

Examination of the Residency Interview Process for Academic Pathology Departments: How to Make the Most of a Resource-Heavy Process

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Abstract

Annual resident recruitment is a complex undertaking that requires many departmental resources of faculty time and effort and in many cases financial investment for meals and lodging. The applicants represent the future of the profession as well as the providers of patient care in the respective training programs. Although we understand the importance of this process, as we become more and more distracted by financial, administrative, and academic duties, the demands of recruitment have not decreased and continue annually. In an attempt to find the best practices for the improvement in our methods of recruitment, a review of the literature on the employment interviews with a specific eye to pathology residency relevant information was conducted. This article reviews some of the factors proven to be important to the applicants as well as an examination of the structure of the interview and the postinterview applicant evaluation process.

Keywords

applicant attraction, applicant interview, recruitment, residency interview, resident recruitment

Introduction

Most pathology residencies (> 90%)¹ are affiliated with academic medical centers, and the academic faculty has the important task of selecting the next generation of our profession. The importance of careful recruitment in academic medical centers is of utmost concern, given the patient care that will be provided by these trainees. Recruiting qualified residents contributes to the sponsoring institution's ability to meet its patient care and safety goals.

The medical profession has often turned outward to nonmedical sources for evidence of best practices and problem solving.² Prior to 2000, the concepts of Lean and Six Sigma were almost entirely industry phrases. In the Joint Commission paper *Reducing Waste and Error*,³ the authors state that industry tools and principles are applicable to an endless variety of processes and work settings in health care and can be used to address "critical challenges." In academic pathology, the recruitment of new trainees is one such challenge.

Most academic faculty are quite busy, given the roles that they must fill in teaching the current trainees, often layered

with fellows and other learners and in preparing research in their fields of expertise. Academic faculty must use nonclinical service time to prepare and present lectures, papers, and seminars. Academic travel takes the faculty away from their home site and is often an issue for interview availability.

Academic faculty sometimes feel so subspecialized that they are not sure they are the right person to interview a senior medical student interested in general pathology who often has no subspecialty of interest yet. Resident recruitment is one of the greatest areas of time commitment for most academic faculty and is condensed into a few calendar months.

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A recent review of medical recruitment interview literature shows key differences in the importance of certain criteria for different specialties, for example, sports team involvement correlates with lower attrition in surgery residencies.⁴ Despite differences, however, different specialties have similar goals of recruiting excellent candidates who will fit well in the program and complete the program.⁴ The pathology literature currently has no reviews or evaluations of specialty-specific interview criteria. As part of our review of industry literature, we hoped to improve our personal program interview process.

In our program, we traditionally have offered weekday interviews for small groups (between 1 and 3 a day) of candidates. We offered up to 3 one-on-one 30-minute interviews with faculty and separate time with residents as well as attendance at a seminar as part of the interview day. Coordinating the faculty for the interviews (aside from the program director) has become increasingly difficult, as few faculty are generally available.

We interview ~30 candidates per annual interview season for 4 positions, and we generally require between 10 and 30 interview days. Toward the mid to end of the National Resident Matching Program (NRMP)-defined interview season, some candidates who scheduled with us canceled, indicating to us that they are done interviewing and suggesting that they have already found a program or two that they feel they will likely be accepted into. This enables them to decrease their travel time and expense.

The time frame for allowable interviews is somewhat controlled by the NRMP system, however, in our experience many candidates feel a sense of urgency to be done before the allotted time frame, and a slow but steady creeping up of the interview dates occurs. This “early drift” psychology is one of the main reasons that match was initially instituted.⁵ In an attempt to scoop the best students from the medical schools, programs were offering medical students positions earlier and earlier until the students were beginning to commit before the start of their third year of school, when many had not yet decided firmly on a specialty.

A review of recruitment and applicant attraction literature, mainly found from nonmedical corporate and psychological literature sources, was undertaken to help us to optimize our interview process and attract the best possible candidates with the “Leaner” efforts.

Definition of Recruitment

Recruitment in the match differs from industry interviewing and hiring in some aspects. The candidate’s time commitment to the program (ie, the employer) is limited to the length of the training program, and an offer is made through the match, a controlled rank list submission system of programs and trainees. Alvin Roth and Lloyd Shapely won the Nobel Prize in economics for designing markets that function through buyer and seller matching principles, known as Deferred Acceptance Algorithm.⁵ The residency medical system remains the only

professional training environment that embraces this system. There are no other professional matches.⁶ Although critics claim this system is too impersonal, the 2016 match will be the 64th for the residency system in the United States. If the match works, it is because program directors are able to craft careful rank lists based on a mix of objective and subjective factors. The interview feeds directly into this factor. It is possibly the only face-to-face contact prior to “start day” in many cases.

In a meta-analytic review of 298 recruitment-related studies, multiple definitions of recruitment were reviewed.⁷ Of those cited, the one most applicable to resident recruitment was “Recruitment involves those organizational activities that: #1 - influence the number and/or types of applicants who apply for a position and/or #2 - affect whether a (job) offer is accepted.” In this case, the “offer” would relate to a program’s recruitment of a desired candidate. Acceptance relates to the candidate ranking the program highly.

By this definition, part #1 begins well before the match begins. “Organizational activities” that influence applications include all of the activities that the sponsoring institution supports that give the organization the reputation that it has among applicants and the general public. If a sponsoring institution is well known for quality research, or for a specific type of research, for instance, this will influence the applicant pool. If the sponsoring institution is known for overall excellence of care, or perhaps excellence in one specific type of care, pediatric, for instance, this will also affect applications. If the sponsoring institution has no reputation or a negative reputation, this also will have an effect.

Whether or not a program receives many or few applications is a self selection process of the applicant pool. Both the individual residency program and the sponsoring institution are equally important therefore in the early stages of recruitment. The applicant does not judge the program solely by its own merits (ie, board pass rates and didactic curriculum) but instead judges the 2 as a whole. Sponsoring institution reputation is not always in the control of the individual pathology program. The program must work with the applications that it receives.

Each program must select, through a programmatically designed process, applicants to interview from the larger pool of applications received. This process of selecting candidates to interview may be unique for that program and should aid the program in selecting applicants with attributes best suited for that program. Many selection criteria are universally attractive, such as high board scores and positive letters of recommendation, however, many variables exist beyond this that are nuanced for different programs. Development of this process is not the focus of this article, however, once the candidates are selected for interview, all programs are hoping for the candidate to reciprocate the interest. According to the analysis, the second part of the definition of recruitment, whether an offer is accepted, is similar to residency candidates reciprocating interest in a residency by ranking the program highly.

Five statistically relevant predictors of attracting candidates,⁷ in decreasing order of importance, which relate to residency recruitment include:

1. Sponsoring institution characteristics—This expands upon reputation to include location, pay, benefits, work environment, and familiarity. This category was found to be overall the strongest predictor for recruitment. A strong predictor in this subset was the perceived work environment, which may overlap slightly with “recruiter characteristics” and “perceived fit” (given subsequently).
2. Recruiter characteristics—This describes the behavior of the Program’s main recruiter(s) including friendliness, perceived competence, fairness, and signals received as to the attractiveness of the given position during the interview. In many pathology programs, this might include the program director and/or associate program director.

Recruiter characteristics have been investigated in separate studies and have found to be contributed to greatly by nonverbal behavior, specifically nonverbal cues of approval of the applicants.⁸ Perceived interviewer personality, the manner of delivery, and adequacy of the conveyed information also influenced the candidate’s positive perception of the program.

3. Perceived fit—This includes the applicant’s interpretation of the match between themselves and the program and sponsoring institution. This “fit” was cited in the medical interview literature as one of the most important purposes for the interview from the candidate’s perception.⁴

One definition of person–organization fit in industry is the compatibility between the individual and their peer group. In residency, this would mean the coresidents and also the attending staff.⁹

4. Hiring expectancies—This includes the applicant’s perception of likelihood of getting ranked highly from the program and also possibly a function of how many positions the program will offer and the odds of getting a spot.
5. Perceived alternatives—This includes the applicants perception of other similar programs to which the applicant finds at least equally attractive.

Gender and Race

The meta-analysis found that “organizational characteristics” were the only factors that seemed to influence the applicants by gender.⁷ Females were more interested in organizational attributes that would reduce job and nonjob “conflicts” including flexible hours, on-site day care, and some other factors. The other 4 categories appeared gender neutral, including recruiter characteristics.

In analyzing race, there was little empirical information; however, knowledge of historical discrimination seemed to influence the minority applicant pool. “Racial minorities may be more vigilant with respect to justice violations and/or they might react more strongly to injustices due to the salience of historical racism” (p. 930).⁷ This falls into the category of organizational characteristics, and, as with gender, no other category appeared to be affected in regard to the race of the applicant.

The recruiter should have personal skills and should provide the correct information about the program in a consistent and fair manner, but the recruiter’s job title, gender, IQ, organizational role, and race appear to be less important. This is an important role however, since it is one of the factors that the program is able to control during the critical interview contact time.

Perceived fit with staff and peers is important, but the authors point out that in more general searches (ie, general Anatomic Pathology and Clinical Pathology (AP-CP) residency) a general approach to recruitment may be best, and for more specialized applicants (ie, neuropathology fellowship), a more targeted and focused interview experience might be best, with more specialized faculty contact.

The Group Interview

Group interviews are often used in residency programs throughout our institution including our program. It is tempting to increase the number of applicants per day in order to decrease the total number of days.

The group interview process has been studied, and lessons from sociology research show the following¹⁰:

Pros—The program can use the group interview to minimize the number of interview days and to be more frugal with departmental resources. Evolving relationships between group members can add stimulation to the dynamics of the interview. Groups can also help an interviewer from the silence encountered with a “recalcitrant” responder. Finally, groups can also help the interviewer start to note the social skills of the applicants through their interactions with each other.

Cons—The group dynamics can alter the flow of the interview. This can cause a loss of control or consistency for the interviewer and make it difficult to compare 2 groups from different days. The size of the group and leadership style of the group participants can change one group to another. One very vocal person can stifle others. The interviewer needs different skills to keep the group interview balanced and focused (versus the one-on-one interview), and one vocalized negative comment in the group setting can taint and discourage the whole group in one instant.

The interviewer needs to ensure the group discussion is benign and nonembarrassing. We have found that it is not possible to ask probing questions about an application item, to a single applicant, within the group.

One-on-one interviews, while expensive in terms of time scheduling, are good places to probe more sensitive issues encountered in the application, and it also gives the individual applicants space to freely ask and answer questions and express

themselves. One-on-one interviews can have some potential pitfalls however.⁸ Researchers have found that interviewers reach a final decision about a candidate in the first 4 minutes of the one-on-one interview. After this decision is reached, the interviewer may lose attention and begin to do most of the talking. Visual (nonverbal) cues were found to be very important to the interviewer forming this early decision. Positive body language included looking straight ahead (rather than down), smiling, posture, interpersonal distance, and body orientation. In this research, female applicants were found to generally be given lower interview scores. This was confirmed in subsequent studies, with the exception that attractive candidates were typically favored over others regardless of gender.

Single interviewers also tend to weigh any piece of negative information about the candidate much more heavily than the positive information. This may be true for residencies, as a major screening process has already occurred prior to the invite being issued to the candidates. Therefore each candidate is considered a viable option unless a negative trait is uncovered. This is called a “knock-out” factor.

One study examined an interview process for civil service jobs that was similar to the residency match process in that there was a substantial amount of preinterview paperwork to review for each candidate. The interviewers tended to be more negative in their scores after meeting the candidates in person.^{8,11} This was thought to be because the paperwork (especially reference letters) tended to be universally positive for the candidates and therefore the face to face interview was the main “knock-out” factor.

During the interview, it was noted that taking notes and avoiding all interruptions can increase interviewer accuracy of ranking. Interview length has been shown to be unrelated to the hiring decision, and decisions were unrelated to the time of day of the interview.

In the postinterview evaluation and ranking, one racial difference was noted about the “ranking” of applicants following the interview day.¹² When more structure was added to the interview day, in the form of preformed questions with predetermined weighted answers, minority applicants appeared to score higher versus interview days that had no prestructured questions and were mainly “ad-lib” interview sessions. This has been interpreted as interviewer bias and stereotype swaying subjective data in nonstructured interviews. These data come from aggregate meta-analyses where interview scores were compared for whites and nonwhites using purely subjective means of rating the applicants.

Structure

Reviews of employment interview literature show that certain aspects of the interview process are likely influencing interview judgments. Reviewers have attempted to define these factors in order to improve reproducibility and value of the interview process.⁸

They found that structured interviews had better interinterviewer reliability. In unstructured interviews, the interviewer

tended to talk the most. In addition, the attitude of the interviewer affected the interpretation of the interviewee’s responses. Interviewers make their decisions most early in unstructured interviews. In addition, without structure, material is not covered consistently during the interview, and interviewers are likely to weigh the same information differently between applicants. Other research concurred with these findings.⁴

Is an Interview Helpful?

The value of the interview, in addition to the already voluminous information provided to programs through the application process, has been brought into question in the past by residency programs and medical schools. In 1982, Brown University decided to eliminate the interview from the selection process of its Medical School in order to reduce the time commitment of staff and the expense and inconvenience to applicants.¹³ In a 3-year review of outcome data (including diversity of the class, clerkship scores, board scores, and eventual choice of specialty), all outcomes were statistically insignificant for those interviewed and those not interviewed. The only area where there was statistical significance related to minorities. More minorities were recruited under this model and noninterviewed minorities scored higher on NBME-I than interviewed minorities.

This again begs the question if interviewer bias and prejudgments hurt minorities during subjective interviews.

In an orthopedic surgery resident recruitment study, there was little consensus among faculty on how to best rank residents in the nonnumeric competency areas¹⁴ postinterview. While the faculty gave each resident a rank upon recruitment, there was only weak correlation with final performance rankings given at the time of graduation, after the attending had worked with the trainees throughout the length of the training program.

Another area where interviews could improve includes the content of the questions. Interviews can possibly be a hazard to the process of objectivity. In a survey of fourth year medical students, 90% reported being asked at least one question deemed illegal according to the Title VII of the Civil Rights act of 1964.¹⁵ The most asked illegal question related to marital status. Although technically not permitted, it was asked by the interviewers, who largely thought of this question as benign and helpful/friendly. Interviewers thought it opened the conversation of spouse opportunities. Some interviewers also asked about other nonpermissible areas that were perceived by the applicants as less benign, such as age and disability.

Handicapped applicants appear to be given lower overall scores with the exception of categories of personal motivation, in which they generally scored higher.⁸ In research on handicap status, if the applicant had a handicap visible during the interview session, the interviewer was viewed more favorably by the candidate if it was mentioned in the interview rather than ignored.

Table 1. Summary of Recruitment Interview Tips.

Sponsoring Institution reputation is an important factor for candidate applications
Programmatic recruiter characteristics are important to candidates, especially:
How competent and fair the recruiter appears
Positive recruiter body language
How much the recruiter seems to like the candidate
Program recruiters do not need to be physicians
Fit between candidates and programs includes fit with the peer group of residents
Candidate characteristics are important to recruiters, especially:
Physical appearance, race, and gender can bias a recruiter and affect the candidate score
Positive body language
Interview characteristics:
Interruptions during interviews should be avoided
Taking notes can improve the candidate's score
Shorter interviews are as relevant as longer interviews (30 minute and greater)
Structured questions can eliminate recruiter bias toward the candidate
Group interviews require more structure in order to maintain control of the conversation
Postinterview discussion panels are effective for candidate scoring and help to lower bias

A method employed to improve postinterview ranking is the use of an interview boards/panel discussion. This method was shown to increase interview ranking reliability and validity in multiple professions. In the 1980s, groups in the United States and United Kingdom published data that showed panel interview scores were more predictive of employment success with up to 30 years follow-up in some studies.⁸

One con of the panel discussion score is that there appeared to be an order bias, with early and later discussions rendering lower scores. No specific number was given however, of the best spot to have. Using panel consensus discussions to rank candidates can add validity to the score by reducing irrelevant individual perceptions made on nonjob-related factors.

Finally, avoiding attrition is multifactorial. Mentorship and attendance at group social activities have been shown to help. Congruence of goals, team building, and prosocial behaviors such as organizational citizenship also bolster long term "fit".^{9,11} These are postmatch techniques that program directors can further explore to ensure they maintain trainees.

Conclusion

Many interview methods appear to have pros and cons. Understanding the importance of the sponsoring institution and recruiter characteristics are key. Any staff person with the right skill set can be trained to recruit. Subspecialty and title are less important. Time of day and length of the interview are also lesser factors. A few of the attributes of the interview uncovered in the medical interview literature were also found in

industry literature, along with other helpful points. A summary of findings are in Table 1.

Group interviews versus one-on-one interviews both have strengths and weaknesses. A possible mix of both techniques may be best, with panel discussions for ranking determination.

Adding structured questions to the interview can decrease bias for the interviewers and maintain reproducibility of interview experience. Avoiding interruptions and taking notes can also enhance the process.

Finally, optimizing the recruitment process can impact the whole department. Faculty time is precious, and resources are scarce. The importance of choosing the future of our profession should be structured utilizing employment interview literature reviews to gain pearls of wisdom that can apply to the pathologist selection process.

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