Part I: Overview of Emergency Medicine

Description of Specialty, Common condition, types of patients:
Welcome to the exciting world of Emergency Medicine (EM)! We are thrilled you are interested in our specialty. EM is a dynamic field in which providers assess and stabilize critically ill or injured patients, work up undifferentiated presentations and serve an important role in the community to provide healthcare to all. EM physicians have a wide breadth of knowledge and are trained in many procedures. We work in a collaborative environment with other EM physicians, nurses, ancillary staff and specialty consultants.

Career trajectories:
The possibilities are nearly endless in EM. There are opportunities for careers in academics, research, teaching, global health, disaster relief medicine as well as careers strictly focused on clinical community-based emergency medicine.

Practice Models
While there are stand-alone emergency department (ED) models, many EM physicians work within a hospital system. These settings can range from small hospitals with low acuity presentations to Level 1 trauma centers, which represent the highest acuity and most critically ill patients. There are also opportunities to practice in an urgent care setting, which is similar to a clinic or stand-alone ED. With such an adaptable skill set, some EM physicians choose to practice abroad in resource-limited countries or settings and some even provide emergency relief in times of disaster.

Residency: Length, typical curriculum
EM is unique in that there are three-year and four-year programs. The majority are three-year programs. There are several hybrid programs around the country that offer an optional additional year of fellowship (“3 plus one or 4 plus one” model). The goal is to provide an additional year of research or academic training.
A typical EM curriculum will include clinical time, didactic learning sessions, simulation and procedural training. Clinical training will cover a broad range of subjects because the EM physician must be adept at so many facets of medical care. Examples include rotations in the ED, intensive care unit, obstetrics and gynecology, orthopedic surgery, trauma services, anesthesia, and internal medicine exposure. Three-year and four-year programs have the same core requirements. The main difference is the amount of elective time offered.

Fellowships offered after residency
There are a myriad of fellowship options after EM residency. Seven fellowships are approved directly by the Accreditation Council on Graduate Medical Education (ACGME). Many EM physicians also choose to participate in additional fellowships that are popular and respected in the EM community, but do not have the distinction of being accredited by the ACGME.

ACGME-Accredited
Addiction Medicine
Clinical Informatics
Emergency Medical Services
Medical Toxicology
Pediatric Emergency Medicine
Sports Medicine
Undersea and Hyperbaric Medicine

Additional Fellowship Options
Administration
Critical Care
Disaster Medicine
Education
Research
Geriatrics
International Emergency Medicine
Palliative Care
Ultrasound
Simulation

Part II: Life as an Emergency Medicine Physician

Demographics
According to a 2015 AAMC survey, 62% of EM residents were male and the remaining 38% were females.
In a 2017 survey of over 14,000 EM physicians, the vast majority (78%) of EM physicians identified as white/Caucasian. Following in prevalence were those who identify themselves as Asian Indian, Hispanic/Latino, and Chinese (each approximately 4%), and black/African American (3%).

**Earnings Potential**
According to a recent survey of EM physicians from 2018, the average salary was $353,000 per year for U.S.-trained physicians. Emergency physicians were the highest among all specialties when it came to self-reported fairness of compensation. Rural hospitals may offer a higher salary, loan forgiveness programs, or other incentives to practice.

**Lifestyle**
Emergency physicians generally work in 8-12 hour shifts that cover 24 hours of each day. Positive aspects of shift work include greater freedom during time off, ability to pursue academic or administrative endeavors, service work, and being able to “sign off” from work when a shift is over. Shift work lends itself to greater flexibility in your work schedule overall. Most EM physicians do not carry a pager or have call responsibilities apart from their shift work. Shift work also allows you to work more for more financial reward. Possible negative aspects include that you must be willing to work evenings, nights, weekend and holiday shifts.

**Academic Medicine**
Academic careers include a wide variety of educational and research based roles. Due to the additional administrative, research and educational responsibilities, academic EM physicians will often work fewer shifts per month when compared to non-academic physicians. The advantage of EM is that it allows flexibility in terms of when your shifts are scheduled, and how many hours per week you are working, so it is possible to devote significant time to academic or research pursuits. Areas of academic interest include resuscitation research, emergency medical services/prehospital care, medical education, information technology, operations, international EM, disaster medicine, and public health.

**Part III: Applying in Emergency Medicine**

**How Competitive is EM?**
Interest in EM has grown in the past several years and the specialty is becoming very popular. According to the NRMP Match Database from 2018, there were 2,278 available EM positions and 2,901 applicants. 99.4 % of positions were filled. Of 220 EM programs, only 10 programs had an “unfilled” status on Match Day meaning one or more of their intern positions were available for students who did not match.

**Planning the post-clerkship and senior years**
Once you have decided on a career in EM, you should meet with your Society-based academic advisors, EM clerkship leadership and any other trusted mentors you may have identified. You may also reach out
to the EM residency leadership at the affiliated hospitals to introduce yourself and review your portfolio. You may consider having more than one EM advisor, especially if you have several areas of interest.

**Clinical Rotations**
Your clinical rotation performance and associated grades will play an important role in your EM residency application. Any EM elective course grade(s) will be closely reviewed. Other important clinical clerkships include surgery, internal medicine, obstetrics/gynecology, and pediatrics, and your medicine sub-internship.

**Sub-Internships**
The EM sub-internship is a great way to gain additional exposure to EM, demonstrate your abilities to your local EM program and receive a Standardized Letter Of Evaluation (SLOE). The SLOE is used to evaluate you as a learner, communicate with other residency programs and serves as an important facet of your ERAS application.

**Away Electives**
Away electives are not required but at least one away rotation is encouraged. This will allow you to receive an additional SLOE for your application. If you are hoping to match into a specific geographic location, you may want to consider doing more than one away rotation to increase your visibility and chances of matching in that area. Ideally, you should have a total of 2-3 EM rotation evaluations. It is recommended to do a rotation in the city or program where you think you may want to rank first or second on your match list. Electives at other institutions open to visiting students may be found at the AAMC website [https://students-residents.aamc.org/attending-medical-school/article/visiting-student-learning-opportunities/](https://students-residents.aamc.org/attending-medical-school/article/visiting-student-learning-opportunities/), or at individual medical school websites.

**Other Recommended Electives**
There are no additional required electives. Many EM applicants choose to do an ultrasound elective because this is a skill you will use in your future career as an EM physician. Other interesting electives that are pertinent to our specialty include anesthesia, toxicology, dermatology, ophthalmology, critical care, trauma, wilderness medicine, international medicine, and pre-hospital medicine.

**Research**
Many EM programs will expect an applicant to have research experience. Research experience does not need to be in EM, but demonstrating your ability to perform a research project and possibly present or publish this research will undoubtedly help your application. Examples of EM-specific research include resuscitation science, health care delivery science, public health, education, and international health.

**National Meetings**
Many academic EM physicians attend the annual Society in Academic Medicine (SAEM) meeting. Another popular annual meeting is through the organization American College of Emergency Physicians (ACEP). For those interested in medical education and residency leadership, there is the annual meeting for the Council of Residency Directors (CORD).
Part IV: Assessing your Competitiveness

What Criteria do Programs Consider?
To give you an idea of competitive scores and application highlights, see the chart below from the Association of American Medical Colleges (AAMC). This captures scores and application criteria for the incoming EM residents during academic year 2017-2018.

<table>
<thead>
<tr>
<th>AGGME-Accredited Specialties</th>
<th>Description of Test or Experience</th>
<th>N</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>10th Percentile</th>
<th>25th Percentile</th>
<th>50th Percentile</th>
<th>75th Percentile</th>
<th>90th Percentile</th>
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<td>Emergency Medicine</td>
<td>MCAT Score</td>
<td>2,181</td>
<td>30.3</td>
<td>4.3</td>
<td>25.0</td>
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<td>30.0</td>
<td>33.0</td>
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<td></td>
<td>STEP 1 Score</td>
<td>1,759</td>
<td>232.5</td>
<td>15.9</td>
<td>211.0</td>
<td>222.0</td>
<td>233.0</td>
<td>244.0</td>
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<tr>
<td></td>
<td>STEP 2 CK Score</td>
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<td>14.2</td>
<td>225.0</td>
<td>235.0</td>
<td>245.0</td>
<td>254.0</td>
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<td>2.0</td>
<td>1.7</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Number of abstracts, presentations,</td>
<td>2,221</td>
<td>3.4</td>
<td>5.8</td>
<td>0.0</td>
<td>0.0</td>
<td>2.0</td>
<td>4.0</td>
<td>8.0</td>
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<tr>
<td></td>
<td>Number of work experiences</td>
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<td>3.6</td>
<td>2.8</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
<td>5.0</td>
<td>7.0</td>
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<tr>
<td></td>
<td>Number of volunteer experiences</td>
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<td>6.8</td>
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<td>2.0</td>
<td>4.0</td>
<td>6.0</td>
<td>9.0</td>
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1. Grades and your DSA
Grades from your core clinical rotations are the most important, specifically surgery, internal medicine, obstetrics/gynecology, and pediatrics. Grades on your EM rotations are also very important. There are some rotations that are only pass/fail, and do not give out grades. This may be something to consider when scheduling away rotations. Given that HMS only gives you a grade for the DSA, it is recommended that you do EM rotations at places that use Pass/High Pass/Honors or other ranked grades.

2. USMLE Step Scores
Your Step 1 score will be the primary test score reviewed by EM programs. Some programs may set a cut-off for Step 1 scores but this will vary between programs. If you did not do well on Step 1, an improved Step 2 score will be beneficial for your application and your advisor may recommend taking Step 2 early. For EM successful applicants in 2017-2018, the average Step 1 and 2 scores were 232.5 and 244.5, respectively.

3. Research Experience
The average number of research experiences for successful applicants in 2017-2018 was 2.0 and the average number of abstracts, presentations, or publications was 3.2. No matter which field you performed research in, it is always beneficial to include in your application. If possible, you should seek out EM-specific research once you determine EM is the field you are applying to.

4. Publications
Publications are an excellent adjunct to your application. It is not required but provides a way to showcase your research and highlight your ability to complete a project.
Extracurricular Activities

Work and volunteer experience will certainly help balance your resume. Successful EM applicants in 2017-2018, had an average of 3.6 work experiences and 6.8 volunteer experiences on their applications. Experience within the field of emergency medicine such as patient technician, pre-hospital provider or medical scribe will help you stand out as an applicant as well.

Getting an Interview: Attributes Residency PD’s Consider in Granting Interviews:

The most important aspects of your application that determine if you will be granted an interview include USMLE I score, EM and core clinical rotation grades (surgery, internal medicine, obstetrics/gynecology, and pediatrics) and letters of recommendation. Additional information will be gleaned from your MSPE/Dean’s Letter.

Letters of recommendation

It is recommended that you submit 2-4 letters of recommendation. In EM, the SLOE is used by EM programs for evaluation. An example is available on the Council of Residency Directors’ website.

https://www.cordem.org/

One letter should be from your home EM rotation. If you do an away rotation, ensure you obtain a SLOE from that institution as well. Letters from EM faculty are generally weighed more heavily than those outside of the specialty.

Once you identify your letter-writers, ask him/her well in advance. Give your letter writers your CV and personal statement to review and plan to meet with them individually. Ask the writers to submit their letters before August 31. The ERAS website provides a letter request form to assist your letter writer. Bottom line is, request your letter early, keep your supplemental documents organized, be respectful of the authors’ time and remember to thank your letter writers.

ERAS gives you the option to waive your right to review these letters. It is strongly recommended you waive the review as it may raise concerns to reviewers if you had access to view the letter.

Standardized Video Interview (SVI)

The emergency medicine program community has agreed to use the Standardized Video Interview during the ERAS® 2020 application cycle for all applicants to emergency medicine residency programs accredited by the Accreditation Council for Graduate Medical Education (ACGME). The SVI is an online video interview intended to assess applicants on two competencies — Knowledge of Professional Behaviors and Interpersonal and Communications Skills. The video interview also will enable applicants to “share objective, performance-based information about themselves beyond academic metrics and add breadth and depth to their applications. It is not intended to replace in-person interviews or Standardized Letters of Evaluation, but rather to be used alongside other application information to provide a more complete and holistic picture of a candidate prior to being offered an in-person
All applicants to ACGME-accredited emergency medicine residency programs are required to complete the Standardized Video Interview as a component of the ERAS 2020 application. Note that completion of the Standardized Video Interview is not a required field in your ERAS application: therefore, you will not be barred from applying for a residency position in emergency medicine if you do not complete the video interview).

More information can be found at the AAMC website https://students-residents.aamc.org/applying-residency/article/about-svi/

How many programs should you apply to?
This answer will vary on an individual basis and your specialty advisor can help you determine the target number of programs based on your application and needs. For example, if you did not do as well as you hoped on your clinical rotations or Step 1, you will likely need to apply to more programs. Similarly, if you are couples matching with a significant other, the number of programs will increase. If you have a very specific geographic location in mind, you may apply to fewer programs.

The AAMC calculates a “point of diminishing returns” based on step 1 scores in each specialty. These data are available at https://www.aamc.org/cim/478994/applysmartem.html (accessed 30 March 2019). This data indicates there is little benefit in applying to more programs beyond a limit suggested by one’s Step 1 score.

In EM, “Applicants with USMLE Step 1 scores ≥235 submitted 19 applications before reaching the point of diminishing returns (confidence band, 18 to 20). The likelihood of entering a residency program at this point is 81%. Applicants with USMLE Step 1 scores ranging from 219 to 234 submitted 24 applications before reaching the point of diminishing returns (confidence band 23 to 25). The likelihood of entering a residency program at this point is 83%. Applicants with USMLE Step 1 scores ≤218 submitted 29 applications before reaching the point of diminishing returns (confidence band 27 to 31). The likelihood of entering a residency program at this point is 71%. In any of these groupings, 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”.

Common questions you may be asked – specialty specific:
Ensure everything on your application is accurate and be prepared to discuss anything in your portfolio during your interview day. Many interviewers will want to know how you chose EM, your career plans, and motivation for applying to their specific residency program. Questions about hobbies or outside interests are common. In addition, you should be able to describe your plans for the future after residency as best you can. In general, EM interviews are designed as a way to get to know you and to inform you about the program. It would be an extremely rare exception for an EM interviewer to ask technical questions or skills assessment, as may be the case in other specialty interviews.
Communication with Programs: NRMP Code of Conduct for Applicants and Programs:
The NRMP Code of Conduct outlines appropriate communication between applicants and residency programs. This prevents programs from asking inappropriate questions and ensures confidentiality. Once you have determined you have a first choice program, discuss with your advisor whether you should communicate this to the program director. Never tell a program you are ranking them first if you are not planning to do so. EM is a tight-knit community and program directors from across the country regularly communicate with one another. It is common for programs to reach out to applicants after the interviews.

Advocating for Interviews
If you do not get an interview offer with a desired program, you may reach out to the residency coordinator or leadership such as the program director. Your advisor may also be able to reach out to the program you are interested in.

References
● Association of American Medical Colleges
● Accreditation of Graduate Medical Education
● Medscape
● National Resident Matching Program