

**2018 Internship Salaries Offered through the VIRMP
Association of American Veterinary Medical Colleges
May, 2019**

Introduction

According to the annual Senior Surveys conducted by the American Veterinary Medical Association (AVMA) 34% percent of 2017 graduates pursued additional training by internship (Bain, Salois, Ouedraogo, Hanson & Dutton, 2018). Recent graduates report receiving additional hands on training and mentoring, as well as pursuing 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.

Historically, post-DVM training programs have paid salaries far lower than the national average for recent graduates. In 2018, AVMA reported new graduate veterinarians earned an average annual salary of \$76,633 (Larkin, 2018). The Association of American Veterinary Medical Colleges (AAVMC) reported an average salary of \$33,738 for interns in training programs in the United States (Greenhill & Young, 2018).

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 salaries for internship 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, 2019). 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 2019, 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

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 Internship Positions Filled through the Match Program

The number of internship positions offered in the United States through the VIRMP for the 2019-2020 training year was 1,371 across 442 employment sites; 345 (25.2%) of these positions were offered by 29 academic institutions. Overall, this represented a 4.1% increase in the total number of internship positions offered through the VIMRP this year. For all listed intern positions, the average starting salary was \$35,423, a 5.1% increase over the previous year's salary of \$33,738. There was a statistical difference between positions offered in academic or private settings, with privately offered internship applicants being offered \$37,794 and academically offered internship applicants being offered \$28,372 or 24.9% less ($p=.000$).

Internship positions listed through the matching program were most often located in the South (33.9.7%) and Northeast (24.9%). Nearly 1 in 4 internship positions were offered in the Western region of the U.S. Positions in the Western region offered salaries significantly higher than in other regions, \$42,100, and 19% higher than the national average internship salary.

A breakdown of average salary by region can be found in Table 1.

<i>Table 1:</i> Average Salary Offered for Internship Positions by Region			
Region	Percentage of Positions Listed	Mean Salary	Median Salary
Midwest	17.1%	\$31,000	\$31,000
Northeast	24.9%	\$34,900	\$34,900
South	33.9%	\$31,500	\$31,500
West	24.0%	\$43,680	\$43,680
Total	100.0%	\$33,000	\$33,000

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

Table 2:

Average Internship Salary Offered by Practice Type

Area of Practice	Number of Positions Listed	Percentage of Positions Listed	Mean Salary	Median Salary
Agricultural Practices	2	.1%	\$26,064	\$26,064
Ambulatory	1	.1%	\$25,000	\$25,000
Anesthesiology	5	.4%	\$28,931	\$27,500
Avian	12	.9%	\$30,313	\$31,250
Cardiology	5	.4%	\$41,323	\$36,000
Community Practice	18	1.3%	\$40,748	\$40,000
Dermatology	4	.3%	\$34,183	\$33,450
Diagnostic Imaging & Radiology	6	.4%	\$34,592	\$32,000
Emergency Medicine/Critical Care	108	7.9%	\$40,708	\$43,000
Equine	21	1.5%	\$28,195	\$27,000
Exotic/Wildlife/Zoo	22	1.6%	\$29,040	\$30,500
Farm Practice/Production Animal Medicine	3	.2%	\$29,667	\$31,000
Food Animal	8	.6%	\$28,367	\$28,000
Large Animal Medicine/Surgery	13	.9%	\$27,742	\$28,000
Large Animal Surgery	3	.2%	\$27,371	\$27,212
Neurology	43	3.1%	\$38,742	\$42,000
Oncology	27	2.0%	\$29,332	\$27,500
Ophthalmology	4	.3%	\$34,875	\$31,750
Other	11	.8%	\$33,204	\$35,000
Shelter Medicine	23	1.7%	\$37,133	\$34,900
Small Animal Internal Medicine	35	2.6%	\$37,577	\$34,000
Small Animal Medicine/Surgery	878	64.0%	\$35,399	\$34,000
Small Animal Surgery	115	8.4%	\$34,540	\$32,000
Sports Medicine & Rehabilitation	4	.3%	\$31,190	\$31,750
Total	1,371	100.0%	\$35,423	\$33,000

Mean salary offerings across practice area ranged from \$25,000 to \$41,000, with average salary offers largely clustered in the low \$30,000 range. Small Animal Medicine/Surgery internship positions continued to make up the largest group of positions (64%). Although most salary offers were fairly close to the median, statistically significant differences were found across practice areas ($p=.000$). These differences may well be mitigated by the very small sample sizes within practice categories. Internships in cardiology offered the highest mean salary offer of \$41,323.

Academic Positions

There were 345 internship positions offered through the VIRMP for the 2019-2020 training year. As noted earlier, the mean salary offered by the academic institutions for internship positions was \$28,372. The largest share of positions were offered at colleges in the South and Midwest (Table 3). Higher internship salaries were offered by colleges in the West and Northeast regions by 8.1% and 3.3%, respectively.

<i>Table 3:</i> Average Salary Offered for Academic Internship Positions by Region			
Region	Percentage of Positions Listed	Mean Salary	Median Salary
Midwest	32.8%	\$27,696	\$27,000
Northeast	15.1%	\$29,304	\$27,212
South	40.6%	\$27,919	\$27,000
West	11.6%	\$30,656	\$28,000
Total	100.0%	\$28,372	\$27,212

Mean salaries by state are shown in Table 4.

<i>Table 4:</i> Average Salary Offered for Academic Internship Positions by State				
State	Mean	Median	N	% of Total N
Alabama	\$25,765	\$26,000	17	4.9%
Arizona	\$35,000	\$35,000	4	1.2%
California	\$41,067	\$43,482	5	1.4%
Colorado	\$29,038	\$28,000	13	3.8%
Florida	\$31,000	\$31,000	17	4.9%
Georgia	\$29,065	\$29,160	12	3.5%
Illinois	\$26,153	\$26,153	18	5.2%
Indiana	\$29,050	\$29,050	8	2.3%
Iowa	\$26,000	\$26,000	11	3.2%
Kansas	\$32,774	\$32,774	12	3.5%
Louisiana	\$26,327	\$26,660	15	4.3%
Massachusetts	\$27,406	\$27,212	20	5.8%
Michigan	\$26,250	\$26,250	14	4.1%
Minnesota	\$27,786	\$28,000	14	4.1%
Mississippi	\$24,733	\$24,000	9	2.6%
Missouri	\$27,000	\$27,000	13	3.8%

New York	\$34,900	\$34,900	13	3.8%
North Carolina	\$32,000	\$32,000	21	6.1%
Ohio	\$28,167	\$28,000	12	3.5%
Oklahoma	\$26,722	\$26,500	9	2.6%
Oregon	\$31,776	\$31,776	6	1.7%
Pennsylvania	\$27,474	\$26,500	19	5.5%
Tennessee	\$25,000	\$25,000	13	3.8%
Texas	\$27,291	\$26,670	17	4.9%
Virginia	\$27,600	\$27,000	10	2.9%
Washington	\$26,064	\$26,064	12	3.5%
Wisconsin	\$27,427	\$26,900	11	3.2%
Total	\$28,372	\$27,212	345	100.0%

An analysis of application requirements revealed that 13.3% of intern positions required at least one previous year's internship or comparable experience. These requirements are slightly positively correlated with salary offers ($P=.000$). Mean salary offers featuring experience requirements were 4.3% higher than salaries without the requirement (Table 5).

Table 5:

Average Salary Offered for Academic Internship Positions by Experience Requirements			
Previous Experience Requirements	Percentage of Positions Listed	Mean Salary	Median Salary
No Previous Internship Required	86.7%	\$28,212	\$27,212
Previous Internship Required	13.3%	\$29,414	\$26,660
Total	100.0%	\$28,372	\$27,212

An analysis of position offerings by practice area reveals that the bulk of positions are in Small Animal Medicine/Surgery. The single cardiology internship position offered the highest mean salary of \$32,774, which is 17.6% higher than the national average. Salary differences across practice areas were statistically significant ($P=.013$); Table 6 shows the mean salaries offered by practice area.

Table 6:

Average Salary Offered for Academic Internship Positions by Practice Area			
Practice Area	Percentage of Positions Listed	Mean	Median
Agricultural Practices	.6%	\$26,064	\$26,064
Ambulatory	.3%	\$25,000	\$25,000
Anesthesiology	1.2%	\$28,038	\$27,000
Avian	.6%	\$27,000	\$27,000
Cardiology	.3%	\$32,774	\$32,774
Community Practice	.3%	\$27,212	\$27,212
Dermatology	.6%	\$30,527	\$30,527
Diagnostic Imaging & Radiology	.6%	\$31,687	\$31,687
Emergency Medicine/Critical Care	5.2%	\$31,241	\$28,139
Equine	4.6%	\$28,257	\$27,106
Exotic/Wildlife/Zoo	4.1%	\$29,813	\$31,000
Farm Practice/Production Animal Medicine	.9%	\$29,667	\$31,000
Food Animal	2.3%	\$28,367	\$28,000
Large Animal Medicine/Surgery	3.8%	\$27,742	\$28,000
Large Animal Surgery	.9%	\$27,371	\$27,212
Neurology	1.2%	\$26,054	\$26,032
Oncology	4.9%	\$27,751	\$26,153
Other	1.2%	\$27,562	\$27,705
Shelter Medicine	3.5%	\$30,665	\$30,400
Small Animal Internal Medicine	1.2%	\$26,351	\$26,202
Small Animal Medicine/Surgery	58.6%	\$28,038	\$27,000
Small Animal Surgery	2.9%	\$28,351	\$26,830
Sports Medicine & Rehabilitation	.6%	\$31,750	\$31,750
Total	100.0%	\$28,372	\$27,212

Limitations

The salary data acquired from the VIRMP only represents a portion of available internship 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 these data are wholly definitive of the salary ranges that may be offered to residents in the United States.

Conclusion

Interns are offered salaries less than half the national average salary earned by new graduates, however, there is a wide range of salaries within those offered. Finally, salaries are influenced by numerous things including location, practice area, and whether the position is offered by an academic institution or a private practice.

Acknowledgements

The AAVMC acknowledges the contributions of the staff of the VIRMP for providing access to the match data.

References

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Please cite as:

Greenhill, Lisa M. and Kendall Young. "2019 Intern Salaries Offered through the VIRMP." Association of American Veterinary Medical Colleges. May, 2018. Web.

Larkin, M. (2018). *Salaries, debt for new graduates continue to increase*. Available at: <https://www.avma.org/News/JAVMANews/Pages/181215f.aspx> [Accessed 7 May 2019].