

THE SUCCESSFUL MATCH 2017



RULES TO SUCCEED IN THE RESIDENCY MATCH

RAJANI KATTA MD
SAMIR P. DESAI MD

FROM THE AUTHORS OF
SUCCESS ON THE WINGS

BOOK EXCERPT FROM
THE SUCCESSFUL
MATCH

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ABOUT THE AUTHORS

Samir P. Desai, M.D.

Dr. Samir Desai serves on the faculty of the Baylor College of Medicine in the Department of Medicine. He has educated premedical students, medical students, residents, and international medical graduates, work for which he has received numerous teaching awards. As a member of the Clerkship Directors in Internal Medicine, he is deeply committed to medical student education. He has served on the medical school admissions and residency selection committees at the Baylor College of Medicine and Northwestern University.

He is an author and editor, having written 18 books that together have sold over 250,000 copies worldwide. The inspiration for his books often comes from his experiences as a mentor, and he has a deep desire to help students and applicants overcome the challenges of the medical school admissions, residency selection, and fellowship selection processes.

In 2009, he co-authored *The Successful Match*, a well-regarded and highly acclaimed book that has helped thousands of residency applicants match successfully. His commitment to helping medical students reach their professional goals led him to develop the website, TheSuccessfulMatch.com. The website's mission is to provide residency and fellowship applicants with a better understanding of the selection process. His book *Medical School Scholarships, Awards, and Grants* has been identified as a high-value resource by the AAMC Group on Student Affairs.

Dr. Desai is deeply committed to enhancing the quality of patient care, reducing medical error, and decreasing health care costs. This desire led him to write the book *Clinician's Guide to Laboratory Medicine*, a resource widely used in the curriculum of medical, PA, and nurse practitioner schools, and listed as one of the "Best Medical Books of All Time" by The Medical Media Review. At Baylor, he is investigating ways in which technology can be used by residents and students to enhance patient care. One initiative currently underway is "Creating and Implementing a Patient Safety Checklist App for Residents and Students on Medicine Wards," a project that was awarded an Innovations Grant by the Alliance for Academic Internal Medicine. He is also a member of the Centers for Disease Control (CDC) Mobile Application Project Team.

After completing his residency training in Internal Medicine at Northwestern University in Chicago, Dr. Desai had the opportunity of serving as chief medical resident. He received his M.D. degree from Wayne State University School of Medicine in Detroit, Michigan, graduating first in his class.

He resides in Houston with his wife (and co-author) and their two children. He keeps fit by weight-lifting and biking with his children, and continues to follow his favorite team: the Detroit Tigers.

Rajani Katta, M.D.

Dr. Rajani Katta is an award-winning educator who is deeply passionate about patient, medical student, and physician education.

She served as Professor of Dermatology at the Baylor College of Medicine for over 17 years, and founded the Baylor College of Medicine Contact Dermatitis Clinic. In 2015 she left to establish her own practice dedicated to allergic contact dermatitis.

She has authored over 60 scientific articles and chapters, and has lectured extensively both nationally and locally on dermatology and contact dermatitis to students, residents, and physicians. She served as Course Director for dermatology in the basic science years for 15 years, and previously served as Clerkship Director of dermatology.

On a national level, she has worked closely to advance the mission of the American Contact Dermatitis Society, serving on the Education Committee and serving on the Board of Directors (2013-2016).

Having advised many students over the years regarding the dermatology match process, she was determined to become an expert in this area. In 2009 she co-authored the first edition of *The Successful Match: 200 Rules to Succeed in the Residency Match*. The book quickly became the best-selling title in this field. It has been recommended as Suggested Reading in the AAMC Careers in Medicine Student Guide and identified as a high-value resource by the AAMC Group on Student Affairs.

She has co-authored a total of 5 books. One of these books, *Success on the Wards: 250 Rules for Clerkship Success*, has helped thousands of medical students make the difficult transition from the preclinical to clinical years of medical school. *Success on the Wards* is a required or recommended resource at many US medical schools.

She has a strong interest in preventive dermatology, and is currently at work on her latest book, on the link between diet and dermatology. She maintains a blog and podcast on this topic at www.KattaMD.com. Her goal is to help foster better dietary choices by emphasizing the effects of diet on the skin.

After graduating with honors from Baylor College of Medicine and completing her internship in internal medicine, she completed her dermatology residency at the Northwestern University School of Medicine.

She and her husband Dr. Samir Desai (her co-author) have two children and one frog and reside in Houston, Texas. They enjoy hiking, and love to hear about great hikes.

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Chapter 1

Introduction

What does it take to match successfully? What does it take to match into the specialty and program of your choice?

Over 42,000 applicants registered for the 2016 NRMP Match, making it the largest Match on record. Competition is intense, and some applicants are unsuccessful.¹

In competitive fields such as general surgery, dermatology, plastic surgery, and orthopedic surgery, over 25% of U.S. senior allopathic applicants failed to match.

Overall, while nearly 94% of U.S. allopathic senior applicants matched, the number of unmatched seniors reached an all-time high of 1,130 applicants. The numbers are significantly worse for osteopathic and international medical graduates (IMGs). Failure to match rates are shown in the following tables.

Percentage of U.S. Allopathic Senior Applicants Who Failed to Match in Competitive Specialties (2016 NRMP and AUA Match)²⁻³	
Specialty	% of U.S. Seniors Failing to Match
Dermatology	28%
General Surgery	27%
Orthopedic Surgery	26%
Plastic Surgery	25%
Neurological Surgery	25%
Urology	23%
Radiation Oncology	19%
Otolaryngology	13%

Failure to Match % by Applicant Type (2016 NRMP Match)²	
Applicant Type	% Failing to Match
Osteopathic applicants	20%
U.S. citizen IMGs	46%
Non-U.S. citizen IMGs	50%

Did you know?

The failure to match rates reported by the NRMP for competitive specialties don't take into account the following:

- Applicants who give up on their preferred specialty choice because they feel that their chances of success are low.
- Applicants who apply to their preferred specialty choice but fail to receive an interview.

These applicants don't officially enter the match for their preferred specialty, and are therefore not included in these statistics. Some researchers have therefore looked at "intent to match" failure rates, and those rates are indeed significantly higher.

As an applicant, your goal is to match into your preferred specialty, and ideally your preferred program.

The evidence indicates that it has never been more difficult to reach these goals.

Over a decade ago, in response to an anticipated physician manpower shortage, allopathic and osteopathic medical schools increased student enrollment. New schools were also established. However, the number of residency positions has not increased at a corresponding rate. As more and more graduates have entered the Match, the competition for available residency positions has intensified.

Did you know?

In a 2015 survey of medical school deans, the AAMC asked "What is your level of concern about your incoming students' ability to find a residency training position of their choice upon completion of medical school?" 50% of the deans surveyed indicated having "major" or "moderate" concern. Of note, the percentage reporting this degree of concern rose from 35% in 2012 to 50% in 2015.⁴

What does it take to match successfully in such a fiercely competitive environment?

The issue is a hotly debated one, and surveys of students, reviews of student discussion forums, and discussions with academic faculty all find sharp divisions on the topic. Try entering this subject into a search engine, and you'll receive thousands of conflicting opinions.

I was speaking to a colleague, and I brought up this question and my work on this book. Her response? "A book on matching? What's there to write about? Get good grades and a great score on the USMLE. That's the book!"

Her response was sadly misinformed.

There's no doubt that medical school grades and USMLE Step 1 scores are very important, but focusing only on those two factors certainly doesn't tell the full story. If that were the case, it wouldn't explain these cases:

- A student with a Step 1 score of 260, membership in AOA, and published dermatology research, was only invited to interview at 2 dermatology programs (one of which was his home school).
- Another student, with a Step 1 score of 230 and no AOA membership, was invited to 9 dermatology interviews.
- Another student with great scores – but minimal dermatology research – was invited to interview at over 20 dermatology programs.

From a scientific approach, what are the factors that account for so much of the variability in match outcomes?

That's an interesting question, but I'm very interested in this topic for a far more personal reason. How can I help this student, sitting across my desk, match into dermatology? This is a very important, personal question for me.

After 17 years as a faculty member, and at a school that fields a high number of dermatology applicants (some years we've had as many as 12 applicants), I've advised many applicants. Dr. Samir Desai has advised a wide cross-section of applicants, from applicants with 15 interview invitations to those reapplying for the 4th time. Together, we've advised hundreds of applicants.

I certainly don't think you need an incredible USMLE score to be a great dermatologist, and yet that's being used as a screen by so many programs. I think we're missing some great applicants because of it. My goal is to help those applicants who I think will make great contributions to the care of their patients and to the specialty: conscientious, thorough, empathetic, and with a strong sense of intellectual curiosity. How can I, as an advisor, help such students? How can you, as that type of student, reach your professional goals?

The first edition of this book was published in 2009, and while the core strategies for a successful match remain the same, some important changes have occurred. The most relevant is that the competition is more intense.

With increased competition, it has become even more important to ensure that your application stands out from the other 499 applications that your dream program has received.

What does it take to achieve a successful match? It takes the right strategy. It also takes significant advanced planning and hard work, above and beyond the intense coursework of medical school.

In the following 600 plus pages, we answer the question of what it takes to match successfully. We also provide specific evidence-based advice to maximize your chances of a successful match.

Our recommendations are based on data from a full spectrum of sources. We present evidence obtained from scientific study and published in the academic medical literature. The results of these studies can provide a powerful impetus for specific actions. We present anecdotal data and advice that have been published in the literature and obtained from online sources. We also take an insider's look at the entire process of residency selection based on our experiences, the experiences of our colleagues in the world of academic medicine, and the experiences of the students and residents with whom we've worked.

We focus on the important questions that define the optimal match strategy. Who are the decision-makers? What criteria do they value? How can you ensure that your application materials highlight these criteria?

Who actually chooses the residents? We review the data on the decision-makers. What do these decision-makers care about? We review the data on the criteria that matter to them. How can you convince them that you would be the right resident for their program? We provide concrete, practical recommendations based on this data. At every step of the process, our recommendations are meant to maximize the impact of your application.

In Chapters 23 - 44, we present specialty-specific data. Given the high failure to match rates for certain specialties, is there any literature available to applicants to guide them through the residency application process? For each specialty, we present the results of those studies. For example, in urology, a survey of residency program directors (PDs) obtained data from 76 directors on the criteria that programs use to select their residents.⁵ What criteria did these directors rank as most important in deciding whom to interview? Which selection factors were most important in determining an applicant's place on the program's rank order list? What were the factors that led programs to downgrade applicants? This evidence-based information is critical to developing an application strategy that maximizes your chances of a successful match.

We review each component of the application in comprehensive detail in the following chapters. Each and every component of your application can be created, modified, or influenced in order to significantly enhance your overall candidacy. We devote the next 600 plus pages of this book to showing you, in detail, exactly how to do so.

Overview of Book

The first edition of this book was written in 2009, and we've seen a sharp rise in the competitiveness of many specialties since that time. This has translated to applicants applying more widely and extensively than ever before. This means that programs are receiving a record number of applications, and it's become ever more difficult to stand out in this sea of applications.

Increasing Competition for Residency Positions	
Residency Program	Comments
Department of Anesthesiology Ohio State University	“Anesthesiology is not the most competitive field, but it has become a lot more competitive in recent years.” ⁶
Department of EM UCSF	“Emergency Medicine residency programs are becoming increasingly more competitive. This field is more popular than in the past, leading to a robust number of applicants each year. There are generally very few positions to ‘scramble’ into each year.” ⁷
Department of Surgery University of Colorado	“Over the past five years, general surgery has become quite competitive.” ⁸

Did you know?

In the 2016 Match, 47% of all U.S. allopathic senior applicants failed to match at the program of their choice.²

This has led applicants to submit a larger number of applications to programs, as shown in the following table.

Average Number of Applications Per Applicant (2011 Versus 2015)⁹		
Specialty	Average Number of Applications Per Applicant (2011)	Average Number of Applications Per Applicant (2015)
Dermatology	40	60
Emergency Medicine	27	35
Obstetrics & Gynecology	32	40
Orthopedic Surgery	47	67
Otolaryngology	38	46
Radiation Oncology	28	35
Urology	44	58

The larger number of applications means more challenges for programs. Programs are finding it difficult to reduce this large group of applicants into a smaller, more manageable number who will receive interview invitations. “These additional applications...cause congestion in the application review process,” writes Dr. Steven Weissbart. “Therefore program directors may overlook preferred applicants as a result.”¹⁰

Did you know?

“As medical schools have increased their class sizes to address the demand for physicians and the number of residency slots has largely remained the same, students are forced to navigate the application process more strategically to match into residency programs.”¹¹

G. Scott Waterman, M.D.
Former Associate Dean for Student Affairs
University of Vermont

Personal Statement

For many students the most dreaded aspect of the residency application is the personal statement. If the words “personal statement” raise your anxiety level, you are certainly not alone. In a study of students at a single medical school, 85% agreed or strongly agreed with the following statement:¹²

I am anxious about writing the personal statement for my residency application.

Individual specialties, residency programs, and application reviewers assign varying degrees of importance to the personal statement. In the screening phase, reviewers whittle down a large applicant pool to a select group that is ultimately extended interview invitations. At some programs, the personal statement is used minimally, if at all, during this screening phase. In others, the personal statement is considered very important:

- “Program directors read a lot of personal statements, so make yours stand out,” writes Dr. Jennifer Oman, former program director of the UC Irvine Emergency Medicine Residency Program. “This is something that you want to pour your heart into and give your full attention...Take the time to do this right. It can save a borderline application from being thrown into the rejection pile.”¹³
- “The personal statement helps us to get to know you, and we read it with great care,” writes Dr. Dempsey Springfield, Program Director of the Harvard Combined Orthopedics Program.¹⁴
- “This is your only chance to ‘talk’ to us – make the most of it...a really good statement could be just enough to tip the balance in your favor and move you into the interview pool,” writes the Wake Forest University Department of Orthopedic Surgery.¹⁵
- The website for the University of Washington Family Medicine Residency states that the “personal statement is the primary component that will be used to select applicants who are invited for an interview. Please write a careful and thoughtful document.”¹⁶

Adding to the importance of the personal statement is this fact: a poorly conceived and executed personal statement may be detrimental to your application. Otherwise excellent candidates have been ranked lower, or even rejected, because of a poorly written statement. As reinforced by the University of Alabama at Birmingham Department of Obstetrics and Gynecology – “poorly written personal statements may detract from an otherwise excellent application.”¹⁷ Even when statements are free of glaring errors, far too many are viewed as neutral, and this represents a lost opportunity to impress the program.

Applicants are urged by advisors and PDs to create thoughtful and unique statements. Crafting a compelling personal statement requires reflection and creative writing. The evidence indicates that many students are uncomfortable doing just that. In the aforementioned survey, only 29% agreed or strongly agreed with the following statement:¹²

I am comfortable with creative and reflective writing.

It is very frustrating trying to put into words your vision for your medical career. Most students don't understand one basic fact about the personal statement, though. Unlike just about every other aspect of the application, you have complete control over the personal statement. You decide the content, the structure, and the form of the statement. This is a unique opportunity to impress the selection committee. In your statement you can showcase your strengths and those qualities that set you apart from other candidates. You can weave in evidence that confirms your qualities. You can use this opportunity to convince a faculty member that you would be an ideal candidate for their particular program. This is information that is not readily apparent to programs from their review of other application components.

When you create a personal statement, you need to consider your audience. When reading a personal statement, what do faculty members look for? What are they trying to determine? Consider the following:

- In a study evaluating the content of personal statements, members of the radiology residency selection committee at Wayne State University ranked eleven content areas from least to most important.¹⁸ Most important was a candidate's explanation as to why they chose to pursue a career in radiology. Personal attributes was second in importance, while perception of radiology defined as the applicant's ability “to explicitly state what he/she feels are the most important characteristics of either radiologists or the practice of radiology” was third.
- In a survey of orthopedic surgery PDs, 43% agreed that “the most important aspect of a personal statement is to learn more about the candidate's personal interests and backgrounds,” while 32% stated that “the most important aspect of a personal statement was to gain insight into an applicant's ability to write and to communicate effectively.”¹⁹

- Among 47 themes identified in an analysis of dermatology personal statements, three were found to be emphasized more often by applicants who matched (studying cutaneous manifestations of systemic disease, contributing to the literature gap, and investigating the pathophysiology of skin diseases).²⁰
- At the website for the Wayne State University pathology residency, the program writes that “your personal statement should summarize your particular background and interests and depict you as a person. You should indicate in your personal statement why you are interested in Pathology, what kind of experience you have had with Pathology, and what career path you plan to follow after training.”²¹

In our chapter on the personal statement (Chapter 7), we review in more detail what programs seek in the personal statement. We review different approaches and provide a springboard to brainstorming and developing your own statement. We review in detail how to conceive and execute a personal statement that reflects your individual strengths and skills, while convincingly conveying your excellent fit with the specialty and with the individual programs in a convincing manner.

Letters of Recommendation

Letters of recommendation (LORs) are a critical component of the residency application. In the 2014 NRMP Program Director Survey, 86% of programs in 22 specialties cited LORs as a factor in selecting applicants to interview.²² The only factor cited more frequently by PDs was the USMLE Step 1 / COMLEX Level 1 score.

Since you won't be directly writing these letters yourself, it may seem as if you have no control over their content. In reality, you wield more influence than you realize. In our chapter on letters of recommendation, we detail the steps that you can take in order to have the best possible letters written on your behalf. These steps include choosing the correct letter writers and asking in the correct manner. We also discuss the type of information to provide, and the manner in which to provide it, in order to highlight those qualities that you hope your letter writer will emphasize.

The purpose of these letters is to emphasize that you have the professional qualifications needed to excel. The letters should also demonstrate that you have the personal qualities to succeed as a resident and, later, as a practicing physician. Since these letters are written by those who know you and the quality of your work, they offer programs a personalized view. In contrast to your transcript and USMLE scores, they supply programs with qualitative, rather than quantitative, information about your cognitive and non-cognitive characteristics.

What do the faculty members reviewing applications look for in a letter of recommendation? The first item noted is the writer of the letter. In a survey of PDs in four specialties (internal medicine, pediatrics, family medicine, and surgery), it was learned that a candidate's likelihood of being

considered was enhanced if there was a connection or relationship between the writer and residency program director. “In cases where there was both a connection between the faculty members and in-depth knowledge of the student (i.e., personal knowledge), the likelihood was that the student’s application would be noted.”²³ In a survey of 109 PDs of orthopedic surgery residency programs, 54% of directors agreed that the most important aspect of a letter was that it was written by someone they knew.¹⁹

In another study, the academic rank of the writer was found to be an important factor influencing the reviewer’s ranking of the letter, with 48% of the reviewers rating it as important.²⁴ A survey of physical medicine and rehabilitation (PM&R) PDs asked respondents to rate the importance of letters of recommendation in selecting residents.²⁵ The study showed that the “most important letters of recommendation were from a PM&R faculty member in the respondent’s department, followed by Dean’s letter, and the PM&R Chairman’s letter.” Next in importance were letters from a PM&R faculty member in a department other than the respondents’, followed by a clinical faculty member in another specialty. The University of Texas-Houston Medical School Career Counseling Catalog gives this advice: “letters of recommendation from private physicians or part-time faculty, and letters from residents are generally discounted.”²⁶

For international medical graduates (IMGs), this issue becomes even more important. A survey of 102 directors of internal medicine residency programs sought to determine the most important predictors of performance for IMGs.²⁷ When rating the importance of 22 selection criteria, the lowest rated criterion was letters of recommendation from a foreign country, with 93% of PDs feeling that such letters were useless.

What else do the faculty members reviewing applications look for in a letter of recommendation? They seek evidence of an applicant’s strengths and skills. Most applicants assume that their letter writers know what to say and what information to provide in a letter to substantiate their recommendation. However, that’s a dangerous assumption. In an analysis of 116 recommendation letters received by the radiology residency program at the University of Iowa Hospitals and Clinics, reviewers noted the following:²⁸

- 10% were missing information about an applicant’s cognitive knowledge.
- 35% had no information about an applicant’s clinical judgment.
- 3% did not discuss an applicant’s work habits.
- 17% did not comment on the applicant’s motivation.
- 32% were lacking information about interpersonal communication skills.

In another review of recommendation letters sent to the Department of Surgery at Southern Illinois University, writers infrequently commented on psychomotor skills such as “easily performed minor procedures at the bedside,” “good eye-hand coordination in the OR,” “could suture well,” and so on.²⁹

Our chapter on letters of recommendation (Chapter 6) reviews strategies to locate letter writers who will be most helpful to your candidacy.

We review how to identify these writers and how to approach them. Most importantly, we describe the type of evidence you can provide the writer and the professional manner in which to provide it. Your letter writers want to write the best letter possible, and you can do much more than you realize to make this a reality.

Medical Student Performance Evaluation (MSPE)

Applicants must submit a letter from the Dean as part of their application. Known previously as the Dean's letter, this letter is now termed the Medical Student Performance Evaluation (MSPE). The typical MSPE contains an assessment of both a student's academic performance and professional attributes. The MSPE is particularly helpful when used as a tool to compare your performance in medical school relative to your peers.

Because this component is written by the Dean, students often don't realize the steps that they can take to influence its content:

- The "Unique Characteristics" section of the MSPE is found on the first page of this document, and is a brief statement about your background and experiences (e.g., leadership positions, involvement in research, community service activities). Schools may ask students to draft this section of the MSPE, and then utilize the draft to create the final product.
- Narrative information about your overall performance on each core clerkship and elective rotation will be placed in the "Academic Progress" section of your MSPE. Schools will often include comments taken verbatim from clerkship evaluations. As you move from clerkship to clerkship, we urge you to monitor your academic file. Keep up with your evaluations, and make note of any lukewarm or negative comments. If you feel that the comments are unfair, discuss it with the clerkship director. Addressing such issues well before the MSPE is created may allow for removal of the comments from your academic record.

These are just two ways in which you can influence the MSPE's content. The bottom line is that, at many schools, students *are* involved in the development of this letter. In Chapter 8, we review the steps that applicants can take to maximize the quality of the MSPE, from possibly choosing an MSPE writer, to providing the correct type of information, to the follow through.

Curriculum Vitae (CV)

Curriculum vitae is a Latin expression meaning the "course of one's life." Known as CV for short, this document provides an overview of a candidate's academic and professional background. While similar to a resume, a CV includes additional information such as research experience, publications, and presentations.

Programs within most specialties require applications to be submitted through the Electronic Residency Application System (ERAS). Using ERAS, applicants take information on the CV and enter it into the ERAS application form (MyERAS application). While this process limits what you can do with the look of your CV, the presentation of the information retains the same importance.

Applicants also need to generate a formal CV, as this will be used by letter writers and may be needed by faculty when interviewing.

From the standpoint of a residency selection committee member, reviewing a vast number of CVs from applicants is a difficult process. Therefore, in many cases your CV will be skimmed. Since you have a limited opportunity to impress the residency selection committee, every line, word, and number of your CV becomes important. In Chapter 9, we review how to describe and position experiences and achievements in order to maximize their impact. We review techniques such as utilization of numbers and action verbs to highlight your accomplishments. We review how to create a professional CV, how to utilize the correct structure and format, and how to maximize the impact of every word, line, and number.

Audition Elective

An “audition” elective essentially serves as an extended interview and should be regarded as such. For students applying to competitive specialties or programs, audition electives are considered a must by some programs. These rotations offer students the chance to highlight skills and qualities that aren’t easily judged by the typical application materials. Students can showcase their clinical acumen, their skills in patient interaction, their abilities to work with colleagues and faculty, and their enthusiasm for the particular program and specialty. These electives also offer additional opportunities to highlight a student’s qualifications for the program. Opportunities include deeper investigation of difficult cases, performing thorough literature searches, volunteering to give presentations, or seeking opportunities to publish in their chosen field.

In some specialties, particularly those that are more competitive, audition electives become very important:

- In a survey of program directors representing multiple specialties, Wagoner and Suriano found that 86% of PDs would give preference to students who had performed at a high level in an audition elective.³⁰
- In a survey of plastic surgery PDs, respondents ranked away rotation performance as the most important factor in the residency selection process. 27% of positions were awarded to away rotators.³¹
- In a survey of orthopedic surgery PDs, *the most important criterion in the resident selection process* was considered to be an applicant’s performance during a rotation at the director’s program.¹⁹ Of note,

applicants were also asked about their impressions regarding the importance of these factors, and this factor was not cited among the top three.

- In another survey of orthopedic surgery PDs, performance on a local rotation was considered the most important attribute in obtaining a residency. This was followed by class rank and the interview.³²
- In a survey of dermatology applicants, the audition elective was similarly important. A total of 53% of applicants matched at a program in which they had some prior experience. Of these, 29% matched at an institution affiliated with their own medical school, 18% matched with an institution where they had done an audition elective, and 6% matched with a program where they had done a research elective/fellowship.³³

In other specialties, by contrast, the audition elective may not have much of an effect. Our chapter on the audition elective (Chapter 10) describes each advantage of the audition elective, and details how to derive the maximum benefit from each. We review what factors to consider when choosing an elective and describe how to deliver an outstanding performance.

The Competitive Edge

If you're planning on applying to a competitive program or a competitive specialty, you'll need to bring into play all of the recommendations throughout this book. In Chapter 4, we review in detail how to add an extra competitive edge to your application. For competitive programs, publications may boost the strength of your application. The possibility of being published in the medical literature is available to all students. We tell you how to locate such opportunities and walk you through the steps needed to submit an outstanding product.

We also discuss research. Many applicants who apply to competitive programs will have participated in research. *Those applicants are your competition.*

In 2014 the NRMP published data on how applicant qualifications affect match success. Included among the data were the percentage of U.S. seniors who had participated in research projects and the percentage with publications. In highly competitive fields such as dermatology, orthopedic surgery, plastic surgery, and radiation oncology, over 97% of U.S. seniors had participated in research projects. Even in the fields that are not the most competitive, including the fields of anesthesiology, pathology, and pediatrics, over 85% of U.S. seniors had participated in research projects.³⁴

The Interview

Contrary to common belief, the purpose of the interview is *not* to determine if you have the qualifications needed to be a resident at the institution. By

granting you an interview, the program has already made that determination. Rather, the purpose of the interview is to assess fit. Are you the right fit for the program? Is the program the right fit for you?

Although the CV, personal statement, letters of recommendation, and other aspects of the application are all of great importance, there is no disputing the fact that the interview is possibly the most critical step of the residency application process. While the other elements of the application will help you get an interview, your interview performance will strongly influence your ranking.

Surveys of program directors over the years have consistently found the interview to be a major factor used to rank applicants. In fact, the results of multiple studies indicate that the interview is the *most* valuable factor used in the ranking of applicants.

Unfortunately, many otherwise qualified applicants lose any chance of matching into the residency program of their choice because of a poor interview. In a study of internal medicine residency applicants, 1/3 of applicants were ranked less favorably following an interview.³⁵ In a study of emergency medicine residency programs, with data obtained from 3,800 individual interviews, a total of 14% of interviews resulted in unranked applicants.³⁶ The conclusion here is that the interview has the potential to destroy your chances. Preparation is critical.

Unfortunately, we find that most applicants don't give interview preparation the priority that it deserves. Applicants spend months of intense study in preparing for the USMLE exam. They then turn around and spend a few casual hours preparing for interviews. This one critical mistake can ruin your chances of matching successfully.

We devote a full six chapters to the interview process. In these chapters, we review the type of research that must be done before each interview. We review what to expect from the typical interview day and the different types of interviews you may encounter. We discuss what to say and how to say it. We review the common interview questions and delve into the intent behind the questions so that you can prepare your responses. We prepare you for what to say when you don't know the answer. These chapters will prepare you for what to do before, during, and after the interview.

Before the Interview

A significant degree of advance planning is necessary to excel during an interview. You need to understand what interviewers are looking for when they speak to applicants. What are they trying to determine? What qualities are they seeking in their future residents? How can you project these qualities? How can you guide the interview to a discussion of your achievements that emphasize these qualities?

A survey of plastic surgery PDs asked them to rank 20 items that were used in the evaluation of applicants during the interview process.³⁷ The survey showed that the highest ranked criteria were leadership qualities, apparent maturity, answers to questions, candidate's interest in

teaching/academics and attitude toward questions. Sixth in importance were questions posed by applicants.

A study of PM&R PDs asked about the importance of different applicant characteristics assessed during the interview.²⁴ Ranked highest were compatibility with the program, ability to articulate thoughts, ability to work with the team, ability to listen, and commitment to hard work.

We will show you how to take this knowledge and use it when preparing your interview responses. Have you held leadership positions? Does your prior employment or volunteer experiences demonstrate a commitment to hard work? A review of your strengths and advance preparation are necessary to guide the interview in a direction that emphasizes these strengths. We also review the advance prep work that you'll need to perform for each program and each interviewer. As emphasized in the University of Chicago Pritzker School of Medicine Residency Process Guide, "If granted an interview, run a Medline search of the faculty's publications. Get some notion of who your interviewers are likely to be, and what their program emphasizes."³⁸ We review effective ways to research each program as well as each interviewer. Gaining this knowledge well in advance of the interview can help you create rapport and allow you to ask the specific, customized types of questions that are most likely to create a favorable impression.

Chapter 13 also tells you what to expect in an interview. You'll learn what to expect from the standard traditional one-on-one interview. You'll also be prepared for the increasingly used behavioral interview, as well as the panel interview and the conversational interview.

Interview Questions

In Chapter 15, we review common interview questions and delve into the intent behind the questions. Does the faculty member really care about your flight into town? Why do they want to know where you see yourself in 10 years? How can you best respond to the intent behind the question?

We also prepare you for specific areas of caution. Were you ready to talk about perfectionism as your greatest weakness? That response joins the other trite, overused responses that leave faculty with a negative impression. Many interviewers end their questioning with "do you have any questions for me?" "Questions asked by applicants" is actually a criterion used by some programs in evaluating applicants. This question can be used as an opportunity to emphasize your interest in the program, and your fit with the program. It's also the type of question that can sink your chances. We provide a full table of potential questions, and specifically review the ones that should never be asked of a faculty member.

Interview Day

A successful interview involves much more than anticipating interview questions and preparing the content of your answers. While most applicants focus their attention on content, nonverbal communication skills are just as important. It's estimated that 65% to 90% of every conversation is interpreted

through body language.³⁹ Of concern for applicants, high levels of anxiety have been shown to adversely affect a variety of nonverbal communication factors, including eye contact, body language, voice level, and projected confidence.⁴⁰ Even small details can alter perceptions. In the *Lancet* article “Getting a Grip on Handshakes,” it was reported that “a strong correlation was found between a firm handshake – as evidenced by strength, vigor, duration, completeness of grip, and eye contact – and a good first impression...”⁴¹

In Chapter 14, we talk about steps you can take to decrease anxiety, and the steps you need to take to manage the nonverbal messages during an interview. In her article, “Anxiety Patterns in Employment Interviews,” Young wrote that “Anxious individuals are less likely to be hired...possibly because interviewers perceive highly anxious people to be less trustworthy, less task-oriented...than low anxiety interviewees.”⁴²

We also suggest what to say and what to do when you don’t know the answer to a question. We review how to handle the situations that you may not be expecting, such as a silent interviewer or inappropriate or illegal questions. These occur more often than you might expect. A survey of urology residency applicants found that “being asked about marital status was recalled by 91% of male and 100% of female, if they had children by 25% of male and 62% of female, applicants, respectively.”⁴³ These two questions are illegal. We review these types of scenarios, since advance awareness and preparation are the keys to interview performance.

After the Interview

Post-interview communication is a critical component of the interview process. However, many applicants don’t recognize this fact. In one study, only 39% of applicants sent follow-up communication to every program with which they interviewed; 55% communicated only with select programs.⁴⁴ In Chapter 16, “After the Interview,” we review the three cornerstones of post-interview communication and how to correctly thank a program for the opportunity to interview. We review what to say when a program contacts you. Statistics reveal that this is a common occurrence.

We also help you plan how to communicate and what to say to the top programs on your list. We elaborate further on the fact that your expressed interest in a program can, in some cases, impact their interest in you. Is there a chance that your communication with a program following the interview can influence your ranking? Absolutely. Not for every faculty member, and not for every program, but there is a chance that at some programs, expressed interest in the program may influence your ranking.

How would your interest in a program affect their interest in you? Your negative interest can provide a negative influence. Negative interest can be perceived as the lack of any communication from the applicant following the interview. Some programs don’t wish to rank highly those applicants who have no interest in the program, because that lack of interest can be an indicator of a poor fit.

A positive interest can be a positive influence. An applicant who ranks a program highly is likely to feel that the program would be a good fit for

her interests and abilities, which is what a program seeks. An applicant who plans to rank a program highly would be thrilled to match there, and that hopefully translates to an enthusiastic, hard-working resident. It is also a point of pride for many programs to match those applicants at the top of their own rank list. In a study examining communication between programs and applicants, the authors wrote that “some program directors appear to construct their match lists with the goal of ‘matching well’ i.e., not having to go far down their lists. To achieve this, knowing where applicants plan to rank them is a high priority.”⁴⁵

However, programs do differ widely in their beliefs on the value of post-interview communication. For some programs, what you say following the interview will have no effect whatsoever on the program’s decision-making process. In a study looking at recruitment behavior, the authors wrote that “program directors were very skeptical of student ranking assurances.”⁴⁶

However, the authors felt that such assurances had an effect on ranking decisions at some programs. They felt that the impact of the rank order list was “limited to one third of programs.” Such information is clearly important to some programs.

Surveys of applicants support this belief. When Miller and his colleagues surveyed graduating students at ten U.S. medical schools, they found that 23% were asked how they planned to rank a program, and 21.7% were told that their level of interest would have bearing on their ranking.⁴⁵

Surveys of PDs support this belief as well. In one study, emergency medicine PDs were asked to rate the importance of 20 items in the resident selection process. An applicant’s expressed interest in the program was found to be a moderately important selection factor. In this study, it ranked of higher importance than the USMLE Step 1 score, although the standard deviation was high, indicating that there were significant differences in how PDs viewed this factor.⁴⁷

Ranking Residency Programs

Even at this late phase of the application process, applicants need to be aware of dangerous potential pitfalls. Most applicants agonize over the top three programs on their list, but don’t spend equivalent time with the bottom three programs on their list. Per the words of the San Francisco Matching Program: “Pay attention to the bottom of your list! Each year some applicants tell us that they omitted a lower choice because they overestimated their chances elsewhere. They ended up unmatched because the omitted program turned out to be their only offer. The only reason not to list a program is that you would rather remain unmatched to explore other options after the match.”⁴⁸

Applicants sometimes create a rank list that is too short, or don’t follow through with all the programs at which they interviewed, in the mistaken belief that they are a “lock” at a specific program. In their Statement on Professionalism, the NRMP writes that each year it is “contacted by applicants who believe that an error has occurred in the Match because they did not match to programs whose directors had promised them positions (i.e., had promised to rank them high enough to ensure a match). In every case, the NRMP has

determined that the applicant did not match to the desired program because, contrary to the applicant's expectation, the program did not rank the applicant high enough on the program's rank order list for the applicant to match there."⁴⁹

Do PDs actually promise positions to applicants? Studies have shown that students often do believe they have received informal commitments from programs. In a survey of fourth-year students at three schools, 43% felt that they had received informal commitments from at least one program.⁴⁴ In a survey of urology residency applicants, 40% felt that they had received informal commitments.⁴³ In Chapter 17, we review other potential pitfalls at this late, yet critical, stage of the process.

Additional Chapters

Special considerations arise for applicants in certain groups. For those at risk of not matching, it's important to have a strategy in place prior to Match week. The NRMP has a program in place called the Supplemental Offer and Acceptance Program (SOAP) for applicants who fail to match. The competition during the SOAP is very intense, and it's important to have a strategy in place far before that date. Chapter 19 reviews the SOAP in detail.

While many of the recommendations in this book are the same for allopathic and osteopathic applicants, there are some additional considerations for osteopathic applicants. This ranges from COMLEX scores to considerations for the separate AOA Match. We present this topic in significant detail in Chapter 20.

A number of different variables come into play if you are an international medical graduate (IMG). Your match strategy will require significant advanced planning, and additional factors. The strategies utilized by U.S. citizen IMGs and non-U.S. citizen IMGs will vary as well. This information is detailed in Chapters 21 and 22.

The other unique group of applicants is those going through the Couples Match. Considerations for these applicants are presented in Chapter 18.

The Successful Match

There are no shortcuts and no easy answers when it comes to a successful match. The residency application process is prolonged and difficult, and while success is never guaranteed, our evidence-based advice and insiders' perspectives provide the specific, concrete recommendations that will maximize your chances of achieving the ultimate goal: that of a successful match.

A Few Notes On How To Read This Book

“Over 600 pages? I’m never going to finish!” No, this is not that type of book. You do not have to read the entire book, and certainly not in one sitting.

- As you start to plan your match strategy, begin with the first three chapters, which include this introduction chapter, The Basics, and The Selection Process.
- If you’re applying for a more competitive specialty or a more competitive program in a less competitive specialty, your advance reading should definitely include the chapters The Competitive Edge and The Right Fit. I also suggest that you read the chapter on letters of recommendation, because this is a very important pillar of your match strategy. You may also wish to read the CV chapter in advance, because you’ll need to submit a CV to be considered for some research opportunities. It may also help highlight any weaknesses in your application. If you’re applying for a competitive specialty, we recommend audition electives, and Chapter 10 provides important recommendations.
- The last section of the book (close to 200 pages) is included as reference material. It covers every specialty in far more specific detail. You can use this section to explore your specific specialty choice (you can ignore the others).
- There are also a lot of pages devoted to references. We referenced over 750 sources in this book. We looked at, and excluded, many, many more. While we summarized and quoted many studies, editorials, and anecdotes within the book, many of these are fascinating primary sources, and may serve as important resources for your application strategy.
- One other point. We made every effort to improve the readability of this book. Therefore, please don’t rely on our writing as an example of correct grammar for professional writing. Our frequent use of contractions and dangling participles, as well as numerals at the start of a sentence, is a conscious choice to improve reading fluency.
- Some chapters were primarily authored by myself, and some were primarily authored by Dr. Desai. Pronouns, including gender pronouns, vary accordingly.
- Even though this is a very comprehensive book, we obviously can’t cover every last topic here. Please check our website www.TheSuccessfulMatch.com for links to other materials and for our blog. We’re also starting a podcast, and we’ll be linking to it there. One of our first topics will be a more in-depth discussion of ways to locate research opportunities.

We wish you the best of luck with your residency match.

Sincerely,

Dr. Rajani Katta and Dr. Samir Desai

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Chapter 2

The Basics

The residency application process starts with some basic yet essential information. You may have chosen a specialty, but have you realistically evaluated your chances of matching into that field? How do you decide which programs you should apply to? How do you locate and actually work with a specialty-specific advisor? How do you actually start the application process? In this chapter, we consider basic information needed to start the application process.

Choice of Specialty

Your residency application starts with your selection of a specialty. Once you decide on a specialty, you must determine:

- The competitiveness of your chosen specialty
- Your competitiveness for that specialty
- The matching program that administers the match process in your chosen field
- The right advisor to help you reach your career goals

Assessing the Competitiveness of Your Chosen Specialty

To develop the optimal match strategy, you must take into account the competitiveness of your chosen specialty. Listed in the following table are the numbers of U.S. allopathic seniors who failed to match in each specialty (2014 NRMP Match). We've also included the percentage of positions in the specialty filled by U.S. allopathic seniors, as opposed to IMGs or graduates of osteopathic schools.

The other columns present the mean USMLE Step 1 scores among matched applicants and the percentage of applicants in the Alpha Omega Alpha Honor Medical Society (AOA) for each specialty.

Assessing the Competitiveness of Specialties Participating in the NRMP Match				
Specialty	U.S. seniors who failed to match	Fill rate (U.S. seniors)	Mean USMLE Step 1 score for matched U.S. seniors	% AOA
Anesthesiology	49 (4.4%)	73%	230	10.6%
Dermatology	111 (24%)	91%	247	50.8%
Emergency Medicine	106 (7.2%)	79%	230	12.0%
Family Medicine	49 (3.6%)	44%	218	8.0%
General Surgery	158 (15.4%)	80%	232	15.3%
Internal Medicine	105 (3.1%)	49%	231	16.4%
Medicine/Pediatrics	11 (3.8%)	84%	233	22.1%
Neurological Surgery	50 (21%)	90%	244	28.3%
Neurology	10 (2.6%)	55%	230	12.8%
Obstetrics/Gynecology	89 (8.6%)	80%	226	12.6%
Orthopedic Surgery	190 (22.7%)	94%	245	32.2%
Otolaryngology	91 (24.7%)	95%	248	38.9%
Pathology	5 (1.9%)	47%	231	11.0%
Pediatrics	73 (3.9%)	71%	226	12.9%
PM&R	26 (11.3%)	61%	220	5.5%
Plastic Surgery	52 (29.2%)	92%	245	39.0%
Psychiatry	26 (3.7%)	57%	220	4.9%
Radiation Oncology	20 (10.6%)	82%	241	23.6%
Radiology	12 (1.5%)	50%	241	21.8%
Vascular surgery	4 (10.8%)	84%	237	22.6%

Adapted from Charting Outcomes in the Match (2014). Available at: <http://www.nrmp.org/wp-content/uploads/2014/09/Charting-Outcomes-2014-Final.pdf>.

Using this information, specialties can be divided into three groups:

- Highly competitive (> 15% of U.S. allopathic applicants fail to match)
- Moderately competitive (5 – 15% of U.S. allopathic applicants fail to match)
- Less competitive (< 5% of U.S. allopathic applicants fail to match)

Competitiveness of Specialties		
Highly Competitive	Moderately Competitive	Less Competitive
Dermatology General Surgery Neurological surgery Ophthalmology Orthopedic Surgery Otolaryngology Plastic Surgery Urology	Emergency Medicine Obstetrics/Gynecology Physical Medicine & Rehabilitation Radiation Oncology Vascular Surgery	Anesthesiology Family Medicine Internal Medicine Medicine/Pediatrics Neurology Pathology Pediatrics Psychiatry Radiology

Among the highly competitive specialties, dermatology, neurological surgery, orthopedic surgery, otolaryngology, plastic surgery, and urology had the highest failure to match rates, ranging from 21% (neurological surgery) to 29.2% (plastic surgery).¹

Note...

For highly competitive specialties, you need a back-up plan. What do you plan to do if you don't match? Interviewers often ask about back-up plans to learn about the depth of your commitment to the specialty. A well thought out back-up plan that allows reapplication implies a deeper commitment to the specialty. Some students apply to two different specialties, using one as a back-up to the other. However, in a survey of general surgery PDs, 75% felt that knowledge of an applicant interviewing in multiple specialties would have a negative effect on the applicant's rank order.²

Assessing Your Competitiveness for Your Chosen Specialty

It's of critical importance to realistically assess your academic credentials and qualifications. Periodically, the NRMP publishes two important documents that applicants may use to assess their competitiveness for specialties participating in the NRMP Match:

- NRMP Program Director Survey³

On a biennial basis, the NRMP surveys all program directors participating in the Match. Respondents are asked to rate the importance of criteria used to select applicants to interview. PDs are also asked to rate the importance of criteria used to rank applicants. In the 2014 survey, approximately 53% of PDs responded to the survey.

- Charting Outcomes in the Match¹

In this document, the qualifications of matched and unmatched applicants are presented by specialty.

It's also important to discuss your academic credentials and qualifications with those who are knowledgeable about the selection process. It's both necessary and important to seek the opinions of your dean, department chairman or PD in your chosen specialty, your advisor, and other key faculty. With their assistance, you can develop a more informed and objective view of your competitiveness for the specialty. Through this process, some applicants recognize the necessity of a back-up plan.

Just as some specialties are more competitive than others, some programs within a specialty are far more selective than others. Again, discussions with experienced advisors can help you learn about program

selectivity. In developing a list of programs to apply to, we encourage you to apply to those programs which you consider your “dream” programs. Every year, applicants match to programs for which they thought they had little or no chance. However, your list definitely needs to include a sufficient number of programs which are sure bets.

Tip # 1

Ask key faculty members at your school for their thoughts on the number of programs to which you should apply. Based on your credentials, have you considered enough programs for which you’re competitive?

Tip # 2

Strategize about concrete steps that you can take to strengthen your application. Should you take the USMLE Step 2 CK exam before applying? Can you participate in research? Should you do an elective with a distinguished professor to secure another strong letter of recommendation? Would an audition elective help?

As you review your competitiveness for the specialty and for particular programs, you must strategize on how to strengthen your candidacy. If you’re reading this book early in your medical education, you have the advantage of time. However, even if you’re in the midst of the application process, there are multiple ways to enhance your credentials.

Tip # 3

Make sure you apply to enough programs. If you receive a plethora of interviews, you can always cancel some.

Matching Programs

While most specialties participate in the National Resident Matching Program (NRMP), the ophthalmology and urology matches are handled by the San Francisco Matching Program and the American Urological Association, respectively. Osteopathic applicants may also choose to participate in the AOA Match administered by National Medical Services (see Chapter 20). Both allopathic and osteopathic applicants can participate in the Military Match.

National Resident Matching Program (NRMP)

In 1952 the National Resident Matching Program, commonly referred to as NRMP, was established through the efforts of its sponsoring groups, which included the American Medical Association, the Association of American Medical Colleges, and the American Board of Medical Specialties. Before its inception, medical students were pressured by residency programs to accept residency training contracts early in their medical training, sometimes as early as the second year of medical school. Many students were forced to make specialty decisions before they were ready.

With the establishment of the NRMP the process became much more ordered, and today there's general agreement that the process is much easier. What did the NRMP do to improve this process? The NRMP requires both applicants and programs to create a rank list. Applicants submit a list of programs they would be willing to attend, in order of preference. Programs also submit their own lists, ranking the candidates they've interviewed in the order in which they would extend offers to fill their residency program. Match results are produced by a computer which matches each applicant to the highest ranking program (on the applicant's rank list) which has offered him or her a position in their program. The results are announced throughout the country in mid-March on "Match Day."

Programs and applicants are expected to honor the results of the Match. To participate in the Match, applicants must agree with the policies and rules of the Match Participation Agreement. When a match occurs between a program and an applicant, both parties have a binding commitment to one another. If either party does not honor the commitment, it is considered a breach of the agreement and results in an NRMP investigation.

In the 2016 NRMP Match, there were over 42,000 registrants vying for just over 30,000 first-year positions.⁴ Over 18,000 of these applicants were U.S. allopathic seniors. The remaining applicants were considered "independent applicants" and included graduates of U.S. medical schools, students at osteopathic schools, Canadian students, and IMGs.

To participate in the Match, applicants must first register for the NRMP at the organization's website. Applicants can register at the site by completing a form, agreeing to the terms and conditions of the Match, and paying the registration fee.

Other Matches

Ophthalmology and Urology do not participate in the NRMP. The ophthalmology match is administered by the San Francisco Matching Program (www.sfmach.org) while the urology match is handled by the American Urological Association (www.aua.net). Both matches take place earlier than the NRMP match and are often referred to as "early matches." Results of these matches are announced in January.

Some Important Terms in the Match...

Categorical Residency Positions: Refers to programs in which residents complete their first year, or internship, as part of the training program. After completing internship, residents remain there to finish training.

Advanced Residency Positions: Refers to positions which begin 1-2 years after the Match, and require completion of preliminary training. Applicants must arrange for this initial period of training separately.

Preliminary Residency Positions: Internal medicine, pediatrics, OB/GYN, and general surgery residency programs may offer preliminary residency positions. These one or two-year positions fulfill the initial training requirements for certain specialties (see Advanced Residency Positions above).

Transitional Year Positions: Refers to a one-year position during which the trainee rotates through various specialties, including internal medicine, surgery, pediatrics, and emergency medicine. Of note, some specialties allow their trainees to complete a transitional year in lieu of a preliminary year. For example, prior to starting dermatology residency, trainees can complete either a transitional or preliminary year.

Note...

Applicants participating in other matches (i.e., ophthalmology or urology) will often register in the NRMP for several reasons. First, many of these residency programs require applicants to arrange for their first year of training (preliminary year) separately. Second, since both specialties are highly competitive, applicants will often apply to a second choice specialty as a back-up plan in the event that they fail to match.

Electronic Residency Application Service (ERAS)

In 1995, the Electronic Residency Application Service (ERAS) was founded by the Association of American Medical Colleges (AAMC). Through ERAS, applicants complete a single application which is transmitted electronically to designated programs. Presently, all specialties participate in the ERAS program, with the exception of ophthalmology, which participates in the San Francisco Matching Program Central Application Service (CAS).

ERAS allows for transmission of all application components, including the common application, personal statement, MSPE, letters of recommendation, and transcripts. For applicants participating in the NRMP Match, September 15 is the earliest date ERAS applications may be submitted to programs.

Note...

All specialties with the exception of ophthalmology use ERAS. Note that, while the urology match is administered by the American Urological Association, urology programs also use ERAS. Ophthalmology, however, participates in the Central Application Service (CAS). A few programs within ERAS participating specialties do not use ERAS. If so, you will need to obtain the application directly from the program.

Did you know?

You can track the status of your ERAS application by using the Applicant Document Tracking System (ADTS). You can determine when supporting documents have been uploaded, and the dates on which residency programs downloaded these documents.

Selecting an Advisor

Insider advice is invaluable. Students recognize that the help of an advisor in guiding them through the complex residency application process can be an important factor in boosting the strength of their application. In a survey of third- and fourth-year medical students at UCSF, 96% of all participants rated mentors as important or very important.⁵ Unfortunately, recognizing the value of a mentoring relationship is a far cry from developing such a relationship. Although 96% of the participants rated mentors as important, only 36% actually reported having a mentor.

The value of advising is recognized in all fields. The literature in the fields of business, education, and medicine all support its value. Although they're at an advanced level in their career, even medical school faculty describe the need for advisors. Comments made by medical school faculty emphasize the value of an advising relationship:⁶

- "I had a difficult time learning the rules of the game."
- "Without a mentor...I had no idea really what to expect from academic medicine. I have been feeling my way through the tunnels because I don't know where the roadblocks are. I just kind of deal with them when I get there."

These comments mirror those we hear from applicants. It's difficult to learn the rules of the game when they're not written down. "I didn't know you could customize your personal statements for different programs." "I didn't know I should have sent an e-mail thank you immediately after the interview, especially since I was planning to send a note later."

It's particularly difficult when you learn the rules of the game too late to make a difference. "I didn't know that matched applicants to neurosurgery in the NRMP data had reported, on average, nearly 12 abstracts, publications, or presentations. I'm in my fourth year now, and it's probably too late."

As you'll see throughout this book, we often recommend seeking the opinions and advice of your advisors. Their insider advice and specific knowledge about the specialty is clearly very valuable. However, how do you, as an applicant, actually locate such an advisor?

Some medical schools recognize the importance of advising students and have responded with the development of mentoring and advising programs. These programs differ widely in structure and scope. At some schools, highly organized programs have been developed. At other schools, the mentoring

process is more informal, consisting of students being given a list of faculty members willing to serve as advisors, and then encouraged to cultivate relationships. As one student in a survey of UCSF students stated, "I create the relationship, and then I follow it. I sort of take the risk."⁷

While some students are able to create such relationships, it can be difficult, and some students blame themselves for not being assertive enough to find a mentor. "I just didn't know how to go about setting myself up for a good thing to happen."⁷ Other students maintain that the problem lies with the system, citing the short duration of courses and clerkships as impediments to developing relationships with faculty.

Did you know?

In a recent study of academic plastic surgeons, researchers had medical students at different institutions place e-mail requests for mentorship with faculty at the same institution. Nearly 25% of plastic surgeons never responded despite students sending 2 separate e-mail requests. The report also shed light on how quickly faculty respond to student e-mails. After the initial e-mail contact, the mean response time was 36 hours. The mean response time following the second e-mail reminder was 72 hours. Of note, 23.1% of responses occurred after the second reminder, emphasizing the importance of follow-up if no response is received after initial contact. Researchers also noted that younger faculty members, those at top 20 medical schools, and members of the American College of Surgeons were more likely to respond.⁸

How have other students met potential mentors? In one study, 28% of students met their mentors during inpatient clerkships, 19% through research activities, and 9% during outpatient clerkships.⁵ If you're lucky, you'll be assigned to an inpatient or outpatient clerkship in which you learn and excel, and through that process develop a relationship with your attending. If so, you may seek a letter of recommendation from your attending, or ask for advice with your career choices and application.

Many students won't find a mentor through randomly assigned clerkships and courses. One option is to choose a particular elective or clerkship for the chance to work with a specific attending. A discussion with other students, upperclassmen, or residents in your chosen field should help identify those faculty members who are known to be excellent advisors. If you're not able to work with these individuals directly in a clinical setting, you may be able to contact them for opportunities to work on research projects or publications. In some cases, potential advisors may be willing to meet with you outside of clinical activities.

Did you know?

The importance of the mentor in the residency selection process was highlighted in a recent study of EM residents. Researchers found that residents who reported “greater mentor effectiveness were more likely to match to their first or second choice.” Of note, 1/3 of respondents indicated that they didn’t have a mentor during medical school. Osteopathic and IMG applicants were less likely to have mentors than their allopathic counterparts.⁹

**Using the Mentor Effectiveness Scale (MES)
to Choose Among Potential Mentors**

While many students ask upperclassmen about potential mentors, the conversation is often short on specifics. To make more informed decisions about your choice of mentor, consider using the Mentor Effectiveness Scale created by researchers at Johns Hopkins University. Ask past student mentees to rate potential mentors on a scale of 1 (strongly disagree) to 5 (strongly agree) using the following 12 behaviors.

My mentor was accessible.

My mentor demonstrated professional integrity.

My mentor demonstrated content expertise in my area of need.

My mentor was approachable and easy to talk with about concerns.

My mentor was supportive and encouraging.

My mentor provided constructive and useful critique of my work.

My mentor motivated me to improve my work product.

My mentor was helpful in providing direction and guidance on professional issues (e.g., networking).

My mentor answered my questions satisfactorily (e.g., timely response, clear, comprehensive).

My mentor was helpful in providing advice on work/school and personal life.

My mentor suggested appropriate resources (e.g., experts, contacts, source material).

My mentor challenged me to extend my abilities (e.g., risk taking, try a new activity, draft a section of an article).

Through this tool, you’ll be able to more accurately identify strengths and weaknesses of potential mentors.

Berk R, Berg J, Mortimer R, Walton-Moss B, Yeo T. Measuring the effectiveness of faculty mentoring relationships. *Acad Med* 2005; 80(1): 66-71.

It can be difficult to ask a faculty member for their help. Understandably, students often hesitate to burden faculty members who are already clearly very busy. However, while faculty members have many demands placed on their time, there are faculty at every medical school who find mentoring and advising students enjoyable and rewarding. While these individuals are sometimes recognized publicly for their work, it’s more typical that they go

about their work diligently but quietly. You should make every effort to identify these types of motivated, dedicated individuals.

In many departments, students applying to a particular field will be advised that they should start the process by setting up a meeting with the clerkship director, program director or chairman of the department. The intent of this meeting is to state that you're planning to apply to the field. From there, the meeting can go in several directions. You can ask for recommendations on potential advisors. You can ask for recommendations on the application process, given the strength of your credentials. You can seek opportunities to work on a case report, to work on a research project, or to arrange a research elective.

Some schools lack residency programs in certain specialties. That poses obvious difficulties for students applying to that specialty. One option would be to seek advisors elsewhere, such as during an audition elective. In addition, local or national organizations may provide assistance. The Society of Academic Emergency Medicine (SAEM) has a virtual advisor program (EAdvisor) open to medical students at all institutions. Through this program, students can query experienced individuals about a variety of issues, including the EM residency application process.

Finding the right advisor can be difficult. Even with a formal system for assigning advisors, the advisor won't necessarily be the right fit for the student. If you encounter this problem, seek guidance from other faculty members. Even classmates, upperclassmen, and residents can serve as additional advisors, although they shouldn't be your sole source of information. Few advisors have the answers to every question, and it's often to your advantage to have several opinions on certain issues. As one student told us, "My faculty advisor was very helpful when it came to writing my letter of recommendation and giving me advice on where to apply. However, two of the upperclassmen who had matched into my field were very helpful when it came to my application itself. They told me which faculty members were the ones to work with, who might have papers that I could work on, and how I should be customizing my personal statement. I wish that I'd had the guts to approach the other faculty that I had worked with for their thoughts on the subject. I also really wish I had asked one of them to help me with a mock interview."

Did you know?

Although you might expect that mentors in a single specialty would agree on the nature of advice delivered to residency applicants, research has not shown this. In one study, researchers designed and distributed a survey to all family medicine residency programs. Respondents were asked to indicate their level of agreement with various advising statements that faculty may offer to students applying to programs. Respondents were asked to use a 4-point Likert scale (strongly agree, agree, disagree, strongly disagree) with each advising statement. Of the 24 items in the survey, consensus was only achieved for 7/24 items. "Lack of shared understanding about factors being used to determine success of applicants presents a significant barrier," wrote the authors of the study. This is yet another reason to consider having multiple mentors.¹⁰

A Note for Shy Students Searching for Mentors

If you're shy, or you just hate having to ask for a favor, please read this.

I was testing out a talk one year, and I gave a practice lecture on the successful match to five 4th-year medical students. One student had several questions following the lecture, because her match efforts weren't going well. In the following week, I received emails from two of the other students. Both asked me to review their personal statements. Both were stellar. Neither needed my help.

The student who clearly could have used my help, though, never contacted me. I had hoped she would. I had several suggestions for her, but I try not to give unsolicited advice. I just wish she had contacted me with a simple email:

Hello Dr. Katta,

I enjoyed your lecture today, and it raised several points that concern me about my own application. Is there any way you might be able to meet with me for 15 minutes during the next two weeks to discuss my application? If you're too busy at this time, I understand, but thank you for considering it.

Regards,

It's always difficult reaching out to individuals in positions of power. It's especially difficult when you're asking for a "favor." Here are my suggestions:

1. Express appreciation when you ask. "Thank you for taking the time to consider my request."
2. Express appreciation afterwards. "Thank you so much for taking the time to meet with me today. I appreciated your advice on..."
3. Be very clear about what it is that you're asking for, and make it clear what kind of time commitment will be involved. "Would you be able to meet with me for 15 minutes to discuss..."
4. If you're asking for potential case reports or research projects, then remember that your offer of hard work may be just what your attending needs at that point in time. If so, it's not a favor: you're offering a valuable contribution.
5. Your request may be met with silence, or with a polite "not at this time." Much of this, as in so much of life, is about timing. Don't take it personally, because it's not.
6. If you're asking to participate in a research project, how many phone calls/emails/meetings will it take before you're offered an opportunity? If your department is actively involved in research, maybe just 2-3. If you're seeking opportunities outside of your home department, maybe 10-20. If you're not a current medical student, maybe 100. Yes, that's correct. A family friend, an IMG, knocked on over 100 doors before she was given the opportunity to write a case report. She parlayed that into more opportunities, and is now finishing her Cardiology fellowship.
7. Lastly, don't hesitate to ask for help if you need it. Please remember that many faculty members are very happy to advise and support medical students, because they find it to be a fulfilling, rewarding aspect of their jobs. I find it very fulfilling to mentor and support individuals whom I believe have great potential. After 17 years as a faculty member, a number of former medical students and residents are now colleagues and friends. I refer friends and family members to some of the dermatologists whom I trained. These are individuals who are caring, empathetic, diligent, and conscientious - in short, the type of physician I admire. I'm proud of these individuals, and I'm happy that I had a part in their training.

Did you know?

Have you ever wondered what forms the basis for the advice offered by mentors and advisors? In one study of pediatric clerkship directors, researchers inquired about the resources which informed advising strategies for applicants. Approximately 40% of respondents reported using subjective resources alone, including their own experiences as an applicant, input from former students, and discussions with colleagues. Less than half indicated that they used objective resources such as NRMP data.¹¹

Did you know?

In a study of over 70 medical students mentored by radiation oncology faculty at a single institution, researchers assessed the impact of the mentorship program. Mentees delivered 75 presentations at national conferences, and published a total of 53 manuscripts. Mentees were also noted to have received numerous medical school and national awards for their work and involvement. The authors concluded that mentorship can have a positive effect on research productivity.¹²

Did you know?

Will your mentoring needs be met by your assigned mentor? Factors to consider include the number of mentees served by the mentor and time spent per month. In a study of 14 newly established schools since 2006, researchers found that the ratio of mentors to mentees ranged widely from 1:1 to 1:20. Time spent in hours per month varied considerably, from as few as 1-2 hours to over 10 hours.¹³

As you consider possible advisors, you should be aware of problems that can occur in the advisor-advisee relationship. Chief among these is the potential conflict of interest that can occur with a faculty member who advises a student and also serves on the residency selection committee (at a program affiliated with the student's medical school). In a survey of 740 graduating medical students from 10 U.S. medical schools, Miller found that nearly half met with their advisors during or following the interview season.¹⁴ The results indicated that:

- 31.8% were encouraged to rank the advisor's program highly.
- 10.3% were asked which programs they planned to rank highly.
- 4% were asked how they planned to rank the advisor's program.

Students reported varying degrees of discomfort with these queries. One respondent stated that “it felt very uncomfortable to talk to him about my own strengths and weaknesses and about which programs I preferred knowing that he would later be evaluating me in comparison with many other applicants and deciding whether or not to advocate for me to be accepted.” Faced with such dilemmas, some students felt pressured to make misleading statements. Miller went on to raise some important questions. “What is safe for applicants to tell their advisors? Can applicants be sure that their advisors will put their interests first in these situations?” You need to consider how you would respond to these types of queries, since you may be placed in a similar situation.

Studies of medical students, advising, and the match are sparse, but our experience has demonstrated that having an effective advisor is invaluable. Advisors can help students with career decisions, evaluate potential residency programs, review *curriculum vitae* and personal statements, write letters of recommendation, and conduct mock interviews. Since faculty members often sit on residency selection committees, many can offer insight into the selection process that is not available elsewhere. By analyzing and comparing your credentials with those of students who have matched in previous years, advisors can identify ways in which you can strengthen your application and work with you to develop an overall strategy for success. Applicants should work hard to identify the right advisors, since these relationships can be invaluable in ensuring a successful match.

Adapted with permission from our column, “The Successful Match,” available at www.studentdoctor.net

Mentors as Inspiration

We’ve focused in this section on mentors who can provide career guidance and who can help with career advancement, but their most important role may be that of role models. Mentors can show us the type of physicians that we can choose to become.

When I was a 3rd-year medical student, I did a rotation at our county hospital. I remember presenting the case of a 12-year-old girl with atopic dermatitis. It was very routine. The resident asked me what medications she was on, and then refilled her prescriptions. As I was discussing a different case with the attending, Dr. D., the young girl walked out of the room. Dr. D. asked me what we had done for the patient. She then proceeded to teach me.

She asked me to look at the girl’s posture. She made me see her downcast gaze, her slow gait, and her overall sense of defeat. I saw the angry flare of dermatitis on her face. Why were we refilling her medications, when they so clearly weren’t working?

She asked me to bring the patient back to the room. We sat down with her and revised her treatment regimen. We worked on giving her hope.

I remember thinking, at that moment, that this was the kind of doctor I wanted to be.

Medical School Resources

If you are currently in medical school, you can and should take full advantage of the resources available at your institution. The scope and quality of these resources vary greatly, and you'll need to research to discover what resources are available. Many schools will offer meetings on the residency application process, with a particular emphasis on deadlines. These meetings typically review the institutional resources available to help students match successfully.

However, the support offered by medical schools varies greatly. In speaking with students and residents, we've heard of schools that cover the whole spectrum. In one school, no group meetings were offered, and no individual meetings with the Dean were arranged. Instead students were reminded of application deadlines by e-mail. "The information was handed down from the residents and upperclassmen, and you were pretty much expected to arrange your own advisors."

At another institution, every student meets with the Dean during the third year. The student's strengths and weaknesses are reviewed, especially as it relates to the student's chances of matching into his or her chosen field. An annual workshop is offered, which pairs a group of students with a recently matched applicant who offers informal advice. At another school, a series of lectures reviews deadlines and the application process itself.

Some schools provide more extensive resources. The Mercer University School of Medicine has a specific Career Counseling and Residency Planning Program. The University of Chicago Pritzker School of Medicine offers an online residency planning guide, which provides specific recommendations from each of the departments. Some schools offer formal mentorship programs. Others offer workshops or assistance with writing a CV or personal statement. Some offer interview skills workshops or mock interviews.

It reflects well on a medical school when their students match well. Therefore, the administration is interested in providing the necessary resources to help their students achieve that goal. Interest expressed by the students can spur the development of further resources. You can also be involved in the creation of additional resources. You can approach the Dean's office. Would they be able to suggest a faculty member to give a lecture on interviewing skills? Would they be able to suggest several advisors to run a mock interview workshop? What about arranging for an annual workshop that takes place after Match Day and provides a forum for matched applicants to advise students applying to the same field? Can the student government approach the Office of Student Affairs about the feasibility of offering these types of programs?

Such programs can also be offered within individual departments. We've interviewed the founders of internal medicine or dermatology interest groups at individual schools. Such interest groups are ideal platforms from which to approach the department. Would the chairman or program director be able to suggest residents who could participate in an informal workshop with the students to offer their insights into the process? Is there a faculty member who would be interested in participating?

Timeline

To match successfully with the specialty of your choice, it's critical that you remain well organized throughout the entire process. Of key importance is knowing and meeting critical deadlines. Timelines for the NRMP, San Francisco Match (ophthalmology), and Urology Match are presented on the following pages.

Note...

In recent years, the residency match has become more competitive. If you're reading this book as a preclinical student and are considering a career in a competitive specialty, consider contacting faculty for shadowing, research, and other opportunities. With so many highly qualified applicants to choose among, programs also look for involvement in extracurricular activities, community service, and research. The preclinical years are an excellent time to build these credentials. In our companion book, *Success in Medical School: Insider Advice for the Preclinical Years*, we provide you with a detailed blueprint on how to stand out in these areas as it relates to the specialty you're considering.

Application Timeline for NRMP Match	
Months	Task
January – April (3 rd Year)	<p>Attend school meetings regarding residency selection process</p> <p>Plan fourth year schedule</p> <p>Determine USMLE Step 2 CK/CS dates</p> <p>Determine if you'll do any away electives; if so, obtain information from schools' websites, and apply early</p> <p>Begin writing CV and personal statement (may need to include as part of away elective application and for MSPE Questionnaire)</p> <p>Complete MSPE Questionnaire</p>
April – May (3 rd Year)	<p>Attend school meetings regarding residency selection process</p> <p>Attend specialty-specific workshops (if offered by your school) and/or meet with specialty-specific advisor to develop application strategy.</p> <p>Ask graduating 4th-year students about their experiences</p> <p>Continue writing CV and personal statement</p> <p>Request letters of recommendation</p> <p>Meet with your school's MSPE writer</p> <p>Complete applications for away electives</p>
June – August	<p>Research programs</p> <p>Develop preliminary list of residency programs</p> <p>Identify each program's application deadline (aim to submit application as early as possible to maximize chances)</p> <p>Meet with advisors to discuss programs on your list</p> <p>Continue writing CV and personal statement</p> <p>Review CV and personal statement with advisor</p> <p>Review transcript for accuracy</p> <p>Request LORs</p> <p>Meet with your school's MSPE writer</p> <p>Arrange for application photo</p> <p>Begin preparing ERAS application</p> <p>Register with NRMP</p>
August – September	<p>Request LORs (if not yet done)</p> <p>Review MSPE</p> <p>Applications may be transmitted on September 15</p> <p>Track status of application using ADTS</p> <p>Schedule interviews (accept interview invitations quickly)</p>
October	<p>National release date for MSPE – October 1</p> <p>Track status of application using ADTS</p> <p>Participate in mock interviews with faculty advisors</p> <p>Schedule interviews (accept interview invitations quickly)</p>
November – February	<p>Interview (send thank you notes following)</p>
January – February	<p>Complete last interviews</p> <p>Review rank order list with advisor</p> <p>Submit rank order list to NRMP</p>
March	<p>Match day usually in mid-March</p> <p>Applicants notified of their status (matched vs. unmatched) 4 days before Match Day</p> <p>SOAP for unmatched applicants</p>

Application Timeline for Ophthalmology Match (San Francisco Matching Program)	
Months	Task
January – April (3 rd Year)	Plan fourth year schedule Determine USMLE Step 2 CK/CS dates Determine if you'll do any away electives; if so, obtain information from schools' websites, and apply early Begin writing CV and personal statement (may need to include as part of away elective application and for MSPE Questionnaire) Complete MSPE Questionnaire
April – May (3 rd Year)	Ask graduating fourth-year students about their experiences Continue writing CV and personal statement Request LORs Meet with your school's MSPE writer Complete applications for away electives
June – August	Registration for SF Match opens (early June) Research programs Develop preliminary list of residency programs Identify each program's application deadline (aim to submit application as early as possible to maximize chances) Meet with advisors to discuss programs on your list Continue writing CV and personal statement Review CV and personal statement with advisor Review transcript for accuracy Request LORs Meet with your school's MSPE writer
August – September	CAS Target/Deadline Date (early September) Review MSPE Schedule interviews (offers begin late September)
October	National release date for MSPE – October 1 Participate in mock interviews with faculty advisors Schedule interviews (accept interview invitations quickly) Begin interviews
November – December	Interview (send thank you notes following)
January - February	Rank list submission deadline for SF Match (early January) SF Match results announced (mid-January)

Application Timeline for Urology Match	
Months	Task
January – April (3 rd Year)	<p>Plan fourth year schedule</p> <p>Determine USMLE Step 2 CK/CS dates</p> <p>Determine if you'll do any away electives; if so, obtain information from schools' websites, and apply early</p> <p>Begin writing CV and personal statement (may need to include as part of away elective application and for MSPE Questionnaire)</p> <p>Complete MSPE Questionnaire</p>
April – May (3 rd Year)	<p>Ask graduating fourth-year students about their experiences</p> <p>Continue writing CV and personal statement</p> <p>Request LORs</p> <p>Meet with your school's MSPE writer</p> <p>Complete applications for away electives</p>
June – August	<p>Registration for Urology Match opens at AUA website (early June)</p> <p>Research programs</p> <p>Determine if programs participate in ERAS</p> <p>Develop preliminary list of residency programs</p> <p>Identify each program's application deadline (aim to submit application as early as possible to maximize chances)</p> <p>Meet with advisors to discuss programs on your list</p> <p>Continue writing CV and personal statement</p> <p>Review CV and personal statement with advisor</p> <p>Review transcript for accuracy</p> <p>Request LORs</p> <p>Meet with your school's MSPE writer</p> <p>Begin ERAS application</p>
August – September	<p>Review MSPE</p> <p>Schedule interviews (offers begin late September)</p>
October	<p>National release date for MSPE – October 1</p> <p>Participate in mock interviews with faculty advisors</p> <p>Schedule interviews (accept interview invitations quickly)</p> <p>Begin interviews</p>
November – December	<p>Interview (send thank you notes following)</p>
January - February	<p>Rank list submission deadline for Urology Match (early January)</p> <p>Urology Match results announced (mid-January)</p>

Researching Programs

Once you determine your specialty choice, you can consider individual residency programs. Applicants utilize a variety of resources to research individual programs:

- Fellowship and Residency Electronic Interactive Database Access (FREIDA Online)

FREIDA Online has been a principal source of residency program information for many years. Applicants can access this directory at www.ama-assn.org at no charge. Information contained in the directory comes directly from residency programs. Every year, programs are surveyed by the AMA and AAMC and the data is loaded onto FREIDA. Currently there are nearly 10,000 residency and fellowship programs in the database, and the system easily allows for searching by specialty or state.

Through FREIDA, applicants can identify the PD and obtain contact information for both the director and coordinator. Generally, applicants are asked to contact the program coordinator for additional information. A link to the program's website is usually included. Applicants may also learn about a program's size, primary teaching sites, interview period, earliest and latest dates for submitting applications, work and call schedules, educational conferences and lectures, employment policies/benefits, compensation and leave, and medical benefits.

- Specialty Organizations

Specialty organizations often have a section on their websites for medical students. In some cases, links to and information about residency programs are included.

- Printed Brochures

Before the internet age, programs routinely printed brochures with program information. With the advent of the web, fewer programs are producing brochures. This information has now been moved to program and departmental websites. Some programs have made brochures available online.

- Residency Program Websites

FREIDA Online often contains links to program websites. However, these links are not always functional. In a study of general surgery residency program websites, only 71% of programs listed in the database had viable links.¹⁵ When links are nonfunctional, program websites can still be found

through search engines. In a survey of applicants who were invited for interviews at the Oregon Health and Science University internal medicine residency program, 79.6% of respondents found these sites helpful in deciding where to apply, while 68.5% found the sites useful in deciding where to interview.¹⁶

- Accreditation Council for Graduate Medical Education (ACGME)

At the ACGME website, applicants can determine the accreditation status of residency programs, including the date of the most recent site visit.

- Advisors/Colleagues

Faculty and resident advisors, as well as colleagues, can be a valuable source of information about residency programs. Advisors can provide insider information not readily available elsewhere.

Using these resources, develop a list of programs that are of interest. Base your list on the factors most important to you. Consider reputation, competitiveness of the program, geographic location, type of hospital (university affiliated, community), program emphasis (academic), setting (urban, rural, suburban), future plans (desire to pursue fellowship training), and your family's needs, in addition to a host of other factors.

Review your list of programs with your advisor. Ask if your list is realistic. While you shouldn't hesitate to apply to a program that would be considered a long shot, there should be a sufficient number of programs on your list which are within reach. Your advisor can estimate your chances of matching with programs on your list, taking into account the competitiveness of the specialty, the competitiveness of the programs on your list, and your academic qualifications and non-academic credentials.

Tip # 4

To remain organized, we recommend that you start a filing system. Keep a file (physical or electronic) for each residency program with program information, application requirements, deadlines, and copies of all correspondence and communication.

The Basics: Common Sense Rules

Why would an applicant approach an attending for a letter of recommendation, and then say “By the way, the deadline is next week.” Why would a student ask to work on a case report, take from the attending the case details, photos, and preliminary literature on the topic, and then never turn in an actual case report? Why would an applicant interview at a program and not send a thank-you letter?

One would think that the actions in the box would be obvious mistakes. *We* would think that these would be obvious mistakes. And yet...we can quote from actual experience and anecdotes from colleagues, each of these mistakes made by multiple applicants. A student asking for a LOR and then not providing the attending any time to work on it. Was the applicant thoughtless, or desperate? Never turning in a final product? Was the applicant paralyzed by perfectionism? In the case of thank you letters, only 39% of applicants in one study sent a thank you letter to every program with which they interviewed. Did they believe it wasn't worth the hassle because the program wasn't going to be high on their list anyway?

We can only guess and try to keep further applicants from making the same mistakes. Some of these mistakes may seem like violations of common sense, and we fully agree. We've included rules that start with “Don't lie,” words one should never have to say to future physicians. However, we quote from multiple studies that indicate that dishonesty in the residency application process occurs, and more often than you would think. In a review of 134 applications to the emergency medicine residency program at Washington University, of the 14 applicants claiming AOA membership, 5 claims were found to be inaccurate.¹⁷ In the same study, of the 15 applicants claiming advanced degrees, 4 claims were inaccurate.

We've included these obvious rules because we see them every year, and the literature supports the fact that they occur.

Pay attention to the rules that only an insider would know well. Pay equal attention to the rules that are so obvious that they may be overlooked.

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Chapter 3

Selection Process

In order to plan the optimal strategy and position your application for maximum impact, you need to first understand the selection process. Strategizing for a successful match hinges on the answers to these three questions:

- Who chooses the residents?
- What do they care about?
- How can you convince them that you would be the right resident for their program?

Who chooses the residents?

This first question really should be broken down further.

- Who selects the applicants to interview?
- Who ranks the applicants?

The two processes are markedly different, and the criteria for interview selection and candidate ranking are markedly different as well.

Who selects the applicants to interview? The committee may be composed of one individual – the program director, the chairman, a designated faculty member, or another designee. In this case, one individual has the power to choose all of the applicants that will be asked to interview. Their criteria become all-important if you have any hope of making it past the screening process.

Alternately, the committee may be composed of several individuals. If so, the committee members decide how to review applications, and this process varies. In some cases, the committee members divide up the applications randomly. In this case, again, only one individual will see your application, and their criteria become all important. In other cases, the committee reviews applications jointly, and discusses the applicants as a group.

What criteria do these decision-makers utilize?

In the process of reviewing hundreds of applications, screening criteria are used frequently. It is a daunting task to review over 400 applications in order to

choose 30 candidates to interview, as is the case at some programs. In a sea of qualified applicants, it's difficult to choose a small fraction to interview.

Did you know?

“Many RPDs use ERAS software tools to set parameters that confine the number of applications downloaded by setting filters that screen for minimum USMLE scores, clerkship grades, citizenship, and geographic location. Applicants whose credentials do not meet the spectrum of criteria set for automatic download from ERAS may never have their applications seen by faculty on a selection committee.”¹

Kenneth Grundfast, M.D.
Chief
Department of Otolaryngology
Boston University School of Medicine

Personal knowledge of an applicant's skills and strengths can trump numbers alone. In highly competitive programs, applicants who are personally known to the program and its faculty have an advantage from that standpoint alone. The sole faculty member deciding whom to interview, out of hundreds of excellent applicants, will naturally give preference to a student she personally knows and respects. In fact, excellent performance on an audition elective at the program is frequently mentioned as an important resident selection criterion. Personal knowledge may also come in the form of a strong LOR from a program's own faculty member. A strong LOR from a faculty member outside the program, but well-known to the members of the selection committee, can also be very persuasive.

However, when personal knowledge of an applicant isn't available, objective criteria, of necessity, take on more importance. Particularly when screening large numbers of applications, objective data is more easily mined. As a broad generalization, objective data is typically more important when making decisions on which applicants to interview. Subjective criteria take on more importance when making decisions on how to rank applicants.

By objective data, we mean factors that are easy to determine and quantify, such as grades in the specialty rotation, USMLE scores, clerkship grades, number of honors grades, and AOA status. Although grades in rotations themselves are based on a combination of objective and subjective factors, the grade itself is easily compared. In the following pages, we discuss the factors used by programs in the residency selection process. Please also visit our specialty-specific chapters for detailed information that pertains to your specialty of choice.

USMLE Scores

The residency selection process can be divided into two phases – screening and ranking. In the screening phase, programs whittle down a large applicant pool into a smaller group. The members of this group will be offered interview invitations. The USMLE Step 1 score is frequently used in the screening

process. In the 2014 NRMP Program Director Survey, the USMLE Step 1 / COMLEX Level 1 Score was cited by 94% of residency programs in 22 specialties as a factor used in selecting applicants to interview. No other factor was cited by a higher percentage of programs (When compared to 2008 NRMP data, every specialty in the 2014 survey showed a rise in the percentage of programs utilizing the score in the screening process, as shown in the table below).²⁻³

% Residency Programs Citing USMLE Step 1 / COMLEX Level 1 Score as a Factor in Selecting Applicants to Interview in 2014 Versus 2008		
Specialty	2008	2014
Anesthesiology	81%	99%
Dermatology	76%	92%
Emergency Medicine	85%	97%
Family Medicine	85%	91%
General Surgery	83%	97%
Internal Medicine	81%	92%
Med/Peds	89%	94%
Neurology	87%	90%
OB/GYN	78%	97%
Orthopedic Surgery	75%	95%
Otolaryngology	87%	98%
Pathology	84%	94%
Pediatrics	81%	98%
Physical Medicine & Rehabilitation	87%	91%
Plastic Surgery	80%	94%
Psychiatry	82%	87%
Radiation Oncology	72%	95%
Radiology	82%	99%

Adapted from:
 Results of the 2014 NRMP Program Director Survey. Available at: <http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf>. Accessed March 3, 2016.
 Results of the 2008 NRMP Program Director Survey. Available at: <http://www.nrmp.org/wp-content/uploads/2013/08/programresultsbyspecialty.pdf>. Accessed March 3, 2014.

PDs are interested in your Step 1 score because it's a good measure of content knowledge, and that's of obvious importance to training programs. Programs are also interested because it offers them some insight into whether you're capable of passing the specialty board certification examination. "Low USMLE scores concern program directors that the applicant may have difficulty passing Step III (which is needed for medical licensure) and may ultimately have difficulty passing the pediatric board exam (which may reflect poorly on the residency program)" writes Dr. Su-Ting Li, Program Director of the Pediatrics Residency Program at the University of California Davis School of Medicine.⁴ Research done in multiple specialties has shown that performance on the Step 1 exam is predictive of performance on board certification exams. Another reason why these scores are so highly valued by programs is that they allow for easier comparison of students from different schools. Finally, programs are

receiving a higher number of applications than ever before, and this flood of applications can easily tax programs. The USMLE allows for winnowing of a large applicant pool into a smaller, more manageable group.

Many residency programs have established threshold or target scores, and applicants who exceed these scores remain in consideration for interview offers. Dr. Sandra Oldham, Program Director in the Department of Diagnostic and Interventional Imaging at the University of Texas Medical School at Houston, provides this information on the process: “The ERAS applications are first viewed by the Program Coordinator who filters out those I should read from the many I don’t need to read. Ms. Roberts looks at several things in each ERAS application – the dreaded USMLE Step 1 score and grades from the medical school transcript. We set the minimum USMLE Step 1 score each year as the main filter for which applications move on to my computer and which do not.”⁵ The Office of Residency and Career Planning at the Case Western University School of Medicine concurs. “Board results are most important for the very competitive specialties. A number of the programs set a threshold Step 1 score level that must be achieved in order to receive an invitation for an interview, such as the national mean of about 220 or even one standard deviation above the mean. The same is true for some of the most outstanding and sought-after residency programs in less competitive specialties.”⁶ Data from the NRMP shown on the following page indicates the percentage of programs with threshold scores by specialty.

% Residency Programs Citing Use of USMLE Step 1 / COMLEX Level 1 Target Scores in Selecting Applicants to Interview in 2014	
Specialty	Percentage
Anesthesiology	85%
Dermatology	82%
Emergency Medicine	69%
Family Medicine	42%
General Surgery	91%
Internal Medicine	71%
Med/Peds	76%
Neurological Surgery	79%
Neurology	60%
OB/GYN	75%
Orthopedic Surgery	93%
Otolaryngology	80%
Pathology	63%
Pediatrics	56%
Physical Medicine & Rehabilitation	48%
Plastic Surgery	86%
Psychiatry	30%
Radiation Oncology	73%
Radiology	86%
Vascular Surgery	81%
Adapted from: Results of the 2014 NRMP Program Director Survey. Available at: http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf . Accessed March 3, 2016.	

Did you know?

Dr. Ellis, the program director of the dermatology program at the University of Michigan, wrote that “last year, more than 100 of our applicants had achieved the top percentile on the United States Medical Licensing Examination.”⁷

Students ask us all the time about the importance of the USMLE score, and whether they have what it takes to get into a certain field. For low-scoring applicants, these are some of the most difficult conversations to have. What we tell them is that, although the USMLE exams were developed for licensure purposes, the reality of the situation is that these scores do play an important role in the selection process at most programs. It’s possible that the time will come when these scores carry less weight in the selection process. In fact, there is a growing group of educators and leaders trying to transform the process. “We do not believe that USMLE Step 1 scores should continue to be the major determining factor in the selection of graduating medical students for interview for graduate medical education programs,” writes Dr. Charles Prober, Senior Associate Dean for Medical Education at Stanford School of Medicine. “Although using numbers as a filter is a convenient way to screen large numbers of applications, USMLE Step 1 scores do not come close to reflecting the totality of attributes critically relevant to a candidate’s potential performance during residency training.”⁸

What do we recommend for applicants with lower scores who seek careers in competitive specialties? We offer advice based on the available data so that students can make informed decisions. We remind them that some programs in every specialty are more holistic in their approach to evaluating applications. We also remind applicants that there are ways to overcome low scores, but that they should also give serious thought to what they will do if they fail to match. What is their back-up plan?

Overcoming a Low USMLE Step 1 Score: 10 Strategies

1 Although the USMLE Step 1 score is of major importance to residency programs, this score is only one component of your application. Strengthening other components is essential to overcoming this obstacle. Dr. Andrew Lee, Chairman of Ophthalmology at the Houston Methodist Hospital, offers the following advice. “Getting the program to ignore a subpar score is challenging but not impossible...Applicants with a subpar score should do everything possible to demonstrate their value in other ways...if you have a less optimal score you must demonstrate to the interviewer or the screener that you offer something else in your application that can justify looking away from the score alone.”⁹

2 Perhaps the most common advice low-scoring applicants will hear is to take and do well on the USMLE Step 2 CK exam. This exam, which is generally taken in the fourth year of medical school, assesses clinical knowledge. Since residency programs do use the Step 2 CK score in the residency selection process, a high score on this exam can put to rest any concerns that programs may have about your low Step 1 score.

3 Dr. Vicki Marx, Program Director of the radiology residency program at the USC Keck School of Medicine, recommends that “the student work hard over a sustained period of time in the third year of medical school to excel on clinical rotations. Clinical rotation scores of Honors and High Pass carry significant weight in screening ERAS applications.”¹⁰

4 Demonstration of leadership ability is another way to strengthen your application. A survey of emergency medicine PDs revealed that having a “distinctive factor,” such as being a medical school officer, was one of three factors more predictive of residency performance.¹¹ In a survey of plastic surgery PDs, leadership qualities were the most important subjective criterion used to evaluate applicants during the interview process.¹² In a study done to determine the predictors of otolaryngology resident success using data available at the time of the interview, candidates having an exceptional trait such as leadership experience were found to be rated higher as residents.¹³

5 A mentor in your chosen field can be a powerful advocate. Dr. Roy Ziegelstein, former Program Director of Internal Medicine at the Johns Hopkins Bayview Hospital, writes that “In the modern era, sports agents have emerged as powerful figures...Modern sports figures need an agent if they are going to get the mega-contract...A medical student needs an agent too. The student has to do well in school, but that is often not enough. The student needs someone, or preferably more than one person, to trumpet his or her accomplishments.”¹⁴

6 Letters of recommendation are an important component of the application, and you will request these letters from faculty. Preclinical students can develop relationships with faculty, and cultivating these relationships over time may lead to the development of a stronger letter later. Dr. Ziegelstein writes that the “best letter is from an individual who is very well known, who has evaluated hundreds or perhaps thousands of students over several decades, who knows you well and who believes you are one of the best students ever.”¹⁴

7 Applicants who have a red flag in their application, such as a low USMLE score, may address the issue in their personal statement. “I recommend that a student for whom a low Step 1 score is an aberration in performance explain their academic strengths very clearly up front in their personal statement,” says Dr. Marx.¹⁰ Dr. Lee offers similar advice. “Another tactic is to tackle the problem head on in the personal statement and to highlight other alternative evidence of performance and intelligence in their record.”⁹ For applicants who failed the Step 1, Dr. Li states that “if failure of Step 1 was due to unusual circumstances (e.g., applicant’s parent died immediately prior to Step 1), the applicant should explain the unusual circumstances in their personal statement...”⁴

8 Exceptional service to the community may help overcome the low USMLE score obstacle. Community service is valued by some programs, and your involvement provides information about your non-cognitive attributes, such as teamwork, leadership ability, maturity, seriousness of purpose, and conflict resolution skills. These are all skills vital to resident success.

9 Significant contributions to research are yet another way to strengthen the residency application. Although some surveys of PDs have suggested that research is less important in the selection process, Dr. Marianne Green, Associate Dean for Medical Education at Northwestern University, writes that “Personally I believe that depth in any area can make a student stand out.”¹⁵

10 As a clinical student, you’ll be able to arrange “audition,” or away, electives at residency programs. Your performance during an audition rotation can have a profound impact on your chances. According to Dr. Lee, “The away elective offers the applicant the opportunity to shine at a prospective institution and introduces the student to the faculty at that specific institution in a real world setting that can create a relationship that leads to an interview or even a higher ranking for the match.”⁹

Adapted from the companion book *Success in Medical School: Insider Advice for the Preclinical Years*.

Did you know?

The website for the radiology program at the University of California at San Francisco (UCSF) states: “We review each application as a whole, and we do not have a threshold value for USMLE scores. However, in recent years, most of our interviewees have had three-digit scores of 240 or higher on Step 1. The small number of our interviewees with Step 1 scores between 200 and 239 have had offsetting factors such as a combination of top clinical grades at a competitive medical school and extraordinary research experience and academic promise.”¹⁶

Clerkship Grades

Clerkship grades are also a major factor in the residency selection process. In March 2009, Dr. Marianne Green, Associate Dean for Medical Education and Competency at Northwestern University, published the results of her survey submitted to over 1,200 program directors across 21 specialties. She and her colleagues sought to determine the relative importance of various residency selection criteria. Grades in required clerkships were found to be the most important academic selection factor.¹⁷ Although the study was not designed to determine the reasons why so much importance is placed on clerkship grades, Dr. Green offered us her thoughts. “Program directors and selection committees are looking for people who are going to become excellent physicians, with the primary emphasis on patient care and teamwork,” said Dr. Green in an interview with us published on the *Student Doctor Network*. “A student’s performance on a clinical team in the direct care of patients is perceived to be the best assessment of these skills.”¹⁵

Since Dr. Green’s study, the NRMP has released several program director surveys. In the most recent survey of nearly 1,800 program directors, published in 2014, 70% cited clerkship grades as an important factor in making interview decisions. Respondents rated it 4.0 in terms of importance on a scale of 1 (not at all important) to 5 (very important).²

Many medical students underestimate the importance of clerkship grades. In fact, 44% of students surveyed at the University of Colorado, University of Utah, and Vanderbilt University felt that these grades were moderately, mildly, or not important at all.¹⁸

Particularly important is the number of honors clerkship grades. This is especially true for highly competitive specialties, as shown in the table on the following page. Most students don’t realize this; only 14.7% of students in Brandenburg’s survey rated the number of honors grades as extremely important.¹⁸

Clerkship grades are also a major determinant of class rank. The most competitive specialties rate class rank among the most important selection criteria. Here again, a significant difference was noted between PDs and students regarding its importance. Surprisingly, 49.3% of students felt that class rank was mildly important or not important at all.¹⁸ For more details on how to excel during rotations, please see our book *Success on the Wards*.

Importance of Clerkship Grades in the Residency Selection Process		
Specialty	% Programs Citing Honors in Clinical Clerkships as a Factor for Making Interview Decisions	Mean Rating*
Anesthesiology	75%	4.0
Dermatology	76%	4.3
Emergency Medicine	82%	4.0
General Surgery	78%	4.0
OB/GYN	72%	4.2
Orthopedic Surgery	87%	4.3
Otolaryngology	85%	4.4
Plastic Surgery	76%	4.2
Radiation Oncology	72%	4.2

*Scale of 1 (not at all important) to 5 (very important)

Adapted from: Results of the 2014 NRMP Program Director Survey. Available at: <http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf>. Accessed March 3, 2016.

Importance of Clerkship Grades: Perspectives of Residency Programs	
Residency Program	Comments
Department of Medicine University of Washington	"Do well in your clerkship. Yes, this is obvious - and easier said than done - but it's also important. Most residency programs look closely at the third-year clerkship grade when selecting applicants." ¹⁹
Department of Surgery University of Colorado	"Most surgery programs look very favorably on an 'Honors' grade in your MS3 surgery clerkship rotation and may factor in the grades you received in your Medicine and Ob/Gyn rotations." ²⁰
Department of OB/GYN UC Davis	"USMLE scores and clerkship grades (especially in ob/gyn, surgery, and internal medicine) are considered factual data and ranked high." ²¹
Dr. Tobias Kohler Program Director Department of Urology Southern Illinois University	"Most institutions utilize board score and clerkship grade cut points to help narrow the field." ²²
Dr. Michael Wu Director of Medical Student Education Dept. of Ophthalmology University of Washington	"Academic performance, particularly on the core clerkships and the USMLE Step 1, may limit a student's ability to match successfully in ophthalmology." ²³
Department of Radiology Stanford University	"Successful candidates will have demonstrated outstanding performance in the core clinical clerkships." ²⁴

Awards

Election to the Alpha Omega Alpha Honor Medical Society (AOA) is perhaps the most well studied award as it relates to residency admission. Eligibility is limited to only allopathic medical students, and members are selected based on academic achievement, leadership, professionalism, and commitment to service. Members are elected by individual chapters, and this process may vary significantly from chapter to chapter. According to the AOA Constitution, no more than 1/6 of the graduating class can be elected into the school's chapter. In 2014, the NRMP surveyed nearly 1,800 residency programs representing 21 specialties about the importance of various residency selection criteria.² Overall, membership in AOA was cited by 61% as a factor in selecting applicants to interview. Membership in AOA was also an important factor in ranking. Overall, it received a mean rating of 4.0 on a scale of 1 (not at all important) to 5 (very important). Data for individual specialties is presented below.

Percentage of Residency Programs Citing AOA as a Factor in Selecting Applicants To Interview by Specialty	
Specialty	% of Programs
Anesthesiology	69%
Dermatology	64%
Emergency Medicine	75%
Family Medicine	31%
General Surgery	70%
Internal Medicine	58%
Neurosurgery	81%
Obstetrics & Gynecology	62%
Orthopedic Surgery	84%
Otolaryngology	83%
Pathology	54%
Pediatrics	62%
Physical Medicine & Rehabilitation	42%
Plastic Surgery	79%
Psychiatry	51%
Radiation Oncology	60%
Radiology	77%
Adapted from 2014 NRMP Program Director Survey. Available at: http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf . Accessed March 3, 2016.	

Although osteopathic students are not eligible for AOA induction, both allopathic and osteopathic students may be elected into the Gold Humanism Honor Society (GHHS). Started in 2002 by the Arnold P. Gold Foundation,

GHHS honors medical students for “demonstrated excellence in clinical care, leadership, compassion and dedication to service.”²⁵ In a study conducted to determine if GHHS membership influences residency selection, the authors wrote that “membership in GHHS may set candidates apart from their peers and allow PDs to distinguish objectively the candidates who demonstrate compassionate medical care.”²⁶ In the 2014 NRMP Program Director Survey, 27% reported using Gold Society Membership as a factor in selecting applicants to interview.²

AOA and GHHS are not the only awards or honors viewed favorably by residency programs. In a survey of over 1,200 PDs in 21 specialties, Dr. Marianne Green determined the relative importance of various residency selection criteria.¹⁷ Dr. Green found that medical school awards (non-AOA) were 10th in importance among a group of 14 criteria. Although not as important as USMLE Step 1 scores, clerkship grades, and LORs, awards were ranked higher than such factors as preclinical grades, research while in medical school, and published medical school research.

Benefits of winning medical school awards and scholarships include:

- Awards can provide a significant boost to the strength of your application, and distinguish you from your peers. Awards and scholarships can easily be placed in the residency application, MSPE (Dean’s Letter), LORs, and CV. We’ve found that interviewers often ask about awards during residency interviews.

Did you know?

In 2013, Justin Berk, a medical student at Texas Tech University School of Medicine, received the American Medical Association Foundation Leadership Award. “For Justin, it’s obviously a huge accolade and something that will follow him for the rest of his medical career,” said Dr. Tedd Mitchell, President of Texas Tech Health Sciences Center, in an interview with *The Daily Toreador*. “As he’s applying for residency programs, it will stand out.”²⁷

Did you know?

Alexander Gallan, a medical student at the Boston University School of Medicine, was the recipient of the 2012 American Society of Clinical Pathology Academic Excellence Award. “The award was a common topic during my residency interviews. I believe it helped my residency application immeasurably by providing justification for all the hard work I have done.”²⁸

- Competitive specialties and residency programs value students who’ve been recognized with awards. Educators believe you have the potential to make similar contributions as a trainee.

Did you know?

When Casey DeDeugd, a medical student at the University of Central Florida, won the Medical Student Achievement Award from the Ruth Jackson Orthopedic Society, she enhanced her visibility in the field. “Your accomplishments thus far are very impressive!” wrote Dr. Gloria Gogola, Chair of the Society’s Scientific Committee. “We look forward...to welcoming you to our field of orthopedic surgery.”²⁹

Did you know?

In 2008, Brian Caldwell, a medical student at the University of Arkansas for Medical Sciences, was the winner of the Dr. Constantin Cope Medical Student Research Award from the Society of Interventional Radiology. “Brian carried the whole project with very little help and really did a nice job,” said Dr. William Culp, Professor of Radiology and Surgery. “I am so pleased that he won the national SIR award, because his participation in the conference introduced him to national leaders in interventional radiology and will help jumpstart his career.”³⁰

- You gain visibility in your school, and bring recognition to the institution.

Did you know?

When Ramy El-Diwany, an M.D./Ph.D. student at Johns Hopkins University, won the 2014 Excellence in Public Health Award from the U.S. Public Health Service (USPHS) Physician Professional Advisory Committee, his institution was also lauded. “This award is a testament to the education provided by the Johns Hopkins University School of Medicine and to the high caliber of its students,” wrote USPHS Lt. Cmdr. Kimberly Smith. “We hope that this award will encourage other Johns Hopkins faculty and students to continue their strong work in public health.”³¹

Did you know?

After Rahul Vanjani received the AMA Foundation Leadership Award, Dr. Scott Schroth, Senior Associate Dean of Academic Affairs at George Washington University, took pride in his student’s accomplishment. “Rahul’s commitment to the community and leadership of service efforts are unparalleled. He exemplifies the sort of creativity and dedication that we look for in medical students at GW, and we are extraordinarily proud of him as a winner of the AMA Foundation’s 2011 Leadership Award.”³²

- Recipients have found that awards have made them more competitive for other awards and scholarships. Awards follow you throughout your career, and can make you more competitive for future opportunities, programs, and employment.

- You further your professional reputation and enhance your credibility in the areas that form the basis for the award.
- Winning an award or scholarship can give you the confidence to pursue other goals.
- Applying for an award requires the support of advocates who become reference letter writers. Strengthening these relationships over time allows faculty members to write strong LORs for residency.

Did you know?

In applying for awards, you often have to submit reference letters. Over time, your letter writers become even stronger advocates, with a vested interest in furthering your career. After David Leverenz won the Southwestern Medical Foundation Ho Din Award, his mentor had this to say: “Dr. Leverenz has done exceptionally well in medical school, performed research, worked, volunteered, and completed multiple mission trips,” said Dr. David Balis, his faculty mentor at UT Southwestern Medical Center. “But what strikes me most about David is his caring, sincere, compassionate personality.” Dr. Leverenz is now a resident at Vanderbilt University.³³

It’s clear that there are compelling reasons to pursue medical school scholarships, awards, and grants. To help maximize the chances of winning awards and scholarships, I wrote the book *Medical School Scholarships, Grants & Awards: Insider Advice on How to Win Scholarships*. Although this book includes an extensive list and description of scholarships and awards, I’ve also placed considerable emphasis on strategy. These recommendations are based on data from a full spectrum of sources. Whenever possible, I’ve included evidence obtained from scientific study and published in the academic medical literature. I also take an insider’s look at the entire process based on our experiences.

For years, we’ve helped applicants match successfully into competitive specialties and residency programs. We’ve worked with medical students at all levels, and we always try to identify scholarship and award programs that will bolster their credentials. In the process of helping students win scholarships and awards, we’ve gained insight into the factors that lead to success. There’s much that can be learned from your predecessors, and the book includes multiple profiles of past scholarship winners. Two copies of this book were mailed to every medical school in the United States, so hopefully it’s available as a resource in your library or at your Office of Financial Aid.

Other criteria

Criteria such as USMLE thresholds, AOA status, or class rank are typically used by the most competitive specialties and programs to narrow their applicant pool. Even in these types of programs, though, some decision-makers will choose to look more thoroughly at an application, even during the initial screening process. They may give weight to a variety of different factors, such as the personal statement or LORs indicating leadership qualities or community involvement. As we stated earlier, personal knowledge of an applicant's skills and strengths can also be a powerful factor for those deciding whom to interview.

We emphasize that these types of objective criteria may not be in standard use by less competitive specialties or programs. The personal statement takes on more importance for family practice PDs, for example. At the website for the University of Washington Family Medicine residency program: The "personal statement is the primary component that will be used to select applicants who are invited for an interview. Please write a careful and thoughtful document."³⁴ Recent studies continue to emphasize the importance of the statement in the family medicine residency selection process. In the 2014 NRMP Program Director Survey, 87% cited the statement as a factor in making interview decisions. Among criteria, only the USMLE Step 1 score was cited by a higher percentage of programs.²

Did you know?

In one study, 17% of PDs in the surgical specialties used social networking sites in the screening of residency applicants. 1/3 of this group reported lowering the ranking of applicants due to inappropriate content.³⁵

How can you determine if you have the minimum requirements to be selected to interview?

Chapters 23 – 44, on specialty-specific information, provides some concrete numbers to review, including average USMLE scores and the percentage of applicants below a threshold who still matched into the specialty. The NRMP data from 2014 indicated that for applicants to emergency medicine, the mean USMLE Step 1 score was 230. Of the applicants with Step 1 scores below 210, 166 of 208 matched. Of U.S. seniors who matched, 12% were members of AOA. Of 2014 applicants reporting no prior research experience, 162 of 175 matched.³⁶ Such concrete numbers can provide perspective on the strength of your own application.

A review of program websites may also provide very useful and specific information. Even within a competitive specialty, some programs are far more competitive than others, and criteria such as USMLE thresholds or AOA status may vary greatly. These criteria may not matter at all for less competitive specialties.

Probably the most important advice on this subject will come from your residency advisor. Advisors who participate in the residency selection process have a well-informed sense of the qualifications of other applicants and how you compare with your competition. Therefore, an advisor who's a program chairman, a residency program director, or a faculty member on the residency selection committee can provide valuable insight into your chances. Other advice may come from the Dean's office, residents in the specialty, or recently matched students or upperclassmen who've researched the issue.

However, selecting applicants to interview is a very different process from ranking those who interview. In speaking with students and reviewing the discussion forums, we don't think enough students grasp this critical point. Great USMLE scores may get you in the door, but when it comes to ranking, they often don't play as much of a role. From the UCSF Department of Radiology: "Once an applicant is selected for an interview, USMLE scores have little bearing on the final rank."¹⁶

Who is actually ranking the applicants?

In 2006, researchers surveyed 145 radiology PDs about the process for ranking candidates.³⁷ A total of 77 directors responded to the survey. In 88.1% of the programs, all members of the interviewing body vote in the ranking of candidates. Of interest, in 76.5% of programs, residents and fellows serve as interviewers. While the interviewing body is responsible for making the final ranking in 62.9% of the programs, the PD has the final word in 33.8%.

Some programs have published information about their own selection process.

- At the general surgery residency program at the Medical University of South Carolina, Brothers wrote that "...all surgical faculty are given equal input, with individual members providing insight into applicants whom they interviewed."³⁸
- Dr. Cruz, former chairman of the department of dermatology at the University of Texas Southwestern Medical Center, stated "Because we are committed to a democratic process, each faculty member who participates in interviews (residents as well as the chief resident) has an equal opportunity to influence the match ranking...During a dedicated meeting, each applicant is discussed and her or his ranking is refined by consensus."³⁹
- The website for the department of radiology at UCSF states that "the selection committee meets in late January...we formulate our rank order list based on consensus."¹⁶
- The department of anesthesiology at the University of Pittsburgh states that their selection committee meets as a group, discusses each

applicant, and then ranks the applicant. The scores are then averaged to yield a final score which is used to form the program's rank list.⁴⁰

- Creation of the rank list for the University of Washington otolaryngology residency program “involves all members of the residency selection committee. Each member will develop his or her own rank list...A meeting of the residency selection committee will be held in February to develop a consensus rank order and which candidates will not be ranked. The program director and Chair may review and revise the final list if needed.”⁴¹

What do these decision-makers care about?

The short answer to this question is that it varies from program to program, and from individual to individual. In some programs, the decision-makers have made an effort to provide objective grading of subjective criteria. In these programs deciding criteria are identified, and a standard scoring system is used to grade the applicant on each criteria.

In other programs the process of ranking applicants can be very subjective. In the study by Otero cited above, 15 directors stated that the “fit” of the candidates and a “gut feeling” were the most important criteria for admission decisions.³⁷ Dr. Moore, Chair and Program Director at the University of California-Davis Department of Anesthesiology, feels that an applicant's performance during the interview “is the deal breaker/maker.”⁴²

Remember that every candidate invited to interview has already met the standards for acceptance. At this stage, subjective measures of personal characteristics become more important. Studies have shown that behavioral and noncognitive skills have significant value in predicting resident performance, while measures such as USMLE scores may be poorly predictive of clinical performance.⁴³⁻⁴⁴ Therefore, at this stage of residency selection, indicators of noncognitive skills become very important. The Office of Residency and Career Planning at the Case Western University School of Medicine states “Remember it is performance on the clinical services reflected by your grades and, above all, by the evaluation comments that program directors consider most important in ranking their applicants. These parameters are considered to be the best predictors of how well an applicant will do as a resident...the highest board scores will not guarantee a position in a program if the comments from your attendings are negative...”⁴⁶

As we alluded to earlier, interview performance is the one criterion that becomes magnified in importance at this stage of the process (ranking). The interview is of such important that one study found that 1/3 of internal medicine residency applicants were actually ranked less favorably following an interview.⁴⁵ In a 2002 survey of orthopedic surgery PDs, researchers found that once invited for an interview, 22% of programs place candidates on equal footing, with ranking decisions based solely on interview performance.⁴⁶ A survey of 361 family practice PDs found that the interview was the most important element of the resident selection process.⁴⁷ One study performed at the Children's Hospital of Philadelphia pediatrics residency program, a highly

competitive program, offered insight into the importance of the interview at their program.⁴⁸ The authors wrote that “interview scores were the most important variable for candidate ranking on the NRMP list.”

What are the qualities that programs seek in a resident and are therefore searching for in the application components and interview?

Further chapters delineate these qualities more thoroughly, but in short, the qualities that make for an outstanding clinician are the same as those that make for an outstanding resident. Programs look for evidence that a student not only possesses high levels of intelligence, but also has a very strong work ethic, is compassionate, is enthusiastic about their chosen field, and is able to handle an intense workload. Beyond that, the criteria for each program and for each individual decision-maker at that program will vary.

Furthermore, the evidence required to demonstrate these criteria will vary for each decision-maker. For example, what evidence best demonstrates a strong work ethic? Is it clinical grades, or letters of recommendation? What evidence best demonstrates high levels of intelligence? Is it USMLE scores, or overall grades in clerkships?

Your research should begin with a review of the individual program websites. These may provide insight into the program’s goals and criteria for residency selection.

- The website for the radiology program at UCSF states that “One of our primary goals is to train academic radiologists, especially clinician-scientists...Most of our interviewees have had research experience...We should emphasize that because ours is a clinically rigorous program, we prefer applicants who have shined on the wards as well as in the laboratory.”¹⁶
- Dr. Flemming, Program Director of the Penn State Hershey radiology program, states, “As for the qualities we seek most of you will have demonstrated more than adequately, your academic abilities with success in exams, good board scores...Beyond academics, there are two important qualities we expect. These are creative thinking and character. Radiology is divorcing itself from the descriptive nature of the art. It is becoming one in which it is important to analyze, develop an opinion, and express this thought process to our other clinical colleagues. It is imperative that you possess the ability to communicate and to understand your role as a communicator...Character is equally important in our resident selection process. We expect trainees to understand their professional responsibility as a physician radiologist, their pivotal role in patient care, and their commitment to fulfill these expectations. It is clear then that we not only look at the merit of your application, but the interview process is all-important.”⁴⁹

- The website for the psychiatry department at the Stony Brook University Hospital states that applicants should have “high intelligence, excellence in both written and verbal self-expression, superior ability to understand both verbal and non-verbal communications from others, exceptional curiosity about the human mind and human behavior, and psychological mindedness.”⁵⁰ The website provides further information on the members of the selection committee, interview questions, and a copy of the applicant rating form used by evaluators.

- The Department of Anesthesiology at the University of Pittsburgh outlines the criteria that interviewers use to rank the applicants, which include such diverse criteria as “grades and honors,” “knowledge of Pitt program,” “quality of answers,” “quality of questions, “enthusiasm, energy, liveliness” and “articulateness, communication skills.”⁴⁰

After sitting through years of selection committee meetings, we can state that the impact of selection factors varies markedly from faculty member to faculty member. Beliefs about which types of evidence prove certain traits also vary markedly. Meetings of the selection committee can be heated, and arguments about the importance of the different selection factors are common. What best predicts how well a candidate will perform as a resident? Our arguments during the ranking process can be as heated as any discussion forum on the topic.

The following paraphrased comments provide an insider’s look at a residency selection committee meeting:

Behind the Scenes at a Residency Selection Committee Meeting	
Applicant	Selection Committee Comments
# 1	<p>“Her USMLE score is the lowest score of all the students we’ve interviewed this year.”</p> <p>“Who cares? Her score is high enough that we don’t have to worry about her passing the boards. I don’t care about the numbers, as long as the enthusiasm and work ethic is there.”</p>
# 2	<p>“That letter of recommendation was lukewarm, and I consider that a red flag.”</p> <p>“But are you taking that comment out of context? The evaluations from his senior electives were outstanding.”</p>
# 3	<p>“That interview was great, but the letter of rec from Dr. Grant wasn’t exactly gushing. Amy, don’t you know him? Can you e-mail him to find out more?”</p>
# 4	<p>“Did you see what the attending on his Internal Medicine rotation wrote about him? That’s very concerning.”</p> <p>“Maybe there were personality issues? I certainly didn’t see that repeated anywhere else, so I think we need to take that into account.”</p>

# 5	<p>“You all know that work ethic is my number one priority, and the fact that this student couldn’t even write a case report after two derm electives is a bad sign.”</p> <p>“I know that everyone else we’ve interviewed today has been published, but maybe you need to cut him some slack. Maybe at their institution, there just aren’t many opportunities to work on case reports.”</p> <p>“That doesn’t mean that much to me, because there are opportunities everywhere if you try hard enough.”</p>
# 6	<p>“Based on that interview, I just don’t think he’d fit in well here.”</p> <p>“I know what you mean, but I think you’re jumping to conclusions. Take a look at the letter from Dr. _____. He worked with him for one month, and that’s a much more meaningful impression than one interview.”</p> <p>“After that interview, I don’t think any letter is going to convince me.”</p>
# 7	<p>“That personal statement, to me, seems to emphasize lifestyle factors.”</p> <p>“I certainly didn’t see it in that light.”</p>

In the following chapters, we delve more deeply into these questions. What do the individuals making the decisions care about? What are the qualities they seek in a resident?

More importantly, how can you demonstrate that you embody those qualities? *How can you convince them that you would be the right resident for their program?*

The remainder of this book is devoted to maximizing the impact of your application. Each component of your application can be created, modified, or influenced in order to significantly strengthen your overall candidacy. We devote the following pages to showing you, in detail, exactly how to do so.

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Chapter 4

The Competitive Edge

If you plan to apply to a competitive program or a competitive specialty, you'll need to bring into play all of the recommendations throughout this book. In this chapter, we go further and review in detail how to add an extra competitive edge to your application. To begin with, you should make every effort to be published in your field. Such opportunities are available to every student, although they can be difficult to locate. We review how to find these opportunities as well as the process of writing for the medical literature. We also review the topic of research. If you're applying to a competitive field, NRMP data indicate that the vast majority of your competition will have participated in research. We review how to locate research opportunities and how to excel.

Rule # 1 If you're applying to competitive programs, you should make every effort to be published in your field.

In every academic medical center, there are ample opportunities to publish. We meet many medical students who would choose to describe themselves as "self-starters." Opportunities to publish only go to those students who truly are self-starters.

Locating these opportunities is often the hardest step, because there are no hard and fast rules. Different types of opportunities to publish exist at the medical school level, even if you've never been involved in formal basic science or clinical research. A few include:

- The case report of a classic case
- The case report of an interesting case
- A case series
- A review article

The case report is typically the entry point for medical students who lack experience in research. Even if you've researched and published extensively, it can be important to have additional scientific study in your chosen field. This confirms your interests in the specialty and your ongoing commitment to scientific pursuits.

How can a case report strengthen your application?

- By seeking out the opportunity, you've demonstrated your drive and enthusiasm.
- You've confirmed your interest in the specialty.
- You've confirmed your thirst for additional knowledge.
- Just the act of seeking out the opportunity demonstrates commitment to the field.
- Seeking out opportunities to publish provides a professional way in which to speak with or meet residents, faculty, and PDs in the institution.
- On a basic level, you've added to, or at least started, the publication section of your CV.
- By writing the case report, you have become an expert in one specific area.
- Your expertise becomes a potential topic of discussion in interviews.
- Your publication may also act as a point of commonality in interviews that can build rapport. "I'm very pleased to meet you, Dr. Lo. I referenced your work on...when writing my review article on..."
- Writing provides an ideal opportunity to showcase your work ethic, your drive, and your skills.
- By writing the case report in record time and by producing outstanding results, you'll be able to highlight your skills to your attending, an individual who can influence your acceptance to the residency program.
- Faculty members with concrete knowledge of your skills may use this specific example in their rotation evaluation, and in their letters of recommendation.
- Such faculty members can also act as vocal advocates for your candidacy for their own program.

Students who produce outstanding case reports in record time are also more likely to be considered for more substantial research projects or publications. More substantial projects are difficult to locate on the medical student level, but obviously are much more valuable in strengthening your application. An attending who's been asked to write a book chapter for the new edition of a well-respected textbook will only collaborate with individuals of known merit. By showcasing your skills, you've increased your chances of being awarded such valuable opportunities.

Rule # 2 Possibilities for publishing abound.

In general, medical students can be involved in publishing two types of case reports. The first type is what we term "classic" cases. These are typical examples of certain diagnoses, and may be published in a variety of journals in

End of excerpt from chapter 4

Chapter 5

The Right Fit

In this chapter we focus on the final question of the application process:

How can you convince the decision-makers that you would be the right resident for their program?

In order to convince those making the decisions, you need to strategize, and you need to start early. Strategic planning begins and ends with outstanding patient care. If you want to match at the residency program of your choice, then the first step is to learn how to be an outstanding clinician. Your ultimate message for any residency program is that you will be an outstanding physician, and that you would make an outstanding resident. Our advice is to start by being the absolutely best clinician. You came to medical school to be a doctor. Learn how to be the best.

Excellence in patient care translates to better clinical evaluations and stronger letters of recommendation. These translate to a stronger transcript, a more positive MSPE, a higher class rank, and AOA candidacy. Evidence of outstanding patient care in an audition elective may even translate to a match at that program.

How do you excel at patient care? The process starts with the recognition that the skills needed to excel in clinical rotations are very different from those required for the basic science years. Our companion book, *Success on the Wards: 250 Rules for Clerkship Success*, lays out in full detail how to perform at an outstanding level in the clinics and on the wards. Chapter 10 of this book, “The Audition Elective,” provides further information on how to excel during your clinical experiences.

We outline the strategizing that continues throughout the application process. Your ultimate goal is to convince those making the decisions that you would be the right resident for their program. In order to do so, you need to confirm that you would be the right fit for their program.

“Fit” is one of those concepts that students don’t realize is such an important criterion. In a survey of radiology PDs, 15 directors stated that the “fit” of the candidates in the program along with a “gut feeling” were the most important criteria for deciding admission.¹ In another survey, PDs wrote that they sought to find applicants who were “people like us.”²

Importance of “Fit” to Residency Programs

You will see the word “fit” time and time again on program websites, highlighting its importance in the selection process. Representative comments are shown below.

“Our application process is designed to...determine your specific interests and ‘fit’ in our program.”³

- University of Buffalo Department of Anesthesiology

“We are recruiting the applicants at the same time we are interviewing them to try to discern which applicants are the best fit for our residency program.”⁴

- University of Michigan Department of Dermatology

“We interview candidates whose academic and personal strengths indicate they would be a good fit for our program.”⁵

- Morristown Medical Center Department of Medicine

“The personal interview is very important in assessing all components important to a good ‘fit’ for both the applicant and the program.”⁶

- Wayne State University Department of Neurosurgery

The goals of the interview are to “assess the ‘fit’ of the applicant...weed out applicants who are a poor fit.”⁷

- Duke University Department of Anesthesiology

“We are looking for an applicant that will fit well within our department and training program.”⁸

- LSU Department of Obstetrics & Gynecology

“Candidates are assessed based on perceived intellectual ability and personality fit to the Department of Orthopedics.”⁹

- West Virginia University Department of Orthopedics

“The program seeks candidates who are committed to their education and training, and have personality traits that fit with existing staff and residents.”¹⁰

- University of California Davis Department of Urology

Other residency programs use the term “compatibility with the program.” In a survey of PM&R PDs, DeLisa found that compatibility with the program was one of the three most important candidate traits, along with the

ability to articulate thoughts and work with others.¹¹ In yet another study, PDs in 14 different specialties were asked to rank the importance of 6 personal and professional characteristics.¹² Compatibility with the program was highest. This was followed by commitment to hard work, fund of knowledge, empathy and compassion, and communication skills.

What are PDs looking for when they search for applicants with the right fit for their program? “Fit” can refer to qualities of the applicant that faculty members feel are essential to success in their program. In one study done by faculty in the department of radiology at the Baylor College of Medicine, the five qualities “deemed most appropriate for training radiologists” at Baylor were interpersonal skills, recognition of limits, curiosity, conscientiousness, and confidence level.¹³

“Fit” can also refer to qualities of the applicant that would help the program reach its goals. Some programs are committed to training future clinician-educators. Students with a stated interest and experience in areas of teaching and education, such as through their work or volunteer experience, would more convincingly demonstrate their fit with the program.

When strategizing for your application, you should plan to utilize techniques that will confirm your fit with a program. This begins with thorough research to determine the traits valued by the specialty. This is followed by thorough research of individual programs to determine valued traits and departmental goals. Although you already performed a thorough self-evaluation in the process of preparing your application, you need to repeat this step. What strengths do you exhibit that are highly valued by your specialty and targeted programs? At this point, you can formulate a compelling message as to why you would be the right resident for the program. Of course, your message doesn’t mean anything without evidence to back it up. You must locate and present the evidence that confirms your fit with the program in the most compelling fashion possible.

Rule # 26 Research the specialty: What traits are valued by the specialty?

What traits are necessary to excel in your chosen field? What traits are valued by the members of the specialty? The chart on the following page shows some essential attributes in selected specialties.

By speaking with specialists in the field and researching specialty-specific websites, you can generate a similar list for your chosen specialty. Analyze your list. Which qualities do you share, and how have you demonstrated these qualities?

<p align="center">Essential Skills and Personal Qualities for the Future Resident in Selected Specialties</p>	
Anesthesiology	<p>Good manual dexterity Skillful at procedures Meticulous Ability to remain calm under stressful situations Ability to make quick decisions Warm and caring</p>
Emergency Medicine	<p>Good manual dexterity Ability to work with and manage a team Compassionate Ability to establish rapport quickly with variety of people Ability to multitask Strength to make tough decisions Ability to make quick decisions Prioritizes well Ability to remain calm during stressful situations Recognizes one's own limits and is not afraid to seek help</p>
Family Medicine	<p>Character traits that make a good family physician were identified by the Association of Family Medicine Residency Directors:¹⁴</p> <p>Compassion Enthusiasm to learn Excellent interpersonal skills Good work ethic Honesty</p>
Neurology	<p>Intellectual curiosity Diligent attitude Patience Comfort with ambiguity Openness to new diagnostic tests and treatments Intense interest in patient's story Fascination with nervous system</p>
Neurological Surgery	<p>In a survey of neurological surgeons, respondents were asked to rate the importance of 22 skills and attributes needed for successful completion of residency training. The top five characteristics identified were honesty, motivation, willingness to learn, ability to problem solve, and ability to handle stress. Although critical thinking, manual dexterity, and communication skills were also important, neurosurgeons believed that these skills could be more easily taught in contrast to the top characteristics.¹⁵</p>
OB/GYN	<p>Excellent interpersonal skills Communicate effectively with patients Ability to quickly adapt to different environments Enthusiasm Energy</p>
Ophthalmology	<p>Compassion Meticulous attention to detail Excellent manual dexterity</p>

Orthopedic Surgery	In one article, qualities which the authors felt were anecdotally associated with better performing residents included trustworthiness, hard-working, efficient, detail-oriented, and personable. ¹⁶
Otolaryngology	Ability to work well as part of a multidisciplinary team Good manual dexterity Superb technical skills Ability to quickly make sound clinical decisions Effectively listening to patients' problems and concerns
Radiology	Ability to interact effectively with a wide variety of clinicians and patients Good written and spoken communication skills Willingness to seek help when necessary Meticulous Thorough Good problem-solving and decision-making skills

End of excerpt from chapter 5

Chapter 6

Letters of Recommendation

Letters of recommendation are a critical component of the residency application. The purpose of these letters is to demonstrate to programs that you have both the professional and personal qualities to succeed as a resident and, later, as a practicing physician. Since these letters are written by those who know you and the quality of your work, they offer programs a personalized view. In contrast to your transcript and USMLE scores, they supply programs with qualitative, rather than quantitative information, about your cognitive and non-cognitive characteristics. A number of studies have shown that behavior, attitude, and other non-cognitive skills are important predictors of resident success. As such, programs place great importance on these letters in evaluating your application.

Since you will not be directly writing these letters, it may seem as if you have no control over their content. In reality, you wield more influence than you realize.

Rule # 32 Letters of recommendation are extremely important in some specialties.

In a 2006 study of medical students at the University of Colorado, University of Utah, and Vanderbilt University, participants were asked to rate the importance of sixteen residency selection criteria.¹ While 65% of survey participants rated the letters of recommendation extremely important, 35% felt that letters were either moderately, mildly, or not important at all. This underlines the misconceptions that students hold about the selection process. Although awareness of letters' importance in the residency selection process has increased over the past ten years, our experience has shown that many students continue to underestimate the value placed on letters by programs.

In a NRMP survey of nearly 1,800 program directors across 21 specialties, 86% cited letters as a factor used to make interview decisions (versus 75% in 2008). Letters of recommendation received a mean rating of 4.2 on a scale of 1 (not at all important) to 5 (very important).² A number of studies have looked at the importance of recommendation letters in the residency selection process. These studies have demonstrated that letters are an important factor in selecting candidates for interview and in the development of the program's rank list.

End of excerpt from chapter 6

Chapter 7

Personal Statement

One of the most dreaded aspects of the residency application, for many students, is the personal statement (PS). In a survey of medical students at a single school, 85% agreed or strongly agreed with the statement “I am anxious about writing the personal statement for my residency application.”¹ It can be very frustrating trying to put into words your vision for your medical career.

Most students don’t understand one basic fact about the personal statement, though. Unlike just about every other aspect of the application, you have complete control over the personal statement. You decide the content, the structure, and the form of the statement. This is a unique opportunity to impress the selection committee. In your statement you can showcase the strengths and qualities that set you apart from other candidates. You can weave in evidence that confirms your qualities. You can use this opportunity to convince a faculty member that you would be an ideal candidate for their particular program. This is information that is not readily apparent to programs from their review of other application components.

With sufficient time and effort, you can create a personal statement that effectively sells yourself to the residency program. While a well-written statement can strengthen your application, a poorly written one can eliminate you from further consideration, even if you are at the top of your class.

Rule # 56 Recognize the importance of the personal statement to some specialties

Individual specialties, residency programs, and application reviewers assign varying degrees of importance to the PS. In the screening phase, reviewers whittle down a large applicant pool to a select group that is ultimately extended interview invitations. Applicants often believe that the personal statement is used minimally, if at all, during this screening phase. While this is true at some programs, you can’t assume that’s the case with all programs:

- At the website for the University of Washington Family Medicine Residency, the “personal statement is the primary component that will be used to select applicants who are invited for an interview. Please write a careful and thoughtful document.”² In fact, a study of family practice residency program directors showed that the personal statement ranked second only to the Dean’s letter for making decisions about whom to

interview.³ With regard to the ranking of applicants, it was third in importance, following only the interview and the Dean’s letter.

- At the Wake Forest University Department of Radiology, members of the selection committee use the personal statement along with the rest of the application to place candidates into one of five groups – interview (high priority), interview (normal priority), interview (low priority), hold for additional information, and do not interview (reject).⁴
- “Personal statement is read by each of our orthopedic faculty members, and is considered by our faculty to be a very important part of the application process,” writes the Department of Orthopedic Surgery at the University of Texas-Houston Medical School. “It is often used as a point of departure for interviewing the student.”⁵
- “Assuming the consummate applicant has impeccable curriculum vitae, letters, and grades, the personal statement takes on immense importance,” writes Dr. Warren Heymann, Head of the Division of Dermatology at Cooper Medical School.”⁶

In further support of the importance of the PS in screening applicants for interview are the results of the 2014 NRMP Program Directors Survey. The percentage of programs citing the statement as a factor used to make interview decisions is shown in the following table.⁷

Importance Of The Personal Statement In Selecting Applicants For Interview	
Specialty	% Programs Citing Statement As A Factor
Anesthesiology	78%
Dermatology	85%
Emergency Medicine	67%
Family Medicine	87%
General Surgery	72%
Internal Medicine	66%
Medicine/Pediatrics	71%
Neurological Surgery	78%
Neurology	71%
Obstetrics & Gynecology	81%
Orthopedic Surgery	82%
Otolaryngology	74%
Pathology	83%
Pediatrics	70%
Physical Medicine & Rehabilitation	79%
Plastic Surgery	85%
Psychiatry	92%
Radiation Oncology	84%
Radiology	74%
Vascular Surgery	80%

Adapted from Results of the 2014 NRMP Program Director Survey. Available at: <http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf>.

End of excerpt from chapter 7

Chapter 8

Medical Student Performance Evaluation (MSPE or Dean’s Letter)

Applicants must submit a letter from the Dean as part of their application. Known previously as the Dean’s letter, this letter is now formally termed the Medical Student Performance Evaluation (MSPE). The typical MSPE contains an assessment of both a student’s academic performance and professional attributes. Residency programs find the MSPE an especially helpful tool to learn about your performance in medical school relative to your peers.

Rule # 69 Recognize the importance of the MSPE in the selection process.

In the 2014 NRMP Program Directors Survey, 84% of residency programs cited the MSPE as a factor used to select applicants to interview. Programs rated the MSPE 4.0 in importance on a scale from 1 (not at all important) to 5 (very important).¹

Importance Of MSPE In The Residency Selection Process	
Specialty	% of Residency Programs Citing MSPE as a Factor in Inviting Students to Interview
Anesthesiology	87%
Dermatology	83%
Emergency Medicine	91%
Family Medicine	80%
General Surgery	79%
Internal Medicine	90%
Neurology	85%
Neurosurgery	81%
Obstetrics & Gynecology	76%
Orthopedic Surgery	79%
Otolaryngology	74%
Pathology	83%
Pediatrics	87%
Physical Medicine & Rehabilitation	88%
Plastic Surgery	62%
Psychiatry	94%
Radiation Oncology	86%
Radiology	91%

Adapted from Results of the 2014 NRMP Program Director Survey. Available at: <http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf>.

The MSPE is also important in applicant ranking. 68% of programs cited the MSPE as a factor in ranking applicants.¹ Why do programs place so much value on this factor? There is research that indicates that the MSPE may predict future performance. In a study done to learn about characteristics of an applicant that might predict future success in an emergency medicine residency, researchers found that the MSPE correlated fairly well with overall success in residency.² In particular, the letter's categorical rating (outstanding, excellent, superior, very good, or good) was found to be a strong predictor of performance during residency training.

Your ultimate goal with the MSPE is to provide assistance to the Dean's office in order to develop the best letter that can be written on your behalf. Fortunately, at most schools, students are involved in the preparation of this letter.

Rule # 70 Understanding the content of the MSPE is the first step in improving it.

Although the MSPE has been a standard part of the residency application for many years, there is considerable debate about its usefulness. Some schools produce letters containing highly useful, detailed and honest information about a student's medical school performance. Others are lacking in key information that programs need to compare applicants.

Critics of the MSPE assert that these letters almost always contain positive information. They contend that significant information is often withheld or suppressed, including information about course or clerkship failure, leaves of absence, or lapses in professionalism. Supporters of the MSPE recognize these shortcomings, but maintain that the letter has value, especially in offering programs information about class rank and a comparison of students to their peers. Furthermore, they cite that schools often include an overall recommendation, usually at the end of the letter.

Because of variability in content and lack of standardization among letters from different schools, the AAMC convened several committees to make recommendations about the letter. These committees recommended that schools should not view the MSPE as a letter of recommendation predictive of future performance, but rather a letter of evaluation. As such, the letter should describe in a sequential manner a student's performance. In describing performance, the AAMC committee urged schools to include comparative performance information. In other words, how did the student perform relative to his peers?

The AAMC also recommended that the MSPE include 6 sections.

Sections Of The MSPE	
MSPE Section	Description
Identifying Information	Your legal name Name and location of medical school
Unique Characteristics	Brief statement about your unique characteristics (e.g., leadership positions, research abilities, community service activities). May also include information about any significant challenges or hardships you encountered during medical school.
Academic History	Month and year of initial matriculation Expected graduation date Explanations of any extensions, leaves of absence, gaps, or breaks in your medical school education Information about courses or clerkships that you were required to repeat or remediate Information about any disciplinary action you received from the medical school
Academic Progress	Your academic performance and professional attributes during basic science and clinical years of medical school Narrative information regarding your overall performance on each core clerkship and elective rotation
Summary	A summative assessment of your performance in medical school relative to your peers.
Appendices	Graphic representation of your performance relative to your peers in each preclinical course and core clerkship Graphic representation of your overall performance relative to your peers.

Did you know?

In a survey of anesthesiology PDs, researchers sought to determine which sections of the MSPE were valued most by programs in predicting successful residents. The sections found to be predictive of success included academic history summary, academic progress, and academic ranking.³

End of excerpt from chapter 8

Chapter 9

Curriculum Vitae

Curriculum vitae is a Latin expression, meaning the “course of one’s life.” Known as CV for short, this document provides an overview of a candidate’s academic and professional background. The CV is an important component of the residency application.

Rule # 80 Your CV must create maximum impact.

Creating a good CV requires time, effort, and a thorough examination of your training and achievements. The overall appearance of your CV needs to be impeccable. The proofreading must be perfect. Each individual line should be positioned for maximum impact. Every pertinent aspect of your achievements must be included.

Students don’t always recognize the importance of creating an outstanding CV. Many residency programs now require applicants to submit applications through ERAS, the Electronic Residency Application Service of the Association of American Medical Colleges. Students aren’t permitted to attach their CV to the ERAS application. However, you are allowed to enter information from your CV directly into the ERAS CV format. PDs can then print out this information in a CV format.

Even though you won’t be able to attach your CV to your ERAS application, you’ll still need to create a professional-looking paper version of your CV for the following reasons:

- Some residency programs don’t participate in ERAS. These programs will request a paper CV.
- The CV will help you fill out your Medical Student Performance Evaluation (MSPE) Data Form. Medical schools use this form to help them create your MSPE, an important component of your residency application.
- The CV will help you complete different sections of the residency application.

- The CV can be of considerable help as you begin to draft your personal statement.
- Mentors and faculty in your specialty of interest will review your CV to provide you with informed advice about how to strengthen your credentials.
- Your letter writers will rely on your CV to help them write strong LORs.
- When students apply for an elective rotation at another institution, they may be required to submit a CV. Such “away” or “audition electives are often helpful for students applying to competitive residencies. Obtaining such an elective can be a competitive process in and of itself.
- Reviewing your CV prior to the interview will remind you of your strengths and accomplishments, helping to boost confidence.
- Interviewers may request a copy of your CV at the start of an interview in order to help structure the interview. This provides an ideal opportunity to emphasize your strengths and highlight the skills you would bring as a resident.

Your CV will continue to be an important document even after you enter a residency program. It’s not a static document, but rather one that needs to be updated regularly as you progress through your career.

Tip # 46

PDs are able to view and print your applicant information in an ERAS CV format. You can, and should, do the same prior to submitting your application.

Tip # 47

For programs that don’t participate in ERAS, you may have to submit a paper CV. While you may be an intelligent, enthusiastic, and charming applicant, you won’t have the opportunity to showcase these qualities during an interview if a poorly written, or even average, CV eliminates you from further consideration. If done well, your CV has the potential to position you above other applicants, even those who may be more qualified.

Rule # 81 Utilize only the correct CV format and structure.

All CVs begin with your name and contact information. Since these items will be at the top of your CV, they can contribute to a positive first impression, and

End of excerpt from chapter 9

Chapter 10

The Audition Elective

An “audition” elective essentially serves as an extended interview, and should be regarded as such. Audition electives are valued by programs as they provide a way to more reliably assess an applicant’s cognitive and noncognitive skills and traits. For students applying to competitive specialties or programs, audition electives are considered a must by some advisors. These rotations give students the chance to highlight skills and qualities that aren’t easily judged by the typical application materials. Students can showcase their clinical acumen, their skills in patient interactions, their abilities to work with colleagues and faculty, and their enthusiasm for the particular program and specialty. These electives also offer additional opportunities to highlight a student’s qualifications for the program. Opportunities include deeper investigation of difficult cases, performing thorough literature searches, volunteering to give presentations, or seeking opportunities to publish in their chosen field.

Audition electives have increased in popularity as students increasingly try to gain a competitive advantage wherever possible. In response to this trend, some educators have criticized students and their medical schools for allowing applicants to do multiple audition electives. Some schools have adopted policies limiting the number of electives that students can complete in any given specialty. However, students continue to receive messages encouraging audition electives, and often these messages come directly from residency programs. Some make it clear that in order to be seriously considered, an applicant should rotate through the department. These conflicting messages are confusing. Should I do an audition elective? How many should I do? When is the best time to do one? How can I excel during the elective? Will it guarantee me an interview? We address these questions in this chapter.

Rule # 98 In some specialties, audition electives are considered a must.

In a survey of PDs representing multiple specialties, Wagoner found that 86% would give preference to students who had performed at a high level in an audition elective.¹ This is not surprising, since an audition elective is essentially an extended interview, during which a program can more reliably assess an applicant’s cognitive and noncognitive skills and traits.

Some specialties attach great importance to the audition elective. In a survey of orthopedic surgery PDs, *the most important criterion in the resident*

selection process was considered to be an applicant's performance during a rotation at the director's program.² The authors of the study further stated that "60% of programs reported that 50% or more of their matching residents over the previous three years had performed medical student orthopedic surgery rotations at the program prior to matching for residency." Of note, applicants were also asked about their impressions regarding the importance of these selection factors, and the audition elective was not cited among their top three. In another survey of orthopedic surgery PDs, performance on a local rotation was considered *the most important attribute* in obtaining a residency. This was followed by class rank and the interview.³ Drs. Peabody and Manning, faculty members in the Department of Orthopedics at the University of Chicago, strongly recommend audition electives. "It's almost mandatory to do an away elective and shine."⁴

In a survey of dermatology applicants, the audition elective was similarly important. A total of 53% of applicants matched at a program in which they had some prior experience. Of these, 29% matched at an institution affiliated with their own medical school, 18% matched with an institution where they had done an audition elective, and 6% matched with a program where they had done a research elective or fellowship.⁵

In other specialties, by contrast, the audition elective may not have much of an effect. As a general rule, audition elective are less important in family medicine, internal medicine, pediatrics, neurology, and pathology. However, even within these less competitive specialties, an audition elective may be important to certain programs. This may be dependent upon other factors including the competitiveness of the program, the strength of your candidacy, and the program's familiarity with your medical school.

Rule # 99 Recognize the full advantages of an audition elective, and plan to maximize each one.

Audition electives provide many potential advantages in increasing the competitiveness of your application. However, applicants who've rotated with us and with our colleagues don't always realize the full roster of potential benefits. Before starting your elective, plan carefully so that you can take advantage of each of these potential benefits.

- An additional elective in your field can provide an unmatched clinical experience. It can allow you to work with and learn from some of the best faculty in the country. It can provide exposure to other facets of the specialty not available at your own institution.
- The audition elective serves as an extended interview. This is your chance to impress upon the program what an outstanding student you are, and what an outstanding resident you would be.
- The audition elective provides an ideal opportunity to impress upon the program how well you would fit in with their residency program. An outstanding student is not always a great fit for every program. You can

End of excerpt from chapter 10

Chapter 11

Preinterview Dinner or Social Event

Surveys have shown that interactions with residents are very important to applicants. While interactions do take place during the interview day, most programs provide significant exposure to residents at social events, either before or after the interview. In a survey of fourth-year students at a single school, 96% of programs visited by applicants held a social event, usually the night before the formal interview.¹ These get-togethers are a rich source of information about the residents, faculty, and program. Even more importantly, they provide another opportunity to highlight your sparkling personality and scintillating wit.

Rule # 113 The residency dinner or social event is important. Make every effort to attend.

The pre-interview residency dinner or social event is an opportunity for you to meet the residents. Through these interactions, you'll be able to gauge their level of happiness. In a survey of nearly 100 matched plastic surgery residents, resident happiness was the highest rated factor influencing program ranking.² In a survey of orthopedic surgery applicants, similar findings were noted. The authors wrote that "applicants first and foremost wish to be happy where they match and gauge this from their observations and interactions with current residents at programs."³ Keep in mind that the structure of the interview day may prevent you from interacting in a meaningful way with residents, which makes the dinner or social event even more important.

Did you know?

We agree with the words of Dr. Patrick Duff, Associate Dean for Student Affairs at the University of Florida College of Medicine. "If the program at which you are interviewing has a social event the night before, or the night of, your interview, you should make every effort to attend. This is your key opportunity to meet the residents on an informal basis (and vice-versa) and to learn a great deal about the day-to-day reality of working in the department... Failure to attend the event may be perceived as lack of serious interest on your part."⁴

Tip # 73

Because the websites of many great programs lack the detailed information which applicants seek, these social events are opportunities to learn more about the program. This information can be used the following day when your interviewer asks, “Why are you interested in our program?”

**Rule # 114 The social event is definitely a part of the interview.
Don’t drop your guard.**

Residents will form impressions of you during these events. Don’t underestimate the importance of the residents in the selection process. In a recent survey of over 1,800 program directors representing 22 specialties, “interactions with house staff during interview and visit” was considered to be quite important in the ranking of applicants. It received a mean importance rating of 4.7 out of 5.0 (scale from 1 [not at all important] to 5 [very important]).⁵ 88% of programs cited these interactions as a factor in ranking applicants. “We offer a dinner with the current residents the evening before all interview dates,” writes the Department of Medicine at Eastern Virginia Medical School. “This is an opportunity for you and our residents to get to know each other in an informal setting. We consider this an important part of the interview process and will seek feedback on applicants from our current residents.”⁶

Did you know?

The Surgical Society at the University of Colorado School of Medicine reminds applicants of the influence that residents may have in the selection process. “Take advantage of the opportunities you have to interact and communicate with the residents at those programs that intrigue you. Contact them by email after you visit and keep in touch. Many program directors ask for resident feedback about each applicant. This can be very helpful to you if you have made a good impression on those residents.”⁷

Tip # 74

While these events tend to be more relaxed than the actual interview, never forget that you are being judged. Even if faculty members are absent, any representative of the program, including residents and support staff, may be asked for their impressions of you. Remain alert and don’t let your guard down. Be cordial, friendly, and polite. Engage in conversation freely with residents and faculty. Just take care in what you reveal.

End of excerpt from chapter 11

Chapter 12

Scheduling Interviews

The process of scheduling interviews may seem straightforward. You receive an interview invite. You contact the program to schedule. In reality, the process is much more complicated. Year after year, students make mistakes in scheduling. Some are minor, some are major, but all have the potential to change the impression you make.

Rule # 119 Respond to the invitation as quickly as possible.

Reply promptly to interview invitations. Slots are filled quickly. We recommend that you respond to an invitation within hours of its receipt. Some candidates who've waited until the next day have found themselves on the waitlist.

Scheduling Interviews: What Do Residency Programs Recommend?	
Residency Program	Recommendation
Department of Surgery University of Missouri	"Please be sure to respond to an interview invitation as soon as possible to reserve a position as interview days fill up quickly." ¹
Department of Surgery Brown University	"We hold four interview dates throughout November, December, and January and these will be filled on a 'first come, first served' basis as e-mail responses to the invitations are received." ²
Department of Medicine Louisville University	"Invitations to interview are sent from the program coordinator to applicants via email. A timely response in the affirmative reserves an interview slot for you. No response or a late response can mean losing an interview spot. A common courtesy is to reply in the negative if you have decided not to apply or interview with our program." ³

Tip # 77

Respond to interview offers quickly, even if you're not sure of your level of interest in the program. Remember that you can always cancel the interview later.

Template For Accepting An Interview Invitation

Dear _____:

Thank you for inviting me to interview at [residency program]. I consider it an honor to be selected for an interview, and I look forward to visiting your program.

After looking over the list of possible interview dates, any of the following dates, if available, would be suitable for me:

November 14
November 18
November 23

Thank you once again.

Sincerely,

Rebecca Conley

After you've agreed on a date, you'll usually receive another e-mail from the program with further instructions, including when to arrive, where to stay, directions, and the day's events. Note the following:

- Place and time of the interview
- Directions
- Where to park
- Where to stay
- Whether you're required to bring any additional documents with you
- Whom you'll be meeting, including the names, titles, and pronunciation of all interviewers. Pay special attention to the positions of those whom you will be meeting.
- Interview itinerary (schedule of events)
- Type of interview (one-on-one versus panel, blinded versus open, number)

End of excerpt from chapter 12

Chapter 13

Before the Interview

An invitation to interview is a significant honor. During the screening process, the program has worked hard to whittle down a large applicant pool into an elite group. Contrary to common belief, the purpose of the interview is *not* to determine if you have the qualifications needed to be a resident at their institution. By granting you an interview, the program has already made that determination. Rather, the purpose of the interview is to assess fit. Are you the right fit for the program? Is the program the right fit for you?

Fortunately, or unfortunately, your work has just increased exponentially. Although the CV, personal statement, letters of recommendation, and other aspects of the application are all of great importance, there's no disputing the fact that the interview is possibly the most critical step of the residency application process. While the other elements of the application will help you get an interview, your interview performance will strongly influence your ranking. Surveys of program directors have shown that success in the interview is critical towards securing a position in the program.

Unfortunately, many otherwise qualified applicants lose any chance of matching into the program of their choice because of a poor interview. In a study of internal medicine residency applicants, 1/3 of the applicants were ranked less favorably following an interview.¹ In a study of EM programs, with data obtained from 3,800 individual interviews, a total of 14% of interviews resulted in unranked applicants.² The conclusion here is that the interview has the potential to destroy your chances. Preparation is critical.

A successful interview is one that moves you higher on the program's rank list, and to a position where you're likely to match. Successful interviewing requires a considerable amount of preparation. You need to know what to research before the interview, what to wear, what to say, how to conduct yourself, and what to do after the interview. In this chapter, we outline the steps to ensure that every one of your interviews will be a success.

Rule # 130 The interview is a critical factor in ranking applicants.

Over the years, many surveys of PDs have inquired about the importance of the interview in the selection process. These surveys have consistently found the interview to be a major factor used to rank applicants. In fact, the results of multiple studies indicate that the interview is *the most* valuable factor used in the ranking of applicants. In the 2014 NRMP Program Directors Survey, 93% of residency programs in 22 specialties cited "interactions with faculty during

interview and visit” as a factor in ranking applicants. Programs rated this factor 4.8 in importance on a scale from 1 (not at all important) to 5 (very important).³ The following table highlights the importance of the interview relative to other selection criteria. As you can see, the top 3 criteria used in ranking all have to do with the residency interview.

Top Criteria Used By Residency Programs To Rank Applicants		
Criteria	% Programs Citing Factor	Mean Importance Rating
Interactions with faculty during interview and visit	93%	4.8
Interpersonal skills	93%	4.8
Interactions with house staff during interview and visit	88%	4.7
Feedback from current residents	82%	4.6
USMLE Step 1 / COMLEX Level 1 score	80%	4.1
Letter of recommendation	74%	4.1
USMLE Step 2 CK / COMLEX Level 2 CE score	71%	4.1
*Survey participants were asked to rank each item on a scale of 1 (not at all important) to 5 (very important).		
Adapted from Results of the 2014 NRMP Program Director Survey. Available at: http://www.nrmp.org/wp-content/uploads/2014/09/PD-Survey-Report-2014.pdf .		

Applicants are often surprised to learn about the importance that programs attach to the interview. However, several studies have shown poor correlation between academic performance during medical school and later performance during residency training. In one study of radiology residents, while honors or A grades in clinical rotations (medicine, surgery, pediatrics) and high USMLE scores were predictive of performance on the American Board of Radiology exam, they were not predictive of clinical performance as a resident.⁴ In a study of obstetrics and gynecology residents, Bell found similar results.⁵ USMLE scores did not correlate with faculty evaluations of resident performance.

Therefore, programs can't rely solely on objective data such as class rank and USMLE scores to make resident selection decisions. Behavioral and noncognitive skills have significant value in predicting resident performance, and programs recognize this fact. However, they're limited in how they can assess these skills, and therefore the interview takes on greater importance. The interview becomes the chief means by which programs can evaluate these noncognitive skills.

End of excerpt from chapter 13

Chapter 14

The Interview Day

Rule # 148 **Your interview day begins long before you meet your interviewer.**

Your interview doesn't start when you sit down with your interviewer. It begins as soon as you enter the premises. Many applicants mistakenly assume they only need to "be on" during the interview. In reality, everything you say or do on the day of the interview may be noted and duly reported.

It's not unheard of for faculty to ask their secretaries and administrative staff for their opinions of the applicants. They may ask the secretary about a candidate's appearance or behavior. Our secretaries have commented on a host of negative behaviors. These range from the disinterested applicant leafing through the waiting room *Sports Illustrated* instead of program information, to the applicant with the arrogant, unfriendly demeanor, to the pesky applicant asking inappropriate questions, especially when the secretary is clearly busy.

Did you know?

Dr. Andrew Lee, Chairman of the Department of Ophthalmology at Houston Methodist Hospital, wrote that "many programs (including our own) use the informal feedback from the residency coordinator, the secretaries, and the other residents to obtain a more complete view of the applicant. Important sentinel behaviors both positive (e.g., politeness, altruism, helpfulness) and negative (e.g., condescension, arrogance, rudeness) may only manifest during applicant interactions with perceived subordinates (e.g., the appointment secretary)."¹

Did you know?

Poor behavior reported by anyone before, during, or after your interview day has the potential to be communicated to a residency program. "We did not rank a candidate as they had a negative encounter at the airport announcing that they had interviewed for a position with us and if the gate agent ever needed their services they would refuse to treat them," wrote a residency coordinator at a major residency program. "The gate agent or someone affiliated with the airline tracked down the physician recruitment office to share what happened. The recruitment office in turn told us. The world is very, very small and word gets around quickly when you least expect it."²

Interviews often don't start on time. Applicants may wait as long as an hour or two. Since many interviewers are practicing physicians, patient care-related issues can arise at any point and require immediate tending. Some candidates lose their patience, and have been known to approach the secretary impatiently or rudely, demanding to know the reason for the delay. How you handle a situation of this type is very telling.

Tip # 102

Applicants should be on their best behavior, not just during the interview, but throughout the entire visit. Programs can gain much insight into your personal characteristics by observing your interactions with other applicants, program staff, residents, and others. The best rule of thumb is to conduct yourself as if there are hidden cameras watching your every move.

Tip # 103

Ask the receptionist where you can place your excess belongings (coat, umbrella, etc.). You don't want to walk into your interview bogged down with clutter.

Rule # 149 Be compulsive about bringing everything that you need for the interview.

Bring the following with you to your interview:

- Curriculum vitae (CV)
- Personal statement
- Application
- Board scores
- Medical school transcript
- Copies of any published articles
- Copies of submitted, accepted, or in press articles, with your advisors' permission
- All correspondence between you and the program
- Notepad portfolio with pen
- Money
- Parking ticket
- Personal items (dental floss, mint, etc.)

While the program is likely to have your application (including CV, personal statement, board scores), you should be prepared with copies in the event that an interviewer asks for one of these items. You may have a closed file interview, or

End of excerpt from chapter 14

Chapter 15

Interview Questions

How are you today?

Did you have any trouble getting here?

How do you like the weather?

Did you have any trouble finding a place to park?

How do you like [our city]? Have you ever visited [our city] before?

Was there a lot of traffic on your way here from the airport (or hotel)?

The above questions, known as icebreaker or “small talk” questions, are usually asked at the beginning of an interview. While this portion of the interview may only last several minutes, its importance can’t be overemphasized. If icebreaker questions are answered well, they can set a positive tone for the rest of the interview, and put both you and the interviewer at ease.

While these questions appear simple, many applicants handle them improperly. Generally, applicants prepare heavily for the deeper questions, but give no thought to these types of icebreaker questions. Savvy interviewers recognize this and purposefully engage applicants in small talk. In doing so, they hope to learn more about an applicant’s true personality.

The key with this type of interaction is to reinforce your overall message, and therefore respond in a confident and positive manner. Answer “How are you today?” with an answer such as “I’m doing great. I’m really happy to be here today” rather than “OK,” or “Tired.” Unfortunately, we’ve interviewed many applicants who end up whining or complaining about one thing or another. You may hate the weather or dislike the city. You may have had difficulty finding the office or struggled with the commute. There’s no reason to share this with your interviewer.

Do you have any questions?

Applicants expect this question will be asked at the end of the interview. However, this isn’t always the case. Occasionally, an interviewer will open with this question. She may wish to test your composure and initiative. Or you may be dealing with an inexperienced interviewer. Have a list of questions ready.

Regardless of when asked, this is a very important question. In fact, some would argue that it is the most important question. Some interviewers consider the quality of the questions asked to be more important than answers given.

Many interviewers consider it a red flag when an applicant has no questions. The worst thing you can say is “No, I don’t have any questions” or “My questions have already been answered.” This is akin to saying that you have no interest in the program. Your interviewer may also wonder if you’ve actually prepared for the interview. Answering “no” also robs you of the opportunity to gain valuable knowledge about the program, the type of knowledge that would help you make an informed ranking decision.

Too often, applicants ask standard or basic questions that have been answered at the program’s website or in their brochure; such questions imply poor preparation. Ask informed questions to learn more about the program. You should convey the fact that you are knowledgeable about the specialty, and your questions should convey the fact that you were interested enough in the program to research it in advance.

To ask the “right” questions, begin by researching the program in great depth. Learn all that you can about the program by using a variety of sources – the program’s website, an internet search, the program brochure, your advisors and faculty, and so on. Savvy applicants begin their question with a reference to what they have learned. “On your website I learned about the importance the program places on developing resident teaching skills. I was excited to read about this because I’ve really enjoyed my teaching experiences as a medical student tutor. I understand that teaching workshops are offered several times a year. Can you tell me more about these workshops?” Note that in this example, the applicant starts by making a reference to the program’s website. He then proceeds to ask a thoughtful and specific question tailored to the residency program. In doing so, he clearly conveys his experiences teaching as a medical student, his passion for it, and his desire to continue it as a resident. If the program is seeking dedicated teachers, this applicant has succeeded in matching his skills to the needs of the program.

Often the best questions are those derived from something the interviewer said earlier. “You mentioned that the program offers a unique lecture series to train residents as researchers. What topics are covered in this series?”

We’ve provided a full table of possible questions to ask faculty members in Chapter 14 “The Interview Day” (see Rule # 163).

Some other tips

- After making a list of questions, prioritize them. You usually won’t have the chance to ask all of your questions. If you could only ask a single question, which one would it be?
- Use your best judgment regarding the number of questions to ask and when to ask them.
- Ask open-ended rather than yes/no questions.
- Keep the questions short.
- Avoid “Why” questions. These can sound critical.

End of excerpt from chapter 15

Chapter 16

After the Interview

Post-interview communication is an important part of the residency selection process, and includes such practices as sending thank-you notes and letters, arranging for second looks, and responding to inquiries and communication from programs. You'll hear mixed opinions of the value of sending thank-you notes following interviews. Some advisors will vehemently urge you not to send notes, while others feel strongly that notes should be sent to every interviewer. Also heavily debated is the value of second look visits, a practice that adds considerable expense to a process that's already consumed thousands of dollars. In this chapter, we will present the evidence so that you can make an informed decision as to how to proceed in this important area.

Rule # 169 Communicating with a residency program after the interview is an important aspect of the application process.

Applicants can initiate post-interview communication in several ways. Most communicate with programs by sending letters, handwritten notes, or e-mail. Some candidates will even phone program directors or revisit institutions. There are many reasons that applicants communicate with programs following an interview:

- Common courtesy
- To thank the program
- To help the program remember them
- To demonstrate interest in the program
- To communicate their intent to rank the program highly
- To ask questions that come up after the interview day
- To request a "second look"
- For fear that not communicating will lower their place on the rank list
- To provide new information to the program about credentials ("update")

We review in more detail the three cornerstones of post-interview communication:

- Plan to thank every program for the opportunity to interview.

- Plan how to communicate and what to say to the top programs on your rank list.
- Plan how to respond to programs that initiate contact with you following the interview.

Did you know?

Following the interview, it is possible to move up the rank-order list. Updating the program with new information (award, publication, presentation, etc.) is one way to make this happen. “Candidates are subsequently re-evaluated based on the information in the file as well as additional information that becomes available,” writes the Department of Orthopedic Surgery at Drexel University. “The program director and program chairman in consultation with members of the faculty and residents determine the final rank order that is submitted to the NRMP and GME offices.”¹

Rule # 170 You should communicate with every program at which you interviewed.

Unless a program specifically makes it known that it does not wish to be contacted, you must at the very least send a thank-you note. Not only is this common courtesy, but at *some* programs post-interview communication may serve as a selection factor, as we more fully describe below.

Note we specified “some” programs. We’ve talked to some faculty who don’t care if they never receive any notes from applicants, and in fact find the flood of mail after an interview to be a hassle.

However, the opposite is true for many faculty members. “This applicant didn’t even bother to send a thank you note. They must not be interested in our program. If they’re not interested in coming here, they wouldn’t be a good fit for us.”

While some applicants recognize these facts and are diligent about communication with programs following the interview, not enough applicants do so. In one study, only 39% of applicants sent follow-up communication to every program with whom they interviewed. 55% communicated only with select programs.²

Did you know?

If a program informs you not to send a thank-you note, respect their wishes. Failure to do so may raise concerns about your ability to follow instructions. Understand that such policies don’t mean that you can’t communicate with these programs after the interview if you have questions or seek additional information. “We instruct applicants to not send ‘thank-you’ letters to interviewers and to not ask about their rank status before Match Day,” writes the Department of Anesthesiology at the University of Miami. “We emphasize ‘meaningful communication’ with our applicants, specified as questions about our program, perspectives on living in our city, and contact information for current residents.”³

End of excerpt from chapter 16

Chapter 17

Ranking Residency Programs

The last step in the residency application process is the creation and submission of your rank order list. On the official rank list, you list those programs, in order of preference, which you would be willing to attend. Programs also submit their own rank lists, in the order in which they would extend offers. Sometime in February, the Match takes place. A computer matches each applicant to the highest ranked program on the applicant's list which has offered him a position. The results are announced throughout the country in mid-March on "Match Day."

For many, Match Day is the happy culmination of a very long, hard application process. Other applicants experience bitter disappointment. There are a whole host of reasons as to why match results may not be favorable. However, we've seen some students who do everything right, only to make critical errors when it comes time to create and submit their rank list. Errors at this final step in the process can undo all of your previous efforts.

Rule # 183 Always rank according to your own criteria.

After the interview season ends, the process of finalizing your rank list begins in earnest. The rank list is a list of the residency programs at which you interviewed, placed in your order of preference. This involves sorting through a great deal of data. Some students are tempted to rank based on reputation alone. "I'd like to attend the most prestigious program I can get into." Ranking programs is rarely that simple. You'll be spending a minimum of three years of your life at this program, and you need to take into account a whole host of other factors. A useful checklist for evaluating residency programs can be found in *Strolling Through the Match*, a publication produced by the American Academy of Family Physicians. It's accessible free to applicants at www.aafp.org. Consider also the following questions:

- Will the residency program provide me with strong clinical training?
- Will that training be broad-based, with exposure to all facets of the field?
- Will it provide some subspecialty training in my areas of interest?
- Will it provide training in additional areas important to me, such as research training?
- How did I feel when I visited the program?

- Would I be able to work with the people there?
- Could I live and work in this city for the next several years?
- What are the strengths and weaknesses of the program relative to others?
- Does the program offer an environment that will allow me to reach my full potential?

Tip # 133

Don't ignore your gut feeling about a program. A program may look outstanding on paper, but if your visit left you feeling that you would be miserable there, consider that an important data point. While objective information is obviously important in the ranking process, emotions can, and should, play an important role.

Rule # 184 Never rank a program that you wouldn't want to attend.

If you have serious doubts about a program, *do not* put that program on your rank list. If you place it on the rank list and you match, you are bound to accept it. In fact, in registering for the Match, the NRMP has applicants affix their passwords to the Match Participation Agreement. This agreement states that a "match between an applicant and a program creates a binding commitment to accept or offer a position. A decision not to honor that commitment is a breach of the Agreement and will be investigated by the NRMP."¹

While applicants can be granted a waiver from their Match commitment, only the NRMP can grant this waiver. Programs are not allowed to grant waivers and must report all waiver requests to the NRMP. If the NRMP denies the waiver request, you will be expected to honor your commitment to the program. Failure to accept the position may lead the NRMP to prohibit you from acceptance into another NRMP-participating program for a period of one year following the decision.

While the NRMP has approved some waiver requests, others have been denied. Overall, it would be better to not match at all than to match at a program you have no desire to attend. In the event that you don't match, you still have additional opportunities to strengthen your application and apply again.

Tip # 134

Think long and hard before you rank any program where you feel you would be unhappy. You may ultimately match there.

End of excerpt from chapter 17

Chapter 18

Couples Match

Any two individuals participating in the NRMP Match can apply as a couple in an effort to match with programs in the same geographic region. You need not be married or engaged. You don't even need to be romantically involved. When it comes time to create your rank-order list, you'll simply do it together, listing pairs of programs. Using its algorithm, the NRMP will match you with the highest ranked pair of programs in which both of you have been accepted.

In 2015, 2,092 applicants participated in the Match as couples, shattering the previous record. Couples in the Match have typically fared well, matching at rates over 90% since 1984, the inaugural year for the Couples Match. In 2016, the match rate was 95.7%, higher than the 93.8% match rate for U.S. allopathic seniors applying alone.¹

Rule # 191 Many advisors are not as familiar with the Couples Match. It's therefore important that you seek out multiple sources of information.

A strong working knowledge of the process is important to avoid common pitfalls. Fortunately, all medical schools have experience with couples participating in the Match. However, it can sometimes be difficult to find mentors and advisors with experience in this area. We recommend:

- Discussing your plans to participate in the Couples Match with your Dean of Student Affairs. It's likely that your Dean is an authority in this area, having counseled many couples before you.
- Seeking the advice and perspectives of faculty advisors in your chosen specialty, as well as your partner's, who have experience guiding couples.
- Consulting with residents who have matched as couples.
- Learning from the experiences of recently matched couples.

Did you know?

“One of the biggest stressors is just the lack of knowledge about the Couples Match. Most people don't really know what the process involves until they're in it, and advisors can be helpful but they don't always have as much experience with couples as single applicants.”²

- Dr. Calvin Kagan, University of Vermont School of Medicine Graduate

Did you know?

If you or your partner are participating in different matches (e.g., NRMP and early match), then you won't be able to match as a couple. The exception to this rule is if the early match specialty (such as urology) requires initial training in another field (such as general surgery). If the other field participates in the NRMP Match, then you and your partner can participate in the couples match for this initial period of training.

Rule # 192 Determine geographic regions of interest for residency training.

At the earliest stages of the process, consider your geographic areas of interest, and ask your partner to do the same. Then compare notes. Are you interested in the same parts of the country? If not, don't worry. This is the time to have an open dialogue about your respective interests, and learn about areas that you may be unfamiliar with. Because larger metropolitan areas have more options in terms of residency programs, couples will generally focus more on these sites, and apply to multiple programs in the same area.

Did you know?

Once you've decided your geographic areas of interest and then identified desirable programs within these areas, you and your partner will apply separately to these programs.

Rule # 193 Apply to a larger number of programs. You can always cancel interviews later.

Couples generally apply to more programs. The number of programs to which you apply should be based on:

- Competitiveness of the specialties you and your partner are seeking
- Competitiveness of each partner's application for the specialty
- Geographic area of interest, and the competitiveness of programs within these areas
- Familiarity of your medical school to these programs
- Red flags in your (or your partner's) application

Another factor which requires consideration involves increasing competition for residency positions. This is due to rising medical student enrollment in existing medical schools and newly created schools. To ensure an adequate number of

End of excerpt from chapter 18

Chapter 19

Supplemental Offer and Acceptance Program (SOAP)

In 2012, the NRMP established the Match Week Supplemental Offer and Acceptance Program (SOAP) for unmatched applicants and unfilled residency programs. During SOAP, applicants apply to residency programs through ERAS. Programs interview applicants, usually by phone or Skype, and then create and submit preference lists. Through a series of rounds, positions are offered to applicants. The following are notable findings from the 2016 SOAP¹:

- There were 13,920 applicants who were designated SOAP-eligible.
- Over 40% of participants were non-U.S. citizen IMGs.
- Over 25% of participants were U.S. citizen IMGs.
- Approximately 15% of participants were U.S. seniors.
- There were 513 unfilled programs, and most (454), but not all, chose to participate in SOAP.
- These programs made available 1,097 unfilled positions.
- 55% of the available positions were for PGY-1 spots, the bulk of which were preliminary surgery positions.
- The specialties with the largest numbers of unfilled positions were Family Medicine, Radiology, Anesthesiology, Internal Medicine, and Pathology.
- By the end of the SOAP process, nearly 93% of positions were filled. 65.1% of these positions were filled by U.S. seniors, 12.9% were filled by osteopathic students/graduates, and 16.8% were filled by IMGs.

The SOAP replaced a process known as the Scramble, an incredibly chaotic experience for both applicants and programs. During the Scramble, there was a flurry of emails, faxes, and phone calls from applicants to programs. Applicants often had friends, family, advisors, and consultants advocate on their behalf, and the process was overwhelming for all those involved. The creation of the SOAP brought order to the process, and established a set of rules to which both applicants and programs must adhere.

Commonly Asked Questions About SOAP

Allopathic, osteopathic, and international medical students and graduates may participate in SOAP, as long as eligibility requirements are met. These requirements include registering for the NRMP Main Residency Match, and being eligible to start residency training on July 1 of that year. Below we answer some common questions about SOAP participation:

I did not apply to any programs prior to SOAP. Can I still participate in SOAP?

Assuming that you are eligible to participate, you need not have applied earlier to participate in the SOAP process. However, you must register for the NRMP Match. The late registration deadline is in February.

I applied to one specialty prior to SOAP. Can I apply to other specialties?

Yes. You can apply to other specialties.

I didn't submit a rank order list. Am I still eligible to participate in SOAP?

Yes. You need not have ranked any programs to participate.

How do I know if I am eligible to participate in SOAP?

You will receive communication informing you of your eligibility to participate. If you're a U.S. medical student, you will be eligible for SOAP if your medical school indicates that you are on schedule to graduate before residency training begins on July 1. For international medical students and graduates, ECFMG is responsible for verifying successful completion of required examinations (USMLE Step 1, Step 2CK, Step 2CS). Following verification, IMG applicants are SOAP-eligible. Note that you don't have to be ECFMG certified to participate in SOAP. You simply have to be on schedule to graduate from your medical school by July 1 (but you must have ECFMG verification of exam completion).

Below we describe the timeline of events during the SOAP process, with specific recommendations to improve your odds of success.

ONE MONTH BEFORE MATCH WEEK

After being notified of an unsuccessful match on Monday of Match Week, applicants only have several hours to create, complete, and submit their applications for SOAP. To make the most of this very short period of time, application documents should be prepared well in advance for applicants who are at risk of not matching (and for those applicants who know they'll be participating in SOAP). Are there new letters of recommendation that need to be obtained for your specialty of choice? Do you need additional letters for back-up specialties? Will you need to write a personal statement for another specialty?

End of excerpt from chapter 19

Chapter 20

Osteopathic Students

Most osteopathic applicants secure residency positions through either the AOA or NRMP Match. Over the past five years, competition for positions in the AOA and NRMP Match has intensified. Although there has been a 22% increase in the number of available AOA-approved residency positions from 2010 to 2014, this growth has not kept pace with the rising number of osteopathic applicants. From 2010 to 2014, the number of applicants participating in the AOA Match increased by 44%: from 1,896 in 2010 to 2,743 in 2014, due to an influx of students from new colleges of osteopathic medicine, as well as expanding enrollment at established schools.¹

In the 2014 AOA Match, 22% of participating applicants failed to match.¹ A similar percentage failed to secure positions through the NRMP Match.² A major reason for failure to match has to do with career aspirations. Since 2007, the American Association of Colleges of Osteopathic Medicine has annually surveyed fourth-year osteopathic medical students in an effort to identify specialties of interest. For the 2012-2013 academic year, only 32% of fourth-year students indicated plans to pursue careers in family medicine, general internal medicine, or general pediatrics.³ It is clear that many osteopathic applicants wish to match with non-primary care specialties.

Unfortunately, most positions available in the AOA Match exist in primary care specialties. Specialties participating in the AOA Match can be divided into three groups – primary, secondary, and traditional internship. Primary specialties include family medicine, internal medicine, and pediatrics. 55% of available positions are in primary specialties. Secondary specialties are defined as all non-primary care specialties. 28% of all positions are in secondary specialties. 18% of all positions are in traditional rotating internships.¹

With limited numbers of available positions, competition for positions in the non-primary care specialties is intense. Examination of AOA Match data in recent years has shown that there is a high fill rate for positions in non-primary care specialties, reflecting demand for training in these specialties. In contrast, many primary care positions go unfilled. Of the 599 unfilled positions in 2014, 90% represented positions in family medicine, internal medicine, and pediatrics. These positions went unfilled despite the fact that 679 applicants failed to match. It's likely that most of these applicants desired positions in non-primary care specialties. The competitiveness of specialties participating in the AOA Match is presented in the following table, in descending order based on the number of applicants per position.¹

Competitiveness of Specialties Participating in the 2014 Osteopathic Match		
Specialty	Applicants Per Position	% Applicants Matching to First-Choice Specialty
Ophthalmology	2.41	36.6%
Otolaryngology & Facial Plastic Surgery	2.37	42.2%
Urological Surgery	2.00	50.0%
Orthopedic Surgery	1.80	53.5%
Anesthesiology	1.77	54.7%
Pediatrics	1.66	50.9%
Obstetrics & Gynecology	1.65	58.9%
Dermatology	1.60	56.9%
Physical Medicine & Rehabilitation	1.50	50.0%
Emergency Medicine	1.44	60.7%
General Surgery	1.31	66.5%
Neurological Surgery	1.19	63.2%
Psychiatry	1.18	55.9%
Family Medicine/Emergency Medicine	1.14	62.5%
Neurology	1.10	73.9%
Diagnostic Radiology	1.09	78.4%
Internal Medicine/Emergency Medicine	1.06	64.7%
Proctology	1.00	100%
Internal Medicine/Pediatrics	1.00	100%
Internal IM/NMM	1.00	100%
Neuromusculoskeletal Med/OMT	1.00	42.9%
Internal Medicine	0.77	81.7%
Family Medicine	0.66	82.9%
Traditional Internship	0.37	79.5%

Adapted from Osteopathic GME Match Report for the 2014 Match. Available at: <http://www.aacom.org/reports-programs-initiatives/aacom-reports/special-reports/ogme-match-2014>.

Osteopathic applicants may also apply to training positions offered through the NRMP Match. Unlike the AOA Match, where osteopathic applicants are competing among themselves, the NRMP Match also includes allopathic and international medical school applicants. Although the NRMP Match offers significantly more residency training positions in non-primary care specialties, history has shown that many of these specialties have traditionally admitted few osteopathic applicants.

2016 NMRP Match Results for DO Applicants Seeking Positions in Competitive Specialties	
Specialty	# Matched DO Applicants/Total Candidates Matched
Anesthesiology	208/1513
Dermatology	3/410
Emergency Medicine	224/1894
General Surgery	58/1239
Neurological Surgery	0/214
OB/GYN	128/1257
Orthopedic Surgery	4/717
Otolaryngology	1/302
PMR	114/383
Radiation Oncology	4/182
Radiology	108/1088
Adapted from Results and Data 2015 Main Residency Match. Available at: http://www.nrmp.org/wp-content/uploads/2015/05/Main-Match-Results-and-Data-2015_final.pdf .	

End of excerpt from chapter 20

Chapter 21

U.S. Citizen International Medical Graduates

Over the past two decades, there's been a tremendous increase in the number of U.S. citizen graduates of international medical schools. In 1995, 527 U.S. citizen IMGs achieved ECFMG certification, representing 9% of all such certifications. By 2013, the number had increased nearly six-fold, and these 2,963 ECFMG-certified graduates accounted for 30% of all certifications.¹ U.S. citizen IMGs make up nearly 15% of the total residency applicant pool.

There's been a remarkable change in the countries where U.S. citizens have trained. Up until the mid-1970s, Americans seeking medical education abroad sought training primarily in Europe, in countries such as Belgium, France, Italy, Spain, and Switzerland. As European schools placed more of an emphasis on the education of their own citizens, Americans began to look elsewhere. Offshore schools in the Caribbean were first established in the late 1970s. Growth of these schools continued in the 1980s but then declined, only to accelerate again after the turn of the century. 40% of Caribbean medical schools were founded after 2000.²

U.S. citizen IMGs have made important contributions to medicine in such areas as patient care, teaching, and research. At a time when the U.S. is facing a growing shortage of primary care physicians, U.S. citizen IMGs are doing their part to fulfill the nation's primary care manpower needs. Over 50% of Caribbean-educated physicians involved in direct patient care are practicing primary care.³ The primary care physician workforce shortage is felt most deeply in rural areas. Over 60 million Americans lack access to primary care, and there's evidence to indicate that IMGs are filling these gaps in many states.⁴ Many IMGs are performing high quality research at institutions across the U.S. The number of full-time IMG faculty doubled from 1984 to 2004. In 2004, there were over 17,000 IMGs serving as faculty members. In 2004, 21.3% of full-time faculty identified as principal investigators on NIH research grants were IMGs.⁵

To make such an impact in the United States as licensed physicians, U.S. citizen IMGs must face and overcome significant obstacles. In a survey of 125 general surgery PDs, respondents were asked to indicate their level of agreement with the following statement:⁶

In reality, all things being equal, our program would rather offer positions to USMGs than to IMGs.

87% strongly agreed or agreed with the statement. Nearly 20% of PDs reported having experienced pressure to rank U.S. medical school applicants higher than more accomplished and qualified IMGs. Over 70% believed that there was discrimination against IMGs in the residency selection process.

For U.S. citizen IMGs, failure to obtain a residency position can be economically devastating. There is also the risk of emotional distress associated with failure to match or even a match that results in a position in an unfulfilling career. As an advisor and consultant to IMG applicants, I’ve been privy to some heartbreaking stories. In working with applicants over a period of many years, I’ve been able to identify the factors that prevent success in the residency match. In this chapter, I discuss these factors, and offer recommendations to navigate this complex process.

Rule # 198 Understand the challenges of matching in the U.S.

In the 2016 NRMP Match, 5,323 U.S. citizen IMGs participated, hoping to secure residency positions in the U.S. Unfortunately, 46.1% of these applicants failed to match.⁷

2016 NRMP Success Rate for Different Applicant Groups	
Applicant Type	Success Rate in NRMP Match
U.S. seniors (allopathic medical schools)	94%
Students/Graduates of U.S. osteopathic schools	80%
US citizen IMGs	54%
Non-U.S. citizen IMGs	50%

Adapted from Advance Data Tables: 2016 Main Residency Match. Available at: <http://www.nrmp.org/match-data/main-residency-match-data/>. Accessed April 23, 2016.

For IMGs, there’s concern that these numbers may worsen. To meet the needs of an anticipated physician manpower shortage, U.S. medical schools have expanded enrollment considerably over the past five years. Unfortunately, because of governmental funding issues, there has not been a corresponding rise in the number of residency positions. As more and more graduates have entered the Match, I’ve seen the competition for available residency positions intensify. Unless funding for more positions is secured, the coming years will likely be very difficult for all residency applicants, and especially so for IMG applicants.

Rule # 199 Research the competitiveness of your chosen specialty, and factor that into your decision-making process.

Certain specialties are far more competitive than others. Specialties such as ophthalmology, otolaryngology, radiation oncology, dermatology, urology, plastic surgery, and orthopedic surgery are highly competitive. There are many more U.S. applicants who wish to enter these fields than positions available. Consequently, a significant number of U.S. applicants fail to match. As you might expect, U.S. citizen IMGs find these specialties the most difficult to enter. Specialties with the highest numbers of U.S. citizen IMG trainees include family medicine, internal medicine, pediatrics, and psychiatry.

Percentage of U.S. citizen IMGs Who Failed to Match in 2014 by Specialty		
Specialty	Number of U.S. citizen IMGs who applied	% Failing to Match
Anesthesiology	160	41%
Emergency Medicine	190	72%
Family Medicine	1,233	57%
General Surgery	308	49%
Internal Medicine	1,594	47%
Neurology	103	43%
Obstetrics & Gynecology	177	56%
Pathology	115	60%
Pediatrics	347	44%
Physical Medicine & Rehabilitation	83	52%
Psychiatry	459	56%
Radiology	102	46%

Adapted from Charting Outcomes in the Match: International Medical Graduates. Available at: <http://www.ecfm.org/resources/NRMP-ECFMG-Charting-Outcomes-in-the-Match-International-Medical-Graduates-2014.pdf>. Accessed June 23, 2015.

I'm often asked if it's possible for U.S. citizen IMGs to match into the most competitive specialties. It's definitely possible, and I've enjoyed helping these applicants reach their professional goals. However, while U.S. citizen IMGs have successfully matched into highly competitive specialties, it requires a well thought out application strategy, and it's far from easy.

Because of the large numbers of IMG applicants matching into less competitive specialties such as psychiatry and family medicine, IMGs often believe that it's easy to match into these fields. As you can see from the data, over 50% of applicants fail to match in these specialties. Regardless of your chosen specialty, the key to a successful match hinges on the development of a carefully developed strategy.

Rule # 200 **As competition for residency positions has increased, the USMLE has taken on more importance than ever before.**

Although U.S. residency programs seek to accurately assess the quality of an applicant’s medical education, it’s impossible for programs to become familiar with each and every international medical school. Instead, programs place considerable emphasis on a tool they’re intimately familiar with – the USMLE exams. These exams have made it easier for programs to assess the medical knowledge of IMG applicants. Since all applicants are required to take these, programs are readily able to compare scores of one applicant with another.

According to the NRMP, the mean USMLE Step 1 score among matched U.S. IMG applicants in 2014 was 217.⁸ In an interview with Dr. Su-Ting Li, Program Director of the University of California Davis Pediatrics Residency Program, we asked her about the importance of the USMLE for IMG applicants:⁹

IMGs need to pass USMLE 1, 2 and CS on their first attempt, preferably with scores higher than 220, and need to complete all steps of USMLE in as short a time frame as possible. IMGs are being compared with other applicants who took the exams while still in medical school, without the luxury of months preparing for each examination. In addition, passage of the USMLEs needs to be done as soon as possible – the chances of matching go down with each successive year away from clinical care.

Below are the mean USMLE Step 1 and Step 2 CK scores for matched and unmatched U.S. citizen IMG applicants by specialty.

Mean USMLE Step 1 Scores for Matched Vs Unmatched U.S. citizen IMGs by Specialty (2014)		
Specialty	Mean Step 1 Score for Matched Applicants	Mean Step 1 Score for Unmatched Applicants
Anesthesiology	234	210
Emergency Medicine	225	215
Family Medicine	206	198
General Surgery	227	216
Internal Medicine	221	205
Neurology	216	203
Obstetrics & Gynecology	221	207
Pathology	224	204
Pediatrics	216	201
Physical Medicine & Rehabilitation	223	207
Psychiatry	205	198
Radiology	237	223

Adapted from Charting Outcomes in the Match: International Medical Graduates. Available at: <http://www.ecfmg.org/resources/NRMP-ECFMG-Charting-Outcomes-in-the-Match-International-Medical-Graduates-2014.pdf>. Accessed June 23, 2015.

Chapter 22

Non-U.S. Citizen International Medical Graduates

There are over 900,000 physicians in the United States. A substantial number of these physicians are international medical graduates (IMGs). According to the AMA, 228,665 are IMG physicians, representing 25.3% of the total physician population.¹

Since most are involved in direct patient care, IMGs have had a vital role in meeting the medical manpower needs of the United States. IMGs have also made valuable contributions to medical education, furthered biomedical and health services research, and held leadership positions in academic medicine. In fact, 17% and 10% of department chairs in the basic sciences and clinical sciences at U.S. medical schools, respectively, are IMGs.²

The Educational Commission for Foreign Medical Graduates (ECFMG) is responsible for certifying the readiness of IMG physicians for entry into U.S. residency training. As you can see from the following table, the ECFMG has certified hundreds of thousands of IMGs (from a number of countries) in its 50 plus years of existence.

Top Countries by Country of Origin ECFMG Certificates Issued, 1958 – 2005						
Citizenship at entry to medical school	Issued 1958-2005:		Issued 1996-2005:		Issued 2001-2005:	
	No.	(%)	No.	(%)	No.	(%)
India	54,292	(18.9)	17,378	(20.8)	8,710	(22.8)
United States	40,051	(13.9)	13,476	(16.1)	7,917	(20.8)
Philippines	19,870	(6.9)	2,519	(3.0)	1,081	(2.8)
Pakistan	13,706	(4.8)	4,930	(5.9)	2,394	(6.3)
United Kingdom	7,534	(2.6)	1,183	(1.4)	467	(1.2)
China	7,072	(2.5)	3,791	(4.5)	1,214	(3.2)
Germany	6,863	(2.4)	1,862	(2.2)	539	(1.4)
USSR	6,171	(2.2)	3,282	(3.9)	1,201	(3.2)
Iran	6,169	(2.2)	1,956	(2.3)	870	(2.3)
Egypt	6,006	(2.1)	1,883	(2.3)	516	(1.4)
Korea	5,995	(2.1)	820	(1.0)	415	(1.1)
Syria	4,292	(1.5)	1,473	(1.8)	677	(1.8)
Nigeria	4,016	(1.4)	1,858	(2.2)	812	(2.1)
Australia	3,819	(1.3)	666	(0.8)	182	(0.5)
Taiwan	3,763	(1.3)	240	(0.3)	55	(0.1)
Lebanon	3,481	(1.2)	1,269	(1.5)	588	(1.5)
Total certificates	287,382	(100)	83,476	(100)	38,142	(100)

Hallock J, Kostis J. Celebrating 50 years of experience: an ECFMG perspective. *Acad Med* 2006; 81 (12): S7-16.

Although the sheer number of IMGs receiving ECFMG certification is impressive, these numbers tell you nothing of the difficulties these IMGs have experienced in their efforts to secure a position in a U.S. residency program. While gaining a desired residency position is difficult for U.S. medical students, it's much more so for IMGs.

IMGs often have to deal with adapting to a new culture in a foreign land, often without friends or family close by for support. For many IMGs, the lack of understanding of the criteria which programs find important makes the residency application process extremely stressful and difficult. In working with IMGs, I've come to realize that misperceptions abound, with IMGs frequently overestimating or underestimating certain residency application criteria. These misperceptions may result in a failure to match.

In this chapter my goal is to provide you with evidence-based advice from the literature on resident selection as it pertains to IMGs. In addition, I seek to deliver information from those individuals who are directly involved in the selection process – namely program directors and other members of the residency selection committee. What do programs value the most? How important are letters of recommendation? Why do programs prefer applicants with U.S. medical experience? How can IMGs secure U.S. clinical experience? What are common interview pitfalls? These are some of the questions I answer in my effort to help you develop an application strategy that will lead to match success.

Rule # 208 Research the competitiveness of your chosen specialty.

Certain specialties are far more competitive than others. Specialties such as ophthalmology, otolaryngology, radiation oncology, dermatology, urology, plastic surgery, and orthopedic surgery are highly competitive. There are many more U.S. applicants who wish to enter these fields than positions available. Consequently, a significant number of U.S. applicants fail to match every year.

As you might expect, IMGs find these specialties the most difficult to enter. For example, 97% of residents training in orthopedic surgery residency programs are graduates of U.S. allopathic medical schools. Of the 3,581 resident physicians in orthopedic surgery, only 1.8% were IMGs.³ Contrast this with family medicine, internal medicine, and psychiatry. In these specialties, IMGs account for over 30% of all resident physicians.

While IMG applicants have successfully matched into highly competitive specialties, it requires a well thought out application strategy. Because of the large numbers of IMG applicants matching into less competitive specialties such as internal medicine and family medicine, IMGs often believe that it's easy to match into these fields. Statistics from the 2014 and 2015 Match results shown below debunk this common misconception.^{4,5}

Key Statistics from the 2015 Match Results...

10,060 non-U.S. citizen IMG applicants participated in the 2015 Match.

898 (8.9%) withdrew.

1,796 (17.9%) did not submit a rank-order list.

Of the remaining 7,366 non-U.S. citizen IMG applicants, 3,725, or 50.6% failed to match.

Key Statistics from the 2014 Match Results...

72% of non-U.S. citizen IMG applicants failed to match into family medicine.

52% of non-U.S. citizen IMG applicants failed to match into internal medicine.

As you can see from this data, thousands of IMGs fail to match every year. Failure to match can be distressing. Those who fail to match often report feeling shocked, depressed, or embarrassed. “I couldn’t believe it,” said one applicant. “I’ve never failed anything before.”

The financial effects of not matching are also significant. The financial cost of the residency application process for IMGs is substantial. IMG applicants incur significant costs every step of the way. Leon and Aranha described these costs in more detail.⁶

Economic constraints impede many competitive FMGs from applying because of the prohibitive fees requested, when analyzed in the context of average foreign wages. To begin with, international medical schools charge very high fees to issue all documents necessary to apply, including medical school transcripts...Several educational courses are available to FMGs to prepare for the USMLE tests. These courses often have prohibitive costs...For a 4-month period, some courses charge about U.S. \$9,000...Testing costs by themselves are equivalent to average annual gross income in many countries.

These costs are just the start. Another area of high expense is that of travel, including travel to the United States and the costs incurred during the interviewing process. In one survey, the median expense per interview was \$330.⁷

Regardless of your chosen specialty, the key to a successful match hinges on the development of a well-thought-out strategy. Such an approach will significantly increase your chances of a successful match.

Percentage Of Resident Physicians Who Are IMGs By Specialty			
Specialty	Total number of residents*	Number of IMG residents	Percentage
Anesthesiology	5,668	671	11.8
Dermatology	1,184	51	4.3
Emergency Medicine	5,631	330	5.9
Family Medicine	10,077	3,467	34.4
General Surgery	7,890	1,312	16.6
Internal Medicine	22,971	9,514	41.4
Neurology	2,207	822	37.2
Neurosurgery	1,272	114	9.0
Obstetrics & Gynecology	4,942	670	13.6
Ophthalmology	1,323	77	5.8
Orthopedic Surgery	3,529	72	2.0
Otolaryngology	1,45	22	1.5
Pathology	2,276	810	35.6
Pediatrics	8,529	1,867	21.9
Physical Medicine & Rehabilitation	1,162	222	19.1
Plastic Surgery	377	58	15.4
Psychiatry	4,917	1,581	32.2
Radiation Oncology	686	15	2.2
Radiology	4,471	358	8.0
Urology	1,189	55	4.6

*Includes resident physicians on duty as of December 31, 2013.

Brotherton S, Etzel S. Graduate Medical Education, 2013-2014. *JAMA* 2014; 312 (22): 2427-2445.

Percentage of non-U.S. citizen IMGs Who Failed to Match in 2014 by Specialty		
Specialty	Number of non-U.S. citizen IMGs who applied	% Failing to Match
Anesthesiology	163	52%
Emergency Medicine	84	63%
Family Medicine	909	68%
General Surgery	308	49%
Internal Medicine	3,546	52%
Neurology	297	50%
Obstetrics & Gynecology	182	66%
Pathology	287	47%
Pediatrics	660	58%
Physical Medicine & Rehabilitation	47	55%
Psychiatry	440	63%
Radiology	129	49%

Charting Outcomes in the Match: International Medical Graduates. Available at: <http://www.ecfm.org/resources/NRMP-ECFMG-Charting-Outcomes-in-the-Match-International-Medical-Graduates-2014.pdf>. Accessed June 23, 2015.

End of excerpt from chapter 22

Chapter 23

Anesthesiology

How competitive is the specialty?

The attractiveness of anesthesiology as a career choice for U.S. senior medical students has fluctuated widely over the years. The number of students pursuing anesthesiology reached a low point in 1995 when only 36% of residency positions were filled by U.S. medical students. Since then, however, there has been growing interest in the field. In the 2016 NRMP Match, U.S. allopathic medical students filled 69% and 60% of the PGY-1 and PGY-2 residency spots, respectively.¹

Did you know?

“Matching and matriculating in an anesthesiology residency in the United States has become much more competitive than 5 years ago,” writes Dr. Gildasio de Oliveira, Assistant Professor of Anesthesiology at the Northwestern University Feinberg School of Medicine.²

Osteopathic and international medical graduate applicants are classified as independent applicants by the NRMP, and do not fare as well. In 2014, approximately 30% of independent applicants failed to match into anesthesiology.³

Highlights of the 2016 NRMP Anesthesiology Match¹

- There were a total of 1,608 positions (PGY-1 and PGY-2 levels).
- Most positions were filled with allopathic medical student applicants (1,064).
- 208 osteopathic applicants matched.
- 114 U.S. IMG applicants matched.
- 80 non-U.S. IMG applicants matched.
- 47 U.S. graduates matched.
- 95 positions went unfilled.

How many years of training are required to become an anesthesiologist?

Four years of residency training are required to become an anesthesiologist. Training begins with either a transitional or preliminary year followed by three years of training in clinical anesthesia. There are two types of anesthesiology programs:

- Categorical four-year program

The first year in these programs is considered the internship or clinical base year.

- Advanced three-year program

These programs require a separate internship. Applicants applying to these programs must also apply to preliminary (medicine, surgery, pediatrics) or transitional year programs.

What percentage of available positions is filled by U.S. seniors? What about other applicants?

In 2013 – 2014, there were 5,686 total residents training in a total of 133 anesthesiology residency programs.⁴ Of these, 78% were U.S. MDs, 11.9% were IMGs, and 10.3% were osteopathic graduates. As shown in the following table, the percentage of positions filled by international medical graduates has declined over the past five years.

Year	Residency Programs	Total # residents	% US MDs	% IMGs	% DO
2013-2014	133	5686	77.8%	11.9%	10.3%
2007-2008	131	5208	77.1%	13.1%	8.9%

Did you know?

Osteopathic applicants may also apply to 13 AOA-approved anesthesiology residency programs. In 2014, the mean COMLEX scores for matched applicants was 523 for Level 1 and 550 for Level 2.⁶

How do programs select residents?

End of excerpt from chapter 27

Chapter 28

Internal Medicine

How competitive is the specialty?

The number of U.S. allopathic medical students entering categorical internal medicine (IM) residencies has risen every year for the past 5 years. According to the NRMP, 3,167 U.S. allopathic medical students matched into the specialty in 2014. However, this number remains significantly below the peak reached in 1985 (3,884). Securing a residency position in IM is not difficult for U.S. allopathic medical students. There are many more positions than interested applicants. In the 2016 NRMP Match, there were 7,024 total positions. Only 2.3% of allopathic students failed to match. Securing positions is considerably more difficult for osteopathic and international medical graduates. The NRMP designates these two groups as independent applicants. In 2014, 45.9% of independent applicants were unable to land positions in the field.¹

Did you know?

There are programs in which you can combine IM residency training with another specialty (IM/anesthesiology, IM/dermatology, IM/emergency medicine, IM/family medicine, IM/medical genetics, IM/neurology, IM/pediatrics, IM/preventive medicine, IM/primary care, and IM/psychiatry).

Did you know?

Despite efforts to encourage IM residents to pursue careers in primary care, most residents choose to pursue subspecialty training. In 1998, over 50% of IM residents entered the primary care workforce. In recent years, however, only 20-25% of IM residency graduates become primary care physicians.

Did you know?

Although U.S. allopathic students have had great success matching into IM, it can be very difficult to match with a highly coveted program. “We are a competitive university program and receive over 2,000 applications per year,” writes the Department of Medicine at Indiana University School of Medicine. “We extend interviews to just over 200 students.”²

Did you know?

Osteopathic applicants may also apply to 129 AOA-approved internal medicine residency programs.

Highlights of the 2016 NRMP Internal Medicine Match³

- There were a total of 7,024 positions.
- 46.9% of positions were filled with allopathic medical student applicants.
- 498 osteopathic applicants matched.
- 1016 U.S. IMG applicants matched.
- 2013 non-U.S. IMG applicants matched.
- 117 U.S. graduates matched.
- 86 positions went unfilled.

How many years of training are required to become an internist?

To become an internist, a minimum of 3 years of residency training is required.

What percentage of available positions is filled by U.S. seniors? What about other applicants?

In 2013 – 2014, there were 23,258 total residents training in a total of 396 internal medicine residency programs.⁴ 52% were U.S. MDs, 40.3% were international medical graduates, and 7.5% were osteopathic graduates.

Year	Residency Programs	Total # residents	% US MDs	% IMGs	% DO
2013-2014	396	23,258	52.2%	40.3%	7.5%
2007-2008	382	22,132	49.4%	44.6%	5.9%

How do programs select residents?

Every few years, the NRMP conducts a survey of PDs. In 2014, the NRMP surveyed 194 internal medicine PDs to determine the factors that are important in selecting applicants to interview.⁶ The top three factors are USMLE Step 1/COMLEX Level 1 score, MSPE, and USMLE Step 2 CK/COMLEX Level 2 CE score. These factors are categorized into tiers of importance in the table on the next page.

End of excerpt from chapter 28

The Successful Match website

Our website, TheSuccessfulMatch.com, provides residency applicants with a better understanding of the selection process. You'll find:

- Inside look at the residency selection process
- Advice from the decision-makers
- Information to position yourself for residency match success

Consulting services

We also offer expert one-on-one consulting services to medical students and IMGs. Whether you seek an overall strategy for match success, accurate assessment of your candidacy for a particular specialty or program, review of your curriculum vitae or personal statement, or thorough preparation for interviews, you can rest assured we have the knowledge, expertise, and insight to help you achieve your goals. All applicants work directly with Dr. Samir Desai. If you are interested in our consultation services, please visit us at www.TheSuccessfulMatch.com. The website provides further details, including pricing and specific services.

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