



**2016 Resident and Intern Salaries Offered through the VIRMP
Association of American Veterinary Medical Colleges
September 2016**

Introduction

According to the annual Senior Surveys conducted by the American Veterinary Medical Association (AVMA) between 2010 and 2014, 47.6% of graduates from professional DVM programs pursue additional training via internship (AVMA, 2015). Recent graduates report hope to receiving additional hands on training and mentoring, as well as pursue specialized experience as reasons for pursuing internships. A smaller number of these professionals go on to pursue residency training with the goal of earning additional degrees and/or board certification.

In the short term, pursuit of additional learning experiences has a negative impact on the salaries earned by new graduates. Historically, post-DVM training programs have paid salaries far lower than the national average for recent graduates. In 2015, AVMA reported new graduate veterinarians earned an average annual salary of \$70,543. That same year, the Association of American Veterinary Medical Colleges (AAVMC) reported an average salary of \$26,572 for interns at colleges of veterinary medicine in the United States and an average salary of \$32,706 for residents completing their training at a college of veterinary medicine. (AAVMC, 2015)

In an effort to broaden the profession's understanding of trainee salaries, the AAVMC has partnered with the American Association of Veterinary Clinicians (AAVC) to study the full complement of residencies and internships offered through a matching program.

Methodology

The American Association of Veterinary Clinicians (AAVC) sponsors the annual Veterinary Internship and Residency Matching Program (VIRMP). The purpose of the program is to “expedite the selection of interns and residencies for participating veterinary colleges and private veterinary practices.” (AAVC, 2016). The VIRMP allows academic institutions and private practices to submit training positions to be filled and applicants to submit their applications and rankings to the VIRMP. Program coordinators review the applications and rank the applicants. Proprietary software used by the VIRMP determines the best matches based on the rankings and notifies the applicants and the program coordinators.

This process begins annually in September of each year when the training program coordinators from individual residency and internship training programs enter their program information into the matching program's website (www.virmp.org). Program coordinators enter detailed information about the positions being offered; the salary being offered is entered as a free-text field.

In the spring of 2016, this data was provided to AAVMC for analysis. Prior to analysis, all free text entered salary information was standardized using US currency formatting. Canadian dollars were converted to the US dollar using an online currency converter ([XE Currency Converter](#), 2016). Residency and internship position offerings were sorted by clinical and non-clinical types; clinical positions were again sorted by practice area. The position entry data included the state location and the name of the institution or practice offering each position. These data were organized using regional variables and a variable descriptive variable indicating whether the practice was located at an academic institution or a private practice.

Descriptive and ANOVA analyses were conducted using SPSS 22.

Definitions

There are two kinds of residents, non-clinical and clinical residents. Non-Clinical residents are defined as individuals involved in basic science training programs. Clinical residents are defined as individuals involved in a three year advanced training program in a specialty area in veterinary medicine. This training may or may not lead to a specialty board certification and may or may not be embedded within a graduate program.

Clinical interns are defined as individuals participating in a one year rotating or specialty clinical training program in veterinary medicine. The internship provides practical experience in applying knowledge gained during formal professional education and offers the opportunity for recent graduates to obtain additional training.

Summary of Findings for Resident Positions Filled through the Match Program

The number of first year residency positions offered through the VIRMP for the 2016-2017 training year was 363; 309 (85.1%) of these positions were offered by academic institutions in the United States and Canada. For all listed resident positions, the average starting salary was \$33,262, and there was no statistical difference between positions offered in academic or private settings.

Resident positions listed through the matching program were most often located in the South (27.6%) and Midwest (26.8%). Only 3.0% of positions were located in Canada. (Table 1). Although only 18.4% of residents are expected to train in the Western region this year, that region offers the highest starting salary of all listed resident positions at \$38,330, which is \$5,000 more than the national average. This statistically significant difference ($p = .000$) is likely attributable to differences in the cost of living, including housing, across regions. For example, as of July 13, 2016, residents training in Davis, California will need \$4,351 more in salary to maintain a comparable standard of living as residents training in Athens, Georgia (Numbeo.com, 2016). Applicants to residency positions in Canada were offered 30.6% less in salary when salaries were adjusted to US currency. This is also likely explained by differences in the cost of living; for example, housing is substantially less costly (26.25%) in Canada (Numbeo.com, 2016). A breakdown of average salary by region can be found in Table 1.

Table 1:

Average Salary Offered for Resident Positions by Region US & Canada		
Region	Percentage of Positions Listed	Mean Salary
Midwest	24.2%	\$30,767
Northeast	26.8%	\$35,157
South	27.6%	\$32,088
West	18.4%	\$38,330
Canada	3.0%	\$25,477
Total	100.0%	\$33,262

Residency match offerings were sorted into categories associated with specialty areas (Table 2).

Table 2:

**Average Resident Salary Offered by Practice Type
US & Canada**

Area of Practice	Number of Positions Listed	Percentage of Positions Listed	Mean Salary
Ambulatory	1	0.3%	\$34,032
Anesthesia	16	4.1%	\$30,909
Avian Medicine	1	0.2%	\$29,500
Behavior	1	0.3%	\$32,000
Cardiology	16	4.1%	\$30,948
Clinical Nutrition	3	0.8%	\$32,789
Dentistry	4	1.1%	\$33,817
Dermatology	5	1.3%	\$31,169
Diagnostic Imagine and Radiology	21	5.4%	\$30,951
Emergency Medicine - Small Animal	48	13.8%	\$34,710
Equine Medicine	8	2.2%	\$33,656
Equine Surgery	6	1.6%	\$32,216
Exotic/Wildlife/Zoo	6	1.6%	\$31,480
Food Animal Medicine & Surgery	4	1.0%	\$31,027
Genetics and Pediatrics - Small Animal	2	0.5%	\$31,000
Herd Medicine/Agricultural Practice/Herd Production	2	0.7%	\$40,668
Laboratory Medicine/Comparative Medicine	41	15.1%	\$44,499
Medicine - Large Animal	14	3.6%	\$30,706
Medicine - Small Animal	42	10.9%	\$31,292
Neurology/Neurosurgery	20	5.2%	\$31,288
Oncology	18	4.7%	\$31,293
Radiation Oncology/Therapy	6	1.5%	\$29,285
Sports Medicine and Rehabilitation	2	0.5%	\$30,000
Surgery - Large Animal	15	3.8%	\$30,526
Surgery - Small Animal	50	13.0%	\$31,419
Theriogenology	7	1.8%	\$30,272
Zoological Medicine	4	1.1%	\$32,642
Total	363	100.0%	\$33,262

Generally, average salary offers for all resident positions listed clustered in the low \$30,000 range. Positions for clinical trainees in Emergency Medicine - Small Animal comprised the single largest group of positions listed (13.8%). Although most salary offers were fairly close to the mean, statistically significant differences were found across practice areas ($p=.000$). These differences may well be mitigated by the very small sample sizes within each practice category.

Non-clinical Residency Training

It is important to differentiate between clinical and non-clinical trainees as the salary offers different significantly.

Trainees pursuing non-clinical residencies in laboratory animal medicine and/or comparative medicine were offered significantly more than their clinical resident counterparts participating in the matching program ($p = .000$). Applicants to these non-clinical programs were offered positions with an average starting salary of \$44,499, while applicants to clinical residency programs were offered \$31,832 or 39.8% less. A single position listing for a biomedical research trainee within this Lab Animal Medicine/Comparative Medicine group, was offered \$51,000 or 60.2% more than the average clinical resident applicant, while other laboratory animal medicine positions offered an average salary of \$44,336. It should be noted that the total number of positions listed for biomedical research and laboratory animal medicine comprised 11.3% of all positions listed in the VIRMP for the year reviewed, and there was only one offer specifically for a biomedical research trainee.

Summary of Findings for Intern Positions Filled through the Match Program

There were 1,180 intern positions listed through in the VIRMP for the 2016-2017 training year; the majority of these positions (77.6%) were offered by private training sites. The average salary offered to prospective interns entering the match program for the 2016-2017 training year was \$31,775; salary offerings ranged from \$12,000 to \$50,000. There was a statistically significant difference in the salaries offered to interns in private training sites and those in academic sites ($p=.000$). On average, interns in private training sites were offered \$5,790 more than their counterparts who are training at academic institutions (Table 3).

Table 3:
**Average Salary Offered for Intern Positions
US & Canada**

Intern Site	Mean Salary
Academic Institution	\$25,985
Private Practice	\$31,775
Total	\$30,264

Like resident trainees, the largest complement of internship positions was offered in the South (30.6%), and over half of all positions were found in the Northeastern and Western regions. (Table 4). Average intern salary offers for positions in the Northeast and West were also higher than those in other regions; the difference was found to be statistically significant ($p = .000$).

Table 4

**Average Intern Salary Offered by Region
US & Canada**

Region	Percent of Positions Listed	Mean
Midwest	14.20%	\$28,557.01
Northeast	26.50%	\$31,821.65
South	30.60%	\$29,087.93
West	25.20%	\$33,202.34
Canada	3.60%	\$21,540.71
Total	100.00%	\$30,263.91

The internship position offerings were sorted into practice areas for the purposes of further analysis (Table 5).

(Table on Next Page)

Average Intern Salary Offered by Practice Type US & Canada			
Practice Area	Number of Positions Listed	Percentage of Positions Listed	Mean Salaries
Agricultural Practices	2	0.2%	\$31,195
Ambulatory	3	0.2%	\$26,494
Anesthesiology	5	0.4%	\$27,780
Avian	9	0.7%	\$27,023
Cardiology	3	0.3%	\$35,667
Dermatology	3	0.2%	\$28,961
Diagnostic Imaging and Radiology	5	0.4%	\$30,921
Emergency Medicine - Small Animal	94	8.5%	\$32,420
Equine	25	1.8%	\$26,298
Exotic/Wildlife/Zoo	17	1.2%	\$25,822
Farm Practice/Production Animal Medicine	4	0.3%	\$26,357
Food Animal	5	0.4%	\$26,840
Large Animal Medicine/Surgery	17	1.1%	\$23,228
Large Animal Medicine/Surgery (Minority)	1	0.1%	\$24,500
Large Animal Surgery	1	0.1%	\$25,316
Neurology	22	1.9%	\$30,485
Oncology	23	1.8%	\$28,397
Other	10	1.0%	\$34,185
Pathology/Clinical Pathology	2	0.2%	\$29,692
Shelter Medicine	6	0.5%	\$30,224
Small Animal Internal Medicine	31	2.8%	\$31,999
Small Animal Medicine/Surgery	794	67.7%	\$30,443
Small Animal Medicine/Surgery (Minority)	4	0.3%	\$25,388
Small Animal Surgery	89	7.5%	\$30,204
Sports Medicine and Rehabilitation	5	0.4%	\$30,152
Total	1180	100.0%	\$29,649.29

More than half of all intern positions were listed in small animal medicine and/or surgery (67.7%); however, a significant salary range was noted for these offerings. Listed salaries for these positions ranged from a low of \$25,683 (18.5% below the mean) to a high of \$31,332 (2.9% above the mean). This variance was statistically significant ($p=.000$).

Discussion

Generally speaking, prospective interns were offered just under \$30,000 and prospective residents were offered approximately \$33,000 in their first year. How closely a training applicant comes to these starting averages is largely dictated by where the residency or intern match occurs and what practice area is being pursued. For intern applicants, whether this will be their first or second internship also influences the salary offer. A small number of internship listings (16.1%) required a year of previous internship training or professional practice to be eligible to apply. Salary offers for second year interns were \$1,375 or 4.6% higher than offers not requiring previous experience ($p=.001$).

There are differences in both the number and types of positions and average salaries listed across the regions. There are more listings for positions in the South and the Northeast, with positions in the Northeast averaging higher salaries than those in the South in those comparative areas. Also, it should be noted that the salaries reported here are *salary offers* for those participating in the match program; it is possible the final salaries may be affected by salary negotiations occurring subsequent to the position/applicant match as well as any additional pay for emergency duty.

Residency programs are typically three years in length; this data is specific to salaries offered through the match program for first year resident placements. Data collected in 2015 by the AAVMC revealed a 4.7% increase in average university residency salaries between years 1 and 3 of training (AAVMC, 2015), with first year average university resident salaries being \$32,084 and third year salaries being \$33,391.

<i>Table 6</i>						
Internship Distribution by Location and Region US & Canada						
	Midwest	Northeast	South	West	Canada	Total
Academic	49.20%	14.80%	30.90%	10.70%	54.20%	26.10%
Private Clinic	50.80%	85.20%	69.10%	89.30%	45.80%	73.90%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Residency Distribution by Location and Region						
	Midwest	Northeast	South	West	Canada	Total
Academic	96.80%	64.10%	92.30%	82.80%	100.00%	85.10%
Private Clinic	3.20%	35.90%	7.70%	17.20%	0.00%	14.90%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

As shown in Table 6, interns accepting positions through the match program will more often have their training experiences in a private clinic setting (73.9%), unless they are in the Midwest or in Canada, where they are nearly just as likely to be in a private clinic or an academic institution for training. More than one-third of residents in the Northeast will be trained in private clinics; this tracks closely with the high percentage of internship offerings in the region (85%). By comparison, residents participating exclusively in the VIRMP are more likely to return to a traditional academic environment for training.

When looking within the internship postings, differences can be found between the internship offerings at universities and private practices. Within the VIRMP, equine intern training is mostly found in academic settings (84.0%) as is training in exotics, wildlife and zoo medicine (70.6%). Training in neurology (90.9%) and small animal emergency and critical care (85.1%) are more likely to be offered in private clinic facilities.

Limitations

The salary data acquired from the VIRMP only represents a portion of available residency and intern positions offered in the United States. It is unclear how many positions are offered to new and recent graduates of the professional DVM program. Because of this, the authors are unable to claim that this data is wholly definitive of the salary ranges that may be offered to residents and interns in the United States.

Conclusion

Interns and residents are offered salaries that less than half the national average salary earned by new graduates. Although previous data assumed that interns were holding such positions for a single year prior to pursuing residency training or entering the broader veterinary workforce, a portion of this population are likely pursuing another internship position with a very small increase in salary. Salaries for internships and residencies are influenced by numerous things including location, practice area and whether the position is offered by an academic institution or a private practice.

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References

Cost of Living. Numbeo, n.d. Web. 16 Sept. 2016.

Dicks, Michael R., Bridgette Bain, and Ross Knippenberg. *2015 AVMA Report on Veterinary Markets*. Schaumburg: American Veterinary Medical Association, 2015. Print.

Dicks, Michael R., Ross Knippenberg, Bridgette Bain, and Lisa Greenhill. *2015 AVMA Report on the Market for Veterinary Education*. Schaumburg: American Veterinary Medical Association, 2016. Print.

Greenhill, Lisa M. "2015 Intern & Resident Salaries at U.S. Schools and Colleges of Veterinary Medicine." *2015 Intern & Resident Salaries at U.S. Schools and Colleges of Veterinary Medicine*. Association of American Veterinary Medical Colleges, Sept. 2015. Web. 9 Sept. 2016.

XE. "XE Currency Converter-Live Rates." n.p., Web. 15 July 2016.