From the Editor: Our Perfect Match?

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While most U.S. vascular surgeons have participated in at least one match conducted via the National Residency Matching Program (NRMP) few have ever second-guessed our specialty’s continued participation. Recent actions by the NRMP, however, have made the case to reconsider this relationship. Last month, Vascular Specialist published a brief article reporting the NRMP’s plan to merge the cardiothoracic and vascular surgery fellowship matches into a combined Thoracic and Vascular Match. While the Association of Program Directors in Vascular Surgery (APDVS) was notified of this move, direct input was not sought. For this, and other reasons I will outline, I am going to suggest that we radically change our approach to the vascular fellowship match.

First, let us consider how we got to this point. In the 1940s, hospital positions far exceeded medical school graduates. In efforts to fill their positions, hospitals became increasingly aggressive. Contracts would be offered to students early on in medical school with 24-48-hour deadlines for responses. These students often found themselves being forced to choose a specialty in their first or second year just to confirm a residency. This frenzied system led to chaotic “matches” between hospitals and applicants. The NRMP was established in the 1950s in an attempt to stabilize the coordination of hospital appointments and find “stable” matches.

The mathematical formula that provides the basis for the match is the Gale-Shapley algorithm. Drs. Gale and Shapley originally used this system to demonstrate a method for forming stable marriages. In simple terms, imagine you have 10 men and 10 women and want to find the best possible pairings for marriage (an admittedly un-PC assumption). Here is the process:
Step 1 – Each man proposes to the one woman he prefers the most (another non-PC arrangement but this WAS the early ’60s).
Step 2 – Each woman reviews her offers (if any), tentatively accepting her best offer, rejecting the rest. Step 3 – All men who were rejected then propose to their second choice.
Step 4 – The women again keep their best offer and reject the rest.
Step 3 and 4 continue until no man wishes to make a further offer. The women then keep the last offer they accepted.

This system of deferred acceptance is meant to produce stable matches by optimizing satisfaction among participants. The algorithm does, however, lean slightly in favor of the initiator of the proposals, in this case, the males. As applied to the NRMP, the match was originally initiated by hospitals, i.e., they were “hospital-proposing.” But in 1995 this algorithm was reversed, and replaced by a new “applicant-proposing” system.

Today, integrated vascular residencies (0+5) fill via the Main Residency Match. Through this system, applicants can apply to a variety of residency types and receive a single appointment. Because of the scarcity of positions and the
relatively young age of the applicants, a variety of options is necessary.

For example, when I was a third-year student I think I wanted to be a neurosurgeon (or maybe it was an astronaut; this was a long time ago). However, my wife states that she definitely wanted to be a vascular surgeon since she was 7 years old. (Whether or not this is true, it is definitely the type of thing she always says.) The Main Residency Match allows relatively undecided applicants, like me, a variety of options to begin their training, while those set on vascular surgery can pursue that alternative.

In contrast to the integrated vascular residencies, vascular fellowships have traditionally filled via an independent specialty match. So what is the issue with the NRMP’s plan to combine the cardiothoracic and vascular fellowship matches? For many vascular surgeons this is a matter of independence. It was, after all, the American Board of Thoracic Surgery who created one of the first roadblocks to forming vascular surgery training programs in the 1970s. More recently, in 2002, the creation of the American Board of Vascular Surgery was denied by the Liaison Committee for Specialty Boards. Vascular surgeons have many reasons to be sensitive to factors affecting our autonomy.

Another issue is the applicants themselves. It is reasonable to expect fourth-year general surgery residents to have a better understanding of their career ambitions than their medical student counterparts. Commitment and desire are indisputable factors affecting career satisfaction. Our current single specialty match produces little attrition among vascular fellows. What to make of applicants who apply to both cardiothoracic and vascular programs? Will these individuals have the same drive to become vascular surgeons? Under the current rules of the NRMP, programs will not even be able to ask vascular applicants if they have applied to cardiothoracic programs as well. Questions regarding specific institutions the applicant is considering and geographic regional preference are forbidden as well.

There are other, more problematic issues with the NRMP system. Most of us, including Drs. Gale and Shapley, consider there to be two stakeholders in forming a stable match, whether between marriage partners or residency and applicant. The NRMP seems to recognize a third stakeholder, “The Match” itself. To protect the sanctity of “The Match,” the NRMP considers it a binding commitment which applicant and program, even in conjunction, cannot void.

Consider, for example, the case of a student who is matched into a preliminary general surgery program because he failed to obtain a position in ENT. Shortly after the match, a new ENT position opens and he asks the general surgery program director to release him to pursue his dream job. The program director happily complies, thinking, “Why am I doing this job if not to protect the resident’s best interests?” Well, not so fast.

Releasing an applicant from a match position requires a special waiver from the NRMP, which can be denied. In such a case, the program director would be forced to fire the student as the only way to release him from the match commitments. Subsequent regulations put in place by the NRMP make even this extreme measure difficult to perform. It appears the interests of the match override those of the program and applicant.

So here is my radical proposal: Remove the vascular surgery fellowship match from the NRMP. The system has become too byzantine with regulations set up to withhold the sanctity of the match over the interests of the true stakeholders. In place, vascular surgery should utilize the San Francisco Match System to fill our fellowship positions.

Nationally, two residencies and 23 fellowships are filled through the San Francisco Match. This system is based on the same Gale-Shapley algorithm, but with a streamlined set of rules. The main restriction is that statements of rank order or match intent must be unilateral, voluntary and unconditional. Like the NRMP, reciprocating deals for fixing rank position are forbidden.

Unlike the NRMP, the San Francisco Match does not regulate beyond these simple guidelines. Importantly, sanctions and disciplinary actions are not handled by the San Francisco Match, these matters are left to the sponsoring society. All other aspects of the selection process could remain unchanged. Application submission and interview scheduling could still be run through the Electronic Residency Selection Service (ERAS).

Program Directors in vascular surgery face a myriad of restrictions from multiple organizations including the NRMP and the Accreditation Council for Graduate Medical Education (ACGME). While these rules are obviously well intended, they are often reactionary and have unintended consequences. It is my firm belief that giving program directors more
leeway in selecting their residents and structuring their training programs will only result in better educational outcomes. For this reason it is time to give vascular surgery a truly independent match, set up to protect the interests of both program and applicant.

The ideas and opinions expressed in Vascular Specialist do not necessarily reflect those of the Society or publisher.

For further information
1) www.nrmp.org/match-process/match-algorithm/
2) sfmatch.org
3) https://web.stanford.edu/~alroth/jama.html

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