![THE MATCH - NATIONAL RESIDENT MATCHING PROGRAM]

CHARTING OUTCOMES™:
DEMOGRAPHIC CHARACTERISTICS OF APPLICANTS IN THE SPECIALTIES MATCHING SERVICE® (SMS®)

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Introduction

In January 2021, the NRMP Board of Directors voted to approve the collection of primary source demographic data from Specialties Matching Service applicants commencing with Fellowship Matches opening after January 1, 2022. The decision was based on months-long study, including solicitation of feedback from the undergraduate and graduate medical education communities and leaders of national learner organizations. Key considerations in favor of collecting demographic information from applicants included the ability to better understand and report on the composition of residency applicant populations, inform efforts to address diversity, equity, inclusion, and belonging goals in the transition to residency, and increase the transparency and understanding of the matching process. There is a critical need to understand the roles of applicant demographics and potentially related biases at all points in the UME-GME transition, from application submission and review through interviewing and ranking.

Identification of Content Domains and Sourcing of Items

A work group consisting of NRMP Board members was convened to identify appropriate content domains and items within those content domains for querying applicant demographics. The final set of content domains included sex assigned at birth, sexual orientation, current gender identity, race and ethnicity, urbanicity of childhood rearing environment, first-generation graduation from college, first-generation graduation from medical school, disability status, and accommodations requested and received during residency.

To the extent possible, the work group preferred that the domains include items from existing medical education and national questionnaires and align with the demographic data collection efforts of other medical education organizations. Toward that end, the NRMP conducted examinations of questionnaires administered by entities overseeing medical education (e.g., the Association of American Medical Colleges) and physician licensing (e.g., the Federation of State Medical Boards), as well as existing national health-related surveys of the general population. The work group also directed staff to review relevant literature to locate potentially suitable measures.

When items of interest could not be identified in existing surveys, special-purpose items were crafted by the work group. Those included questions addressing childhood urbanicity and first-generation college and medical graduation. The final selection of items used to query applicant demographics may be found in Appendix A.

Data Collection Procedures

Demographic data items are administered within the NRMP's Registration, Ranking, and Results (R3) system as part of Match registration. Applicants are introduced to the items with language that makes clear the data are collected for research purposes. They are told they may refuse consent for the use of their data in research and may opt out of answering any or all questions. Further, they are informed that their demographic data will never be incorporated into the matching algorithm, never be identifiable or disaggregated for the public, and never be provided in identifiable form to programs. The NRMP's demographic data collection protocol underwent Institutional Review Board (IRB) review and was determined to be exempt from IRB oversight.

Structure and Content of this Report

Data Cell Size Requirements

To preserve applicant confidentiality, a minimum cell size of 25 respondents was required for all data points included in the report. In some cases, that threshold affected which demographic characteristics could be reported (for instance, a specialty may not have the cell sizes to allow race to be reported). It also restricted which response options within a characteristic could be reported (i.e., race could be reported for a specialty but only for specific race groups like Black/African American, Asian, and White). The NRMP will collect data annually; accordingly, the ability to present data with increasing granularity will improve for all specialties over time without compromising applicant confidentiality.

Data Presentation

With the first iteration of the report, considerations about how best to present the data were purposely broad and exploratory, the overarching goal being to provide as much subspecialty-specific data as possible even if it resulted in the creation of different profiles across subspecialties. This report includes demographic characteristics reported by applicants who participated in the **Specialties Matching Service for appointment year 2023**. When future years of data are added to the report, the viewer will be able to choose to view the data for each year individually, or cumulatively, using the **Appointment Year dropdown menu**.

Viewers will have the ability to examine applicant demographics by both **preferred subspecialty** (i.e., the subspecialty of the program ranked first on each applicant's rank order list) and **matched subspecialty** (i.e., the subspecialty an applicant matched to through the match algorithm regardless of whether that subspecialty was preferred). Individual subspecialties can be selected from the **Preferred and Matched Subspecialty dropdown menus**. Because some subspecialties will not have enough data to populate any of the visualizations for at least the first few years of data collection, individuals viewing the visualizations will have the option to select individual subspecialties, or superordinate categories into which some of the smaller specialties have been rolled. To create these categories, individual subspecialties were grouped based on their ACGME specialty classification. There are a handful of cases where there are subspecialties not included in ACGME's specialty structure. In these instances, subspecialties were grouped based on which overarching specialty is assigned within the NRMP system. These specialty categories are reflected in the **Preferred and Matched Specialty Group dropdown menus**.

It is important to reiterate that preferred subspecialty is based on the first-ranked subspecialty on each applicant's rank order list and does not necessarily mean that an applicant obtained a position within that preferred subspecialty. For example, applicants whose preferred subspecialty is Pediatric Hematology/Oncology but who obtain a position in Pediatric Infectious Disease will appear in the visualizations under Pediatric Hematology/Oncology, _**not**_ Pediatric Infectious Disease.

In addition to the ability to examine the demographic information by subspecialty, many visualizations include an **Applicant Type dropdown menu**, which allows the viewer to view the information by each of the five applicant types included in the report.

For a full list of visualizations and other components of this report, viewers can visit the Table of Contents screen within the interactive version of the report. Below is a list of visualization types within each category, as well as a description of each.

- **Active Applicants by Preferred Subspecialty: Specialties Matching Service**—Demographic characteristics by preferred subspecialty—all applicant types. Viewers wishing to view only a subset of applicant types can select the applicant types they wish to view.

- **Active Applicants by Matched Subspecialty: Specialties Matching Service**—Demographic characteristics by matched subspecialty—all applicant types. Viewers wishing to view only a subset of applicant types can select the applicant types they wish to view.

- **Active Applicants by Preferred Subspecialty and Applicant Type: Specialties Matching Service**—Demographic characteristics by preferred subspecialty and applicant type.

- **Active Applicants by Matched Subspecialty and Applicant Type: Specialties Matching Service**—Demographic characteristics by matched subspecialty and applicant type.

- **Active Applicants Match Outcomes by Matched Subspecialty: Specialties Matching Service**—Demographic characteristics by matched subspecialty and Match outcomes.

- **Active Applicants Match Outcomes by Preferred Subspecialty: Specialties Matching Service**—Demographic characteristics by preferred subspecialty and Match outcomes.

- **Active Unmatched Applicants by Preferred Subspecialty: Specialties Matching Service**—Demographic characteristics of unmatched applicants by preferred subspecialty.

The visualizations included at the specialty level have between one and 8 demographic characteristics reported. In cases where only a subset of the available response options are reported (due to small cell sizes), the percentages included in the visualizations are based only on applicants who endorsed the response options with sufficient cell sizes to report. For example, in the Active Applicants by Match Outcomes visualizations, some cell sizes for the "unmatched by algorithm" response option are too small to report, leading to some categories reporting 100 percent of a grouping as having been matched by the algorithm. This represents 100 percent of the data included in the visualization after the removal of the prohibitively small cells but does not represent 100 percent of the underlying data.

Consistent with standard practice in analyses of survey data, the response options "I do not know" and "I prefer not to answer" were combined for all demographic characteristics that included these two options. For first-generation college and first-generation medical school graduation, the two "yes" categories (i.e., yes first in my immediate family, yes first in my extended family) were also combined. Please see Appendix A for additional detail about the demographic characteristics queried and associated response options.

Sample and Consent Rates for the Present Report

Sample

This section of the report highlights active applicants participating in the Specialties Matching Service (SMS) for fellowship appointment year 2023, which included 82 subspecialties and yielded a final sample size of 13,919 active applicants.

Consent Rates

Percentages of active applicants who consented to provide demographic data for research, combining over all applicant types, are shown in Table 3 by preferred subspecialty, and shown in Table 4 by matched subspecialty. Overall, 81.2 percent (N=11,309) of SMS applicants consented to provide demographic data for appointment year 2023. When looking at SMS applicants who *matched* to a subspecialty, 82.3 percent (N=9,509) consented to provide demographic data. Consent rates also varied both by subspecialty and by applicant type. Among subspecialties with at least 25 consenting active applicants, the highest consent rates were in Complex Family Planning (92.6 percent) by *preferred* subspecialty and in Female Pelvic Medicine and Reconstructive Surgery (OB/GYN) (93.5 percent) by *matched* subspecialty. The lowest consent rates were in Breast Imaging by both *preferred* subspecialty (66.5 percent) and by *matched* subspecialty (65.3 percent). Consent to provision of demographic data for research by applicant type, combining over preferred specialties, are shown in Table 1. The highest percentages consenting to use of data was observed among Canadian graduates (89.6 percent) while the lowest rate was observed among U.S. IMGs (76.7 percent).

"Do Not Know" and "Prefer Not to Answer" Responses

The percentages of active applicants who consented to provide demographic data for research and indicated that they did not know or preferred not to answer one or more items was 14.8 percent by *preferred* subspecialty and 14.4 percent by *matched* subspecialty. As noted previously, these two response options were combined for the analyses. Among applicants who did not know or preferred not to answer any items, the majority gave this response to only one question, accounting for 9.7 percent of the overall sample by *preferred* subspecialty and 9.6 percent of the overall sample by *matched* subspecialty. As with consent to provide demographic data, do not know/prefer not to answer responses to demographic questions varied by preferred subspecialty (Table 5) and matched subspecialty (Table 6). Among subspecialties with at least 25 consenting active applicants, the lowest rates of applicants who gave any do not know/prefer not to answer responses were in Pediatric Nephrology by both *preferred* subspecialty (6.1 percent) and *matched* subspecialty (6.3 percent). The highest rates of applicants endorsing these responses were in Pediatric Emergency Medicine (Emergency Medicine) by *preferred* subspecialty (22.6 percent) and in Sleep Medicine by *matched* subspecialty (24.1 percent). The lowest percentage of applicants providing any of these responses (see Table 2) was observed among U.S. MD graduates (12.9 percent) while the highest was observed among Canadian graduates (23.3 percent).

Table 1. Consent Rates (%) by Applicant Type—SMS Appointment Year 2023[1]

Applicant Type[2]	Total NRMP active applicants[3], N	Consented to provide demographic data, N (%)
U.S. MD Graduates	7,291	6,058 (83.1)
U.S. DO Graduates	2,119	1,679 (79.2)
U.S. IMGs	1,789	1,372 (76.7)
Non-U.S. IMGs	2,672	2,157 (80.7)
Canadian Graduates	48	43 (89.6)

[1] Fellowship applicants can participate in multiple Matches. For SMS appointment year 2023, there were 36 applicants who participated in more than one Match. These individuals are included in the table above, meaning the values included in the table are not unique applicant counts. The inclusion vs. exclusion of these applicants did not notably change the consent rates.

[2] Excludes Fifth Pathway applicants due to small subgroup sizes.

[3] Active applicants are applicants who certified a rank order list.

Table 2. "Do Not Know/Prefer Not to Answer" Responses to Demographic Questions by Applicant Type— SMS Appointment Year 2023[1]

Applicant Type[2]	Number of "Do Not Know/Prefer Not to Answer" Responses among Active Applicants[3], %[4]			
	0	1	2	3 or more
U.S. MD Graduates	87.1	8.6	1.7	2.6
U.S. DO Graduates	85.8	9.5	2.2	2.6
U.S. IMGs	81.3	11.2	2.8	4.7
Non-U.S. IMGs	82.0	11.6	2.8	3.6
Canadian Graduates	76.7	16.3	4.7	2.3

[1] Fellowship applicants can participate in multiple Matches. For SMS appointment year 2023, there were 36 applicants who participated in more than one Match. These individuals are included in the table above, meaning the values included in the table are not unique applicant counts. The inclusion vs. exclusion of these applicants did not notably change the observed percentage distributions.

[2] Excludes Fifth Pathway applicants due to small subgroup sizes.

[3] Active applicants are applicants who certified a rank order list.

[4] Some percentages may not add to 100 because of rounding.

Table 3. Consent Rates by Preferred Subspecialty—SMS Appointment Year 2023[1]

Preferred Subspecialty[2]	Number of Active Applicants[3]	Number Consenting to Provide Demographic Data for Research	Consent Rate (%)
Academic General Pediatrics	--	--	--
Addiction Medicine	151	120	79.5
Addiction Psychiatry	78	54	69.2
Adolescent Medicine	33	29	87.9
Adult Congenital Heart Disease	--	--	--
Advanced Heart Failure & Transplant Cardiology	74	59	79.7
Allergy and Immunology	191	153	80.1
Brain Injury Medicine (Neurology)	--	--	--
Brain Injury Medicine (Physical Medicine & Rehabilitation)	--	--	--
Breast Imaging	158	105	66.5
Cardiovascular Disease	1,659	1,327	80.0
Child Abuse	--	--	--
Child and Adolescent Psychiatry	356	277	77.8
Clinical Cardiac Electrophysiology	152	124	81.6
Clinical Ultrasound	159	130	81.8
Colon and Rectal Surgery	135	115	85.2
Complex Family Planning	27	25	92.6
Consultation-Liaison Psychiatry	86	73	84.9
Critical Care Medicine	204	161	78.9
Developmental and Behavioral Pediatrics	34	28	82.4
Emergency Medical Services	98	88	89.8
Emergency Radiology	--	--	--
Endocrinology, Diabetes, Metabolism	371	300	80.9
Female Pelvic Medicine and Reconstructive Surgery (OB/GYN)	50	45	90.0
Female Pelvic Medicine and Reconstructive Surgery (Urology)	--	--	--
Gastroenterology	1,039	796	76.6
Geriatric Medicine (Family Medicine)	--	--	--
Geriatric Medicine (Internal Medicine)	160	134	83.8
Global Emergency Medicine	--	--	--
Gynecologic Oncology	109	89	81.7
Hand Surgery (General Surgery)	--	--	--
Hand Surgery (Orthopaedic Surgery)	176	153	86.9
Hand Surgery (Plastic Surgery)	--	--	--
Headache Medicine	40	31	77.5
Hematology and Oncology	923	751	81.4
Hospice and Palliative Medicine	420	338	80.5
Infectious Disease	330	278	84.2
Interventional Pulmonology	65	53	81.5
Interventional Radiology	127	91	71.7

Laryngology	--	--	--
Maternal-Fetal Medicine	163	135	82.8
Medical Genetics	--	--	--
Medical Toxicology	70	58	82.9
Minimally Invasive Gynecologic Surgery	80	70	87.5
Musculoskeletal Radiology	166	130	78.3
Neonatal-Perinatal Medicine	288	252	87.5
Nephrology	368	295	80.2
Neuroradiology	273	203	74.4
Oncology	--	--	--
Pain Medicine	415	311	74.9
Pediatric Anesthesiology	142	121	85.2
Pediatric Cardiology	182	156	85.7
Pediatric Critical Care Medicine	226	190	84.1
Pediatric Emergency Medicine (Emergency Medicine)	63	53	84.1
Pediatric Emergency Medicine (Pediatrics)	181	167	92.3
Pediatric Endocrinology	65	57	87.7
Pediatric Gastroenterology	124	104	83.9
Pediatric Hematology/Oncology	159	142	89.3
Pediatric Hospital Medicine	120	105	87.5
Pediatric Infectious Diseases	38	30	79.0
Pediatric Nephrology	37	33	89.2
Pediatric Pulmonology	57	44	77.2
Pediatric Rehabilitation Medicine	--	--	--
Pediatric Rheumatology (Pediatrics)	--	--	--
Pediatric Sports Medicine	36	31	86.1
Pediatric Surgery	82	73	89.0
Pediatric Transplant Hepatology	--	--	--
Pediatric and Adolescent Gynecology	--	--	--
Pulmonary Disease	--	--	--
Pulmonary Disease and Critical Care Medicine	930	754	81.1
Reproductive Endocrinology	77	61	79.2
Rheumatology	352	288	81.8
Sleep Medicine	190	145	76.3
Spinal Cord Injury Medicine	--	--	--
Sports Medicine (Emergency Medicine)	--	--	--
Sports Medicine (Family Medicine)	335	280	83.6
Sports Medicine (Physical Medicine and Rehabilitation)	56	50	89.3
Surgical Critical Care	289	253	87.5
Surgical Oncology	80	68	85.0
Thoracic Surgery	164	136	82.9
Vascular Neurology	190	154	81.1
Vascular Surgery	178	147	82.6
TOTAL	**13,919**	**11,309**	**81.2**

[1] Fellowship applicants can participate in multiple Matches. For SMS appointment year 2023, there were 36 applicants who participated in more than one Match. These individuals are included in the table above, meaning the values included in the table are not unique applicant counts. The inclusion vs. exclusion of these applicants did not notably change the observed consent rates.

[2] Subspecialties that did not meet the minimum cell size for reporting of data are included as rows in the table with no data reported, denoted by "--".
[3] Active applicants are applicants who certified a rank order list.

Table 4. Consent Rates by Matched Subspecialty—SMS Appointment Year 2023[1]

Matched Subspecialty[2]	Number of Active Applicants[3]	Number Consenting to Provide Demographic Data for Research	Consent Rate (%)
Academic General Pediatrics	--	--	--
Addiction Medicine	141	113	80.1
Addiction Psychiatry	75	54	72.0
Adolescent Medicine	30	26	86.7
Adult Congenital Heart Disease	--	--	--
Advanced Heart Failure & Transplant Cardiology	71	57	80.3
Allergy and Immunology	153	129	84.3
Brain Injury Medicine (Neurology)	--	--	--
Brain Injury Medicine (Physical Medicine & Rehabilitation)	--	--	--
Breast Imaging	150	98	65.3
Cardiovascular Disease	1,152	941	81.7
Child Abuse	--	--	--
Child and Adolescent Psychiatry	333	263	79.0
Clinical Cardiac Electrophysiology	129	105	81.4
Clinical Ultrasound	151	122	80.8
Colon and Rectal Surgery	109	97	89.0
Complex Family Planning	--	--	--
Consultation-Liaison Psychiatry	82	70	85.4
Critical Care Medicine	176	139	79.0
Developmental and Behavioral Pediatrics	31	25	80.7
Emergency Medical Services	83	76	91.6
Emergency Radiology	--	--	--
Endocrinology, Diabetes, Metabolism	341	281	82.4
Female Pelvic Medicine and Reconstructive Surgery (OB/GYN)	46	43	93.5
Female Pelvic Medicine and Reconstructive Surgery (Urology)	--	--	--
Gastroenterology	656	523	79.7
Geriatric Medicine (Family Medicine)	--	--	--
Geriatric Medicine (Internal Medicine)	153	128	83.7
Global Emergency Medicine	--	--	--
Gynecologic Oncology	78	67	85.9
Hand Surgery (General Surgery)	--	--	--
Hand Surgery (Orthopaedic Surgery)	156	135	86.5
Hand Surgery (Plastic Surgery)	--	--	--
Headache Medicine	36	28	77.8
Hematology and Oncology	706	580	82.2

Hospice and Palliative Medicine	390	316	81.0
Infectious Disease	328	277	84.5
Interventional Pulmonology	45	37	82.2
Interventional Radiology	125	89	71.2
Laryngology	--	--	--
Maternal-Fetal Medicine	137	113	82.5
Medical Genetics	--	--	--
Medical Toxicology	49	43	87.8
Minimally Invasive Gynecologic Surgery	45	41	91.1
Musculoskeletal Radiology	164	129	78.7
Neonatal-Perinatal Medicine	268	237	88.4
Nephrology	359	287	79.9
Neuroradiology	261	194	74.3
Oncology	--	--	--
Pain Medicine	358	270	75.4
Pediatric Anesthesiology	137	116	84.7
Pediatric Cardiology	165	143	86.7
Pediatric Critical Care Medicine	204	175	85.8
Pediatric Emergency Medicine (Emergency Medicine)	54	48	88.9
Pediatric Emergency Medicine (Pediatrics)	161	150	93.2
Pediatric Endocrinology	66	57	86.4
Pediatric Gastroenterology	112	94	83.9
Pediatric Hematology/Oncology	156	140	89.7
Pediatric Hospital Medicine	99	86	86.9
Pediatric Infectious Diseases	40	32	80.0
Pediatric Nephrology	36	32	88.9
Pediatric Pulmonology	58	44	75.9
Pediatric Rehabilitation Medicine	--	--	--
Pediatric Rheumatology	--	--	--
Pediatric Sports Medicine	--	--	--
Pediatric Surgery	49	44	89.8
Pediatric Transplant Hepatology	--	--	--
Pediatric and Adolescent Gynecology	--	--	--
Pulmonary Disease	--	--	--
Pulmonary Disease and Critical Care Medicine	730	603	82.6
Reproductive Endocrinology	48	38	79.2
Rheumatology	265	223	84.2
Sleep Medicine	178	141	79.2
Spinal Cord Injury Medicine	--	--	--
Sports Medicine (Emergency Medicine)	--	--	--
Sports Medicine (Family Medicine)	270	226	83.7
Sports Medicine (Physical Medicine & Rehabilitation)	36	33	91.7
Surgical Critical Care	270	236	87.4
Surgical Oncology	71	60	84.5
Thoracic Surgery	92	80	87.0
Vascular Neurology	177	145	81.9
Vascular Surgery	136	115	84.6
TOTAL	**11,548**	**9,509**	**82.3**

[1] Fellowship applicants can participate in multiple Matches. For SMS appointment year 2023, there were 36 applicants who participated in more than one Match. These individuals are included in the table above, meaning the values included in the table are not unique applicant counts. The inclusion vs. exclusion of these applicants did not notably change the observed consent rates.

[2] Subspecialties that did not meet the minimum cell size for reporting of data are included as rows in the table with no data reported, denoted by "--".

[3] Active applicants are applicants who certified a rank order list.

Table 5. "Do Not Know/Prefer Not to Answer" Responses to Demographic Questions by Preferred Subspecialty—SMS Appointment Year 2023[1]

Preferred Subspecialty[2]	Number of "Do Not Know/Prefer Not to Answer" Responses among Active Applicants[3], %[4]			
	0	1	2	3 or more
Academic General Pediatrics	--	--	--	--
Addiction Medicine	81.7	13.3	2.5	2.5
Addiction Psychiatry	81.5	11.1	3.7	3.7
Adolescent Medicine	79.3	10.3	3.5	6.9
Adult Congenital Heart Disease	--	--	--	--
Advanced Heart Failure & Transplant Cardiology	88.1	6.8	1.7	3.4
Allergy and Immunology	81.7	9.2	3.9	5.2
Brain Injury Medicine (Neurology)	--	--	--	--
Brain Injury Medicine (Physical Medicine & Rehabilitation)	--	--	--	--
Breast Imaging	81.9	11.4	2.9	3.8
Cardiovascular Disease	86.4	7.3	2.1	4.2
Child Abuse	--	--	--	--
Child and Adolescent Psychiatry	80.1	15.5	2.9	1.4
Clinical Cardiac Electrophysiology	83.9	8.1	0.0	8.1
Clinical Ultrasound	85.4	10.0	1.5	3.1
Colon and Rectal Surgery	89.6	8.7	0.9	0.9
Complex Family Planning	92.0	8.0	0.0	0.0
Consultation-Liaison Psychiatry	82.2	8.2	4.1	5.5
Critical Care Medicine	81.4	14.9	1.9	1.9
Developmental and Behavioral Pediatrics	85.7	14.3	0.0	0.0
Emergency Medical Services	90.9	6.8	1.1	1.1
Emergency Radiology	--	--	--	--
Endocrinology, Diabetes, Metabolism	81.7	14.3	2.0	2.0
Female Pelvic Medicine and Reconstructive Surgery (OB/GYN)	88.9	11.1	0.0	0.0
Female Pelvic Medicine and Reconstructive Surgery (Urology)	--	--	--	--
Gastroenterology	85.4	8.7	2.9	3.0
Geriatric Medicine (Family Medicine)	--	--	--	--
Geriatric Medicine (Internal Medicine)	79.9	14.2	1.5	4.5
Global Emergency Medicine	--	--	--	--
Gynecologic Oncology	88.8	9.0	2.3	0.0
Hand Surgery (General Surgery)	--	--	--	--
Hand Surgery (Orthopaedic Surgery)	92.8	5.2	0.0	2.0
Hand Surgery (Plastic Surgery)	--	--	--	--
Headache Medicine	80.7	9.7	3.2	6.5

Hematology and Oncology	87.8	7.9	1.5	2.9
Hospice and Palliative Medicine	82.0	12.7	2.7	2.7
Infectious Disease	83.1	13.3	1.8	1.8
Interventional Pulmonology	81.1	18.9	0.0	0.0
Interventional Radiology	82.4	8.8	3.3	5.5
Laryngology	--	--	--	--
Maternal-Fetal Medicine	83.0	14.1	1.5	1.5
Medical Genetics	--	--	--	--
Medical Toxicology	81.0	15.5	0.0	3.5
Minimally Invasive Gynecologic Surgery	90.0	8.6	1.4	0.0
Musculoskeletal Radiology	83.9	6.9	3.1	6.2
Neonatal-Perinatal Medicine	87.7	6.8	2.8	2.8
Nephrology	84.4	10.5	3.1	2.0
Neuroradiology	85.2	8.4	1.0	5.4
Oncology	--	--	--	--
Pain Medicine	83.0	9.3	2.6	5.1
Pediatric Anesthesiology	83.5	13.2	0.8	2.5
Pediatric Cardiology	91.0	5.8	1.3	1.9
Pediatric Critical Care Medicine	89.5	8.4	0.5	1.6
Pediatric Emergency Medicine (Emergency Medicine)	77.4	15.1	7.6	0.0
Pediatric Emergency Medicine (Pediatrics)	87.4	7.8	3.0	1.8
Pediatric Endocrinology	82.5	14.0	1.8	1.8
Pediatric Gastroenterology	88.5	8.7	0.0	2.9
Pediatric Hematology/Oncology	88.0	9.2	0.7	2.1
Pediatric Hospital Medicine	88.6	8.6	1.0	1.9
Pediatric Infectious Diseases	83.3	13.3	0.0	3.3
Pediatric Nephrology	93.9	0.0	6.1	0.0
Pediatric Pulmonology	90.9	4.6	4.6	0.0
Pediatric Rehabilitation Medicine	--	--	--	--
Pediatric Rheumatology	--	--	--	--
Pediatric Sports Medicine	80.7	12.9	3.2	3.2
Pediatric Surgery	89.0	6.9	4.1	0.0
Pediatric Transplant Hepatology	--	--	--	--
Pediatric and Adolescent Gynecology	--	--	--	--
Pulmonary Disease	--	--	--	--
Pulmonary Disease and Critical Care Medicine	85.4	10.1	1.9	2.7
Reproductive Endocrinology	86.9	6.6	4.9	1.6
Rheumatology	81.6	10.8	3.5	4.2
Sleep Medicine	77.9	13.1	4.1	4.8
Spinal Cord Injury Medicine	--	--	--	--
Sports Medicine (Emergency Medicine)	--	--	--	--
Sports Medicine (Family Medicine)	84.3	10.4	3.2	2.1
Sports Medicine (Physical Medicine & Rehabilitation)	84.0	8.0	2.0	6.0
Surgical Critical Care	86.6	9.1	1.2	3.2
Surgical Oncology	88.2	5.9	1.5	4.4
Thoracic Surgery	89.0	7.4	2.9	0.7
Vascular Neurology	85.1	11.7	1.3	2.0
Vascular Surgery	85.7	8.2	0.0	6.1
TOTAL	**85.2**	**9.7**	**2.1**	**3.0**

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values included in the table are not unique applicant counts. The inclusion vs. exclusion of these applicants did not notably change the observed percentage distributions.

[2] Subspecialties that did not meet the minimum cell size for reporting of data are included as rows in the table with no data reported, denoted by "--".

[3] Active applicants are applicants who certified a rank order list.

[4] Some percentages may not add to 100 because of rounding.

Table 6. "Do Not Know/Prefer Not to Answer" Responses to Demographic Questions by Matched Subspecialty—SMS Appointment Year 2023[1]

Matched Subspecialty[2]	Number of "Do Not Know/Prefer Not to Answer" Responses among Active Applicants[3], %[4]			
	0	1	2	3 or more
Academic General Pediatrics	--	--	--	--
Addiction Medicine	82.3	13.3	2.7	1.8
Addiction Psychiatry	81.5	11.1	3.7	3.7
Adolescent Medicine	76.9	11.5	3.9	7.7
Adult Congenital Heart Disease	--	--	--	--
Advanced Heart Failure & Transplant Cardiology	87.7	7.0	1.8	3.5
Allergy and Immunology	82.2	10.1	3.1	4.7
Brain Injury Medicine (Neurology)	--	--	--	--
Brain Injury Medicine (Physical Medicine & Rehabilitation)	--	--	--	--
Breast Imaging	83.7	11.2	3.1	2.0
Cardiovascular Disease	87.7	7.0	1.8	3.5
Child Abuse	--	--	--	--
Child and Adolescent Psychiatry	80.6	14.8	3.0	1.5
Clinical Cardiac Electrophysiology	85.7	8.6	0.0	5.7
Clinical Ultrasound	85.3	10.7	1.6	2.5
Colon and Rectal Surgery	90.7	7.2	1.0	1.0
Complex Family Planning	--	--	--	--
Consultation-Liaison Psychiatry	82.9	8.6	4.3	4.3
Critical Care Medicine	82.7	13.7	0.7	2.9
Developmental and Behavioral Pediatrics	84.0	16.0	0.0	0.0
Emergency Medical Services	90.8	6.6	1.3	1.3
Emergency Radiology	--	--	--	--
Endocrinology, Diabetes, Metabolism	81.9	13.9	2.5	1.8
Female Pelvic Medicine and Reconstructive Surgery (OB/GYN)	86.1	14.0	0.0	0.0
Female Pelvic Medicine and Reconstructive Surgery (Urology)	--	--	--	--
Gastroenterology	85.3	9.6	2.7	2.5
Geriatric Medicine (Family Medicine)	--	--	--	--
Geriatric Medicine (Internal Medicine)	79.7	14.8	1.6	3.9
Global Emergency Medicine	--	--	--	--
Gynecologic Oncology	86.6	10.5	3.0	0.0
Hand Surgery (General Surgery)	--	--	--	--
Hand Surgery (Orthopaedic Surgery)	91.9	5.9	0.0	2.2
Hand Surgery (Plastic Surgery)	--	--	--	--
Headache Medicine	85.7	7.1	0.0	7.1
Hematology and Oncology	88.6	7.6	1.6	2.2
Hospice and Palliative Medicine	82.6	12.7	1.9	2.9

Infectious Disease	83.8	12.6	1.8	1.8
Interventional Pulmonology	83.8	16.2	0.0	0.0
Interventional Radiology	82.0	9.0	3.4	5.6
Laryngology	--	--	--	--
Maternal-Fetal Medicine	88.5	9.7	0.9	0.9
Medical Genetics	--	--	--	--
Medical Toxicology	81.4	16.3	0.0	2.3
Minimally Invasive Gynecologic Surgery	90.2	9.8	0.0	0.0
Musculoskeletal Radiology	83.7	7.0	3.1	6.2
Neonatal-Perinatal Medicine	87.8	6.8	3.0	2.5
Nephrology	84.7	10.1	3.1	2.1
Neuroradiology	84.5	8.8	1.0	5.7
Oncology	--	--	--	--
Pain Medicine	81.9	10.0	2.6	5.6
Pediatric Anesthesiology	84.5	12.9	0.9	1.7
Pediatric Cardiology	90.9	6.3	1.4	1.4
Pediatric Critical Care Medicine	89.1	9.1	0.0	1.7
Pediatric Emergency Medicine (Emergency Medicine)	83.3	8.3	8.3	0.0
Pediatric Emergency Medicine (Pediatrics)	88.0	9.3	1.3	1.3
Pediatric Endocrinology	82.5	14.0	1.8	1.8
Pediatric Gastroenterology	90.4	8.5	0.0	1.1
Pediatric Hematology/Oncology	87.9	9.3	0.7	2.1
Pediatric Hospital Medicine	91.9	5.8	1.2	1.2
Pediatric Infectious Diseases	78.1	15.6	3.1	3.1
Pediatric Nephrology	93.8	0.0	6.3	0.0
Pediatric Pulmonology	90.9	4.6	4.6	0.0
Pediatric Rehabilitation Medicine	--	--	--	--
Pediatric Rheumatology	--	--	--	--
Pediatric Sports Medicine	--	--	--	--
Pediatric Surgery	90.9	6.8	2.3	0.0
Pediatric Transplant Hepatology	--	--	--	--
Pediatric and Adolescent Gynecology	--	--	--	--
Pulmonary Disease	--	--	--	--
Pulmonary Disease and Critical Care Medicine	85.2	10.3	1.8	2.7
Reproductive Endocrinology	86.8	7.9	2.6	2.6
Rheumatology	84.8	9.0	2.7	3.6
Sleep Medicine	75.9	14.2	4.3	5.7
Spinal Cord Injury Medicine	--	--	--	--
Sports Medicine (Emergency Medicine)	--	--	--	--
Sports Medicine (Family Medicine)	87.6	8.0	2.7	1.8
Sports Medicine (Physical Medicine & Rehabilitation)	87.9	6.1	0.0	6.1
Surgical Critical Care	86.4	8.9	1.3	3.4
Surgical Oncology	91.7	1.7	1.7	5.0
Thoracic Surgery	87.5	7.5	3.8	1.3
Vascular Neurology	85.5	12.4	0.7	1.4
Vascular Surgery	83.5	9.6	0.0	7.0
TOTAL	**85.6**	**9.6**	**2.0**	**2.8**

[1] Fellowship applicants can participate in multiple Matches. For SMS appointment year 2023, there were 36 applicants who participated in more than one Match. These individuals are included in the table above, meaning the values included in the table are not unique applicant counts. The inclusion vs. exclusion of these applicants did not notably change the observed percentage distributions.

[2] Subspecialties that did not meet the minimum cell size for reporting of data are included as rows in the table with no data reported, denoted by "--".
[3] Active applicants are applicants who certified a rank order list.
[4] Some percentages may not add to 100 because of rounding.

Appendix A

Below is a list of the demographic items that were queried of applicants participating in the Specialties Matching Service for fellowship appointment year 2023. Due to small cell sizes, not all demographic items could be presented in the report. In future years, as sample size accrues, additional variables and response options will be reported for more specialties and at greater levels of granularity.

Items	Source(s)
Are you of Hispanic, Latino, or Spanish origin or descent? ☐ Yes ☐ No ☐ Don't know/decline to answer **(***If of Hispanic, Latino, or Spanish origin or descent*:) Which of these Hispanic, Latino, or Spanish groups best describes you? (*More than one category may be selected.***) ☐ Mexican, Mexican American, Mexicano, or Chicano ☐ Puerto Rican ☐ Central or South American ☐ Cuban or Cuban American ☐ Dominican (from Dominican Republic) ☐ Spanish (from Spain) ☐ Other (specify) _____ ☐ I do not know ☐ I prefer not to answer Which of these groups describes you? (*More than one category may be selected.*)[a] ☐ White ☐ Black or African American ☐ American Indian or Alaska Native (American Indian includes North American, Central American, and South American Indians)	Adapted from Substance Abuse and Mental Health Services Administration National Survey on Drug Use and Health

☐ Native Hawaiian

☐ Guamanian or Chamorro

☐ Samoan

☐ Other Pacific Islander

☐ Asian (including: Asian Indian, Pakistani, Bangladeshi, Sri Lankan, Chinese, Filipino, Japanese, Korean, and Vietnamese)

☐ Other (specify) _____

☐ I do not know

☐ I prefer not to answer

(*If identified as Asian*:)

Please tell me which of these Asian groups describes you?

☐ Asian Indian

☐ Pakistani

☐ Bangladeshi

☐ Sri Lankan

☐ Chinese

☐ Filipino

☐ Japanese

☐ Korean

☐ Vietnamese

☐ Other (specify) _____

☐ I do not know

☐ I prefer not to answer

(*If identified as other racial group 2 questions previously*)

Please tell me which other racial group describes you

_____

☐ I do not know

☐ I prefer not to answer

How would you characterize the area in which you grew up? ☐ Rural ☐ Suburban ☐ Urban ☐ I do not know ☐ I prefer not to answer	Developed by Work Group
Are you the first member of your family to graduate from college? ☐ Yes, immediate family ☐ Yes, extended family ☐ No ☐ I do not know ☐ I prefer not to answer	Developed by Work Group
Are you the first member of your family to graduate from medical school? ☐ Yes, immediate family ☐ Yes, extended family ☐ No ☐ I do not know ☐ I prefer not to answer	Developed by Work Group
What sex were you assigned at birth? ☐ Male ☐ Female ☐ I prefer not to answer	Association of American Medical Colleges (AAMC) Matriculating Student Questionnaire (MSQ) and Year 2 Questionnaire (Y2Q), 2020
What is your current gender identity? Select all that apply: ☐ Male ☐ Female ☐ Trans male/Trans man ☐ Trans female/Trans woman ☐ Genderqueer/gender nonconforming	AAMC MSQ and Y2Q, 2020

☐ Different identity (please state) _____ ☐ I prefer not to answer	
How do you self-identify? ☐ Bisexual ☐ Gay or lesbian ☐ Heterosexual or straight ☐ I do not know ☐ I prefer not to answer If one of the above three identities did not best describe you, then with what identity do you feel more comfortable? I self-identify as: _____ ☐ I prefer not to answer	Adapted from AAMC Y2Q and MSQ, 2020
Are you a person with a disability (e.g., ADHD, learning, psychological, chronic health, mobility, hearing, vision, etc.)? ☐ Yes ☐ No ☐ I do not know ☐ I prefer not to answer	AAMC Y2Q, 2020
(*If responded affirmatively to the above*:) Which of the following best describes your disability? If you have more than one type, select all that apply. (Optional: please add a brief description where provided.) ☐ Attention deficit/hyperactivity disorder ☐ Chronic health disability ☐ Deaf or hard of hearing ☐ Learning disability ☐ Mobility disability ☐ Psychological disability ☐ Visual disability ☐ Other	AAMC Y2Q, 2020

☐ I do not know ☐ I prefer not to answer	
(*If responded "yes" to disability question*:) Did you request accommodations from your residency program? ☐ Yes ☐ No ☐ I do not know ☐ I prefer not to answer	AAMC Y2Q, 2020
(*If responded "yes" to whether requested accommodations*:) Has your residency program provided accommodations for your disability? ☐ Yes ☐ No ☐ I do not know ☐ I prefer not to answer	AAMC Y2Q, 2020
(*If accommodation not provided*:) Which of the following best describes why your residency program did not or has not provided accommodations? ☐ My request for accommodations was denied ☐ My request for accommodations is under review ☐ I do not know ☐ I prefer not to answer	AAMC Y2Q, 2020
(*If responded "no" to whether requested accommodations*:) Which of the following best describes why you did not request accommodations from your residency program? ☐ I have not requested accommodations because I feel I do not need accommodations ☐ I have not requested accommodations for other reasons (*Please specify*: _____) ☐ I do not know	AAMC Y2Q, 2020

☐ I prefer not to answer	

[a] Applicant-reported race is reported here with each applicant classified in a single category based on a modification of the Census Bureau algorithm as implemented in the 2010 Census. In the future the NRMP Research Team plans to explore other approaches that may have greater utility for classification. Going forward the NRMP Research Team will also examine the subgroup compositions of the race identity categories and develop additional codes for them as needed.

In the categorization used for this report, applicants were assigned to categories using the following order of precedence: Native American/Alaska Native, Pacific Islander, Asian, Black/African American, White, and Other.

Version History

Version Number	Date Published	Description of changes since previous version
1.1	August 21, 2023	N/A
2.0	March 5, 2024	Two corrections were made to the *narrative text only* (i.e., no corrections within the Tableau interactive report were needed): • Version 1.1 was inadvertently **not** restricted to active applicants. All counts and percentages in version 2.0 are restricted to active applicants. • A typo resulted in "Do Not Know/Prefer Not to Answer" responses to the gender identity question not being counted in Tables 2, 5, and 6 of version 1.1. This has been corrected in version 2.0.