



AAMC

Tomorrow's Doctors, Tomorrow's Cures®

Report on Residents

Executive Summary

November 2021

Association of
American Medical Colleges

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Background

The AAMC *Report on Residents* is an online collection of data tables that includes current and historical data related to graduate medical education (GME). These tables provide information about characteristics of residency applicants and residents and about post-residency professional activities. This report will help residency applicants, residency program directors, and researchers understand the changing body of residents and fellows at a critical time in their medical training. The AAMC wishes to acknowledge the Accreditation Council for Graduate Medical Education (ACGME), American Association of Colleges of Osteopathic Medicine (AACOM), American Medical Association (AMA), American Osteopathic Association (AOA), Educational Commission for Foreign Medical Graduates (ECFMG), National Board of Medical Examiners (NBME), and National Board of Osteopathic Medical Examiners (NBOME) for helping make these analyses possible.

Methodology

This publication complements existing data reports that address different aspects of GME. It incorporates multiple sources of information when possible, using the wide range of data available to the AAMC and described in Table 1.

In each data table, the year or years of data included represent the most recent data available. The specific years of data, and the data sources used, are identified for each table either as part of the table or in the notes.

The report's data sources have different participation rates, which vary across years. Approximate participation rates for each data source, when available, are provided in Table 1. Because many of the report's tables combine data from different data sources, the number of individuals in a given report is limited to those for whom we have data for all relevant variables. Counts of individuals are included in all the report's tables.

The *Report on Residents* is organized in chronological order of progression through GME: pre-residency, residency, and post-residency. Some tables display data by specialties and subspecialties accredited by the Accreditation Council for Graduate Medical Education (ACGME). According to the ACGME, a specialty program is 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."¹ The prerequisite specialties include programs that serve as preliminary training for residents who intend to subspecialize. A subspecialty program is 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."¹ The specialty identified as "Transitional Year" includes programs that provide training in multiple disciplines to help residents prepare for selecting and entering a specialty.

Tables displaying data on first-year residents may include residents who later enter another specialty or subspecialty. This mostly affects specialties such as General Surgery, Internal Medicine, and Pediatrics, in which a one-year experience may be required before the resident trains in another specialty. Also, a large percentage of those completing residencies in these three specialties go on to complete subspecialties within those specialties. For data displays that include people who have completed their residencies ("completed residents") or practicing physicians by specialty, the most recently completed GME specialty or subspecialty is shown. Residents who completed training in a specialty but are active in another GME program are excluded from the counts of completed residents or practicing physicians, unless otherwise noted.

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Table 1. Data Sources Available to the AAMC

Data Source	Description
Annual Osteopathic Medical School Questionnaire	This questionnaire is completed by DO-granting medical colleges and collects information on the number of DO graduates in a given year. It is administered by the American Association of Colleges of Osteopathic Medicine (AACOM).
Comprehensive Osteopathic Medical Licensing Examination of the United States (COMLEX-USA)	The COMLEX-USA is a three-level, national, standardized examination for licensure for the practice of osteopathic medicine created by the National Board of Osteopathic Medical Examiners.
Faculty Roster	The AAMC initiated the Faculty Roster in 1966 to support national policy studies by collecting comprehensive information about the characteristics of paid faculty members at U.S. medical schools accredited by the Liaison Committee on Medical Education (LCME®). The Faculty Roster typically has a response rate of almost 100% (e.g., 98.7% in fiscal year 2020).
GME Track® Resident Survey (GME Track)	GME Track is a resident database and tracking system that the AAMC introduced in March 2000 and that is used to collect data for the National GME Census. The National GME Census is run jointly by the AAMC and the American Medical Association (AMA) to help GME administrators and program directors collect and manage GME data. The GME Track Resident Survey typically has a response rate of about 95% (e.g., 94.6% in 2020). GME Track resident status information is collected as of Dec. 31 of the corresponding year. For example, the 2020 GME year represents residents who were active in training as of Dec. 31, 2020.
Matriculating Student Questionnaire (MSQ)	The AAMC MSQ is an annual questionnaire administered since 1987 to all first-year medical students at LCME-accredited U.S. medical schools. The MSQ typically has a response rate between 70% and 77% (e.g., 76.2% in 2020).
Medical School Graduation Questionnaire (GQ)	The AAMC GQ is an annual questionnaire administered since 1978 to all students graduating from LCME-accredited U.S. medical schools. The GQ typically has a response rate of about 79% (e.g., 79.4% in 2021).
Physician Masterfile (AMA Masterfile)	Established by the AMA in 1906, the Physician Masterfile includes education, training, and professional certification information. It contains current and historical data for more than 1.4 million physicians, residents, and medical students in the United States. Data for physicians not represented in the AMA Physician Masterfile may be missing from the

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	report. For example, about 6% of completed residents in GME Track are not represented as active physicians in the AMA Physician Masterfile. As a result, practicing physicians may be underrepresented. AMA physician status information is reported as of Dec. 31 of the corresponding year. For the 2021 <i>Report on Residents</i> , AMA Physician Masterfile data represent physician statuses as of Dec. 31, 2020.
Student Records System (SRS)	The AAMC SRS houses secure, centralized enrollment information about the national medical student population and tracks student progress from matriculation through graduation. All LCME-accredited U.S. medical schools verify 100% of medical students in the SRS.
United States Medical Licensing Examination (USMLE)	The USMLE is a three-step exam for medical licensure in the United States sponsored by the Federation of State Medical Boards (FSMB) and the National Board of Medical Examiners (NBME).

Selected Findings

The *Report on Residents* examines unique trends among states, specialties, and phases of the GME continuum. The tables and the selected findings below are organized by progression through GME to reflect the different ways that people use the data. For example, current medical students looking to apply to residency programs may be interested in the test scores and experiences of first-year residents in various specialties. Alternatively, state policy analysts focusing on workforce or funding issues may be concerned with retaining physicians who completed residency training in a particular state.

Pre-residency

- Over the course of medical school, most medical students change their preferred residency specialty. For the past three years, between 25% and 27% (27.0% in 2021) of respondents to the GQ indicated the same specialty preference as they had on the MSQ (Table A1).
- Specialty preference continuity in Neurology increased from 25.7% in the 2020 *Report on Residents* to 30.4% in 2021. However, Orthopaedic Surgery continues to have the highest rate of specialty preference continuity from medical school matriculation to medical school graduation with 45.7% continuity in 2021 (Table A1).
- On average, first-year residents in both Obstetrics and Gynecology and Internal Medicine/Pediatrics reported participating in the highest average number of volunteer experiences (8.9) (Table B1).

Residency

- While the overall number of residents was higher in 2019 than in 2018, the percentage of residents who are international medical school graduates has decreased each year, from 25.9% in the 2015 *Report on Residents* to 23.0% in the 2021 *Report on Residents* (Table B3).

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- While men made up a slightly larger percentage of Psychiatry residents in 2019, there are now more women training in Psychiatry than men in 2020 (Table B3).
- Of general specialties, Medical Genetics and Genomics had the highest percentage of active U.S. MD-PhD graduates in 2020, at 24.4% (Table B4).
- The distribution of active MD residents by race/ethnicity varies across specialties. Overall, 50.0% of active U.S.-citizen MD residents in 2020 reported White, 21.8% reported Asian, 7.8% reported Hispanic, 5.8% reported Black or African American, 0.6% reported American Indian or Alaska Native, and 0.2% reported Native Hawaiian or Other Pacific Islander. Additionally, 17.2% of active MD residents were non-U.S. citizens in 2020 (Table B5).

Post-residency

- More than half (57.1%) of the individuals who completed residency training from 2011 through 2020 are practicing in the state where they did their residency training (Table C4). This retention rate is slightly higher than the rate for individuals who completed residency training from 2010 to 2019 (55.5%).
- A higher proportion of women who completed residency training from 2011 through 2020 are practicing in the state of their residency training — 60.5% — than men, at 54.2% (Table C5).
- California has the highest physician retention rate, with 77.8% of individuals who completed residency training going on to practice in state (Table C6).
- Of those individuals who completed residency training from 2011 through 2020 and hold a full-time faculty appointment at a U.S. MD-granting school, 77.4% hold appointments at the assistant professor level (15.7% of the entire cohort of people who completed residency training) (Table C8).

Next Steps

Although the changes in this report from year to year are often marginal, the *Report on Residents* is one of many important resources for tracking changes within the largest specialties and subspecialties. Those interested in exploring data for a research project may request specific data by submitting a copy of the [AAMC Data Request Form](#). Additional information is available in the [ACGME Data Resource Book](#).

Providing Report Feedback

Comments on how to improve this report are welcome. Please share your thoughts by emailing residentreport@aamc.org.

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Reference

1. Accreditation Council for Graduate Medical Education. *ACGME Data Resource Book: Academic Year 2020-2021*. Chicago, IL: ACGME; 2021. acgme.org/globalassets/pfassets/publicationsbooks/2020-2021_acgme_databook_document.pdf.