

FOCUS: EDUCATION — CAREER ADVICE

The Residency Application Abyss: Insights and Advice

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Most medical students apply for residency training upon completion of medical school. The choice of specialty is one of a student's first major career decisions, and the application process often results in considerable anxiety, as it is competitive, unpredictable, and requires a significant investment of time and money. This article, which addresses several important facets of the residency application using both experiential and evidence-based data, is organized chronologically into sections that describe a logical approach to applying for residency: choice of a specialty, the personal statement, the interview day, and developing a rank list. A list of relevant websites is also included. This paper is a resource that provides timely and tangible guidance to medical students applying for residency training.

INTRODUCTION

Some threads link all physicians. Yes, the care of patients unites us, as do the underlying principles of medical practice, patient advocacy, and improving our profession, but the career, training, and experience of a cardiothoracic surgeon differs vastly from that of a psychiatrist. The day-

to-day routine of a primary care doctor shares little in common with the day-to-day routine of a physician-scientist. Fortunately, students can choose the role in medicine that fits them best. Reasonably, choosing which path to follow — initially in terms of specialty — is one of the first choices one must make in launching a medical career. Of course, an initial career

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†Abbreviations: ACGME, Accreditation Council of Graduate Medical Education; ERAS, Electronic Residency Application System.

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choice may not be correct and may need to be revisited, but for most physicians, specialty choices they make in the third or fourth year of medical school have a profound impact on the next 30 years of their life.

Toward this end, this article will explore some of the many important items for medical students to consider in choosing a specialty. From the initial choice, to interviewing at residency programs, to choosing where to “match,” we will use a practical chronological approach, backed by evidence where possible, to better inform third- and fourth-year medical students about their choice of career. Whichever field the reader thinks he/she may want to pursue, we hope the information is useful and practical. There is no way this paper can answer every question for every student considering every specialty. Talking to local resources at your school — faculty, the program director, residents in the specialty, etc. — is invaluable and will provide the best and most up-to-date specialty-specific information. These people also can answer unique questions about a specialty (i.e., Should I do an away rotation?) that many students often have. Most medical schools also have “residency information nights” or series. These are invaluable and critical resources that should be used in the residency application process. This article will broadly compliment the resources available at each medical school.

A general timetable for what do and when to do it as it relates to applying to residency programs, written by resident Jeff Gonzalez, is available from the American Medical Association’s website [1].

CHOOSING A SPECIALTY

This is one of the first decisions one makes in life that has a real effect on one’s career. Sure, attending medical school also has an impact, but at most schools, the first two years of basic science provide some — but little — in the realm of patient care. Most students attend classes in years 1 and 2 of medical school with the goal of being best prepared for the clinical medicine of years 3 and 4, which

provides a different and often deeper level of fulfillment inherent to patient care.

Some students come to medical school already differentiated. They are committed to a certain field (for one reason or another), and the four years of medical school are just another hoop to jump through so that they can get into the residency they want. For those students, the experience of medical school may be different from the non-differentiated “stem cell” students that let their experiences influence and guide them. Or maybe not.

There are many factors, even in the pre-clinical years, that influence student interests and eventual specialty pursuits. For example, when students at a traditionally urban medical school are offered the chance to participate in a rural medicine rotation, their knowledge of and interest in rural medicine increases [2]. When pre-clinical students were offered the opportunity to participate in a vascular surgery educational initiative that included lectures and experiential learning, interest in vascular surgery and desire for further training both increased [3]. Additional specialty-specific examples are many and arrive at a common-sense conclusion: Students are interested in fields that they are exposed to and can imagine being taught by advisors and mentors in that field.

At least one study has shown that the school attended does not seem to influence career choice [4]. In this same study, the authors showed that being married increased the likelihood of choosing primary care (odds ratio, 2.2) and the two factors that increased the likelihood of choosing a specialty were prestige relative to other fields and income. A follow-up study by the same group in 2005 [5] showed that income and lifestyle were the leading factors influencing students’ career path choice.

The focus on salary in choosing a career is not surprising. The average medical school debt for the class of 2009 was \$156,456, according to the Association of American Medical Colleges. Furthermore, salary differences between general/primary care specialties and subspecialties is impressive and significant [6].

When considering a specialty, it is important to consider both the inpatient and outpatient experiences for a physician. What a student sees in the inpatient setting might be a small snapshot of a doctor's overall career. A thorough, 360-degree evaluation of a field of medicine in terms of practice sites, lifestyle, administration, and remuneration is essential prior to committing to a specialty.

Lifestyle seems to play an ever-increasing role in choosing a specialty or generalist career, something common across most fields of medicine [7-9]. Ironically, much of what students learn about clinical specialties and lifestyle is not from faculty, but rather from interns and residents. From patient care to bedside manner, to the ethos and practice of medicine itself, students attain more from house staff, not because of faculty "not doing their job" or not being "present," but by virtue of the paradigm that exists in American medical education. All authors of this article can readily attest to this. The role of the clinical "hidden curriculum" [10] on student choice might be much more influential than previously suspected.

By the end of the third or early in the fourth year of medical school, most students have done all of their required rotations, as well as several elective rotations. It is at this time we recommend sitting down and reviewing all the clinical experiences one has had if one is still undecided on a specialty. Anne Vinsel, a project administrator from the University of Utah Medical Center, has written *Twelve Steps for Choosing a Specialty* [11], which helps guide students. Interestingly, even though lifestyle and income seem to contribute more and more to the choice of specialty, Vinsel's advice in Step 8 is to "delete any reasons related to lifestyle and money."

Once you have decided on a specialty, it is time to do two things. First, think of residency programs you might be interested in based on word of mouth, advice from faculty, geographic location, institutions others from your school have attended, and by using the American Medical Association's FREIDA website, an online database with

almost 9,000 graduate medical education programs accredited by the Accreditation Council for Graduate Medical Education, as well as more than 200 combined specialty programs (Table 1). Secondly, write a personal statement that reflects your choice of residency. Remember, too, that every year a handful of applicants cannot decide on a single residency choice, so apply to two or more.

THE PERSONAL STATEMENT

The importance of the personal statement cannot be over-emphasized. That being said, it is only one piece of the entire application package. If anything, the personal statement should improve or stabilize your application; it should never decrease the value of your application. It should also never be longer than one page.

To achieve this, you should have everyone you can read your statement. That includes your academic advisor, anyone who writes you a letter of reference, at least five or six of your closest peers, residents you have worked with, and anyone else you admire and respect personally and professionally. Be forewarned: What one person tells you to change, another will tell you is an important and critical part of the essay. However, as is often the case, a rule of thumb is, the more the better.

Remember that this is called a *personal* statement. The overarching goal is to give the residency committee an idea of who you are as a person. It should not be a simple redo of your curriculum vitae. There are, however, certain common themes that most residency applicants consider important to mention in a personal statement, including why one is interested in a particular field, what is unique about you compared to other applicants, and what you can contribute to the residency program during your training. Others feel that mentioning the type of program you want and perhaps a special facet or feature of training you hope to gain from a program is an important element. Many online resources are available to complement advice from advisors (Table 1).

Table 1. Selected Websites Related to the Residency Application Process.

Choosing a Specialty
1. http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/medical-student-section/membership-services/choosing-medical-specialty/specialty-information.page?
2. http://www.ama-assn.org/ama/pub/about-ama/our-people/the-federation-medicine/national-medical-specialty-society-websites.page
3. https://www.aamc.org/students/medstudents/cim/specialties/
4. http://explorehealthcareers.org/en/home
5. http://www.abms.org/who_we_help/physicians/specialties.aspx
Application
1. http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/minority-affairs-consortium/transitioning-residency/the-application-process-a-timetable-success.page?
2. http://www.aafp.org/online/en/home/publications/otherpubs/strolling.html
3. https://www.aamc.org/services/eras/
4. http://www.sfmatch.org/
5. http://www.nrmp.org/
Personal Statement
1. http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/minority-affairs-consortium/transitioning-residency/writing-your-personal-statement.page?
Interview
1. http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/minority-affairs-consortium/transitioning-residency/general-residency-questions.page?
2. http://www.medscape.com/viewarticle/733498
3. https://www.aamc.org/download/77936/data/residencyquestions.pdf
Specific Residency Program Information
1. http://www.ama-assn.org/ama/pub/education-careers/graduate-medical-education/freida-online.page
2. http://www.acgme.org/adspublic/
Lifestyle/Childcare Factors
1. http://www.bestplaces.net/
2. http://childcareaware.org/
3. http://nafcc.org/
4. http://www.nncc.org/states/stateindex.html

Medical students seem to be correct in choosing what and why to write about certain topics. In one study that reviewed residency applications to radiology, 97 percent of applicants included in their essay why they chose radiology, and when asked, members of the selection committee included in the study agreed that this was the most important question to answer [12]. While writing style and skill also improve any essay, the selection committee in this study ranked basic language skills as being the most important element of form; origi-

nality and eloquence were the least important. The take-home message is this: Use spell check, grammar check, and any other checking system to ensure your basic grammar is correct. You have one page that you will spend many hours writing and perfecting. *Any* error is unacceptable to *any* program.

Though there are general guidelines on residency personal statements, some of which were mentioned above, it seems that homogeneity of personal statements is increasing beyond the a priori topic of “why

this field.” An interesting study recently published analyzing responses from more than half of the anesthesiology program directors in the United States showed that the personal statement may not be all that personal after all [13]. Three main themes were mentioned in more than half of the essays submitted to their programs: interest in physiology and pharmacology, enjoyment of a hands-on specialty, and desire to comfort anxious patients. The authors of the study concluded that “[the] data show a high prevalence of common features found within personal statements, and a general ambivalence amongst those program directors for whom the statements were intended . . . the personal statement has become generalized, and — for the most part — lacks the originality that may optimize its utility in distinguishing one applicant from another” [13].

While there are no cross-sectional data to suggest that personal statements may be more or less important to different specialties, a decade-old study of emergency medicine residency programs showed that of all components of the application, the personal statement was the part that contributed least to the overall importance of the residency application process [14].

Given this data suggesting that the essay is at best a required but only moderately important piece of the residency application and at worst a perfunctory exercise of homogeneous regurgitation, it is still a part of the application that the applicant controls 100 percent and has the potential to reflect the applicant’s personality, goals, and best attributes. Despite this, some applicants feel that they either are incapable of writing an essay themselves or are overtaken with the importance of the page-long, several-paragraph composition. In a recent study in *Annals of Internal Medicine*, Segal and colleagues analyzed nearly 5,000 essays submitted to all residency programs at Brigham and Women’s in Boston, Massachusetts, and found evidence of plagiarism in 5.2 percent of all essays submitted with application [15]. They concluded that “evidence of plagiarism in residency application

essays is more common in international applicants but was found in those by applicants to all specialty programs, from all medical school types, and even among applicants with significant academic honors” [15].

THE INTERVIEW

You have chosen a field to which you want to apply, written a personal statement, and applied to residency. Do not forget that the earlier you apply to residency, the better chances you have of getting interviews at the programs you want. Though you might feel that applying on the *first* day you can is a bit obsessive, programs feel otherwise — and so do thousands of applicants.

Most programs adhere to rather strict criteria in granting students interviews. While the criteria certainly differ among programs, institutions, and specialties, generally most programs use the U.S. Medical Licensing Exam Scores to review applications further [16,17]. There is no “rule of thumb” that can be used to know what scores each program uses unless the individual programs post it on their website. If programs do not post it (and the great majority do not), do not ask — they will not tell you.

Most applicants will accept every interview they are offered, and that is understandable. For more competitive specialties, an applicant may need to interview at many programs; for lesser competitive ones, perhaps a smaller number. We will not suggest an arbitrary number that each applicant should or should not achieve, but recognize that most interviews occur from November through January and coordinating them geographically (key in decreasing travel costs) can be quite difficult. Complicating the process further is the relatively limited number of interview dates each program offers. However, just as you want to see a program, they also want to see you. Therefore, if it is difficult to make an interview, select a specific date due to travel plans, etc. and be honest with the residency coordinator and ask if an exception can be made. While un-

common, occasionally alternative dates can be arranged.

Interview days, in general, are fairly homogeneous. Many start the night prior at the pre-interview dinner/reception. Lest you think this is not part of the interview process, you are wrong. From the moment you have contact with a program, you are evaluating the program and the program is evaluating you. This includes pre-interview e-mails and phone calls to administrative staff as well.

If a program has a pre-interview gathering, it often helps to attend. If you cannot, though, do not worry. The point of these gatherings is to allow you to spend time with residents. Dress is business casual for both men and women; most residents come from clinic or the hospital directly to the dinner. Regardless of what the residents or faculty do or say, do not have any amount of alcohol that will have an effect on you, do your best not engage in contentious conversations, and do not stay out too late — remember that you have to be in top form in the morning.

The interview day starts anywhere between 7 a.m. to 9 a.m. and lasts until 1 p.m. to 4 p.m. based on the program. Depending on how far the interview is from where you live, you can decide to arrive the morning of the interview or the night prior. The format will differ depending on each program, but generally includes a talk by the program director and other faculty, between one to eight interviews (the total interview time is often 60 to 90 minutes, regardless of the number of interviews), lunch, a tour of the hospital(s), some sort of educational activity (rounds, a lecture, a morning report, etc.), and time to talk with residents and faculty (though this may simply be over lunch). There are also other components of the day that often highlight a residency program's best assets, such as research, special program features, etc. These are often done by residents or faculty.

Many programs are quite similar in terms of structure and education. This is not due to chance. The Accreditation Council of Graduate Medical Education (ACGME†) is the body that approves and regulates resi-

dency training in the United States (Table 1), and it requires all programs in each specialty to teach all residents basic, common things. At the end of the interview day, it is often not the things that programs share in common that attract applicants — it is the uniqueness of each program that applicants remember.

Every program for which you interview will tell you the rotation and call schedules, show you the inpatient and often the outpatient setting, tell you the salary and benefits offered, etc. While everyone expects to be told these facts, they often do *not* figure into deciding on how to rank programs. Rather, the unique features of the program tend to contribute to this decision. The most important thing that contributes to this decision — and which no one can *tell* you on your interview day — is how you *feel* about the program on the day of the interview. Did you get along with the residents you met? Was house staff present on the interview day or were they too busy to even meet the applicants? Did the interns seem happy to you? Were your resident tour guides friendly, upbeat, and insightful? What did the house staff say they did for fun — the same things you do? These immeasurable facets of the interview day are the reasons you *really* go to the interview. If you do not feel comfortable on the day you interview, do you think you will be comfortable for the next three to eight years? Applicants should certainly allow their opinion of a program to be influenced by the dynamics and interactions with the house staff that they have on interview day. These people will be your residents by the time you are interns, the ones you call at 2 a.m. with questions, and your best teachers.

To underscore the importance of the interview day: Makdisi et al. presented a paper at the 2010 American Program Directors of Surgery meeting entitled “How We Select Our Residents — A Survey of Selection Criteria in General Surgery Residents” [16]. Their results indicated that, on a Likert 5-point scale, the interview was by far the most important factor (4.69), followed by Step 1 score (4.21), and letters of recommendation (4.02).

YOUR TOP CHOICE AND YOUR RANK LIST

Your opinion of a program forms as early as the first e-mail they send you and only really takes shape after your interview. One of the best resources to confirm your ideas about a program is to talk to other applicants. They have no say on whether you get accepted to a program, but you will see the same faces over and over at your different interviews. The same programs want the same students — this makes sense, just as the same students want the same programs.

What makes a program unique for one person may be inconsequential to another. For example, for students wishing to do research, they will be interested in knowing how this academic pursuit will be fostered during their time at that program. They may even want to prearrange meetings with potential mentors on the day of the interview or have several questions about this aspect of a program. For someone interested in purely clinical medicine, the breadth and depth of both required and elective rotations will be most important. International health experiences, teaching opportunities, location of the program, or anything else an applicant considers important will be a factor in deciding on programs. For applicants with a spouse, partner, or family, their opinions and input will also matter significantly (Table 1).

Before one creates a rank list and inputs into the Electronic Residency Application System (ERAS) (Table 1), programs that are not desirable should be crossed off the list and not ranked. There is a paucity of data on what factors influence students' rank lists. One recent, small study on radiology applicants cited several factors that influenced rank lists. The factors that Lewis et al. [18] cited as the most influential on rank lists, and are applicable to all residency programs, were happy, friendly, and enthusiastic residents, followed by friendly, enthusiastic, and approachable faculty members; location; teaching/resident education, didactic conferences; hospital/departmental facilities; research opportunities; patient/case diversity; free housing, free food, book funds; conference funding; elective opportunities/external rotations; and the program director [18].

Two perennial questions that applicants ask are 1) What should I say if a program contacts me? and 2) Should I tell my top choice program that they are my top choice?

Being contacted by a program after the interview is actually quite common — it in no way suggests that the program is more or less interested in you than it was prior to the interview. In a recent study of applicants to Emergency Medicine residencies, 89 percent reported being contacted in some way by a program after interview day [19], mostly via e-mail (91 percent) but 55 percent by phone. Reactions to this follow-up were mixed, with feeling of happiness mixed with feelings of being “put on the spot.” In a majority of instances, though, subjects reported that being contacted changed the order of their rank list in at least one case. If you have more questions for the person contacting you, you can ask them, and if not, simply thank the person for contacting you and move on. It is also a good rule of thumb for all applicants to contact the program soon after interview day (within a week) via e-mail or postal mail to thank the program and the interviewers for their time and insight.

It is up to you whether you tell a program if they are your top choice or not. It ideally should not influence the program's ranking of you. As discussed above, no studies have shown a correlation between applicants where an applicant informed a program of its place on his or her rank list and that program's rank list. Remember, though, that despite what may seem like a “whole new world” to a residency applicant, academic medicine is a relatively small world. If you tell a program they are your top choice, tell only one program — the one that *really* is your top choice. Who should you tell? The program director has the final say in selecting applicants at most programs, so that person is probably the best person to contact.

CONCLUSION

Based on common questions that medical students have at the time of residency

application, we have used the available evidence to provide a broad outline of the application process for students regardless of the field they have chosen. In summary:

1. The choice of specialty should become a topic of active thought and discussion toward the end of a student's third year of training.

2. The personal statement should be reviewed with multiple friends, advisors, and mentors and submitted with a complete application at the earliest date possible.

3. The interview is an extremely important part of the overall residency application process for both the program and the applicant.

An applicant's top choice and rank list is an important consideration with multiple factors to consider and will determine the location where one evolves from student to resident and eventually into a prepared and capable attending physician.

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