%	0	0.0%
Radiation oncology	91	87	95.6%	4	4.4%
Radiology-diagnostic	194	167	86.1%	27	13.9%
- Abdominal radiology	12	7	58.3%	5	41.7%
- Endovascular surgical neuroradiology	1	0	0.0%	1	100.0%
- Musculoskeletal radiology	18	16	88.9%	2	11.1%
- Neuroradiology	70	55	78.6%	15	21.4%
- Nuclear radiology	6	2	33.3%	4	66.7%
- Pediatric radiology	25	18	72.0%	7	28.0%
Interventional radiology - independent	80	76	95.0%	4	5.0%
Interventional radiology - integrated	85	82	96.5%	3	3.5%
Surgery	328	324	98.8%	4	1.2%
- Complex general surgical oncology	29	29	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	129	21	16.3%	108	83.7%
- Vascular surgery	106	102	96.2%	4	3.8%
Vascular surgery - integrated	62	61	98.4%	1	1.6%
Thoracic surgery	67	65	97.0%	2	3.0%
- Congenital cardiac surgery	10	5	50.0%	5	50.0%
Thoracic surgery - integrated	27	26	96.3%	1	3.7%
Urology	145	145	100.0%	0	0.0%
- Female pelvic medicine and reconstructive surgery	14	14	100.0%	0	0.0%
- Pediatric urology	17	17	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. Excluding programs with 0 residents on duty. Not all accredited programs completed these data. Total number of specialty programs = 5,060. Total number of subspecialty programs = 5,930.

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	4,772	3,760	78.8%	2,926	61.3%	2,966	62.2%	2,591	54.3%
Anesthesiology	151	109	72.2%	35	23.2%	52	34.4%	22	14.6%
Dermatology	142	113	79.6%	100	70.4%	97	68.3%	79	55.6%
Emergency medicine	187	80	42.8%	35	18.7%	48	25.7%	54	28.9%
Family medicine	677	645	95.3%	425	62.8%	391	57.8%	614	90.7%
Internal medicine	548	462	84.3%	421	76.8%	381	69.5%	397	72.4%
Medical genetics and genomics	33	26	78.8%	21	63.6%	16	48.5%	3	9.1%
Neurological surgery	116	72	62.1%	62	53.4%	83	71.6%	26	22.4%
Neurology	159	116	73.0%	134	84.3%	119	74.8%	54	34.0%
Child neurology	71	61	85.9%	67	94.4%	47	66.2%	11	15.5%
Nuclear medicine	21	15	71.4%	8	38.1%	5	23.8%	1	4.8%
Obstetrics and gynecology	284	214	75.4%	246	86.6%	233	82.0%	190	66.9%
Ophthalmology	121	92	76.0%	82	67.8%	88	72.7%	69	57.0%
Orthopaedic surgery	198	157	79.3%	105	53.0%	143	72.2%	136	68.7%
Osteopathic neuromusculoskeletal medicine	19	19	100.0%	7	36.8%	15	78.9%	19	100.0%
Otolaryngology - head and neck surgery	123	92	74.8%	62	50.4%	91	74.0%	67	54.5%
Pathology-anatomic and clinical	116	35	30.2%	17	14.7%	13	11.2%	19	16.4%
Pediatrics	209	194	92.8%	160	76.6%	157	75.1%	174	83.3%
Physical medicine and rehabilitation	91	86	94.5%	61	67.0%	80	87.9%	52	57.1%
Plastic surgery	49	41	83.7%	32	65.3%	36	73.5%	42	85.7%
Plastic Surgery - integrated	82	64	78.0%	50	61.0%	62	75.6%	67	81.7%
Preventive medicine	66	61	92.4%	35	53.0%	49	74.2%	29	43.9%
Psychiatry	262	232	88.5%	189	72.1%	119	45.4%	64	24.4%
Radiation oncology	87	69	79.3%	39	44.8%	45	51.7%	5	5.7%
Radiology-diagnostic	167	133	79.6%	51	30.5%	54	32.3%	28	16.8%
Interventional radiology - independent	76	47	61.8%	40	52.6%	23	30.3%	10	13.2%
Interventional radiology - integrated	82	62	75.6%	51	62.2%	29	35.4%	12	14.6%
Surgery	324	232	71.6%	194	59.9%	249	76.9%	206	63.6%
Vascular surgery - integrated	61	40	65.6%	30	49.2%	46	75.4%	21	34.4%
Thoracic surgery - integrated	26	12	46.2%	13	50.0%	23	88.5%	4	15.4%
Urology	145	103	71.0%	86	59.3%	109	75.2%	61	42.1%
Internal medicine/Pediatrics	79	76	96.2%	68	86.1%	63	79.7%	55	69.6%

Notes: Excluding programs with 0 residents on duty. Not all accredited programs completed these data. 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	4,772	1,811	38.0%	1,543	32.3%	1,470	30.8%	689	14.4%
Anesthesiology	151	109	72.2%	35	23.2%	3	2.0%	14	9.3%
Dermatology	142	36	25.4%	80	56.3%	36	25.4%	11	7.7%
Emergency medicine	187	26	13.9%	14	7.5%	12	6.4%	116	62.0%
Family medicine	677	312	46.1%	130	19.2%	454	67.1%	134	19.8%
Internal medicine	548	36	6.6%	169	30.8%	190	34.7%	56	10.2%
Medical genetics and genomics	33	1	3.0%	3	9.1%	3	9.1%	2	6.1%
Neurological surgery	116	28	24.1%	38	32.8%	8	6.9%	7	6.0%
Neurology	159	6	3.8%	75	47.2%	20	12.6%	10	6.3%
Child neurology	71	6	8.5%	32	45.1%	15	21.1%	2	2.8%
Nuclear medicine	21	0	0.0%	7	33.3%	2	9.5%	2	9.5%
Obstetrics and gynecology	284	181	63.7%	36	12.7%	100	35.2%	24	8.5%
Ophthalmology	121	99	81.8%	88	72.7%	23	19.0%	7	5.8%
Orthopaedic surgery	198	181	91.4%	68	34.3%	20	10.1%	10	5.1%
Osteopathic neuromusculoskeletal medicine	19	6	31.6%	2	10.5%	4	21.1%	0	0.0%
Otolaryngology - head and neck surgery	123	102	82.9%	63	51.2%	17	13.8%	1	0.8%
Pathology-anatomic and clinical	116	22	19.0%	21	18.1%	10	8.6%	88	75.9%
Pediatrics	209	33	15.8%	0	0.0%	140	67.0%	39	18.7%
Physical medicine and rehabilitation	91	44	48.4%	64	70.3%	14	15.4%	6	6.6%
Plastic surgery	49	44	89.8%	21	42.9%	6	12.2%	0	0.0%
Plastic surgery - integrated	82	76	92.7%	46	56.1%	10	12.2%	1	1.2%
Preventive medicine	66	7	10.6%	35	53.0%	46	69.7%	31	47.0%
Psychiatry	262	6	2.3%	151	57.6%	208	79.4%	53	20.2%
Radiation oncology	87	12	13.8%	22	25.3%	4	4.6%	5	5.7%
Radiology-diagnostic	167	37	22.2%	48	28.7%	16	9.6%	36	21.6%
Interventional radiology - independent	76	19	25.0%	19	25.0%	4	5.3%	3	3.9%
Interventional radiology - integrated	82	18	22.0%	26	31.7%	6	7.3%	6	7.3%
Surgery	324	225	69.4%	90	27.8%	28	8.6%	9	2.8%
Vascular surgery - integrated	61	28	45.9%	33	54.1%	4	6.6%	0	0.0%
Thoracic surgery - integrated	26	5	19.2%	15	57.7%	1	3.8%	0	0.0%
Urology	145	98	67.6%	70	48.3%	18	12.4%	6	4.1%
Internal medicine/Pediatrics	79	8	10.1%	42	53.2%	48	60.8%	10	12.7%

Notes: Excluding programs with 0 residents on duty. Not all accredited programs completed these data. 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.6							
Percentage of Programs Teaching Residents and Fellows to Manage Pain and Recognize Addiction by Type of Education and by Specialty and Subspecialty							
Specialty	Number of Programs	Non-Pharmacologic Pain Management		Pharmacologic Pain Management		Opioid Prescribing	
		#	%	#	%	#	%
OVERALL	12,366	9,330	75.4%	10,025	81.1%	9,671	78.2%
TOTAL PIPELINE	5,154	4,195	81.4%	4,535	88.0%	4,538	88.0%
Allergy and immunology	81	36	44.4%	41	50.6%	43	53.1%
Anesthesiology	161	156	96.9%	161	100.0%	154	95.7%
- Adult cardiothoracic anesthesiology	73	54	74.0%	68	93.2%	40	54.8%
- Clinical informatics	1	0	0.0%	0	0.0%	1	100.0%
- Critical care medicine	63	55	87.3%	62	98.4%	46	73.0%
- Regional anesthesiology and acute pain medicine	38	36	94.7%	36	94.7%	38	100.0%
- Obstetric anesthesiology	41	34	82.9%	40	97.6%	32	78.0%
- Pain medicine (multidisciplinary)	109	108	99.1%	106	97.2%	109	100.0%
- Pediatric anesthesiology	60	56	93.3%	60	100.0%	47	78.3%
Colon and rectal surgery	65	43	66.2%	58	89.2%	61	93.8%
Dermatology	144	96	66.7%	108	75.0%	101	70.1%
- Dermatopathology (multidisciplinary)	56	9	16.1%	12	21.4%	16	28.6%
- Micrographic surgery and dermatologic oncology	78	62	79.5%	63	80.8%	66	84.6%
Emergency medicine	272	239	87.9%	267	98.2%	267	98.2%
- Clinical informatics	5	1	20.0%	3	60.0%	3	60.0%
- Emergency medical services	75	64	85.3%	73	97.3%	63	84.0%
- Medical toxicology	27	24	88.9%	26	96.3%	26	96.3%
- Pediatric emergency medicine	27	25	92.6%	25	92.6%	25	92.6%
- Sports medicine	9	6	66.7%	6	66.7%	8	88.9%
- Undersea and hyperbaric medicine	8	7	87.5%	6	75.0%	6	75.0%
Family medicine	705	688	97.6%	698	99.0%	690	97.9%
- Clinical informatics	6	5	83.3%	5	83.3%	5	83.3%
- Geriatric medicine	49	48	98.0%	47	95.9%	45	91.8%
- Hospice and palliative medicine (multidisciplinary)	178	173	97.2%	175	98.3%	176	98.9%
- Sports medicine	156	148	94.9%	145	92.9%	124	79.5%
Internal medicine	575	513	89.2%	550	95.7%	549	95.5%
- Adult congenital heart disease	24	12	50.0%	12	50.0%	9	37.5%
- Advanced heart failure and transplant cardiology	82	57	69.5%	63	76.8%	49	59.8%
- Cardiovascular disease	255	159	62.4%	185	72.5%	176	69.0%
- Clinical cardiac electrophysiology	112	72	64.3%	81	72.3%	78	69.6%
- Clinical informatics	19	9	47.4%	10	52.6%	12	63.2%
- Critical care medicine	55	45	81.8%	51	92.7%	41	74.5%
- Endocrinology, diabetes, and metabolism	153	78	51.0%	85	55.6%	77	50.3%
- Gastroenterology	210	163	77.6%	176	83.8%	152	72.4%
- Geriatric medicine	113	108	95.6%	112	99.1%	104	92.0%
- Hematology	2	2	100.0%	2	100.0%	1	50.0%
- Hematology and medical oncology	172	147	85.5%	165	95.9%	161	93.6%
- Infectious disease	157	84	53.5%	81	51.6%	84	53.5%
- Interventional cardiology	170	114	67.1%	124	72.9%	111	65.3%
- Nephrology	151	94	62.3%	114	75.5%	100	66.2%
- Medical oncology	6	4	66.7%	6	100.0%	5	83.3%
- Pulmonary disease	20	14	70.0%	16	80.0%	17	85.0%
- Pulmonary disease and critical care medicine	188	134	71.3%	169	89.9%	149	79.3%
- Rheumatology	125	114	91.2%	115	92.0%	100	80.0%
- Sleep medicine (multidisciplinary)	88	47	53.4%	46	52.3%	56	63.6%
- Transplant hepatology	59	44	74.6%	45	76.3%	41	69.5%
Medical genetics and genomics	46	19	41.3%	20	43.5%	16	34.8%
- Medical biochemical genetics	20	11	55.0%	12	60.0%	9	45.0%
- Molecular genetic pathology (multidisciplinary)	42	8	19.0%	6	14.3%	8	19.0%
Neurological surgery	116	91	78.4%	102	87.9%	109	94.0%
- Endovascular surgical neuroradiology	2	1	50.0%	1	50.0%	2	100.0%

TABLE H.6 *Extended*

Recognition of Dependence and Addiction		Referral for Dependence and Addiction Treatment		Treatment of Dependence and Addiction		Medication-Assisted Treatment Waiver Training		Experiential Training Using Medication-Assisted Treatment		None of The Above	
#	%	#	%	#	%	#	%	#	%	#	%
9,913	80.2%	8,170	66.1%	5,135	41.5%	2,141	17.3%	1,687	13.6%	676	5.5%
4,489	87.1%	3,902	75.7%	2,648	51.4%	1,251	24.3%	982	19.1%	135	2.6%
52	64.2%	38	46.9%	12	14.8%	4	4.9%	3	3.7%	9	11.1%
160	99.4%	132	82.0%	114	70.8%	32	19.9%	29	18.0%	0	0.0%
61	83.6%	35	47.9%	25	34.2%	5	6.8%	4	5.5%	1	1.4%
1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
56	88.9%	38	60.3%	33	52.4%	4	6.3%	4	6.3%	0	0.0%
37	97.4%	32	84.2%	26	68.4%	8	21.1%	7	18.4%	0	0.0%
37	90.2%	25	61.0%	22	53.7%	4	9.8%	6	14.6%	0	0.0%
108	99.1%	105	96.3%	89	81.7%	54	49.5%	45	41.3%	0	0.0%
53	88.3%	33	55.0%	27	45.0%	1	1.7%	3	5.0%	0	0.0%
51	78.5%	42	64.6%	17	26.2%	5	7.7%	3	4.6%	0	0.0%
97	67.4%	77	53.5%	15	10.4%	5	3.5%	6	4.2%	7	4.9%
20	35.7%	12	21.4%	5	8.9%	2	3.6%	1	1.8%	26	46.4%
59	75.6%	36	46.2%	12	15.4%	4	5.1%	5	6.4%	2	2.6%
268	98.5%	257	94.5%	218	80.1%	132	48.5%	82	30.1%	0	0.0%
1	20.0%	1	20.0%	1	20.0%	0	0.0%	1	20.0%	1	20.0%
63	84.0%	54	72.0%	46	61.3%	29	38.7%	14	18.7%	0	0.0%
26	96.3%	24	88.9%	25	92.6%	23	85.2%	18	66.7%	1	3.7%
24	88.9%	16	59.3%	11	40.7%	4	14.8%	1	3.7%	0	0.0%
8	88.9%	7	77.8%	3	33.3%	2	22.2%	1	11.1%	0	0.0%
6	75.0%	8	100.0%	1	12.5%	0	0.0%	1	12.5%	0	0.0%
686	97.3%	674	95.6%	544	77.2%	377	53.5%	286	40.6%	2	0.3%
5	83.3%	5	83.3%	5	83.3%	5	83.3%	1	16.7%	0	0.0%
47	95.9%	42	85.7%	23	46.9%	15	30.6%	13	26.5%	0	0.0%
175	98.3%	161	90.4%	115	64.6%	55	30.9%	35	19.7%	0	0.0%
125	80.1%	102	65.4%	42	26.9%	17	10.9%	9	5.8%	3	1.9%
545	94.8%	495	86.1%	393	68.3%	146	25.4%	103	17.9%	2	0.3%
16	66.7%	13	54.2%	4	16.7%	1	4.2%	1	4.2%	3	12.5%
61	74.4%	43	52.4%	16	19.5%	2	2.4%	2	2.4%	6	7.3%
188	73.7%	143	56.1%	73	28.6%	17	6.7%	15	5.9%	11	4.3%
73	65.2%	53	47.3%	23	20.5%	4	3.6%	2	1.8%	8	7.1%
9	47.4%	8	42.1%	4	21.1%	4	21.1%	0	0.0%	5	26.3%
42	76.4%	32	58.2%	25	45.5%	9	16.4%	7	12.7%	1	1.8%
89	58.2%	75	49.0%	28	18.3%	7	4.6%	4	2.6%	19	12.4%
168	80.0%	144	68.6%	61	29.0%	12	5.7%	12	5.7%	6	2.9%
99	87.6%	84	74.3%	45	39.8%	20	17.7%	13	11.5%	0	0.0%
1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
143	83.1%	109	63.4%	49	28.5%	13	7.6%	10	5.8%	0	0.0%
123	78.3%	115	73.2%	48	30.6%	21	13.4%	10	6.4%	10	6.4%
125	73.5%	92	54.1%	49	28.8%	11	6.5%	12	7.1%	6	3.5%
101	66.9%	92	60.9%	36	23.8%	7	4.6%	8	5.3%	11	7.3%
4	66.7%	3	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
18	90.0%	14	70.0%	12	60.0%	3	15.0%	2	10.0%	2	10.0%
151	80.3%	119	63.3%	74	39.4%	17	9.0%	10	5.3%	3	1.6%
96	76.8%	74	59.2%	20	16.0%	6	4.8%	3	2.4%	2	1.6%
60	68.2%	39	44.3%	14	15.9%	4	4.5%	7	8.0%	4	4.5%
51	86.4%	43	72.9%	22	37.3%	1	1.7%	3	5.1%	0	0.0%
29	63.0%	22	47.8%	8	17.4%	2	4.3%	3	6.5%	11	23.9%
14	70.0%	7	35.0%	4	20.0%	2	10.0%	2	10.0%	5	25.0%
12	28.6%	12	28.6%	6	14.3%	1	2.4%	0	0.0%	23	54.8%
98	84.5%	80	69.0%	47	40.5%	14	12.1%	14	12.1%	0	0.0%
0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

TABLE H.6 <i>Continued</i>							
Percentage of Programs Teaching Residents and Fellows to Manage Pain and Recognize Addiction by Type of Education and by Specialty and Subspecialty							
Specialty	Number of Programs	Non-Pharmacologic Pain Management		Pharmacologic Pain Management		Opioid Prescribing	
		#	%	#	%	#	%
Neurology	170	147	86.5%	160	94.1%	141	82.9%
- Brain injury medicine	1	1	100.0%	1	100.0%	1	100.0%
- Clinical neurophysiology	93	62	66.7%	67	72.0%	53	57.0%
- Epilepsy	85	46	54.1%	48	56.5%	46	54.1%
- Endovascular surgical neuroradiology	2	2	100.0%	2	100.0%	2	100.0%
- Neurodevelopmental disabilities	8	8	100.0%	7	87.5%	3	37.5%
- Neuromuscular medicine	53	45	84.9%	49	92.5%	32	60.4%
- Vascular neurology	109	83	76.1%	85	78.0%	66	60.6%
Child neurology	77	72	93.5%	73	94.8%	51	66.2%
Nuclear medicine	37	23	62.2%	20	54.1%	22	59.5%
Obstetrics and gynecology	293	260	88.7%	282	96.2%	280	95.6%
- Female pelvic medicine and reconstructive surgery	54	50	92.6%	53	98.1%	52	96.3%
- Gynecologic oncology	63	56	88.9%	61	96.8%	62	98.4%
- Maternal-fetal medicine	99	89	89.9%	95	96.0%	91	91.9%
- Reproductive endocrinology and infertility	49	44	89.8%	46	93.9%	43	87.8%
- Complex family planning	26	26	100.0%	26	100.0%	25	96.2%
Ophthalmology	125	81	64.8%	95	76.0%	92	73.6%
- Ophthalmic plastic and reconstructive surgery	4	3	75.0%	4	100.0%	3	75.0%
Orthopaedic surgery	200	178	89.0%	185	92.5%	197	98.5%
- Adult reconstructive orthopaedics	25	22	88.0%	22	88.0%	23	92.0%
- Foot and ankle orthopaedics	7	6	85.7%	7	100.0%	7	100.0%
- Hand surgery	72	62	86.1%	62	86.1%	66	91.7%
- Musculoskeletal oncology	12	8	66.7%	10	83.3%	12	100.0%
- Orthopaedic sports medicine	91	83	91.2%	80	87.9%	84	92.3%
- Orthopaedic surgery of the spine	16	13	81.3%	15	93.8%	15	93.8%
- Orthopaedic trauma	12	11	91.7%	12	100.0%	12	100.0%
- Pediatric orthopaedics	25	23	92.0%	23	92.0%	25	100.0%
Osteopathic neuromusculoskeletal medicine	28	28	100.0%	28	100.0%	26	92.9%
Otolaryngology - head and neck surgery	125	94	75.2%	110	88.0%	121	96.8%
- Neurotology	26	21	80.8%	22	84.6%	24	92.3%
- Pediatric otolaryngology	31	21	67.7%	25	80.6%	29	93.5%
Pathology-anatomic and clinical	144	25	17.4%	27	18.8%	36	25.0%
- Blood banking/transfusion medicine	52	10	19.2%	10	19.2%	14	26.9%
- Clinical informatics	11	5	45.5%	5	45.5%	5	45.5%
- Chemical pathology	4	0	0.0%	1	25.0%	0	0.0%
- Cytopathology	93	22	23.7%	23	24.7%	27	29.0%
- Forensic pathology	45	2	4.4%	2	4.4%	2	4.4%
- Hematopathology	86	14	16.3%	15	17.4%	22	25.6%
- Medical microbiology	15	2	13.3%	2	13.3%	3	20.0%
- Neuropathology	38	7	18.4%	7	18.4%	7	18.4%
- Pediatric pathology	28	2	7.1%	3	10.7%	3	10.7%
- Selective pathology	109	15	13.8%	16	14.7%	28	25.7%
Pediatrics	210	190	90.5%	202	96.2%	188	89.5%
- Adolescent medicine	32	27	84.4%	25	78.1%	20	62.5%
- Child abuse pediatrics	31	14	45.2%	13	41.9%	14	45.2%
- Clinical informatics	8	1	12.5%	3	37.5%	4	50.0%
- Developmental-behavioral pediatrics	44	27	61.4%	19	43.2%	15	34.1%
- Neonatal-perinatal medicine	106	99	93.4%	98	92.5%	77	72.6%
- Pediatric cardiology	64	44	68.8%	52	81.3%	45	70.3%
- Pediatric critical care medicine	75	69	92.0%	73	97.3%	61	81.3%
- Pediatric emergency medicine	55	47	85.5%	55	100.0%	51	92.7%
- Pediatric endocrinology	72	31	43.1%	33	45.8%	35	48.6%
- Pediatric gastroenterology	67	54	80.6%	53	79.1%	47	70.1%

TABLE H.6 *Continued, Extended*

Recognition of Dependence and Addiction		Referral for Dependence and Addiction Treatment		Treatment of Dependence and Addiction		Medication-Assisted Treatment Waiver Training		Experiential Training Using Medication-Assisted Treatment		None of The Above	
#	%	#	%	#	%	#	%	#	%	#	%
144	84.7%	128	75.3%	63	37.1%	14	8.2%	14	8.2%	1	0.6%
1	100.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
63	67.7%	49	52.7%	21	22.6%	1	1.1%	1	1.1%	10	10.8%
53	62.4%	36	42.4%	12	14.1%	1	1.2%	2	2.4%	6	7.1%
2	100.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	50.0%	2	25.0%	1	12.5%	0	0.0%	1	12.5%	0	0.0%
38	71.7%	34	64.2%	10	18.9%	2	3.8%	1	1.9%	1	1.9%
82	75.2%	66	60.6%	25	22.9%	6	5.5%	5	4.6%	1	0.9%
55	71.4%	41	53.2%	20	26.0%	3	3.9%	3	3.9%	0	0.0%
21	56.8%	16	43.2%	12	32.4%	7	18.9%	6	16.2%	7	18.9%
267	91.1%	255	87.0%	167	57.0%	66	22.5%	59	20.1%	0	0.0%
41	75.9%	31	57.4%	8	14.8%	2	3.7%	1	1.9%	0	0.0%
56	88.9%	42	66.7%	17	27.0%	6	9.5%	1	1.6%	0	0.0%
92	92.9%	89	89.9%	68	68.7%	38	38.4%	29	29.3%	0	0.0%
36	73.5%	26	53.1%	10	20.4%	2	4.1%	2	4.1%	0	0.0%
25	96.2%	22	84.6%	8	30.8%	2	7.7%	1	3.8%	0	0.0%
82	65.6%	66	52.8%	24	19.2%	5	4.0%	3	2.4%	4	3.2%
3	75.0%	3	75.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
180	90.0%	148	74.0%	70	35.0%	28	14.0%	19	9.5%	0	0.0%
21	84.0%	15	60.0%	4	16.0%	2	8.0%	3	12.0%	1	4.0%
7	100.0%	7	100.0%	3	42.9%	1	14.3%	1	14.3%	0	0.0%
60	83.3%	48	66.7%	22	30.6%	9	12.5%	5	6.9%	2	2.8%
7	58.3%	5	41.7%	3	25.0%	1	8.3%	0	0.0%	0	0.0%
74	81.3%	57	62.6%	22	24.2%	8	8.8%	6	6.6%	0	0.0%
15	93.8%	11	68.8%	4	25.0%	1	6.3%	1	6.3%	0	0.0%
10	83.3%	8	66.7%	2	16.7%	2	16.7%	2	16.7%	0	0.0%
19	76.0%	12	48.0%	3	12.0%	0	0.0%	0	0.0%	0	0.0%
27	96.4%	24	85.7%	13	46.4%	6	21.4%	4	14.3%	0	0.0%
110	88.0%	85	68.0%	35	28.0%	8	6.4%	4	3.2%	0	0.0%
21	80.8%	14	53.8%	5	19.2%	2	7.7%	1	3.8%	0	0.0%
18	58.1%	11	35.5%	5	16.1%	2	6.5%	3	9.7%	0	0.0%
62	43.1%	41	28.5%	20	13.9%	3	2.1%	4	2.8%	68	47.2%
16	30.8%	11	21.2%	4	7.7%	1	1.9%	1	1.9%	28	53.8%
4	36.4%	1	9.1%	0	0.0%	0	0.0%	1	9.1%	3	27.3%
0	0.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	2	50.0%
36	38.7%	23	24.7%	13	14.0%	0	0.0%	1	1.1%	41	44.1%
15	33.3%	4	8.9%	3	6.7%	0	0.0%	0	0.0%	30	66.7%
36	41.9%	22	25.6%	12	14.0%	1	1.2%	2	2.3%	41	47.7%
3	20.0%	1	6.7%	2	13.3%	0	0.0%	0	0.0%	9	60.0%
12	31.6%	8	21.1%	3	7.9%	0	0.0%	0	0.0%	23	60.5%
9	32.1%	5	17.9%	1	3.6%	1	3.6%	0	0.0%	18	64.3%
35	32.1%	30	27.5%	15	13.8%	5	4.6%	7	6.4%	54	49.5%
191	91.0%	150	71.4%	92	43.8%	16	7.6%	15	7.1%	0	0.0%
29	90.6%	30	93.8%	21	65.6%	11	34.4%	7	21.9%	0	0.0%
23	74.2%	11	35.5%	3	9.7%	0	0.0%	1	3.2%	6	19.4%
2	25.0%	1	12.5%	2	25.0%	0	0.0%	0	0.0%	4	50.0%
35	79.5%	31	70.5%	11	25.0%	2	4.5%	1	2.3%	4	9.1%
72	67.9%	30	28.3%	60	56.6%	8	7.5%	10	9.4%	1	0.9%
44	68.8%	21	32.8%	16	25.0%	4	6.3%	4	6.3%	3	4.7%
55	73.3%	32	42.7%	34	45.3%	2	2.7%	5	6.7%	1	1.3%
41	74.5%	36	65.5%	23	41.8%	6	10.9%	3	5.5%	0	0.0%
42	58.3%	31	43.1%	13	18.1%	1	1.4%	0	0.0%	15	20.8%
51	76.1%	35	52.2%	16	23.9%	5	7.5%	5	7.5%	0	0.0%

TABLE H.6 Continued

Percentage of Programs Teaching Residents and Fellows to Manage Pain and Recognize Addiction by Type of Education and by Specialty and Subspecialty

Specialty	Number of Programs	Non-Pharmacologic Pain Management		Pharmacologic Pain Management		Opioid Prescribing	
		#	%	#	%	#	%
- Pediatric hematology/oncology	76	74	97.4%	75	98.7%	72	94.7%
- Pediatric infectious diseases	64	36	56.3%	38	59.4%	39	60.9%
- Pediatric nephrology	47	30	63.8%	36	76.6%	26	55.3%
- Pediatric pulmonology	56	34	60.7%	35	62.5%	28	50.0%
- Pediatric rheumatology	37	37	100.0%	34	91.9%	21	56.8%
- Sports medicine	17	17	100.0%	17	100.0%	14	82.4%
- Pediatric transplant hepatology	17	13	76.5%	13	76.5%	14	82.4%
- Pediatric hospital medicine	52	51	98.1%	51	98.1%	49	94.2%
Physical medicine and rehabilitation	97	96	99.0%	95	97.9%	94	96.9%
- Brain injury medicine	25	25	100.0%	25	100.0%	25	100.0%
- Neuromuscular medicine	1	1	100.0%	1	100.0%	1	100.0%
- Spinal cord injury medicine	24	23	95.8%	24	100.0%	22	91.7%
- Pediatric rehabilitation medicine	22	21	95.5%	22	100.0%	21	95.5%
- Sports medicine	21	19	90.5%	20	95.2%	21	100.0%
Plastic surgery	52	39	75.0%	46	88.5%	51	98.1%
Plastic surgery - integrated	84	65	77.4%	78	92.9%	83	98.8%
- Craniofacial surgery	8	5	62.5%	8	100.0%	8	100.0%
- Hand surgery	17	10	58.8%	14	82.4%	17	100.0%
Preventive medicine	72	49	68.1%	50	69.4%	54	75.0%
- Medical toxicology	1	1	100.0%	1	100.0%	1	100.0%
- Undersea and hyperbaric medicine	1	1	100.0%	1	100.0%	1	100.0%
Psychiatry	284	215	75.7%	226	79.6%	216	76.1%
- Addiction medicine (multidisciplinary)	85	82	96.5%	85	100.0%	82	96.5%
- Addiction psychiatry	53	49	92.5%	50	94.3%	49	92.5%
- Child and adolescent psychiatry	146	94	64.4%	78	53.4%	57	39.0%
- Forensic psychiatry	49	17	34.7%	21	42.9%	20	40.8%
- Geriatric psychiatry	64	52	81.3%	49	76.6%	34	53.1%
- Consultation-liaison psychiatry	64	53	82.8%	59	92.2%	45	70.3%
Radiation oncology	91	71	78.0%	83	91.2%	87	95.6%
Radiology-diagnostic	196	96	49.0%	122	62.2%	124	63.3%
- Abdominal radiology	13	8	61.5%	10	76.9%	5	38.5%
- Endovascular surgical neuroradiology	3	2	66.7%	3	100.0%	2	66.7%
- Musculoskeletal radiology	20	10	50.0%	11	55.0%	13	65.0%
- Neuroradiology	89	36	40.4%	41	46.1%	44	49.4%
- Nuclear radiology	18	7	38.9%	8	44.4%	9	50.0%
- Pediatric radiology	48	14	29.2%	13	27.1%	16	33.3%
Interventional radiology - independent	93	66	71.0%	75	80.6%	76	81.7%
Interventional radiology - integrated	91	65	71.4%	74	81.3%	78	85.7%
Surgery	344	284	82.6%	314	91.3%	330	95.9%
- Complex general surgical oncology	31	26	83.9%	29	93.5%	29	93.5%
- Hand surgery	2	2	100.0%	2	100.0%	2	100.0%
- Pediatric surgery	51	46	90.2%	48	94.1%	49	96.1%
- Surgical critical care	145	123	84.8%	136	93.8%	130	89.7%
- Vascular surgery	115	82	71.3%	98	85.2%	110	95.7%
Vascular surgery - integrated	67	46	68.7%	57	85.1%	62	92.5%
Thoracic surgery	74	51	68.9%	63	85.1%	69	93.2%
- Congenital cardiac surgery	15	8	53.3%	10	66.7%	12	80.0%
Thoracic surgery - integrated	31	20	64.5%	25	80.6%	29	93.5%
Urology	145	111	76.6%	125	86.2%	136	93.8%
- Female pelvic medicine and reconstructive surgery	15	13	86.7%	14	93.3%	14	93.3%
- Pediatric urology	26	17	65.4%	22	84.6%	25	96.2%
Transitional year	172	153	89.0%	161	93.6%	159	92.4%
Internal medicine/Pediatrics	79	72	91.1%	77	97.5%	78	98.7%

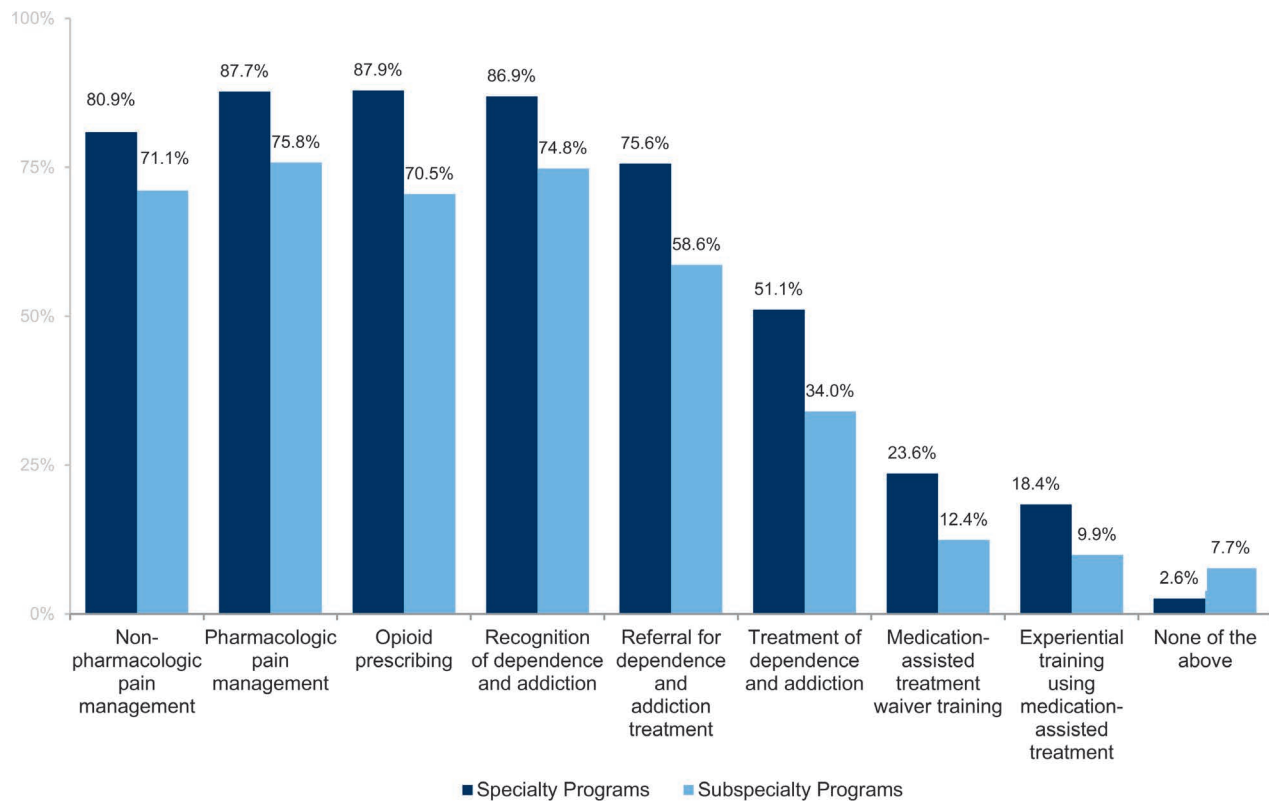
Notes: Not all accredited programs completed these data. Total number of specialty programs = 5,453. Total number of subspecialty programs = 6,913. Programs can select more than one education type.

TABLE H.6 Continued, Extended

Recognition of Dependence and Addiction		Referral for Dependence and Addiction Treatment		Treatment of Dependence and Addiction		Medication-Assisted Treatment Waiver Training		Experiential Training Using Medication-Assisted Treatment		None of The Above	
#	%	#	%	#	%	#	%	#	%	#	%
65	85.5%	38	50.0%	21	27.6%	5	6.6%	5	6.6%	0	0.0%
40	62.5%	32	50.0%	8	12.5%	3	4.7%	1	1.6%	9	14.1%
31	66.0%	20	42.6%	11	23.4%	5	10.6%	4	8.5%	3	6.4%
37	66.1%	25	44.6%	11	19.6%	3	5.4%	4	7.1%	5	8.9%
23	62.2%	16	43.2%	4	10.8%	0	0.0%	0	0.0%	0	0.0%
14	82.4%	12	70.6%	7	41.2%	2	11.8%	1	5.9%	0	0.0%
15	88.2%	10	58.8%	7	41.2%	1	5.9%	0	0.0%	0	0.0%
49	94.2%	38	73.1%	22	42.3%	1	1.9%	1	1.9%	0	0.0%
93	95.9%	84	86.6%	61	62.9%	16	16.5%	17	17.5%	0	0.0%
22	88.0%	17	68.0%	6	24.0%	2	8.0%	4	16.0%	0	0.0%
1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
18	75.0%	17	70.8%	9	37.5%	3	12.5%	2	8.3%	0	0.0%
16	72.7%	12	54.5%	5	22.7%	1	4.5%	0	0.0%	0	0.0%
18	85.7%	13	61.9%	10	47.6%	2	9.5%	1	4.8%	0	0.0%
42	80.8%	26	50.0%	13	25.0%	4	7.7%	5	9.6%	0	0.0%
74	88.1%	55	65.5%	29	34.5%	14	16.7%	13	15.5%	0	0.0%
5	62.5%	3	37.5%	1	12.5%	0	0.0%	0	0.0%	0	0.0%
14	82.4%	11	64.7%	2	11.8%	0	0.0%	2	11.8%	0	0.0%
64	88.9%	55	76.4%	35	48.6%	22	30.6%	10	13.9%	3	4.2%
1	100.0%	1	100.0%	1	100.0%	1	100.0%	1	100.0%	0	0.0%
1	100.0%	1	100.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
283	99.6%	273	96.1%	278	97.9%	215	75.7%	179	63.0%	0	0.0%
83	97.6%	81	95.3%	85	100.0%	83	97.6%	78	91.8%	0	0.0%
53	100.0%	48	90.6%	52	98.1%	50	94.3%	48	90.6%	0	0.0%
144	98.6%	139	95.2%	125	85.6%	50	34.2%	27	18.5%	0	0.0%
42	85.7%	30	61.2%	22	44.9%	7	14.3%	5	10.2%	2	4.1%
62	96.9%	57	89.1%	55	85.9%	17	26.6%	14	21.9%	0	0.0%
62	96.9%	62	96.9%	54	84.4%	35	54.7%	26	40.6%	0	0.0%
78	85.7%	65	71.4%	28	30.8%	10	11.0%	4	4.4%	0	0.0%
133	67.9%	91	46.4%	55	28.1%	11	5.6%	9	4.6%	23	11.7%
8	61.5%	5	38.5%	2	15.4%	0	0.0%	0	0.0%	0	0.0%
2	66.7%	2	66.7%	1	33.3%	0	0.0%	1	33.3%	0	0.0%
12	60.0%	9	45.0%	7	35.0%	0	0.0%	0	0.0%	3	15.0%
55	61.8%	36	40.4%	19	21.3%	8	9.0%	7	7.9%	21	23.6%
8	44.4%	8	44.4%	5	27.8%	2	11.1%	1	5.6%	5	27.8%
23	47.9%	14	29.2%	9	18.8%	2	4.2%	5	10.4%	15	31.3%
70	75.3%	45	48.4%	20	21.5%	6	6.5%	7	7.5%	3	3.2%
70	76.9%	57	62.6%	31	34.1%	7	7.7%	8	8.8%	1	1.1%
287	83.4%	244	70.9%	109	31.7%	33	9.6%	32	9.3%	2	0.6%
23	74.2%	21	67.7%	8	25.8%	3	9.7%	3	9.7%	1	3.2%
1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
37	72.5%	27	52.9%	16	31.4%	3	5.9%	2	3.9%	0	0.0%
120	82.8%	94	64.8%	57	39.3%	16	11.0%	17	11.7%	0	0.0%
92	80.0%	73	63.5%	39	33.9%	10	8.7%	9	7.8%	1	0.9%
51	76.1%	37	55.2%	22	32.8%	8	11.9%	7	10.4%	1	1.5%
59	79.7%	46	62.2%	30	40.5%	4	5.4%	5	6.8%	1	1.4%
10	66.7%	6	40.0%	7	46.7%	0	0.0%	0	0.0%	1	6.7%
24	77.4%	17	54.8%	12	38.7%	4	12.9%	3	9.7%	0	0.0%
121	83.4%	94	64.8%	48	33.1%	12	8.3%	13	9.0%	0	0.0%
12	80.0%	11	73.3%	3	20.0%	1	6.7%	0	0.0%	0	0.0%
19	73.1%	11	42.3%	7	26.9%	3	11.5%	1	3.8%	0	0.0%
160	93.0%	137	79.7%	101	58.7%	28	16.3%	18	10.5%	2	1.2%
77	97.5%	68	86.1%	52	65.8%	25	31.6%	21	26.6%	0	0.0%

FIGURE H.7

Percentage of Programs Teaching Residents and Fellows to Manage Pain and Recognize Addiction by Type of Education



Notes: Not all accredited programs completed these data. Total number of specialty programs = 5,453. Total number of subspecialty programs = 6,913. Programs can select more than one education 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

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
- Sports medicine
- Pediatric transplant hepatology
- Pediatric hospital medicine

Physical medicine and rehabilitation

- Brain injury medicine

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



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