

The Single Match: Reflections on the National Resident Matching Program's Sustained Partnership With Learners

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Abstract

In 2020, the National Resident Matching Program (NRMP) sponsored the inaugural “Single Match”—the first time that seniors and graduates of U.S. MD-granting and DO-granting schools participated in one Match. In honor of the Single Match milestone, the authors examine the NRMP's history, reflecting on the organization's efforts since the 1950s to support learners and the graduate medical

education community by fostering a responsive, robust matching program while remaining true to its founding principles to provide parity of experience for applicants and reduce coercive practices. The chaos and stress associated with the pre-Match days in the 1920s and 1930s that led to the call for a national clearinghouse are highlighted as are significant NRMP accomplishments, from the organization's

incorporation as a 501(c)(3) organization in 1953 as a simple internship placement system through the first Single Match. Recognizing that the current transition to residency is not without its stressors, the authors note that the NRMP remains committed and willing to continue to evolve and identify innovative and meaningful ways to address learner needs and improve the transition to residency.

The 2020 Main Residency Match marked a significant milestone for the National Resident Matching Program (NRMP) and the medical education community. The 2020 Match was the inaugural “Single Match”—the first time that seniors and graduates of U.S. MD-granting and DO-granting schools participated in one Match. The Single Match reflects the realization of the Single Accreditation System for U.S. residency programs, which was created and promoted by the Accreditation Council for Graduate Medical Education (ACGME), the American Osteopathic Association (AOA), and the American Association of Colleges of Osteopathic Medicine.¹

In honor of this NRMP milestone, we felt it appropriate, as current and former learner members of the NRMP Board of

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Directors, with support of NRMP staff, to reflect on the NRMP's history—namely, its relationship with learners and the critical role it has played and continues to play in learners' transition from undergraduate to graduate medical education.

Before the Match

There are few practicing physicians today who can accurately describe for medical students what the high-pressure struggle for internships was like before the Match.²

The internship was formalized in the early 1900s as a critical component of medical education. By the 1930s, hospitals' race to sign medical students to training had become fiercely competitive. As internship positions outnumbered the graduating medical school seniors available to fill them, hospitals extended offers to students (via telegram and, more urgently, by telephone) as early as their second year. Students had only hours to accept or reject these offers. Mullin noted that the competition and absence of structure bred unfairness, inequality, and unwarranted pressure.³

In 1927, the *Bulletin of the Association of American Medical Colleges* published a letter from Dr. William Darrach, dean of Columbia University College of Physicians and Surgeons, to Dr. Fred C. Zapffe, executive secretary of

the Association of American Medical Colleges (AAMC), announcing a plan for deferred acceptance of interns (i.e., waiting to appoint interns to residency positions until all candidates had been considered) at Presbyterian Hospital in New York City.⁴ The letter was published as support for changes to a process described in an editorial note as having “proven to be a most vexatious matter in the past. Courses have been disrupted by the scramble for hospital positions; the [students'] work has suffered and hospitals have not profited.”⁴ In the 1930s and 1940s, others advocated for changes to the “prevalent disorder” in intern selection and “chaotic situation” in schools and hospitals that led to “an epidemic of worry” among students.^{5,6} National organizations and associations passed resolutions calling for a streamlined process for internship placement or attempted “fixes” at the regional level, but none of the efforts were successful.⁵

A Match to Support Learners

By 1950, a centralized clearinghouse for internship placement had been proposed.³ The early model was endorsed by national medical and medical education associations to facilitate matching students to internship positions based on confidential rank order lists created by both hospitals and students. The aim was to establish a uniform timeline for all intern appointments.

Dissatisfied with the design of the proposed model, a group of Harvard Medical School students, led by W. Hardy Hendren III, approached the school's leadership in 1951 to oppose the algorithm.⁷ They believed it inadvertently penalized students for using the first choice on their rank order lists to “reach” for positions they wanted but for which they might be less qualified and thus unlikely to obtain. Hendren and colleagues rallied the class presidents at the 79 existing U.S. medical schools to push for proposed modifications that would make the algorithm more equitable for students. The students' efforts were successful, and the National Internersociation Committee on Internships (NICI)—comprising leaders from national medical education organizations including the AAMC, American Medical Association, and American Hospital Association—agreed to modify the model in time for the 1952 NICI Match.

After the first NICI Match, the NRMP (initially known as the National Internship Matching Program) was incorporated as a 501(c)(3) organization in 1953 and over time built a matching program to support learners. In 1984, couples matching was introduced so partners could try to obtain training at a pair of programs, usually in the same geographic location. In 1988, advanced specialties were added to the Match so applicants could attempt to secure positions for postgraduate years (PGYs) 1 and 2 simultaneously to achieve a full course of training. That year, the NRMP also introduced WebROLIC, the first web-based iteration of the Registration, Ranking, and Results (R3) system, which provided students 40 more days to consider and input their ranking preferences.

In 1995, another significant learner-centered change took place with the commissioning of a new “applicant proposing” algorithm by the NRMP Board of Directors. A study comparing the new algorithm with the former also was commissioned to determine whether the former algorithm favored hospital preferences over student preferences.⁸ Although the investigation found that the new algorithm would have changed Match outcomes for only 1 of 1,000 applicants participating in prior Matches, the NRMP adopted the new algorithm at

its May 1997 Board Meeting and has used it since the 1998 Match.

A Single Match for the Graduate Medical Education Community

The AOA Match in the form most people in medical education today would recognize began in 1995, but the AOA Match had served as an osteopathic internship placement system since the 1950s.⁹ Although a relatively small number of residency programs dually accredited by the ACGME and AOA had participated for years in both the NRMP and AOA matching programs, it was not until the transition toward the Single Accreditation System was underway that the number of positions in the NRMP Match offered by osteopathic programs started to grow. By the end of 2019, 87% of positions in osteopathic programs were ACGME-accredited.¹⁰ In the 2020 Match, 2,672 positions were offered by 520 programs previously accredited by the AOA.¹¹

Although osteopathic programs are relatively new to the NRMP, DO students and graduates have been a part of the NRMP fabric for at least as long as the NRMP has been reporting Match outcomes data. In the 2011 Match, 2,178 active DO applicants submitted certified rank order lists.¹² Five years later, that number had grown to 2,982, an increase of 37%.¹³ In 2020 and the first Single Match, the number of active DO applicants had risen to 7,154, with DO seniors in particular earning a 90.7% match rate, the highest on record for that group.¹¹

As the transition toward the Single Accreditation System gained momentum and the Single Match became a growing reality with the planned shuttering of the AOA Match in 2019, the NRMP increased its commitment to supporting DO learners. In 2016, it expanded its reporting to target DO learner communities and highlight Match outcomes for DOs with publications like “Charting Outcomes in the Match for U.S. Osteopathic Medical Students and Graduates,” which presents the characteristics and qualifications of DO seniors who have matched to their preferred specialties.¹⁴ With the 2020 Match, the NRMP expanded its definition of *sponsored applicants* to include DO senior students: Sponsored applicants are

students at medical schools accredited by the Liaison Committee on Medical Education or the Commission on Osteopathic College Accreditation who can be offered training positions only through the NRMP or another national matching plan. As sponsored applicants, DO senior students are protected alongside U.S. MD senior students, through the NRMP's Match Participation Agreement, from being pressured to accept non-Match positions that could potentially limit their rights to freely and fully investigate all choices for training.

In addition, the NRMP looked inward at its governing board to reflect on its diversity and ability to represent all stakeholders. In 2018, the NRMP Board of Directors elected the first DO student director, and in 2020, it revised its bylaws to include DO representation at the physician and resident physician levels.

A Sustained Focus on Learners

Responding to and supporting the needs of learners has remained a priority of the NRMP over time (see Chart 1). In 2008, the NRMP partnered with the AAMC to convene a work group to address the “Scramble,” the chaotic period during Match Week in which applicants who were unmatched when the matching algorithm was processed attempted to secure unfilled positions. The Scramble resembled the early days before the Match: a lack of stewardship over the process, no trust or transparency, and no binding nature of contracts. Thus, unmatched applicants were compelled to make decisions about their training in a very short time frame. Recognizing these applicants deserved a more organized method to secure training, the Supplemental Offer and Acceptance Program (SOAP) was launched as part of the 2012 Match Week and brought with it an extension of the rights and protections afforded under the Match Participation Agreement.

In 2009, the NRMP Board of Directors requested an internal study of positions offered outside the Match and found that more than one-third of residency programs in Match-participating specialties offered non-Match positions and that 1 in 7 residents obtained positions outside the Match. Relying on the NRMP's founding principle—to ensure applicants are free to make

Chart 1

Timeline of NRMP History: Achievements and Expansion of the Match to Benefit Learners

Time period	Event
1950–1951	Centralized clearinghouse proposed for internship appointments; learners push for modification of algorithm to better favor learners' ranking preferences
1952	First Match conducted by the National Interassociation Committee on Internships (NIC)
1953	The National Resident Matching Program (initially known as the National Internship Matching Program) incorporated as a 501(c)(3) organization
1980s	Couples matching introduced; PGY-2 positions added to the Match for full course of training; WebROLIC introduced (first web-based iteration of the R3 system)
1990s	New "applicant proposing" algorithm commissioned by the NRMP Board of Directors in 1995 (first used in the 1998 Match) to ensure the most favorable outcomes possible for learners
2012–2013	The Match Week Supplemental Offer and Acceptance Program (SOAP) launched for applicants who remain unmatched when the algorithm is processed; All In Policy for Match-participating residency programs implemented to maximize learner options for placement
2016	"Charting Outcomes in the Match" publication ¹⁴ created to support DO learners
2018	First DO student director elected to the NRMP Board of Directors
2020	First Single Match; DO senior students join U.S. MD senior students as sponsored applicants in the Match; the NRMP bylaws revised to establish permanent DO representation on the Board of Directors

Abbreviations: NRMP, National Resident Matching Program; the Match, Main Residency Match; PGY, postgraduate year; R3, Registration, Ranking, and Results.

training decisions without coercion—the NRMP Board implemented the All In Policy with the 2013 Match to mandate that programs electing to participate in the Match register and attempt to fill all positions through the Match or another national matching plan.

Other, more recent accomplishments include the creation of The Match PRISM (Program Rating and Interview Scheduling Manager) smartphone application, development of a library of online learning videos and R3 system support guides, and publication of Tableau-based interactive data tools. All are available free of charge to learners and interested Match stakeholders via the NRMP's public website at nrmp.org.

Reflecting on the Past to Guide the Future

In the first Match in 1952, approximately 10,400 internship positions were offered to 5,800 graduating U.S. medical school seniors.¹⁵ In the 2020 Match, the first Single Match, 34,266 PGY-1 positions were offered to 40,084 active domestic and international applicants.¹¹ Yet,

throughout the NRMP's history and for all its growth, the organization has remained true to its roots. As Stalnaker and Smith¹⁶ wrote in 1954:

Thus, in full freedom of choice, the plan works as a clearing house, not interfering with, but giving effect to the choices of both hospital and student. It has removed, insofar as possible, the great pressures that caused recriminations once common to the internship placement scene. The broken contracts, the pressuring and signing up of students long before the senior year for internship commitments and other undesirable aspects have now largely disappeared.... The matching program does *not* allocate, distribute or otherwise control interns or internships. It does *not* set quota or approve hospitals for internship training. It does *not*, by its nature, favor any group of hospitals or in any way advise students where to intern.

Those founding principles remain true today. The NRMP is not an application service, a recruitment company, or an accrediting body for graduate medical education. It is not a physician employer nor is it a financial planner for institutions. Through the Match, the NRMP strives

for parity of experience and promotes uniform guidelines for all participants, protects applicants' rights to maintain confidentiality of their ranking and interview preferences, and reduces coercive practices by programs. As a result, the Match "dilutes the traditional power differential between employer and job seeker" by ensuring the matching algorithm achieves the most preferred outcomes for as many applicants as possible.¹⁷

The NRMP has come a long way, but we recognize that the residency selection process still is fraught with stress and uncertainty, albeit for reasons different from those that prompted creation of the Match. Application inflation, debt, and a disproportionate reliance on licensure exam scores have contributed to a climate that makes the transition to residency perhaps as stressful as when the Match was created nearly 70 years ago.^{18,19} However, as the NRMP moves beyond achievement of the Single Match milestone and we reflect on the organization's history of responding to the needs of its constituents, we believe the NRMP will continue to evolve and identify innovative and meaningful ways to address learner needs. We hope learners of all kinds value that commitment and stand ready to support the NRMP's efforts to continually improve the transition to residency.

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