Ranking Programs

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Description of the Ranking Algorithm

The National Resident Matching Program (NRMP) uses a mathematical algorithm to place applicants into residency positions. The model was originally created to address the stable marriage problem (or in our case, the stable matching problem). The goal is to find a stable match between two sets of elements given that each participant has a preference for each element.

The algorithm is "applicant-proposing," meaning the preferences expressed by the applicants have priority over the programs because the applicants' preferences initiate placement into programs.

What does this mean? The Match favors the applicant. **Create your rank order list in the order of your *true* preferences, not how you**

think you will match based on feedback from programs.

Steps of the Algorithm

An attempt is initially made to match an applicant to his or her most preferred spot. If he or she cannot be matched to the first choice program, the algorithm then attempts to place him or her into the second choice, and so on, until there is a "tentative match" made or the applicant runs out of programs.

The tentative match is made when the program either has an unfilled position or the program does not have an unfilled position, but the applicant is ranked higher on the program's list than another applicant tentatively matched to the program. In the second case, the applicant that is ranked lower on the program's list is then removed to make room for the higher ranked applicant. The algorithm then attempts to place the applicant that was removed into the program next on his or her list.

These videos describe the match algorithm:

About The Matching Algorithm

The NRMP Residency Match Algorithm

General Advice About how to Make Your List

As stated above, the match algorithm favors the applicant and as a result, all applicants should prepare their rank list according to their true preferences and not external pressures.

Be frank with yourself about what you are looking for in a program. Are you seeking a great reputation, high case volumes, plentiful research experiences, good resident camaraderie, or good weather? Be honest and rank accordingly. There is no program that has all of these attributes together at the same place. Prioritize your

preferences and respect your decision.

It may be useful to you to rank programs as you see them during the interview. Take notes after visiting each program and prepare a rough draft of the rank list. You can adjust this list as you go through your interviews.

Match Violations during Preparation of the Rank List

The important code of conduct for the match process can be found at here.

It is clearly stated that programs may express their interest in a candidate and applicants can freely express their interest in a program; however, neither party can ask the other to disclose their ranking preferences or ranking intentions.

- Programs may not require applicants to come back for a second visit (look) or imply that a second visit is used to determine the applicant's placement.
- Programs are not to engage in post-interview communication that is disingenuous for the purpose of influencing applicants' ranking preferences.

That being said, some applicants do report receiving phone calls from programs that suggest they will be "ranked to match." Some perceive these calls from programs as attempts to influence applicants' decisions while others view it as a way for programs to genuinely express their interest. These interactions can be genuine, but there will always be stories on the trail about applicants and programs that were not honest. Take everything said with a grain of salt.

There are also stories or rumors about programs that "require" applicants to rank them #1 for the applicant to be considered at that

program. Handling these situations can be very difficult and should be addressed on an individual or program basis with the help of your mentors in the field.

Couples Matching

How Does the Couples Match Work?

Couples match does not change the way the Match software runs your algorithm, but it pairs your list with your partner's. As a couple, you will match to the most preferred pair of programs on your rank order lists where each partner has been offered a position.

You will need to have the same number of ranks on your list. The list will run for each of you as normal, but in order to match at your couple's #1, you will each individually need to match at both programs in order to match there as a couple. If one of you does not match, the "Couple's #1" option fails and the algorithm tries with your combined #2 and runs the algorithm until it stops at a condition where you both match.

How Does this Change your Approach to the Application and Interview Process?

There is no difference in how you fill out your ERAS except checking a box stating you are participating in the Couples Match.

When choosing which programs to apply to, your high yield options are cities with multiple hospitals and programs. Make sure you both have options in the cities you are applying to and apply broadly. Be open and candid with each other about what you are each looking for in a program. Many applicants apply to the programs that they did not think they would apply to on their own.

The main difference in how you approach this process occurs when

interviews are offered. Applicants have found sending an email to program coordinators to be helpful when their partners receive an invitation to interview. For example, if your significant other receives an invitation at a program in X city, it helps to send an email to the programs in that city implying that your significant other just received an interview invitation there. If you receive an interview to a program, your partner should do the same for their options in that city. See below for a template email:

Template email:

Dear [Residency Coordinator],

My name is [name] and I am one of the neurosurgery applicants in this current application cycle. I am participating in the couples match with my [relationship], [partner's name], who is applying for [specialty] and will be interviewing with [program]'s department on [interview date]. We understand this is not a reason to offer me an invitation to interview, but we humbly hope your department can take this into consideration when reviewing my application. We think [program/city] would be a great option for us and would love for the opportunity to explore [city] and get to know both programs. Thank you.

Sincerely,

[name]

Ranking Programs in the Couples Match

The most difficult part of the couples match process is the final ranking of programs. Every couple does it differently, but the key to navigating this process is open communication with the couples about what is important to each and both of you. Do you absolutely have to end up in the same city with each other, even if one of you has a significantly "worse" option? At what point would you be

unhappy with the program?

Most people take one of two approaches to making the list, but they both start with each individual making their own "personal list." Make your rank list as if you were doing this alone, just so you have a reference when you two will begin combining your list.

Compromise: Take your lists and assign point values to each program based on their rank and start creating combinations based on the cities. Combine their scores and sort the list from top to bottom. For programs that end up having similar scores, one option is to look at the difference between the ranks and sort combinations based on that. The idea behind this process is that it might be better for the two of you to compromise instead of one being completely unhappy.

After you complete all of the matches where you end up together, you can split up the list by taking Person A's list and pairing each option with Person's B list. For example, this would be your #1 paired with their #1-20, then your #2 paired with their #1-20, etc. Once you have all combinations, you can then rank one of your lists with the other person going "unmatched" and vice versa to get all the combinations.

Stratification: You can take a similar approach with scoring above, but create cut off points where you would rather match at more preferred programs instead of being together at less preferred programs. For example, ranking your couple's top 5, then splitting up into your individual "preferred" choices, then coming back together.

This is by no means a comprehensive account of how you should approach the couples match process since every couple is different. Again, the key is open communication. It also is helpful to speak with residents that have gone through this process for further insight.

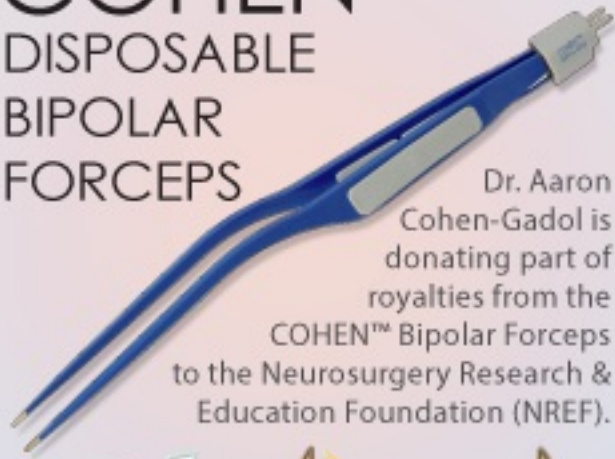Submit Your Complex Case to be Reviewed by the Atlas Team