

**Executive Summary, Clinical Pathology
ACVP/STP/ASVCP Supply and Demand Survey 2007
Demographics Subcommittee, Recruitment Committee, ACVP**

As a follow up to the 2002 Survey to identify and characterize the shortage of veterinary pathologists in the workplace, a second survey, supported by the American College of Veterinary Pathologists, Society of Toxicologic Pathology and American Society for Veterinary Clinical Pathology, was performed in 2007. The 2007 survey was similar to the 2002 survey, with some modification, so that meaningful comparisons could be drawn between the two surveys and trends and issues more accurately defined. As in 2002, surveys were sent to veterinary pathology training programs (“supply”) and to employers of veterinary pathologists (“demand”). As with the 2002 survey, the goals were to obtain an idea of the current and future demand for veterinary pathologists to assess the challenges associated with recruiting veterinary pathologists. The survey was also used to determine if the goals of training programs had shifted, the number of trainees entering and completing programs had changed and if the challenges associated with recruiting had changed. The summary below is for the clinical pathology portion of the survey.

Attempts were made to be more “concise” with identifying the survey populations and a concerted effort was made before the survey was done to accurately identify training programs actually in existence, to avoid duplication of contacts both within in training programs and among employers and to be more accurate in identification of programs and employers. Hence the survey numbers are somewhat different than in 2002. Thirty-seven out of 39 total questionnaires sent to training programs were filled out and returned, a 94.9% response rate, while 122 institutions employing pathologists out of 248 surveyed returned information for a response rate of 56.9%.

“Supply” Summary (Survey of Training Programs in Clinical Pathology)

Twenty four programs responded to the 2007 survey; this is comparable to 2002, which had approximately the same number of responses (23) and similar response rate.

Types of programs represented included 41% training institutions offering combined residency/PhD programs and 83% offering three year residency only or residency/MS programs; these numbers are different than 2002, in which 50% of responding institutions offered combined residency/PhD programs and 75% offered three year residency only programs. This reflects a significant change in training priorities although PhD training still appears to remain important for some institutions.

Board certification/eligibility as a major goal of training programs was only 66%, compared to 91% in 2002, a substantial change.

The number (#) of trainees enrolled in training programs was 62 in 2007; this compares with 41 in 2002. Most of the increase was associated with an increase in the # of enrollees in three year residency only programs (41 in 2007 vs. 22 in 2002). Those enrolled in combined residency/PhD programs was somewhat decreased (12 in 2007, 17 in 2002).

Minority enrollment was roughly the same in both 2002 and 2007, 5 and 6, respectively. Non-citizen enrollment increased substantially by 2007 – 19 in 2007 compared to 6 in 2002.

Respondents to questions regarding funding sources indicated that the training institution itself provided funding for 46% and 29% of their residency only and residency/MS positions respectively, with industry

sources funding 13% residency only and 8% residency/MS. The home state provided 0% residency only and 4% residency/MS while the federal government provided funding for 0% of residency and residency/MS programs. With regards to combined residency/PhD programs, institutions themselves provided support for 17%, the home state for 8%, the federal government for 4% and Industry for 4% of these types of programs. These types of data were not collected in the 2002 survey, so no comparisons or assessments of changes can be made.

Changes in # of enrollment positions since 2002 were 15 positions gained, 0 lost, for a net gain of 15; most of these new positions were funded by Industry (9) and a few by the institution (3).

With regards to the perceived adequacy of positions to meet the service and teaching needs of the program, 18% replied that there were too few positions (50% in 2002), 82% thought that the # of positions was just right (50% in 2002) and 0% replied that there were too many positions (0% in 2002). This is a substantial improvement in perceptions.

Difficulties with recruiting seem to have eased somewhat since 2002, with 57% responding that it was not very or not at all difficult to recruit candidates (compared to 36% in 2002).

Barriers to recruiting have changed to some extent since 2002. In 2007 the top four barriers listed by respondents were low stipends at 70%, debt at 60%, competition from other specialties at 50%, lack of desire for PhD training at 50% and program location and other at 30%. This is compared to 2002 in which competition from other specialties was 71%, debt at 64%, low stipends at 57%, length of program at 35% and program location at 29%. *Primary* barriers to recruiting were “other” and low stipends (each listed by 33% of respondents) and program length, debt and disinterest in pursuing a PhD (each listed by 11%).

Factors limiting # of positions were funding for residencies (listed by 92% of respondents), numbers of faculty (42%), funding for PhDs (25%), # of applicants (8%) and other (17%). This is a different pattern in some respects from 2002; although 95% that year listed funding for residencies as a limiting factor and 47% listed faculty numbers as limiting; however, 16% in 2002 listed # applicants as a limiting factor, 37% listed PhD funding, and 10% listed other factors. As for the *primary* factor limiting positions, funding for residencies was still the primary factor although not listed by as many (58% in 2007 compared to 85% in 2002). Other primary limiting factors that differed substantially between 2002 and 2007 were “other” factors (21% in 2007 vs. 0% in 2002) and # of faculty, a factor that increased in 2007 (16% vs. 5% in 2002).

A slight increase in the number of applicants per position was noted in the 2007 survey. According to respondents there was an average of 5.3 applicants/open position, with 22% of the positions having >7 applicants; this is similar to 2002, where there were 5.1 applicants/position and only 19% reporting >7 applicants/position.

A trend toward more qualified applicants over the past five years was also noted, with 26% reporting an increase in the # qualified applicants, 74% the same and 0% fewer. This is in contrast to 2002, where 17% reported having an increase in # qualified applicants over a five year period, 50% reported the same and 17% reported fewer.

Numbers of graduates from training programs over the past five years has increased since the 2002 survey, with a total of 67 candidates reported as graduates (3.4/program) in comparison to 55 graduates over a five year period in 2002 (2.9/program).

Placement of graduates over the past five years increased in some areas, and decreased in others. Increases were noted for Academia (35 in 2007 vs. 24 in 2002) and private labs (22 vs. 14); Industry (Pharma) placed fewer graduates (5 vs. 8), while self employed decreased (1 vs. 5).

“Demand” Summary (Survey of Employers of Veterinary Pathologists)

Sixty employers employed clinical pathologists out of the 114 surveyed (52.6%). This is roughly the same as that in 2002, in which 59/140 employers surveyed employed clinical pathologists. The average number of pathologists employed by the respondents was 3.24/institution (compared to 2.6 in 2002). The total number of pathologists employed by the respondents was 191, compared to 153 in 2002.

The range of pathologists employed was 1-27, compared to 1-20 in 2002, with 26.3% of respondents employing 1-2 clinical pathologists, compared to 66% in 2002, implying that some institutions are employing larger numbers of clinical pathologists.

Open positions at the time of the survey were 15 institutions out of 50 responding (30%) that they had open positions compared to 19/61 (31%) in 2002; the average number of open positions/employer was 1.73 (compared to 1.6 in 2002), and 40% employers had more than open position. Over the past two years 28 out of 51 employers had open positions a somewhat lower percentage (55%) than in 2002 (64.5%).

There was a shift “downward” in # qualified applicants per open position in the past two years compared to 2002, with 26% employers reporting 0 qualified applicants per position (7.5% in 2002), 49% reporting 1-2 qualified applicants per position (65% in 2002) and 26% reporting 3+ applicants per position (27.5% in 2002). The number of applicants perceived as qualified compared to five years prior shifted between 2007 and 2002, with 30% responding that there were fewer qualified candidates, 64% responding that there were the same and 6% replying that there were more; in 2002, by contrast, the responses were 46% too few, 45% the same and 9% more.

The average time to fill positions showed a slight trend upward compared to 2002. Only 2% respondents reported that it took <3 months to fill a position (0% in 2002) and 17% reported a 3-6 month time lag compared to 19% in 2002. 48% of employers responded that it took 7-12 months to fill an open position (compared to 56% in 2002) but 22% reported that it took on average 12-18 months to fill positions and another 11% replied that it took >18 months (compared to 13% and 11%, respectively in 2002).

Anticipated job openings reported by respondents averaged 1.8/institution, with 38% anticipating openings in 2008-2009; this resulted in an anticipated 34 total open positions. In 2002, 1.0 openings/institution were anticipated in 2002-2003, with 42.6% having open positions); this resulted in 20 anticipated openings. For 2010-2013, it was anticipated that there would be 1.4 openings/institution (44 total), with 68% institutions having openings; in 2002, by contrast, it was anticipated that there would be 1.2 openings/institution (50 total) in 2004-2007, with 77% institutions having openings.

Openings *due to retirements* were anticipated by respondents to be on average 1.0 openings/institution (6 total) for 2008-2009, with 15% institutions having openings; for 2010-2013, there 1.2 openings/institution (22 total) anticipated, with 44% of employers having openings. This is roughly the same percentage anticipated for 2002-2003 (1.0/ institution, 4 total, 12.5% with openings) and 2004-2007 (1.1/institution, 19, 42% with openings) reported in the 2002 survey.

Minimum requirements for employment appear to have shifted somewhat from 2002. In the 2007 survey, 50.5% of respondents would require residency training and 61% would require ACVP board eligibility while 41% would require ACVP board certification at the time of hiring. Only 25.5% would require a PhD. This is somewhat shifted from the 2002 survey, where 36% required residency training, 67%

required ACVP board eligibility, 47% required board certification and 36% required a PhD. The percentage of employers who would hire a non-boarded candidate decreased to 64% in 2007 from 71% in 2002 but 91% (vs. 80% in 2002) would require ACVP board certification after hiring. Attitudes about the importance of a PhD also shifted between 2007 and 2002. In 2007, 42% of employers responded that a PhD was very or somewhat important (compared to 64% in 2002) while 30% responded that a PhD was not very important or not important at all (compared to 31% in 2002). A substantial number of respondents (15%) chose the response “it depends on the situation;” this is in contrast to 5% in 2002.

The greatest barrier to recruiting continues to be the limited # of qualified applicants, with 63% of employers listing this as a significant factor and 49% listing this as the *primary* factor, which is substantially less than the 2002 survey (82% a significant factor and 65% the *primary* factor). Other factors listed by more than 20% of the respondents as being significant were salary (43%) geographic location (33%) and excessive job demands (24%), in contrast to 2002 where salary (58%) and job demands (36%) were more often cited. Other primary factors listed by many were salary (19%), roughly the same as 2002 (18%) and geographic location (11%), which increased substantially from 2002 (2%).

Perceptions about # pathologists being trained have not changed much over time. In 2007, 78% of those surveyed thought there were not enough pathologists being trained, 22% thought the right number were being trained and 0% thought too many were being trained. In 2002, the percentages were 80%, 20% and 0%, respectively.

Summary of Supply vs. Demand in 2007

The estimated supply of graduates (adjusted for non-responders) for the next six years was 71, 13 in 2008, 9 for 2009, 16 for 2010, 19 for 2011, 12 for 2012 and 2 for 2013; in 2002 the four year estimated supply was 56 (62 trainees were enrolled in programs in 2007).

The estimated demand for the next four years (2008-2011) is 75, based in extrapolated data to account for nonresponders (43,1% of survey population) weighted to account for variability in response rates among small (1-5 employees), middle sized (6-10 pathologists employed), and large (>11 pathologists employed) institutions. This compares to 2002, when the four year demand was estimated to be 56. The estimated six year (2008-2013) is 105.

The estimated deficit of clinical pathologists over the next four year period (2008-2011) is 17, with the highest deficit years being 12 in 2008 and 13 in 2013; the estimated deficit for the next six year period (2008-2013) is 45. In 2002 the estimated four year deficit (2002-2005) was 12.

Additional analysis of employer data to determine in which sector demand is going to be greatest (eg, Academia, Contract Labs, Diagnostic Labs) and for what reason (eg, retirements, retrenchments) is currently underway and a summary addendum will be put forward as that information becomes available.