Applying to dermatology residency: An ethical approach to an inherently unethical process☆,☆☆

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Case scenario

Hope (H) is preparing her dermatology residency applications. She approaches her mentor, Dr. Wisdom (Dr. W), chair of dermatology at her institution, for advice. H attends a top-tier southwestern medical school and has above-average grades and several publications in dermatology but has a below average U.S. Medical Licensing Examination (USMLE) Step 1 score. She is concerned that she is not going to be given serious consideration because of this score. She asks her mentor for his advice on which programs she should consider.

Dr. W should recommend that H:

A) Apply to a less competitive specialty;
B) Embellish her extracurricular activities to compensate for her low score;
C) “Shotgun”—apply to every program;
D) Apply to all programs in which she has a sincere interest, especially those programs in the southwest and with which she has a genuine connection; or
E) Take a year off from medical school to complete a research fellowship to bolster her application with more publications.

Discussion

Dermatology is one of the most competitive specialties in medicine. In 2017, there were 651 total applicants for only 423 postgraduate year (PGY)-2 spots (National Resident Matching Program, 2017b). Among the U.S. seniors applying to dermatology, those who ranked dermatology as their only specialty went unmatched 13.8% of the time.

Applicants desire to maximize their chances of a successful match while programs have an obligation to ensure that they interview and match with applicants who are the best fit and most likely to thrive. The match is designed to maximize the chances of both parties reaching their goals in the fairest way possible. However, the extremely competitive nature of dermatology has created an unethical situation for applicants and programs. The majority of applicants are forced to “shotgun”—apply to all or nearly all programs to maximize their chances of a successful match. This creates a large expense of both time and money for applicants and time and effort to review the applications by programs. In response, many programs have instituted certain screening methods to whittle down the applicant pool and deal with the deluge of applicants; however, this process might unintentionally eliminate sincerely interested and qualified applicants.
There are several ethical issues that surround the residency application process and deserve to be addressed. Herein, we address two of these ethical issues.

**Ethical issue one**

What is the ethical responsibility of a mentor to a mentee as far as the match is concerned? How should a mentor approach great students who do not meet some of the objective metrics necessary for successfully matching into dermatology?

Answering this question involves working within the current match framework to best help the applicant. This also involves recognizing that not every applicant will match and that it is important that mentors adequately advise these mentees about their predicament. Not matching can be very costly to an applicant, both monetarily and emotionally, and mentors must keep this in mind when advising students. This is very similar to the ethics of encouraging optimism and breaking bad news in other areas of medicine.

The ethical responsibility of a mentor to a mentee with regard to advising for the match is not clearly defined. As difficult as this discussion may be, mentors should identify applicants at risk of not matching and provide realistic advice. Mentors must understand the data surrounding the match and factors that comprise a successful application and use these data to provide practical advice to the applicant. When approached for advice, mentors should gauge an applicant’s chances of success on the basis of three broad categories: academics, letters of recommendation, and research.

Important factors in the academics category include grades (including Alpha Omega Alpha [AOA] Honor Medical Society status, if available) and USMLE Step 1 score. Approximately half of dermatology applicants who successfully match and a quarter of applicants who do not match are inducted into AOA, respectively (National Resident Matching Program, 2016a). The average Step 1 score for matched and unmatched applicants in 2016 was 249 and 239, respectively. In general, a score of 240 is thought to be sufficient to avoid any automatic filters that may be employed by certain programs.

Letters of recommendation are a vital part of the application process and are instrumental in obtaining an interview (Kaffenberger et al., 2014). The more senior and better known the letter-writer, the better. Dermatologist-written letters are viewed far more favorably than letters by non–dermatologists regardless of time spent working with that person. Research is another vital component of a successful application. The mean number of abstracts, presentations, and publications for matched and unmatched applicants in 2016 was approximately 12 and 9, respectively.

While no data are available with regard to away rotations and the probability of matching, away rotations afford programs the opportunity to get to know the applicant and determine their personality fit, work ethic, and interpersonal skills. Performing well and impressing faculty with one’s sincere interest in dermatology and their specific program likely increases applicants’ chances of being invited for an interview. Additionally, away rotations also offer students an opportunity to get to know a specific program and learn if they would like to train there.

We suggest that a mentor place an applicant in three buckets on the basis of how he or she stacks up with the aforementioned categories. If the applicant scores poorly in each of the three categories (e.g., low USMLE step score, poor letters of recommendation, or little research), an alternative specialty should be recommended. If the applicant scores well in all categories but poorly in several others (e.g., high USMLE step score, poor letters of recommendation, and little research), it is reasonable to recommend a research year to bolster their application. Finally, if the applicant scores well in the majority of or all categories (e.g., high USMLE step score and good letters of recommendation but little research), it is reasonable to advise applicants to undertake a research project and then apply to dermatology because their chances of success will be high.

**Ethical issue two**

Is it ethical for programs to use objective screening metrics to eliminate approximately 30% of applications from their already large applicant pool? For this issue, there are different perspectives depending on whether you are the applicant or the residency program.

**Applicant’s perspective**

The average length of the rank order list (ROL, i.e., number of programs an applicant ranks to bid for a spot) has increased considerably over the last 15 years. The average ROL length of successfully matched U.S. seniors in 2017 was approximately 12 compared with approximately eight in 2002 (National Resident Matching Program, 2017a). National Resident Matching Program (NRMP) data consistently demonstrate that matched applicants and filled programs have a longer ROL than unmatched applicants and unfilled programs. This trend holds true for dermatology with the mean number of continuous ranks 8.9 and 4.2 for matched and unmatched U.S. seniors in 2016, respectively (National Resident Matching Program, 2016a). This has led to applicants increasing the number of programs to which they apply to attempt to increase their ROL. Indeed, a longer ROL in dermatology is directly correlated with probability of matching.

The median number of applications submitted by matched and unmatched U.S. seniors in 2017 was 92 and 90, respectively, which implies that both successful and unsuccessful applicants are applying to nearly all programs (Association of American Medical Colleges, 2017). In addition, applicants are more likely to match at programs that are geographically close to their institutions (Chen et al., 2016). These data suggest that it is in an applicant’s best interest to apply broadly plus choose and target specific, geographically proximate programs. The need to apply broadly places both monetary and time-related burdens on the applicants, but the need to apply to nearby programs raises the ethical issue of a self-fulfilling prophecy in which applicants are more likely to match at institutions that are geographically close. This can inadvertently decrease the diversity of resident backgrounds, experiences, and medical school training that a program attracts.

Additionally, pigeon-holing an applicant to programs in his or her medical school geography may be unfair. Some applicants sincerely want to experience other geographic areas while they train in dermatology but others may “shutgun” apply only to hedge their bets to obtain more interview invitations. For this latter group, when invitations for interviews are forthcoming, students tend to turn down interviews at programs that they are less interested in attending (which often includes distant programs).

**Program’s perspective**

In a 2016 survey by the NRMP, program directors in dermatology were asked to select from a list of factors that they rated most important in selecting applicants to interview (National Resident Matching Program, 2016b). The data included percentage of program directors ranking a particular factor as important. While expected metrics such as USMLE Step 1 score and letters of recommendation ranked among the most important, other more subjective factors also were highly ranked, including personal prior knowledge of the applicant (80%), audition elective/rotation within the department (70%), and perceived interest in the program (77%). These factors were similarly highly ranked in a survey that asked for factors that were the most important in selecting applicants to rank.

These data support an applicant benefiting from selectively choosing programs to apply to, especially those with which he or she has developed a close relationship and/or expressed direct
interest. However, many programs have multiple rotators from other medical schools and as a result cannot interview every rotator, including those who may have a genuine interest. This fact could inadvertently provide an unfair disadvantage to applicants who cannot afford more away rotations or an advantage to those whose medical school schedules permit more away rotations.

Programs face an enormous task in terms of receiving and reviewing applications, interviewing candidates, and forming a rank list. The average number of applications received, applicants interviewed, and applicants ranked per program in 2016 were 449, 34, and 30, respectively. In response, many programs have instituted screening measures to narrow the applicant pool. More than 80% of programs use a specific USMLE Step 1 score target when considering which applicants to interview. Approximately 29% of applications are rejected on the basis of a standardized screening process. Other applicants are screened by an initial review, which leaves approximately 61% of applicants who receive an in-depth review.

This leaves an enormous number of applications to be reviewed by a program, which leaves less time available per application. However, by instituting blanket screening measures on the basis of arbitrary score cutoffs, programs run the risk of excluding otherwise genuinely interested and qualified candidates who do not fall above the threshold. Although students who score highly on examinations deserve credit for their accomplishment, this one criterion needs to be measured in concert with the student’s grades, publications, and letters of recommendation. If all other benchmarks are outstanding, one bad examination grade should not be the sentinel event that causes someone to be excluded from pursuing their desire to become a dermatologist.

Analysis of case scenario

In our opinion, Dr. W should recommend that H apply broadly while also placing an emphasis on applications to programs in the southwest and programs in which she has a genuine interest or with which she has a connection (choice D). Several dermatology programs institute geographic screens because applicants are less likely to attend programs out of their region and programs subsequently are more likely to choose applicants from within their geographic region (Chen et al., 2016). By focusing on programs near her institution, H is more likely to receive interview invites, which are critical for successful matching.

Furthermore, Dr. W should recommend that H additionally apply to programs with which she has established a connection (through a research project or away rotation) or programs in which she has a genuine interest. H will have a better chance of acquiring interview invites, independent of the program’s location, if the faculty and staff are already familiar with her. By applying to programs in which she has a genuine interest, she has an increased chance of standing out among applicants because she has independently generated a reason for wanting to attend the program, a trait valued by program directors and faculty. Although applying broadly might result in H obtaining interviews from programs with which she does not have a personal or geographic connection, targeted applications are more likely to result in a good outcome.

Answer A is incorrect because she should not be discouraged from applying to her desired specialty simply because her board score fell below the average. All other metrics in her buckets are excellent because she has good grades, publications in dermatology, and letters of recommendation. Discouraging applicants who have lower-than-average board scores away from dermatology can hurt our specialty by potentially reducing the diversity of applicants accepted into our field. Additionally, one poor score on one test, which could occur due to a multitude of reasons, should not dissuade an otherwise outstanding candidate.

Answer B is also incorrect because it would be unethical of H to embellish her activities to augment her application. Instead, she would be better served by focusing on the strengths of her application and expending extra attention on applications in her geographic region.

Answer C is incorrect because even though “shotgun” applying to every program might help garner some interviews, the amount of money and time expended by the candidate and programs results in a burdensome workload and expense for all parties involved. Some would argue that broadly applying is a necessity in dermatology given the large number of applicants per available spots. However, we recommend applying in a thoughtful manner in which particular attention is paid to geographically proximate programs and programs for which there is a preexisting cultivated connection.

Finally, answer E is incorrect because the recommendation to take a research year should be reserved for applicants with several deficiencies in their applications and thus has a low likelihood of success. While H has a lower than average USMLE score, she is a member of AOA, has good letters of recommendation, and good research, all of which indicate that she is likely to have a successful application.

Bottom line

The small number of residency spots and large number of applicants in dermatology has created an inherently unethical situation in which undue burden is placed on both applicants and programs. Applicants are forced to apply to many programs and programs are forced to review many applications and institute screening measures.

The most ethical way to handle this potentially unethical process is for applicants to apply in a truthful manner, target geographically proximate programs, and apply to programs for which they have a genuine interest. In turn, programs should be careful when instituting screening measures and screen applicants for the characteristics that indicate a genuine interest and real likelihood of ranking the program. It is possible if both applicants and programs follow these suggestions, they can ethically deal with an inherently unethical situation.

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