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New Trends in Orthopaedic Surgery Residency Applications: The Role of Preference Signaling

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Article - Feature

New Trends in Orthopaedic Surgery Residency Applications: The Role of Preference Signaling

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Introduction

Orthopaedic surgery is known to be one of the most competitive specialties for medical students to pursue. It is important for applicants to have a strong portfolio of achievements, including research, presentations, and volunteering to increase chances of matching. USMLE scores and AOA membership tend to be higher among residency applicants that match into orthopaedic surgery. Moreover, the match rate for orthopaedics is lower at 74% compared to the overall match rate of 93.8%.[1] To increase chances of matching into an orthopaedic program, it is recommended to start preparing early and stay informed about trends and strategies in orthopaedic surgery residency matching. This paper aims to provide insight on the new preference signaling program for medical students considering orthopaedic surgery. We also hope this article can serve as a guide for students in other specialties with similar programs in place.

Application Process

The orthopaedic surgery residency application process is selective and demanding. To be eligible for consideration, applicants must have graduated from an accredited medical school and passed the USMLE and/or COMLEX medical board exams. The application process typically begins in the spring of the year prior to the start of the residency, with most programs participating in the National Resident Matching Program (NRMP) and using the Electronic Residency Application Service (ERAS). After applying in the fall, qualified candidates will be invited for interviews in the winter to visit the program's facilities and meet with the faculty and current residents. After interviews, applicants will submit a rank order list of their preferred programs to the NRMP, which will then match them to programs based on both parties' preferences.

In 2022, a new step called preference signaling was integrated into the orthopaedic surgery residency application as an additional tool for applicants to show interest to specific programs; and likewise, allowing programs to identify applicants most interested in joining their residency class.[2]

The resident selection process is based on various factors, including academic performance, clinical experience, research, and letters of recommendation. In the most recent match cycle, 35.7% of US MD seniors who matched into orthopaedics were AOA members and had an average of 16.5 combined abstracts, publications, and presentations. Residency programs have also shifted from using USMLE Step 1 scores (which have now become pass-fail) to using 3-digit USMLE Step 2 scores as a way of evaluating applicants. US MD seniors who matched in orthopaedics had an average USMLE Step 2 score of 256 (90th percentile), while the average among all specialties to match was 248 (75th percentile).[1] In light of these factors, it is often recommended that students start preparing as early as possible for the orthopaedic match.[3]

Trends in the Residency Application Process

The COVID-19 pandemic brought about significant changes to the residency application process. In March 2020, the global economy shut down leading medical institutions to pause all clinical rotations and shift to virtual education. This presented a major challenge for residency programs, which lost two crucial elements of the application process: away rotations and in-person interviews.[4] In response, programs were forced to adapt and embrace a virtual environment.

While in-person away rotations have mostly been resumed, virtual interviews have emerged as a lasting impact of the pandemic. It is uncertain if virtual interviews will become a permanent feature of the application process, but there is support for their continued use. Surveys indicate that 84% of applicants and 91% of interviewers believe that virtual interviews are effective and convenient and should be continued in the future application process.[5,6] Given this support, it is likely that virtual interviews will be a common aspect of the residency application process for all applicants.

Shotgun Approach and Interview Hoarding

As popular as virtual interviews have become, there are other concerning issues among application strategies that have been on the rise for some time. One of the most noticeable trends is the sharp increase in the number of applications submitted by an applicant, rising from 46.5 to 74.9 between the years of 2008 and 2018.[7] This is likely due to the increasingly competitive nature of applying to

orthopaedic surgery, fear of not being matched, and the convenience of the application process. This strategy, known as the "shotgun approach" involves applying to as many programs as possible with hopes of increasing one's chance at obtaining interviews and matching.[8]

From the program's perspective, the increase in the number of applicants has created logistical challenges for properly reviewing applications. The average number of applications received per program has risen from 323.3 to 576.8 between these same years.[7] With so many applicants, it becomes more difficult to provide a thorough review of each applicant, raising concerns that programs and applicants are not matching as effectively as possible. The effects of the "shotgun approach" were exacerbated by the reduced time and costs of travel for virtual interviews, leading to a phenomenon known as "interview hoarding" where highly ranked applicants participate in multiple interviews in a single day or weekend.[8] This "hoarding" leaves fewer interview spots for other applicants who may have more interest in a specific residency program.

Preference Signaling

With the hope to mitigate the "shotgun approach" and "interview hoarding", the American Orthopaedic Association has introduced a formal preference-signaling process for the 2022-2023 residency application cycle. This process, available through the Electronic Residency Application Service (ERAS) supplemental application page, allows applicants to indicate their preference for up to 30 programs.2 While not mandatory, this feature allows programs to see an applicant's "signal" of interest. Similar preference-signaling programs have been implemented and well received in other specialties such as otolaryngology, dermatology, and general surgery. However, the other specialties allow a much lower number of "signals"; only 3 to 5 programs per applicant.8 These other specialties use preference signaling as a means for applicants to communicate to programs that they are among their top few choices. But in orthopaedics, it can be suspected that program directors may use signaling as an additional screening tool – though its effectiveness in this regard is yet to be determined.

As a result, fewer top-level candidates "hoarding" interviews is expected to create more opportunities for strong, "mid-tier" applicants at highly competitive programs.[8] One approach that students can consider when applying to orthopaedic programs is to utilize various resources to identify a range of options that cater to their level of qualifications. Then, one could strategically assign the 30 signals relative to their portfolio using geographic location, program's values, or program size as means of determining the best fit. Additionally, coordination among applicants from the same institution could be beneficial in reducing competition and increasing match rates, especially at institutions that typically only interview a small number of students from the same school.[8]

In the first year of preference-signaling for Orthopaedic applicants, the Jefferson Orthopaedic Surgery Residency Program received approximately 850 applications for 6 spots. Of those 850 applications, 375 indicated a preference for Jefferson. Approximately 100 applicants were offered interviews. All applicants that were offered interviews had signaled a preference for Jefferson during the process. James T. Purtill MD, Jefferson Orthopaedic Residency Program Director, felt that preference-signaling was useful to the department in evaluating the applicants. He felt that preference-signaling had an overall positive effect on the process and will likely continue in future matching cycles.[9]

Conclusion

Orthopaedic surgery is a highly competitive specialty among medical students and requires a strong portfolio of achievements to increase chances of matching. The match rate for orthopaedic surgery is lower compared to the overall match rate, and the selection process is based on various factors such as academic performance, clinical experience, research, and letters of recommendation. The COVID-19 pandemic brought about significant changes to the residency application process, including the use of virtual interviews, which have emerged as a lasting impact of the pandemic. However, there are concerning trends among application strategies, such as the "shotgun approach," which involves applying to as many programs as possible. The American Orthopaedic Association has introduced a formal preference-signaling program for the 2022-2023 residency application cycle to address the issue of "interview hoarding" and provide more interviews to competitive candidates at strong programs. The program aims to provide more effective matching between programs and applicants and reduce the number of applications received by each program. By utilizing the preference signaling program and other resources, applicants can strategically choose programs that best cater to their qualifications, increasing their chances of matching.

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