



THE MATCH[®]
NATIONAL RESIDENT MATCHING PROGRAM[®]

Charting Outcomes™ :

**Applicant Survey Results
Main Residency Match®**

2023

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Introduction

In March 2023, The National Resident Matching Program® (NRMP) conducted a survey of applicants who participated in the Main Residency Match®. First administered in 2008, the Applicant Survey has been conducted biennially since 2009 with the primary purpose of characterizing the factors that applicants consider in (1) selecting programs to which to apply, and (2) ranking programs at which they have interviewed for the Main Residency Match.

The survey was sent to applicants who certified a rank order list (ROL) as part of the 2023 Main Residency Match. It was fielded during the 11 days between the Rank Order List Certification Deadline and the start of Match Week to prevent match outcomes from influencing applicants' answers. Per NRMP policy, withdrawals from the Match must be completed by the Rank Order List Certification Deadline; however, between the ROL Certification Deadline and the time when the matching algorithm is processed, some applicants could still be withdrawn from the Match for reasons related to ineligibility, or participation in or matching through another national matching program. In 2023, 152 applicants with a certified a ROL were subsequently withdrawn from Match participation; they were not included in either the numerator or the denominator for calculating response rates.

Survey

The 2023 Applicant Survey elicited information on:

Program Characteristics

Program characteristics considered by applicants in selecting where to apply and which programs to place on the ROL and the perceived importance of those characteristics.

Ranking Strategy

Ranking strategies (e.g., ranking programs in order of true preferences, ranking one or more less competitive programs as a "safety net" or "fallback" plan).

Recruitment Cycle

Numbers of applications submitted, interview invitations received, interviews attended, and programs ranked in preferred specialty (specialty of the first program on the ROL) and, separately, in all other specialties where applicable.

Because of the extraordinary circumstances resulting from the COVID-19 pandemic and the consequent move to virtual recruitment and interviewing for residency positions starting with the 2021-2022 Match cycle, the NRMP also included in the Survey a set of items to query applicant experiences with the virtual recruitment process, including:

- Perceived stress, perceived readiness for, and comfort level with the virtual experience along with impact of the virtual experience on the number of programs applied to and ranked;
- Numbers of interviews attended virtually and in person; and
- Potential challenges related to the application, recruitment, ranking, and matching environments as introduced by reliance on virtual platforms

In addition, because some programs offered in-person interview options during the 2023 Match cycle, and others offered in-person second visits, items were added to assess applicant experiences with both types of in-person encounters. Examples include:

- Numbers of programs offering only in-person, only virtual, or either in-person or virtual interviews;
- Numbers offering applicants in-person second visits only before the rank order list certification deadline, only after the rank order list certification deadline, or either before or after the rank order list certification deadline; and
- Applicant perceptions of pressure to attend in-person second visits

Findings concerning the virtual and hybrid recruitment experiences in 2023, including year-over-year comparisons for all specialties combined of virtual experiences over the past three cycles, will be reported separately.

As was the case in 2021 and 2022, and to allow for robust questioning about the virtual and hybrid recruitment experiences while minimizing respondent burden, some items from prior administrations of the Applicant Survey were not included in 2023. These items targeted questions about the likelihood that applicants would pursue a range of strategies if they did not obtain a residency position in the Main Residency Match (e.g., participate in the Supplemental Offer and Acceptance Program (SOAP), seek graduate medical education outside the United States, engage in research for a year before re-entering the Match). Future iterations of the survey will re-introduce questions about applicants' consideration of various fallback strategies.

Table 1. Preferred specialty- and applicant type-specific response rates are presented in **Table 1** below. The overall response rate across all applicant types was 19.1% (n = 8,175). As reflected in the table, the report presents survey results by applicant type for 19 specialties where at least 50 total responses were submitted. When each applicant type-defined subgroup was represented by at least 10 responses within a specialty, three subgroups were analyzed:

- U.S. MD seniors
- U.S. DO seniors
- All Other Applicant Types (U.S. MD graduates, U.S. DO graduates, U.S. citizen students and graduates of international medical schools (U.S. IMGs), non-U.S. citizen students and graduates of international medical schools (non-U.S. IMGs), students and graduates of Canadian medical schools, and Fifth Pathway applicants)

Specialties for which analyses could be presented for all three subgroups include:

Anesthesiology	Dermatology	Emergency Medicine
Family Medicine	Internal Medicine	Internal Medicine/Pediatrics
Neurology	Obstetrics/Gynecology	Orthopaedic Surgery
Pathology	Pediatrics	Physical Medicine and Rehabilitation
Psychiatry	Radiology-Diagnostic	Surgery-General

Applicant-type distributions for Child Neurology, Neurological Surgery, Otolaryngology, and Plastic Surgery allowed for analyses of two subgroups (U.S. MD seniors in one group, and U.S. DO seniors + All Other Applicant Types in a second group).

The “All Other Specialties” category as reflected in **Table 1** combines 24 specialties, including 17 combined programs (e.g., Emergency Medicine/Anesthesiology, Pediatrics/Psychiatry/Child Psychiatry), where fewer than 50 total responses per specialty were submitted. Applicants who ranked Transitional Year or PGY-1 preliminary programs first on their rank order lists were considered to have “No Preferred Specialty.” Respondents in the “All Other Specialties” and “No Preferred Specialty” categories are only included in analyses of all specialties combined.

Numbers of applications submitted, interview invitations received, interviews attended, and programs ranked were self-reported by respondents. Factors considered by applicants (and their mean importance) in selecting programs to which to apply and to place on their ROLs are presented within specialties by applicant type.

For count variables such as numbers of applications submitted, where respondents provided hand-entered numeric responses, the validity of extremely high response values was called into question. Based on one variable from the Program Director Survey for which we could confidently estimate the plausible range of values (specialty-specific program quotas), we estimated the rate of outlier prevalence and designed a rule for identifying similar rates of outliers for other survey-assessed count variables based on distances of observed responses from the median. The median was selected because it is less sensitive to extreme outlier responses than the mean. Where the median value was zero, the rule was adjusted to remove a similar rate of extremely high values based on distances of observed values from the mean.

Summary of Results

Although there was some variability by applicant type, the factors that applicants considered most frequently when selecting programs to which to apply included perceived goodness of fit, desired geographic location, work/life balance, and quality of residents in the program. These results are generally consistent with those observed in 2021 and 2022. Similarly, the considerations applicants most frequently endorsed regarding ranking decisions were goodness of fit, interview day experience, desired geographic location, and work/life balance. The first three of these were also most frequently endorsed in the two previous years, but in those years, applicants less frequently indicated considering work/life balance. As in previous years, applicants in 2023 also valued such factors as program reputation; quality of educational curriculum and training, faculty, and program director; and balance between faculty supervision and resident responsibility for patient care.

Table 1. Distribution and Response Rates by Preferred Specialty and Applicant Type¹

Specialty	US MD Seniors			US DO Seniors			All Other Applicant Types ²		
	Surveys Sent	Number Responding	Response Rate (%)	Surveys Sent	Number Responding	Response Rate (%)	Surveys Sent	Number Responding	Response Rate (%)
Anesthesiology	1668	310	18.6%	479	108	22.5%	687	111	16.2%
Child Neurology	127	32	25.2%	24	6	25.0%	52	15	28.8%
Dermatology	562	94	16.7%	79	18	22.8%	212	28	13.2%
Emergency Medicine	1263	213	16.9%	716	114	15.9%	499	91	18.2%
Family Medicine	1414	234	16.5%	1411	201	14.2%	1901	381	20.0%
Internal Medicine	3785	580	15.3%	1637	231	14.1%	6566	1786	27.2%
Internal Medicine/Pediatrics	317	56	17.7%	55	14	25.5%	49	18	36.7%
Neurological Surgery	265	53	20.0%	11	2	18.2%	82	8	9.8%
Neurology	608	99	16.3%	196	32	16.3%	562	157	27.9%
Obstetrics and Gynecology	1261	286	22.7%	356	62	17.4%	370	74	20.0%
Orthopaedic Surgery	931	145	15.6%	230	33	14.3%	217	23	10.6%
Otolaryngology	368	80	21.7%	33	6	18.2%	69	4	5.8%
Pathology-Anatomic and Clinical	248	41	16.5%	98	19	19.4%	547	177	32.4%
Pediatrics	1636	314	19.2%	616	97	15.7%	857	266	31.0%
Physical Medicine and Rehabilitation	353	60	17.0%	255	47	18.4%	131	13	9.9%
Plastic Surgery (Integrated)	250	41	16.4%	4	1	25.0%	67	11	16.4%
Psychiatry	1456	225	15.5%	496	80	16.1%	766	149	19.5%
Radiology-Diagnostic	981	152	15.5%	225	45	20.0%	494	79	16.0%
Surgery-General	1234	215	17.4%	363	57	15.7%	918	105	11.4%
All other specialties ³	606	129	21.3%	103	21	10.3%	230	48	20.9%
No preferred specialty ⁴	338	20	5.9%	30	0	0.0%	404	58	14.4%
Total	19,671	3379	17.2%	7417	1194	15.9%	15,680	3602	25.4%

Findings indicate that applicants' consideration of program characteristics in decision making about application and ranking is likely based in part on preferred specialty and what applicants perceive as important to those specialties. For example, consider these comparisons of program characteristics considered in application decisions between applicants who preferred Psychiatry versus Orthopaedic Surgery:

- Of U.S. MD seniors who preferred Psychiatry, 70 percent reported considering program flexibility to pursue electives and interests, whereas 42 percent of U.S. MD seniors who preferred Orthopaedic Surgery reported considering the same factor.
- Of U.S. DO seniors who preferred Psychiatry, 51 percent reported considering future fellowship training opportunities at the institution, whereas 43 percent of U.S. DO seniors who preferred Orthopaedic Surgery reported considering the same factor.
- Of all applicants other than U.S. MD seniors and U.S. DO seniors who preferred Psychiatry, 52 percent reported considering cultural, racial, or ethnic diversity of the geographic location; in contrast, only 25 percent of those preferring Orthopaedic Surgery reported considering that factor.

Regarding program characteristics considered in ranking decisions:

- Among U.S. MD seniors who preferred Psychiatry, 75 percent said they considered work/life balance, compared with 54 percent of U.S. MD seniors who preferred Orthopaedic Surgery.
- Of U.S. DO seniors who preferred Psychiatry, 35 percent said they considered appropriate balance between faculty supervision and responsibility of residents for patient care, compared with 45 percent of U.S. DO seniors who preferred Orthopaedic Surgery.
- Of applicants other than U.S. MD seniors and U.S. DO seniors who preferred Psychiatry, 31 percent said they considered diversity of patient problems, compared with 13 percent who preferred Orthopaedic Surgery.

Other highlights:

- Broadly consistent with findings from previous years' Applicant Surveys, the median numbers of applications submitted by U.S. DO seniors and Other Applicant Types were higher than those submitted by U.S. MD seniors, regardless of match status. Across applicant types, unmatched applicants reported that they applied to more programs than matched applicants.
- Both matched and unmatched U.S. MD and U.S. DO seniors reported that they were offered and attended considerably more interviews than their counterparts of Other Applicant Types.
- Consistent with results observed in the 2021 and 2022 Applicant Surveys, matched U.S. MD and U.S. DO seniors reported that they obtained similar numbers of interviews.
 - However, consistent with 2022 but in contrast to the 2021 results, unmatched U.S. MD and U.S. DO seniors also reported that they obtained similar numbers of interviews.
- The largest numbers of applications were submitted by applicants preferring Internal Medicine, Dermatology, Otolaryngology, and Plastic Surgery. By contrast, the largest numbers of interviews offered were to applicants preferring Emergency Medicine and Child Neurology, and the largest numbers of interviews attended and programs ranked were among applicants who preferred Emergency Medicine and Otolaryngology.

The NRMP hopes that applicants, program directors, medical school officials, and faculty advisors find these data useful as they prepare for and participate in the Main Residency Match.

The NRMP's data reporting and research activities are guided by the NRMP Board of Directors Data Release and Research Committee. NRMP data and reports can be found at: <https://www.nrmp.org/match-data-analytics/residency-data-reports/>.