

**2018 Resident Salaries Offered through the VIRMP
Association of American Veterinary Medical Colleges
June, 2018**

Introduction

According to the annual Senior Surveys conducted by the American Veterinary Medical Association (AVMA) 31.6% percent of 2016 graduates pursued additional training by internship (Dicks, Bain, & Knippenberg, 2017). Recent graduates report receiving additional hands on training and mentoring, as well as pursuing specialized experience as reasons for pursuing internship. A smaller number of these professionals go on to pursue residency training with the goal of earning additional degrees and/or board certification.

Historically, post-DVM training programs have paid salaries far lower than the national average for recent graduates. In 2017, AVMA reported new graduate veterinarians earned an average annual salary of \$73,380 for 2016 graduates (Dicks, Knippenberg, Bain & Greenhill 2017). In 2017, the Association of American Veterinary Medical Colleges (AAVMC) reported an average salary of \$34,527 for first year residents in training programs in the United States (Greenhill & Young, 2017).

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. This publication focuses exclusively on first year salaries for residency programs in the United States.

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, 2017). 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 2018, this data was provided to AAVMC for analysis. Prior to analysis, all free text entered salary information was standardized using US currency formatting. Residency 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 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 in the United States through the VIRMP for the 2018-2019 training year was 352. Positions were offered in two categories: academic institutions and private practices. A total of 73 entities offered positions for the 2018-2019 training year. Academic institutions offered the bulk of residency training positions in the most recent match cycle, 301 or 85.5% of positions offered at 46 sites.

For all listed resident positions, the average starting salary was \$35,021 or 1.4% higher than the salary offered in 2017. The increase also represented a smaller increase than the Consumer Price Index (CPI) (2.5%) for the period April 2017 to April 2018 (Bureau of Labor and Statistics, 2018). There was also a statistical difference between positions offered in academic or private settings, with privately offered residency applicants being offered \$37,169 and academically offered residency applicants being offered \$34,657 or 7.2% less ($p=.009$).

Resident positions listed through the matching program were most often located in the South (30.7%) and Midwest (27.6%). Although only 16.2% of residents are expected to train in the Western region this year, that region continues to offer the highest starting salary of all listed resident positions at \$39,891, which is \$4,870 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 May 14, 2018, residents training in Davis, California will need \$4,816 more in salary to maintain a comparable standard of living as residents training in Urbana, Illinois (Numbeo.com, 2018). A breakdown of average salary by region can be found in Table 1.

Table 1:
Average Salary Offered for Resident Positions by Region

Region	Percentage of Positions Listed	Mean Salary	Median Salary
Midwest	27.6%	\$32,565	\$30,500
Northeast	25.6%	\$36,209	\$35,157
South	30.7%	\$33,665	\$31,364
West	16.2%	\$39,891	\$42,216
Total	100.0%	\$35,021	\$33,000

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

Table 2:
Average Resident Salary Offered by Practice Type

Area of Practice	Number of Positions Listed	Percentage of Positions Listed	Mean Salary	Median Salary
Ambulatory	2	.6%	\$35,556	\$35,556
Anesthesia	18	5.1%	\$32,866	\$32,682
Avian Medicine	1	.3%	\$28,000	\$28,000
Cardiology	9	2.6%	\$33,529	\$32,500
Clinical Nutrition	3	.9%	\$34,572	\$35,000
Dentistry	4	1.1%	\$36,308	\$36,608
Dermatology	11	3.1%	\$31,097	\$31,350
Diagnostic Imagine and Radiology	15	4.3%	\$31,591	\$31,000
Emergency Medicine/Critical Care	56	15.9%	\$36,113	\$35,000
Equine Medicine	10	2.8%	\$34,155	\$31,634
Equine Surgery	11	3.1%	\$33,553	\$31,350
Exotic/Wildlife/Zoo	2	.6%	\$39,287	\$39,287
Food Animal Medicine & Surgery	5	1.4%	\$34,675	\$34,157
Herd Medicine/Agricultural Practice/Herd Production	1	.3%	\$42,216	\$42,216
Laboratory Medicine/Comparative Medicine	37	10.5%	\$47,214	\$47,484
Medicine - Large Animal	13	3.7%	\$32,745	\$31,364
Medicine - Small Animal	42	11.9%	\$33,609	\$32,390
Neurology/Neurosurgery	19	5.4%	\$32,082	\$31,000
Oncology	19	5.4%	\$32,539	\$31,364
Ophthalmology	1	.3%	\$35,157	\$35,157

Radiation Oncology/Therapy	6	1.7%	\$31,129	\$29,530
Sports Medicine & Rehabilitation	1	.3%	\$28,000	\$28,000
Surgery - Large Animal	10	2.8%	\$32,530	\$33,070
Surgery - Small Animal	43	12.2%	\$33,099	\$31,364
Theriogenology	8	2.3%	\$32,318	\$31,350
Zoological Medicine	5	1.4%	\$34,750	\$35,000
Ambulatory	352	100.0%	\$35,021	\$33,000

Although salaries within the sample ranged from \$28,000 per year up to \$47,214 year, average salary offers across practice areas largely clustered in the low \$30,000 range. Positions for clinical trainees in Emergency Medicine/Critical Care comprised the single largest group of positions listed (15.9%). 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 differ significantly.

Trainees pursuing non-clinical residencies in Laboratory Medicine/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 \$47,214 while applicants to clinical residency programs were offered \$33,588 or 28.9% less in salary. It should be noted that the total number of positions listed for laboratory animal medicine comprised 10.5% of all positions listed in the VIRMP for the year reviewed.

Academic Residency Offerings

As noted earlier, US colleges of veterinary medicine offered 301 residency positions in the match for the 2018-2019 employment year. The mean salary positions offered by the colleges was \$34,656, with a salary range of \$26,000 to \$64,000. Much like the total complement of residency offerings, the largest percentage of positions could be found in the Midwest (29.9%) and Southern regions (35.2%). Salaries in the Northeast and West were significantly higher than in other regions ($P=.000$). Table 3 provides salary averages for academic residency positions by region, while Table 4 provides salary averages by state where academic residency opportunities are offered.

Table 3:
**Average Salary Offered for Academic
Residency Positions by Region**

Region	Percentage of Positions Listed	Mean Salary	Median Salary
Midwest	29.9%	\$32,318	\$30,500
Northeast	18.9%	\$36,644	\$35,157
South	35.2%	\$33,660	\$31,364
West	15.9%	\$38,882	\$42,216
Total	100.0%	\$34,656	\$32,500

Table 4:
Average Salary Offered for Academic Residency Positions by State

State	Mean	Median
Alabama	\$31,350	\$31,350
California	\$43,054	\$42,216
Colorado	\$33,167	\$32,500
Connecticut	\$45,000	\$42,000
Florida	\$36,938	\$36,358
Georgia	\$35,996	\$31,364
Illinois	\$33,177	\$30,767
Indiana	\$30,500	\$30,500
Iowa	\$29,000	\$29,000
Kansas	\$34,157	\$34,157
Louisiana	\$33,786	\$30,916
Maryland	\$47,484	\$47,484
Massachusetts	\$36,918	\$35,157
Michigan	\$36,991	\$33,640
Minnesota	\$32,679	\$30,000
Mississippi	\$30,133	\$30,200
Missouri	\$29,997	\$26,500
New York	\$39,758	\$35,700
North Carolina	\$35,735	\$35,000
Ohio	\$34,448	\$33,000
Oklahoma	\$29,000	\$29,000
Oregon	\$35,321	\$32,280
Pennsylvania	\$33,086	\$31,000
Tennessee	\$29,773	\$28,000
Texas	\$30,407	\$29,584
Virginia	\$37,098	\$35,412
Washington	\$33,975	\$29,472
Wisconsin	\$29,800	\$29,800
Total	\$34,656	\$32,500

Table 5 shows the mean residency salary offerings by practice area. Positions in laboratory animal/comparative medicine comprised the largest single group of offerings by positions, and these positions offered a higher salary than others offered across practice area. Most salaries offered were clustered close to \$32,000. Residency positions in Small Animal Medicine and Small Animal Surgery, together, represented 21.6% of academic residency positions offered during this match period.

Table 5:

Average Salary Offered for Academic Residency Positions by Practice Area

Practice Area	% of Positions	Mean	Median
Ambulatory	.7%	\$35,556	\$35,556
Anesthesia	6.0%	\$32,866	\$32,682
Avian Medicine	.3%	\$28,000	\$28,000
Cardiology	2.3%	\$34,285	\$35,000
Clinical Nutrition	1.0%	\$34,572	\$35,000
Dentistry	1.3%	\$36,308	\$36,608
Dermatology	3.3%	\$31,007	\$31,175
Diagnostic Imaging and Radiology	5.0%	\$31,591	\$31,000
Emergency Medicine - Small Animal	11.3%	\$33,075	\$31,350
Equine Medicine	3.3%	\$34,155	\$31,634
Equine Surgery	3.7%	\$33,553	\$31,350
Exotic/Wildlife/Zoo	.7%	\$39,287	\$39,287
Food Animal Medicine and Surgery	1.7%	\$34,675	\$34,157
Herd Medicine/Agricultural Practices/Herd Production	.3%	\$42,216	\$42,216
Laboratory Animal/Comparative Medicine	12.3%	\$47,214	\$47,484
Medicine- Large Animal	4.3%	\$32,745	\$31,364
Medicine - Small Animal	11.3%	\$32,752	\$31,357
Neurology/Neurosurgery	5.3%	\$32,441	\$31,175
Oncology	6.0%	\$32,722	\$31,822
Ophthalmology	.3%	\$35,157	\$35,157
Radiation Oncology Therapy	1.7%	\$31,503	\$29,800
Sports Medicine and Rehabilitation	.3%	\$28,000	\$28,000
Surgery - Large Animal	3.3%	\$32,530	\$33,070
Surgery - Small Animal	10.3%	\$32,296	\$31,000
Theriogenology	2.7%	\$32,318	\$31,350
Zoological Medicine	1.3%	\$34,688	\$32,884
Total	100.0%	\$34,656	\$32,500

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 in the United States.

Conclusion

Residents are offered salaries that less than half the national average salary earned by new graduates, however, there is a wide range of salaries within those offered. Overall, resident salaries rose less than the CPI for the last year. Finally, salaries 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.

Acknowledgements

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References

Cost of Living. Numbeo, n.d. Web. 14 May. 2018.

Consumer Price Index—April 2018. Bureau of Labor Statistics, US Department of Labor. Web. 10 May 2018. Web.

Dicks, Michael R., Bridgette Bain, and Ross Knippenberg. *2017 AVMA Report on Veterinary Markets*. Schaumburg: American Veterinary Medical Association, 2017. Print.

Dicks, Michael R., Ross Knippenberg, Bridgette Bain, and Lisa Greenhill. *2017 AVMA Report on the Market for Veterinary Education*. Schaumburg: American Veterinary Medical Association, 2017. Print.

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