



2022 Match[®]

RESULTS FOR FAMILY MEDICINE

The American Academy of Family Physicians' (AAFP's) brief analysis of family medicine results from the annual National Resident Matching Program Main Residency Match[®] (NRMP Match) provides a snapshot of the incoming physician workforce at its most significant inflection point: the moment medical students and graduates obtain their residency training position in a medical specialty. The AAFP closely monitors important workforce trends. For historical comparison, this analysis also includes insights into Match data reported by the American Osteopathic Association regarding the AOA Intern/Resident Registration Program (AOA Match) prior to 2020.

Records Set in 2022 Match

The 2022 NRMP Match had the most family medicine positions available in history. The results marked 13 years of growth in positions offered—the last 11 of which have broken all-time records—for family medicine in the NRMP Match, and an all-time high for osteopathic medical students matching in family medicine.

Call to Action

While the residency Match results reflect momentum for family medicine, the pace needs to accelerate in order to meet the demand for family medicine in the U.S. The U.S. medical education system is far from delivering the primary care medical workforce needed in the country it serves, and whose taxpayers fund it. The composition of residency training positions must reflect the composition needed in the workforce, and as such, needs to increase steeply in family medicine, other primary care specialties, and a few other specialties. Health care, education, and societal systems need to incentivize, recruit, and support a more diverse medical student population that better represents the U.S. population and those who are more likely to choose primary care careers and practice in underserved areas. Substantial increases in the family medicine and primary care workforce—while also accounting for the composition, distribution, and quality of that workforce—are needed to improve the health of Americans and the sustainability of the health care system.

The Family medicine workforce needs to grow rapidly, requiring a level of disruptive change that will reform the nation's medical education system.

2022 NRMP Match Highlights

- Family medicine offered **4,935** positions, 91 more than in 2021, and 13.6% of positions offered in all specialties.
- **4,470 medical students and graduates matched to family medicine residency programs** (categorical and combined) in 2022. A break down of those matches:
 - **1,555** U.S. allopathic medical school (MD) seniors
 - **1,496** osteopathic medical school (DO) seniors
 - **779** U.S. international medical graduates (IMGs)
 - **458** foreign IMGs
 - **94** previous graduates of U.S. MD-granting schools
 - **87** previous graduates of DO-granting schools
 - **1** classified by the NRMP as “other”
- The number of **DO seniors matching to family medicine reached a record high, growing by 53 matches over 2021.** However, the percentage of DO students matching to family medicine (22.4%) has declined steadily.

The number of U.S. MD seniors matching decreased by 68 compared with the year prior. It remains significantly below—785 matches—the historical peak of 2,340 in 1997. Only 8.4% of matched U.S. MD seniors matched in family medicine.

- One-quarter (25.1%) of U.S. IMGs and 10% of foreign IMGs who matched to any specialty matched to family medicine.
- A total of **3,232** U.S. MD and DO seniors and graduates matched in family medicine.
- Family medicine represents **12.2%** of all U.S. students or graduates matched in 2022.

A Closer Look at the 2022 NRMP Match Results

Family Medicine in the 2022 NRMP Match:

- Family medicine* offered 13.6% and filled 13.1% of the total positions.

- The overall fill rate (percentage of positions filled of the positions offered) in family medicine was 90.6%. Broken down by applicant type:
 - **31.5%** U.S. MD seniors (33.5% in 2021)
 - **30.3%** DO seniors (29.8% in 2021)
 - **25.1%** IMGs (15.8% U.S.-citizen IMGs and 9.3% non-U.S. citizen IMGs)

**Includes family medicine-categorical, plus combined programs: emergency medicine-family medicine, family medicine-preventive medicine, and psychiatry-family medicine.*

Compared with 2021, family medicine residency programs in the 2022 NRMP Match:

- Offered 91 more positions (4,935 vs. 4,844)
- Matched 23 fewer students and graduates (4,470 vs. 4,493)
- Matched:
 - 68 fewer U.S. MD seniors (1,555 vs. 1,623)
 - 53 more DO seniors (1,496 vs. 1,443)
 - 2 fewer U.S. IMGs (779 vs. 781)
 - 14 more foreign IMGs (458 vs. 444)
 - 38 fewer previous graduates of U.S. MD-granting schools (87 vs. 125)
 - 17 more previous graduates of DO-granting schools (94 vs. 77)
- Had an overall fill rate of 90.6%, a decrease from 92.8% the year prior and the lowest fill rate since 2007.
- Had a fill rate for 30.3% DO seniors, the highest in history; up from 29.8% in 2021.
- Had a fill rate for U.S. MD seniors of 31.5%, the lowest fill rate in history; down from 33.5% in 2021.
- Offered 13.6% of all positions in the Match (vs. 13.8% in 2021)
- Matched (compared to the total matched in any specialty for each applicant type):
 - **8.4%** of all U.S. MD seniors (vs. 8.8% in 2021)
 - **22.4%** of DO seniors (vs. 22.8% in 2021)
 - **25.1%** of U.S. IMGs (vs. 24.8% in 2021)
 - **10%** of foreign IMGs (vs. 10.2% in 2021)

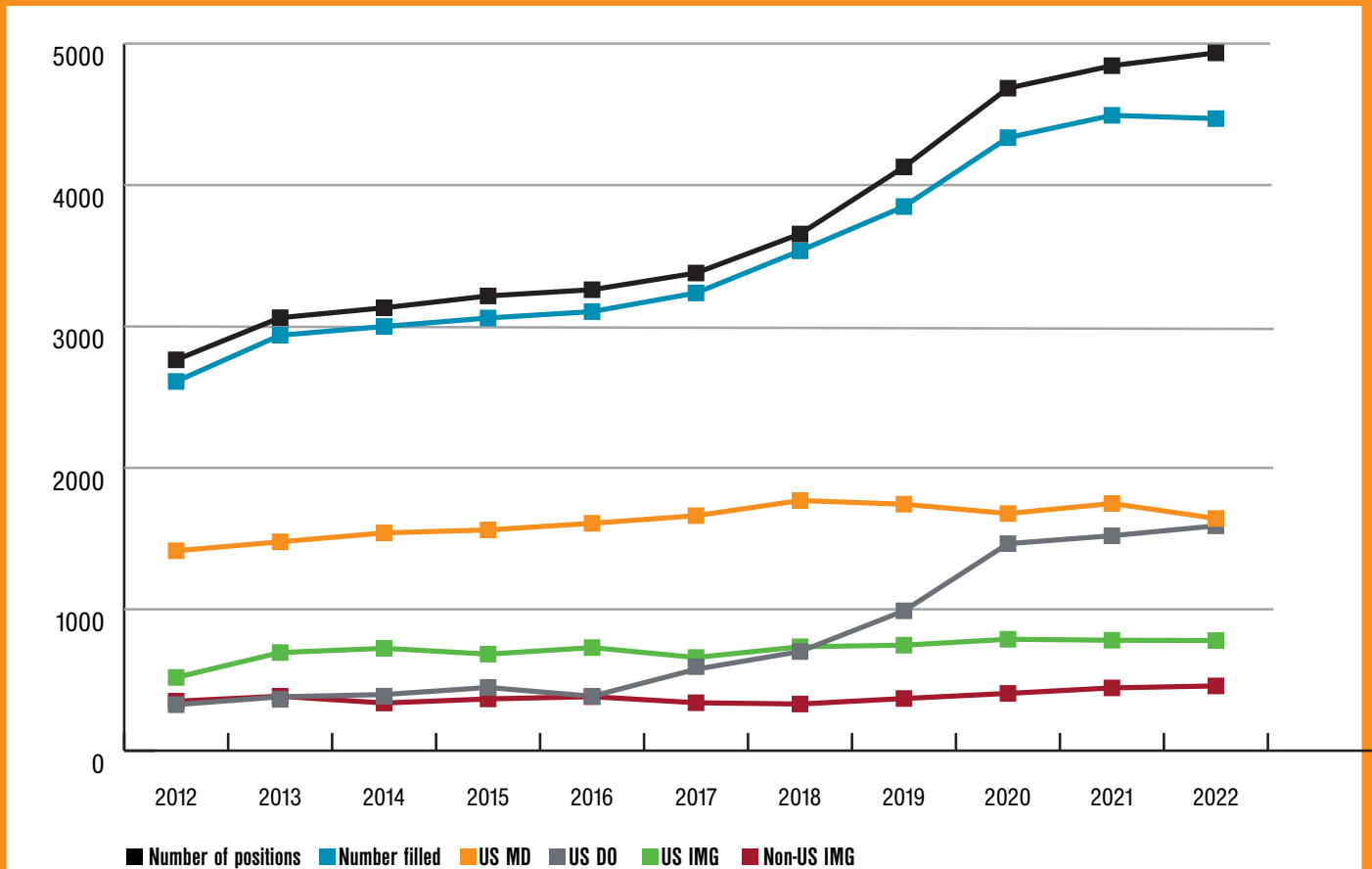
The 2022 NRMP Match results continue a 13-year trend of increases in the number of family medicine positions offered. Results also indicated growth in the number of osteopathic medical students entering

family medicine. The number of U.S. MD seniors matching in family medicine has seen year-over-year declines three of the last four years after nine previous years of growth. The number of family medicine positions filled in the 2022 NRMP Match is the second highest in the history of the specialty. However, despite overall growth in the specialty, the number of positions filled with U.S. MD seniors remains 785 below the historical high of 2,340 in 1997, reflecting concerns with the U.S. medical education system’s ability to train physicians in the most needed specialties.

The number of unfilled positions after the main Match was 465, up 114 from 2021 which had 351 unfilled positions. In recent history, from 2012-2018 an average of 140 positions were unfilled pre-Supplemental Offer and Acceptance Program® (SOAP®). In 2019 that number rose to 280, and again to 350 positions in 2020, resulting in consecutive increases over the last four years.

Family Medicine in the NRMP Match 2012-2022

PGY-1 Residency Positions Offered and Filled by Applicant Type



Graph created by the American Academy of Family Physicians | MED22030754
 Data are sourced from the National Resident Matching Program as of Match Day each year and do not include positions filled in the Supplemental Offer and Acceptance Program or through the American Osteopathic Association Intern/Resident Registration Program.



In 2019 and 2020, the rise of unfilled positions seemed to correlate with a rapid growth in the number of positions offered and consolidation to the NRMP Match from the AOA Intern/Resident Registration Program that was finalized in 2020. However, the COVID-19 pandemic upended residency recruitment processes and limited opportunities for students to participate in away rotations and visit residency programs.

Definitive data was not available on Match Day, but it is likely that the impact of the pandemic on the residency recruitment process will be studied and may reveal that the application process, interview acceptance, and ranking behaviors were different and contributed to the number of unfilled positions. It is likely that family medicine residency program growth is also a factor, as new family medicine residency programs may be accredited late in the application cycle and may list positions with intention to fill during the SOAP. If recent history is an indicator, most of the 465 family medicine positions unfilled after the 2022 NRMP Match are anticipated to be filled during the SOAP. In 2021, only 8 family medicine positions were unfilled post-SOAP.

The number of unfilled positions in family medicine reflects the lowest fill rate (90.6%) since 2007. Historically, in 2003 the family medicine fill rate hit a record low of 76.2% and then steadily grew each year until a record-high fill rate of 96.7% was achieved in 2018. Since 2018 the fill rates have been lower but remained over 90% and may have been impacted by the consolidation of the AOA Match to the NRMP Match and the COVID-19 pandemic.

By contrast, the fill rate in family medicine for U.S. MD seniors decreased drastically between 1996 (72.6%) and 2005 (40.7%). Since then, it fluctuated to a high of 48.3% in 2012, but had a sharper downturn in recent years to 31.5% in 2022, the lowest in history. These results reflect that pursuit of family medicine careers

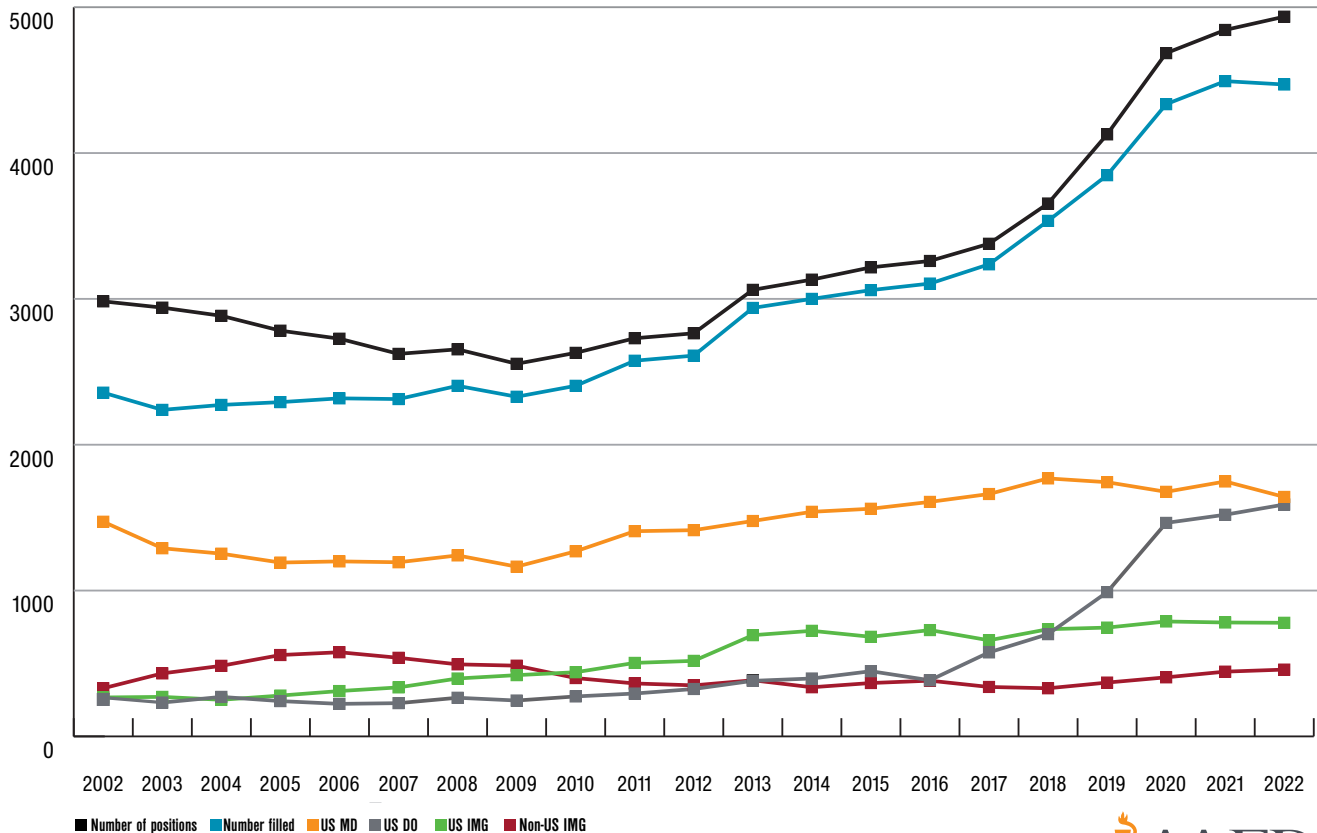
among students and graduates of U.S. MD schools did not regain momentum after the decline of the late 1990s and early 2000s alongside family medicine's record growth of the 2010s and now early 2020s. The trends are also impacted by the increase in family medicine positions filled by DO students, especially from 2018-2020 with the transition from the AOA to the NRMP Match.

The trend for U.S. MD seniors is deeply concerning for the U.S. primary care workforce and calls for U.S. MD medical schools, especially, to recruit and graduate more students who are likely to enter primary care specialties and practice in underserved areas.

Possibly the most striking trend in Match results in recent years is the strong and rising contribution to the family medicine workforce from DO students and graduates. Though some of the growth is an artifact of the migration from the AOA Match to the NRMP Match, there is also real growth in the number of DOs matching in family medicine. Looking deeper, the percentage of DOs (22.4%) has declined slightly but steadily in recent years, but the growth of DO schools has produced a rising number of graduates and, therefore, more total DOs going into family medicine. For perspective, U.S. MD seniors made up 54.3% of the total applicants who matched to all specialties in 2022 (18,486 of 34,075 total) and only 34.8% of applicants who matched in family medicine (1,555 of 4,470), while DO seniors made up 19.6% (6,666 of 34,075) of the total applicants who matched to all specialties, but 33.5% of applicants matched to family medicine (1,496 of 4,470). The number of DO students applying in family medicine already exceeds the number of U.S. MD students applying, and the number matching is almost on par.

Family Medicine in the NRMP Match 2002-2022

PGY-1 Residency Positions Offered and Filled by Applicant Type



Graph created by the American Academy of Family Physicians | MED22030754

Data are sourced from the National Resident Matching Program as of Match Day each year and do not include positions filled in the Supplemental Offer and Acceptance Program or through the American Osteopathic Association Intern/Resident Registration Program.



Applicants In 2022:

- Family medicine-categorical positions had 1,789 U.S. MD senior applicants and 2,013 DO senior applicants
- Family medicine-emergency medicine positions had 17 U.S. MD senior applicants and 13 DO senior applicants
- Family medicine-preventive medicine positions had 9 U.S. MD senior applicants and 6 DO senior applicants
- Family medicine-psychiatry positions had 44 U.S. MD senior applicants and 9 DO senior applicants

The NRMP Advance Data Tables did not contain applicant data for international medical students and graduates by specialty.

Family medicine categorical had the most programs (745) of any specialty participating in the 2022 NRMP Match. Family medicine-categorical was the most-ranked specialty for DO seniors with 23,642 ranked positions. Among U.S. MD seniors, family medicine-categorical was the sixth highest ranked specialty with 23,642 ranked positions. U.S. MD seniors ranked more preliminary year positions (56,793 for 353 programs and 1,174 positions), internal medicine (52,100 for 641 programs and 9,380 positions), transitional year (33,476 for 195 programs and 1,616 positions), emergency medicine (24,562 rankings for 277 programs and 2,921 positions), and pediatrics (25,389 rankings for 235 programs and 2,942 positions).

Family Medicine Positions Offered and Filled: 5- and 20-Year Data

	2018	2019	2020	2021	2022
Positions Offered	3654	4128	4685	4844	4935
Positions Filled	3535	3848	4335	4493	4470
Positions Filled by U.S. MD Seniors	1648	1617	1557	1623	1555
Positions Filled by U.S. MD Grads	121	126	120	125	87
Positions Filled by U.S. DO Seniors	N/A	N/A	1399	1433	1496
Positions Filled by U.S. DO Grads	N/A	N/A	65	77	94
Positions Filled by U.S. IMGs	735	746	788	781	779
Positions Filled by Non U.S. IMGs	330	369	405	444	458
Positions Unfilled (Pre-SOAP)	119	280	349	351	465
Fill Rate	96.7%	93.2%	92.5%	92.8%	90.6%
Fill Rate by U.S. MD Seniors	45.1%	39.2%	33.2%	33.5%	31.5%
Rate of U.S. MD Senior Matching to Family Medicine	9.3%	9.1%	8.6%	8.8%	8.4%
Fill Rate by U.S. DO Seniors	N/A	N/A	29.9%	29.8%	30.3%
Rate of U.S. DO Seniors Matching to Family Medicine	N/A	N/A	23.4%	22.8%	22.4%
Fill Rate of DO Matching to Family Medicine through NRMP and AOA	19.2%	24.0%	N/A	N/A	N/A
Fill Rate of matched DOs in Family Medicine through NRMP and AOA	18.6%	19.5%	N/A	N/A	N/A
Fill Rate by U.S. IMGs	20.1%	18.1%	16.8%	16.1%	15.8%
Rate of U.S. IMGs Matching to Family Medicine	25.3%	24.9%	25.0%	24.8%	25.1%
Fill Rate by Non U.S. IMGs	9.0%	8.9%	8.6%	9.2%	9.3%
Rate of Non U.S. IMGs Matching to Family Medicine	8.3%	9.2%	9.6%	10.2%	10.0%
Fill Rate by U.S. MD Grads	3.3%	3.1%	2.6%	2.6%	1.8%
Rate of U.S. MD Grads Matching to Family Medicine	18.3%	18.7%	17.3%	15.5%	10.1%
Fill Rate by U.S. DO Grads	N/A	N/A	1.4%	1.6%	1.9%
Rate of U.S. DO Grads Matching to Family Medicine	N/A	N/A	26.3%	28.5%	24.5%
Fill Rate by Others	0.0%	0.0%	1.4%	0.0%	0.0%
Rate of Others Matching to Family Medicine	0.0%	8.3%	14.3%	0.0%	9.1%

[Data since 2002 are available as a download. These data are represented in the 10- and 20-year graphs above.](#)

Family Medicine Programs

These results are a combination of all PGY-1 positions that result in eligibility for licensure and board certification in family medicine. Those include family medicine-categorical and combined residency programs. Broken down:

- 745 family medicine categorical programs offered 4,916 and filled 4,451 positions. The overall fill rate for family medicine-categorical programs was 90.5%.
- 6 family medicine-psychiatry programs offered and filled 10 positions.
- 3 emergency medicine-family medicine programs offered and filled 7 positions.
- 2 family medicine-preventive medicine programs offered and filled 2 positions.

Altogether, a total of 756 family medicine categorical and combined residency programs offered positions in the 2022 NRMP Match, 15 more programs than in 2021 (741).



Morgan Weiler, MD, of University of Kansas Medical Center, Wichita, Kan., matched to the Family Medicine Residency Program at Ascension Via Christi in Wichita.

Other Primary Care Specialties

In the 2022 NRMP Match:

- Primary care* positions were 16.1% of the positions offered overall (5,830 of 36,277) and 15.7% of the positions filled overall (5,359 of 34,075). Primary care residency programs filled with U.S. MD seniors at a rate of 37.2% (2,166 of 5,830), down slightly from 38.7% in 2021 and more significantly from 44.1% in 2019 and an average of 49.6% from 2014-2018.
- Of the U.S. MD seniors matched, 11.7% were in primary care residencies (2,166 of 18,486), down from 12.1% the year prior.
- Primary care residency programs filled with DO seniors at a rate of 27% (1,577 of 5,830).
- Of the DO seniors matched, 23.7% were in primary care residencies (1,577 of 6,666), a significantly higher rate than U.S. MD seniors

In total, 85 more positions were offered in primary care specialties in 2022 compared to 2021. These results show a year-over-year increase of 1.5% in the number of positions offered in all primary care specialties. Comparatively, the 2022 NRMP Match had 3.1% more positions overall, across all specialties, than the year prior.

The AAFP uses a narrower definition of primary care specialties than the NRMP and many medical schools. Family medicine residency graduates practice primary care at a higher rate (more than 90%) than any other medical specialty. Studies show most graduates of internal medicine programs subspecialize and do not practice primary care, and less than half of graduates of pediatrics residencies practice primary care. Both internal medicine and pediatrics have a category of primary care dedicated positions, which the AAFP includes in this analysis. Although many internal medicine-pediatrics combined program graduates go on to subspecialize, the AAFP does include these positions because it is also a training pathway to primary care. Although this count does include some inflation by including positions that will not contribute to the primary care workforce, it is much less inflated than the definition used by the NRMP and many medical schools.

*Defined as family medicine categorical and combined programs, internal medicine-primary, internal medicine-pediatrics, and pediatrics-primary.

Compared with the 2021 NRMP Match:

- Medicine-primary (primary care internal medicine) filled 13 fewer positions in 2022 (424 vs. 437) and matched 248 U.S. MD seniors and 33 DO seniors.
- Medicine-pediatrics (med-peds) filled 7 more positions (392 vs. 385) and matched 332 U.S. MD seniors and 39 DO seniors.
- Pediatrics-primary (primary care pediatrics) filled 1 fewer position (73 vs. 74) and matched 31 U.S. MD seniors and 9 DO seniors.

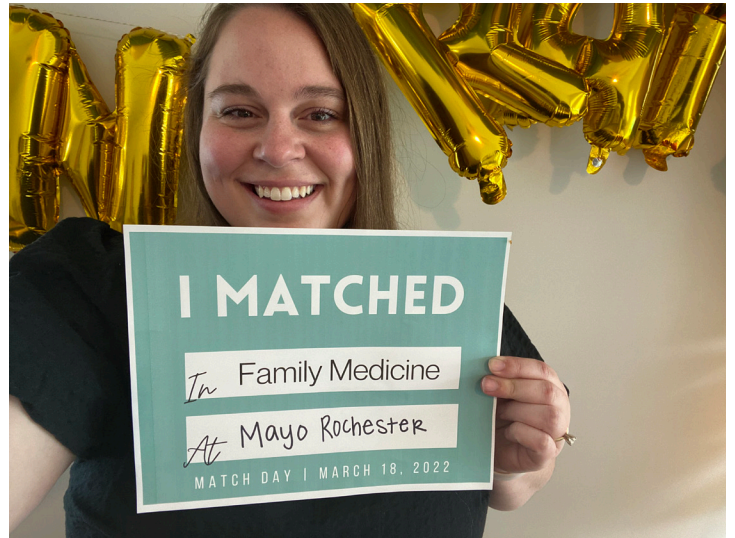
All specialties in the NRMP Match

A total of 36,277 PGY-1 positions were offered in all medical specialties in the 2022 NRMP Match, and 34,075 were filled. The breakdown of filled positions by applicant type:

- 18,486 seniors in Liaison Committee on Medical Education (LCME)-accredited U.S. schools of medicine (MD-granting)
- 6,666 seniors from Commission on Osteopathic College Accreditation (COCA)-accredited U.S. osteopathic colleges of medicine (DO-granting)
- 4,571 non-U.S. citizen seniors or previous graduates of international medical schools
- 3,099 U.S. citizen seniors or previous graduates of international medical schools
- 859 previous graduates of U.S. MD-granting schools
- 383 previous graduates of DO-granting schools
- 11 were from another pathway (Canadian, Fifth Pathway, etc.).

Beyond the NRMP Match

Some of the growth seen in the NRMP Match in recent years can be attributed to a change in the Match services available to programs and students and do not reflect changes to the actual workforce input.



Rebecca Stoll, DO, of Alabama College of Osteopathic Medicine in Dothan, Ala., matched to Mayo Clinic Family Medicine Residency – Rochester.

Historically, another prominent matching program for medical students or graduates was the AOA Intern/Resident Registration Program, the AOA Match. This program matched students into graduate medical education programs that were either solely accredited by the AOA or were dually accredited by the AOA and the Accreditation Council for Graduate Medical Education (ACGME). However, 2020 marked the first year without an AOA Match as all programs transitioned to ACGME accreditation and to the NRMP Match.

The United States is the only country that trains osteopathic physicians; the AOA Match did not include international medical graduates.

Looking Forward

The family medicine workforce needs to grow rapidly to better deliver the primary care workforce needed for a high-functioning, affordable U.S. health care system leading to better health outcomes.

The level of disruptive change needed will take reform of the nation's medical education system to provide and prioritize training opportunities that reflect the workforce needs of the U.S. To improve health outcomes, workforce shortages need to be addressed by increasing residency training in family medicine and other primary care specialties and a



Juan Oves, Jr., MD, of Florida International University Herbert Wertheim College of Medicine in Miami, Fla., matched to Tufts University Family Medicine Residency at Cambridge Health Alliance in Boston, Mass.

few subspecialties. It will also take societal and educational support of transformed pathways to and through medical school to increase the diversity of U.S. medical graduates to better reflect and care for the U.S. population.

The cultural and systematic shifts needed to achieve this rebalancing of the U.S. physician workforce need immediate attention across sectors and communities, including teaching hospitals, payers, health policy makers, employers, and individuals. The nation's primary care workforce shortage is already affecting patients and communities in every state and is exacerbated with each passing day. Achieving health equity is only possible with a strong foundation of primary care accessible to all. Family medicine is calling for dramatic changes to be implemented immediately across the pathway to medical school, process of medical education, practice transformation, and payment reform.

The family medicine community commits itself to leading and supporting this change, partnering with the public and private sectors, medical schools and residencies, sponsoring institutions, policymakers and public officials, payers, communities, and their patients to change the trajectory.

Understanding the Data

Two significant procedural changes to the NRMP Match process affect the historical data from the NRMP where a change in the process resulted in variances, not representing the true change in workforce trends.

Single Accreditation System: From 2014 to 2020, the U.S. graduate medical education system shifted to a single accreditation system (SAS) under the Accreditation Council for Graduate Medical Education. The 2020 NRMP Match was the first year in which there was no AOA Intern/Resident Matching Service. This means that a portion of the growth in family medicine in the NRMP Match does not reflect new training positions, but rather the shift from one matching service to another.

The NRMP's All-In Policy: Instituted in 2013, this policy changed how programs offered their positions, with programs that had previously only offered a portion of their positions in the NRMP Match required to offer all their positions in the Match. Again, some of the increases for family medicine, and overall, in the years since then have been a result of a shift in how positions were filled rather than reflective of new training opportunities or an increasing workforce.

More on the Family Medicine and Primary Care Workforce

The NRMP Match is the largest and most representative mechanism for medical student recruitment into specialized medical residencies in the United States, and as such, serves as a barometer of workforce production.

However, NRMP Match results are not comprehensive of all entry into graduate medical education in the U.S. The NRMP Match is not the only mechanism through which medical students or graduates are matched with their required graduate medical education, or residency programs, in a specialized field to lead to board certification in a medical specialty (or multiple specialties). Other matching services, like the annual Military Match, as well as private arrangements outside of the Match also fill residency openings. The results published on Match Day each year also exclude the SOAP.

The following resources provide a more in-depth look at the family medicine workforce pipeline:

- [Trends in US Medical School Contributions to the Family Physician Workforce: 2018 Update From the American Academy of Family Physicians](#) – This article provides an in-depth look at those entering family medicine residency programs, including the percentage of graduates from U.S. medical schools.
- [Results of the 2017 National Resident Matching Program® and the American Osteopathic Association Intern/ Resident Registration Program: An Examination of Family Medicine and Primary Care](#) – This article is the last in a long-running series that reported on the performance of family medicine and other primary care specialties in the NRMP Match. A detailed analysis of the AOA Match is also included.

For more on the primary care physician workforce:

- [The State of Primary Care in the United States: A Chartbook of Facts and Statistics](#) – From the Robert Graham Center for Policy Studies in Primary Care, this describes the current state of primary care in the U.S. and presents information from a variety of national sources to answer questions about who, what, where, and how primary care is being delivered.
- [Graham Center State Workforce Projections](#) – The Graham Center projects to 2030 the needed primary care physician workforce by state.
- [Graham Center Publications and Reports on Medical Education](#) – Find Graham Center research on medical education, including related to graduate medical education positions, medical school contributions to the primary care workforce, Teaching Health Centers, and more.
- [No More Lip Service; It's Time We Fixed Primary Care](#) – This two-part Health Affairs blog post calls for changes across the system to reach the optimal primary care workforce.
- [Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care](#) – This landmark report from the National Academies of Science, Engineering, and Medicine proposes an implementation plan to strengthen primary care in the U.S., especially for underserved populations, and to inform primary care systems around the world.

To connect with the AAFP's efforts on workforce reform:

- [Graduate Medical Education Financing Policy](#) – The AAFP's recommended six principles to reforming the nation's graduate medical education system to meet workforce needs.
- [Fighting for Family Medicine](#) – Read about recent AAFP advocacy wins to strengthen the primary care workforce.
- [AAFP Advocacy Focus: Graduate Medical Education](#) – Learn about and Speak Out on efforts to grow graduate medical education opportunities in family medicine.
- [AAFP Advocacy Focus: Medical Student Debt](#) – Learn about and Speak Out on efforts to address the affordability of medical school and decreasing medical student debt.
- [AAFP Rural GME policy](#) – Six principles on growing graduate medical education in rural communities

Find AAFP resources to support students on their journey to family medicine:

- [Strolling Through The Match](#) – The AAFP's comprehensive guide to matching provides information from start to finish of the Match process, including the timeline, process, and tips on ranking programs and interviewing. This resource has been updated for the 2021-2022 Match season to focus entirely on careers in family medicine and family medicine residency.
- [AAFP National Conference of Family Medicine Residents and Medical Students](#) – This annual conference hosted by the AAFP gives medical students and residents an opportunity to explore the family medicine specialty and interact with thousands of peers, hundreds of residency programs, and leaders in family medicine.
- [FMIG Network](#) – The AAFP's Family Medicine Interest Group (FMIG) Network supports medical school student organizations to provide activities and programming that promote family medicine across the country and internationally.
- [Primary Care Leadership Collaborative \(PCLC\)](#) – This leadership program designed for medical student leaders of FMIGs trains and supports them to advance primary care and improve the health of their communities.