

## Low Career Satisfaction and Compensation Disparities may Contribute to Vascular Surgery Assistant Professor Attrition

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### Abstract

**Objectives:** We analyzed APVS satisfaction, compensation, perceived and actual gaps between academic and private practice compensation.

**Methods:** 22 APVS completed a survey. Compensation data for APVS and private practice vascular surgeons (PPVS) was gathered from the Medical Group Management Association and Association of American Medical Colleges, respectively. Compensation was compared between APVS and PPVS in practice < 7 years.

**Results:** 31.82% of respondents were satisfied with their career. 22.73% were dissatisfied. 22.73% of respondents were satisfied with their compensation. 59.09% were dissatisfied. APVS believed PPVS with equal experience earned compensation 30.5% greater than theirs and would relinquish their academic appointment if their compensation increased by 41.67%. There was a \$70.7K inflation adjusted compensation difference between APVS and PPVS with < 7 years of experience in 2003 (P=0.043) which increased to \$114.9K by 2012 (P=.001).

**Conclusion:** APVS report low career satisfaction. There is a widening compensation gap between junior academic and private practice vascular surgeons. Among other measures to improve faculty satisfaction and retention, academic center leadership should consider utilizing non-academic compensation benchmarks to improve recruitment and retention of prospective and current APVS.

**Keywords:** Compensation; Vascular; Physicians; Patient; Medical

### Introduction

Compensation is one of several factors that significantly impacts faculty attrition. In 75% of instances, employment termination is voluntary [1]. Academic physicians who report higher job satisfaction are more likely to remain at their institution of employment, provide higher quality patient care and produce higher patient satisfaction [2]. According to a 2012 study of academic surgical specialists, the strongest predictors of surgeons' overall satisfaction included department governance, collegiality and relationship with supervisors [3]. In the aforementioned study, although compensation was not the primary driver of employment satisfaction, it was determined to be statistically correlated to academic surgeon satisfaction [1].

A 10 year retention study conducted by the Association of American Medical Colleges (AAMC) concluded that the attrition rate among assistant professors is higher than that among academic physicians of higher rank. Two medical school deans recently indicated that they were losing academic faculty to private practice groups [4]. They also stated that with decreasing state subsidies, there would be a greater need for academic institutions to secure additional funding in order to retain faculty [5].

While many studies analyze compensation, satisfaction, and perceptions among large cohorts of assistant professors, there are none that we are aware of that specifically focus on assistant professors of vascular surgery (APVS). Our first objective was to understand various aspects of APVS employment including career satisfaction, compensation and APVS perceptions of the differences in compensation compared to private practice vascular surgeons (PPVS).

Our second objective was to track trends in annual compensation for APVS and PPVS with a similar length of practice experience in order to identify any significant existing compensation disparities between junior vascular surgeons in academic and private practice.

### Materials and Methods

101 APVS from 53 different academic institutions were emailed access to a 10 question voluntary and confidential survey pertaining to their employment history, employment satisfaction, current compensation and perceptions regarding private practice compensation (Appendix A). APVS that were included were those with email addresses that were listed on their institution's website or were accessible through a Google™ search. Contacted APVS received access to the survey for 2 months. A reminder email was sent approximately 1 week prior to the end of this time period. 22 surveys were completed through SurveyMonkey® (a response rate of ~21.8%) during the months of November and December of 2014. Compensation, for purposes of this study, was defined as salary, bonus and incentive pay. We excluded all fringe benefits including retirement contributions, insurance premiums and allowances.

In addition to self-reported compensation data, total annual compensation data for PPVS and APVS were collected from databases maintained by the Medical Group Management Association (MGMA) and Association of American Medical Colleges (AAMC), respectively.

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Compensation data from both MGMA and AAMC (collected by Faculty Practice Solutions Center formed by University Health System Consortium) only includes direct annual compensation and excludes fringe benefits. Compensation data for APVS reported by AAMC were compared to a PPVS cohort with ≤ 7 years of private practice experience. Linear regression was used to model the relationship between total annual VS compensation as a mathematical function of time. All analyses were run using Stata, version 13.1, StataCorp LP, College Station, Texas, USA [6,7].

## Results

The average length of employment for responding APVS was 34.09 months ± 26.79 months (Table 1). The mean compensation for responding APVS was \$340,905 ± \$81,626 with a median compensation of \$320,000. On average, APVS believed that PPVS with equal length of surgical experience earned total annual compensation packages worth 30.5% ± 16.35% more than their current compensation. On average, APVS stated that they would be willing to relinquish their academic appointment in favor of private practice if their compensation package was increased by 41.67% ± 25.02% (Figure 1). Only 22.73% of respondents were satisfied with their current compensation levels, 59.09% were dissatisfied and the remaining 18.18% were unsure of their compensation satisfaction (Figure 2). Of all respondents, only 31.82% were satisfied with their academic career thus far. 22.73% were dissatisfied and 45.45% were unsure of their career satisfaction.

According to compensation data published by the AAMC and MGMA, a >\$50K compensation difference between APVS and PPVS with ≤ 7 years of experience existed in 2003 (P=0.043) which further diverged between years 2004 and 2012 (P ≤ .003). While in 2003, the compensation disparity between the paired cohorts was \$54.5K (\$70.7K when adjusted for inflation), this figure more than doubled to \$110.5K by 2012 (\$114.9K when adjusted for inflation). As a percentage of

APVS compensation, this compensation discrepancy increased over the 10 year time period studied from 26.5% to 34.6% (Figure 3).

## Discussion

Our survey results demonstrate that only 31.82% of APVS were satisfied with their academic career, 22.73% were satisfied with their compensation, 100% believed they earned annual compensation less than that of private practice counterparts with equal length of experience and, on average, would relinquish their academic appointment in favor of a private practice career if their compensation package was increased by 41.67%.

The survey respondent career satisfaction rate was lower than the published career satisfaction rate of academic and private practice physicians. With respect to academic faculty across the country, 63% report being “very satisfied” or “satisfied” with their medical schools as a place to work [8,9]. The satisfaction rate is lower for general and specialist surgeons at 51.3% and 57.7% respectively [9]. According to Balch et al., VS report the lowest level of career satisfaction among surgical subspecialties with 36% of respondents stating they would not pick a career in surgery again. VS also report the second highest level of burnout at 44% and the highest suicide ideation rate at 7.7%. Given this reality, employers who offer opportunities for VS to attain higher levels of career satisfaction are better positioned to recruit and retain VS [10].

Dissatisfaction with an academic career is multi-factorial. A common reason cited for physician dissatisfaction and turnover is cultural tension secondary to a mismatch between the values of the physician and the organization. Other reasons expressed for dissatisfaction include, but are not limited to, a lack of autonomy, work control, negative perceptions of organizational culture, healthcare reform, professional liability, paperwork and dealing with insurance carriers. Perhaps the most prevalent external source of dissatisfaction

	Mean	Std. Dev.	Median	Range
Employment Length (months):	34.09	26.79	33	2-84
Total Annual Compensation:	\$340.9K	\$81.6K	\$320K	\$220K-\$550K
Suspected Compensation Increase for Private Practice Counterpart (as % of current compensation):	30.48%	16.35%	25%	10%-70%
Compensation Increase Required to Spur Termination of Academic Appointment in Favor of Private Practice Employment:	41.67%	25.02%	30%	0%-100%

Table 1: Responses of assistant professors of vascular surgery who completed survey.

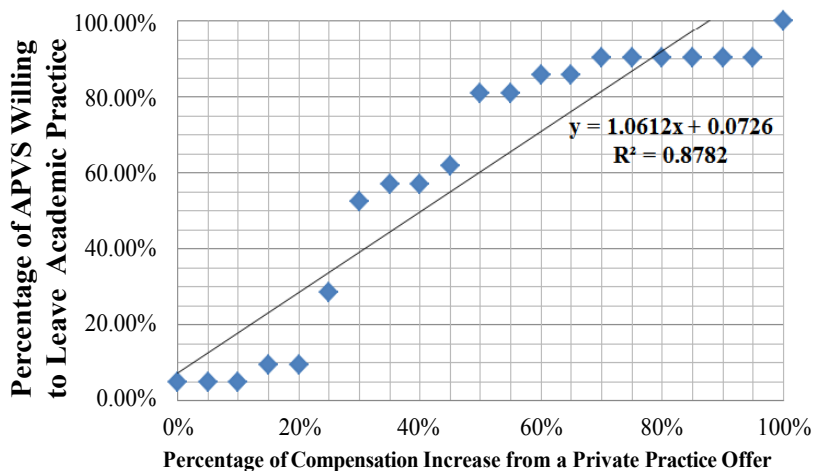


Figure 1: Percentage of APVS stating willingness to leave academic practice at various compensation increases from private practice offer.

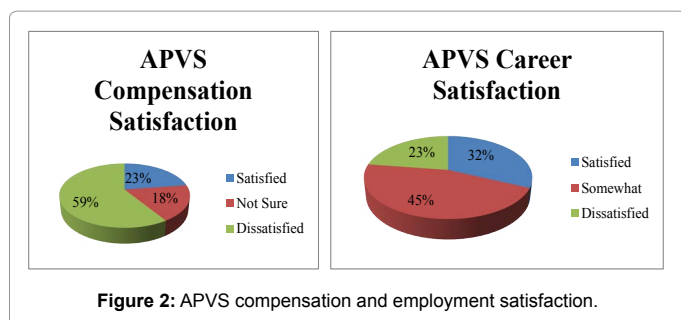


Figure 2: APVS compensation and employment satisfaction.

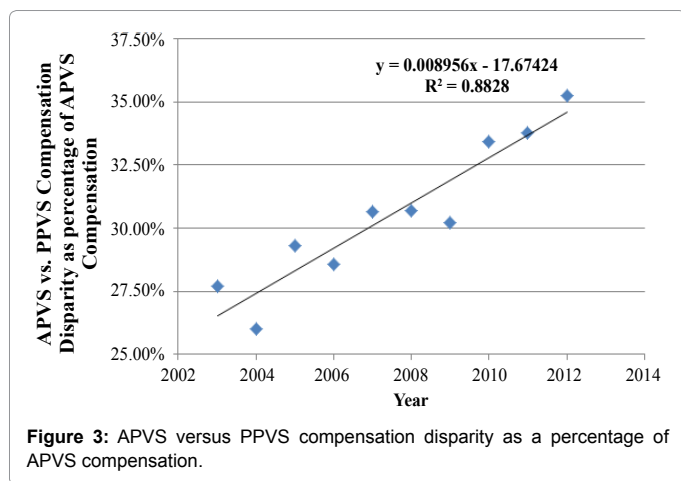


Figure 3: APVS versus PPVS compensation disparity as a percentage of APVS compensation.

is regulatory burden [11]. For instance, 76% of physicians express dissatisfaction with Medicare's quality reporting requirements. Surgeons choose academic surgery for a variety of reasons, but mostly because of a passion for research and teaching in addition to the clinical mission [12,13]. A McKinsey and Company survey of 1400 physicians in various specialties made evident the fact that even though financial incentives are important, compensation is not the sole nor primary determinant of physician satisfaction or attrition [14].

In a survey of 762 surgeons, career satisfaction was measured using a 5 point Likert scale with five variables: practice related factors, compensation related factors, practice location, patient race and demographics of surgeons. Although all the practice related factors were significantly correlated with career satisfaction, among compensation related factors, income and financial incentives to expand services had the strongest correlation to career satisfaction. In a Community Tracking Physician Study dataset of 6,590 physicians, although vascular surgery was not a designated specialty, a strong positive correlation between hourly wage and satisfaction was found. In a national study of members of the American College of Surgeons, among factors associated with intent to leave current practice, practice characteristics (method of compensation, practice setting, specialty and hours spent per week in the operating room) were all independently associated with self-reported intent to leave a practice [15].

A 10 year retention study published by the AAMC demonstrates that assistant professors are most inclined to relinquish their academic appointment in favor of private practice [16]. While the 10 year attrition rate of academic faculty was 38% over the time period studied, this rate was 44% for first-time assistant professors. A study conducted at University of Colorado School of Medicine suggests that 34% of academic faculty attrition occurs within the first 3 years of employment.

In another survey of junior level physicians, the turnover rate was 11% between the first and second year of practice, 12.4% between the second and third year of practice and 8.7% between the third and fifth year of practice [17]. The turnover rate declined to 5.7% between the fifth and tenth year of practice and 4.6% after the tenth year of practice [18].

A single institution study conducted at Perelman School of Medicine at the University of Pennsylvania suggests that the likelihood of attrition of assistant professor faculty was 1.87 times greater in faculty appointed on the clinician educator or research track as opposed to the tenure track. When considering the cost of faculty attrition, it may be in the financial interest of the academic institutions to query and address reasons for attrition, including compensation disparities if any [19].

Since the AAMC does not report compensation data by duration of practice similar to MGMA, but rather by academic rank, the challenge in comparing academic faculty compensation with PPVS is to match groups with similar length of experience. The AAMC conducted a study which supports the choice of cohorts used for the pairwise comparison between AVS and PPVS total annual compensation. The study determined that 40.7% of first-time assistant professors who received promotion, the average number of years until promotion was 7.4 years. Our study shows a statistically significant difference in inflation adjusted compensation between APVS and comparable PPVS in 2003, which is sustained and diverging up until and including 2012 [20]. AAMC and MGMA data from 2012 suggests that PPVS with  $\leq 7$  years of experience earn 34.6% more in compensation than APVS. This figure is slightly greater than, but close to, the perceived compensation disparity reported by survey respondents of 30.5%. This indicates that in general, APVS are aware of the degree of the existing compensation disparity.

Many APVS have willfully made a choice to work in an academic institution for less compensation; however, the compensation disparity each APVS is willing to accept varies greatly among individuals. One respondent indicated he/she would be willing to leave academics in favor of private practice at an identical level of compensation although two other respondents indicated that they would only leave academics if their compensation doubled. At the existing 34.6% compensation disparity, 52.4% of survey respondents stated they would be willing to relinquish their academic appointment in favor of private practice. Of this subgroup, 81% would be willing to stay in academic practice if the compensation disparity was reduced from 34.6% to 20%. If the current trend of diverging compensation between APVS and PPVS continues, academic medical centers may run the risk of losing prospective and current APVS to private practice competition. Since Centers for Medicare and Medicaid has clarified that academic medical centers, for purposes of determining fair market value, are not limited to just using the AAMC benchmark on compensation, databases which predominantly reflect private practices could also be utilized to establish salaries.

### Limitations

The survey is limited by the small sample of 22 respondents out of 101 APVS contacted. In 2012, the AAMC compiled compensation data that was voluntarily reported by institutions. In total, data from 167 APVS was reported. Based on this information, we presume that we were able to establish email contact with a substantial portion of APVS. Furthermore, a response rate of  $\sim 21.8\%$  was obtained which is comparable to that of other anonymous online physician surveys. Although APVS are relatively few in number when compared to academic physicians of other subspecialties, caution is required when

making conclusions about the broader APVS population from 22 responses.

There are many barriers to obtaining new employment including obtaining a new job offer, geographical relocation, etc. Although respondents stated that they would leave at specific compensation disparities, it is unknown as to whether or not they would actually act on this response.

It is possible that those APVS who decided to respond to this survey may have been more compelled to do so due to employment dis-satisfaction. Nevertheless, the respondent career satisfaction rate was approximately equal to published surgical subspecialist career satisfaction rates. 32% of respondents reported being very satisfied with their career while an additional 45% reported being somewhat satisfied. According to Bach et al., 57.7% of surgical subspecialists reported being satisfied with their career [10].

Another limitation is that the paired cohorts (academic and private practice) that were compared with respect to compensation may not be exactly identical in terms of length of medical practice. However, as mentioned the groups are as comparable as possible given the fact that they represent two different populations. Additionally, we are unable to estimate any difference in work hours, productivity or compare the exact value of benefits offered by private versus academic employers. Since we are only comparing annual salary compensation, it is certainly possible that the additional value of these benefits may erode the advantage of PPVS.

Also, as we have pointed out, many APVS choose academic employment primarily because of research, teaching and/or other preferences. Therefore, compensation may be not be as highly prioritized by many such faculty.

## Conclusions

Satisfaction with careers and compensation is low among APVS. Academic medical centers (AMCs) continue to compensate APVS at a significantly lower level compared to their PPVS colleagues. This compensation disparity has grown over time. While there are some advantages and rewards of an academic career such as retirement, tuition and other benefits, in a competitive era of possible VS shortages and substantial educational debts, compensation differences may be a deciding factor for some VS who are starting or are early into their careers. In addition to focusing on the other major reasons for faculty attrition, to stay competitive, AMCs should consider utilizing benchmarks non-AAMC also to narrow the existing compensation disparity in order to better recruit and retain APVS.

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