

# Employer Expectations for Newly Trained Pathologists

## Report of a Survey From the Graduate Medical Education Committee of the College of American Pathologists

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• **Context.**—Multiple sources have identified challenges that training programs face in preparing graduates for the “real world” practice of pathology, and many training programs have sought to decrease the gap between skills acquired during training and those required in practice. However, there exists the possibility that some of the difficulty experienced by newly trained pathologists and employers might arise from differences between employer expectations of new hires and what applicants expect from their first job.

**Objective.**—To define the constellation of skills and attributes employers prioritize when hiring newly trained pathologists.

**Design.**—A survey of fellows of the College of American

Pathologists in practice for 5 or more years in the United States was administered and the results were analyzed.

**Results.**—A total of 630 pathologists who were responsible for hiring a new-in-practice pathologist completed the survey. Regardless of practice setting, certain skills and attributes were rated critically important in new hires, including ethics/integrity, work ethic, and professionalism. Seventy-one percent reported having some difficulty hiring entry-level pathologists and cited inadequate training/experience during residency, and applicants having unrealistic expectations regarding work load/hours as the most common reasons.

**Conclusions.**—Prospective employers not only expect well-developed diagnostic skills in their job applicants, but also require evidence of a strong work ethic and outstanding professionalism. Successful applicants must display willingness to assume responsibilities and flexibility regarding existing and new responsibilities. A secondary but important finding of this survey was that most jobs are garnered through word-of-mouth recommendations; therefore, it is crucial for pathologists-in-training to hone their networking skills.

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Multiple surveys, papers, and conferences during the past 20 years have tried to assess the strengths and weaknesses of pathology residency and fellowship training programs with respect to their ability to prepare graduates for the clinical practice of pathology. Similarly, attempts have been made to identify the expectations of potential employers and the needs of the workforce as a whole.<sup>1–6</sup> These investigations have consistently found that newly graduated residents have some difficulty immediately stepping into the role of a practicing pathologist, particularly in the general practice of pathology in the community setting. Attention has therefore been directed toward identifying gaps in topics related to diagnostic skills, laboratory administration training, and consultative abilities.

A 1998 study by Horowitz<sup>1</sup> found that the skills important for the community hospital pathologist (where 80% or more of graduates seek their first job) encompassed anatomic pathology skills including surgical pathology and frozen

sections, gross dissection, cytology, autopsy, and fine-needle aspiration; clinical pathology skills including knowledge of test interpretation, clinical pathology consultation, laboratory management (including informatics), and utilization review; as well as a broad array of “soft skills” including areas such as communication and interpersonal skills, professionalism, and leadership. A subsequent study<sup>2</sup> surveyed community hospital pathologists and found that employer expectations in anatomic pathology were similar to those in 1998 but that knowledge of quality assurance was now essential. Deficiencies in anatomic pathology included inadequate gross pathology skills, inability to meet work load and turnaround time demands, lack of interest in and deficient autopsy skills, and poor communication skills. In clinical pathology, clinical knowledge and experience continued to be essential for practice but other areas of importance included clinical consultation skills (including test interpretation and strategies), laboratory administration and medical director leadership, inspection and accreditation expertise, and transfusion medicine and coagulation testing skills. “Nonpathology” skills found to be deficient included communication and interpersonal skills (including emotional maturity, integrity, collegiality, ability to develop good working relationships—ie, professionalism at large), coding/billing knowledge, and computer and teaching skills.<sup>2</sup>

In another study, 33% of employer respondents indicated that new hires were “somewhat prepared” or “only slightly prepared” to enter practice, and nearly one-third indicated a major deficiency in at least 1 critical area.<sup>3</sup> Areas in which recent graduates were least prepared included regulatory and compliance issues, clinical laboratory management, and billing issues. Indeed, preparation for laboratory management received one of the lowest ratings by employers with almost half (48%) indicating that newly trained pathologists were “only slightly” or “not at all” prepared in this area.<sup>3</sup>

Perhaps as a means to feel more prepared for their first job, increasing numbers of trainees have elected to pursue multiple fellowships in recent years. Residents cited increasing “marketability” and developing an area of expertise as their most common reasons for pursuing fellowship training.<sup>4</sup> The findings from the employment survey administered to residents and fellows by the American Society for Clinical Pathology (ASCP) in association with their 2014 nationally administered in-service examination (RISE) indicated that 56% of postgraduate year (PGY)-3 and PGY-4 residents planned to do 1 fellowship, while 40% planned to complete 2 or more.<sup>7</sup> Similar to the study by Lagwinski and Hunt,<sup>4</sup> residents in the ASCP survey cited 3 primary reasons for completing fellowships: enhancement of their pathology skills, fulfilling a requirement for a desired position, and enhancing the ability to secure employment.<sup>7</sup>

The authors of this article believe that some of the difficulty experienced by newly trained pathologists and employers might arise from differing expectations that employers have for their new hires, compared to skill sets that applicants believe they must have to succeed in their first job. To more fully understand what constellation of skills and attributes employers are prioritizing in their new hires, a comprehensive survey of employers in a broad spectrum of practice settings was conducted. From the findings of this survey, and a review of the literature examining the expectations employers cite as most crucial in applicants, the authors attempt to describe those skills and

<b>Role (Select All That Apply)</b>	<b>n</b>	<b>Percentage Selecting</b>
Medical director	282	46
Staff pathologist/member of group	270	44
Head of group	181	30
Department chair	139	23
Medical school faculty	109	18
Section head/manager/supervisor	63	10
Other	51	8
<b>Total No. of respondents</b>	<b>608</b>	

<sup>a</sup> Percentages do not sum to 100% because this is a multiselect item.

attributes that are considered most important for newly trained pathologists to possess.

## MATERIALS AND METHODS

A survey addressing skills and attributes employers prioritize when considering new hires was constructed (see Appendix). The target population for the survey was pathologists responsible for hiring newly trained pathologists. To reach the target population an e-mail invitation to complete an anonymous, Web-based survey was sent to 7261 fellows of the College of American Pathologists (CAP). All CAP fellows in practice for 5 or more years and located within the United States received the survey. An initial screening question asked if the respondent had been responsible for hiring a new-in-practice (NIP) pathologist, defined as one who has worked for 0 to 3 years after training, in the past 5 years. Respondents selecting “no” were screened out of the survey. The survey was designed to identify and understand the attributes employers seek in applicants for entry-level pathologist positions.

## RESULTS

### General Survey Characteristics

A total of 7261 pathologists in practice for 5 or more years were identified and 1222 responded (17%). Of the 1222 pathologists, 630 (52%) were responsible for hiring an NIP pathologist. Of the 630 pathologists, 447 (71%) reported having some degree of difficulty hiring entry-level pathologists, and no differences in difficulty were identified from the type of practice setting. In addition to completing the multiple choice items of the survey, 490 of the 630 pathologists (78%) offered additional free-text advice to pathology trainees about to enter the job market for the first time. Because not every respondent answered every question, the number of respondents for each question does not always equal 630. Also, percentages do not always add up to 100% owing to rounding or multiple-response options.

### Respondent Demographics

Respondents were asked to select their role in their practice or institution (multiple selections were possible). As shown in Table 1, respondents held a variety of roles. Five hundred sixteen of 608 respondents (85%) had been in practice for either 10+ to 20 years (n = 179, 29%) or more than 20 years (n = 337, 55%). Eighty-seven percent (531 of 607) of respondents indicated holding a leadership role. Of the 531 respondents in a leadership role, 273 (51%) said they had been in a leadership role for more than 10 years.

When asked to describe their current employment setting, 216 of 606 respondents (36%) selected not-for-profit hospital, 184 (30%) selected academic center/hospital, and 82 (14%) selected pathologist-owned laboratory. Nearly half of the 607 respondents who provided information about

Anticipated No. of Hires	Overall (N = 611), No. (%)	Academic (n = 184), No. (%)	Other (n = 422), No. (%)
None	93 (15)	15 (8)	77 (18)
1	184 (30)	35 (19)	149 (35)
2–3	258 (42)	96 (52)	158 (37)
≥4	76 (12)	38 (21)	38 (9)

<sup>a</sup> Percentages do not sum to 100% because of rounding.

their practice size (n = 291, 48%) work in large practice settings with 11 or more pathologists, and another 138 (23%) work in settings with 6 to 10 pathologists.

Eighty-five percent of employers (n = 518 of 611) anticipate hiring at least 1 NIP pathologist in the next 5 years (see Table 2). In academic settings, the percentage is even higher (n = 169 of 184, 92%) and 38 of those 184 respondents (21%) expect to hire 4 or more NIP pathologists. Two-thirds of employers in nonacademic settings (n = 233 of 344, 68%) anticipate at least 1 of these positions will be partner track. As shown in Table 2, 442 of the 611 respondents (72%) anticipate hiring between 1 and 3 newly trained pathologists, regardless of practice setting. Nearly all of the 606 survey respondents who provided information about their role in the hiring process were responsible for interviewing applicants (n = 598, 99%) and reviewing applications/curricula vitae (n = 563, 93%).

### Importance of Specific Skills and Attributes

Respondents rated the importance of specific skills and attributes to their hiring decisions, using a 5-point scale ranging from “not at all important” (1) to “critically important” (5). Response options were defined as shown in Table 3. As shown in Figure 1, the 18 skills and attributes rated were divided into 4 categories: interpersonal style (7 items), work style (4 items), career motivation and job search (4 items), and technical proficiency (3 items). Table 4 contains mean ratings and response frequencies for each attribute.

The attributes most frequently rated “critically important” (ie, a candidate must excel in that area in order to receive a job offer—there is zero-tolerance for even minor development needs) were ethics/integrity (n = 475 of 623, 76%), work ethic (n = 411 of 623, 66%), and professionalism (n = 383 of 624, 61%). Most respondents also felt that the following attributes were necessary: diagnostic skills (n = 359 of 621, 58%), emotional stability (n = 344 of 624, 55%), team attitude (n = 338 of 621, 54%), and communication skills (n = 333 of 623, 53%). While all attributes were deemed important, the following items, all of which were within the “career motivation” group, were considered to be least critical (rated slightly or not at all important): membership in professional organizations (n = 279 of 620, 45%), leadership experience (n = 228 of 621, 37%), and knowledge of their practice and staff (n = 125 of 622, 20%). The same attributes emerged as most and least critical regardless of practice setting.

There were some differences based on practice setting in the relative importance of the other 8 attributes that appear to be important but not critical. Specifically, academic employers placed more importance on career goals than those from other settings. Sixty-two percent (n = 114 of 184) of academic employers rated this as “critically” or “very important” compared to only 44% (n = 187 of 421) of those

Response Option	Definition
Critically important	A candidate <b>must excel</b> in this area to be hired
Very important	A candidate <b>should be above average</b> in this area to be hired
Important	A candidate <b>may be average</b> in this area and be hired
Only slightly important	A candidate <b>may be below average</b> in this area and be hired
Not at all important	This skill/attribute is not taken into consideration in hiring decisions

in other settings. Conversely, academic employers placed less emphasis on loyalty (63% versus 75%, n = 116 of 183 and 315 of 418) and relationship-building skills (78% versus 85%, n = 143 of 183 and 356 of 420).

Three-hundred thirteen of the 630 survey respondents (50%) commented when asked, “What other factors not previously listed should a job candidate demonstrate in order to be hired for a position in your laboratory or practice setting?” Many described attributes and skills already included in the survey; however, there were 5 additional themes noted in at least 5% of the comments provided (see Table 5). An applicant’s research and teaching potential were deemed particularly important by 33 of the 98 respondents (34%) in academic settings; this attribute was prioritized by only 3 of the 182 employers (2%) in other settings. The ability to learn/know when to ask for help was specifically mentioned by 29 of 313 respondents (9%), although once again there was a difference based on setting, as 20 of the 29 respondents (69%) were from nonacademic settings. Approximately 7% of the 313 respondents noted the importance of each of the following: willingness to relocate/interest in the community (20), an applicant’s fit with the practice (22), and fellowship training and/or strength of the residency training program (22). Only the first of these showed differences based on practice setting, with 16 respondents in nonacademic settings (of 182; 9%) prioritizing willingness to relocate/interest in community, compared to 3 in academic settings (of 98; 3%). One respondent did not indicate the practice setting.

### Importance of Fellowship Training

To assess whether the decision by residents to do more than 1 fellowship was being driven by employer expectations, this survey asked, “Would you hire an NIP pathologist with no fellowship training?” Of 618 respondents, 158 (26%) answered “yes,” 193 (31%) answered “maybe,” and 267 (43%) answered “no.” Respondents who answered “no” or “maybe” were given the opportunity to provide a comment. Of the 355 pathologists who provided explanatory comments for their answer, the single most common reason was that their practice requires subspecialization (n = 205, 58%). Other common reasons included a consideration of the candidate’s other attributes and experience (n = 82, 23%), possible variations in staffing needs (n = 33, 9%), and variation in the reputation of residency training programs (n = 32, 9%). There were differences noted between practice settings, as academic employers placed greater emphasis on fellowship training; 58% (n = 107 of 183) would not consider hiring an individual without fellowship training, compared to 37% (n = 154 of 421) of private practice employers.



**Figure 1.** Skills and attributes rated by survey respondents.

<p><u>Interpersonal Style</u></p> <ul style="list-style-type: none"> <li>• Communication skills</li> <li>• Emotional stability</li> <li>• Ethics/integrity</li> <li>• Loyalty</li> <li>• Relationship-building skills</li> <li>• Professionalism</li> <li>• Team attitude</li> </ul>	<p><u>Work Style</u></p> <ul style="list-style-type: none"> <li>• Efficiency/ability to multitask</li> <li>• Enthusiasm</li> <li>• Flexibility</li> <li>• Work ethic (eg, reliability, individual accountability)</li> </ul>
<p><u>Career Motivation</u></p> <ul style="list-style-type: none"> <li>• Career goals</li> <li>• Membership in professional organizations</li> <li>• Knowledge of practice/staff (ie, effort to learn about potential employer)</li> <li>• Leadership experience</li> </ul>	<p><u>Technical Proficiency</u></p> <ul style="list-style-type: none"> <li>• Diagnostic skills</li> <li>• Knowledge of pathology/specialty area</li> <li>• Problem-solving skills</li> </ul>

### Importance of Existing Relationships

Most respondents (n = 456 of 620, 74%) answered “yes” to the question, “Would you hire an NIP pathologist who does not have an existing relationship with current staff member(s) in your laboratory or practice setting, or with other trusted colleagues in your professional network?” Of the 164 pathologists who answered “no” or “maybe,” 127

provided an explanatory comment; these comments centered around 4 themes. Twenty-seven (21%) respondents noted that strong references would be required in the absence of an existing relationship, while another 24 (19%) stated that hiring an applicant without an existing relationship would depend on the applicant’s strengths, qualifications, and interview process. Twenty-five respondents (20%) felt that an existing relationship or recommendation

**Table 4.** Means and Response Frequencies for Importance Ratings<sup>a</sup>

	Mean	SD	N	Critically Important, No. (%)	Very Important, No. (%)	Important, No. (%)	Only Slightly Important, No. (%)	Not At All Important, No. (%)
<b>Interpersonal style</b>								
Communication skills	4.47	.62	623	333 (53)	249 (40)	41 (7)	0 (0)	0 (0)
Emotional stability	4.47	.65	624	344 (55)	227 (36)	53 (8)	0 (0)	0 (0)
Ethics/integrity	4.73	.51	623	475 (76)	131 (21)	16 (3)	1 (0)	0 (0)
Loyalty	3.95	.85	620	174 (28)	274 (44)	143 (23)	26 (4)	3 (0)
Relationship-building skills	4.12	.72	622	189 (30)	329 (53)	91 (15)	13 (2)	0 (0)
Professionalism	4.56	.62	624	383 (61)	213 (34)	24 (4)	2 (0)	2 (0)
Team attitude	4.47	.65	621	338 (54)	243 (39)	35 (6)	4 (1)	1 (0)
<b>Work style</b>								
Efficiency/ability to multitask	4.03	.72	623	155 (25)	343 (55)	113 (18)	11 (2)	1 (0)
Enthusiasm	3.93	.72	623	121 (19)	352 (57)	136 (22)	11 (2)	3 (1)
Flexibility	4.07	.67	620	155 (25)	363 (59)	95 (15)	7 (1)	0 (0)
Work ethic (eg, reliability, individual accountability)	4.63	.55	623	411 (66)	193 (31)	18 (3)	1 (0)	0 (0)
<b>Career motivation</b>								
Career goals	3.45	.80	622	42 (7)	268 (43)	251 (40)	52 (8)	9 (1)
Membership in professional organizations	2.58	.88	620	5 (1)	79 (13)	257 (42)	207 (33)	72 (12)
Knowledge of your practice and staff (ie, made an effort to learn about the potential employer)	3.18	.88	622	37 (6)	177 (28)	283 (45)	109 (18)	16 (3)
Leadership experience	2.82	.90	621	17 (3)	119 (19)	257 (41)	191 (31)	37 (6)
<b>Technical proficiency</b>								
Diagnostic skills	4.52	.61	621	359 (58)	226 (36)	36 (6)	0 (0)	0 (0)
Knowledge of pathology/specialty area	4.38	.67	621	299 (48)	260 (42)	59 (10)	3 (1)	0 (0)
Problem-solving skills	4.25	.67	619	231 (37)	317 (51)	66 (11)	5 (1)	0 (0)

<sup>a</sup> Percentages may not sum to 100% because of rounding.

**Table 5. Additional Factors Considered in Hiring Decisions**

Theme	Overall <sup>a</sup> (n = 313), No. (%)	Academic (n = 98), No. (%)	Other (n = 182), No. (%)
Research and teaching experience/potential	38 (12)	33 (34)	3 (2)
Ability to learn/know when to ask for help	29 (9)	5 (5)	20 (11)
Fit with the practice	22 (7)	6 (6)	13 (7)
Fellowship training and/or strength of residency training program	22 (7)	9 (9)	12 (7)
Willingness to relocate/interest in the community	20 (6)	3 (3)	16 (9)

<sup>a</sup> Overall column includes all respondents, including those not identifying their practice setting.

from a trusted source was necessary to properly evaluate a candidate's qualifications and "fit" with the practice, and 23 (18%) stated that an existing relationship was required owing to prior bad experiences or preference of the practice. There were only minor differences based on practice setting, as 24 of 184 academic respondents (13%) would not consider hiring an NIP pathologist unknown to the practice in contrast to 35 of the 422 respondents (8%) in other settings.

### "Red Flags"

The survey asked respondents to identify 2 or 3 "red flags" that would immediately disqualify a candidate for a position; 556 of the 630 respondents (88%) commented. The most frequent responses included poor interpersonal skills (n = 186, 34%), poor references (n = 139, 25%), and gaps in employment and/or frequent job changes (n = 119, 21%). At least 10% of respondents also identified poor technical proficiency (n = 95, 17%), poor professionalism/work ethic/integrity (n = 71, 13%), unrealistic expectations regarding salary and work hours (n = 65, 12%), and substance abuse or other behavioral or legal problems (n = 55, 10%). Of the 630 respondents, 533 also commented when asked for the most common reasons that a candidate had been disqualified for a position in the past 5 years. More than 10% of the 533 respondents listed poor interpersonal skills (n = 87, 16%), poor communication skills including difficulty with the English language (n = 86, 16%), poor technical proficiency (n = 85, 16%), and poor references (n = 62, 12%).

### Perceived Difficulty Hiring and Competition for Positions

As shown in Figure 2, a total of 436 of 614 respondents (71%) reported some degree of difficulty hiring qualified entry-level pathologists, regardless of practice setting. These employers were asked why they believed it was difficult and were provided with 10 options as well as a free-text answer box. Six of the options were selected by more than 20% of 427 respondents to this question. The most common reason cited was inadequate training/experience during residency (n = 194, 45%), followed closely by the impression that candidates had unrealistic expectations regarding work load and hours (n = 181, 42%), and a mismatch between residency training and job requirements (n = 169, 40%). Additional reasons cited were that candidates had poor communication or interviewing skills (n = 157, 37%), were too limited in their geographic preference (n = 153, 36%), and had unrealistic expectations regarding salary and/or benefits (n = 143, 33%).

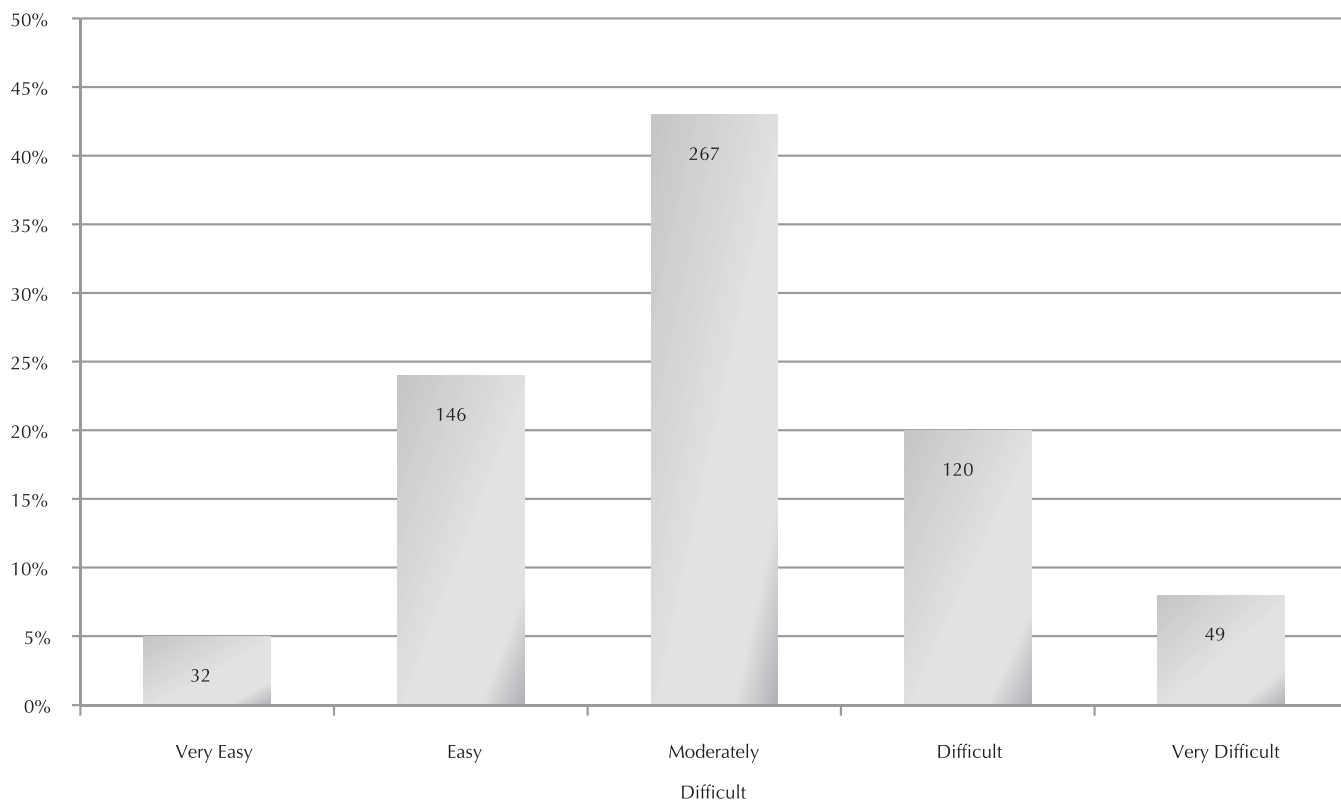
Five hundred twenty-four of 629 employers (83%) identified "networking/word of mouth" as the most common recruiting method; other options, which more than 10% of the 629 employers reported using, included Pathology Outlines (n = 227, 36%), pathology journals (n = 173, 28%), CAP Online Career Center (n = 141, 22%),

specialty society Web sites (n = 131, 21%), conference postings (n = 86, 14%), and recruiters (n = 86, 14%). Employers typically received 1 to 10 applications for each available position (n = 390 of 629, 62%), although 109 (17%) reported routinely getting more than 20 applicants per available position. Most (n = 532 of 629, 85%) interviewed no more than 4 applicants for a position.

### Advice to Job Applicants

There were 490 respondents (of 630, 78%) who offered free-text advice to pathology trainees about to enter the job market for the first time; a summary of the most common responses has been organized into the following 3 categories:

1. Capitalize on opportunities during training to enhance leadership skills and develop skills needed for practice while demonstrating excellence. It was recommended that trainees get involved in leadership activities as preparation for the job market and applicants were encouraged to assume as much graduated responsibility as possible, given the observation that "residency is easier than being a practicing pathologist, regardless of type of job." The phrase "demonstrate excellence" was used repeatedly by prospective employers, several of whom stated their preference for applicants who were excellent in surgical pathology or other specialty areas. One advised applicants to "look for gaps or opportunities in the practice that will make you a valuable asset." Employers stressed the need for practical experience to be gained during training so that independent sign-out was a more natural transition. Respondents also indicated that there is a perceived need for "clinical pathology and business skills" in many practices and felt that the most successful applicants would acquire expertise in some particular area, then use that experience as a selling point.
2. Develop interpersonal and communication skills. A concise and grammatically correct cover letter and curriculum vitae was deemed indispensable. Candidates were advised to have a mentor vet their resume to identify areas needing explanation and be able to discuss their career goals during the interview. Multiple respondents said that applicants should research the prospective employer, using Web pages as well as publications and professional interests of members of the group, and be able to talk about the practice during the interview, thus demonstrating that they were serious about this position. Another stated, "don't come across as entitled." Advice surrounding the need to be humble and effectively communicate with individuals outside of the practice was often repeated. Several respondents stressed that pathologists in today's job market need to be comfortable interacting with clinical colleagues both



**Figure 2.** Perceived difficulty in hiring qualified entry-level pathologists.

informally and formally (eg, via tumor boards, calling back frozen sections); applicants were thus advised to gain as much experience as possible in interdepartmental communication during training. As previously shown, many employers were most comfortable hiring someone known to a member of their practice or other trusted source. Applicants were advised to build such relationships at local, regional, and national meetings.

3. **Be flexible and know your preferred job characteristics.** Areas in which employers are looking for flexibility include primarily geographic placement and scope of practice. Multiple respondents reiterated the need for a new employee to be willing to work hard and show evidence of motivation, for example by volunteering for committees or actively seeking opportunities to enhance the practice. Many felt that an applicant should come in talking about what they could add to the practice rather than just asking what the practice has to offer them. Employers noted the importance of applicants realistically assessing their own interest in the position and ensuring that their application reflected this enthusiasm for the job. Several noted that the roles and responsibilities of any job will inevitably change over time; therefore, it is crucial for an applicant to demonstrate the flexibility to accommodate to such shifts. Many respondents stressed the need for an applicant to consider their “fit” with the group, since those are the individuals an applicant would rely on.

#### COMMENT

With 630 respondents from a variety of practice settings, our survey is one of the largest to date that examines expectations potential employers have for newly trained

pathologists. Data are from a wide range of community hospital, academic, and other private practice settings; and based on the characteristics of practicing pathologists found in the CAP Practice Characteristics Survey,<sup>8</sup> the responses are felt to provide a representative, well-developed, and in-depth picture of what employers are currently looking for in their hiring of NIP pathologists (defined as those who have been in the workforce for 3 years or less). Strengths of the study include the large absolute number of respondents (630) and the variety of practice settings they represent. The large number of free-text comments (490) provided by those who did complete the survey indicates that respondents recognized the importance of this topic and that they were fully engaged in providing information. The most significant limitations of this study revolve around the possible bias introduced by sampling method and the use of a predominantly multiple-choice survey. While the number of respondents was high, the overall percentage was low (1222 of 7261 = 17%). It is also possible that those who chose to answer the survey have different expectations and/or are more invested in the process of hiring NIP pathologists than those who did not participate.

As diagnostic skills are generally assumed to be indispensable, potential employers often focus on other attributes (ie, communication and interpersonal skills) to facilitate the selection process. Two of the most critically important attributes that job applicants must demonstrate are their ability to function as part of a group as well as their work ethic; this has also been previously noted.<sup>1,2</sup> Multiple comments addressed the need for applicants to be willing to work hard and to be flexible regarding their roles within a practice. One significant challenge employers identified in finding qualified newly trained pathologists was applicants’

unrealistic expectations about either the work load or hours required or the salary or benefits provided. Prospective employers need to be confident that their new hires will put in the time needed to complete the work and show flexibility regarding their responsibilities, as there are no duty hour restrictions following training. Our study further demonstrates that regardless of practice setting, employers place a great deal of importance on interpersonal and communication skills and professionalism, 2 core residency training competencies that both applicants and residency training programs may prioritize less than those related to medical knowledge and patient care. “Soft or ‘nonpathology’ skills” such as communication and professionalism are difficult to teach, assess, and remediate during training but these attributes become even more critical as the NIP pathologist progresses through his/her postgraduate years.<sup>9–11</sup> Professionalism issues—such as collegial and interpersonal interactions, honesty, and reporting/recognizing medical errors—also rose to the top when academic training programs and departments were surveyed over a decade ago to identify important ethical issues impacting the practice of pathology.<sup>12</sup> Current results highlight the ongoing need for training programs to provide effective education in ethics, professionalism, and interpersonal skills. In addition, results emphasize that it is key for the job applicant to recognize the importance of these skills and to convey, in one pathologist’s words, “This is who I am, how I work, [and] how I interact with others.” A track record of this type of behavior established and documented during residency and attested to in letters of recommendation was deemed invaluable.

The comments provided regarding existing relationships also highlight the importance of developing professional relationships during residency, as 10% (n = 59 of 620) of respondents indicated they would not hire someone unknown to their practice and most stated that they would strongly prefer to have prior knowledge of the applicant, typically via a trusted source vouching for the applicant’s qualifications. This preference for such a preexisting relationship was noted in both academic and private practice settings and highlights the need for trainees to begin building a network of people who will assist them in their employment search during training. Many positions are filled without being publicly posted, emphasizing the need for strong networking skills to take advantage of this “word of mouth” avenue by which many employers seek new hires. One way in which trainees can develop this type of professional network is via active participation in local and national professional organizations, and by developing close mentoring relationships with teachers and pathologists who act as positive role models and “mirror back” the work and professionalism of the pathologist.<sup>9–14</sup>

Another common theme that emerged was the need for newly hired pathologists to continue learning after employment begins; they need to put in the effort and ask questions, as well as “stepping up” to assume responsibilities that they may feel lie outside of their specialty area. As any position will invariably change with time and the needs of a given practice will shift, pathologists must be willing to acquire new skills and take on new responsibilities. Many survey respondents commented on the importance of “playing well with others” and knowing when to ask for help. While having a sense of humility and enthusiasm is necessary to acquire a job, being a “team player” who is willing to work hard and be dedicated to the practice, along with continued

growth through the process of lifelong learning, was considered absolutely essential to job retention.

Items identified by employers as potential “red flags” predominantly centered around issues of professionalism, such as poor interpersonal skills or lackluster references. Comments made by multiple respondents indicated that demonstration of work ethic and integrity was crucial for an applicant to be considered for employment, while competence in diagnostic ability was a presumed prerequisite. Many noted that positive interactions with ancillary staff were as important as those with fellow pathologists. One advised, “Be careful who you make enemies with in training. During a reference check, it will come back to bite you.”

Particularly in light of recent discussions within the graduate medical education community regarding the importance of fellowships, it was interesting to note that while a fellowship is highly desired, our data indicate that it is not absolutely necessary, as only 26% (158 of 618) of employers considered it mandatory. This survey did not assess whether multiple fellowships would benefit an applicant more than a single fellowship, but the theme that emerged seemed to be that the nature of a fellowship was more important than the quantity. The key finding in this regard is that applicants need to complete fellowships that make them more valued to a practice. This could mean completing a general fellowship so they can function in a small community practice and handle everything that comes through the door or focusing on a subspecialty area that has been identified as a practice need. One way to maximize fellowship experience is for residents to contact groups in the geographic area in which they want to work and specifically inquire as to anticipated needs. This requires particular forethought given the 18-month lag or more between fellowship application and commencement; however, if a trainee has a strong geographic preference, it is one way both to ensure the postresidency training will be of value to the practice and to begin building relationships with the colleagues they hope to join.

## CONCLUSIONS

In the final analysis we highlight 3 main conclusions based on the results of this survey: (1) Work ethic and professionalism are crucial and are assumed to be built on a base of diagnostic excellence. The former will help an applicant both get and keep a job, while lack of the latter has been noted as one of the obstacles to finding qualified applicants. (2) Applicants must demonstrate a willingness to take on new responsibilities, develop and demonstrate lifelong learning, and be flexible regarding their responsibilities once in a new position. Lack of alignment between applicant and employer expectations regarding work load and salary or benefits was cited as a difficulty employers face in hiring newly trained pathologists. (3) Most (up to 70%) available jobs are not publicly posted, highlighting the need for applicants to hone their networking skills. This process can be greatly facilitated by a mentor during training, as well as by active participation in local and national professional organizations. There does appear to be at least some truth to the adage, “it’s not what you know, but who you know,” or perhaps better said, “it’s not only what you know, but who you know, and who knows you.”

Many of the observations and conclusions presented here are intuitively expected by both employers and potential job seekers. However, nonpathology skills have clearly emerged



as important areas of emphasis for employers and must be adequately addressed by trainees and by extension, training programs. Future studies regarding the workforce and employer expectations would benefit from an even broader sampling of pathologists and more specific ranking of attributes and/or attitudes, based on the common themes we identified in this study. Additional investigation into how to better teach, assess, and incorporate professional and interpersonal communication skills into residency training, as well as faculty development in mentoring skills, should prove beneficial.<sup>3,15</sup>

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#### APPENDIX. Survey Questions

**1. During the past 5 years, were you responsible for hiring a new-in-practice pathologist (ie, a pathologist with 0 to 3 years of experience)?**

- Yes
- No

**2. On average, how many pathologists apply for an available position within your laboratory or practice setting?**

- 1–5
- 6–10
- 11–15
- 16–20
- 21–30
- 31–40
- 41–50
- >50

**3. On average, how many job applicants does your laboratory or practice interview before making a hiring decision?**

- 1–2
- 3–4
- 5–7
- 8–10
- >10

**4. Which of the following do you use to advertise your available positions? (Select all that apply)**

- Networking/word of mouth
- CAP Online Career Center
- Pathology Outlines
- careermed.com
- pathboard.com
- Specialty society Web site
- LinkedIn or other social media
- CAP Today
- Pathology journal
- Conference posting
- Recruiters
- Placement services
- Other, please specify:

**5. When evaluating candidates for positions in your laboratory or practice setting, how important is it that a candidate demonstrates each of the following skills/attributes related to interpersonal style? (5-point scale: critically important to not at all important)**

- Communication skills
- Emotional stability
- Ethics/integrity
- Loyalty
- Relationship-building skills
- Professionalism
- Team attitude



APPENDIX. Continued

**6. When evaluating candidates for positions in your laboratory or practice setting, how important is it that a candidate demonstrates each of the following skills/attributes related to work style?** (5-point scale: critically important to not at all important)

Efficiency/ability to multitask  
Enthusiasm  
Flexibility  
Work ethic (eg, reliability, individual accountability)

**7. When evaluating candidates for positions in your laboratory or practice setting, how important is it that a candidate demonstrates each of the following skills/attributes related to career motivation and job search?** (5-point scale: critically important to not at all important)

Career goals  
Membership in professional organizations  
Knowledge of your practice and staff (ie, made an effort to learn about the potential employer)  
Leadership experience

**8. When evaluating candidates for positions in your laboratory or practice setting, how important is it that a candidate demonstrates each of the following skills/attributes related to technical proficiency?** (5-point scale: critically important to not at all important)

Diagnostic skills  
Knowledge of pathology/specialty area  
Problem-solving skills

**9. What other factors not previously listed should a job candidate demonstrate in order to be hired for a position in your laboratory or practice setting?**

**10. Would you hire a new-in-practice pathologist with no fellowship training?**

Yes  
No  
Maybe  
If you responded "No" or "Maybe," please explain your answer:

**11. Would you hire a new-in-practice pathologist who does not have an existing relationship with current staff member(s) in your laboratory or practice setting, or with other trusted colleagues in your professional network?**

Yes  
No  
Maybe  
If you responded "No" or "Maybe," please explain your answer:

**12. What are the top 2 or 3 "red flags" that would immediately disqualify a candidate for a position in your laboratory or practice setting?**

**13. During the past 5 years, what were the most common reasons for a candidate to be disqualified for a position in your laboratory or practice setting?**

**14. Overall, how difficult is it to hire qualified entry-level pathologists?**

Very easy  
Easy  
Moderately difficult  
Difficult  
Very difficult

**15. Why do you believe it is difficult to hire qualified entry-level pathologists? (Select all that apply)**

There is a mismatch between residency training and job requirements.  
Candidates have inadequate training/experience during residency.  
Candidates are too limited in their geographic preferences.  
Candidates have unrealistic expectations regarding salary and/or benefits.  
Candidates have unrealistic expectations regarding work load/hours.  
Candidates have poor communication/interviewing skills.  
There is a mismatch between candidate availability and when we need them to start working (ie, candidates start looking too early).  
There are too few new-in-practice pathologists in the job market.  
We use inadequate methods of advertising available positions.  
We do not effectively recruit and screen candidates who apply to our positions.  
Other, please specify:

**16. If you could give some advice to pathology trainees who are about to enter the job market for the first time what would it be?**

**17. How many new-in-practice pathologists does your practice anticipate hiring in the next 5 years?**

None  
1  
2–3  
4–5  
6–10  
≥11

APPENDIX. Continued

**18. How many of these potential jobs do you anticipate being partner track positions?**

- None
- 1
- 2–3
- 4–5
- 6–10
- ≥11

**19. Please indicate your role(s). (Select all that apply)**

- Staff pathologist/member of group
- Pathologist head of group
- Medical director
- Department chair
- Medical school faculty
- Section head/manager/supervisor
- Other, please specify:

**20. How long have you been in practice?**

- ≤1 year
- 1+ to 3 years
- 3+ to 5 years
- 5+ to 10 years
- 10+ to 20 years
- 20+ to 30 years
- 30+ to 35 years
- 35+ to 40 years
- >40 years

**21. How long have you been in a leadership role (eg, head of group or division, chair of department)?**

- ≤1 year
- 1+ to 3 years
- 3+ to 5 years
- 5+ to 10 years
- 10+ to 20 years
- 20+ to 30 years
- 30+ to 35 years
- 35+ to 40 years
- >40 years
- Not applicable

**22. In which of the following ways are you typically involved in the hiring process (either individually or as part of a group)? (Select all that apply)**

- Review applications/curricula vitae
- Interview candidates
- Make the hiring decision
- Extend the job offer to the candidate
- Negotiate the contract

**23. Which of the following best describes your primary laboratory or practice setting? (Select only one)**

- Academic center/hospital (with an ACGME residents' program)
- For-profit hospital
- Not-for-profit hospital
- Pathologist-owned laboratory
- Corporate reference laboratory
- Niche subspecialty reference laboratory
- Physician office laboratory (nonpathologist owned)
- Military/federal government
- Other, please specify:

**24. Please indicate the size of your primary laboratory or practice setting.**

- 1–3 pathologists
- 4–5 pathologists
- 6–10 pathologists
- 11–20 pathologists
- ≥21 pathologists

Abbreviation: ACGME, Accreditation Council for Graduate Medical Education.