



EMRA and CORD

# Student Advising Guide

---

**Editor-In-Chief**

**Zachary Jarou, MD**

University of Chicago

---

**Associate Editors**

**Emily A. Hillman, MD**

University of Missouri-Kansas City/Truman Medical Center

**Adam Kellogg, MD, FACEP**

University of Massachusetts Medical School — Baystate Health

**Lucienne Lutfy-Clayton, MD, FACEP**

University of Massachusetts Medical School — Baystate Health

**Alexis Pelletier-Bui, MD**

Cooper Medical School of Rowan University

**Jamie Shandro, MD, MPH, FACEP**

University of Washington School of Medicine



COUNCIL OF RESIDENCY DIRECTORS IN EMERGENCY MEDICINE

## **2018–2019 EMRA Board of Directors**

Omar Maniya, MD, MBA, President  
Hannah Hughes, MD, MBA, President-Elect  
Zach Jarou, MD, Immediate Past President  
Tommy Eales, DO, Secretary/Editor, EM Resident  
Nathan Vafaie, MD, MBA, Speaker of the Council  
Karina Sanchez, MD, Vice-Speaker of the Council  
Erik Blutinger, MD, MSc, Resident Representative to ACEP  
Sara Paradise, MD, Director of Education  
Angela Cai, MD, MBA, Director of Health Policy  
Greg Tanquary, DO, MBA, Director of Membership  
Nick Salerno, MD, Director of Technology  
Eric McDonald, MD, ACGME RC-EM Liaison  
Scott Pasichow, MD, MPH, EMRA Representative to AMA  
Corey McNeilly, MA, Medical Student Council Chair

## **EMRA Staff**

Cathey B. Wise, CAE, Executive Director  
Valerie Hunt, Managing Editor

## **Disclaimer**

This book is intended as a general guide only. While the editors have taken reasonable measures to ensure the accuracy of all information presented herein, the user is encouraged to consult other resources when necessary. The publisher, authors, editors, and sponsoring organizations specifically disclaim any liability for omissions or errors found in this handbook or for appropriate use.

Please be aware: We have cited NRMP Charting Outcomes in multiple chapters, along with AAMC resources. NRMP, AAMC, and the authors have attempted to produce unbiased and, where available, evidence-based information and advice regarding matching and competitiveness. However, there are no perfect studies available to give us the best evidence. We have used the best information available, and caveats are present. In this guide, we reference matched and unmatched candidates; it should be noted that a matched candidate indicates a candidate who matched into a preferred specialty. An unmatched candidate did not match into the preferred specialty, but did not necessarily not match into residency at all.

Copyright 2019 Emergency Medicine Residents' Association

ISBN 978-1-929854-52-3

4950 W. Royal Lane, Irving, TX 75063

972.550.0920, emra.org

All rights reserved. This book is protected by copyright. No part of this book may be reproduced in any form or by any means without written permission from the copyright owner.

## Foreword

**Every year on the third Friday of March**, medical students across the country open their “Match Day” envelopes and (hopefully) breathe a sigh of relief to discover they will be training at one of their top-choice programs. It’s the culmination of years of hard work, and it comes at the end of an exceptionally stressful process.

This book will help alleviate some of that stress. We want to help you apply smarter, not harder.

As promised in the subtitle, we have focused on the evidence. What does the data show to be effective for matching in emergency medicine? We’ve broken it down for you. An incredible team of authors and editors have worked hard to bring you a highly referenced, evidence-based road map to joining this incredible specialty of ours.

The data is reassuring. Across all specialties, half of all U.S. seniors will end up at their top-ranked program, and three-quarters of seniors will end up at one of their top 3 choices. Yet students are applying to twice as many residency programs as they were a decade ago: 53.8 in 2018, compared to only 25.7 in 2008. Consequently, program directors — now inundated with more applications than ever before — are forced to resort to filtering applications, and tools like the AAMC Standardized Video Interview are being considered to help assess applicants.

Why are students over-applying? The most common response I hear is “because emergency medicine is becoming more competitive.” But does the evidence support this assertion? Approximately 90% of all EM-bound U.S. seniors continue to match in EM each year, and over the past decade, the 4 NRMP “Charting Outcomes in the Match” reports that have been released show that mean Step 1 scores and number of volunteer and work experiences for EM applicants remain average. In fact, EM consistently falls below average in terms of the percentage of Alpha Omega Alpha members matched and the average number of research experiences and abstracts/posters presented.

While the NRMP’s “Charting Outcomes” helps students predict their likelihood of matching based upon the number of programs on their rank list, it doesn’t help students understand the number of applications they need to secure

---

*Students are applying to twice as many residency programs as they were a decade ago. But what does the data show to be effective for matching in emergency medicine? We’ve broken it down for you.*

---

enough interviews to build a rank list that will guarantee a match. This is where the AAMC's Point of Diminishing Returns figures come into play. For example, students with low Step 1 scores (< 215) applying to EM will experience diminishing returns after 32 programs, while students with Step 1 scores at or above the national average (> 234) will experience diminishing returns after only 18 programs. The evidence shows that scattershooting for a residency spot will not be as effective as fine-tuning your application strategy. That's where this book shines. Using evidence — not anecdotes from years past — we help you position yourself for success.

This book also includes targeted tips for:

- Osteopathic students
- Military match
- Dual training
- At-risk students
- IMG students
- Couples
- Latecomers

We know the match process (and everything leading up to it) can be daunting. We know you're getting advice from all corners. But we also know **you are going to be OK. Using the evidence we've distilled in this book, turn your attention to applying smarter, not harder.**

Good luck! We look forward to welcoming you as colleagues in emergency medicine!

Zach Jarou, MD  
Editor-in-Chief

# Table of Contents

<b>Chapter 1. Choosing Emergency Medicine . . . . .</b>	<b>1</b>
<i>Melanie Camejo, MD, University of Missouri-Kansas City Medical School/Truman Medical Center</i>	
<i>Meredith Wittie, MD, University of Arkansas Medical Sciences</i>	
<i>Daniel Fuchs, MS, Alabama College of Osteopathic Medicine Class of 2019</i>	
<b>Chapter 2. The Preclinical Years . . . . .</b>	<b>9</b>
<i>Michael Pasirstein, MD, MPH, FACEP, Drexel University College of Medicine</i>	
<i>Mark Ramzy, DO, EMT-P, Drexel University</i>	
<i>Sean Trostel, Medical College of Georgia Class of 2019</i>	
<b>Chapter 3. Third Year/Planning for Fourth . . . . .</b>	<b>17</b>
<i>Colleen A. Crowe, MD, MPH, Medical College of Wisconsin</i>	
<i>Lesley J. Walinchus-Foster, MD, Cooper University Hospital</i>	
<i>Hayley Musial, Florida International University Herbert Wertheim College of Medicine Class of 2020</i>	
<b>Chapter 4. Finding Your Fit: Learning the Landscape of EM . . . . .</b>	<b>29</b>
<i>Arleigh Trainor, MD, FACEP, FAAEM, University of South Dakota — Sanford School of Medicine</i>	
<i>Amanda Jurvis, DO, Beaumont Health System</i>	
<i>Michael Messina, Ohio University Heritage College of Osteopathic Medicine Class of 2019</i>	
<b>Chapter 5. Applying for Away Rotations . . . . .</b>	<b>39</b>
<i>David Gordon, MD, Duke University</i>	
<i>Joshua Wallenstein, MD, Emory University</i>	
<i>Ronnie K. Ren, MD, UMMS-Baystate Medical Center</i>	
<i>Sarah Ring, University of Miami Miller School of Medicine Class of 2019</i>	
<b>Chapter 6. Crush Your EM Clerkships, Secure Your SLOEs . . . . .</b>	<b>51</b>
<i>Shefali Trivedi, MD, The Mount Sinai Hospital</i>	
<i>Ryan JJ Buckley, MD, MPH, Yale University</i>	
<i>Bryan Feinstein, FP-C, University of Washington School of Medicine Class of 2019</i>	
<b>Chapter 7. Building Your ERAS Application . . . . .</b>	<b>67</b>
<i>Katia M. Lugo Enriquez, MD, FACEP, Advent Health</i>	
<i>John Cafaro, MD, Cooper University Hospital</i>	
<i>Kathryn L. Anderson, University of Vermont College of Medicine Class of 2019</i>	
<b>Chapter 8. Apply Smarter, Not Harder: Understand Your Competitiveness . . . . .</b>	<b>79</b>
<i>Mark F. Olaf, DO, FACEP, Geisinger Health</i>	
<i>Erin Karl, MD, University of Nebraska Medical Center</i>	
<i>Jonathan Pickos, Des Moines University College of Osteopathic Medicine Class of 2019</i>	

**Chapter 9. Interview Season Logistics .....97**

Nathan J. Lewis, MD, FACEP, *Virginia Commonwealth University*  
Grace A. Hickam, MD, *Virginia Commonwealth University*  
Cameron B. Justice, AEMT, *Pacific Northwest University COM Class of 2020*

**Chapter 10. Making the Most of Interview Day .....105**

Alan C. Taylor, MD, *University of Tennessee, Memphis*  
Chad M. Simpkins, MD, *Cooper University Hospital*  
Hannah Gordon, MPH, *FIU Herbert Wertheim College of Medicine Class of 2019*

**Chapter 11. Preparing and Submitting Your Rank List ..... 113**

Jennifer S. Jackson, MD, FACEP, *University of Miami Miller School of Medicine*  
Seth M. Kelly, MD, MBA, *University of Maryland*  
Marie J. Murphy, MPH, *SUNY Upstate Medical University Class of 2019*

**Chapter 12. What If I Don't Match? ..... 119**

Jeff Druck, MD, *University of Colorado School of Medicine*  
Sameer Desai, MD, *University of Kentucky*  
Casey L. Lawson, MD, *University of Kentucky*  
Samantha Lord, MS, NREMT-P, *Des Moines University Class of 2019*

**References..... 125**

**Targeted Tips**

**Osteopathic Students**

Megan Stobart-Gallagher, DO, *Thomas Jefferson University Hospital*  
Jody "AJ" Lakey Jr., *Pacific Northwest University of Health Sciences Class of 2019*

**International Medical Graduates**

Dimitry Danovich, MD, *NYU Langone/Bellevue Hospital*  
Xiao Chi Zhang, MD, MS, *Thomas Jefferson University*  
Vanessa Graff, *St. George's University — Grenada West Indies Class of 2019*

**Military Match**

Linda Katirji, MD, *University Hospitals Cleveland Medical Center*  
Gillian Schmitz, MD, FACEP, *Uniformed Health Services University of Health Sciences*  
Kyle Couperus, MD, *Madigan Army Medical Center*

**Couples Match**

Jose V. Nable, MD, MS, NRP, *Georgetown University School of Medicine*  
Caitlin Schrepel, MD, *University of Washington*

**Latecomers**

Sarah C. Crockett, MD, *Dartmouth Hitchcock Medical Center*

**At-Risk Candidates**

Liza G. Smith, MD, *University of Massachusetts Medical School — Baystate*

# Glossary of Abbreviations

- AAEM — American Academy of Emergency Medicine  
AAMC — Association of American Medical Colleges  
ABEM — American Board of Emergency Medicine  
ACEP — American College of Emergency Physicians  
ACGME — Accreditation Council for Graduate Medical Education  
ACOEP-RSO — American College of Osteopathic Emergency Physicians  
Resident Student Organization  
AMA — American Medical Association  
AOA — Alpha Omega Alpha Honor Society or American Osteopathic  
Association  
ASC-EM — Advising Students Committee in Emergency Medicine  
COMLEX — Comprehensive Osteopathic Medical Licensing Examination  
CORD — Council of Residency Directors in Emergency Medicine  
CV — Curriculum Vitae  
ECFMG — Educational Commission for Foreign Medical Graduates  
ED — Emergency department  
EM — Emergency medicine  
EMIG — Emergency Medicine Interest Group  
EMRA — Emergency Medicine Residents' Association  
ERAS — Electronic Residency Application Service  
LoR — Letter of Recommendation  
MODS — Medical Operational Data System  
MSPE — Medical Student Performance Evaluation  
NBME — National Board of Medical Examiners  
NRMP — National Resident Matching Program  
PD — Program Director(s)  
SAEM — Society of Academic Emergency Medicine  
SLOE — Standardized Letter Of Evaluation  
SOAP — Supplemental Offer and Acceptance Program  
Step 2 CK — USMLE Step 2 Clinical Knowledge exam  
Step 2 CS — USMLE Step 2 Clinical Skills exam  
SVI — Standardized Video Interview  
USMLE — United States Medical Licensing Examination  
VSAS — Visiting Student Application Service  
VSLO — Visiting Student Learning Opportunities

## **COMMON SYNONYMS**

Clerkship: away rotation, audition rotation, externship, sub-internship, sub-I





# Choosing Emergency Medicine

**Emergency physicians have the privilege of taking care of patients** and their families during the most vulnerable moments of their lives, simultaneously being a resuscitator, detective, team captain, coach, and metaphorical bartender. The breadth of skills and knowledge required to bring order to the chaos of the emergency department on a daily basis is what sets us apart, and also dictates which types of medical students will be successful and fulfilled by choosing emergency medicine.

## A Brief History of Emergency Medicine

In order to understand the practice of emergency medicine today — and the 240 EM residency programs approved by the ACGME by 2018 — it helps to understand how we have evolved as

a specialty. Post-World War II, America experienced a tremendous period of prosperity including a quadrupling in the number of automobiles, 41 thousand miles of new highways, and the development of suburbs. This new mobility, coupled with increasing specialization in medicine, separated many patients from the family physicians that traditionally cared for them. In 1955, emergency “rooms” (which have since grown into “emergency departments”) were staffed by physicians from a wide

variety of specialties who were not necessarily equipped with the specialized training required to treat the breadth of patients. The ED was labeled “the weakest link in the chain of hospital care.” The care provided to soldiers injured on the jungle battlefields of the Vietnam War was superior to the care received by many civilians in the United States.

---

*In 1968, John Wiegenstein, MD, and a small group of physicians practicing in EDs came together to form the American College of Emergency Physicians.*

---

**In 1966**, the National Academy of Sciences published “Accidental Death and Disability: The Neglected Disease of Modern Society,” which highlighted accidental injuries as the leading cause of death during the first half of one’s life, an epidemic problem with significant economic and human costs.<sup>1</sup> That same year, the National Traffic and Motor Vehicle Safety and Highway Safety Acts created mechanisms for the federal government to create new safety standards for automobiles, as well as the development of national standards for the implementation and advancement of pre-hospital EMS systems.

**Then in 1968**, John Wiegenstein, MD, and a small group of physicians practicing in EDs came together to form the American College of Emergency Physicians. Membership was limited to those who “voluntarily devote a significant portion of their medical practice to emergency medicine and surgery.” Their goal was to organize the innovative trailblazers who were creating an entirely new way of delivering acute, unscheduled care across the country, determining the best ways to run and maintain viable emergency departments.<sup>1</sup>

**In 1970**, Bruce Janiak became the first emergency medicine resident at the University of Cincinnati, and by 1975, there were 31 EM residency programs. These pioneering residents took a chance pursuing training in emergency medicine, a specialty which was not yet officially recognized. In 1979, the American Board of Emergency Medicine achieved primary board status by the American Board of Medical Specialties, and EM officially became the 23rd medical specialty.

**In 1986**, the Emergency Medical Treatment and Labor Act became law. Prior to EMTALA, “patient dumping” was common in some communities, whereby poor, often critically ill patients were shifted from private to public hospitals, many times to the patient’s detriment. EMTALA requires all hospitals that accept Medicare to provide screening and treatment for emergency medical conditions, regardless of insurance status. And emergency physicians are happy to do this. As the safety net of our health care system, we provide more uncompensated care than any other medical specialty.

**Over the past several decades**, the number of patients visiting EDs has continued to steadily rise, while the number of inpatient beds has continued to shrink, leading to problems with ED crowding. The proportion of patients seen for trauma has declined thanks to injury prevention efforts, while the average age and complexity of patients seeking care for medical illnesses has increased. There is also an increasing number of patients seeking psychiatric care in the ED.<sup>2-4</sup> As increasing emphasis is placed upon the delivery of value-based care, EDs will continue to play a crucial role as diagnostic and care coordination centers where decisions about which patients require costly inpatient hospitalizations are made, which is especially important given that a growing, large majority of hospital admissions originate from the ED.<sup>5</sup>

## What Makes Emergency Medicine Special?

- **Undifferentiated patients** — EDs have become the diagnostic centers for a growing majority of patients in today's health care system. Emergency physicians often are the first to assess a patient, and a broad differential diagnosis must be considered to ensure that the patient's symptoms are translated into an appropriate diagnosis.
- **Sick or not sick?** — From the doorway of a patient's room, emergency physicians must be able to quickly answer this question. We must always first consider the worst possible diagnoses for any given chief complaint, while also considering what is most probable or uncommon and therefore likely to be missed. This differential is continually re-weighted as test results return and responses to treatment occur. This does not always lead to a clear diagnosis, but patients are risk-stratified and the risk arising from dangerous diagnoses is diminished through this approach. While it may feel unsatisfying to discharge a patient with an unclear diagnosis (such as "abdominal pain of unclear cause"), sometimes the most dangerous thing that a patient can have is a label of an uncertain diagnosis (such as "GERD" for unclear epigastric pain), since labels provided in the ED can strongly influence the care received after admission and the follow-up plan.
- **Quick rapport** — Emergency physicians must rapidly establish trust with patients and families they have never met during times of vulnerability and uncertainty. It's been said that "people don't care how much you know, until they know how much you care." This is not the time for complex physiologic discussions; it is the time to connect, show empathy, and help others feel at ease. You are the calm in the storm.
- **Critical decision-making** — The acuity of the ED requires you to make management decisions based on your clinical assessments, often without the benefit of complete information or diagnostic testing. A tolerance for chaos and uncertainty will serve you well. An emergency physician will make 10,000 implicit and explicit decisions in a shift; 10 of these will be wrong.<sup>6</sup>
- **Multitasking** — This may be better described as "distracted decision-making" because emergency physicians need to rapidly shift their focus between patients among a variety of distractions — all without letting the quality of decision-making be affected.
- **Teamwork** — Relationships within the ED and throughout the institution are hugely important. Your character is the cornerstone of your ability to be the leader of a team. Your colleagues need to know they can count on

you. Get comfortable trusting your instincts and your team. The successful EM physician is able to appear in control and unflustered (even when panicking on the inside). They are able to calmly lead a resuscitation, listen to the input of the entire team, and prioritize the many necessary tasks and interventions.

- **Procedures** — Emergency physicians must be experts at resuscitation and airway management, plus be skilled in a variety of other procedures ranging from basics like suturing and vascular access to lifesaving procedures like pericardiocentesis and thoracotomy. Some you will do every day and others you will need to perform just once or twice in your career.
- **Safety net** — No patient is too poor, too non-compliant, too old, too young, or too pregnant to be seen in an ED. The ED is never closed, and you are never too busy, too tired, or too distracted to care for the patient in front of you. You take pride in the ability to care for those who cannot care for themselves and value the privilege to help people on their worst day.
- **Episodic care** — For the most part, emergency physicians do not have the continuity of care common to many other specialties. You form very short but important patient relationships. The successful emergency physician gains fulfillment from even brief encounters.
- **Ever-changing** — Every day is different and unpredictable. You will be repeatedly challenged with new situations. Just as each day changes, EM is a specialty that continues to change. You grow and gain new skills, perform research to support our decisions and care, and keep current with reading, skill acquisition, and practice.

## Work-Life Balance

ED shifts are a sprint, not a marathon. You will be at the hospital for a fixed amount of time, working very hard — and then you will go home to spend time doing the other things you love. Shifts in EM vary in length depending upon where you work, with 8- to 12-hour shifts being the most common. Some lower volume EDs have shifts as long as 24 hours.

Emergency physicians work days, nights, weekends, and holidays; do not expect a 9–5, Monday–Friday schedule. In contrast, emergency physicians are not “on call” like many other specialists, though you may be asked to cover a shift for a colleague in the event of illness or asked to come in during a disaster scenario.

Given the predictable, scheduled nature of their clinical shifts, emergency physicians have a great deal of flexibility in planning their schedules around important life events. Not having a practice where you are responsible for the ongoing care of a panel of patients provides excellent career portability.

## Unique Challenges in Emergency Medicine

While EM is an overall fulfilling choice of specialty, it does come with its own set of emotional, mental, and physical challenges. These stresses come from the pressure to quickly evaluate, treat, counsel, and disposition patients while also being held accountable for meeting quality metrics and improving patient satisfaction in a chaotic environment that can be made even worse when dealing with long wait times, patients suffering in pain, alarms ringing, and constant distractions. Emergency physicians must also deal with the physical effects of shift work as their waking hours may frequently not follow a normal circadian rhythm.

In the ED you will make lifesaving decisions that may not always result in a good outcome; you will bear witness to terrible trauma and illnesses in both children and adults. You will also have an upfront view into many tragic aspects of society that the majority of the population only hears about on the news, including gun violence, child abuse, drug overdoses, elder neglect, suicide attempts, intimate partner violence and sexual assault, as well as the short and long-term consequences of poverty, homelessness, and substance use disorders. Debriefing after emotionally demanding interactions, reflecting upon events, and having a strong support system all help emergency physicians remain resilient.

## Burnout in EM

Although burnout is a serious risk in any medical specialty, a work environment with high demand and little control is most likely to lead to burnout. Maslach and Leiter define burnout as erosion within 3 critical areas: engagement, emotions, and fit. Erosion of engagement involves decreased energy and enthusiasm for medical practice.<sup>4</sup> Emotional erosion is defined as the transition to cynicism and bitterness. Finally, erosion of fit involves feelings of discomfort, and a sense of isolation. EM is the specialty with the highest prevalence of burnout.<sup>7</sup> In a national study comparing rates of burnout among different specialties, EM clinicians experienced professional burnout more than 3 times that of the average physician, with 65% reporting symptoms of burnout.<sup>7</sup>

It is imperative that EM clinicians learn how to recognize burnout in themselves and others, and seek help. Fortunately, physician wellness and resiliency have become important priorities for residencies, emergency departments, and EM specialty organizations. Circadian schedules that match our natural forward rotation can reduce fatigue. Global systems changes can address increasing patient volumes. Personal measures that can be taken to prevent and ameliorate burnout include exercise, a healthy diet, strong social supports, self-reflection, and mindfulness. It is also important for workplaces to offer the means of dealing with burnout symptoms. Employee assistance programs play an important role by allowing physicians to self-report and get help, without

their problems becoming public knowledge. Possessing varied interests, both personally and professionally, has been found to be protective toward burnout.<sup>7</sup> Some potential ideas are: engage in research projects, write, and join committees and other service organizations. Work to cultivate hobbies, travel, and a maximize life outside the hospital.

In a survey of residents across all specialties, 53.8% of EM trainees reported experiencing at least one symptom of burnout at least weekly compared to an overall prevalence of 45.2%. Despite this, EM residents reported below average rates of regret about their choice to become a physician (11.4%) or pursue their specialty (3.3%), compared with 14.1% and 7.1% across all specialties.<sup>8</sup>

While burnout is a serious issue that EM physicians must be aware of to actively combat and prevent, the practice of EM is incredibly rewarding. We act as a safety net within health care and have the privilege and responsibility of caring for those most vulnerable. We walk away from shifts having made a tangible positive impact on our patients and community.

## Is Emergency Medicine Right for You?

The “love of every single specialty” seems to be a common feeling among those who go into emergency medicine. In addition to comparing your own traits to those of successful emergency physicians, ask yourself the following questions:

- When you walk through the doors of your emergency department, do you get an overwhelming feeling that you belong there?
- Does the thought of a trauma or code where you can save a life give you a surge of adrenaline and excitement?
- When you see a stranger who is injured, do you run to them?
- Do you enjoy the diagnostic inquiry of undifferentiated illness?
- Do you enjoy a wide range of clinical challenges requiring a variety of skills each shift?
- Do you enjoy a fast-paced work environment?

If the answer is yes to these questions, then emergency medicine may be the right fit for you. You will save lives, solve mysteries, ease suffering, and support others on what may be the worst day of their lives — and you will do it in a clearly defined shift, rather than marathon call days. Emergency physicians are also very portable, able to move around the country and world because we are not tied to a patient panel or practice. If chaos, wide variety, fast pace, or death make you feel anxious and disheartened, then EM may not be the best fit for you. If you are considering EM purely for the “lifestyle and flexibility,” keep in mind that while your shifts are scheduled and predictable, they may be predictably in conflict with spending time with your family or your

overall wellness. Choose EM because you love the specialty, not because of any assumptions EM will have on your lifestyle. Watch the Emmy-award winning documentary, “24/7/365: The Evolution of Emergency Medicine,” for an inside look at EM.

A great resource for evaluating yourself if you desire something more structured is the Careers in Medicine website provided by the AAMC. This self-assessment tool helps you to evaluate your interest in specific areas of medical practice, and propose medical specialties that may be best for you based on your responses.



## Post-Residency Career Opportunities

The specialty of emergency medicine provides a broad range of career opportunities after residency training. Graduates can work at community hospitals, safety net inner city hospitals, critical access rural hospitals, university-based teaching and research institutions, or some combination of those. For those looking to explore the country and make use of your work-anywhere skills, you can opt for locum tenens.

While we all practice emergency medicine, daily practice can look very different depending on the setting. In a typical community hospital you will be providing most of the care to your patient and likely will not have all the specialties available at academic hospitals. You will perform more of your own procedures and make complex decisions of when a patient needs to be transferred out. You may be working as the only emergency physician among other attendings, nurse practitioners, and physician assistants. When consulting other specialists, you will deal directly with attendings and only rarely with a trainee. This is likely to be a very different relationship than that experienced in a large academic medical center. These hospitals also come with varying trauma center levels, stroke certifications, cardiac, and cancer facilities. This may impact the patient population seen, as well as your availability of resources. Generally, you will spend the majority of your time caring for patients in the ED, though you may spend a small amount of time with other administrative or quality improvement responsibilities. Many residency graduates may find themselves working in freestanding (non-hospital based) emergency departments, where any patient needing further acute care must be transferred to a different facility.

Another career option is as an academic emergency physician at an academic medical center. In this role, part of your time is spent working clinically, teaching and supervising residents and students. Additional time is spent on non-clinical teaching, research, and departmental service. This clinical work can be very different from that of the community provider taking direct care of patients.

You will typically be responsible for more patients while delegating to and supervising your learners. Some health systems offer a hybrid opportunity wherein some shifts are at the academic medical center and others are at an affiliated community hospital.

As EM has matured as a specialty, more and more graduates are choosing to pursue subspecialty fellowship training. Fellowships are almost always affiliated with residency training programs, and most last 1 or 2 years. Fellowships facilitate increased knowledge in an area of EM that can then be developed into a career niche. Many academic departments are looking for fellowship training for new hires. Some EM fellowships are ACGME-accredited and offer subspecialty board certification, while others often have an associated master's degree. The **EMRA Fellowship Guide** is a great resource to learn more about fellowship training opportunities. It offers details on opportunities in:

- Addiction Medicine
- Administration/ED Operations/Patient Safety & Quality Improvement Fellowships
- Aerospace Medicine
- Cardiovascular Emergencies
- Anesthesia Critical Care Medicine
- Internal Medicine
- Critical Care Medicine
- Neurological Critical Care
- Surgical Critical Care
- Disaster Medicine
- Emergency Medical Services (EMS)
- Forensic Emergency Medicine Niche
- Geriatric Emergency Medicine (GEM)
- Health Policy
- Informatics
- Injury Control
- International Emergency Medicine
- Medical Education
- Neurovascular and Stroke
- Observation Medicine
- Occupational and Environmental Health
- Pain Management
- Palliative Care
- Pediatric Emergency Medicine
- Population Health and Social Emergency Medicine
- Research Fellowship
- Resuscitation
- Simulation Fellowship
- Primary Care Sports Medicine (PCSM)
- Tactical Medicine
- Telemedicine
- Toxicology
- Emergency Ultrasound
- Undersea and Hyperbaric Medicine
- Wilderness Medicine
- Women's Health

## THE BOTTOM LINE

- ✓ EM is a dynamic, exhilarating, ever-changing specialty that is best fit for those with strong interpersonal skills, a calm demeanor, and a desire to work as part of a team for brief, poignant encounters.
- ✓ Successful EM physicians are kind, hard-working and flexible, with a penchant for controlling chaos and tolerance of the emotional toll our role entails.
- ✓ The EM lifestyle allows for flexibility and portability, without being responsible for a panel of patients during off-time. Emergency physicians work hard when they are on duty and can play and plan when they are off.
- ✓ It is our privilege to act as a safety net and care for all who present to the ED.



# The Preclinical Years

**If you have decided that emergency medicine is for you**, then you are probably wondering what you can do to increase your chances of successfully matching. During the preclinical years, your performance in preclinical courses and participation in extracurricular activities can impact your chances of matching at your top-choice residency program.<sup>1</sup>

Start by reviewing the Emergency Medicine Medical Student Planner created by the CORD Advising Students Committee in EM (Table 2.1). Additional planners have been created and specifically tailored for applicant populations such as osteopathic students and military students. Those planners can also be found on the CORD ASC-EM website at [www.cordem.org/communities/committees/advising-student-comm/](http://www.cordem.org/communities/committees/advising-student-comm/).

## Academics: Preclinical Basic Sciences

Perhaps the most obvious component of the preclinical years are the basic science courses. Many schools are opting to grade courses as pass/fail, but regardless of the grading structure, having a full grasp on the information is necessary. In EM, we are proud to see all types of patients, and therefore are expected to initially manage and stabilize a wide range of maladies. Building a solid foundation will ideally prepare you for the COMLEX Level 1 and/or the USMLE Step 1 examinations, which ultimately will be used to compare you against other applicants. Step 1 preparation begins Day 1.

**At-Risk Candidates:** Failing a course will be seen as a red flag, but failing one course does not automatically disqualify you from a residency in emergency medicine. What is most vital is identifying the reason for the failure and taking corrective action.

If you feel overwhelmed by the workload, reach out to the course director or someone in your school's office of student affairs. Many students have been able to excel in undergraduate courses with mild learning disabilities, but under the pressure of medical school are unable to cope with the vast amount of work. Early recognition is important, and your school likely has resources to assist you. Furthermore, there are many time-management

resources online, ranging from videos to customizable planners and calendars.

Failing multiple preclinical courses is a more difficult hurdle to overcome. Often when a student fails multiple courses, they fall behind their original class. Failing two courses in first year typically can be remediated in the summer. Failing two or more courses in second year may cause the clinical portion of school to be delayed. If you fail two or more courses in the preclinical years, then working with the office of student affairs will be necessary, as staying in phase with your class will be weighed against your chances of scholastic success.

If you are still considering applying to EM, find an EM advisor as soon as possible. Failing multiple courses puts you at a higher risk of failing to match in EM unless proactive measures are taken.

**TABLE 2.1. CORD ASC-EM Medical Student Planner<sup>2</sup>**

Source: CORD ASC-EM Planner

Year 1	Summer	Fall	Winter	Spring
<b>Academics</b>	Basic Sciences — aim to be in top ½ of class			
<b>Research</b>	Complete your institutional review board (IRB) registration process. <i>*(Ntl avg = 2 research &amp; 3 publication experiences)</i>	Mentor and Project Selection	Literature Search	Submit IRB Application
<b>Volunteer</b>	Aim for consistent, longitudinal experiences (at least 3): national societies, student run clinics, advising/mentoring opportunities, community organizations, international projects, etc. <i>*(Ntl avg = 6–7 volunteer experiences)</i>			
<b>EM Career Experience</b>	1. Join your school's EMIG (Emergency Medicine Interest Group) 2. Join EMRA			1. EM based continuity clinic or shadowing 2. Find an EM advisor and explore CORD ASC-EM resources
<b>Misc.<sup>^</sup></b>	Keep track of experiences for CV	ACEP, FIX conferences	AAEM conference	SAEM conference
Year 2	Summer	Fall	Winter	Spring
<b>Academics</b>	Basic Sciences — aim to be in top ½ of class	Start studying for USMLE Step 1 exam	Begin planning and coordinating clerkships	Take Step 1 <i>*(EM ntl average 232)</i>
<b>Research</b>	Await IRB determination (likely resubmit with changes)	Data Collection		
<b>Volunteer</b>	Take leadership positions in volunteer organizations and complete a volunteer project			
<b>EM Career Experience</b>	Take a leadership position in EMIG			Meet with EM advisor to discuss early strategies for success
<b>Misc.<sup>^</sup></b>	Keep track of experiences for CV	ACEP, FIX conferences	AAEM conference	SAEM conference

It is worth noting a few other ways that your pre-clinical performance will play a role in the residency application process. First, the Dean's Letter, or Medical Student Performance Evaluation, includes information on your pre-clinical performance. The MSPE is a required component of the residency application and is reviewed by residency leaders when deciding which students to invite for interviews. Second, pre-clinical performance is considered by school committees responsible for selecting honor society or fraternity members for induction into Alpha Omega Alpha or Sigma Sigma Phi.

## Finding Mentors and Advisors

Finding advisors and mentors can be as difficult as it is to agree upon a definition of the two terms. During the preclinical years, many medical schools will assign advisors. Your school may have a career development center, with faculty and staff assigned to advise students. While their advice is important and often accurate, their role is different from that of a mentor. The CORD ASC-EM defines advisors as emergency medicine academic faculty who provide specialty-specific, evidence-based advice.

In contrast, mentors will help coach you and often act as a role model. They are able to provide guidance and can offer intelligent direction on more generalized career advice. Mentors should be individuals whose professional and personal advice you seek and whose character you hope to emulate in your own life.

Regardless of your academic performance during your preclinical years, finding quality advising and mentorship will be beneficial, and there are multiple people who can fill such roles. A mentor can be a peer who can offer their recent experiences to help guide you. If your school has an EM residency program, then shadowing a resident or faculty member can help establish a mentor-mentee relationship.

Ideally, you should obtain an advisor who is designated by your school or EM department and is affiliated with an ACGME-accredited residency program. If such a person is not available, then start by contacting physicians in the ED and let them know you are seeking an EM advisor. While anyone who is residency-trained in emergency medicine can provide career guidance, a faculty member with expertise and experience in advising students through their preclinical and clinical years in preparation for EM match is best.

If your school does not have an affiliation with a core teaching hospital or a residency program, review the CORD ASC-EM advising resources at <https://www.cordem.org/communities/committees/advising-student-comm>. You may also benefit from the EMRA Student-Resident Mentorship Program.<sup>3</sup> This online service allows students to connect with residents who self-identify as mentors. Students can also join virtual advising sessions through EMRA Hangouts.

Lastly, faculty advisors are often available during your EM elective or out-of-town rotations; consider asking the clerkship director or one of their residency leaders for advising.

**Osteopathic Students:** Your institution may not offer EM-specific academic advising if not affiliated with a residency program.<sup>12</sup> If this is the case, consider reaching out to recent grads and national mentoring programs through ACOEP-RSO, EMRA, or CORD.

## Emergency Medicine Interest Groups (EMIGs)

A commitment to emergency medicine can be difficult to demonstrate during the preclinical years. One easy way is to join your school's EMIG. By joining the group, you will gain insight into the world of emergency medicine. Skills

---

*Joining an EMIG (a.k.a. EM club) demonstrates your commitment early and can help you gain valuable leadership opportunities and mentorship connections.*

---

workshops, ranging from suturing to advanced cardiac resuscitation, are often provided. Talks from local and regional experts are especially useful.

In addition to being a member of the EMIG, you can potentially become a leader of the organization. As a leader, you are guaranteed to have a seat at the workshops, and you will also gain other valuable experience. Lastly, through your local EMIG you will often meet seasoned

advisors and mentors, and you may find more opportunities for research or clinical experiences.

## Preclinical Exposure to EM

At many schools EM is not a required rotation during your clinical years, so you may have limited exposure prior to the time you need to decide which specialty to apply to. Since it may be difficult to find extra time to shadow in the ED while on other clinical rotations as a third-year, spending time in the ED early on can play a crucial role in helping you decide if this is the environment where you can see yourself spending the rest of your career.

## Service, Leadership, and Advocacy

The NRMP Match data shows the mean number of volunteer experiences as 7.3 for allopathic students, 6.0 for osteopathic students, 18.8 for U.S. IMG students, and 4.3 for non-U.S. IMGs.<sup>14,5</sup> While sporadic volunteer opportunities such as a day in a soup kitchen or working a support tent at a 10K are important, long-term involvement with a program is viewed as more substantive.

PDs in emergency medicine were surveyed by the NRMP, and 69% reported that leadership qualities were an important factor in determining competitiveness for residency. This is noted to be more important than your personal statement and honor society membership.<sup>6</sup>

While EMIGs are a great way get your “feet wet” with leadership roles, additional options to get involved is through local, state, and national emergency medicine organizations such as EMRA and ACEP. By getting involved at the state or national level, you can advocate for the interests of your patients and colleagues and develop the skills to become a leader. These are also great opportunities to meet other students and physicians who are excited about emergency medicine. While leadership and extracurricular activities may help enhance your residency application, remember that mastering the basic sciences and building strong foundational knowledge should always come first.

## Research as a Medical Student

Program directors use many criteria to help select their residency class. The number of research experiences by various applicant groups varies (Table 2.2). Though this amount of research involvement may seem intimidating during medical school, many medical students have performed research previously. The application for residency often includes all research performed, including research done during undergraduate and graduate education. Fortunately, the PD survey demonstrates that only 33% of PDs said research was important for offering interviews, and only 20% said it was important for ranking.<sup>6</sup>

**TABLE 2.2.** Average Research Experience of Successful EM Candidates in the 2018 NRMP Match<sup>1,4,5</sup>

	Allopathic	Osteopathic	U.S. IMG	Non-U.S. IMG
<b>Number of Research Experiences</b>	2.5	1.5	1.8	2.9
<b>Number of Abstracts, Presentations, and Publications</b>	3.7	1.8	2.2	7.6

While performing research can be beneficial, finding the “perfect” research project during medical school can be difficult. Doing research just for the sake of doing research is often not advised, especially given the lower emphasis EM PDs place on this activity. Furthermore, doing research to pad your CV or to have another talking point during your residency interviews is also not advised. It is usually clear during the interview process how much involvement one had in the projects they list, and whether they were actually passionate about what they did.

If your school does not have a department or division of emergency medicine, then finding a project that interests you outside of EM is an option. Most medical schools have a contact for research opportunities. If your medical school does not, reach out to faculty in emergency medicine to see if there are any research projects for you to join. Lastly, your medical school may be in close proximity to another, and perhaps you can find a research project and possibly an advisor or a mentor at that location.

## Initial Medical Licensing Exam

Finding leadership opportunities in medical school will provide valuable experiences, contribute to a robust EM application, and ultimately contribute to your effectiveness as an emergency physician. However, no amount of leadership, research, or volunteer activities can compensate for a medical licensing exam failure.

According to the NRMP 2018 PD survey, 97% reported that USMLE Step 1/COMLEX Level 1 score is important in deciding whom to interview.<sup>6</sup> According to NRMP Match Data, the mean score for those students who successfully match in emergency medicine is 233 for USMLE Step 1, and 569 for COMLEX Level 1.<sup>14</sup>

Because Step 1 performance is highly important to EM PDs, you should start planning early how to best prepare for the exam. First, talk with your mentors, especially if they are residents or students more senior to you. You may find it beneficial to purchase commercially available review books, flashcards, and question banks as study aids during your preclinical years to maintain basic science knowledge through Step 1. Recent research suggests that retrieval practice in the form of practice questions and spaced repetition in the form of flash cards are two of the most effective ways to prepare for the USMLE.<sup>7</sup> While passing your classes needs to be your top priority, studying the relevant board review material simultaneously is a great way to prepare for Step 1.

**Osteopathic Students:** Though osteopathic medical schools require COMLEX Level 1, Level 2CE/PE, and Level 3 for licensure, many residency programs require USMLE Step 1 and/or 2 for all applicants. While there are some residency programs that require either USMLE Step 1 or 2, there are some that specifically require Step 1. Use **EMRA Match** to filter programs based on licensing examination performance and if USMLE is a requirement.

As noted in a recent survey conducted by CORD ASC-EM, only half of the programs who consider osteopathic students will offer an interview without either step of the USMLE, but 87% would offer an interview if the applicant had taken USMLE Step 1.<sup>8</sup> Of the program directors surveyed, 27% did not weigh the COMLEX at all.<sup>8</sup>

Acceptance of COMLEX scores may change as the applicant pool expands, the move to a single accreditation system is complete, and programs become more comfortable with interpreting the COMLEX. In November 2018, the AMA House of Delegates created a policy calling for the AMA to promote equal acceptance of USMLE and COMLEX scores.<sup>9</sup> However, at present, available data indicates if you are an osteopathic medical student, taking the USMLE Step 1 and 2 in addition to the COMLEX will open more opportunities for residency interviews. If you are unable to take both, prioritize USMLE Step 1. In addition, studying specifically for the USMLE will help maximize your chance of success.<sup>10</sup>

**At-Risk Candidates:** While most students take and pass USMLE Step 1, some do not. Not passing Step 1 of the licensing examination will significantly impact your application strategy. According to the 2018 NRMP PD survey, 98% of respondents would seldom or never interview a student with a Step 1 failure.<sup>6</sup> However, an unpublished survey by CORD ASC-EM indicates there are programs willing to consider applicants who retake Step 1 and pass.<sup>8</sup> If you fail Step 1, contact your office of student affairs and your advisor so you can come up with a plan to retake the exam and perform well.

Students often wonder if performing below-average will negatively affect their chances of matching. In a recent survey conducted by CORD ASC-EM, approximately half of programs will not consider an applicant who failed USMLE Step 1; however almost all interview applicants with below-average scores.<sup>8</sup> While some programs filter applications in ERAS based on licensing exam scores, not all do.<sup>11</sup> Further, you can take steps to compensate for a below-average score by taking Step 2 early and ensuring strong performance on clinical rotations.

Students can use EMRA Match to filter which programs report having recently interviewed applicants who have previously failed Step 1.

As you look forward to the clinical years of medical school, remember that the best students and physicians built strong foundational medical knowledge during the preclinical years of medical school. The effort you put forth during your first 2 years will pay dividends for you and your patients as you move into your clinical rotations, residency, and beyond.

## THE BOTTOM LINE

- ✓ The preclinical years provide a crucial foundation for the knowledge needed to succeed: on medical licensing exams, during your clinical years, and on your emergency medicine rotations. Effort in the early years is a huge return on investment for the residency application process.
- ✓ Seek out opportunities to explore EM early; this will help you decide if EM is a good fit for you.
- ✓ If you have a red flag such as a low or failed Step 1 score or a failed preclinical course, seeking early guidance from an EM advisor is critical.
- ✓ When planning your research and volunteer activities, keep in mind that PDs value meaningful commitment over sporadic and superficial involvement (quality over quantity), and choose to dedicate your time to activities you truly care about.



# Third Year and Planning for Fourth

The start of your third year marks the first major transition into regular clinical responsibilities. It is an exciting time! You are able to apply your basic science knowledge to clinical practice, participate as part of a health care team, and regularly spend time with patients. At the same time, your responsibility increases and more of your time is spent at the bedside rather than in the classroom. The way you learn may need to evolve, and your schedule will be more rigorous. Additionally, your performance in core rotations is a critical part of your residency application, so performing well is important. You will also be simultaneously planning your fourth year, which can be both exciting and stressful. What are the keys to success on rotation and advance planning?

## Third Year

**FIGURE 3.1.** Important Time Frames in Third Year

Source: CORD ASC-EM Planner

Summer and Fall	Winter	Spring
Start of 3rd Year and core Non-EM rotations	Continue or start to research EM home/away rotations  Start planning for Step 2 CK: scheduling and studying  Meet with your academic EM advisor	Finish core rotations  Meet with your academic EM advisor if you haven't done so  Apply for and confirm EM rotation dates  Study for Step 2 CK

**Military Match:** If you are a military match candidate, the timeline is accelerated. Applicants should research rotations early (summer of third year) and plan to rotate much earlier than non-military peers. You will be applying for and scheduling rotations in the winter!

**IMG Students:** Ensure paperwork is completed in time to allow for U.S. rotations. Consider researching away rotations as early as possible (summer of third year) so you can apply preferentially to institutions that accept your visa.

**Couples Match:** Meet with your advisor (individually and as a couple) to discuss career goals and how to increase your competitiveness as a couple. Consider these questions: What does couples matching mean to you? What compromises are you willing to make? What compromises are you not willing to make?

**Latecomers:** If you are undecided about your specialty but considering EM, meet with an EM advisor early in third year to discuss your options.

## Academic Performance in Core Clerkships

Performing well in your core clerkships is critical for a number of reasons. Making the most of your rotations and performing at a high level will:

- Accelerate your Step 2 CK preparation
- Allow you to apply your knowledge to patient care during your EM rotation(s)
- Make you a more competitive applicant

Narrative comments from your evaluations and information about your performance relative to your peers will be included in the Dean's letter. Per NRMP Match data from the 2018 PD Survey, 75% of PDs cited "Grades in required clerkships" as an important factor when selecting applicants to interview, with a mean importance rating of 3.9 out of 5.<sup>1</sup> AOA and other honor society selection committees will also heavily consider your core clerkship performance. Lastly, your grades will impact your final class rank. One recent study found that EM rotation performance and AOA designation were predictors of top performance in residency.<sup>2</sup> Additionally, EM rotation grades have been shown to correlate with rank list position.<sup>3</sup>

## What does all of this really mean?

It means preparation for Step 2 and your EM rotations begins now, with your core clerkships. With each rotation you are building your knowledge base and residency application.

**At-Risk Candidates:** Failing a clerkship is a major red flag. On a recent CORD ASC-EM survey of EM educators, nearly all programs reported "rarely or never" interviewing applicants with a clinical course failure.<sup>4</sup> A clerkship failure should prompt consideration of a non-EM backup plan and a meeting with your academic EM advisor. Alternatively, performing at a high level on clerkships can help mitigate the effect of a low USMLE Step 1 score.

## Core Clerkship Pearls

Set yourself up for success on your core rotations — because all of them will ultimately help you be a better emergency physician. First, you can ask peers what worked well for them. What books did they read? Did they use any other resources? Next, make sure you review the syllabus and grading criteria. If a large part of your grade is exam performance, then creating a study plan for that rotation is important. And finally, be sure to ask for feedback from faculty and the clerkship director so you can identify areas for improvement early. Clerkship directors can help you come up with a plan to address these areas.

### TABLE 3.1. Core Clerkship Pearls

**Surgery** — Success is all about dedication and preparation. Arrive early to pre-round, take time to “own” your personal patients, and absorb all you can about post-op care. Don’t avoid the OR; there you’ll learn valuable lessons on procedures (chest tubes, central lines, tracheostomies, etc.). Learning how to tie sutures is also essential. Examine any patient who is presenting for emergency surgery, as learning how to recognize an acute abdomen is a critical skill.

**OB/GYN** — You will deliver babies in the ED! Make every effort to get hands-on practice while on rotation. Pay particular attention to the techniques used in difficult deliveries (like shoulder dystocias). Also, practice reading fetal monitoring strips every day, as this is a skill commonly tested on your shelf exam. Ask if you are able to perform cervical checks during labor to start to get a sense of degree of dilation and understand the various stages of labor. Being sensitive to gynecologic complaints and expertly and gently performing a pelvic exam is an essential skill in the ED. Lastly, participate in the care of patients with preeclampsia or post-partum patients with complications or breastfeeding concerns — these patients often present to the ED after-hours.

**Psychiatry** — EM physicians care for patients with a variety of mental health complaints, and many of these patients have limited access to care. Learning how to help patients find community resources is key. Also, learning how to identify those in acute psychosis or with a true psychiatric emergency is critical. While rotating, try to become an expert in psychiatric medications, their dosing, interactions, and long-term and life-threatening side-effects.

**Pediatrics** — Although there are many things to memorize during your pediatric rotation (such as developmental milestones and immunization schedules), there are also EM-specific pearls. Learn the basics such as normal and abnormal vitals, how to properly suction an infant or toddler, and how to counsel families on safe-sleep habits. Take time to learn the basic treatment regimens for asthma, congenital abnormalities and their physiology, as well as changing physical exams at different ages.

**Family Medicine/Internal Medicine** — Understanding the hospital course and basic disease processes for the most common illnesses is critical. During your IM rotation it is especially important for you to take responsibility for your patients. Know their labs from 3 days ago, their vitals for the past 24–48 hours, and most importantly ask the nursing staff how they are doing. Your IM rotation hinges on collaboration between you and the entire health care team. Family medicine rotations vary at different institutions. While rotating, try to become an expert in antihypertensive and diabetes medications, including their indications, dosing, interactions, and side effects.

## Dean's Letter/Medical Student Performance Evaluation

The MSPE is an aggregation of all of your medical school accomplishments and is compiled by your home institution. This letter places a heavy emphasis on your core clerkship performance and feedback, discusses your background, pre-clinical performance, and highlights any service work or publications you may have. Core clerkship performance is critical, with many MSPEs providing a visual representation of your performance compared with your peers (typically a series of bar graphs or charts). According to the 2018 NRMP survey, 84% of program directors cited the MSPE as an important factor when selecting applicants to interview, with a mean importance rating of 3.3 out of 5.<sup>1</sup>

Be aware of the content of your MSPE, because below-average performance or potentially negative comments could be seen as a red flag and should be discussed early with your academic EM advisor.

## Planning for Your Emergency Medicine Clerkships

As an EM-bound student you should complete two EM rotations so you have two letters of recommendation (in EM we refer to these letters as SLOEs, Standardized Letters of Evaluation; [see Chapter 6: Crush Your EM Clerkships, Secure Your SLOEs](#)). While most required EM rotations are during fourth year, some EM rotations are offered during third year. Also, some schools with a required fourth-year EM rotation may allow students to rotate early (as an M3) if they have met the prerequisites. The experience gained on an EM rotation during the third year of medical school varies based on school, program, and timing. For example, if you rotate in the last month or block of M3, after all core rotations, that is much different than rotating in November of M3 before your surgery and pediatric rotations.

If your school offers or requires a third-year EM rotation, or permits you to schedule the M4 rotation as an M3, find out if they will write a SLOE. Some institutions will not provide a SLOE for M3s. Moreover, if a SLOE is an option, be sure to ask if the SLOE will compare you to other M3s or to the M4 cohort — the added experience, confidence, and clinical competence of the M4 group may diminish your evaluation. An experienced EM advisor can help answer some of these nuanced questions as each individual students' circumstances are unique.

Ideally, you will complete your home institution ("home EM") rotation as early as possible in order to get your feet wet before your away EM rotation. Unfortunately, EM is not a required rotation at all medical schools. If you do not have a home EM rotation with an ACGME-affiliated residency program, your only options will be away rotations. Late fall and early winter of your third year is the best time to start researching away emergency medicine rotations. EMRA Match is a great place to start when researching programs.<sup>5</sup>

There is more than one method for you to apply for away rotations. The most critical thing is that you have at least 1 EM rotation completed before September 15. (See Chapter 5 for more detailed information.)

**Military Match:** The timeline is accelerated. Applicants should research rotations early and plan to rotate as early as January of M3. Military rotations are set up by contacting the program directly via email.

**Osteopathic and IMG Students:** Be aware that your school may not have a home rotation so you must spend time researching academic programs with a history of accepting osteopathic and IMG applicants — EMRA Match can help with this.

**Latecomers:** Work with your EM advisor or clerkship director if you are having difficulty scheduling rotations. They can be an invaluable resource of experience and connections.

## Fourth Year

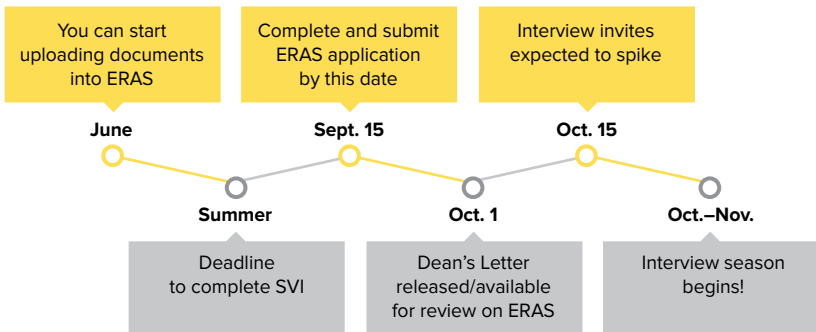
### FIGURE 3.2. Important Time Frames in Fourth Year

Source: CORD ASC-EM Planner

Summer	Fall	Winter
Complete at least 1 EM rotation by Sept. 15	Complete EM rotation(s)	Interview for residency
Prepare for and take Step 2 CK & SVI	Prepare and submit ERAS application	Complete M4 coursework/rotations
Meet with your academic EM advisor		

### FIGURE 3.3. Important Dates

Source: CORD ASC-EM Planner



**IMG and At-Risk Candidates:** These applicants are encouraged to have 2 (as opposed to a minimum of 1) rotations completed early so that both SLOEs are in ERAS on opening day, or on/before the release date of the MSPE. According to a recent CORD ASC-EM survey, program leaders responsible for interviewing applicants recommend 2–3 SLOEs for IMG applicants.<sup>4</sup>

**Military Match:** The timeline is accelerated. The match takes place in December of fourth year. Apply and be prepared to interview at civilian programs in late December/early January in case you don't match into a military program.

**Latecomers:** Even if you do not have a completed SLOE by opening day, do not delay in submitting your ERAS application. Only 15% of programs reported that it was "highly likely" that an application would be reviewed if it were completed after the ERAS opening date in September.<sup>11</sup>

## USMLE Step 2 CK

Residency programs are evaluated on the rate at which their graduates pass the boards when they finish residency. It has been demonstrated for many specialties, including EM, that not passing the USMLE or COMLEX is a strong predictor of struggling to pass later exams. This correlation leads program directors to worry about applicants who struggle on these types of knowledge assessments. According to the 2018 NRMP PD survey, 86% of respondents listed USMLE Step 2 CK (and COMLEX Level 2CE scores) as a factor in offering interviews.<sup>1</sup> Further, USMLE Step 2 CK scores were given a mean importance rating of 3.9 out of 5 (compared to 3.8 for USMLE Step 1). Because of its clinical focus, USMLE Step 2 is often considered to be at least equally important as USMLE Step 1.<sup>1,4</sup> The bottom line is USMLE Step 2 CK performance is very important — your work is not done after USMLE Step 1!

Preparing for USMLE Step 2 CK begins during pre-clinical courses and spans all of your core clinical clerkships. Your daily efforts to make the most of your rotations and master the learning objectives will save you time in the long run. In considering Step 2 preparation, take some time to reflect on your USMLE Step 1 and clerkship exam performances: What worked well (or not)? What were your lessons learned? If you underperformed, make sure you have met with an advisor and/or consulted with your office of student affairs and come up with a plan to improve. Perhaps you need additional time in the form of a study month.

Students interested in matching into emergency medicine should take into account their USMLE Step 1 scores when deciding when to sit for USMLE Step 2 CK. Program directors may send interview invitations when applicants present an acceptable Step 1 score in conjunction with a robust application, despite not reporting a Step 2 CK score. Per NRMP data, 51% of programs do not require

Step 2 CK scores when deciding whom to interview.<sup>1</sup> However, that means 49% do put some weight on this exam prior to granting an interview. Also, keep in mind that as you progress through fourth year, it could be more difficult to find time to study during away rotations and preparing your application.

If your Step 1 score is less desirable, it is recommended you attempt to bolster your application by taking Step 2 CK early (end of June or mid-July) so your scores are available for release to programs when ERAS opens on September 15. A significant improvement between Step 1 and Step 2 CK scores can help compensate for a lower Step 1 score. Most programs will require a Step 2 CK and Step 2 CS score prior to the rank list deadline.<sup>2</sup> The average USMLE Step 1 score for unmatched applicants is 220.<sup>6</sup> Additionally, the median Step 1 score below which programs generally do not grant interviews is around 210.<sup>1</sup> As such, if you scored <220 on Step 1, it is important to take Step 2 CK early.

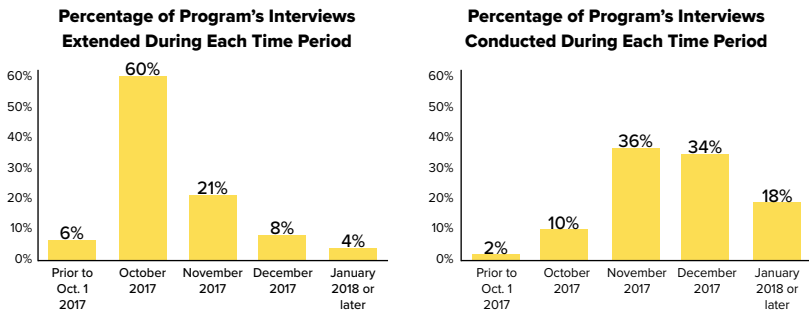
**Latecomers:** Prioritize getting your first SLOE over taking Step 2 CK early. Both are important, but studies show the SLOE is more important in offering interviews.<sup>1,3,9-11</sup>

In general, it's probably best to allow yourself time to focus on Step 2 and EM rotations independently. However, since there is significant overlap in the time period for completion of each, this may not be possible. Your school may have deadlines that mandate a completion date during a SLOE-granting EM rotation. For those who feel a dedicated study month (or 2 weeks) is needed this should be done only if timing allows for scheduling at least one EM rotation over the summer months. Remember your goal is to have at least 1 SLOE, but preferably 2, uploaded to ERAS by opening day.

**Osteopathic Students:** As there is no reliable score conversion from COMLEX to USMLE, it is strongly recommended that if you have not taken USMLE Step 1, you do take USMLE Step 2 CK early so your score is available when ERAS opens. This allows you to be compared apples-to-apples to your allopathic counterparts.<sup>7,8</sup>

## Fourth Year Coursework

EM rotations take an average of 2 months. Your school may have required coursework, but students are often able to enroll in electives with flexible scheduling or take time off for interviews, etc. Because of the volume of interviews conducted in November and December, many students take time off during these months.<sup>1</sup> According to the 2018 PD survey for the 2017–2018 interview season (Figure 3.4), the majority of interview invites were sent in October (60%) and November (21%), and interviews were conducted in October (10%), November (36%), December (34%), and January (18%).<sup>1</sup>

**FIGURE 3.4. EM Program Interview Activities (n=84)**

Copyright 2018 National Resident Matching Program. All rights reserved. Reprinted with permission. Permission to use, copy, and/or distribute any documentation and/or related images from NRMP publications shall be expressly obtained from NRMP.

Speak with your advisor or upper-year mentors who have gone through the specific coursework at your school to determine which electives are best for interview season in terms of flexibility for traveling and interviewing.

For any rotations during interview season, be sure to communicate with as much advance notice as possible regarding your interview schedule and travel requirements. Most courses or rotations have attendance requirements — so keep this in mind. After you have completed your two EM rotations (home and away), consider broadening your coursework. As an EM physician, you will need to draw upon a broad skill set during your career. Through EM and non-EM electives you can build important skills.

## EM Subspecialty Electives

In order to further explore your interests in the field of EM, consider an elective in a related area. There are several clerkships on VSLO in EM specialty areas including ultrasound, pediatric EM, toxicology, EMS, wilderness medicine, etc. Such rotations will help you expand your knowledge base and help you to get to know another program's faculty and residents. It can also open your eyes to the versatility of a career in EM and help build your excitement for residency and beyond. While subspecialty rotations can sometimes provide a letter of recommendation, these letters are not given the same weight as a traditional SLOE because they reflect your performance in a narrow area within EM.

**IMG Students and Latecomers:** For applicants struggling to get 1–2 (or any) rotations that can provide a traditional group SLOE, an EM subspecialty elective may be the next best option.



## **Non-EM Electives**

### ***Ophthalmology***

Eye complaints in the ED can be challenging for a number of reasons. Consider an ophthalmology rotation in order to become proficient at slit lamp examinations. Eye foreign bodies, ocular trauma, and vision loss complaints all warrant a good slit lamp exam. Additionally, learning how to use fluorescein and measure intraocular pressure will certainly put you a step ahead as an intern.

### ***Orthopedics***

Performing a solid musculoskeletal exam as well as recognizing and reducing fractures and dislocations are crucial skills for any emergency physician. A rotation in ortho can also help you communicate effectively with your consultants in the department. Learning fracture types (Smith fracture vs. Colles fracture, etc.), nomenclature of specific bony areas, and key information for your consultant will make all of your interactions with orthopedics so much smoother. Make sure to also absorb all you can about splinting and casting! Our orthopedic colleagues have a wealth of information on the best ways to immobilize fractures and are usually very willing to impart that knowledge to you.

### ***Dermatology***

Take this opportunity to brush up on life-threatening rashes and recognizing lesions that may be indicative of serious diseases. Ask about outpatient medical management of common rashes and skin complaints and try to learn what needs emergent consultation vs. close follow-up.

### ***Pulmonology***

Working with a pulmonologist can provide fascinating insight into what happens to our respiratory distress patients after they are admitted. Learning about how to work a ventilator and set/adjust ventilator settings is a critical skill and cannot be overestimated. Be sure to observe a bronchoscopy whenever possible to gain a better understanding of the respiratory tree and the extensive sequelae of lung diseases. Pay particular attention to the medication and homecare of patients so you can help counsel your patients who have frequent visits for COPD or asthma exacerbations.

### ***Critical Care***

ICU experiences can provide opportunities to learn new procedural skills such as placing arterial lines or central lines. Managing patients on ventilators and various medication drips is a key skill for EM physicians. You can learn about ICU admission criteria and the care and treatment of patients with conditions commonly encountered in the ED such as sepsis, multisystem trauma, stroke, etc.

### *The Human Side of Medicine*

The medical knowledge and clinical skills needed for EM are extensive, but communication, professionalism, and interpersonal skills will also be crucial in your career. They will likely contribute to your overall career satisfaction and even longevity. Take advantage of courses with focus on palliative care, difficult discussions, or even how to be a better educator. This will make you a stronger EM physician, respected colleague, and patient advocate.

**TABLE 3.2. Timing of Courses, Clerkships, and Activities**

Source: CORD ASC-EM Planner

Year 3	Summer	Fall	Winter	Spring
<b>Academics</b>	Clinical Clerkships: Focus on consistent performance across all clerkships, balance shelf exam with clinical performance			Start studying USMLE Step 2 CK
<b>Research</b>	Data Analysis. Write abstract and submit for presentation at national or regional EM meeting (ACEP, EMRA, SAEM, CORD, Critical Care, Wilderness, Ultrasound, EMS)		Consider writing a case report or small quality-improvement project with a resident or attending from one of your rotations.	
<b>Volunteer</b>	Complete another volunteer project (if possible)			
<b>EM Career Experience</b>	Take a leadership position in EMRA or another organization	Research elective rotations via EMRA Match	EM or critical care based continuity clinic or shadowing	<ol style="list-style-type: none"> <li>1. Meet with EM advisor to gauge competitiveness and discuss electives and 4th year schedule</li> <li>2. Apply for visiting EM rotations--programs accept applications as early as March</li> </ol>
<b>Misc.<sup>^</sup></b>	Keep track of experiences for CV	ACEP, FIX conferences, EMRA Medical Student Forum, EMRA Residency Program Fair at ACEP Scientific Assembly	<ol style="list-style-type: none"> <li>1. AAEM Medical Student Session</li> <li>2. Review again CORD ASC-EM website and resources</li> </ol>	<ol style="list-style-type: none"> <li>1. Update CV for VSLO</li> <li>2. EMRA Medical Student Forum, Residency Fairs at national/regional conferences</li> </ol>

Year 4	Summer	Fall	Winter	Spring
<b>Academics</b>	<ol style="list-style-type: none"> <li>1. Study and take Step 2 CK *(EM natl avg 245)</li> <li>2. Electives — front load EM rotation, EM electives — goal for at least 1 SLOE before ERAS opens!</li> </ol>	<ol style="list-style-type: none"> <li>1. Consider rotations to expand your knowledge base and skill set: critical care, anesthesia, pediatric emergency medicine, radiology, ophthalmology, orthopedics</li> <li>2. Take USMLE Step 2 CS</li> </ol>		
<b>Research</b>	Write abstract and submit for presentation at national or regional EM meeting, or if already accepted, present at EM meeting			<ol style="list-style-type: none"> <li>1. Present at EM meeting</li> <li>2. Compose manuscript and submit for publication</li> </ol>
<b>Volunteer</b>	Complete another volunteer project (if possible)			
<b>EM Career Experience</b>	<ol style="list-style-type: none"> <li>1. EM rotation at home (if offered) and outside institution</li> <li>2. Meet with EM advisor to discuss ERAS application strategy</li> <li>3. Visit EMRA Match</li> </ol>	<ol style="list-style-type: none"> <li>1. EM rotation(s) at outside institution if not done in summer; 3rd academic EM rotation not ubiquitously required, please consult advisor</li> <li>2. Consider an EM elective rotation (pediatrics, ultrasound, toxicology, international, sports med, EMS, etc.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Interview — consider taking a month off</li> <li>2. Create rank list</li> </ol>	<ol style="list-style-type: none"> <li>1. MATCH DAY!</li> <li>2. Do something fun</li> </ol>
<b>Misc.<sup>^</sup></b>	<ol style="list-style-type: none"> <li>1. Update CV for ERAS application</li> <li>2. Start writing personal statement for ERAS application</li> <li>3. Standardized Video Interview</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit ERAS application on opening day (mid-September)</li> <li>2. Residency Fairs — national and regional</li> </ol>	Medical Conferences	

\*All National Averages are based on the 2016–2017 first year EM resident. Available at <https://www.aamc.org/data/484714/report-on-residents-2017-b1table.html>. There is a large standard deviation, with some applicants having no research experience or publications. Numbers indicate all experiences over a 4-year medical school career.

<sup>^</sup>Conferences may offer numerous opportunities for students considering a career in EM; attendance is not required or considered a factor that influences a student's potential to match in EM.

## THE BOTTOM LINE

- ✓ Core clerkships are critical in helping you with develop the knowledge and skills to succeed in emergency medicine and do well on USMLE Step 2; in addition, your performance will be highlighted in your MSPE and is important to EM PDs.
- ✓ Begin planning your fourth year early. This includes researching EM electives and brainstorming a strategy to prepare a complete ERAS application (when will you take Step 2? How many EM rotations do you need to complete before Sept. 15?).
- ✓ If you do not have an EM advisor now is the time to find one. An academic EM advisor can provide critical guidance on fourth-year planning.

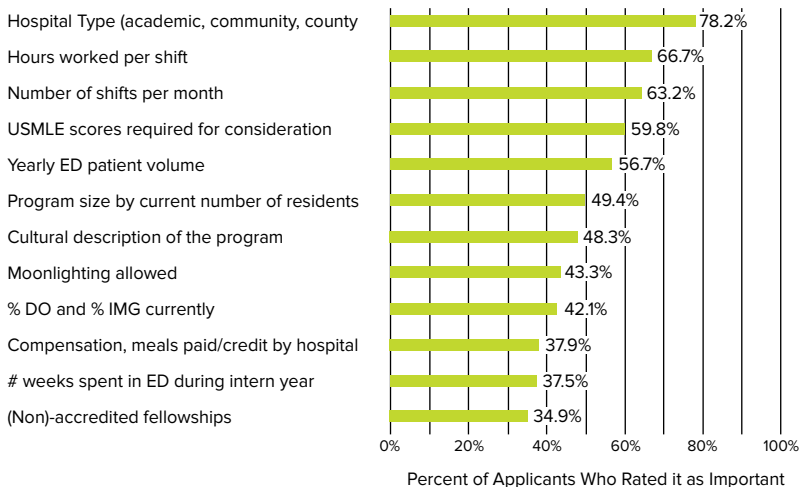
# Finding Your Fit: Learning the Landscape of EM

**One of the most exciting things about medicine** is there is always more to learn. This is true for the application process as well. Now that you have decided on EM, the next thing you must consider is which type of residency will be best for you.

## Factors Important for Residency Selection

While all EM residency programs must meet the ACGME Program Requirements, there is still room for significant variation between programs. Students applying to EM say many factors are important in deciding where they apply and ultimately rank programs, including geographic location, length of training, hospital type(s), clinical duties/experiences, reputation, program culture, and more.<sup>1-3</sup> Many of these program attributes have been included as filter options in EMRA Match.

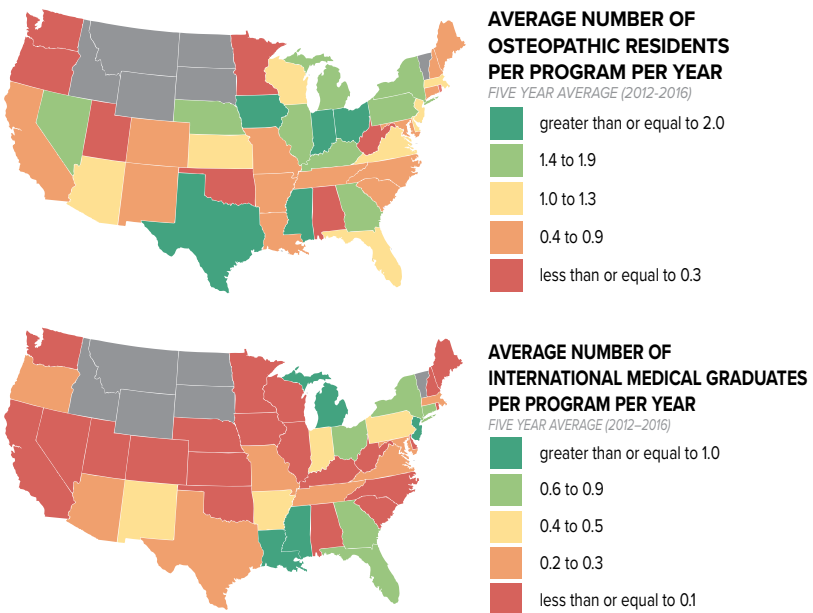
**FIGURE 4.1.** Common Attributes Students Ranked as Important When Evaluating an EM Residency Program<sup>1</sup>



## Location, Location, Location

Desired geographic location is typically the most important factor during both the application and ranking process. Some applicants want to be close to family, while others are looking to embark on a new adventure or seek unique social and recreational opportunities to enjoy when not at work. The cultural, racial, and ethnic diversity of the patient population may also vary by location. Residency programs in highly desirable urban areas will likely have a higher cost of living compared to other programs. Applicants with significant others may also need to consider job opportunities that will be available for their partners in each location. Many physicians end up practicing in the same geographic location where they completed their residency training.<sup>4</sup>

**FIGURE 4.2.** Geographic Locations Historically Favorable to DO/IMG Applicants<sup>5</sup>



### Average Number of Matched Osteopathic (DO) and U.S. International Medical Graduates (IMG) Per ACGME Accredited Residency Program Per Year By State From 2012–2016

Source: Jarou Z, Sayers J. Geographic Trends in the DO/IMG EM Match. CORD Academic Assembly, Fort Lauderdale, FL, April 2017. *West J Emerg Med.* 2017;18(5.1).

**Couples Match:** You don't have to match at the same institution to be within a certain geographic distance of each other. Target cities and geographic locations that have multiple residency programs in each of your specialties.

**Osteopathic and IMG Students:** While osteopathic applicants will no longer have to make the decision to apply to AOA vs. ACGME programs due to the Single Accreditation System, certain states have traditionally matched a higher number of DO residents per program per year. The same holds true for IMG applicants.<sup>5</sup>

## Comparing 3- and 4-Year Programs

One of the many things that makes EM unique is that applicants have the option of applying to both 3- and 4-year training programs. Approximately one-quarter of programs are 4 years in length. Applicants must weigh the opportunity cost of spending an additional year being paid as a resident, rather than an attending, with the benefits that can be gained by graduating from a 4-year training program.

Many applicants will apply to a mix of both 3- and 4-year programs, and must consider what makes an additional year of training at each program “worth it.” For example, an extra year of training may provide additional opportunities to teach students and interns, develop experience in maintaining the flow of patients throughout the entire ED, provide EMS medical direction, allow for unique clinical rotations outside of the ED or within an EM subspecialty area, allow for participation in a longitudinal specialty track during residency (see “Fellowships/Scholarly Tracks” section later in this chapter), or provide additional elective time to tailor their training experience to suit their individual needs.

Elective time is an opportunity to explore other areas within EM, especially if you have special interests like international medicine, research, or ultrasound. This may help you decide about fellowship training, especially if you're interested in a fellowship not available at your program.

There is no difference in moonlighting opportunities, total critical care time, or percentage of time spent off-service during intern year between 3- and 4-year training programs; however, 4-year programs typically offer 14 weeks of elective time, compared to only 7 weeks of elective time at 3-year programs.<sup>2</sup>

Four-year programs are more likely to have Internal Medicine, Neuro ICU, and Administration rotations, and on average have an additional 2.4 weeks of time spent doing pediatric EM.<sup>6</sup>

**TABLE 4.1.** Similarities and Differences Between 3- and 4-Year Programs<sup>2</sup>

<b>Program Characteristic</b>	<b>3-Year Programs [n=160] (95% CI)</b>	<b>4-Year Programs [n=57] (95% CI)</b>	<b>Total [n=217] (95% CI)</b>
Allow Moonlighting	91.3%	91.2%	91.2%
Elective Time	7.0 weeks (6.4–7.6)	14.0 weeks (12.2–15.9)	8.8 weeks (8.0–9.6)
Critical Care Time	19.2 weeks (18.3–20.0)	20.0 weeks (18.3–21.6)	19.36 weeks (18.6–20.1)
Percent Off-Service During Intern Year	39.7% (37.4–42.1%)	40.5% (35.5–45.6%)	39.9% (37.8–42.1%)

**TABLE 4.2.** Prevalence of Rotation Types at 3- vs. 4-Year Programs

<b>Rotation</b>	<b>% of 3-Year Programs With This Rotation [n=150]</b>	<b>Mean Duration in Weeks</b>	<b>% of 4-Year Programs With This Rotation [n=50]</b>	<b>Mean Duration in Weeks</b>
Internal Medicine	23%	4.2	66%	4.8
Neuroscience ICU	21%	3.7	76%	3.4
Pediatric EM	83%	9.7	88%	12.1
Administration	53%	2.4	70%	2.7
Elective	95%	6.7	94%	13.1

## Training Environment

Every residency program is housed at a sponsoring institution that assumes ultimate responsibility for ensuring the program receives the support necessary to successfully train residents. This sponsoring institution is typically the primary clinical site where residents complete their training, and may be a university, community, or county-based hospital (see Figure 4.3 for a breakdown of residencies by primary training environment). All EM residency programs must be affiliated with a medical school. Many residency programs have additional sites to provide exposure to experiences not offered at the primary clinical site. There are pros and cons to each type of training environment. You should consider which learning environment will best prepare you for your ultimate career goals.

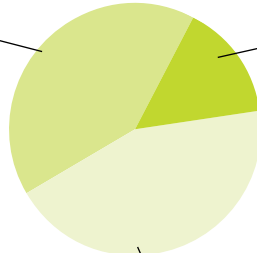


## FIGURE 4.3. Prevalence and Types of Primary Training Environments

### Percentage of Residencies Self-Reporting Each Hospital Setting

#### Community—44%

- May have less specialty coverage or in-house specialty coverage
- More insured population
- Often more age diversity in population, with a larger geriatric population
- May have greater number of unopposed residencies, meaning learners in different residencies are not competing for the same experience (eg: EM residents are not competing with orthopedic residents for fracture reductions)



#### University—41%

- Wider breadth of specialists available
- May have a larger exposure to rare diseases
- Greater exposure to research, specifically bench research
- Often has specialty residencies competing for procedures and closely directing care

#### County—15%

- Typically in an urban setting
- Will have more of an indigent and immigrant population
- More cultural diversity in the population
- Perceived to have more trauma exposure, specifically in penetrating trauma
- Often servicing uninsured or poorly insured individuals, demanding a close working relationship with ancillary services such as social work

## ED Patient Volume

While many applicants consider patient volume to be an important factor in choosing a residency program, this may or may not translate to increased learning opportunities. The ACGME requires that the primary clinical site and any ED where a resident spends more than 4 months to have a minimum of 30,000 annual visits. The primary site should also see a minimum of 3% or 1200 critically ill patients (whichever is greater). While some residency programs boast patient volumes in the hundreds of thousands, which may increase exposure to rare pathology, this may or may not hold true depending upon the staffing models used at each residency program. Some residency training programs will be located at institutions that also train or employ non-physician providers.

As EM is dedicated to the care of the critically ill, it can be important to explore the total number of critical care weeks during residency vs. the general nature of those critical care experiences to ensure a robust exposure to this field. In addition, many programs allow for additional critical care time to be used for electives if this is an interest of yours or you plan to pursue a fellowship.

## Work-Life Balance: Length and Number of Shifts Per Month

Per ACGME rules, EM residents may not work longer than 12 hour shifts while in the ED. They must have a length of time off-duty that is equal to or longer than their scheduled shift length between each work period. Residents may not see patients for more than 60 scheduled hours per week in the ED (and no more than 72 total hours per week). EM residents must have at least 24 hours off every 7 days. Within these constraints, there is significant variability in the average shift length and number of shifts per month, though the majority of

---

*Try to find a program that offers sufficient clinical exposure to become proficient, fits your learning style, and accommodates your personal wellness.*

---

programs require interns to work 16–21 shifts per month that are each 9 hours or less. The number of shifts per month at a program may or may not decrease over the course of your training.

Many residents cite time for personal and professional needs as a crucial factor for burnout prevention. In one study, the authors conclude that “when baseline needs of adequate sleep and self-care are not met, the capacity for self-actualization

is limited. The strained, moment-to-moment mentality many residents experience does not permit introspection, processing of emotions, or learning from challenging patient encounters.”<sup>7</sup>

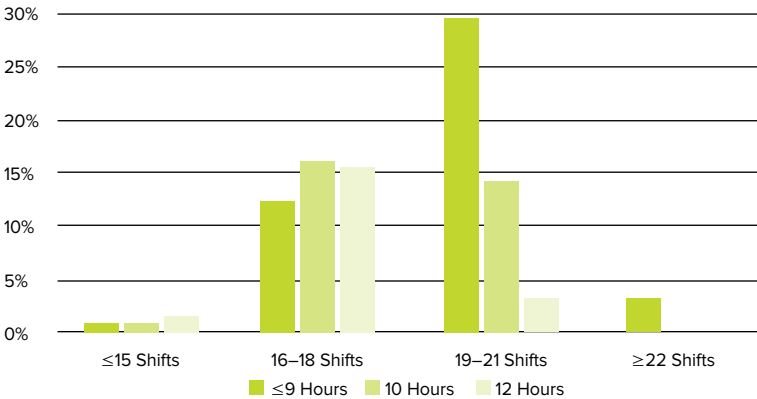
Applicants should try to find a program that will provide them with enough clinical exposure to become clinically excellent, while also considering their personal wellness and learning style. For example, those who learn best by seeing and doing may have a better educational experience at programs with more clinical duties, while those who learn best by reading and reflecting may be better suited to a program with more time for study.

**TABLE 4.3. Average Length and Number of Shifts During PGY1**

Average PGY1 ED Shift Length (Hours)	Percentage of Programs (n=226)	Average Number Shifts Per ED Month During PGY1	Percentage of Programs (n=222)
9 or less	37.2%	15 or fewer	5.0%
10	25.7%	16–18	46.8%
12	17.3%	19–21	45.0%
Variable	19.9%	22 or more	2.7%

**FIGURE 4.4.** Percentage of Programs with Each Combination of Average PGY1 Shift Length and Frequency<sup>2</sup>

(n=177, programs with "variable" length of shifts excluded)



## Program Size

The ACGME requires a minimum of 18 residents per EM residency program to foster a sense of community and to ensure there is a critical mass of learners to support educational activities. The largest EM residency is a four-year program that accepts 25 residents per year for a total of 100 residents.

There is nothing inherently good or bad about a large or a small program. A smaller residency may have more dedicated one-on-one instruction and a closer-knit community, while a larger residency program may have greater resources, greater flexibility in scheduling, and more varied rotations. It is important to consider the number of clinical sites staffed by a program's residents to understand how much actual opportunity for interaction you will have with your colleagues while on shift.

## Residency Program Culture

Each residency program will have a relatively unique culture that results from the personalities who work there and the program's priorities. Which factors are overall most important in determining if you will be happy at the program? Which training environment do you think you will work and learn best in? Do you need a family-friendly program? Are you looking for a program that will push you to your clinical limits, or one that will provide more time for pursuing research or other scholarly endeavors?

Program culture can be difficult to determine prior to visiting, though some sense of culture can be derived from social media profiles on Facebook or Twitter and their description of culture on EMRA Match. Lastly, spending time with current residents while on rotation or when visiting for an interview can give you a good “insider” perspective.

## **Moonlighting**

The vast majority of EM residency programs (83%) allow residents to moonlight, either internally or externally.<sup>2</sup> Moonlighting is permitted by the ACGME for non-PGY1 residents so long as it does not interfere with their education or cause a duty hours violation. Internal moonlighting allows residents to work additional shifts within their training program, which provides them an opportunity to assume the mindset of independent practice while still working in a department alongside their regular faculty. External moonlighting opportunities may allow residents to work at urgent care locations or in rural, critical access hospitals where they may be the only physician for miles, stabilizing patients for transport to facilities with more advanced capabilities.

## **Compensation & Benefits**

Residents of all specialties training at each sponsoring institution are paid on the same PGY pay scale. Nationwide, the average starting salary for interns across specialties is \$55,200, increasing to \$60,700 for fourth-year residents.<sup>8</sup> While there may be mild salary differences between programs given regional variation in cost of living, it is not recommended to make this a deciding factor in your rank list. Applicants may want to take note of additional benefits like meal plans, vacation time, parental leave policies, housing subsidies, and retirement plans.

## **Original Research vs. Scholarly Activity Requirement**

The ACGME requires residents and faculty involvement in scholarly activity in order to maintain accreditation. The 2019 Common Program Requirements allow trainees and their program directors to use a wide variety of options to fulfill scholarly activity requirements, including discovery, integration, application, and teaching.<sup>9</sup>

Historically, 39% of EM residency programs have mandated resident scholarly activity requirements to be fulfilled by original research. Applicants seeking to fulfill their scholarly activity requirements by writing textbook chapters, presenting at national conferences, curriculum development, national leadership positions, or non-peer reviewed publications should pay attention to each program’s requirements.<sup>10</sup>

## Fellowships/Scholarly Tracks

If you are already interested in a fellowship, then attending residency at a program that offers your hoped-for fellowship could be beneficial. You will likely have a better understanding of what the fellowship entails, plus the selection committee will already know you since they will have been your mentors during training. At the same time, it can also be nice to gain exposure to a different training environment by completing fellowship training in a new location.

For those who would like to begin developing a niche during residency, either in preparation for fellowship or to make themselves more marketable for a career in administration or academics, some programs offer scholarly tracks in areas such as medical education, administration, EMS, toxicology, ultrasound, and more. These tracks create mentorship communities within a residency program. Some programs require residents to participate in tracks, while others have optional tracks. During a 2009 working session at the CORD Academic Assembly, eight residency programs shared their experiences with scholarly tracks, reporting that they helped residents create a coordinated portfolio of work in a single area of expertise, were associated with increased pursuit of academic careers by residency graduates, improved marketability for post-residency job search, and increased output of scholarly activity.<sup>11</sup>

---

*Some programs offer scholarly tracks that can help establish a coordinated portfolio of work, increase scholarly output, and improve marketability.*

---

## Newer vs. Established Residency Programs

There is no data to suggest that an older vs. a newer program will give you a better residency experience. However, there are pros and cons to consider. A new residency will likely have more leeway to incorporate new ideas and innovations, allowing residents to make a lasting contribution to the program. A more established residency will have the advantage of being a known commodity with a larger alumni network to access when searching for jobs, fellowships, or niche types of mentorship. It is important to keep an open mind as either type of program may ideally serve your needs as a trainee.

## Reputation

Picking a residency program based upon “reputation” should be avoided.

**There is no “best” residency program, only a set of programs that will be the best fit for you based upon your future goals, learning style, and lifestyle.**

In September of 2014, all major EM organizations wrote a co-signed letter to Doximity concerning the methodology behind the “Reputation” sort-by function in their Residency Navigator tool.<sup>12</sup> Use of Doximity has been shown to cause one-quarter to one-half of applicants to change their rank lists, mostly by adding programs.<sup>13,14</sup> Students are encouraged to consider objective data rather than unvalidated “reputation rankings” when comparing which program will best fit their needs.

### Osteopathic Students: Historic/Ongoing Osteopathic Affiliation

Starting in 2020, all programs will be under a single GME accreditation system. If a student feels that maintaining an osteopathic-focused education is important, they will find a handful of historically AOA programs have applied for ACGME “Osteopathic Recognition,” which conveys their distinction in educational programming.

Use search filters (percent osteopathic residents currently at the program, acceptance of COMLEX in lieu of USMLE, etc.) in addition to reviewing data on the ACGME website to aid. Remember just because a program does not currently have an osteopathic resident, it does not eliminate your chances — but it should guide a realistic approach to applying.

## THE BOTTOM LINE

- ✓ Start researching programs early to get a sense of what you find important in programs and which programs fit your needs.
- ✓ Multiple factors go into selecting a residency program. Only you can determine the program that is the best fit for you.
- ✓ Avoid relying on “reputation rankings” when considering which programs fit your needs.

# Applying for Away Rotations

**The away rotation plays a critical role in the EM residency match.** For the medical student, it is an opportunity to explore different geography and learning environments that may vary by region or hospital. For the residency program, the away rotation offers an independent assessment of a student's ability to learn and grow from the feedback they receive, or demonstrate consistency across institutions and different clinical settings.

In the 2018 NRMP Program Director Survey, “Letters of Recommendation in the Specialty” — known in EM as the SLOE (Standardized Letter of Evaluation) — was one of the most commonly cited factors (97% of respondents) in selecting which applicants to interview and had the highest importance rating (4.8 out of 5). As SLOEs can only be obtained through an emergency medicine rotation, it is no surprise that “Audition elective/rotation within your department” and “Away rotation in your specialty at another institution” were among the other most important factors.<sup>1</sup>

More information about the structure and content of the SLOE can be found in Chapter 6: Crush Your EM Clerkships, Secure Your SLOEs.

## **How Many Away Rotations Do I Need?**

To be a competitive EM applicant, aim to complete 2 EM rotations and obtain 2 SLOEs. Typically, this will be 1 home rotation and 1 away rotation. For students without a home EM rotation, this will be 2 away rotations at different institutions. Students should have at least 1, but ideally 2, SLOE(s) submitted in time for ERAS Application opening in mid-September to be granted interview offers. If you're unable to complete 2 rotations by this time, the 2 SLOEs should be submitted by the time you interview or as soon as possible thereafter to assist in rank list formation.

Program directors place high value on away rotation evaluations. Two 2018 surveys showed that performance on an away rotation is one of the most influential factors used by program directors in interview selection decisions.<sup>1,2</sup> On the other hand, in a 2016 survey, 27% of PDs reported that it was “critical” for students to complete a home rotation, even if they had no interest in attending residency there.<sup>3</sup> This suggests that students, barring significant conflict, should still secure their home EM rotation first.

In regard to number of rotations needed to interview, 2 studies found 80–90% of programs require at least 1 EM rotation or SLOE to grant an interview. In addition, the studies show 20–45% of programs require 2 SLOEs to grant an interview.<sup>2,4</sup> This variance may be due to differences in respondents and wording. **Nonetheless, it shows the importance of having 2 SLOEs to make a competitive application.** It is exceedingly rare for a program to require more than 2 SLOEs. Of note, this data is not meant to apply to EM subspecialty SLOEs like ultrasound or pediatric emergency medicine.

Based on this, we recommend 2 SLOEs from separate institutions to maximize your competitiveness. If you can only complete 1 EM rotation but are otherwise qualified, it may hamper but not bar you from matching. In this case, a SLOE from your home institution, as long as it has an accredited EM residency program, may be more important. There is rarely a need for a third SLOE and rotation, unless your advisor feels it's needed to strengthen your application.

**Osteopathic Students:** For an osteopathic applicant with similar competitiveness to the average allopathic applicant, 79% of residency leadership respondents to a recent survey recommended 2 SLOEs and 11% recommended submitting 3 or more.<sup>7</sup>

**IMG Students:** For an IMG applicant with similar competitiveness to the average allopathic applicant, 63% of residency program leadership respondents to a recent survey recommend 2 SLOEs whereas 19% recommend 3 or more.<sup>7</sup>

**Latecomers:** Very few programs will extend an interview invitation with no SLOEs (only 8 on EMRA Match in 2018), but 80% report extending offers with 1 SLOE.<sup>5</sup> Prioritize getting a SLOE as early as possible after you choose EM. If you have a later letter, make sure to notify the residency programs when it is uploaded.

In 2018, the first of this series of questions on the SLOE is: “Commitment to EM. Has carefully thought out career choice.” Be sure to convey to your SLOE writers how you have thought out your choice and how committed you are to EM even though you may have chosen the specialty later than others.



**At-Risk Candidates:** Having strong clinical skills but difficulty translating this knowledge in testing situations is a familiar struggle. Programs are more likely to consider students with weaker test scores if they have established a consistent pattern of strong clinical performance. Seeking out clerkships that do not have testing requirements as a criterion for grading may also be beneficial for these students.

You are not required to submit a SLOE from every EM rotation you do. If you suspect that your SLOE may not be very supportive, additional or alternative letters are often the best way to mitigate this. If you completed an EM rotation and did not submit a SLOE from the rotation, be prepared to discuss why this might be the case in your interviews.

## Where Do I Want to Rotate?

Consider a few strategies when deciding where to rotate: targeted, exploratory, or practical.

In the targeted approach, you can aim for a specific program or region of the country to explore “personal fit” and to demonstrate interest. This is the ideal approach for many, as geography and “fit” have been shown to be among the most important factors in applicants in choosing an emergency medicine program.<sup>5</sup> Regional competitiveness can vary based on the perceived desirability and concentration of residency programs. In a more competitive region, obtaining a SLOE from a program there may be advantageous - even if you do not “honor” — as programs from the same region tend to be familiar with each other’s assessment styles and thereby confident in interpreting each other’s SLOEs. Many programs also prefer a “known” candidate, and this should offset the fear that you might perform poorly on an audition rotation at a specific institution.

An exploratory strategy may be an option if you’re less geographically inclined. Rotating at a different region adds perspective and opens opportunities during the application season. You should also consider varying clinical environments. Academic, county, community, urban, and regional are a few of the characterizations a hospital might have, and they impact how learning is accomplished and patient care is practiced. Exploring different practice environments will help you be more prepared come interview season.

Like interviews, away rotations can be expensive and inconvenient. As a practical strategy, we strongly advise you to consider cost of living, housing, transportation, and your academic schedule when planning for aways. It is reasonable to choose an away rotation in the same region to contain cost. To successfully match in EM, your performance and professionalism are more important than where you rotated.

**Osteopathic Students:** Certain states have been more “friendly” to osteopathic applicants in the past. [See Chapter 8: Understanding Your Competitiveness](#) for information on historical geographic match locations of DO applicants. EMRA Match for Clerkships reports that 93% of clerkship programs accept osteopathic students.<sup>4</sup>

**IMG Students:** Only 32% of clerkships listed in EMRA Match report accepting international students.<sup>4</sup> Students from international medical schools may benefit from seeking the advice of graduates from their medical schools that matched into EM to inquire where they completed their EM rotations.

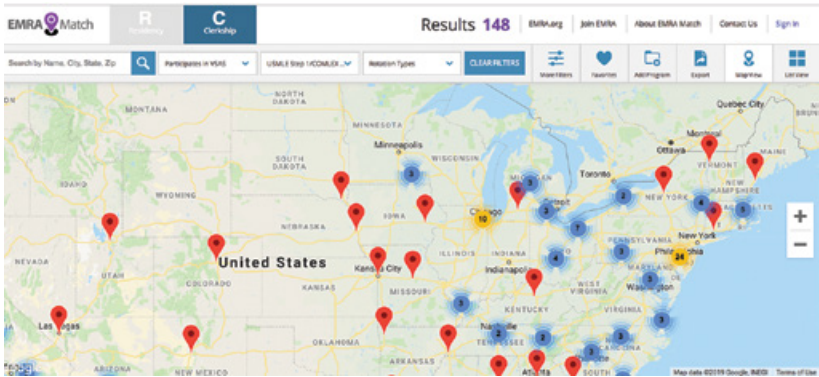
**Military Match:** Students should do at least 1 of their rotations at a military EM site.

**Couples Match:** Consider away rotations in cities where both you and your partner are interested in matching. Check with your mentor — depending on your specific application profile, you may need to do 2 away rotations to maximize your chances for success in the couples match. This is particularly true if your partner is applying to a competitive specialty.

## How Do I Find Rotations?

Several resources exist to help you find available away rotations. Most residencies will have a clerkship, and you can find information on the residency website. The VSAS/VSLO site is a portal for away and global rotations in all specialties. Specific to EM, the EMRA Match tool allows applicants to browse, search, and filter residency programs (240 listed for 2018) and clerkships (145 listed for 2018). Clerkship filters include:

- Participation in VSAS
- Step 1/COMLEX Required
- Rotation Types
- Flexible Rotation Dates
- Interview Policy
- SLOE Authorship
- Consider DO Students
- Consider IMG Students
- Housing Availability
- Vehicle Recommended

**FIGURE 5.1. EMRA Match for Clerkships**

SAEM also has a Clerkship Directory with a filter tool based on several learning environment factors (region, hospital setting, trauma designation, and number of residents per year). If you're interested in a specific institution, check the program's website directly.

More than 40 departments or institutions offer stipends to students from underrepresented groups to rotate through their diversity externship scholarships. These can also be found through EMRA or SAEM.

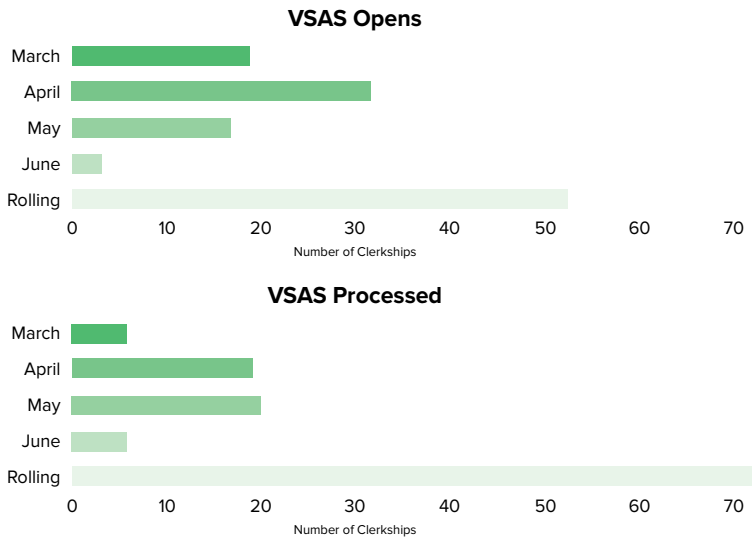
**Osteopathic Students:** With fewer than one-third of osteopathic medical schools having affiliated residency programs, DO students must apply smart and realistically to obtain 2 early academic rotations to provide them with competitive SLOEs.

**IMG Students:** International medical graduates similarly will not have a home EM rotation and will need to obtain 2–3 SLOEs to be considered as a potential candidate.

### When Do I Apply? When Do I Rotate?

The majority of institutions begin accepting applications in March or April, with a small minority of programs opening before March.<sup>6</sup> The timing varies by institution (see Figure 5.2). This does not account for preparation time, so students should plan accordingly. Factors that complicate planning your away rotations include home institution core rotations and other schedule requirements that often extend into mid- to late summer as well as inflexibility of the away rotation schedule. Only 3 out of every 10 clerkships listed in EMRA Match advertise flexible rotation dates.<sup>4</sup>

**FIGURE 5.2.** Months that VSAS/VSLO applications are accepted and processed as reported by clerkship directors on EMRA Match



Students usually complete their home and away rotations in the summer, but many students will not be able to complete their second rotation, usually away, until fall or sometimes winter. As previously mentioned, up to 45% of programs may require 2 submitted SLOEs to grant an interview — putting you at a disadvantage if your rotations are not completed.<sup>2-4</sup> This does not bar any student from matching into EM, however, and we strongly recommend these students to seek advice and to plan ahead. In general, students should have a minimum of 1 SLOE submitted by the time of ERAS Application opening in mid-September to qualify for receiving interview offers.

Many clerkships also process applications on a rolling basis and other students may change their schedule, creating availability as the season progresses.

**Military Match:** Military rotations are usually set up in January by contacting the program directly via email. Contacts are updated on the MODS (Medical Operational Data System) website.

**Latecomers:** Consider following up with programs that may not have offered a position initially as open spots may come available with late cancellations from other students.

## How Do I Apply for Away Rotations?

Most applications can be completed through the AAMC's VSLO website and VSAS system. Approximately 80% of clerkships on EMRA Match participate in VSAS. Visit the VSLO website to create an account and receive specific instructions regarding the application process. (<https://students-residents.aamc.org/attending-medical-school/article/visiting-student-learning-opportunities/>)

Application requirements may vary slightly across programs. In general, materials you should gather before applications open include:

- An updated CV
- Proof of USMLE Step 1 score
- A letter of recommendation from an EM advisor\*
- Proof of positive vaccine titer response
- Immunization record
- Proof of BLS and/or ACLS certification
- A certified background check and drug screen\*\*
- Professional photograph
- N95 Respirator fitting
- Personal statement/letter of intent

This list is by no means exhaustive, as some programs require institution-specific paperwork or training.

\*Some rotations will ask for a letter of recommendation from an EM advisor. Do not stress out if you have not worked in the ED yet — this does not need to be someone you've worked with, just someone who knows you're serious about pursuing a residency in emergency medicine.

\*\*Some institutions, but not all, will ask for a new, certified background check and/or a drug screen. As they are not universally required, you should review individual requirements specified by your desired institutions.

**IMG Students:** International students will also want to consider their visa status when applying to clerkships. International students can use EMRA Match to find clerkships that are open to IMGs and residency programs that will sponsor visas. The ACEP International Section also offers a Rotation and Observation Database.

Some of the proposed materials are more difficult to plan for submission than others. For instance, not every applicant will have taken the USMLE Step 1 by the time VSAS opens. At present, an estimated 85–90% of externship programs require a passing Step 1 score with 37%–43% accepting COMLEX as an alternative.<sup>4,6</sup> To not be limited in options, it is worth considering taking Step 1 to have a score report by the time VSAS opens.

## Clerkship Application & Vaccination Timeline

Proof of positive vaccine titer response is another component that requires advanced planning. Timing is important here as any negative titer results will require a booster and a designated waiting period for antibody response. Be prepared! Do not let this requirement delay you from submitting applications. While most clerkships make use of the AAMC Standardized Immunization Form, which only requires Hepatitis B titers, some institutions that do not use this form may require MMR or varicella titers as well. To be safe, having all five drawn is advantageous, but that needs to be considered against your financial situation. Other testing and vaccinations to consider include: being up-to-date on the flu shot and having documentation of recent two-step tuberculin skin test (aka PPD) or QuantiFERON Gold test.

**IMG Students:** A small population of students may have received the Bacille Calmette-Guerin (BCG) vaccine outside of the United States and subsequently tested positive on their PPD. For healthy, asymptomatic students, a proof of Isoniazid (INH) completion and most recent normal chest X-ray report should suffice. However, in rare instances, these students may be asked to undergo additional testing.

A proposed timeline for gathering documents and having titers drawn is listed. This will allow you to apply to a few programs that begin accepting applications in February. Most programs may not accept externship applications until March or April, however, so it is important to visit VSAS and plan on an individual basis.

### November

- Get titers drawn. If any are negative, immediately get a booster. Titers typically may not be re-drawn for 6–8 weeks.

### December

- Update your CV and choose an appropriate professional photograph
- Gather other previously mentioned documents as time permits
- Visit program websites to research programs
- Ask an EM advisor for a letter of recommendation, if required by desired institution(s)

### January

- Complete background check, if necessary
- Establish and execute a firm plan for up-to-date TB testing
- Have titers redrawn (if necessary and not already completed)

### February–April

- Write your Statement of Interest for the programs that require it
- Submit VSAS when applications open

Not all clerkship programs use VSAS, which attempts to standardize the process, but will in general have similar requirements. Find specific instructions at individual institutional websites outside of VSAS. This extra step might make some non-VSAS clerkships “less competitive” and easier to secure a rotation from.

**Latecomers:** Looking at programs outside of the VSAS in effort to secure a rotation will likely increase your chances of success.

## How Do I Get Accepted for an Away Rotation?

Expert opinion recommends that an average student apply to 5–7 institutions to receive 1–2 invites. Consult with your advisor to determine the right number of applications for your personal situation and goals.

A Step 1 score can be an important factor influencing your chance of being accepted for an away rotation. In a 2018 survey of clerkship directors, 90% of respondents reported requiring at least a passing score on USMLE Step 1, and among these, 45% use a mean Step 1 score of 213 as a screening cutoff.<sup>6</sup> These numbers are similar to Step 1 score utilization for away rotations and interview selection as reported on EMRA Match.<sup>4</sup> Programs included in EMRA Match for Clerkships declare whether they require USMLE Step 1, with or without a cutoff score. If you have a lower Step 1 score, you may benefit from targeting programs that report not having a cutoff.

---

*In general, clerkship directors value genuine interest in matching to their program or region. Be specific and detailed about why you want to work in their program.*

---

In general, clerkship directors value genuine student interest in matching to their program or region. In the current application environment, however, common sentiment is that student interest is hard to gauge. If a program

requests a statement of interest, this can be a great opportunity to communicate your particular interest in the region and in the program. Local ties, for example, are valuable to mention.

Personal, direct communication to the clerkship director or coordinator, beyond the letter of interest requested by the application, may be helpful in some cases but detrimental if overused. Reach out through direct communication judiciously, reserving only for a few institutions (maximum of 3) in which you are most interested.

Your home institution can also help you secure an away rotation, if you communicate specific interest. It is acceptable to want to leave your home institution for residency training. Many programs, especially those with a large cohort of EM-bound medical students, will appreciate that disclosure. In that case, your home institution may have faculty connections to a particular region who can help you secure a rotation. Again, overuse of this strategy will also dilute its effect.

**Latecomers:** Contact your home EM advisor directly, as they can be an invaluable resource of experience and connections in your effort to complete application requirements.

Attendance at conferences and other networking opportunities may be helpful. At national conferences such as ACEP's *Scientific Assembly*, EMRA hosts a Medical Student Forum and Residency Fair. This event occurs in October, so attendees will have enough lead time ahead of VSAS application to establish a network, follow up, and apply. You can also learn more about programs and make connections at the fair, but it is important to recognize attendance does not guarantee an away rotation. This is especially true for students attempting to secure a rotation or interview at more competitive institutions.

## Troubleshooting & Tips

### How do I deal with conflicting home requirements and away rotation schedules?

- Address it early with the dean of your home institution or contact the away rotation clerkship director. Some institutions will make exceptions or help you troubleshoot. Asking for an exception implies genuine interest. Reserve this only for rotations you would almost certainly accept if offered.



### **I do not have EM faculty at my institution. Where can I find individualized advice?**

- Find an EM faculty mentor at an outside institution willing to advise you. This is especially important for osteopathic and international students. Often, this may be the clerkship director who “adopts” you on your first away rotation. EMRA coordinates a mentorship program at <https://www.emra.org/students/advising-resources/student-resident-mentorship-program/>.
- EMRA also understands the cost and potential low yield of traveling far distances just to obtain good but generalized advice. In response, through EMRA Hangouts, it hosts live, online forums featuring prominent EM advisors once each month to answer timely questions. Sessions are recorded for those who can't log in live: <https://www.emra.org/be-involved/events--activities/emra-hangouts/>.

### **I couldn't secure an away rotation at a program I was very interested in. How can I still show interest and learn more about the program?**

- Often, institutions will offer away rotations in a subspecialty area of emergency medicine. A letter from these rotations is less influential than an adult EM course, but it may resonate with that specific institution — and you will gain valuable knowledge, including a new skill set and familiarity with that program. Common subspecialty rotations include EMS, Global Health, Pediatric EM, Research, Toxicology, Ultrasound, and Wilderness Medicine. These subspecialty rotations can be identified using the filter included in EMRA Match for Clerkships.

### **What if I don't get or can't do an away rotation?**

- While away rotations have many practical benefits, they also pose difficult hardships and just may not be feasible for some students. Pregnancy and parenthood are 2 such situations that may constrain the ability of both partners to travel far from home. Family illness and caregiver needs may affect others. In general, EM programs are sensitive to work-life balance and personal wellness. Nevertheless, these situations require a thoughtful approach to communication as well as securing a second letter from your home institution, if possible.
- If you're in this situation, it's most important to have a trusted, experienced advisor help you develop a plan. Complete an additional EM subspecialty elective at your home institution. The ideal elective would give you an opportunity to demonstrate your clinical skills to EM faculty who could then write an additional SLOE letter. Finally, you should thoughtfully, deliberately explain the reason for being unable to complete a traditional away rotation; that communication should be part of the plan you develop with your advisor.

### I accepted an away rotation, but then I received an invitation from my top-choice program. Is it OK for me to cancel my original rotation?

- Be very cautious when cancelling an away rotation. If the rotation is several months out such that the program can accommodate another student, then it's typically understandable and should be accompanied by polite and honest communication.
- Last-minute cancellations of away rotations are strongly discouraged and will be frowned upon — with the exception, of course, for personal emergencies.

## THE BOTTOM LINE

- ✓ With rare exception, EM candidates should complete 2 EM rotations to acquire a total of 2 SLOEs. If available, 1 of your 2 rotations should be a home rotation.
- ✓ You should have a minimum of 1 SLOE by the time residency programs are able to view applications in ERAS (mid-September) to be considered for interview invitations. Having 2 SLOEs submitted by this time will maximize your competitiveness.
- ✓ It is highly unusual for an applicant to require 3 SLOEs to match, and it does not necessarily make you more competitive. In fact, doing extra away rotations may be harmful to your colleagues who are having difficulty obtaining their first away rotation.
- ✓ An away rotation should be affiliated with an EM residency program so that your SLOE can be completed by an EM faculty member.
- ✓ VSAS is the standard way to secure away rotations, but there are other ways that will require more personal inquiry. In general, current expert opinion suggests you should apply to 5–7 clerkships to get 1–2 invites. Consult with an advisor to confirm an application strategy that supports your personal situation.

# Crush Your EM Clerkships, Secure Your SLOEs

**Three years of hard work have flown by** and you have earned the opportunity to demonstrate your skills and explore emergency medicine. Two of the most important factors of your application, your clerkship grades and your SLOEs, are a result of your rotation performance. These factors carry a significant weight in how most programs determine interview invitations and rank order list position. You're about to begin your EM rotation and you have one burning question:

***What can I do to really stand out and make a positive impression during my clerkship?***

First, remember some basic practices that may seem small but in reality will be the foundation of your performance.

- ***Be on time.*** Even better, be early. Showing up late to a shift or didactic session can seem unprofessional and demonstrate a lack of enthusiasm. If you need to miss a day or will be late, notify your clerkship director as soon as possible. During an away rotation, take into account the commute time from your housing to your clinical site before your first day.
- ***Dress appropriately.*** Ask how you are expected to dress on-shift (scrubs, business casual, white coat, etc.), during conferences, and in didactic sessions.
- ***Be enthusiastic.*** Your enthusiasm for learning will be noticed quickly and much appreciated. It will also help you get the most out of your rotation.
- ***Come prepared.*** Bring your stethoscope, trauma shears, pharmacy guide, medical apps (including calculators), or any other pocket EM guide with you for quick references.

Next, understand that you're an important member of the team. Your evaluations and plans matter, even if at times you feel they don't. Along with the nursing staff, you will be the first person to meet patients, and your history and physical will be the foundation of the plan moving forward.

**IMG Students:** Non-native English speakers will need to demonstrate mastery of the English language to show you can communicate well with both patients and other members of the care team.

## Preparing for a Successful Clerkship

It's important to build your fund of EM-specific knowledge. This occurs before, during, and after clinical rotations. Take advantage of the many resources available to you — not only during your clerkships, but also as you prepare for them and after you crush them.

**TABLE 6.1.** Guidance for EM Learners

<b>Basics of Emergency Medicine and Basics of EM: Pediatrics</b> (printed pocket guide and app)	2-volume set for use on-shift outlines the most common chief complaints in the ED and guides you through initial diagnosis and treatment at the bedside
<b>EM Fundamentals</b> (print)	Comprehensive reference manual with quick guides, can't-miss diagnoses, warning signs, and common treatments for a broad range of conditions
<b>EMRA Clinical Prediction Card</b> (print)	Trifold pocket reference with the most common clinical prediction rules (HEART, PECARN, Wells', Centor, Ottawa, etc.)
<b>CDEM M4 Curriculum</b> (online)	Learning modules prepare you to address common complaints in 10 categories
<b>CDEM EM Clerkship Primer</b> (online)	A detail-oriented "how to" manual to think like an emergency physician, focused on aspects of EM that are often overlooked or underrepresented in traditional textbooks
<b>Ottawa's Clerkship Guide to Emergency Medicine</b> (downloadable PDF)	Student-driven handbook offers background, assessment, investigations, and management for common complaints
<b>Best Podcasts for the Student EM Nerd</b> (podcasts)	Ever-changing and never-ending list of audio resources, loosely organized for beginning and advanced learners
<b>Patient Presentations in Emergency Medicine</b> (video)	Training video to help you learn how to present a patient in the unique ED environment
<b>The 3-Minute Emergency Medicine Medical Student Presentation: A Variation on a Theme</b> (downloadable PDF)	Article discussing the characteristics of patient presentation in emergency medicine

You might feel like there's an overwhelming number of resources; test several of them before your clerkship and use the ones you feel most comfortable with.

## Interacting with Patients

While you're brushing up on the clinical aspects of patient care, don't forget the patient. It's important to establish rapport quickly — but that can be challenging when you're approaching a stranger who's experiencing a problem grave enough to lead them to the ED. Follow some basic steps:

- Introduce yourself to the patient and explain your role as a medical student.
- Find out who is accompanying them (do not make assumptions).
- Ask why they're in the ED today (for chronic conditions, find out what made today different than any other day, and research prior treatments).
- Determine if they've had any prior work-up relevant to today's visit and where these records can be located.
- Inquire about their access to follow-up care to help coordinate a safe discharge plan.
- Small things go a long way with patients and their visitors; does the patient need a blanket? A phone to call their loved one? Does their elderly visitor need a chair?
- If your initial impression is the patient is unstable, agitated, or altered, you are probably right, and in such instances it is appropriate to grab your resident or attending immediately to evaluate the patient.

## Presenting a Patient

Your oral presentation to your attending is critical in demonstrating your knowledge of patients' complaints, exams, and management plans. But a patient presentation in emergency medicine is unique. The pace of the ED environment demands extremely succinct presentations that may be interrupted at any given time; be thorough but brief, and be ready to pick up where you left off after any interruptions. Focus your presentation to include the patient's chief complaint and any information relevant (positive or negative) to the complaint, also noting relevant exam findings. Then present your differential diagnosis, prioritizing the most emergent diagnoses, and discuss your anticipated management plan. While presenting your plan, you may also consider including any consultations you may need, and anticipated final disposition if it is apparent. Be ready to answer any additional questions about the history and physical exam, but this does NOT mean you need to present every detail initially; stick to what you know is relevant to the chief complaint.

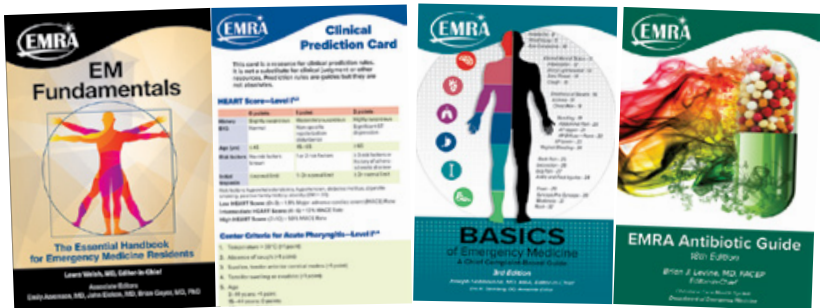
## Developing a Strong DDX and Plan

Your differential diagnosis should be based on your history and physical exam. Do not rattle off a random assortment of diagnoses, as this reflects poorly on your H&P and on your medical decision-making. Do include all emergent diagnoses in your differential, even those that are less likely or don't require further work-up, to demonstrate to your evaluator that you've considered all possibilities. **A good framework to organize your differential is SPIT:<sup>1</sup>**

- **S**erious
- **P**robable
- **I**nteresting
- **T**reatable

Utilize your differential to decide which labs, imaging, and interventions are needed. Familiarize yourself with the clinical prediction rules that your supervising resident or attending will be considering when determining what work-up is needed, such as the HEART Score for ACS, the Wells' Score and PERC for PEs, Canadian CT Head rule for trauma, etc. Be ready to discuss your anticipated disposition for the patient, including what type of follow-up they might need. If you don't verbalize your thinking, your supervisor won't be able to know what you have or haven't thought about, and won't be able to give you as meaningful feedback on your presentations. Expect to be quizzed after you present your differential and plan. These questions are not casting doubt on your competence, but rather they enable your evaluator to understand your thought process and provide an opportunity to strengthen or modify your plan.

**FIGURE 6.1.** Free On-Shift Resources in EMRA Student Member Kits



**Don't lie.** If you didn't ask a question about a patient's history, forgot to check for something during your physical exam, or didn't consider a specific diagnosis when generating your differential, **absolutely do not lie!** It takes time to gain the trust of your supervisor, but that trust can evaporate quickly. When you are open and honest about what you did or didn't do, it provides assurance that the rest of your presentation is honest and accurate. You can always go back into a patient's room to collect the missing information. But if there is even a hint that your presentation was not honest, it creates more work for your supervisors because they must start with a blank slate.

**Don't overreach.** There's a first time for every procedure, and when that's the case, simply let your supervising physician know you've never performed the procedure but you would like to learn and practice. Similarly, if you are asked a question you cannot answer, just say you don't know, and then go find an answer. Admitting you don't know something doesn't show incompetence, it demonstrates humility — and patients and attendings alike will respect this.

**Take “ownership” of your patients.** Depending on your rotation and electronic chart access, this can be difficult. In general, you should stay on top of lab/imaging results and recognize their relative impact on care. For example, if a UA comes back suggesting UTI, reporting this to the resident/attending **and** suggesting an appropriate antibiotic choice and disposition would be excellent care. Remember — anyone can report abnormal findings, but the real question is *what to do with those findings*.

Ownership also includes updating patients with plans, results, and managing their expectations of their visit. This is easier for you as a student, simply because you'll have more time than your resident/attending. Show ownership by reassessing after interventions (eg, is the nauseous patient no longer vomiting after receiving antiemetics) and re-evaluating physical exams as needed (serial abdominal exams). Furthermore, inform your attending of any status updates with your patients, reassessments, or results. You are often the best eyes and ears for your attending. Recognizing a critical change or “sick” patient and immediately alerting the ED team of this will always garner respect.

If given tasks to complete (notes, consults, procedures) do them promptly and inform your supervising resident or attending when you're finished. If you encounter difficulty, that's OK — just let the team know. If you have completed all tasks for a patient, you can demonstrate initiative by asking to pick up another patient. However, be sure not to pick up so many that you fall behind. You will impress your attending far more by providing thorough, complete care to fewer patients than by superficially involving yourself with a lot of patients.

**Grow.** As you become more comfortable in the ED, challenge yourself to pick up one more patient than your prior shift, still being sure not to get overloaded. Set an alarm or timer for your history and physical exams to practice becoming more efficient — without cutting corners. For patients undergoing procedures, familiarize yourself with the steps of the process, the supplies needed, and express an interest in performing or assisting whenever possible. Lastly, recognize that managing a patient in septic shock will require more attention than some other patients, and that not carrying “more patients” does not reflect your effort or ability.

**Communicate with your team.** Check in with your supervisor at the start of every shift. Introduce yourself and identify expectations and responsibilities for each shift. Expectations may change from attending to attending, shift to shift, and it’s important to recognize these differences. Examples of these are: Should you assign yourself to the next patient or should you ask permission before assigning yourself to new patients? *Should you present before or after writing your note? Are you responsible for writing your orders?*

Lastly, communicate with the *entire* team (attendings, residents, nurses, consultants, secretaries, transportation techs, etc.) respectfully and pleasantly. Learn names. Let them you are there and eager to be a part of patient care. This allows them to show you interesting cases, teach procedures, and be included throughout the course of your shift.

**Ask questions.** If you are unsure about something, ask! Asking questions reflects an interest in learning and demonstrates that you are thinking about your patient’s presentation. Remember, *we know you’re a medical student and you’re here to learn.* It’s our responsibility to educate medical students, and most teaching departments work to foster learning. Of course, there is a balance — before asking a question, consider looking up the answer to your question and be ready to discuss possible management strategies. A good way to phrase this (and demonstrate self-motivation) is *“I have a question regarding management of X. I’ve read that we can do Y, however, was wondering if that’s the appropriate course in the setting of...”* Also, unless your question involves an emergent issue, certain times in the ED may not be appropriate for discussions and feedback (sign-outs, critical patients, etc.).

If you are unsure about something (how to call a consult, discharge a patient, etc.), ask your attending or team members. In general, we recommend asking residents first, as sometimes the attending is managing multiple other tasks.



**Ace the final exam.** Depending on your rotation site, you may take an exam created by that department or by a national organization. Be sure to inquire about what resources are recommended for preparation (readings, practice questions, etc.). Free and fee-based question banks are widely available. Do some reading, flashcards, and practice questions each day to build your knowledge base and prepare for the exam.

**Attend conference.** Many sites integrate this into your clerkship schedule. However, if not, ask if you can attend weekly resident conferences. Your interest will be noticed, and it will give you an opportunity to see what's new in EM, get to know some of the residents, and see what your weekly educational experience would look like if you match at that program.

**Be kind.** Think of your clerkship as a month-long interview, remembering that your interactions with everyone, from attendings and residents to ED staff to the residency coordinator, will be noted. Be unfailingly kind, courteous, and professional.

**Look ahead.** Clerkships are the perfect chance to build your professional network, not only by meeting attendings, residents, and administrators, but also by connecting with other students who are rotating with you — because they could be your fellow resident next year. Along the same lines, get to know the city where you're rotating; can you see yourself living there? Finally, find out up front whether an interview will be offered at the end of your clerkship; this data is available in EMRA Match.

Remember that while you're continually being graded during your clerkship, this is also *your* opportunity to evaluate the program. Do you like the atmosphere, the residents, the attendings, the opportunities? These rotations will be the basis for how you evaluate each and every program where you interview.

## Demystifying the SLOE

Now, let's look at the criteria you will be evaluated on from that dreaded (mysterious?) SLOE. Why is this important? Program directors have ranked SLOEs (and rotation grades) as some of the most important criteria when looking at selecting potential residents.<sup>2</sup> Therefore, understanding the SLOE provides insight into how you will be formally evaluated.

The SLOE has 4 sections: Background Information, Qualifications for EM, Global Assessment, and Written Comments. The first section includes background information on the applicant including which number EM rotation this is, what grade was given, and how the student's grade compares to others in the past academic year. The "Qualifications for EM" reflect the areas you are likely be

evaluated on throughout each shift. These 7 criteria broadly are: commitment to EM, work ethic, differential diagnosis and treatment development, teamwork, caring nature toward patients, potential future (residency) required guidance, and a prediction of success for applicants. These are answered in comparison to your peers. The third section is the “Global Assessment.” This has been cited as a significant predictor in rank order list position.<sup>3</sup> This is where the letter writer is asked to rank the applicant in the top 10%, top third, middle third, or bottom third compared to other emergency medicine residency candidates. Further, the “Written Comments” section of the SLOE solicits writers to reflect on your non-cognitive attributes, such as self-motivation, altruism, attitude, maturity, compassion, etc. This part highlights areas that will require attention, addresses low rankings from the SLOE, and mentions the applicant’s strong attributes or characteristics. It is highly recommended that medical students review the SLOE form before beginning their emergency medicine rotation to understand the characteristics by which they will be judged.

At the end of the day, the SLOE provides readers insight into your perceived professional and personal strengths, and it enables writers to highlight both as they feel necessary.

## Whom do I ask for my SLOE?

Most programs have a plan in place for rotators to obtain a SLOE. Some rotations will say who will handle the SLOE at the clerkship orientation, whereas others will have students formally ask. Typically you will ask the clerkship director to complete your SLOE. However, some clerkships will ask you to obtain a SLOE from the faculty who knows you best. If this is the case, try to identify a faculty member early on in the rotation, especially if your rotation is late in the cycle. Many academic departments are now creating a “departmental SLOE” — a jointly signed letter from the clerkship director, program director, and associate program directors.

Clarify the process by which you will obtain your SLOE on the first day of your rotation.<sup>4</sup> Importantly, it is expected that you will have a SLOE from each site at which you rotated. Not having a SLOE will be perceived as a red flag and may require explanation if you are invited for an interview. An exception to this is rotations that are scheduled later in the application cycle. If you have already submitted 2 SLOEs and you are completing a third EM rotation later in the year (ie, December), you do not need to obtain a SLOE from this rotation.

**IMG Students:** Make it known to the medical student director very early on in your rotation, or even prior to starting, that you hope to obtain a SLOE from them.

**FIGURE 6.2. Official CORD SLOE****EM Specialty SLOE**

I have read this year's instructions @ cordem.org  Yes  No

Applicant's Name: \_\_\_\_\_ AAMC ERAS ID No. \_\_\_\_\_

Letter Writer's Institution: \_\_\_\_\_ Email: \_\_\_\_\_

Reference Provided By: \_\_\_\_\_ Telephone: \_\_\_\_\_

Present Position (Select one)  Chair  Clerkship Director  Faculty  Group SLOE  
 Group SLOE + CD  Non-Faculty  Vice Chair

**A. Background Information**

- How long have you known the applicant? \_\_\_\_\_
- Nature of contact with applicant: (Check all that apply)
  - Know indirectly through others/evaluations
  - Extended, direct observation in the ED
  - Clinical contact outside the ED  Advisor
  - Occasional contact (< 10 hours) in the ED  Other: \_\_\_\_\_
- Did this candidate rotate in your ED?  Yes  No
  - If so, what grade was given?
    - Honors  High Pass  Pass  Low Pass  Fail
- Is this the student's first, second or third EM rotation?
  - 1st rotation  2nd rotation  3rd rotation  4th rotation  Unknown
 What date(s) did this student rotate at your institution? (mm/yy) \_\_\_\_\_
- Indicate what % of students rotating in your Emergency Department received the following grades last academic year:
 

Honors	% _____	Total # students last year: _____
High Pass	% _____	
Pass	% _____	
Low Pass	% _____	
Fail	% _____	
100% Total		

EM is a required rotation for all students at our institution?  Yes  No

**B. Qualifications for EM. Compare the applicant to other EM applicants/peers.****1. Commitment to Emergency Medicine. Has carefully thought out this career choice.**

- Above peers (Top 1/3)                       Below peers (Middle 1/3)                       At level of peers (Lower 1/3)

**2. Work ethic, willingness to assume responsibility.**

- Above peers (Top 1/3)                       Below peers (Middle 1/3)                       At level of peers (Lower 1/3)

**3. Ability to develop and justify an appropriate differential and a cohesive treatment plan.**

- Above peers (Top 1/3)                       Below peers (Middle 1/3)                       At level of peers (Lower 1/3)

**4. Ability to work with a team.**

- Above peers (Top 1/3)                       Below peers (Middle 1/3)                       At level of peers (Lower 1/3)

**5. Ability to communicate a caring nature to patients.**

- Above peers (Top 1/3)                       Below peers (Middle 1/3)                       At level of peers (Lower 1/3)

**6. How much guidance do you predict this applicant will need during residency?**

- Less than peers                       The same as peers                       More than peers

**7. Given the necessary guidance, what is your prediction of success for the applicant?**

- Outstanding                       Excellent                       Good

**C. Global Assessment**

1. Compared to other EM residency candidates you have recommended in the last academic year, this candidate is in the:

<u>Ranking</u>	<u># Recommended in each category last academic year</u>
<input type="checkbox"/> Top 10%	_____
<input type="checkbox"/> Top 1/3	_____
<input type="checkbox"/> Middle 1/3	_____
<input type="checkbox"/> Lower 1/3	_____
Total Number of letters you wrote last year:	_____



## End-of-Shift Feedback/Evaluations

While the SLOE is a summary evaluation of your performance for your entire rotation, it is crafted based upon the cumulative feedback/evaluations you receive for each individual shift. Students should determine who will be evaluating them at the end of each shift, will it be an attending, a senior resident, or both?

While you are being evaluated and graded continually by the faculty and upper-level residents during your clerkship, you should not be a passive bystander. Seek feedback early and often — even if that means waiting for your supervising resident or attending to finish signing out (while being respectful of their time). Be prepared to explain what you think you did well, what you would do differently, and how you plan to improve on the next shift. Clear communication at the beginning of each shift also enables you to show that you are engaged with specific goals: for example, “Today my specific goal is to work on (*insert X*), and I’d love feedback on it.” At the end of the shift follow up on this goal and seek constructive criticism.

In addition to familiarizing yourself with the contents of the SLOE, you should also familiarize yourself with the end-of-shift evaluation tool that will be used to judge your performance. Many clerkships have adopted the “National Clinical Assessment Tool” to provide standardized evaluation across institutions, calculating a final grade by averaging NCAT-EM scores from 5 shifts.<sup>2</sup> The group identified 6 clinical performance domains to evaluate, along with an assessment of your professionalism during a shift.<sup>2</sup>

**FIGURE 6.3. National Clinical Assessment Tool**

Student Name:		Date:		
Assessor Name:		Shift/site:		
	Pre-Entrustable	Mostly Entrustable	Fully Entrustable/ Milestone 1	Outstanding/ Milestone 2
<b>Focused history and physical exam skills</b>  <input type="checkbox"/> Unable to assess	Extraneous or insufficient information. May miss key physical findings or examine incorrectly.	Generally adequate information. Exam mostly adequate and correct. May not differentiate important from extraneous detail.	Appropriate information for clinical context.  Exam complete and appropriately tailored. May include excess detail, but thorough and accurate.	Exceptional focused H&P, obtains all relevant information.  Addresses chief complaint and urgent issues. Differentiates important from extraneous detail.
<b>Ability to generate a prioritized differential diagnosis</b>  <input type="checkbox"/> Unable to assess	Limited ability to filter, prioritize, and connect information to generate a basic differential based on clinical data and medical knowledge.	Generally able to filter and connect information to generate a basic differential based on clinical data and medical knowledge.  Beginning to incorporate data and prioritize.	Reliably synthesizes data into a complete differential.  Incorporates data. Prioritizes differential by likelihood.	Demonstrates exceptional differential diagnosis and data interpretation.  Uses all available information to develop a prioritized differential focusing on life/limb threats.
<b>Ability to formulate plan (diagnostic, therapeutic, disposition)</b>  <input type="checkbox"/> Unable to assess	Difficulty applying knowledge to formulate plans, or does not offer plan.	Usually able to apply knowledge to formulate plans, though plans may be incomplete/incorrect in some details.	Reliably able to apply knowledge to formulate plans that are complete, appropriate, and tailored to patient needs/desires.	Exceptional ability to apply knowledge to formulate outstanding patient-centered plans.
<b>Observation, monitoring and follow-up</b>  <input type="checkbox"/> Unable to assess	May not re-evaluate patients or follow up results in a timely fashion.	Usually re-evaluates patients and follows up results, though may need prompting.  Beginning to integrate new data into ongoing plan.	Reliably re-evaluates patients and follows up results in a timely manner without prompting.  Integrates basic data into ongoing plan, though may need help. Completes tasks despite distraction.	Exceptional re-evaluation and follow up skills. Proactive. Integrates complex results into ongoing plan. Able to handle multiple patients simultaneously.

	Pre- Entrustable	Mostly Entrustable	Fully Entrustable/ Milestone 1	Outstanding/ Milestone 2
<b>Emergency recognition and management</b>  <input type="checkbox"/> Unable to assess	<p>May not recognize or respond to abnormal vital signs or patient deterioration.</p> <p>Delays or fails to seek help.</p> <p>Unable to recommend stabilization interventions.</p>	<p>Recognizes and responds to most abnormal vital signs but may miss subtle changes.</p> <p>Promptly seeks help.</p> <p>Recommends and/or initiates some basic stabilization interventions.</p>	<p>Reliably recognizes and responds to all vital sign abnormalities and trends. Promptly seeks help.</p> <p>Recommends and/or initiates all basic and some advanced stabilization interventions.</p>	<p>Exceptionally attentive to vital sign abnormalities and patient deterioration.</p> <p>Promptly seeks help.</p> <p>Recommends and/or initiates basic and advanced interventions appropriately.</p>
<b>Patient- and team-centered communication</b>  <input type="checkbox"/> Unable to assess	<p>Communication with patients and/or team is unidirectional or not tailored to circumstances.</p> <p>May not read or respond to others' emotions well. May not always attend to patient comfort or preferences.</p> <p>May not always integrate well into team, may not recognize value of team contributions.</p>	<p>Communication with patients and/or team is bidirectional and usually tailored to circumstances.</p> <p>Generally reads and responds to others' emotions well. Usually attentive to patient comfort and preferences. Usually integrates well into team, may not fully understand team roles or contributions.</p>	<p>Communication with patients and/or team is bidirectional and reliably tailored to circumstances.</p> <p>Skillful in reading and responding to others' emotions.</p> <p>Reliably sensitive to patient perspective and preferences.</p> <p>Integrates well into team and recognizes value of team members.</p>	<p>Demonstrates exceptional communication skills with patients and/or team.</p> <p>Effectively reads and negotiates complex emotional situations and conflicts. Always sensitive to patient perspective. Highly regarded by patients and team.</p>



Professionalism: Specific Attribute/Behavior	Concerns?		Please describe specific behaviors observed
	Yes	No	
Compassion, sensitivity, or respect towards patients			
Respect or collegiality towards team members			
Receptivity to constructive feedback			
Honesty or ethical conduct			
Dependability, accountability, or responsibility			
Initiative, diligence, or work ethic			
Punctuality, attendance, or preparation for duty			
Appropriate dress or grooming			
Other (please describe)			

**Global assessment: compared to other students with a similar level of experience, this student's performance today was:**

Lower 1/3	Middle 1/3	Top 1/3	Exceptional (top 10%)
-----------	------------	---------	-----------------------

**Please comment on this student's performance today:**

## THE BOTTOM LINE

- ✓ Performing well on your EM rotation requires knowing the differential diagnosis for common chief complaints, being able to synthesize and succinctly present patients to your attending or supervising resident (including your plan), “owning” and re-evaluating your patients, and being a great team player and communicator.
- ✓ Ask for feedback! Familiarize yourself with the tools that will be used in your evaluation so you can focus on demonstrating behaviors that will give you a competitive SLOE and grade from your rotation.
- ✓ Make use of the Patient Presentations in Emergency Medicine instructional video to learn how to effectively and efficiently tell your patient’s story.
- ✓ Do not under any circumstances lie about the patient history you take or about an exam finding. Your supervisors know that you’re learning, and they don’t expect perfection. They do expect honesty — and it will take a long time, if ever, to earn back trust if you lie.

# Building Your ERAS Application

By now, you have started to consider the different types of EM residency programs available (Chapter 4), you have completed or scheduled your EM clerkships and USMLE exams (Chapters 3 and 5), and it's time to understand how you actually go about applying to residency programs. There are several components of the application, and each will impact your competitiveness (Chapter 8).

## The Electronic Residency Application Service

ERAS is a platform offered by the AAMC and used by most specialties for senior medical students applying for residency positions.<sup>1</sup>

The ERAS application helps you get a foot in the door with an interview invitation. In addition, it provides content, so residency program leaders can learn about you and help prompt interview discussion. Furthermore, the application helps guide the program director's rank list.

## How Do I Create an ERAS Account?

Registering for ERAS requires a "token" that will be provided to your medical school's Dean's office.

**IMG Students:** Visit [ECFMG.org/ERAS](http://ECFMG.org/ERAS) to obtain an ERAS token via the Online Applicant Status and Information Systems (OASIS) portal. Graduates of Canadian medical schools should visit [CaRMS.ca](http://CaRMS.ca) for information how to register for ERAS.

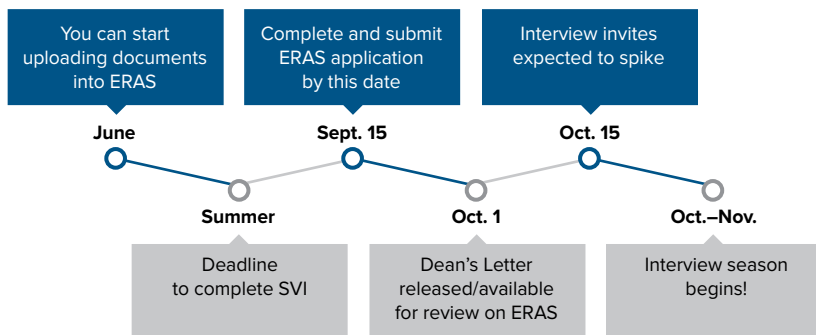
**Military Match:** The military uses a separate application system through MODS (Medical Operational Data System); however, you must also apply through ERAS to be considered for civilian programs in case of deferment.

## Know The Timeline

Keep key dates in mind when approaching the application process. The first is the date ERAS opens and you can begin editing your application and uploading documents. Historically the opening date was July 1; however, for the 2019 application cycle, ERAS opened earlier (June 7) so applicants could have more time to work on their application. Also new to the 2019 application cycle, ERAS began allowing students to start applying to ACGME-accredited programs in early September (September 5).

Residency programs are granted access to applications and supporting documents beginning September 15 at 9 a.m. ET. All applications submitted up to this point will be stamped with that date and time. The early submission window was created simply to avoid technical difficulties related to the huge volume of applications being submitted simultaneously. Submitting your application before September 15 will help reduce the possibility of overwhelming the website, but it will not give you any advantage in terms of when programs will receive your application.

**FIGURE 71. Important Dates**



## Stick to the Timeline!

Some program leadership may start looking at applications on Sept. 15 while others wait until Oct. 1 when the MSPE is available. However, it is imperative that you submit your application as close to Sept. 15 at 9 a.m. ET as possible. In a prior survey of PDs, only 15% of respondents stated that it was “highly likely” that an application would be reviewed if it were completed after the ERAS opening date.<sup>6</sup>

Regardless of when you apply, once you certify and submit your application, you will not be able to make changes other than on the Personal Information section and uploading additional letters. Consider assembling your application in June of your fourth year to avoid delays.

**Military Match:** The deadline for initial application to military programs through MODS is the second week of September, and supporting documents are typically due Oct. 15. Rank list is usually submitted around this time as well. Keep these military-specific deadlines in mind as you must complete both MODS and ERAS simultaneously.

**Latecomers:** Don't wait for rotations or letters. Submit your application on time. A program will wait for a letter, but they won't wait for you.

## The Components of ERAS

- Personal and Biographic information
- Curriculum Vitae (Education, Experience, Licensure, Publications)
- Personal Statement
- Letter(s) of Recommendation
- USMLE Transcript and/or COMLEX-USA Transcript
- Medical Student Performance Evaluation (MSPE or “Dean’s Letter”)
- Medical School Transcript
- Standardized Video Interview Video
- Photo (optional)

## Personal and Biographic information

This section is where you enter your basic demographic and biographic information as well as military service obligations and whether or not you are couples matching. There is also a section for you to include your NRMP match ID, which you will get when you register for the NRMP Match. This is a separate process from creating and submitting your ERAS application. You must go to the NRMP website ([www.nrmp.org](http://www.nrmp.org)) to register. Note that NRMP match ID registration does not open until Sept. 15 at 12 p.m. EST. You do NOT need this ID number in order to submit and certify your ERAS application, and you can add it later — so don't wait for it.

**Couples Match:** Discuss with your advisors and partner if you will disclose your couples match status on ERAS. There are benefits and potential risks of doing so. You are not mandated to disclose. A handful of programs may want to avoid EM-EM couples. Additionally, if a partner is applying to a specialty that is not offered at the same institution, some PDs may not be aware of the non-EM training programs offered at hospitals nearby, leading them to think the interview may be low-yield.

## Curriculum Vitae

The CV is simply a combination of several individual sections within ERAS that is compiled into a different format for readers in case they prefer to view the items in one document rather than on separate tabs within ERAS. These individual sections include **Education** (along with awards, membership in professional societies, languages spoken, hobbies/interests, and interruptions in medical training), **Experience** (research, work, and volunteer), **Licensure** (board scores, life support certifications, prior licensure information), and **Publications**.

While board scores, SLOEs, and medical transcripts provide objective data for residency program leadership, this section allows you to describe accomplishments outside of the classroom/wards, as well as to highlight personal qualities and attributes not captured elsewhere in the application. This section is often thought of as the “X-factor” of your application and helps reviewers gauge if you resonate with the program’s values. There is a real opportunity to stand out from other applicants; just listing your experiences does you a disservice. The application is much stronger if you include brief details of each activity to highlight your role and specific characteristics you developed through each experience. Demonstrate what you learned from each experience or how it made you a better person. Also, take advantage of the personal interests section. This is one of the few chances you will have to talk about yourself outside of medicine, and it’s frequently a great springboard for conversations during program interviews. A common pitfall in this section of the application is exaggerating the amount of time committed to each activity. Be truthful always.

**At-Risk Candidates:** Applicants with a history of felony or misdemeanor convictions will be required to disclose this. There will be a text-box to provide details. An applicant with this history is best served accepting responsibility, taking ownership of any mistakes, and demonstrating conscious changes for the better.

**Latecomers:** Include activities and accomplishments in other fields on your CV if they are substantial. Leadership, work, and research in other specialty areas may still be relevant. EM as a specialty requires a broad set of skills and interests.

## Personal Statement

Personal statements can cause a high level of anxiety. How do you write a personal statement that captures your excitement as you apply to the field you want to practice? What is the role of the personal statement? How does it differ from other parts of your application? How much will it matter? **A survey of EM residency directors showed the most influential components of residency applications are SLOEs, residency interviews, EM evaluations/grades, and clinical clerkship grades. The personal statement ranked below all of these components in importance.**<sup>2</sup> This is good news and bad news. It is unlikely a great personal statement will make up for an application that is otherwise poor, but sometimes a great personal statement can tip the scales in your favor.

So how do you write such a statement? The personal statement allows the residency selection committee to “meet” you before meeting face-to-face. Introduce yourself. Show (rather than tell) programs that you have the qualities to be a great resident by using examples from your previous experiences and achievements. Writing about how much you enjoy emergency medicine does not distinguish you from any other applicant; focus instead on what makes you unique. Describe the challenges you’ve faced to demonstrate your ability to persevere. Highlight how your previous experiences show your passions, values, and goals, and how you plan to channel your intelligence, creativity, and compassion into your career. Don’t go overboard by including examples from every previous experience; you will have a chance to talk about these in the experiences section. Choose a few examples that really highlight who you are and what you’re looking for in a residency. Committees want to know you will be a good fit with their program, so discuss what you are looking for in a residency program and what you want to gain from the next 3–4 years of your life. Make the personal statement *personal*.

Other essential facts that apply to all writing you are submitting apply here too.<sup>3</sup> Edit your statement, put it away for a few days, then edit again with fresh eyes. Have those you trust read it as well. Take the recommendations with a grain of salt, but make sure you correct all spelling and grammar.

Although it is stressful, try to have some fun with the process. It is, by definition, the most personal part of the application. Allow yourself to reflect on what makes you really *you*, and let that shine through.

Each statement is limited to 28,000 characters. There is no limit to the number of personal statements that can be created, and you can create program-specific personal statements (but be very careful not to send the wrong statement to the wrong program).

**At-Risk Candidates:** Applicants who have a facet of their application that is likely to be considered a red flag, such as a USMLE or course failure, a felony or misdemeanor conviction, an unaccounted for gap in their CV, etc., should use the personal statement to address these issues. This is likely the first place a reviewer will look for an explanation. If they do not find one, there is little incentive for them to go any further in considering you for an interview. Take ownership of your past and do not make excuses. Articulate how you have emerged from your challenges better equipped for a career in EM. And most important, have your advisor read your statement and give you feedback.

**Latecomers:** The personal statement may be a good place to explain how you came to EM as a specialty, but keep it succinct. Perhaps you had an “Aha moment,” so feel free to tell your story. Be sure your statement also shares experiences that convey the bigger picture of who you are and what you have to offer.

**Dual Accreditation:** Students applying to both EM and EM-combined programs or programs in a different specialty have the ability to upload multiple personal statements.

## Letters of Recommendation

In Chapter 5: Applying for Away Rotations, it was discussed that the SLOE obtained at the end of each EM clerkship is the single most crucial component of your application and that two of them are recommended.<sup>2,4,5</sup>

ERAS allows you to submit a maximum of 4 LoRs to each program, but it is not necessary to upload 4. It is variable how many total letters a program will want before they consider a student’s application to be “complete enough” to offer an interview. **It is important to know that after four LoRs are assigned to a program, you can no longer remove/add LoRs.** Therefore, if you performed a later away rotation (September or later) but are counting on this rotation for a SLOE, it is important to leave one LoR spot open for this SLOE at the time of your initial application submission. **Additional letters can be added as they become available, but do not delay submitting your applications while waiting for SLOEs to be uploaded.**



Within ERAS, you must enter the names and titles of your letter writers, the specialty the letters will be used to apply to (emergency medicine), and whether or not they waive the right to view each LoR. In general, applicants normally waive the right to review their LoRs, allowing letter writers to provide an honest assessment. Once a LoR entry has been confirmed, you will be provided with a unique Letter ID and Letter Request Form that can be delivered to LoR authors by email directly from ERAS (with an optional custom message), or downloaded as a PDF, with instructions on how to upload your LoR.

**While having both SLOEs uploaded by Sept. 15 can be to your advantage, it's not a deal-breaker; many programs will still consider you with only one SLOE at the time of file review and interview offer — both will just need to be uploaded by time of applicant ranking.** A third SLOE is rarely suggested but may be beneficial if you have red flags or had a challenging rotation.<sup>7,9</sup> On the EMRA Match website,<sup>10</sup> programs list how many SLOE(s) they expect to consider an applicant for an interview.

In addition to the 2 SLOEs recommended from your clerkship experiences, you can add LoRs from another EM faculty member with whom you have worked closely (for example from a subspecialty rotation such as ultrasound, toxicology, EMS, etc.) or from a non-academic EM physician or a physician not in the specialty. However, it is important to note that SLOEs generated by EM experiences that are affiliated with a residency training program carry more credibility than a LoR from a non-academic EM physician or a physician not in the specialty.<sup>5</sup>

**Latecomers:** While studies show a LoR from a physician in a specialty other than EM carries less value than a SLOE, you may have a mentor or advisor from a different specialty who has worked closely with you.<sup>4</sup> You can consider including a non-EM LoR if you had a strong relationship with the writer. Be sure to leave room in ERAS to upload 2 SLOEs before submitting your rank list.

## USMLE or COMLEX Transcripts

Within ERAS, applicants must authorize the release of their Step scores from the NBME by entering their USMLE ID and paying a transcript fee. You can track the status of your transcript request by logging back into ERAS. If your Step 2 scores are not available at the time of your initial application, you must log back into this section of ERAS and select “Resend My Scores.”

*Guidance about when to take USMLE Step 2 CK can be found in Chapter 3: Third Year and Planning for Fourth. Information about how your USMLE/COMLEX scores should influence your application strategy can be found in Chapter 8: Apply Smarter, Not Harder: Understand Your Competitiveness.*

**Osteopathic Students:** You can upload COMLEX-USA transcripts, USMLE transcripts, or both. If uploading COMLEX-USA transcripts, you must authorize their release by entering your NBOME ID and paying a transcript fee, similar to the process for uploading USMLE scores. As mentioned in Chapter 2: The Preclinical Years, osteopathic students who take USMLE are more likely to match at ACGME programs. There is no direct conversion from COMLEX to USMLE scores for programs to compare you apples to apples. Refer to EMRA Match for programs that will accept COMLEX scores alone when helping make your application decisions (hint — it will not be a majority of programs!).<sup>16-18</sup>

**IMG Students:** USMLE transcripts for IMGs are released by ECFMG rather than NBME.

## Medical Student Performance Evaluation (Dean's Letter)

The MSPE is not a letter of recommendation, but rather a summary of your performance throughout medical school. The MSPE is a valuable part of your application because it gives a broader perspective of your four years of medical school. This evaluation emphasizes strong attributes demonstrated throughout your medical education, highlights your accomplishments during this time, and addresses any red flags or difficulties. It also provides a narrative to your clinical clerkship performances. The MSPE traditionally includes your rank compared to classmates, and this can help you gauge your competitiveness as an applicant; however, not all medical schools have a class ranking system. In this case, your school will indicate this in the MSPE. Check with your dean ahead of time to understand your institution's process so you understand your own competitiveness. Training programs do not rely heavily on this component of the application when selecting applicants for interview, likely because it is released later than the rest of your residency application (Oct. 1 compared to Sept. 15). However, the MSPE is rated highly in importance when it comes to deciding how to rank applicants.<sup>2</sup>

**At-Risk Candidates:** Be familiar with your MSPE so you can address any red flags such as course failures or professionalism issues in your personal statement and during your interviews. Take ownership of the issues, reflect upon what you have learned, and be ready to explain the changes you have made to ensure that the past will not repeat itself during residency.

**Latecomers:** If you changed specialty choices, be sure to update your dean as soon as possible. They may choose to emphasize different aspects of your strengths or accomplishments as they relate to EM.

## Medical School Transcript

This is simply a list of your pre-clinical and clerkship grades, which is released prior to the MSPE. Your MSPE will provide more detailed information about your clerkship performances. By the time you are putting together your ERAS application, there is not much you can do about any of this information. While basic sciences grades have been ranked lower in terms of importance to residency programs, performance in required third-year clerkships is cited as being heavily valued.<sup>2,4</sup>

## The Standardized Video Interview

The SVI is a pilot project by the AAMC to improve the residency application process. As of the 2019 application cycle, the SVI is considered a mandatory component of the ERAS application for EM-bound students. If you are unsure about emergency medicine or considering another specialty, take the SVI prior to the deadline. If ultimately you do not pursue EM, the SVI data will not be used in your application to your chosen specialty. However, if you do decide on EM but did not complete the SVI, your application could be viewed as incomplete. *Note: ERAS will not ban students who do not complete the SVI from applying to EM programs.*

The goal of the SVI is to assess two main competencies for which PDs currently report having inadequate tools to evaluate: interpersonal/communication skills and professionalism. The overarching goal is to recognize applicant qualities beyond academic metrics that may not otherwise be represented on the ERAS application.

The SVI usually opens to students in early June and closes in mid-July. Applicants with extenuating circumstances (ie, military duty or severe illness) can request an extension from the AAMC. Applicants who indicate on ERAS that they are applying to emergency medicine will receive an email within 24 hours inviting them to complete the video interview. The SVI can be completed any time before the deadline, from any personal device with a web camera and internet (computer, laptop, tablet, or smartphone). The interview does not need to be completed in one sitting, as long as all questions are completed by 11:59 p.m. ET on the day it is due. However, once an individual question is started, the response clock begins and interviewees must respond to that question.

The SVI consists of 6 questions: 3 designed to assess interpersonal/communication skills and 3 evaluating professionalism. Applicants have 30 seconds to read the text prompt and up to 3 minutes to provide a response. This is a one-way interview system, meaning you will not be interacting with a human interviewer. The videos will be graded by human resource professionals who have been trained to recognize and eliminate bias. Each of the 6 questions will be graded by a separate rater who will generate an objective score between 1 (low) and 5 (high) based on a rubric for professional behaviors, interpersonal and communication skills.

A third party, HireVue, is responsible for the technical operation. You should complete the technology check available through HireVue to ensure the microphone and visual components are functioning correctly prior to starting the SVI. **Do not skip this step!** Also, there are 2 full-length, ungraded practice interviews available through the HireVue system. You have unlimited opportunities to complete these practice interviews, free of charge. Take advantage of them. The SVI format may be more challenging for you than a person-to-person interview, and you will have only one opportunity to complete the SVI!

Treat the SVI like any other residency interview. Present yourself professionally and dress as if this was an in-person interview. Be aware of your body language by watching a video of yourself, and practice with a classmate or mentor for feedback. Perform the interview in a distraction-free area to avoid background noise. Do not share the questions with other applicants. Prepare for the SVI in the same manner you would for a traditional interview. Applicants may benefit from brainstorming experiences ahead of time that highlight their communication and professionalism skills. Review preparation materials available through the AAMC and take advantage of the practice tests. AAMC survey data found that the 92% of students who prepared in some sort of way averaged one point higher than the 8% who did not prepare. They also showed that the location in which students performed the SVI did not affect outcomes, with 75% being performed at home.<sup>12</sup>

It is still unclear how program directors will interpret these data or how the SVI score (or videos, which are also viewable by PDs) will affect your application. Some programs may use the data to help screen out someone who does poorly, while others may use the SVI to invite applicants who may not have otherwise been interviewed. Many programs may choose not to use the SVI at all.

In an abstract presented at a 2018 SAEM conference, Dr. Melissa White found that the SVI did not change the likelihood of being interviewed in 93% of cases. However, on further subgroup analysis, SVI scores in the 6–11 range decreased the likelihood of being offered an interview by 64%.<sup>13</sup> For this reason, it may be reasonable to address a low SVI score with your advisor.

**Latecomers:** You are able request an extension of the SVI deadline if your first EM clerkship started on or after July 16. Deadline for extension requests in 2018 was Aug. 30. The SVI must be completed by Sept. 15. If you did not complete the SVI by July 15 and did not submit a request for extension, your SVI will be scored as incomplete. If you received an extension, but did not complete the SVI by Sept. 15, you will receive an incomplete.<sup>15</sup> The significance of an incomplete SVI score at the time of this publication is still unknown. If you are considering EM, but are unsure, take the SVI before July 15 just to be safe.

## Photo

This is optional, but the vast majority of applicants do upload a photo to ERAS. While your photo does not need to be from a professional photographer, you need to appear professional. No selfies!

## THE BOTTOM LINE

- ✓ Be honest on your application; do not inflate your accomplishments or involvement in anything. Program directors also look for congruence. They want to make sure the person they interact with on the interview day is consistent with the person they see on paper.
- ✓ Anything on your application is fair game to be discussed further in an interview. If it is on your application, be prepared to talk about it!
- ✓ Spelling and grammar errors can be a kiss of death. Spend time making your application clear, crisp, and error-free. From the ERAS site, you can print your application to review for errors. Have friends, family, and mentors read over your application before you submit.
- ✓ Prepare for the SVI. However, it is still unclear how program directors are using this tool or whether it will expand from a pilot project, so try not to stress too much.
- ✓ Stick to the timeline. It is OK to not have 2 SLOEs uploaded by Sept. 15, but you must have your application submitted by this date. **Do not submit late!**



# Apply Smarter, Not Harder

## *Understand Your Competitiveness*

**Let's get to the burning question that every applicant asks:** How competitive am I? While a book chapter can never replace an EM-specific advisor who is familiar with your application's strengths and weaknesses, we do have survey and analytical data from the NRMP and residency program leadership<sup>1-13</sup> to help you better assess your level of competitiveness, thereby helping you apply to residency in a more informed and confident manner. Take a deep breath — while every applicant has their strengths and weakness, the vast majority of applicants fall into the competitive category, so it is likely that you do, too!

### **What is competitiveness in the EM match?**

Competitiveness is your ability to match; this closely correlates with the likelihood of obtaining enough interviews to match. EM competitiveness is influenced through tangible factors such as grades, board scores, class rank, and letters of recommendation and can be qualified based on nationally available data. Your ultimate success in the match is greatly affected by your application strategy, which requires careful consideration with an EM-specific advisor.

### **What is the difference between being nationally, regionally, or locally competitive?**

Local competitiveness is difficult to predict. Your competitiveness within a specific locality or hospital may center around personal relationships, which have developed over time, in addition to more standardized qualifications such as national board scores and letters of recommendation. Moreover, individual programs will emphasize different application components that might change how competitive you are within that locality. You can ask your academic advisor for insight.

Regional competitiveness might be influenced by relationships but may also be influenced by a rotation or letter of recommendation generated from a rotation within that same region. Program leadership places increased influence upon

letters and evaluators with which they are familiar — in a 2014 program director survey, 97% of respondents agreed that, “Knowing the person who wrote the SLOR [now known as the SLOE] increases its value to my decision-making.”<sup>8</sup> While some programs within a region share some of the same preferences or priorities when selecting candidates,<sup>9</sup> not all do, thus making regional competitiveness also challenging to predict.

National competitiveness is more broad but easier to qualify in terms of common residency application components, including grades, board scores, class rank, and letters of recommendation. National data on competitiveness presented in this document represent data that historically have predicted a successful match into EM and the preferences and general consensus opinion of those individuals who are involved in allocating interviews and generating rank lists at EM residency programs.

**Osteopathic and IMG Students: See Chapter 4: Finding Your Fit: Choosing Where to Apply.** Figure 4.2 for information about which states historically match the most osteopathic and IMG applicants. By focusing applications where there are both more programs and more spots, osteopathic and IMG applicants can maximize their opportunities to match.

## Filters & Their Role in Your Competitiveness

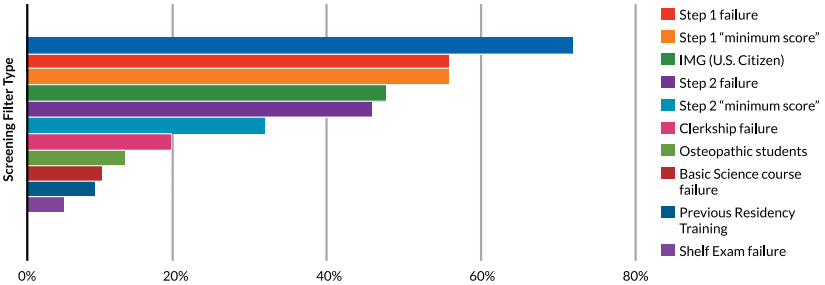
As mentioned above, your ability to match closely correlates with the likelihood of obtaining enough interviews to match. As the number of residency applications per medical student increase each year, residency programs need to find ways to wade through the increasing number of applications they receive. One of the solutions employed by a little more than half of programs (54%) is applying screening filters to help determine which files to review further for interview offer.<sup>15</sup> Figure 8.1 details the most commonly used filters and the relative frequencies of screening filter use by programs that report using filters.<sup>13</sup>

While program directors still give board scores a lower importance rating than SLOEs, grades in EM, and EM rotation performance when determining who to offer interviews (3.8/5 compared to 4.8, 4.5 and 4.5, respectively)<sup>5</sup>, approximately 55% of programs in the survey from Figure 8.1 report using filters for Step 1 failure and a Step 1 “minimum score.”<sup>13</sup> According to the 2018 NRMP PD Survey, 62% indicated they wanted program candidates to have a target score when deciding which applicants to interview.<sup>5</sup> EMRA Match shows 41% of programs reported using a cutoff and 15% of programs declined to disclose whether or not they use a cutoff.<sup>11</sup> In another survey, 10% of programs require a USMLE Step 1 score of greater than 220 to offer an applicant an interview.<sup>9</sup>



Therefore, your board scores are important! But you'll soon see that this is just one piece of the puzzle in determining your overall competitiveness.

**FIGURE 8.1.** Relative Frequencies of Screening Filter Type by the 54% of EM Programs that Report to Using Them (n=71)<sup>13</sup>



**IMG Students:** The most frequently used filter reported by programs is IMG (Not US Citizen) — reported by >70% of programs. Target the majority of your applications towards programs that have historically accepted IMG applicants into their program — this can be searched on EMRA Match.

**Osteopathic Students:** The 2018 NRMP program director survey showed that 81% of ACGME program directors will offer interviews to osteopathic students.<sup>5</sup> In the 2018 NRMP Match, 81.6% of U.S. Osteopathic Seniors applying to EM matched, compared to 91% of their allopathic peers.<sup>2</sup> These match rates do not include students who participated in the AOA match, and it will be difficult to know if a true difference in match rates exists until all programs have transitioned to ACGME accreditation and participate in the same match.

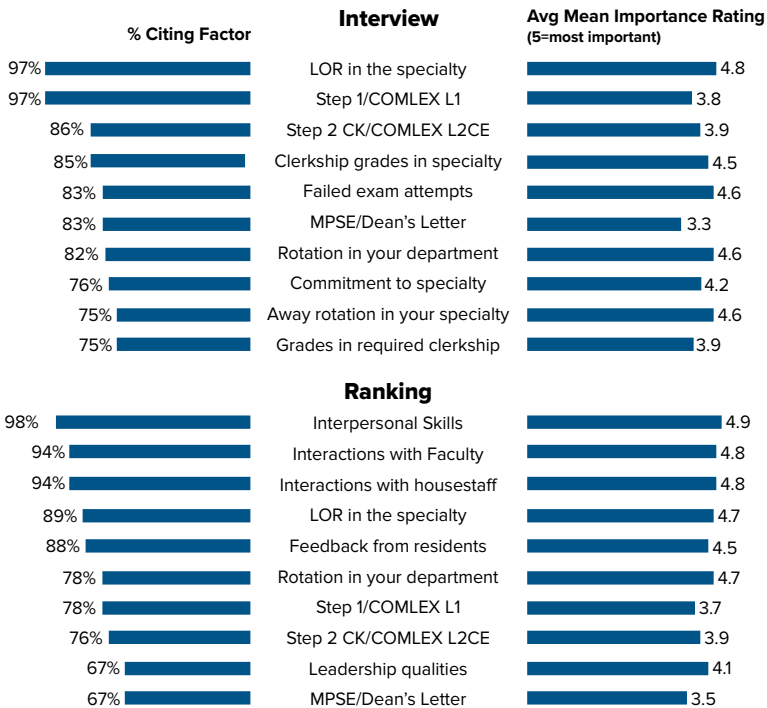
**At-Risk Candidates:** If you have a USMLE score < 225, use a search engine such as EMRA Match to identify programs who are unlikely to filter out your application based on this single criterion. A declared Step 1 cutoff score does not mean an applicant with a lower score should absolutely not apply to that program, but rather that the applicant should be realistic about having a lower chance of obtaining an interview invitation there.

If you are an applicant who has the potential to be filtered out by more than one of the reported filters in Figure 8.1, you likely fall into the *Marginally Competitive* category (see below). It is extremely important that you meet with an EM-specific advisor to discuss a possible parallel plan.

## Which factors are most influential in increasing candidate competitiveness?

There is a difference between the factors that will help you garner the interview and the factors that affect your position on a residency program's rank list (Figure 8.2).<sup>5</sup> **The SLOE and related factors (such as grades in your EM clerkships and EM rotation performances) are highly influential in both interview offer and ranking.**<sup>5,9</sup> It is important to recognize that some of the other factors that affect your chances of an interview offer may not be as influential in final ranking (for example, board scores). After you get your foot in the door, interpersonal skills and interactions with individuals on your interview are the most influential components in ranking. See Figure 8.2 for further delineation of factors that are important in selecting applicants for interview offer versus factors that are important in ranking applicants.

**FIGURE 8.2.** Top 10 factors program directors use in selecting applicants to interview and in ranking<sup>5</sup>



Adapted from National Resident Matching Program: Results of the 2018 NRMP Program Director Survey

**Military Match:** Most military programs state the audition rotation is the MOST important factor in a student's application.

**Latecomers:** An away rotation is also a month-long interview. If you have the opportunity to rotate with a program, you are evaluated by your future colleagues on a daily basis. This opportunity to work with you has been ranked a 4.6/5 by program directors in extending interviews.<sup>1</sup> Only SLOEs ranked higher in the 2018 survey.<sup>5</sup>

Moderately influential factors in inviting applicants to interview included:

- Personal knowledge of the applicant
- Evidence of professionalism and ethics
- Leadership qualities
- AOA membership
  - *The percentage of individuals who were AOA members who matched into EM was 12.4% while the percentage of AOA members among those who didn't match into EM was 0.7%, suggesting that AOA members are more competitive, but that AOA designation does not guarantee a match.<sup>1</sup>*
- Perceived interest in the program
- MSPE (also known as the "Dean's Letter")
- Medical school reputation
  - *The percentage of individuals matching into EM who came from a "Top 40" medical school as it relates to NIH funding was 27.6% and was 19.9% for those not matching, again suggesting that the name or reputation of a school may influence a candidate's competitiveness.<sup>1</sup>*

Less influential components included:

- Overall or mean number of research experiences
- Overall or mean number of abstracts<sup>5</sup>
- Overall or mean number of presentations or publications<sup>5</sup>
- Overall or mean number of work experiences or volunteer experiences<sup>5</sup>
- The percentage of individuals who had obtained a PhD or other degree did not remarkably differ between those who matched and those who did not.

## Which factors are most influential in decreasing candidate competitiveness?

- Any failed attempt on a USMLE/COMLEX exam
- Low grades in an EM clerkship

## The SLOE seems to hold a lot of influence, but I can't read it. How do I evaluate the competitiveness of my SLOE?

SLOEs are routinely rated highly in terms of impact in selecting candidates for interviews.<sup>5,6,9</sup> However, candidates usually forego the right to read the letters. It would be improper to ask a letter writer or a program to disclose the information on the SLOE or to specifically ask where a candidate is likely to be ranked. Therefore, we recommend asking the letter writer for a full evaluation at the end of the rotation, including a grade, and asking how well that grade and the overall performance compares to others who have rotated this year or last year. We also recommend asking the letter writer about the anticipated level of support for their candidacy, as this approach maintains professional integrity, but, at the same time also informs the candidate of his or her anticipated competitiveness.

**At-Risk Candidates:** Rather than simply asking for a SLOE, be more specific and ask if the letter writer is able to write a supportive SLOE. This opens a dialogue that could help you understand your competitiveness.

## How many SLOEs do I need to be competitive? Do more of them make me more competitive?

Depending on some predetermined factors, most candidates in the range from *Competitive* to *Very Competitive* will be advised to do 2 EM rotations at an institution with an EM residency program, and candidates in the *Less Competitive* range will be advised to do 2–3. There is rarely a reason to do 4 or more EM rotations. It is generally expected to obtain a SLOE from each of these rotations.

Unfortunately, some individuals get advised to do as many EM rotations as possible. However **more does not necessarily translate to better**. Performing at a high level consistently on 3, 4, or 5 EM rotations takes a lot of effort and stamina. Expectations for each subsequent EM rotation are likely to be very high, as you will be expected to have accumulated a lot of experience at that point. There is also a point of diminishing returns where you may be viewed as an over-achiever or as though you're trying to overcompensate for another part of your application. EM is a community that attempts to support its members, and when you elect to perform 4–5 clerkship rotations, you selfishly keep others from participating, violating the community-centered principle. Program directors look for these patterns and recognize these behaviors. It is not uncommon for PDs to question candidates who complete more than 3 rotations.

**Osteopathic and IMG Students:** If you are only able to obtain one academic rotation due to lack of a home rotation, make the absolute MOST of it to obtain the strongest SLOE possible. Use EMRA Match to help determine programs' willingness to offer an interview with one SLOE.

## Do the timing of my SLOEs influence my competitiveness?

While it is ideal that two SLOEs are present in the application at the time of submission, many programs recognize you cannot always complete two EM rotations and obtain SLOEs by the mid-September deadline. EMRA Match identifies programs willing to offer an interview with zero, one, or two SLOEs; use this data if you will not have a second SLOE available by time of interview offers (October). If you obtain a SLOE after submitting your application, consider emailing programs to make them aware that an additional SLOE is uploaded and ready for review. Refer to Chapter 5: Applying for Away Rotations for further data informing your competitiveness with regard to timing of your SLOEs.

## How do board scores affect my competitiveness?

Board scores, like SLOEs, provide another objective comparative parameter. As already discussed, many programs use USMLE Step 1 scores as a screening tool, and many will not interview applicants with a failed USMLE Step 1 or Step 2 CK score.<sup>5,9,11</sup> Each program has different cut-offs for what they consider to be competitive. Ultimately, the decision to grant an interview is multifactorial, and scores alone may not guarantee an interview.

## What is a good score on USMLE Step 1 for applying to EM?

Providing exact competitiveness cut-offs for USMLE Step 1 is challenging. We have used several resources<sup>1,3,6,7</sup> and figures to support the competitiveness ranges below with regard to USMLE Step 1 scores. Refer to Figure 8.3 for a better idea of probability of matching by USMLE Step 1 score.

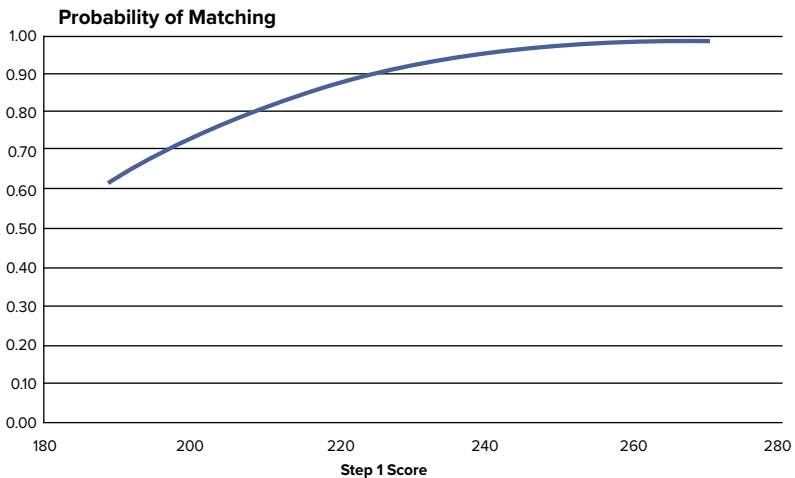
- Marginal Competitiveness: < 200
- Less Competitive: 200–219
- Competitive: 220–239
- Very Competitive: > 240

**Osteopathic Students:** It is important to consider these numbers if/when preparing for USMLE. It is a different exam than COMLEX and will require you to adapt how you study and prepare.

**IMG Students:** Aim for >240 score to be competitive.

**At-Risk Candidates:** It is important to note that 63% of applicants who scored between 191 and 200 on USMLE Step 1 matched in the 2018 match cycle.<sup>1</sup> A survey of EM educators demonstrated that approximately half of programs will not consider an applicant who has failed USMLE Step 1, but almost all do consider applicants with below-average scores.<sup>6</sup> Work closely with your advisor to apply smartly and use other sections of ERAS to highlight your competitive qualities and other accomplishments. Applicants who have a USMLE Step failure or lower USMLE scores in combination with a weaker overall application (lower 3rd year and/or EM clerkship grades, etc.) need a non-EM backup plan, though applicants with below-average scores in the setting of an otherwise competitive application do not.

**FIGURE 8.3. Probability of Matching by Step 1 Score<sup>1</sup>**



Source NRMP Data Warehouse. Note: Probabilities calculated based on 2016–2018 applicants.

Copyright ©2018 NRMP. Reproduction prohibited without the written permission of NRMP

**Charting Outcomes in the Match  
U.S. Allopathic Seniors, 2018**

## How important is USMLE Step 2 CK?

The 2018 NRMP Program Director survey suggests that the USMLE Step 2CK/COMLEX Level 2 CE is just as an important — if not more so — than USMLE Step 1/COMLEX Level 1.<sup>5</sup>

The number of programs that require completion of Step 2 CK in order to offer an interview is unclear — surveys indicate as few as 5%<sup>10</sup> but up to 48%.<sup>5</sup> Your safest bet is to complete Step 2 CK in time for your score to be released by October 1.

**Osteopathic Students:** Taking and doing well on USMLE Step 2 CK can really bolster your application and help you be viewed on an even playing field when comparing numbers apples to apples.

**At-Risk Candidates:** To improve their chances of being considered for an interview, students with a lower USMLE Step 1 score should plan to study for and take USMLE Step 2 CK in time to have the score available when ERAS opens on Sept. 15.

## What is a good score on USMLE Step 2 CK for applying to EM?

- Marginally Competitive Candidates: < 210 (including failed USMLE Step 2 CK attempt)
- Less Competitive Candidates: 211–239
- Competitive Candidates: 240–259
- Very Competitive Candidates: > 260

## How important are my preclinical and clinical grades?

While basic sciences grades have been ranked lower in terms of importance to residency programs, performance in required third-year clerkships are cited as being heavily valued in multiple studies.<sup>5,9</sup>

EM rotation grades have been cited as very important to program directors year after year.<sup>5,9</sup> However, grade alone does not translate directly into a certain level of competitiveness. While the traditional grade breakdown is Honors/High Pass/Pass, some schools only give Pass/Fail or sometimes Honors/Pass/Fail grades. Schools also vary widely in terms of grade distribution (percentage of Honors vs High Pass vs Pass grades), which is reported on SLOE. So while a Pass grade generally equates to lower competitiveness, this may not be the case on a Pass/Fail rotation or on a rotation with a very high percentage of Pass grades. Likewise, an Honors grade generally equates to higher competitiveness, but this may not be the case if the majority of students at this institution obtain an Honors on their rotation.

For both third-year and EM clerkships, an upward progression of grades through rotations will be well received and a downward progression may be more poorly received.

### How important are extracurricular activities when applying to EM?

Extracurricular activities are a good way to show yourself as an individual and display what mattered enough for you to volunteer your time. This often comes up during interviews, so be ready to discuss anything you are listing. Leadership roles and involvement in medical school administration or interest groups can convey your dedication and work ethic. Focus on extracurricular activities that demonstrate leadership, commitment and hard work. It is doubtful that any one of these activities, on their own, actually predicts success or competitiveness in EM, though some programs will view these experiences favorably.

### How important are work experiences when applying to EM?

Generally, EM-related endeavors help augment your application. Examples of these may include work as a scribe in an ED, work as an EMT or paramedic, or other work in the health care field. Prior jobs incorporating multi-tasking and customer service skills, such as waiter or waitress, may also be viewed as helpful. However, it is worth noting that prior work experience is not viewed as a heavily influential factor in inviting applicants for interviews or for selecting candidates for ranking.<sup>5</sup> It is also worth noting that most candidates who successfully match into EM have at least one or more work experience listed, with an average of 3.5 work experiences.<sup>1</sup>

### How important is research when applying to EM?

The amount of research experience is not generally very influential in determining the competitiveness of a candidate.<sup>5,9</sup> However, this will vary from program to program. Programs with prominent research efforts may place emphasis on research. Four-year residency programs also place a greater emphasis on research and publications compared to three-year programs.<sup>9</sup> It is important to note that most candidates who successfully match into EM have at least one research experience, and an average of 2.5,<sup>1</sup> though not all of this research pertains to EM.

**Military Match:** Research is typically more important in military applications than civilian as this is given a high degree of weight in the military “point system.”

**IMG Students:** A 2018 poll indicates that research is not weighted as highly as previously indicated.<sup>6</sup>



## How many volunteer experiences should I have when applying for EM?

Volunteer experiences are not overly influential in determining your competitiveness.<sup>5</sup> However, they are tracked in ERAS, and candidates who successfully match into EM have an average of 7.3 volunteer experiences.<sup>1</sup>

## What red flags might significantly change my level of competitiveness?

- Academic struggle, such as failed Step 1 or Step 2 CK or failure of a clinical or pre-clinical course
- Unexplained gaps in medical education or unexplained intervals in the CV
- Professionalism issues, academic misconduct, or clerkship failures
- Criminal convictions, including felonies or misdemeanors

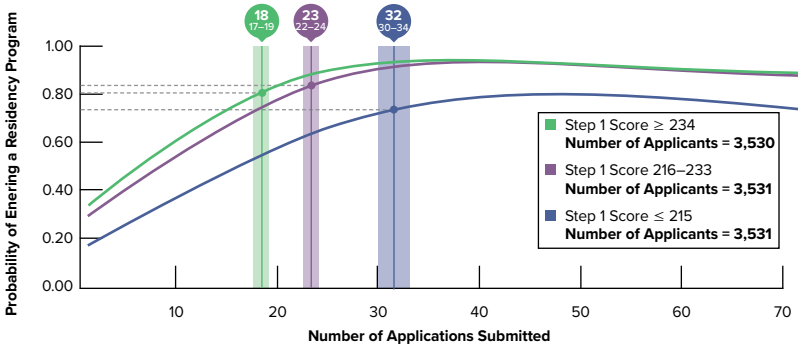
**At-Risk Candidates:** While not all of these carry equal weight, any one of them can negatively affect your application. A 2018 survey suggests that academic misconduct is most concerning, with 100% of residency leadership respondents never or rarely interviewing these candidates. The next most concerning red flag was clerkship failure, with 94% never or rarely interviewing these candidates.<sup>6</sup>

## So, how competitive am I?

This chapter has attempted to break up the separate components of your application and classify each in terms of relative competitiveness. You can generally view each individual component as additive towards an overarching level of competitiveness, though some components may be weighted more heavily than others, and weighting is program-dependent. **As you read this next section, remember it's more likely than not that you fall into the competitive category!**

The following competitiveness-based recommendations take into consideration the data cited thus far as well as the AAMC's graph on the point of diminishing returns for entering an EM residency program for U.S. MD applicants (Figure 8.4). The AAMC defines the point of diminishing returns as "the point at which the value added by submitting one additional application is reduced relative to the value added by each application."<sup>3</sup> Please remember the following recommendations are general guidelines and should never replace advice from an experienced EM-specific advisor who is familiar with you and your application's strengths and weaknesses.

**FIGURE 8.4. Point of Diminishing Returns for Entering an EM Residency Program for U.S. MD Applicants<sup>3</sup>**



Source AAMC Data Warehouse: ERAS file accessed on May 1, 2017.

1. Number of Applicants = 10,592; this analysis included U.S. MD applicants only.
2. The point of diminishing returns is the point at which the value added by submitting one additional application is reduced relative to the value added by each application before reaching the point of diminishing returns. The addition of one application beyond this point results in a lower rate of return on an applicant's likelihood of entering a residency program.
3. The point of diminishing returns is an estimate and is not perfectly precise. Therefore, confidence bands around the point of diminishing returns are provided. The lower and upper bounds of each confidence band are shown (a) below the point of diminishing returns in the circle and (b) by the shading around the vertical lines. The width of the confidence band describes the precision of the estimate, with wider bands indicating less precision.

*The following recommendations for number of applications are considerably lower than the average number of applications per applicant to EM (57.7 according to AAMC's 2019 preliminary data)<sup>14</sup> and represent an area where applying strategically rather than in larger numbers will have a better return on investment.*

## Marginally Competitive

Your application will have some of the following criteria but likely will not overlap that of any other category:

- USMLE Step 1: < 200
- USMLE Step 2 CK: < 211
- Only 1 EM rotation with no higher than a passing grade\*
- No SLOEs or a SLOE that is not supportive
- Little or no exposure to EM in extracurricular projects or interest groups
- Presence of a red flag: academic struggle (failed Step 1 or Step 2 CK, failure of a pre-clinical course or clerkship), gaps in medical education or CV, professionalism issues, academic misconduct, criminal convictions

How this affects your application strategy:

- You may not be well-suited for a residency in emergency medicine or may have to overcome significant obstacles. You should consider a search for alternative plans to emergency medicine (apply to a different residency type altogether), but may consider a parallel plan if you strongly desire (simultaneously apply to both emergency medicine and a different residency type as a backup/alternate).
- You may be tempted to apply to as many rotations and residency programs as possible. However, the return on this time and monetary investment may fall very short of expectations. If you are a marginally competitive candidate, seek guidance from both an EM advisor and a general academic advisor to develop an appropriate application strategy.

### Less Competitive

Your application likely will have some of the following components and none of the components of a competitive or very competitive candidate:

- USMLE Step 1: 200–219
- USMLE Step 2 CK: 211–239
- Fewer than 2 SLOES supporting a residency in EM
- Passing grades on EM rotations or a combination of Pass and High Pass grades\*
- Has limited exposure to EM through extra-curricular projects or interest groups

How this affects your application strategy:

- You may be well-suited for emergency medicine but should develop a residency search strategy with an experienced, dedicated, EM-specific advisor in order to optimize chances and align resources.
- Survey data of EM residency program leadership and advisors indicate that 72% of individuals would advise candidates in this category to apply to about 31–50 programs.<sup>12</sup> See Figure 8.5 for further breakdown of recommendations from this survey for an applicant that falls into the Less Competitive category.
- You should plan to apply to about 35–45 programs.

**Osteopathic Students:** Do not be deterred if you fall in this category. Just focus on finding an EM advisor and researching historically osteopathic friendly programs. Your likelihood of matching is still very high if you apply smartly.

## Competitive

The vast majority of applicants fall into this category! Your application will have at least 2 or more of the following components, but also may have some criteria of a very competitive or less competitive candidate:

- USMLE Step 1: 220-239
- USMLE Step 2 CK: 240-259
- 2 SLOES that support a residency in EM
- A combination of Pass, High Pass or Honors grades on an EM rotations\*
- Demonstrated commitment to EM in EM-related volunteer, research, or work projects

How this affects your application strategy:

- You are well-suited for a residency in emergency medicine and have a good chance at matching in emergency medicine. General advising resources will apply to you, though an EM-specific advisor is best at guiding you to success.
- Survey data of EM residency program leadership and advisors indicate that 85% would recommend candidates in this category apply to about 21–40 programs.<sup>12</sup> See Figure 8.5 for further breakdown of recommendations from this survey for an applicant that falls into the *Competitive* category.
- You should plan to apply to about 20–30 programs.

## Very Competitive

- Your application will have 2 or more of the following components:
- USMLE Step 1: > 240
- USMLE Step 2 CK: > 260
- 2 SLOEs that strongly support a residency in EM
- High Pass &/or Honors grades on 2 EM rotations\*
- Demonstrated commitment to EM in EM-related volunteer, research or work projects.

How this affects your application strategy:

- You have a very good chance at matching in emergency medicine and general advising resources and advice will apply to you, though an EM-specific advisor is best at strategizing for success. An applicant in this category should pursue their interests in the specialty and follow usual advice for the match.

- Survey data of EM residency program leadership and advisors indicate that 97% would recommend candidates in this category apply to about 11–30 programs.<sup>12</sup> See Figure 8.5 for further breakdown of recommendations from this survey for an applicant that falls into the *Very Competitive* category.
- You should plan to apply to about 15–25 programs.

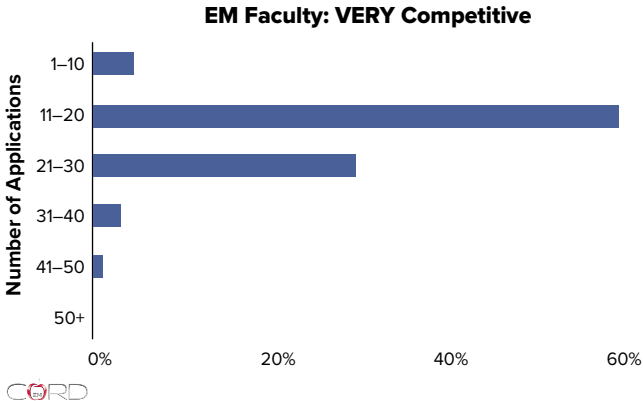
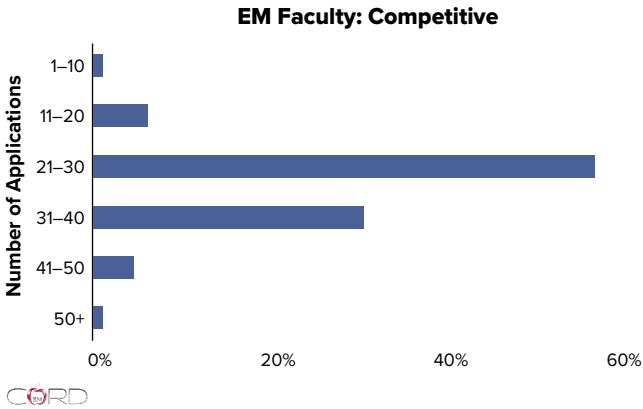
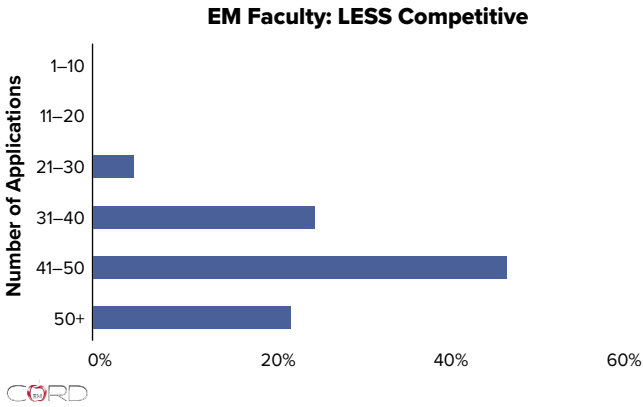
\*Some schools only give Pass/Fail grades or administer a very low percentage of High Pass & Honors grades. Letter readers will be able to see this and determine your performance based on other components of the SLOE, including comparison to your peers, but a Pass/Fail only course makes it more difficult to determine your own competitiveness. In this situation, it is especially important to ask your letter writer if they will be able to write you a supportive letter.

**Couples Match:** In a 2018 survey, a majority of EM faculty advisors recommend applying to a minimum of 31–50 programs when an “average” EM applicant is participating in the couples match (defined as high pass/honors grades, first-pass USMLE Step 1 score of ~230, 1–2 scholarly projects, and no red flags).<sup>6</sup> Consider applying to geographic locations with multiple programs in both of your specialties.

**Military Match:** Given the small number of military residencies, military students are encouraged to apply to ALL available military programs.

**At-Risk Candidates:** Consider the perceived competitiveness of a program to make sure you are applying to programs that are realistically within your reach. Assessing competitiveness is more of an art than a science, but there are several questions you can ask to help make this assessment. First, is the program in a highly desirable place to live? Second, does the program have “name brand” recognition that would look impressive on your CV? And third, is the program “EM famous” for their faculty or their longevity within the specialty? The more ‘yes’ answers, the more applications the program is likely to receive, and the more competitive the applicant pool for the program is likely to be. You should not refrain from applying to traditionally “competitive” programs, though it may be a good idea to consider these programs as a reach and not include them in your overall number count for applications.

**FIGURE 8.5.** Number of Applications Recommended by EM Advisors for Applicants Based on Competitiveness (n=200)<sup>12</sup>



## Tips for Increasing Competitiveness

There are many elements under your control, but by the time you apply to EM, some of them might already be settled. In that case, try these tips:

- Prepare for and do well on the USMLE Step 2 CK early enough that it can be included in your ERAS application at the time of submission in mid-September.
- Perform at your best during your EM rotations and obtain feedback from early EM rotations and mentors to augment your performance on future rotations.
- Rotate at 2 EM residency programs, ideally at your home institution and at an away institution. In some cases, a third rotation may be helpful, particularly if your home institution doesn't have an EM residency or if you're a less competitive applicant.

**Military Match:** Rotate and connect with as many military programs as possible.

- Find an advisor in EM to help you assess your competitiveness and identify strengths and weaknesses. Ideally this person should have experience in advising EM students, be part of core faculty of an EM residency program, and may be a clerkship director, program director, or associate program director.

**Orphan Applicant:** If your school isn't affiliated with a training program or if it lacks EM faculty for advising, consider joining EMRA, SAEM, or other professional organizations. Through EMRA's Medical Student Council, you can be paired with a resident mentor. Students can also participate in large-group virtual advising sessions through EMRA Hangouts every month. Keep in mind that you can also seek out advisors and mentors at programs where you rotate.

**Osteopathic Students:** Seek out early mentorship from someone connected in EM!

**IMG Students:** Mentorship in EM is always very helpful and helps keep you on track. The ACEP International Section offers a Rotation and Observation Database and can help connect you with a mentor.

**Latecomers:** If you are a latecomer to EM, then you likely have a previous advisor in another specialty. Outside advice will be helpful, but only EM-focused advisors will understand the entire process.

- Consider participating in research, getting involved in a national EM organization, and networking with EM physicians. The advice and networking that comes with these experiences can help you as much — or more than — the projects themselves.

**TABLE 8.1. Recommendations Based on Competitiveness**

Applicant Competitiveness	Step 1	Step 2	SLOEs	EM Grades*	Other Characteristics	Recommendations
Marginally Competitive	<200	<211	None/Not supportive	Pass	Presence of red flags	Pursue an alternate or parallel plan
Less Competitive	200–219	211–239	1 supportive	Pass/HP	Limited EM exposure	35–45 applications
Competitive	220–239	240–259	2 supportive	Pass/HP/H	Commitment to EM-related activities	20-30 applications
Very Competitive	>240	>260	2 strongly supportive	HP/H	Commitment to EM-related activities	15-25 applications

## THE BOTTOM LINE

- ✓ The vast majority of applicants fall into the competitive category — likelihood is that you do, too!
- ✓ In general, SLOEs tend to play the largest role in determining competitiveness.
- ✓ While great board scores can get you in the door, they are not as important when ranking — this is where intangibles like your interpersonal skills come into play.
- ✓ Your application, just like you, is multifaceted. There is no magic formula that guarantees success in the match. Work with your advisor to assess your own competitiveness by considering elements that are given the most weight by program directors and residency programs, as well as elements that have trended towards success in past matches.



# Interview Season Logistics

The interview season can be both an exciting and memorable part of your journey through medical school. While the logistics of planning your interview trail can seem daunting at first, understanding some trends in the match data and preparing in advance can ensure you make the most of it. There are some specifics about the interview process you should understand.

## How important are residency interviews?

Residency interviews play a crucial role in your match success. Each interview is a way for the program director, faculty, and residents to get to know you personally. Your performance on interview day is a significant factor in determining your placement on the program's rank list.

In the 2018 NRMP Program Director Survey, 98% of programs considered interpersonal skills an important factor in ranking applicants, and 94% considered interactions with faculty and residents on interview day a key component.<sup>1</sup> Together, these were considered to be more important elements in ranking applicants than USMLE/COMLEX scores, class ranking, volunteer/extracurricular activities, personal statements, or post-interview communications, just to name a few.<sup>1</sup>

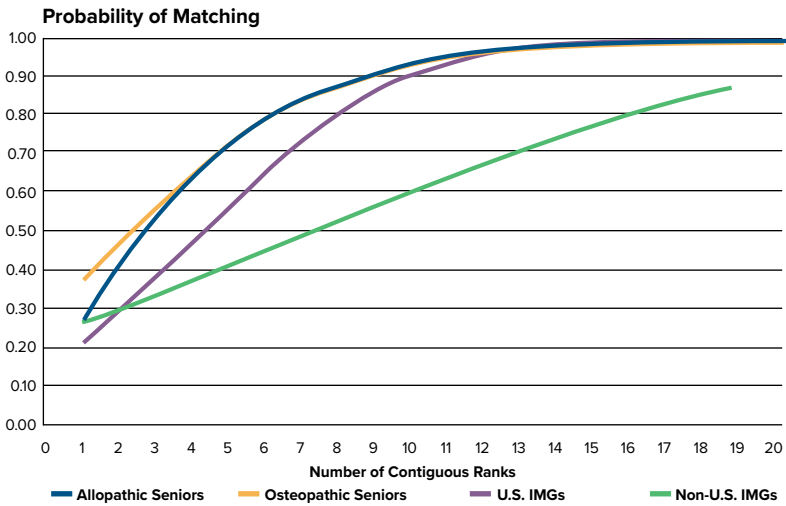
## How many interviews should I go on?

There is no universal answer to how many interviews will guarantee a match, but NRMP data can guide you. Your match depends on how you rank your programs and how the programs rank you. A match can only occur if both parties are ranked by one another, and programs will only rank you if they've interviewed you.

The probability of matching is related to the number of contiguous ranks.<sup>2</sup> For allopathic and osteopathic senior medical students, the probability of matching is 80% at around 6–7 contiguous ranks and becomes >95% at around 11–12.<sup>2,3</sup> Therefore, the typical applicant should aim for 11–12 interviews.

**Chapter 8: Understanding Your Competitiveness: Apply Smarter, not Harder** guided you on assessing your competitiveness. The application recommendations exist to support you in obtaining 11–12 interviews.

**FIGURE 9.1.** Probability of Matching to Preferred Specialty by Number of Contiguous Ranks<sup>2-4</sup>



Copyright 2018 National Resident Matching Program. All rights reserved. Reprinted with permission. Permission to use, copy, and/or distribute any documentation and/or related images from NRMP publications shall be expressly obtained from NRMP.

**IMG Students:** For non-U.S. IMGs, 18 contiguous ranks correlates to < 90% probability of matching.<sup>4</sup> Some programs will not interview IMGs at all; this data is available as a filter on EMRA Match.

**Latecomers:** If you applied particularly late in the season, you may face challenges getting the recommended number of interviews. If this is the case, work closely with your advisors and consider the following:

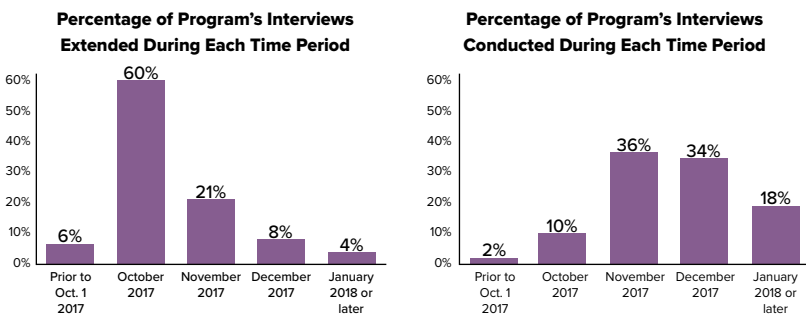
1. Don't intentionally go unmatched and try to scramble. EM historically has had few, if any, unfilled spots. Scrambling into another specialty is also highly risky and should be avoided.<sup>7</sup>
2. With your advisor's help, develop a back-up plan. Depending on your situation, this may mean dual applying to a preliminary/transitional year or another specialty. If you plan to re-apply in EM, make sure you understand GME funding rules to avoid future complications.

3. Splitting 4th year: Many medical schools have an opportunity to split 4th year. This maintains your eligibility for the match, does not create a gap year in your application, and maintains financial aid and GME funding.
4. Emergency medicine is a growing specialty, and brand-new programs occasionally fill their first class outside the match. This is uncommon, but worth exploring if the opportunity arises.
5. Don't expect to be able to complete a different residency, such as family medicine or internal medicine, with the expectation of practicing emergency medicine afterward. This is advice that many individuals outside of EM will offer as a secondary option. As EM grows, the demand for ABEM board-certified providers also grows. Without completing an EM residency, you will not be board-eligible. This leads to VERY limited job opportunities.
6. Above all, speak with your advisor and medical school deans about your options. Each program, applicant, and application is different, and expert advice and assistance can make the difference in whether you match.

## Juggling the Schedule

Many interview invitations are extended in October after the Dean's Letter is released; however, additional invitations occur throughout the entire interview season as students cancel and more dates become available. Generally, interviews are conducted in October through January, with the majority (>60%) occurring in November and December.<sup>1</sup> Appropriate scheduling and planning of your academic schedule is a vital part of ensuring that you have the availability to attend your desired interviews.

**FIGURE 9.2 Interview Activity<sup>1</sup> (n=84)**



Copyright 2018 National Resident Matching Program. All rights reserved. Reprinted with permission. Permission to use, copy, and/or distribute any documentation and/or related images from NRMP publications shall be expressly obtained from NRMP.

**Couples Match:** To save money, consider scheduling interviews together with your partner in the same city. Most programs report trying to coordinate schedules to allow couples to interview at a similar time, although this may be difficult.

**Military Match:** Students must arrange interviews with programs separately from the MODS application, often via email with the program coordinator early in the year. Some institutions may offer phone or video interviews — try to schedule an in-person interview whenever possible. Consider scheduling civilian interviews late in the season (mid-December to January). This allows adequate time to cancel your interviews if you match in a military program.

During the interview-heavy months, one strategy is to dedicate an entire month to interviews if your school allows it. Another strategy is to purposefully schedule rotations that are less rigorous or do not necessarily have clinical requirements. If you cannot arrange for such a schedule, talk to your advisor about elective options that are more conducive for traveling to interviews.

**At-Risk Candidates:** If you are a less competitive applicant, early interviews might not be as forthcoming. It may be beneficial to plan to take off January for interviews rather than one of the earlier months.

**Latecomers:** Depending on when you submitted your application, leaving January available for interviews may be a good plan for you, too.

Keep in mind that programs generally offer an optional interview dinner or social event; this may be held the night before, the night of, or sometimes the night after your interview. While these events might not be expressly mandatory, attendance is strongly recommended whenever possible. These informal gatherings are an important way to meet the residents, learn about the culture of the program, and show your interest.

Exercise caution when scheduling multiple interviews back-to-back. In some instances, this may be helpful or necessary in cutting down on travel costs or time away from clinical duties. Prolonged periods of travel, however, can be exhausting and may adversely affect your performance on interview day. Appearing tired may be misinterpreted as being disinterested and can potentially hurt you in the ranking process.

## Communication and Scheduling Etiquette

Interview offers may be extended through a scheduling system (eg, Interview Broker or ERAS Interview Scheduler) or sent directly from the program itself. Applicants typically receive notification of interview offers via email. Sync your email to your mobile device or even create a separate email account specifically for interviews to ensure you don't miss any offers. It is also a good idea to routinely check your junk or spam folders in case some invitations are accidentally routed there.

**Handle interview invitations promptly.** Some programs may send out more invitations than available interview spots (this is atypical, yet something to be aware of), so your timely response is critical. When securing a spot, there may also be an option to choose either morning or afternoon. Once scheduled, programs such as Interview Broker will email a confirmation to you of the date/time of the interview. If you find yourself using multiple websites or applications to schedule interviews, it may also be advantageous to dedicate a planner or calendar to keep track of all of your interviews.

**Be professional if you need to cancel.** Some cancellations are necessary because of travel or financial constraints, and sometimes applicants cancel interviews after they feel they have attended enough. **No matter the reason, advance notice is a must.** Try to cancel far enough in advance to allow the program time to find another applicant to take your place. Generally, cancellations should not be made less than 2 weeks from the date of the interview, and a month or more beforehand is ideal.

**Don't harm your chances before you even arrive for the interview.** Other scheduling behaviors that reflect poorly on you include hoarding, double-booking, and no-shows. In the rush of initial interview offers, it's tempting to accept every offer — even if you have no real interest in a program. **Resist this urge.** Remember that everything you do can be evaluated by programs, and unprofessional behavior can dramatically influence programs' perception of you. Once you have obtained enough interview offers at programs where you have a genuine interest, it is unnecessary to hoard additional interviews. With enough cancellation notice, those spots can be freed up for other students.

If you double-book, decide which interview you will attend and let the other program know as soon as possible. While double-booking can be tempting,

particularly if you are unsure which program you like best, understand that **it is highly frowned upon**. In fact, scheduling services actively combat them through different policies. ERAS does not allow any double booking. Interview Broker has a double booking policy that notifies both programs at 48 hours if you do not resolve the double booking. Thalamus will be adopting a similar policy if double bookings begin to occur. Retaining a double booking past 48 hours may lead to programs rescinding your interview offers. After you submit your applications, while awaiting interview offers, create a pre-ranking list of your programs by desirability. When you achieve an excess of interviews or find yourself double-booked, use this list to choose which interviews to give up.

Finally, it is important to actually attend the interviews you schedule. No-showing is unprofessional and can hurt your chances of matching. Word can (and likely will) get back to the dean of your school and the program director of your home institution. Remember this is very much a job interview. Your professionalism is being evaluated at every stage of this process.

## Managing Costs on the Interview Trail

Interviewing is expensive. The costs of travel, lodging, and the increasing number of programs to which applicants apply all add up to a heavy financial burden. In one study, it was estimated that the average interview season expense per student is over \$5,000, with 67% going to airfare and lodging.<sup>5</sup> Another study estimated that the total cost of pursuing an EM residency, including costs related to away rotations, is over \$8,000.<sup>6</sup> While some of these costs are unavoidable, there are a few ways to reduce your expenses on the interview trail.

- Use credit cards with rewards programs — and learn the intricacies of those programs.
- Bunk with friends (or friends of friends), and check out services like Swap & Snooze, which arranges free lodging for medical students on the interview trail.
- When possible, stay with residents from the program where you are interviewing. Sometimes this opportunity will be obvious in pre-interview communication with the residency program coordinator; if not, there is no harm in asking.
- Plan your interviews to maximize your travel dollar; cluster interviews geographically.
- Consider driving instead of flying.

Unfortunately, the process of applying and interviewing is expensive, but it is an important investment in your career. Anticipating the cost will allow you to budget appropriately, and careful planning can help alleviate additional stress.

### **Additional Logistical Tips**

- Bring appropriate weather gear (eg, umbrella, long coat, etc.).
- Always have a backup! Pack a backup dress shirt/blouse, pants, pantyhose, tie, etc. When traveling to interviews, always observe Murphy's law (what can go wrong, will go wrong). This is also helpful if you have interviews back-to-back and do not have a chance to dry-clean your clothes.
- Wear comfortable shoes. You may be walking a lot during interviews.
- Bring a notepad to jot down questions to ask during your individual interviews.
- If flying, be wary of checking your bags.

### **THE BOTTOM LINE**

- ✓ An applicant of average competitiveness should go on enough interviews to be able to rank 11–12 programs, which gives them a >95% chance of matching.
- ✓ The majority of interview invitations are sent in October, and the majority of interviews are conducted in November and December.
- ✓ Be considerate of your colleagues and programs during interview season. Hoarding interview invitations at programs you don't intend to go to takes away interview opportunities from your colleagues, and if you wait too long to cancel, it makes it difficult for the program to book someone else in your place.
- ✓ Prepare to spend approximately \$5000 on the residency application and interview process (not including any expenses related to doing away rotations).





# Making the Most of Interview Day

**Interview day gives you a firsthand look at the programs** you have been researching. This is an important day for the programs as well, because your interview day score is highly important when ranking residents, outdone only by your SLOE letters.<sup>1</sup> Make a good impression — and understand that it's equally important for you to interview the program and determine how well it fits your needs and goals.

## Preparing for Interviews

Interviews can be stressful, but adequate preparation leads to success. Practice answering interview questions with a friend. Think through ways in which you'll describe yourself, your hobbies, and your reason for choosing EM. Plan specific questions for each program. This will allow for a more natural conversation, and you won't have to do all the talking!

Most important, be yourself on interview day. You have made it this far in your career, so you're clearly a bright, intelligent, and successful individual. Even if you are on the shy side, remember that you know yourself better than anyone else, and the interview is the time to let your positive qualities shine. Residency interviews help the program faculty and residents get to know you as a person, and they also help you decide if the program is a good fit for you.

## Scoping Out the Area

When traveling to a city or region that is new to you, explore the area. Finding a location where you will be happy spending your free time is important to your future wellness. The pre-interview events are also a great opportunity to find out more about the area.

When evaluating a new area, consider what is important to *you*. Would you prefer to live in a house with a yard, a condominium, or an apartment? This is not only determined by the area (a house with a yard may be less obtainable in a larger, urban setting), but also by your personal needs (family, children,

pets), and the prospective duration you might be there (3- or 4-year program, fellowship, employment goals). You also need to think about which of these choices is affordable on your income. Resident salaries are fairly consistent across the nation — unlike cost of living, which varies dramatically. Finding out where the residents and staff live can be very helpful.

In addition to housing options, learn what there is to do in the area. Are there local parks? How varied are the dining and entertainment choices, and are they affordable? Where do the residents go to unwind? If you have children, you'll want to know how the schools rank, are they close by, and — if you're evaluating private schools — whether they're affordable. What amenities and activities does the area have for children? If you have a significant other, it might be beneficial to have them scope out the area during your interview, especially

---

*Interview season should be fun. Do your research and prepare, but don't forget to be yourself.*

*This is your chance to find the program that is the best fit for you.*

---

if time is an issue. If you find yourself more impressed than expected by a program or its location, consider coming back for another visit before submitting a rank order.

As you're planning your visit, research the hotels near your interview site. Often, the closer the better, although many hospitals with thriving EDs are located in areas that can be less desirable, so be safe. Keep in mind that the area around the medical

center may have a very different atmosphere than the surrounding city, so make sure to explore the city before making a final impression, and don't necessarily base your impression on that single location. Additionally, a handful of programs offer on-site lodging, and will usually inform you of this. It has become increasingly common for residents to invite interviewees to stay with them, giving you a window into the resident lifestyle in that area.

## **Pre-Interview Events**

Most programs will host an event to allow current residents and faculty to meet candidates in a more casual setting before or after the formal interview. This event is primarily for your benefit. Some newer programs may not have enough residents yet, so you'll get a chance to speak with the faculty informally. Occasionally travel plans and other interview schedules may interfere with your attendance at these events, but try not to miss them. The more direct "face time" spent at a program, the greater the potential benefit for you and the program; applicants have ranked "personal experience with residents" as one of the most important factors when making a rank list.<sup>2</sup> Consumption of alcohol

is generally accepted in moderation at social events — but remember every interaction with a program is an extension of the interview day, and residents will likely report back to their administrators about any concerning behavior. If the social is scheduled for the evening prior to your interview, keep in mind you have a busy day scheduled for the next morning, and most interview days begin early.

## Interview Day Routine

The less rushed you are in the morning, the more relaxed you will be. Give yourself plenty of time to get dressed, pack your bags, and head to the interview. Ideally, checkout from your lodging should be later in the day or the following day, giving you time to explore, or at least change and pick up your bags. However, this may be impractical in terms of cost and travel plans, in which case you'll need to factor checkout time into your schedule. Most programs can keep your bags safe for you during your interview day, although space may be limited.

**Military Match:** The military uniform for interviews is important. Make sure to discuss this with upperclassmen/classmates or reach out to a mentor.

Arrive a little early, giving yourself a window for any delays (getting lost, traffic, parking). Although most programs are reasonably understanding of delays, being late gets you off on the wrong foot. The food and breakfast options provided by a program on interview morning may vary significantly (full meals to very little), so grab a meal before you arrive if time permits, or plan on bringing something with you, just in case. Be careful with the morning coffee if you are nervous, as your heart rate might not need the extra caffeine boost.

## Do Your Research

One of the best ways to put yourself at ease and impress your interviewers is to do your research beforehand. Be sure you have reviewed the program's website and other readily available information.

1. **Know the program leadership** — particularly the chair, program director, assistant/associate program directors, clerkship director, and chief residents, as well as the program coordinator. This can help you tailor your questions to the individual who may answer them most effectively. You can reach out to the program coordinator ahead of time and ask who you will be interviewing with if you want to further investigate their particular interests.

2. **Review basic program demographics** — class size, required off-service rotations, and secondary departments. You should come to every interview with questions written down that are important to you. Don't ask questions easily answered by visiting the program's website.

## Take Notes

Interview season can be a long road, and by the end, some of the important program details and your memories of them will begin to blur. Notes on who you met, whom you interviewed with, the questions you asked, and the answers to those questions, or general conversations with key members of the program will be an important reference when the time comes to make your rank list. It will also be useful if you need to reply to the program and its members.

## The Interview

The interview day generally begins with an overview of the program, typically delivered by the PD. This will answer many questions, though the focus usually will be on the strengths of the training experience. A tour of the ED and other parts of the hospital are also typical components of the day.

The interviews themselves tend to be several separate short interviews, usually one-on-one, with members of the program leadership, faculty, and sometimes residents. Programs may have each interviewer focus on a different aspect of the applicant, such as academics, goals, or personality fit for the program. Don't worry about who's looking for what. Being yourself is more important than trying to cater your answers to what you think each interviewer wants to hear. Most emergency physicians tend to be relatively down-to-earth people who genuinely enjoy having a good, professional conversation with applicants. And remember it is a conversation; don't be a passive participant simply reacting to questions. The interviewers are trying to get to know you, and they want to hear what you have to say.

Anything you have provided in your application is fair game for interview questions, so know your application. If you listed spear fishing as a hobby, you should be able to hold a conversation about it. (Your interviewer may be a spear fisherman too!) Also, keep in mind that a tangent is considerably different than a conversation. Keep your answers concise.

**Couples Match:** You are not required to discuss your couples match situation; there are potential risks and benefits of doing so — discuss this strategy with your partner and advisors. During your interviews, consider mentioning connections that you or your partner have to the area. If your partner liked their interview, consider mentioning this as well.

**IMG Students:** This is also an opportunity for you to demonstrate how your experiences at your home institution can contribute to your career.

**At-Risk Candidates:** If you are applying to another specialty as a back-up in parallel with your EM application, this will not be evident to reviewers or interviewers. You are under no obligation to divulge this.

## Red Flags

The interview is an opportunity to explain any red flags in your application. At least one interviewer will ask you about it. Remember, if anything in your application was disqualifying, they would not have invited you for an interview. Avoid making excuses for everything you think is deficient in your application. It is only a chance to briefly explain a particular event that diverges from the rest of your application. Do not dwell on negativity; keep a positive attitude and remember there is something to be learned from every negative event, and strength in recovering from such.

**At-Risk Candidates:** If your application has any red flags, such as failure of the USMLE, pre-clinical course or clerkship, a prior felony or misdemeanor history, or extended time in medical school, be prepared to address these topics in the interview. As in the personal statement, take responsibility, don't make excuses, and most important, articulate how you have emerged from these challenges better prepared for a career in EM. Practice answering red flag questions out loud with a friend or advisor.

## Fact-Finding

Finally, remember during the interview that you are also interviewing the program. You need to find out if this is the right place for you to spend the next 3–4 years. You should be prepared with questions about characteristics of the program that are important to you. Ask more than one member of the program, as they may have different perspectives on the issue. Also, some potentially important details may not be clear from the website or general program overview presentation (eg, clinical and didactic teaching styles, program goals for the future, recent changes made to the program structure, resident wellness, resident retention and remediation, and changes in staffing). Do not be afraid to ask for contact information for current residents or graduates from their program. There is no better way to assess a program than by talking to someone who has been there.

## Additional Observations

At the end of the interview day, you may be tempted to grab your things and go. However, this is often a wonderful time to ask if you can stay a little longer, taking time to observe how the department flows. Most programs are happy to have interviewees spend time in the ED as an observer. Viewing the interactions on-shift can give you a lot of insight. Do the physicians seem happy? Does the team appear cohesive? What kind of patient load is each resident carrying at each stage of their training? Are there pleasant interactions between the ED and their consultants? Introduce yourself to anyone and everyone, and ask if you can tag along. You can even consider traveling with an extra pair of scrubs. Again, make notes on this portion of the visit.

## The Second Look

The second look is another way to gain additional insight into a program, especially when having difficulty with making the top of your rank list. Second looks can be a considerable added expense and are not expected. Revisiting every program where you interviewed is completely unnecessary; second-look trips are only beneficial if you are having difficulty choosing between 2–3 programs.

Second visits are usually easily obtained by calling or emailing the program coordinators. Usual attire is clinical, including badge and white coat, rather than business attire. Second looks should be focused on visiting the clinical areas rather than meeting with program directors again. You are there to get a better idea of how and if you fit into the day-to-day interactions at that program. Residency programs typically avoid initiating any further formal contact after your interview, as that would potentially violate NRMP rules. Do not be offended if the program director or administrative staff do not meet with you formally.

## Thank-You Notes and Further Communication

It is common courtesy to thank your interviewers for their time; however, the overall value of the thank-you note varies greatly among program leaders. Generally, an email is just as acceptable as a handwritten letter, although there is likely some variation in this belief. There is no rule on the timing of the note, but it is best to send it immediately after the interview, before it moves too far down your to-do list. Sending a note is unlikely to significantly change the way a program ranks you, although it cannot hurt, and is a common professional courtesy that will be noticed as your career continues.

After interviews you will be faced with a decision on communicating with programs regarding where they stand on your rank list. This is a much-debated subject without a clear answer. It is very important to note that **you**

**are not required to divulge a program's rank order**, even if directly asked by any member of the program. In fact, NRMP guidelines specifically state “*program directors shall not solicit or require post-interview communication from applicants, nor shall program directors engage in post-interview communication that is disingenuous for the purpose of influencing applicants' ranking preferences.*”<sup>3</sup> This guideline is interpreted differently by each program. Some take a hard line and completely abstain from any initiation of contact with applicants. Others may feel that notifying their highly ranked applicants regarding their status is not “soliciting” or “disingenuous.” And some programs will initiate a discussion of the applicants rank list despite these guidelines.

In terms of actual practice, in a study of the 2006–2007 EM interview cycle, 90% of respondents reported being contacted by a program between their interview date and rank list submission, with the majority via email.<sup>4</sup> Three out of 5 contacted were happy about the information, but 1 out of 5 reported feeling uncomfortable, likely due to the nature of the contact.

---

*Be diplomatic yet honest in all post-interview communication. Don't read too much into any program's response (or lack thereof), due to NRMP restrictions.*

---

Data with similar results have been published based on non-EM specific research. Additionally, it was noted that almost 25% of respondents altered their rank order based on post-interview communication — and 20% of respondents reported feeling assured they would match at a program, but did not despite ranking that program first.<sup>5</sup> Another study published in 2009 found that 8% of respondents were specifically asked to divulge a program's rank position by a program representative, and almost 7% reported matching at a program that was lower on their rank list than a program that informed them they were “ranked to match.”<sup>6</sup>

You are not compelled to divulge rank order information to programs, and programs should not be asking. Likewise, you should not rely on information a program gives you about your order on their rank list. However, the NRMP does not stipulate guidelines for *applicants* regarding post-interview communication. *You* may freely disclose to a program where it is ranked on your list — but be honest. The most common practice is to notify your top-ranked program of its position. A program's response to such information will vary greatly, from no response, to a purposely vague response, all the way to a definite answer of your ranking by them. Do not read too much into any response (or lack of response); each program takes a unique approach to complying with NRMP rules.

## THE BOTTOM LINE

- ✓ Interview season should be fun. Do your research and prepare, but don't forget to be yourself. In addition to the program trying to decide if you're the right fit for them, this is your opportunity to figure out if the program is the best fit for you.
- ✓ Take advantage of pre-interview events to get to know the current residents. They are the ones most likely to give you an unbiased view of what it's like to train at the program. If consuming alcohol, do so in moderation; you've got a big day ahead of you!
- ✓ Be sure to take plenty of notes to help you make ranking decisions between programs.
- ✓ Do not spend too much time worrying about thank-you notes. There are no rules, and it's unlikely to significantly change the way a program ranks you; however, it can't hurt, and it's a common professional courtesy.
- ✓ Do not play games with any post-interview communication (ie, don't tell every program they're your No. 1 program); it's a small world and it could be very awkward the next time you see a PD to whom you sent a disingenuous message.



# Preparing and Submitting Your Rank List

Throughout interview season, you should be thinking about your rank list, comparing and contrasting programs as you go. Try to come up with a draft rank list and update it after each interview, placing the program you just visited in the list with your other programs and keeping notes about your thoughts on each program.

## How Does the Match Work?

At the end of interview season, applicants submit a rank-order list of the programs at which they interviewed (and would want to match) from most to least preferred, and residency programs submit a rank-order list of applicants from most to least preferred. From there, a Nobel prize-winning algorithm goes to work to find “stable marriages” between applicants and programs. The “stable marriage problem” is well-known in the fields of mathematics, economics, and computer science and is considered solved when there is no pair of matches by which both a program and an applicant would be better off than they are currently matched.<sup>1</sup>

Picture this: You rank a program No. 1, and your No. 1 program has 12 spots available for interns. If that program ranks you in any of their top 12 positions, a match is made, and you will not be considered for matches at any other programs. Alternatively, you could also match at this program even if you were lower on their list; for example, let’s say they ranked you 20th, but 8 people ahead ranked different programs at the top of their lists and those other programs ranked the 8 people ahead of you high enough to create matches — you would still match at your top choice!

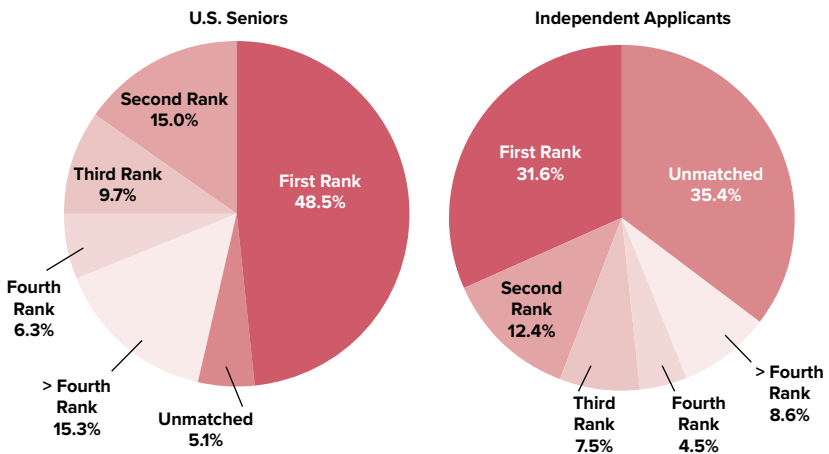
To see a live example of a simulated match between 5 applicants to 2 hospitals with 2 positions each, visit [NRMP.org/matching-algorithm](http://NRMP.org/matching-algorithm).

**It is critical to understand that the NRMP algorithm favors your preferences as the applicant.** You should rank programs in the order in which you would *truly* prefer to match. Do not try to “game” the system and rank programs based on where you think you fall on their lists.

Similarly, expressions of interest from a program are not binding — interpret them with caution. Again, always rank programs in your order of preference. The first program you rank should be your top choice, even if you think it’s a reach. Conversely, do not rank a “reach” program first on your list just to see if you can match there if it’s not where you really want to end up.

Overall, three-quarters of U.S. senior applicants will match at one of their top three choices. Unfortunately, across all specialties, 5% of U.S. seniors will not match (Chapter 12: What If I Don’t Match? explains what to do in that case).

**FIGURE 11.1.** Percent of Matches by Choice and Type of Applicant, 2018<sup>2</sup>



Copyright 2018 National Resident Matching Program. All rights reserved. Reprinted with permission. Permission to use, copy, and/or distribute any documentation and/or related images from NRMP publications shall be expressly obtained from the NRMP.

**Couples Match:** To participate as a couple, both applicants must be entering the same match and pay a “couples fee.” The NRMP does not define who can couples match; you can couples match with a friend, spouse, partner, sibling, or anyone else who agrees to create a paired rank list with you. For more information, visit: [NRMP.org/couples-match-videos](http://NRMP.org/couples-match-videos)

## How to Build Your List—What Matters to You?

There is no single way to build your rank list; the “right way” to build it is based on what is right *for you*. Many factors play a role in this.

Reflect on your professional and personal goals when prioritizing your list.

Identify 3–5 things that matter most to you when comparing programs to rank.

**See Chapter 4 — Finding Your Fit: Learning the Landscape of EM** for a list of factors that differentiate programs from one another. Some common elements to consider include:

- Length of training (3- vs 4-year program)
- Location of training
- Programs’ affiliated hospitals
- Residency rotation curriculum
- Flexibility of elective time

If you have already identified your interests in potential fellowship training, you may choose to weigh emergency medicine residency programs at sites that have that fellowship more heavily. The flexibility and amount of elective time in residency may also be important if you harbor fellowship goals, because it will facilitate dedicated scholarly time and research that will help you prepare for future fellowship applications.

**Couples Match:** Prepare your rank lists separately, then together. As a couple, discuss your priorities (same institution, same city, geographic distance, both partners matching at his/her top choice, etc). Are you willing to have one partner go unmatched? Avoid making a rank list in which one partner will definitely be unhappy.

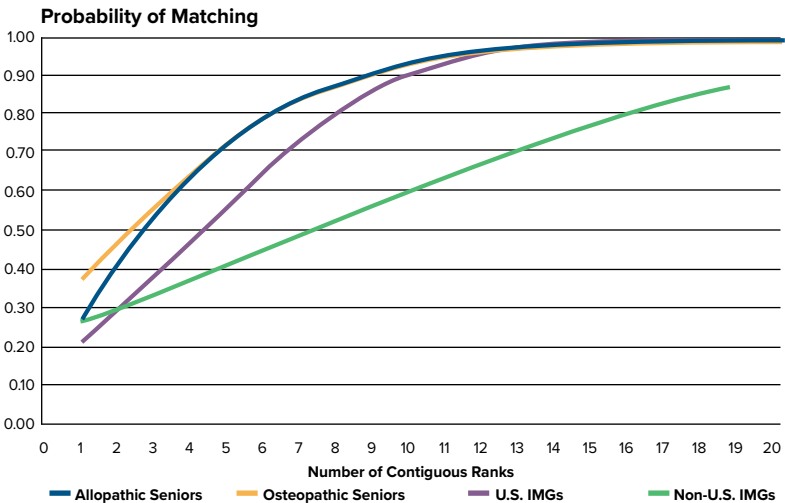
## How Many Programs Should I Rank?

Most faculty and deans agree that you should rank all of the programs at which you interviewed, with rare exceptions. Think carefully before choosing not to rank a program where you interviewed. On one hand, it is risky to include a program where you would not be happy training, because the match is binding for both applicants and programs. On the other hand, going unmatched puts you in a much more challenging position if you wish to pursue a career in EM. There are few to no positions that go unfilled in the EM match, so “scrambling” (now called SOAPing; **see Chapter 12**) into a position outside of the match is highly unlikely. Only leave a program off your rank list if you would rather train in something other than EM, or not match at all, than train there.

A program that you weren't sure about on interview day might surprise you when you arrive to train there. All EM residency programs will lead you to the end goal of becoming a competent emergency physician. It will nearly always be better to be matched and move forward with your career path than to go unmatched with a gap year without structured clinical experience and patient care.

As mentioned in Chapter 9—Interview Season Logistics, with the exception of non-U.S. IMG applicants, ranking 11–12 programs will give you a >95% chance of matching. The NRMP's Interactive Charting Outcomes in the Match tool<sup>3</sup> and its ranking guidelines<sup>4</sup> can be very helpful as you determine how many programs you need to rank in order to match, and how to rank them based upon your individual competitiveness.

**FIGURE 11.2. Probability of Matching to Preferred Specialty by Number of Contiguous Ranks<sup>3</sup>**



Copyright 2018 National Resident Matching Program. All rights reserved. Reprinted with permission. Permission to use, copy, and/or distribute any documentation and/or related images from NRMP publications shall be expressly obtained from NRMP.

**Military Match:** MODS will allow you to rank 5 programs. Given the limited number of spots in the military match, you should rank ALL military programs where you interview.

**At-Risk Candidates:** Rank ALL programs where you interviewed. If you did not interview at enough programs to attain a high likelihood of matching, you have hopefully already developed a proactive backup plan with your academic advisor to apply to a second specialty or transitional internship.

## How Do I Submit My Rank List?

Creating your NRMP rank list requires creating registering for the Match at NRMP.org prior to the registration deadline, usually in late November. **This is a different registration process than ERAS.** If you have trouble with registration, contact the NRMP help desk or ask your dean for assistance. Resources abound at NRMP.org, including tutorials and videos explaining every step of the process.

In mid-January, you can start to rank programs in the NRMP's Registration, Ranking, and Results (R3) system. This website will use your credentials obtained when you registered in the fall. You should make sure you have the correct program identification numbers when you enter your rank list. Some schools/residencies have multiple program codes for different types of applicants. You will then enter the programs into the R3 system in your order of preference.

After you enter your rank preferences, you will need to certify your list. You must certify your list by the ranking deadline (February) to have it officially available for matching purposes. You will receive a confirmation email and see the status of your list change to “*certified*” when you have done this. *You can re-rank and re-certify as many times as you want up until the NRMP's Rank Order List certification deadline!* Certify your list each time you make changes so you will always have an updated certified list in the system. The R3 system does not save old versions of your rank list.

Currently, you are allowed 20 ranked unique programs before you have to pay additional (nonrefundable) fees.

## Help! Whom Should I Talk To?

Ask a friend, parent, significant other, or objective third party to help you talk through the programs in which you're interested. If you're bringing a significant other along during residency, be sure the cities you prioritize will have opportunities for them. You should also consult with your advisor to understand how different options may affect your career path.

Consider having a pretend Match Day!

1. Place all programs at which you interviewed in a bowl.
2. Have a friend pull a program out of the bowl and read the residency name out loud.
3. How did you feel when that name was read?
4. Ask your friend about their perception of your reaction to each program. If you are taking notes or using a spreadsheet, record your thoughts/response next to each program.
5. If you are still unsure, “try on” a few programs and exercise your imagination. For one day, pretend you matched at Program A and see how you feel. Then the next day pretend you matched at Program B. This may help clarify your true preference.

Once you have certified your final rank list, your work is done — and the waiting begins.

### THE BOTTOM LINE

- ✓ Start a draft of your rank list during the interview season, and keep notes as you go to help you as you finalize and certify your list.
- ✓ With rare exception, it is to your advantage to rank all programs where you interviewed.
- ✓ Understand that the match algorithm favors applicant preferences, so develop your rank list according to your true preference rather than trying to “game” the system based on what you think programs might do.

# What If I Don't Match?

**So, you didn't match.** We are so sorry. We are hoping our words of wisdom can assist you in achieving success, whatever that may mean to you at this stage. As you reflect, it is important that you understand why you didn't match; only with an honest appraisal of why you were unsuccessful can you plan your best approach to the SOAP, reapplication, or alternative career trajectory.

If you are reading this as someone who thinks you may be an at-risk applicant to not match, then you are one step ahead! Meet with an academic EM advisor now to discuss proactive strategies.

## **Why Are You Here?**

Before you can form a plan to move forward, you need to know why you didn't match. External evaluation should be a requisite portion of your application review. Any faculty member who told you that not matching would be a possibility is likely a good source (they were right). Your student affairs dean is another good resource, and a sympathetic program director can be a wonderful additional source of information.

## **Program type and number: Did you apply to the right number and type of programs?**

You are assessed on two elements for matching: your paper application and your interviews. If you had an appropriate number of interviews (at least 10), it is probable that you had deficiencies in interviewing, and significant interview practice or attending an interview course should help.

If you did not get a reasonable number of interviews, either you did not apply to enough of the right programs, or something in your paper application is limiting you.

Evaluate the 5 elements of your application to find weak spots that may have caused you to not match. (Revisit Chapter 8: Understanding Your Competitiveness: Apply Smarter, Not Harder.)

- **Step Scores:** The average Step 1 score for matching EM students is 233; for Step 2 CK, it's 247.<sup>1</sup> Substantially lower scores are likely a barrier to getting interviews. If you did not take the USMLE or did not take Step 2 by mid-September, your application may not have been reviewed at all. Unfortunately, it is difficult to overcome this hurdle — the one method that can prove clinical acumen is to do well on additional rotations. Sometimes, you can delay medical school graduation to do additional rotations or do them in late winter/early spring before you graduate, but each rotation is serving you only at that institution, as additional SLOEs are unlikely to make a difference for getting you past the Step 1 hurdle. Similarly, applying to appropriate programs is crucial with a low Step score.
- **ERAS Application:** Red flags on the ERAS application include felony convictions, a dearth of involvement in any other activities, wildly unbelievable statements (such as 120 hours per week on a project) or inappropriate statements about activities, and leaves of absence without explanations.<sup>2</sup>
- **Personal Statement:** It is rare this makes a substantial difference, but grammatical errors, a statement shorter than three-quarters of a page, or inappropriate comments in your personal statement all can serve as barriers to getting an interview.
- **LoRs (including SLOEs):** This could be your blindside reason for not matching. SLOEs with comments such as “disinterested” or “confrontational” are barriers to matching. However, students are not able to see their SLOEs, so how can you know if a LoR or a SLOE is what caused you to not match? SLOEs are reflective of grades and comments received during a rotation, so low scores or less than enthusiastic comments are indications that a specific SLOE may not be the one to use.<sup>3</sup> Ask your advisor or a sympathetic PD to review your letters and provide guidance about which letters they would recommend you make use of moving forward.
- **MSPE:** Most medical schools allow you to see your MSPE; the significant red flags within an MSPE are either in professionalism, time off, negative comments from clinical rotations, or low quartile ranking. Professionalism issues must be addressed in a personal statement, as they remain the largest red flag in an application. As MSPEs are finalized and follow you, other elements of the application must address any MSPE deficiencies.



## SOAP

The Supplemental Offer and Acceptance Program occurs during Match Week to match unfilled spots with unmatched applicants. This is facilitated via ERAS and is a binding contract, just like the standard match.

You find out on Monday of Match Week at 11 a.m. ET whether you matched. An electronic list of unfilled programs who chose to participate in SOAP is available at that time. If you did not match, then at 2 p.m. Monday you can begin applying to programs in any unfilled specialty. Typically programs offer video interviews to applicants they are considering. Three rounds of offers are made — the first two at noon and 3 p.m. Wednesday, and the third (final) round at 9 a.m. Thursday. If you receive an offer, you have 2 hours to accept or reject. It is against NRMP rules for you (or any advisors acting on your behalf) to contact program directors of unfilled spots until the program has contacted you first.

Once the SOAP rounds are completed, all remaining open spots will be listed. At that point, students can contact programs directly.

**Military Match:** Military spots available will be published on MODS.

## What are my options?

Realistically, matching into EM via SOAP is extremely unlikely, although if any EM spots are open you should pursue them. In 2017, 99.7% of the 2,047 spots filled; this left 6 spots open. In 2016, there was 1 spot open.<sup>1</sup> If you have not matched, the real decision you need to make is whether to try to obtain a one-year position and then reapply to EM, choose another specialty, or do a non-clinical year.

Occasionally there may be a new residency in EM that receives approval after the NRMP process, and students who have not matched at first or through SOAP are eligible to contact those sites directly. An EM advisor actively involved in the application process should know if they exist and can direct you to them.

If you decide to do a preliminary year of post-graduate training in another specialty, make sure you go to an academic institution with an emergency medicine residency program. Secure an early rotation in the ED so those folks can advocate for you and write a letter. Be open and honest with the program leadership about your situation and you'll find many people willing to help guide you to success. A 2018 survey of program leaders showed most believe the best use of time is to SOAP into a prelim year and reapply the following year.<sup>4</sup> Further, they preferred the applicant perform the prelim year in a surgical or medicine department. There are a few new options for EM/Critical Care

preliminary years, which include extensive training in both EM and Critical Care. They have the advantage of continued exposure and training directly applicable to EM and a letter of recommendation from an EM clinician, familiar with EM training.

**TABLE 12.1. Gap Year Options**

Activity for Gap Year	Advantage	Disadvantage
Extend Medical School	Complete additional rotations and obtain additional SLOE	Additional cost and no additional training toward another pathway in medicine
Additional Degree (MPH)	Gain knowledge in specific area	Additional cost and lack of clinical activity (unless combined with above)
EM/Critical Care Year	Extensive training applicable to EM	Only 1–2 EM programs evaluate your performance & application occurs 2 months in
Transitional/Preliminary Year	Gain training & can practice independently or match into another specialty after Step 3 passed	If training at hospital with EM program only that program will know you
Surgery Prelim Year	Gain training & show work ethic	Burnout & if training at hospital with EM program only that program will know you
Internal Medicine	Gain training & outlet to continue in specialty	Lose 1 year of support for training (if categorical) & if training at hospital with EM program only that program will know you

Non-clinical choices include obtaining an MPH, performing a research year, extending medical school to a 5th year, or obtaining some other type of graduate degree. These are all reasonable options, but be ready to explain how this better prepared you when you re-apply to EM. Choosing one of these paths does give you the opportunity to apply for positions that become available after the match (assuming you have not chosen an option with a binding contract). If you choose to do research, do so with an emergency physician. If you choose another non-clinical route, find ways to stay involved with the EM program in your facility. You can also consider rotating in EM in the months just prior to graduation to get an additional SLOE.

In the past, applicants have decided on a different specialty, such as internal medicine or family medicine, and then worked in the ED after graduation. These positions were often available in more rural areas, but are becoming rare. **This is not an effective pathway to the independent practice of emergency medicine and is not recommended.**

**Military Match:** Military applicants who do not match typically enter a transitional year or a GMO (general medical officer) assignment. In general, it is harder to match into EM out of a transitional year than a GMO assignment after not matching.

## Re-application

Re-applying for residency is a red flag for many programs. The fact you are reapplying cannot be hidden, and you have very little time before the next application cycle begins. Be honest about your deficiencies, and address the ones that are possible to alter. You cannot change your Step 1 or 2 scores. You cannot change your transcript or felonies. You can, however, prove your work ethic, add a stronger SLOE, show your dedication to the field, and make more contacts through conferences, social media, presenting research, etc.

If you think a SLOE from your previous year may have prevented you from matching, choose which letters to re-submit with your new application. Even if you do ask that a SLOE be re-submitted, sit down with the letter writer, try to show what you have done to improve yourself, and ask them to revise the SLOE accordingly. Consider completing additional EM rotations before you graduate in order to obtain new SLOEs that are more supportive. While it will be clear what you have done, if these new SLOE are supportive they will help your application more than a less supportive original SLOE.

If your interview skills are not strong, practice. Find friends and advisors to give you frank commentary on those skills.

The LoR from your program director if you are in a clinical year (eg, preliminary surgery or medicine) can address changes in your abilities and work ethic. It is important to note that you will have only worked with them for a couple of months by this point, so their LoR may not be as influential as the EM program directors' letters.

If you are in a categorical residency, you need your PD's permission and LoR for re-application. Also, if you match into a categorical residency position outside of EM and then decide to re-apply, some places will not be able to interview you because of funding issues. The government assigns funding based on your first categorical match in a particular specialty for a certain number of years — which can often create a shortfall because of the difference in lengths of residencies. Prelim years do not count. If you initially match into a 4- or 5-year categorical in a different specialty and are re-applying, the government will provide funding for the number of categorical years you would have had remaining.

If you decide to re-apply, you need to understand your chances are certainly not universally better. You may improve your chances at a few places that now know you better, or are willing to meet you, but statistically, your chances of matching into EM are diminished. In the 2018 NRMP program director survey approximately one-quarter of program directors indicated they often interview or rank prior graduates, and approximately two-thirds responded they seldom do.<sup>5</sup> Even interviewing itself is more challenging if you are in a clinical year and need to find creative ways to get time off to travel. You may be limited on how many times you can leave for interviews per month. A back-up plan is even more crucial, because a second re-application to EM is even less likely to be successful.

### THE BOTTOM LINE

- ✓ The most important step to take if you don't match is to find an advisor well-versed in EM application/re-application. Sit and talk through your application to identify what likely contributed to you not matching, and to construct a personalized strategy to move forward.
- ✓ The SOAP allows you to apply for open spots within EM for this match, if any are available. You can also choose to apply in another specialty or for a preliminary position during SOAP.
- ✓ There are multiple approaches to re-application in EM including extending medical school, pursuing a year of training and completing an additional degree or experience. Each of these has advantages and disadvantages for re-application in EM.

# References

## Chapter 1. Choosing EM

1. American College of Emergency Physicians. 50 years of EM. 2018. <https://www.acep.org/who-we-are/50Years/#sm.00001312tyigaw6swlw7v3ig0j>. Accessed October 22, 2018.
2. Marcozzi, D., Carr, B., Liferidge, A., Baehr, N., & Browne, B. (2018). Trends in the Contribution of Emergency Departments to the Provision of Hospital-Associated Health Care in the USA. *International Journal of Health Services*, 48(2), 267–288. <https://doi.org/10.1177/0020731417734498>
3. Augustine JJ. Long-Term Trends in Emergency Department Visits, Patient Care Highlighted in National Reports. ACEP Now. Published January 11, 2017. <https://www.acepnow.com/article/long-term-trends-emergency-department-visits-patient-care-highlighted-national-reports/?singlepage=1>
4. Morganti KG, Bauhoff S, Blanchard JC, Abir M, Iyer N, Smith A et al. The Evolving Role of Emergency Departments in the United States. *RAND Health*, 2013. [https://www.rand.org/pubs/research\\_reports/RR280.html](https://www.rand.org/pubs/research_reports/RR280.html)
5. Lin MP, Baker O, Richardson LD, Schuur JD. Trends in Emergency Department Visits and Admission Rates Among US Acute Care Hospitals. *JAMA Intern Med*. 2018;178(12):1708-1710. <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2706174>
6. Lex J. EM Mindset — Joe Lex — Thinking Like An Emergency Physician. emDocs. July 11, 2016. [http://www.emdocs.net/em-mindset-joe-lex-thinking-like-an-emergency-physician/#\\_edn7](http://www.emdocs.net/em-mindset-joe-lex-thinking-like-an-emergency-physician/#_edn7). Accessed October 22, 2018.
7. Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med*. 2012;172(18):1377-1385.
8. Dyrbye LN, Burke SE, Hardeman RR, Herrin J, Wittlin NM, Yeazel M et al. Association of Clinical Specialty With Symptoms of Burnout and Career Choice Regret Among US Resident Physicians. *JAMA*. 2018;320(11):1114-1130. <https://jamanetwork.com/journals/jama/fullarticle/2702870>

## Chapter 2. The Preclinical Years

1. National Resident Matching Program. Charting Outcomes in the Match: U.S. Allopathic Seniors. July 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Seniors.pdf>.
2. CODR Advising Students Committee for Emergency Medicine. Emergency Medicine Medical Student Planner. 2018. [https://www.cordem.org/globalassets/files/committees/student-advising/\\_2018-satf-general-medical-student-planner.docx.pdf?usp=sharing](https://www.cordem.org/globalassets/files/committees/student-advising/_2018-satf-general-medical-student-planner.docx.pdf?usp=sharing).
3. Emergency Medicine Residents' Association. Student-Resident Mentorship Program. <https://www.emra.org/students/advising-resources/student-resident-mentorship-program/>.
4. National Resident Matching Program. Charting Outcomes in the Match: Senior Students of U.S. Osteopathic Medical Schools, 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Osteo.pdf>.
5. National Resident Matching Program. Charting Outcomes in the Match: International Medical Graduates, 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-IMGs.pdf>.
6. National Resident Matching Program Data Release and Research Committee. Results of the 2018 NRMP Program Director Survey. <http://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf>.
7. Giordano C, Hutchinson D, Peppler R. A Predictive Model for USMLE Step 1 Scores. *Cureus*. 2016;8(9):e769.
8. Council of Emergency Medicine Residency Directors Student Advising Task Force. (2018). [CORD SATF Advising Addenda Study]. Unpublished raw data.
9. Murphy, Brendan. DO and MD Licensing Exams Should Be Viewed Equally, Says AMA. American Medical Association, 14 Nov. 2018. [www.ama-assn.org/residents-students/match/do-and-md-licensing-exams-should-be-viewed-equally-says-ama](http://www.ama-assn.org/residents-students/match/do-and-md-licensing-exams-should-be-viewed-equally-says-ama).
10. Weizberg M, Kass D, Husain A, Cohen J, Hahn B. Should Osteopathic Students Applying to Allopathic Emergency Medicine Programs Take the USMLE Exam? *West J Emerg Med*. 2014; 15(1):101–106.
11. Negaard M, Assimakopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria : An Update and Comparison. *AEM Educ Train*. 2018;2(2):146-153.
12. Stobart-Gallagher M, O'Connell A. Preparing Osteopathic Students for the Single Graduate Medical Education Accreditation System: Evaluating Factors for Match Success in Emergency Medicine. *West J Emerg Med*. 2018;19(5):820-824.

## Chapter 3. Third Year/Planning for Fourth

1. National Resident Matching Program Data Release and Research Committee. Results of the 2018 NRMP Program Director Survey. <http://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf>.
2. Bhat R, Takenaka K, Levine B, et al. Predictors of a Top Performer During Emergency Medicine Residency. *J Emerg Med*. 2015;49(4):505-512.
3. Breyer MJ, Sadosty A, Biros M. Factors Affecting Candidate Placement on an Emergency Medicine Residency Program's Rank Order. *West J Emerg Med*. 2012;13(6):458-462.
4. Council of Emergency Medicine Residency Directors Student Advising Task Force. (2018). [CORD SATF Advising Addenda Study]. Unpublished raw data.
5. Emergency Medicine Residents' Association. EMRA Match. <https://webapps.acep.org/utills/spa/match#/search/map>. Accessed August 20, 2018.
6. National Resident Matching Program. Charting Outcomes in the Match: U.S. Allopathic Seniors, 2nd ed. July 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Seniors.pdf>.

- Lee AS, Chang L, Feng E, Helf S. Reliability and Validity of Conversion Formulas Between Comprehensive Osteopathic Medical Licensing Examination of the United States Level 1 and United States Medical Licensing Examination Step 1. *J Grad Med Educ*. 2014;6(2):280-283.
- Sarko J, Svoren E, Katz E. COMLEX-1 and USMLE-1 Are Not Interchangeable Examinations. *Acad Emerg Med*. 2010;17(2):218-220.
- Negaard M, Assimacopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria: An Update and Comparison. *AEM Educ Train*. 2018;2(2):146-153.
- Love JN, Smith J, Weizberg M, et al. Council of Emergency Medicine Residency Directors' Standardized Letter of Recommendation: The Program Director's Perspective. *Acad Emerg Med*. 2014;21(6):680-687.
- King K, Kass K. What do they want from us? A survey of EM program directors on EM application criteria. *West J Emerg Med*. 2017;18(1):126-128.

## Chapter 4. Finding Your Fit: Learning the Landscape of EM

- Jarou Z, Ochsenbein S, Franzen D, Fairbrother H, Kellogg A. CORD Research Abstracts 2016: Do Students Have Access to the Data They Desire When Selecting an Emergency Medicine Residency Program? *West J Emerg Med*. 2016; 17:S10-11.
- Emergency Medicine Residents' Association. EMRA Match. <https://webapps.acep.org/utlils/spa/match#/search/map>.
- National Resident Matching Program. Results of the 2017 NRMP Applicant Survey. <http://www.nrmp.org/wp-content/uploads/2017/09/Applicant-Survey-Report-2017.pdf>.
- Koehler TJ, Goodfellow J, Davis AT, Spybrook J, vanSchagen JE, Schuh L. Predicting In-State Workforce Retention After Graduate Medical Education Training. *J Grad Med Educ*. 2017;9(1):73-78.
- Jarou Z, Sayers J. Geographic Trends in the DO/IMG EM Match. CORD Academic Assembly, Fort Lauderdale, FL, April 2017. *West J Emerg Med*. 2017;18(5.1). <https://escholarship.org/uc/item/92v5j9x4>.
- Gottlieb M, Arno K, Kuhns M, Chan TM. Distribution of Clinical Rotations Among Emergency Medicine Residency Programs in the United States. *Acad Emerg Med*. 2018;2(4):288-292.
- Fortenberry K, Knox J, Van Hala S. What Do Residents Want for Burnout Prevention? ... Time. *Acad Med*. 2018;93(3):343-344.
- Levy S. Medscape Residents Salary & Debt Report 2018. Published July 18, 2018. [https://www.medscape.com/slideshow/2018-residents-salary-debt-report-6010044?src=WNL\\_physrep\\_180718\\_ressalary2018\\_13&uac=22676MY&implID=1687730](https://www.medscape.com/slideshow/2018-residents-salary-debt-report-6010044?src=WNL_physrep_180718_ressalary2018_13&uac=22676MY&implID=1687730)
- Accreditation Council for Graduate Medical Education. ACGME Common Program Requirements (Residency), 2019. <https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/CPRResidency2019.pdf>.
- Geyer BC, Kaji AH, Katz ED, Jones AE, Bebrata VS. A National Evaluation of the Scholarly Activity Requirement in Residency Programs: A Survey of Emergency Medicine Program Directors. *Acad Emerg Med*. 2015;22(11):1337-1344.
- Regan L, Stahmer S, Nyce A, Nelson BP, Moscati R, Gisondi MA, Hopson LR. Scholarly Tracks in Emergency Medicine. *Acad Emerg Med*. 2010;17(s2):S87-S94.
- EM Coalition. Letter to Nate Gross, MD, Doximity. <https://www.cordem.org/globalassets/files/board/adv--position-statements/doximity-letter.pdf>. Sept. 12, 2014.
- CORD Abstracts 2015. Effect of Doximity Residency Rankings on Residency Applicants' Program Choices. *West J Emerg Med*. 2015;16(6):889-893.
- Peterson WJ, Hopson LR, Khandelwal S, et al. Impact of Doximity residence rankings on emergency medicine applicant rank lists. *West J Emerg Med*. 2016;17(3):350-354.

## Chapter 5. Applying for Away Rotations

- National Resident Matching Program, Data Release and Research Committee. Results of the 2018 NRMP Program Director Survey. <https://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWWW.pdf>.
- Negaard M, Assimacopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria: An Update and Comparison. *AEM Educ Train*. 2018;2(2):146-153.
- King K, Kass K. What do they want from us? A survey of EM program directors on EM application criteria. *West J Emerg Med*. 2017;18(1):126-128.
- Emergency Medicine Residents' Association. EMRA Match. <https://webapps.emra.org/utlils/spa/match#/search/map>. Accessed November 6, 2018.
- National Resident Matching Program. Results of the 2017 NRMP Applicant Survey by Preferred Specialty and Applicant Type. <http://www.nrmp.org/wp-content/uploads/2017/09/Applicant-Survey-Report-2017.pdf>.
- Gordon D, Wallenstein J. Away Rotations: Addressing and Navigating the Chaos. Council of Emergency Medicine Residency Directors, 2018 Academic Assembly, San Antonio, TX.
- Council of Emergency Medicine Residency Directors Student Advising Task Force. (2018). [CORD SATF Advising Addenda Study]. Unpublished raw data.

## Chapter 6. Crush Your EM Clerkships, Secure Your SLOEs

- Chinai SA, Guth T, Lovell E, Epter M. Taking Advantage of the Teachable Moment: A Review of Learner-Centered Clinical Teaching Models. *West J Emerg Med*. 2018;19(1):28-34.
- Negaard M, Assimacopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria : An Update and Comparison. *AEM Educ Train*. 2018;2(2):146-153.
- National Resident Matching Program. Charting Outcomes in the Match: U.S. Allopathic Seniors. July 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Seniors.pdf>.

4. Lutfy-Clayton L, Morrissey T, Pelletier-Bui A, et al. The Emergency Medicine Applying Guide. Council of Emergency Medicine Residency Directors Advising Students Committee in Emergency Medicine. 2018.
5. Jung J, Franzen D, Lawson L, et al. The National Clinical Assessment Tool for Medical Students in the Emergency Department (NCAT-EM). *West J Emerg Med.* 2018;19(1):66-74.

## Chapter 7. Building Your ERAS Application

1. Association of American Medical Colleges. 2019 ERAS MyERAS Residency User Guide. [https://aamc-orange.global.ssl.fastly.net/production/media/filer\\_public/ac/f5/ac/f5ac5c46e-6894-4a47-9511-732bcd9d900/eras\\_2019\\_-\\_myeras\\_residency\\_user\\_guide\\_web.pdf](https://aamc-orange.global.ssl.fastly.net/production/media/filer_public/ac/f5/ac/f5ac5c46e-6894-4a47-9511-732bcd9d900/eras_2019_-_myeras_residency_user_guide_web.pdf).
2. Negaard M, Assimacopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria : An Update and Comparison. *AEM Educ Train.* 2018;2(2):146-153.
3. Olson DP, Oatts JT, Fields BG, Huot SJ. The residency application abyss: insights and advice. *Yale J Biol Med.* 2011;84(3):195-202.
4. National Resident Matching Program, Data Release and Research Committee. Results of the 2018 NRMP Program Director Survey. <https://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf>.
5. Love JN, Smith J, Weizberg M, et al. Council of Emergency Medicine Residency Directors' Standardized Letter of Recommendation: The Program Director's Perspective. *Acad Emerg Med.* 2014;21(6):680-687.
6. King K, Kass K. What do they want from us? A survey of EM program directors on EM application criteria. *West J Emerg Med.* 2017;18(1):126-128.
7. Hillman E, Lutfy-Clayton L, Desai S, Kellogg A, Zhang XC, Hu K, Hess J. Student-Advising Recommendations from the Council of Residency Directors Student Advising Task Force. *West J Emerg Med.* 2017;18(1):93-96.
8. Lutfy-Clayton L, Morrissey T, Pelletier-Bui A, et al. The Emergency Medicine Applying Guide. Council of Emergency Medicine Residency Directors Advising Students Committee in Emergency Medicine. 2018.
9. Lutfy-Clayton L, Morrissey T, Thibodeau L, Pelletier-Bui A, Hillman E. The Emergency Medicine Applicants FAQ. Council of Emergency Medicine Residency Directors Advising Students Committee in Emergency Medicine. 2018.
10. Emergency Medicine Residents' Association. EMRA Match. <https://webapps.acep.org/utlils/spa/match#/search/map>.
12. National Resident Matching Program. Charting Outcomes in the Match: U.S. Allopathic Seniors. July 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Seniors.pdf>.
13. Jarou Z, Karl E, Alker A, et al. Factors Affecting Standardized Video Interview Performance: Preparation Elements and the Testing Environment. *EM Resident.* 2018;45(2):30-32.
14. White M. The Standardized Video Interview: Does It Help or Hurt? SAEM Annual Meeting; 2018 May 16; Indianapolis, IN.
15. Council of Emergency Medicine Residency Directors Student Advising Task Force. (2018). [CORD SATF Advising Addenda Study]. Unpublished raw data.
16. Weizberg M, Kass D, Husain A, Cohen J, Hahn B. Should Osteopathic Students Applying to Allopathic Emergency Medicine Programs Take the USMLE Exam? *West J Emerg Med.* 2014; 15(1):101-106.
17. Sarko J, Svoren E, Katz E. COMLEX-1 and USMLE-1 Are Not Interchangeable Examinations. *Acad Emerg Med.* 2010;17(2):218-220.
18. Lee AS, Chang L, Feng E, Helf S. Reliability and Validity of Conversion Formulas Between Comprehensive Osteopathic Medical Licensing Examination of the United States Level 1 and United States Medical Licensing Examination Step 1. *J Grad Med Educ.* 2014;6(2):280-283.

## Chapter 8. Apply Smarter, Not Harder: Understand Your Competitiveness

1. National Resident Matching Program. Charting Outcomes in the Match: U.S. Allopathic Seniors. July 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Seniors.pdf>.
2. National Resident Matching Program. Charting Outcomes in the Match: Senior Students of U.S. Osteopathic Medical Schools, 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Osteo.pdf>.
3. Association of American Medical Colleges. Apply smart in emergency medicine: new data to consider. <https://www.aamc.org/cim/478994/applysmartem.html>.
4. National Resident Matching Program. Results and Data: 2018 Main Residency Match®. <http://www.nrmp.org/wp-content/uploads/2018/04/Main-Match-Result-and-Data-2018.pdf>.
5. National Resident Matching Program Data Release and Research Committee. Results of the 2018 NRMP Program Director Survey. <http://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf>.
6. Council of Emergency Medicine Residency Directors Student Advising Task Force. (2018). [CORD SATF Advising Addenda Study]. Unpublished raw data.
7. Harmouche E, Goyal N, Pinawin A, Nagarwala J, Bhat R. USMLE Scores Predict Success in ABEM Initial Certification: A Multicenter Study. *West J Emerg Med.* 2017;18(3):544-549.
8. Love JN, Smith J, Weizberg M, et al. Council of Emergency Medicine Residency Directors' Standardized Letter of Recommendation: The Program Director's Perspective. *Acad Emerg Med.* 2014;21(6):680-687.
9. Negaard M, Assimacopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria : An Update and Comparison. *AEM Educ Train.* 2018;2(2):146-153.
10. King K, Kass K. What do they want from us? A survey of EM program directors on EM application criteria. *West J Emerg Med.* 2017;18(1):126-128.
11. Emergency Medicine Residents' Association. EMRA Match. <https://webapps.acep.org/utlils/spa/match#/search/map>.

12. Lutfy-Clayton L, King K, Gordon D. 2017. Can we at least get some guidelines here? CDEM Student Advising Task Force. Didactic. Council of Emergency Medicine Residency Directors Academic Assembly. April 27, 2017.
13. Rimple D, Van Meter M. "Advising to Match." CORD Academic Assembly. New Orleans Marriott, New Orleans, LA, April 2014. [Published by Jarou Z, Kellogg, A. EM Resident Magazine, December 2014/January 2015. <https://www.emra.org/emresident/article/diagnosing-the-match-trends-in-the-applicant-selection-process/>]
14. AAMC. Preliminary Data (ERAS 2019). <https://www.aamc.org/services/eras/stats/359278/stats.html>.
15. AAMC. 2017 Program Director Survey: Current Practices in Residency Selection. Figure 2: Does your program use filters or minimum thresholds (eg, USMLE Step 1 scores, state residency) when selecting applicants to interview? <https://www.aamc.org/initiatives/optimizingme/transitiontoresidency/469010/chart1.html>.

## Chapter 9. Interview Season Logistics

1. National Resident Matching Program Data Release and Research Committee. Results of the 2018 NRMP Program Director Survey. <http://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf>.
2. National Resident Matching Program. Charting Outcomes in the Match: U.S. Allopathic Seniors. July 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Seniors.pdf>.
3. National Resident Matching Program. Charting Outcomes in the Match: Senior Students of U.S. Osteopathic Medical Schools, 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-Osteo.pdf>.
4. National Resident Matching Program. Charting Outcomes in the Match: International Medical Graduates, 2018. <http://www.nrmp.org/wp-content/uploads/2018/06/Charting-Outcomes-in-the-Match-2018-IMGs.pdf>.
5. Van dermark JT, Wald DA, Corker JR, Reid DG. Financial Implications of the Emergency Medicine Interview Process. *AEM Educ Train*. 2017;1(1):60-69.
6. Blackshaw AM, Watson SC, Bush JS. The Cost and Burden of the Residency Match in Emergency Medicine. *West J Emerg Med*. 2017;18(1):169-173.
7. Overton DT. Advice for Emergency Medicine Applicants. <http://med.wmich.edu/sites/default/files/Advice%20for%20Emergency%20Medicine%20Applicants%202017.pdf>.

## Chapter 10. Making the Most of Interview Day

1. Negaard M, Assimacopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria : An Update and Comparison. *AEM Educ Train*. 2018;2(2):146-153.
2. Love JN, Howell JM, Hegarty CB, et al. Factors that influence medical student selection of an emergency medicine residency program: implications for training programs. *Acad Emerg Med*. 2012;19(4):455-460.
3. National Resident Matching Program. Match Communication Code of Conduct. <http://www.nrmp.org/communication-code-of-conduct/>. Accessed September 15, 2018.
4. Yarris LM, Deiorio NM, Gaines SS. Emergency Medicine Residency Applicants' Perceptions about Being Contacted after Interview Day. *West J Emerg Med*. 2010;11(5):474-478.
5. Jena AB, Arora VM, Hauer KE, et al. The prevalence and nature of postinterview communications between residency programs and applicants during the match. *Acad Med*. 2012;87(10):1434-1442.
6. Thurman RJ, Katz E, Carter W, Han J, Kayala E, McCoin N, Storrow AB. Emergency Medicine Residency Applicant Perceptions of Unethical Recruiting Practices and Illegal Questioning in the Match. *Acad Emerg Med*. 2009;16(6):550-557.

## Chapter 11. Preparing Your Rank List

1. Medium. How Long Does the Residency Match Algorithm Take to Run? 2015. <https://medium.com/@vishnuravi/how-long-does-the-residency-match-algorithm-take-to-run-c38c06cd4d57>.
2. National Resident Matching Program. Results and Data: 2018 Main Residency Match. 2018;49. <https://mk0nrmpcikgb8jxyd19h.kinstacdn.com/wp-content/uploads/2018/04/Main-Match-Result-and-Data-2018.pdf>.
3. National Resident Matching Program. Interactive Charting Outcomes in the Match. <http://www.nrmp.org/interactive-charting-outcomes-in-the-match/>.
4. National Resident Matching Program. Ranking Residency Programs. <http://www.nrmp.org/ranking-residency-programs/>. Accessed September 15, 2018.

## Chapter 12. What If I Don't Match?

1. National Resident Matching Program. Results and Data: 2018 Main Residency Match. <https://mk0nrmpcikgb8jxyd19h.kinstacdn.com/wp-content/uploads/2018/04/Main-Match-Result-and-Data-2018.pdf>.
2. Liang M, Curtin LS, Signer MM, Savoia MC. Unmatched U.S. Allopathic Seniors in the 2015 Main Residency Match: A Study of Applicant Behavior, Interview Selection, and Match Outcome. *Acad Med*. 2017;92(7):991-997.
3. Negaard M, Assimacopoulos E, Harland K, Van Heukelom J. Emergency Medicine Residency Selection Criteria : An Update and Comparison. *AEM Educ Train*. 2018;2(2):146-153.
4. Council of Emergency Medicine Residency Directors Student Advising Task Force. (2018). [CORD SATF Advising Addenda Study]. Unpublished raw data.
5. National Resident Matching Program Data Release and Research Committee. Results of the 2018 NRMP Program Director Survey. <http://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf>.