

Advising Medical Students about Ophthalmology Electives and Residencies

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Ophthalmic faculty members, especially those who direct medical student education, are influential in advising prospective residents about choosing electives and evaluating residencies. As nearly as I can determine little formal attention has been paid to this important activity. For over 40 years I have been advising medical students about ophthalmology; initially at the Boston University School of Medicine and for the last 24 years at the Harvard Medical School where I currently direct medical student education in ophthalmology. The recommendations that follow are my personal opinions formed over decades and are offered in the hope that this essay will stimulate others involved in advising medical students to respond with their criticisms and suggestions.

Of course the duration and number of electives vary considerably among medical schools but there must be few that do not include them in their curricula. Electives are thus a medical school fact-of-life and without proper guidance students are at risk of making bad selections. I will start by discussing the type of elective from which I believe students should be dissuaded. With internship on the horizon, anxiety prompts students to attempt to redress their perceived clinical deficiencies before graduation. This leads to the all too common practice electing a month of cardiology, a month of radiology, a month of hematology, a month of intensive care, and so forth. Experience has shown that this is unnecessary as interns readily acquire "on the job" the skills necessary to perform

effectively in their new role. In any case, students could not possibly fill most, let alone all, of the perceived interstices of their medical education. I have steered trainees away from this course without evident ill effect on their internship performance. It makes no sense to squander electives to prepare for a one-year experience.

Many students ask if they should take an elective that allows them to participate in laboratory research. Students gain the impression that their prospects for obtaining an ophthalmology residency are enhanced if they have "done some laboratory research". Sadly, they are correct! Even residency training programs that rarely produce laboratory investigators seem to give weight to laboratory research in assessing applicants. However, one can safely infer from the small proportion of our graduates (including those with PhDs) who undertake laboratory careers even part-time or temporarily, that laboratory research is literally not for everyone. If a student has a genuine interest in, or curiosity about, laboratory research, even if only to sample the experience, and can identify an appropriate mentor, it is an excellent idea to allocate elective time to laboratory research. However, a one-month laboratory elective is insufficient for a student to gain much benefit from the experience. I encourage students to be honest with themselves and not to elect laboratory research solely to enhance their credentials. The same considerations apply to clinical research, except that a well-designed project performed under the direct supervision of a faculty member and with advanced planning that permits the student "to hit the ground running" can be accomplished in a month.

At most medical schools only rising seniors and fourth-year students are eligible to take electives. While few students will have had exposure to the specialty at that stage many, and perhaps most, of the students who have decided upon ophthalmology have already made their decision. However for the unde-

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cided student who is considering ophthalmology it makes sense to choose a clinical elective in ophthalmology that allows opportunities to observe, and participate with, ophthalmic clinicians. The student should choose an elective in which there will be direct supervision by a faculty member since, should the student decide to apply for residency, it will be important to obtain a recommendation from an ophthalmologist who has directly observed the student's performance. The ophthalmology match is one of the early matches so the elective should be taken as early as possible.

Should a student determined to enter ophthalmology take an elective in ophthalmology? Those students who have identified residency programs to which they are likely to apply could consider taking an elective at one of those programs perhaps in a sub-specialty of Ophthalmology. This will allow the student to learn if that program is a good "fit" and it will allow one or more faculty members at that program to learn about the student. Furthermore, since these students have probably had little or no exposure to clinical ophthalmology it would be well for them to learn at first-hand what it is to be an ophthalmologist. Again, one should strive to identify an elective in which faculty and not house-staff supervise the elective student. Taking an elective at a program in which one might be interested has been characterized derisively as an "audition" although in this context both the student and the program are being auditioned, and the latter is probably more important and informative than the former. I obviously do not share the view that this type of elective should be discouraged. For the student it remains the best means of discovering the strengths, weaknesses and characteristics of a program. The information obtained by both parties in this manner should form a useful part of the matrix that will determine how the student ranks the program and where the program ranks the student.

A recent article has provided an excellent discussion of the residency selection process from the programs' point-of-view [1]. The view from the other side also deserves discussion. When it comes to assessing residency programs most prospective ophthalmology residents are truly innocents vulnerable to the hearsay of sources such as studentdoctor.net and in need of honest guidance. There are two stages in the process: the first is to identify the programs to which the student should apply, and the second is how to judge the programs when it is time to make a match list.

As a counselor you must help the student to identify those programs that would prove most congenial to

that particular student. One size does not fit all. I cannot overemphasize how important it is for the advisor to be honest and to avoid purveying misinformation to potential trainees about other residency programs. This purveying of misinformation appears to be widespread despite the fact that few of us have accurate current information about other programs. On the other hand it is appropriate to inform the applicant of such negatives as you know to be currently valid. Advisors naturally want to recruit the best medical students to their own programs but this should be accomplished by emphasizing the qualities of one's program and not by unfairly denigrating one's competitors. The needs of the candidate must trump all other considerations.

The "big name" programs (each reader will have his or her own "top ten") are not necessarily the only, or even the best, places to train. Thanks to the effectiveness of the Residency Review Committee for Ophthalmology, a physician who satisfactorily completes an accredited program will generally find him or herself equipped to practice ophthalmology and competent to sit for the board certification examinations [2]. This should be reassuring to potential trainees but that is not to say that there are not significant differences among programs; differences that may be very important to the individual applicant. Recently adduced evidence indicates that first-time failure rates in the examinations of American Board of Ophthalmology may be related to such factors as the size of the program [3]. In the cohort that was investigated, 32 of 118 residency programs accounted for 50% of the first-time failures. These data brook several interpretations. For example, a relatively high failure rate might be consequent to the caliber of the residents enrolled in certain programs rather than to deficiencies in the educational program. In any case the authors did not identify the programs that seemed to disproportionately produce graduates "inadequately prepared to take the examination".

Owing to the stiff competition, students apply to a great many programs. How does the student winnow the list? In the final analysis many students make their selections on the basis of gestalt; the whole of a program appearing to be something other than the sum of its parts. Something ineffable may thus determine the student's choices. Nevertheless the advisor should proceed on the assumption that the student will employ feature analysis in evaluating residencies.

The task is simplified if the student has geographic constraints. Some students must stay in a particular area, usually owing to social necessities. Others rec-

Table 1. Details to consider in ophthalmology programs.

- What is the on-call schedule in each year of the program?
- How available is the faculty?
- To what extent does faculty directly supervise residents in ambulatory settings?
- In general how amiable is the faculty?
- Is faculty turnover a problem?
- Is there a good relationship between the residents and the departmental chairperson?
- Is there a good relationship between the residents and the program director?
- Are there outside rotations?
- Is there satisfactory supervision at outside rotations?
- Are the physical facilities, equipment and support personnel adequate at all facilities?
- Is there faculty supervision before, during and after surgery at each of the facilities?
- What is the surgical volume? (A good index is the number of cataracts performed by the average graduate of the program the previous year.)
- What role (positive and negative) do fellows play in the residents' education?
- How many residents have left the program prematurely in recent years, and for what reasons?
- What proportion of the graduates take fellowships?
- Are the graduates generally successful in obtaining their desired fellowships?
- What proportion of the graduates enter private practice?
- What proportion of the graduates join the full-time faculty of academic departments?
- What are the economic realities for residents?

ognize that there are areas of the country in which they would not want to spend even three years. It is also well to recognize that after completing residency there is a tendency to remain in the general region in which one has trained. Some students might wish to apply to programs in a region where they want to make their permanent home.

What are the non-geographic variables that should influence a student's decision to apply to a particular program? One important factor is the student's performance in medical school. Selection committees and directors of residency programs receive applications from many more students than they can accommodate for interviews. In most cases interviews are reserved for those students who have given evidence of superior academic performance as measured by the results of board examinations, grades and election to Alpha Omega Alpha. Students attending the program's parent institution are usually granted an interview and others are interviewed on the basis of superior performance during an "audition" or after a personal recommendation from a trusted colleague. Most advisors know from experience and reputation that there are certain residency programs to which students who fail to meet these criteria will probably not be granted an interview and it would be helpful to warn such applicants if this is apt to be the case.

Another important factor is the extent to which the resident receives faculty supervision. There is a tension between the trainees' desire for independence and the patients' need to have their care supervised by experienced clinicians. Some compromise exists in all

programs; however, the variation is huge. Residents are apt to care for patients in several venues and the degree of supervision may vary among them. Provided the advisor has accurate current information, the student should be apprised of the balance and how it is addressed at various programs. Each student should decide at what level of supervision he or she would be most comfortable.

A third consideration is surgical volume. Potential applicants usually consider high-volume programs inherently attractive. However, they should be reminded that residency is zero-sum. In some programs with a plethora of surgery, other aspects of ophthalmology might perforce be under-emphasized. Furthermore, in some high-volume programs the resident may not have satisfactory faculty supervision at one or more of the three equally important stages of ophthalmic surgery: pre-operative, intra-operative and post-operative. To the extent that one has accurate current information the student should be given some idea of surgical volume at various programs and what implications the surgical volume has for the trainee. Another variable is the extent to which the sub-specialties of ophthalmology are represented by the faculty. Many part-time members of the faculty are dedicated and available sub-specialists. But all things being equal, I advise potential applicants to favor programs with full-time faculty members in all of the sub-specialties. Whether they are actually available to the residents is equally important and the applicant should attempt to determine this by questioning current residents at the time of an interview (see below) or during an "audition" (see above).

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The next step is for the potential applicant to investigate the programs using whatever formal and informal sources are available. There are apt to be discrepancies between the program as depicted in brochures and by the faculty, and the reality. If possible, prior to any interviews, the applicant should contact current trainees or recent graduates to learn about the program from the trainee's point-of-view. When invited for interviews the applicant should arrange to meet several current trainees face-to-face without faculty present. If a program does not afford applicants this opportunity, one can infer that the program has problems which they want to hide. The current trainees can supply the details of life in that program (Table 1). The applicant should try most of all to learn if most of the residents are happy. Because the answer will be a distillate of all this information, I think that the key question to ask of a resident should be: would you select that program again if you were an applicant? Once that point has been reached applicants are on their own and must rank the programs according to the extent to which they perceive each program would most closely fit their needs and desires.

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