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## Medical Student Forum

### WHAT DO PROGRAM DIRECTORS LOOK FOR IN AN APPLICANT?

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**Abstract**—Program directors (PDs) are faced with an increasing number of applicants to emergency medicine (EM) and a limited number of positions. This article will provide candidates with insight to what PDs look for in an applicant. We will elaborate on the performance in the emergency medicine clerkship, interview, clinical rotations (apart from EM), board scores, Alpha Omega Alpha membership, letters of recommendation, Medical Student Performance Evaluation or dean's letter, extracurricular activities, Gold Humanism Society membership, medical school attended, research and scholarly projects, personal statement, and commitment to EM. We stress the National Resident Matching Program process and how, ultimately, selection of a residency is equally dependent on an applicant's selection process. © 2019 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Keywords**—emergency medicine; program directors; match; NRMP; applicant; medical student; selection process

### INTRODUCTION

The number of emergency medicine (EM) programs participating in the National Resident Matching Program (NRMP) and available positions for incoming graduates has been steadily increasing. Over the past 6 years alone, 67 additional programs and 610 new positions were made available for EM applicants (1,2). Despite this increase, EM continues to be one of the more competitive fields. Program directors (PDs) are faced with an increasing number of applicants to EM and a limited number of positions, begging the question, “What do program directors look for in candidates?”

### DISCUSSION

Based on a review of the literature, this article will provide insight to candidates on areas of the application that PDs weigh heavily, including the interview and the wide-ranging “other” category of experiences that influence applicant ranking. Of note, emphasis will be placed

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on the mutual selection process inherent to the NRMP match and how ultimately selection of a residency is equally dependent on an applicant's selection process.

### *What We Know from the EM Literature*

There is a wide body of knowledge on what PDs look for in applicants across all fields, but the prominent work cited in EM literature is an article by Crane and Ferraro published in 1999 (3). The goal of this study was to determine whether there was consensus among EM residency programs on the selection criteria of applicants. A 20-item questionnaire was sent to all EM PDs consisting of items based on the current Electronic Residency Application Service guidelines. PDs were instructed to rank each item on a 5-point scale as to its importance in selection of residents. **Table 1** lists the results of this survey in descending order of importance.

**Table 1** provides a listing of variables that are considered when evaluating an EM applicant; however, the relative importance of these variables likely differs between individual programs. One should note that "Other" ranked 4th out of 18, indicating that there is more to the selection process than what this table and rank provide. Variables deemed important by PDs under "Other" included: future plans within the specialty; commitment to EM; EM experience; work ethic; and difficult to define characteristics, such as personality, character, humanistic values, and motivation (3).

### *EM Clerkship Score and Clinical Performance*

Performance in an EM rotation is one of the most important aspects of the application (3,4). This is because

**Table 1. Results of Crane and Ferraro's Survey (3)**

Rank	EM Application Element
1	EM rotation grade
2	Interview
3	Clinical grades
4	Other
5	Recommendations
6	Grades (overall)
7	Elective at program director's institution
8	Board scores (overall)
9	USMLE II
10	Interest expressed
11	USMLE Step I
12	Awards/achievements
13	AOA status
14	Medical school attended
15	Extracurricular activities
16	Basic science grades
17	Publications
18	Personal statement

AOA = Alpha Omega Alpha; EM = emergency medicine; USMLE = US Medical Licensing Examination.

optimal performance in an EM rotation is the most direct and convincing evidence in the eyes of PDs that the student will later excel in an EM training program. Poor performance on an EM rotation can likewise adversely affect candidates who are otherwise successful in every other area of the application. Excellent board scores and great recommendations from other core rotations will usually not help an applicant if they are perceived poorly on their clinical rotation in EM. In fact, performance on clinical clerkships is regarded as a potential tool for predicting future specialty match (5). PDs aspire for applicants who can excel in the unique and challenging environment of the ED, where time constraints, high pressure, emotionally charged situations, and the demand for excellent team and communication skills are a daily premium.

Given the value of strong performance on the EM rotation, how can an applicant make the best impression and what controllable factors will contribute to an honors grade? Some simple rules apply here. Be on time and prepared for work—this includes clean, crisp scrubs and impeccable personal hygiene. Be aware that you are always being observed whether or not you realize it. Always display a positive attitude. Never speak badly of patients or verbalize judgments about the validity of a patient's complaint. Demonstrate willingness to help with all aspects of a patient's care, no matter how menial that particular aspect may be. At the outset, make sure everyone and, specifically the clerkship directors, know you are interested in EM. Ask for feedback at the end of every shift: "What can I do to improve my performance?" Be proactive about seeing patients: "I see there is another patient waiting, would it be ok if I see him?" Keep the focus on patients and providing them with the best possible care and this will reflect highly on you. Don't be a "know it all." Be humble. This is tricky because most PDs are interested in your fund of knowledge—but it is important to wait for the appropriate moment to show what you know. The best way to do this is by providing complete, well thought out differential diagnoses when presenting cases. Be honest about what you do and do not know. Show an authentic interest in learning about the differential, disease process, and management of your patients. Do not be so focused on "performing" that you forget to listen and be receptive to what is going on around you, or what your attending may be trying to teach you. The EM clerkship is essentially a month-long job interview, and to succeed students need to perform at the highest capacity.

### *General Tips for the EM Rotation*

Make sure to rotate through an emergency department that is associated with an EM residency. Students attending a medical school without an EM training

program should strongly consider an away rotation. When seeking letters of recommendation at away rotations, inform the PD or the clerkship director exactly what your goals and interests are at the onset. PDs will carefully look at performance in every EM rotation. PDs will evaluate the score received, written statements, and the letters of recommendation that they receive from EM faculty you worked with. It is not uncommon for PDs to contact programs to inquire about a candidate's clinical performance during clerkships, especially if there are discrepancies between the clerkship evaluation of the student and the overall record. PDs tend to look more favorably at letters or evaluations from individuals they know and from those with established reputations as educators in EM. This is important because such individuals are familiar with the process and very aware of the importance of providing an accurate and complete assessment of an applicant's profile and performance. Remember that academic EM is a small community—any odd behavior or mistake is likely to be communicated among programs.

It is evident that PDs wish to match candidates who are enthusiastic, hard working, and reliable, with outstanding clinical and interpersonal skills, and a commitment to the specialty. During an EM clerkship, students exhibiting these qualities often receive “honors” grading or an outstanding clerkship evaluation. However, the process that determines whether a student will or will not get “honors” is far from universal. For example, a number of competitive clerkships will have few honors grade and little grade inflation. Some programs include a shelf examination and its score in the grading process. This may favor excellent test takers and may undervalue an outstanding clinical performance and work ethic of an applicant who does not do well on multiple-choice examinations. Also note that some schools/programs utilize a pass/fail system only to reflect upon a student's performance during a clerkship. This complicates matters for PDs, who now have to rely solely on evaluation comments and letters of recommendation, and seek to procure them. EM residencies have attempted to minimize the variability inherent to the process with a coordinated move towards standardized letters of evaluation (SLOEs) (6).

### *The Interview*

Second only to EM rotation performance, the importance of the interview at a program cannot be overemphasized. A recent survey of pediatric emergency medicine PDs regarding criteria they use in selection of fellows placed a higher priority on qualities assessed during the interview than on academic accomplishments or standardized test scores (7). When generalized across all fields, literature demonstrates the importance of the interview in se-

lection criteria of applicants (3,8–10). The interview allows you to demonstrate your personality, enthusiasm for the field, and many other intangible qualities ranked highly in the “Other” section by PDs in Crane and Ferraro's survey (3). Interviews are used to assess candidates' noncognitive skills and gain a feel for their overall compatibility with a residency program. However, it is important to remember the importance of basic rules for any interview. Arrive on time, be well-groomed and prepared for your interview with intelligent, informed questions about the program. Act interested, listen, and be kind to all people you are in contact with. Attend the pre-interview social gathering offered by many programs, if possible—this is another opportunity for the program and residents to gain valuable information about applicants and their potential fit into a program. It should go without saying that if a social event is part of the interview process, a “fatal” mistake would be failure to maintain professional, though more relaxed, behavior. Remember that this is essentially still part of the interview and behave as such. Take time to review information about the program, identify what is special about it, and review interests of the faculty. Almost every program has a website and applicants should be familiar with important aspects of the program on the website. Do not be a “no-show” at an interview. As stated, the world of EM is small and word will get to other programs. It is acceptable to cancel an interview but poor form to do this at the last minute. Applicants should give programs at least 2 weeks' notice if they need to cancel, so that the program may offer that sought-after interview slot to another qualified applicant.

Traditionally, EM PDs noticed that top EM applicants were applying to too many programs, accepting too many interviews, and ending up canceling interviews late. By 2015, however, EM PDs noticed a change: students were being provided better advice on how many programs to apply to and how many interviews to accept. Due to this effort, top applicants were declining more unnecessary interviews and doing so earlier in the application cycle (11).

### *Clinical Rotations (Apart from EM), Board Scores, and Alpha Omega Alpha Membership*

PDs look carefully at performance in non-EM clerkships and in particular at the core required rotations, such as medicine and surgery. High marks in other clinical rotations, such as internal medicine, surgery, and pediatrics, are important. PDs are looking for a track record of proven performance throughout the clinical rotations, as well as “red flags.” Incomplete grades, failures, or deficiencies of any kind on any clinical rotation will be noted and work against the applicant. This is one of the reasons

why it is essential to perform at high capacity through all clinical rotations. It is also important for applicants to be familiar with and assure the accuracy of their final grades and comments from rotations with those of the Medical Student Performance Evaluation. If there is a deficiency on any of the clinical rotations, applicants need to be prepared to address it in an honest way during the interview.

When a school does not use grades it complicates the process because it forces the PD to rely on other variables that may not favor some candidates. Clinically average or subaverage candidates may succeed in securing excellent comments and letters of evaluation, while clinically outstanding ones may not be able to relay the quality of their performance effectively enough.

A moderate amount of emphasis is placed on preclinical grades during the first 2 years of medical school. Mediocre grades do not preclude you from matching in an excellent EM residency program; however, you will be expected to compensate with exemplary performance in other areas, such as clinical rotations.

To be reasonably competitive in the EM match, you should aim to score above the 50th percentile on the U.S. Medical Licensing Examination (USMLE). Some programs have filters and do not interview candidates unless they achieve a certain score on board examinations; however, no formal study has been done to ascertain a cutoff range. Only 39.4% of respondents on Crane and Ferraro's study of EM PDs reported a minimum requirement on USMLE Step I, while 31.9% reported a minimum requirement for USMLE Step II (3). The presence or absence of a cutoff, however, neither proves nor negates the outstanding quality or competitiveness of an EM training program. Breyer et al. found a negative correlation between the final placement on the rank order list with USMLE score, indicating that lower placements on the rank list were given to applicants with higher USMLE Step I and II scores (4).

PDs may consider USMLE/Comprehensive Osteopathic Medical Licensing Examination (COMLEX) Step II scores more strongly than Step I. In some cases, programs may not interview otherwise qualified applicants who have failed to perform well on their board scores. While the actual score cutoffs may vary, the higher the score the better. The reason for this is that PDs are looking for predictors of who will later succeed in or have difficulty passing the EM in-training and later credentialing examinations. Failing the USMLE/COMLEX examination is a serious problem that an applicant will have difficulty overcoming. It may impede the ability to get interviews and must be explained whenever possible if an interview is granted. If you have a poor test result on Step I, strongly consider meticulous preparation and an early fall test date for Step II so that results can be released prior to interview season. It is important

to realize that a higher Step II score may open doors closed by a poor Step I performance. If there are special circumstances as to why you did poorly on the boards explain this in the personal statement.

Being a member of Alpha Omega Alpha (AOA) or having academic awards is certainly not a necessity; however, it does help set you apart. PDs also realize that recognition through awards or AOA membership is certainly not a guarantee of a rewarding professional relationship or clinical performance.

Compilation and review of correlative studies published in 2011 revealed that honor society membership, examination scores, and performance on clinical clerkships were the student factors with the strongest predictors of performance in residency (12). However, in a study done by Breyer et al., parameters that were either positively correlated (standardized letter of recommendation [SLOR] and rank in medical school) or negatively correlated (USMLE scores) with the applicant's placement on the rank order list were shown to be weak indicators of the applicant's final placement. This eludes to the possibility of having other, more important, factors that come into play when ranking an applicant (4).

#### *Letter of Evaluation (LOE)*

The best LOEs are from people known in the field of EM. Most, if not all, PDs look for a standardized letter of evaluation (SLOE), which is available in template form on the Council of Emergency Medicine Residency Directors website ([www.cordem.org](http://www.cordem.org)). Since 2016, the CORD SLOE has been submitted electronically on the eSLOE website. This has increasingly become the most useful and effective type of LOE that applicants can secure and has become the "common language" of PDs. The SLOE developed in response to the recognition that narrative LOEs are often not helpful because of the lack of standardization and descriptive "inflation" of adjectives used to describe applicants (8). For many PDs, the "global assessment" item on the SLOE is one of the most vital pieces of information because in it the author ranks the student for overall performance compared to all the other students in a given year. This helps PDs to interpret all of the other information present in the application. Table 2 shows components of the SLOE (13).

Doing an EM rotation without providing an LOE may be perceived as a red flag by PDs. Having more than two letters from the same rotation may be excessive. One or two letters from core clinical rotations may help some, but letters from other 4th-year non-EM electives are generally considered less helpful.

The central role of excellent LOEs cannot be overemphasized. Ask people you know who respect you and will perform this task of reference in a prompt fashion. Ask

**Table 2. Components of the Standardized Letter of Evaluation (13)**

Section	Components
Background information	Nature of contact with applicant Clerkship grade (if rotated in evaluator's ED) Reporting percent of rotating students who received honors, high pass, pass, low pass, and fail in the previous academic year
Qualifications for EM	Ranking of applicant as above (top one-third), at level (middle one-third), or below level of peers (lower one-third) in the following categories: commitment to EM, work ethic, ability to develop and justify a differential diagnosis and treatment plan, ability to work with a team, and ability to communicate a caring nature to patients Predicting how much guidance this applicant will need during residency Predicting the future success of the applicant
Global assessment	Ranking of applicant in comparison to other EM candidates the evaluator has recommended in the previous year Number of letters written by author in last academic year.
Written comments	An open narrative section limited to 250 words or less A summary of the qualities of the institution/rotation that the evaluator deems important or necessary

ED = emergency department; EM = emergency medicine.

faculty who know you personally and who have worked with you. It is of paramount importance to utilize LOEs from physicians who are known in the world of academic EM. It is acceptable to receive a LOE from a physician from a specialty other than EM that you have a good relationship with and who knows you well.

*The Medical Student Performance Evaluation or Dean's Letter*

According to the NRMP 2018 PD survey, the Medical Student Performance Evaluation (MSPE) is the third most common factor cited by PDs to select applicants to interview (2). However, the MSPE may not be important to a number of PDs and has even been criticized in the literature (14). Some PDs still give considerable weight to this document, while others find it less useful or simply use it to screen for "red flags," for class rank, and for overall clinical and interpersonal qualities and problems. PDs review it to get an overall assessment of your performance through 4 years at a single institution. Some MSPEs still use a classification that relays to the reader a general indication of a student's rank relative to the rest of the class. The MSPE was criticized for being

used as an LOE when in fact it is an LOE, as well as for the lack of standardization and inclusion of comparative information (15,16). Accordingly, an MSPE Task Force was launched in January 2015 and released new recommendations to be adopted while writing MSPEs (15,17). Take time when you meet with the Dean or Associate Dean who will write your evaluation to go over the strengths of your application and specific evidence of your commitment to EM. If you had difficulties during medical school or legitimate reasons to take substantial time off during the course of your education, discuss them with the Dean and determine an optimal way to portray them in your letter. Attempt to acknowledge in the letter your commitment to EM as your first and only career selection.

*Extracurricular Activities and Gold Humanism Society Membership*

Extracurricular activities demonstrate that you have a life and interests outside of the hospital and give you something to discuss during your interview. Most PDs look for candidates that go beyond just working clinical shifts. When presenting yourself, make sure that the balance between extracurricular activities and commitment to EM is expressed, as PDs may be deterred by applicants who focus on the great fit between their extracurricular interests and the flexibility in scheduling inherent to practicing as an emergency physician.

PDs are not only interested in involvement in EM-related activities. Relate your personal interests and hobbies with those that aim to serve others (e.g., volunteer activities, membership, contributions, or leadership in student and medical organizations). PDs value leadership skills as a high marker for academic potential, trainability, reliability, outstanding work ethic, and interpersonal skills. Ongoing involvements over time in any given project and demonstrated leadership are both positive factors.

The Gold Humanism Honor Society (GHHS) was established in 2002 to recognize medical students who are exemplars of empathy, compassion, altruism, integrity, and service in working with patients and others in the field of medicine. Members are selected as 3rd- and 4th-year medical students by their peers. As of December 2010, there are 92 active chapters throughout the United States. Membership is noted in your dean's letter and is an achievement viewed favorably by PDs. PDs familiar with the GHHS are likely to consider members as practitioners of humanistic-centered care (18). Membership in GHHS may set a candidate ahead of a peer with similar attributes, allowing PDs an objective resource by which to assess candidates who practice compassionate medical care.

### *Medical School Attended*

PDs place small but significant value on the identity of the medical school attended by applicants to their programs. Graduates from the most competitive medical schools may have some weight added to the value of their application in certain programs. Matriculating into such schools is in itself a competitive process, which predicts success, motivation, a strong work ethic, and academic potential. PDs may also grant special consideration to candidates from the medical school to which their own program is affiliated.

### *Research and Scholarly Projects*

Research experience has become important for applicants in EM. Commitment to a research project demonstrates an interest in original thought, ability to follow through on a project, and contribution to the field of medicine. It is important that the applicants do not misrepresent the amount of their participation in a research project. Bibliographic citation guidelines can be downloaded from the Society for Academic Emergency Medicine medical student home page ([www.saem.org](http://www.saem.org)). If an applicant has publications, it is advised they bring copies to the interviews, as they are likely to be discussed.

Crane and Ferraro's study resulted in "publications" being ranked among the lowest of the variables they examined (3). An update on EM residency selection criteria by Negaard et al. published in 2018 similarly suggests that research is the least regarded component of the application when selecting applicants (19). Being listed as an author or co-author on peer-reviewed publications may not be important to PDs, as a study evaluating internal medicine residents showed that publishing history does not correlate with clinical performance (20). However, this may not apply to involvement in EM research and scholarly activities. Such involvement constitutes one of the most effective ways to demonstrate commitment to the specialty, to get to know leaders in the field and PDs who will review your file. Scholarly activity demonstrates academic and leadership potential, as well as motivation. It showcases the applicant's ability to reliably and effectively complete assignments, and to collaborate with faculty, residents, and other students.

### *The Personal Statement*

The personal statement is the applicant's opportunity to showcase him- or herself as an individual. The goal of the applicants should be to let the PD know why they will be a good physician, what led to their choice of EM as a specialty, and what contribution can they provide to an EM residency. It is important to make

sure the statement does not have spelling or grammatical errors. In general, the statement should not be longer than one page. Clichés and common descriptions of EM should be avoided. The vast majority of personal statements do not help or hurt an applicant, so the applicant should be careful if he or she chooses a format that would be considered nonstandard (e.g., poems, stories).

### *Commitment to EM*

Commitment to EM is another central element that must be conveyed in the application and can be demonstrated in a myriad of ways; from EM-centered research or scholarly activity, emergency medical service experience, as well as involvement with EM interest groups. Becoming a student member of EM-based societies and professional organizations will provide the applicant with information on the rewards, controversies, and challenges associated with a career in EM. Being well-informed on current topics in EM will only benefit the applicants in their interviews, clerkship performance, and personal statement. Once the applicant knows that he or she is interested in EM as a career path, they should get to know EM. Such involvement will only add strength to his or her file.

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