

Does College Debt Influence a Physician Assistant's Practice Choice?

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Abstract

Purpose: The percentage of physician assistant (PA) graduates entering primary care dropped from 56% in 1996 to 39% in 2009. In addition, a 2010 PA census found only 24% of PAs work in primary care. The primary purpose of this study was to determine if PA education debt impacts PA graduate job choice. It is hypothesized that (1) Physician assistant students, with a primary care focus, change their concentration to surgical and non-surgical sub-specialties after entering PA training programs and (2) physician assistant graduates select higher paying sub-specialties, rather than primary care employment, to help offset acquired student loan debt.

Methods: This cross-sectional quantitative study measured PA graduate demographics, PA education debt, and debts impact on the PA's first job choice. A random sample of 3,046 PAs, located in the West South Central (WSC) Division (Oklahoma, Arkansas, Louisiana, and Texas) of the American Academy of Physician Assistants (AAPA), was surveyed.

Results: Study results revealed a significant change between the PA students' primary care desire (when entering PA school) and actual first PA job ($p < .001$). In addition, the study found a statistically significant relationship between PA education debt and the PA movement into specialty practice (p value $< .006$).

Conclusions: PA students who enter school with a primary care focus often take their first job in a surgical or non-surgical sub-specialty practice. Education debt is a major influence leading to this trend.

Introduction

Shih, Davis, Schoenbaum, Nuzum, and McCarthy¹ describe U.S. healthcare “as a cottage industry [favoring] high-cost intensive medical intervention ... over higher-value primary care, including preventive medicine and the management of chronic disease.”¹ This concept reflects the urban migration of physicians and helps explain why 65% of rural citizens in U.S. counties are medically underserved.² Some experts believe the shortfall is a result of medical students being enticed by income to debt projections. For example, the American Medical Association³ reports top salaries of \$204,370, \$426,000, \$492,762, \$512,500, and \$600,000 for family practice physicians, urologists, gastroenterologists, orthopedic surgeons, and radiologists, respectively, and debt projections for medical school can be as high as \$200,000 or more.

One attempt to fill the primary care provider shortfall came in 1965 when Dr. Eugene Stead and Duke University opened the first physician assistant (PA) program. Duke’s first class had four students (three completed the program) and each was paid to attend training^{4,5}. Today there are 154 accredited entry-level PA programs. Unlike Duke, students pay to attend these programs, with tuition averaging \$50,611 and \$61,088 for resident and non-resident students respectively.^{6,7} Add student fees, parking fees, lab costs, instrument and book purchases, housing, travel, and food and the over two-year program can cost well over \$100,000.

As tuition has risen, so have PA salaries and according to the American Academy of Physician Assistants (AAPA), in 2009 a primary care PA could expect to earn \$85,461 per year.⁸ In contrast, AAPA⁸ reported yearly salaries of \$102,018 and \$99,968 in emergency medicine and surgical sub-specialty PA practices. As the gap in salaries between primary and specialty care has increased, so has PA migration away from primary care. For example, in 1996 56% of PA

graduates entered primary care, compared to only 39% in 2009.⁹ In addition, a 2010 PA census found that only 24% of PAs worked in primary care.¹⁰

The purpose of this study was to examine whether the cost of physician assistant education affects career choice after graduation. It is hypothesized that (1) Physician assistant students, with a primary care focus, change their concentration to sub-specialties after entering PA training programs and (2) physician assistant graduates select higher paying sub-specialties, rather than primary care employment, to help offset acquired student loan debt.

This study specifically examined four states, Oklahoma, Louisiana, Arkansas, and Texas – identified as the West South Central (WSC) Division by the American Academy of Physician Assistants. These states were selected based on their geographic region and overall healthcare performance as rated by The Commonwealth Fund.¹¹ Oklahoma, Louisiana, Arkansas, and Texas were ranked 50th, 49th, 48th, and 46th respectively.¹¹ To meet the same standards as the number one state, Arkansas alone would need to (1) insure 292,606 adults and 32,180 children, (2) provide preventive care to 146,834 adults aged 50 and older, (3) provide preventive services to 64,137 diabetics over 18, (4) give routine childhood vaccinations to 10,220 children, and (5) prevent 1,201 premature deaths under the age of 75.¹¹

The Kaiser Commission¹² believes the U.S. primary care crisis will worsen once health care reform becomes law. There are 578,500 (16%) Oklahoma residents without health care insurance, 790,400 (18%) in Louisiana, 526,400 (19%) in Arkansas, and 6,258,700 (26%) in Texas.¹³ Once insured, many of these individuals will seek a primary care provider, increasing the gap between primary care demand and access. Understanding factors associated with a PA graduates first job choice can influence PA program recruitment and education policies aimed at addressing the primary care crisis.

Methods

This cross-sectional quantitative study was conducted on PAs located in the AAPA WSC Division. The states included were Oklahoma, Arkansas, Louisiana, and Texas. The WSC Division includes 5,232 AAPA-registered PAs, from which Medical Marketing Services, Inc. (MMS) randomly selected 3,046. MMS is the official e-mail service provider for AAPA. Inclusion criteria required an active PA license in Oklahoma, Louisiana, Arkansas, or Texas and a minimum PA practice work schedule of 20 hours per week. Exclusion criteria included all other allied health professionals, PAs who practice in other states, and PAs who have chosen to opt out of the AAPA mailing list. The target minimum response rate was 10% or approximately 300.

An electronic survey was developed and piloted prior to use. Five faculty members from Harding University, an AAPA-WSC PA program, reviewed the survey for content and face validity. After minor wording changes and IRB approval, the survey was piloted to ten PAs in the target population, and a final version was created. Data from the pilot testing were not included in the study results. The electronic survey contained true and false, Likert scale, and multiple choice questions on demographics, desired career path when entering PA school, PA practice upon graduation, PA education-related debt, and debts impact on the PA graduates first job choice. Using MMS, an introduction and link to the electronic survey was e-mailed to the study sample. The survey was open for eight weeks. No reminder e-mail was sent.

Data were analyzed with IBM SPSS Statistics version 19. Demographic and professional characteristics were summarized with frequencies and percentages. In addition, frequency counts helped evaluate the link between demographics and practice choice. A McNemar test was used to evaluate whether there was a significant change in respondents' first job goal when entering

PA school and the first job taken after graduation. Chi-square tests were used to evaluate the relationship between demographic characteristics, debt, and respondents' first job after graduation. Alpha was set at 0.05, two-tailed.

Results

Of the 3,046 potential subjects, 2,991 (98.19%) opened the e-mail requesting their participation in this study. Of those, 454 (15.2%) followed the embedded link to an online survey and 120 (4%) opened and completed the questionnaire. Nine respondents did not meet inclusion criteria, leaving a sample of 111 and resulting in a response rate of 3.6%. Table 1 summarizes the sample demographic characteristics, which were consistent with the AAPA statistics.¹⁰ The PA sample included 16% minorities, 56% females, 84% under 40 years of age at the time of PA graduation, and 53% who were married during PA school. In addition, 58% had household incomes under \$50,000 during high school. A higher percentage of minority respondents were practicing in primary care compared to non-minority respondents (25% versus 8%, $p=.016$). There were no other statistically significant differences in practice choice by demographic characteristics (Table 1).

The majority of students (86.5% or 96 of 111) entered PA school intending to work in primary care. After graduation, however, only 51.4% of these students (57 of 111, a 39 student shift) took a job in a primary care (Table 2). Forty percent of PA students left school with an education debt of \$65,000 or more, 41% owed between \$1 and \$64,999, and 19% had no debt. Of those with debt over \$65,000, 63.6% felt it influenced their first job choice. In contrast, only 26.1% of students owing \$1 to \$64,999 felt the debt had an influence on their practice choice (Pearson χ^2 (df = 1, N = 90) = 12.84, $p<.001$) (Figure 1). Figure 2 summarizes the relationship of debt to first job choice. Among students who left school with no debt, 81% entered primary care.

In comparison, only 50% of students with a debt of \$1 to \$64,999 and only 38.6% of those with a debt of \$65,000 or more entered a primary care field (Pearson χ^2 (df = 1, N = 111) = 10.25, $p < .006$).

Discussion

The purpose of this study was to examine whether the cost of physician assistant education affects career choice after graduation. Study results showed 86.5% of PA students entered school intending to work in primary care but only 51.4% took their first PA job in primary care. These results were statistically significant and suggest a change between career desire when entering PA school and actual first PA job.

The study sought to identify the effect of debt on this dilemma and found a relationship between increased PA education debt and the PA graduate shift away from primary care. When students had no debt, 81% entered primary care. Debt between \$1 and \$64,999 found 50% going into primary care and only 38.6% of those with debt of \$65,000 or more entered primary care. Again, these results were statistically significant and support the premise that education debt influences a PAs first job choice.

This trend is not unique to PAs. In a 2008 article in the Journal of the American Medical Association, Kuehn¹⁵ discussed medical school debt and that high surgical and non-surgical specialty salaries cause physicians to move away from primary care. Similarly, a 2009 study by McGaha, Schmittling, Bieck, Crosley, and Pugno¹⁶ found only 7.5% of medical school graduates enter a family practice residency. This is alarming given that only 22.6% of family practice residents choose to work in rural underserved communities.¹⁷

The respondents demographic influence was also considered and compared to a 2010 study by Muma, Kelley, and Lies which found a higher incidence of minority PAs working in

primary care.¹⁴ In addition, Muma and colleagues found a higher number of primary care PAs were married, older, and had a household income under \$50,000 when they graduated from high school.¹⁴ In our study, however, the only demographic characteristic associated with a PA graduate entering primary care practice was ethnicity. Minorities made up 24.6% of PA respondents in primary care but only accounted for 7.5% of those working in surgical and non-surgical sub-specialties (table 1). All other demographic characteristics were not significantly associated with career choice.

Limitations

Although the study and practice demographics were consistent with other similar studies, it is limited by its low response rate. In addition, the research relied on respondent recall of career and debt and a subjective response relating PA education debt to career choice. The potential of poor recall may occur and worsen the longer a PA has been out of school.

Recommendations

If the PA community is to return to its primary care roots, debt issues must be addressed. Additional research should examine methods of deferring or eliminating PA education cost via available programs like the National Health Service Corps (NHSC), Indian Health Services (IHS), military service, and similar opportunities. These programs provide a tuition payoff fund given the PA graduate agrees to work a set timeframe at specified underserved facilities. For example, NHSC will pay up to \$60,000 of education debt for 2 full years of service at an approved Health Professional Shortage Area and in some instances up to \$170,000 for 5 years of service.¹⁸

PA programs should promote these payback opportunities and take a proactive role in helping eligible rural and underserved clinics request loan repayment status. In addition, schools

might consider methods that incorporate repayment program eligibility into the PA interview process and even have recruiters at the interview sessions. Finally, research evaluating how PA programs present primary care in their academic and clinical curriculum may provide some insight into this area.

Conclusion

This study supports the premise that PA students change practice focus after entering PA school and that PA education debt leads PA graduates to enter sub-specialty fields instead of primary care. According to the Kaiser Family Foundation¹³ there are 8,179,500 uninsured residents in the AAPA West South Central Division (Louisiana, Arkansas, Oklahoma, and Texas). If access is already a problem and healthcare reform occurs, who will provide care to the millions of newly insured patients? If the PA profession intends to be a force in primary care, the migration away from primary care must be considered. Education cost deferment is one of many issues that need to be addressed.

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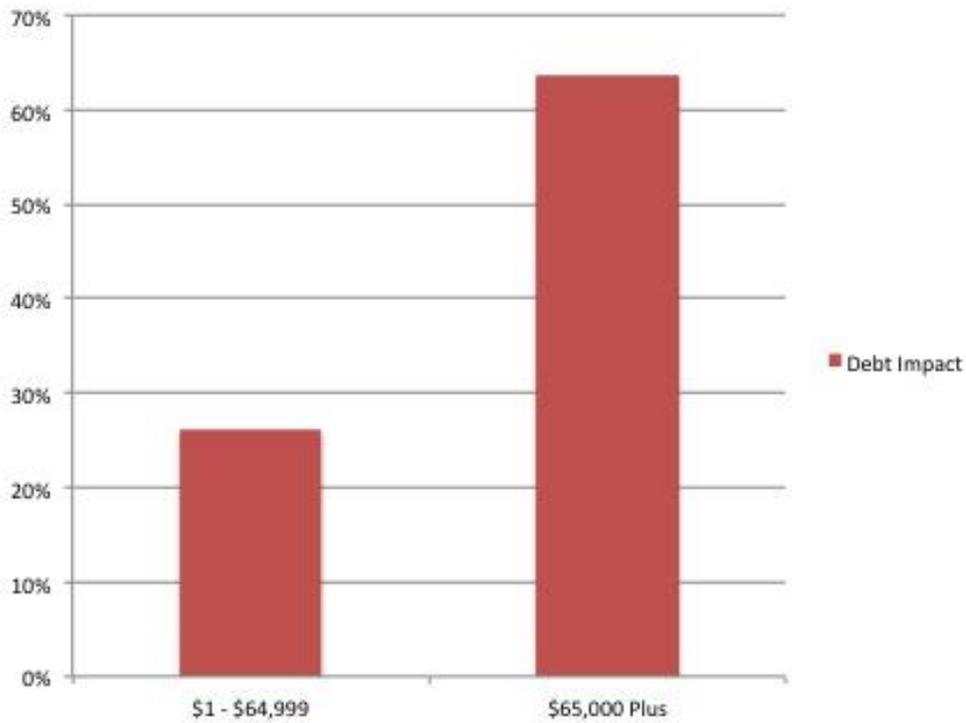


Figure 1. The impact of PA education debt on PA first job choice. This figure illustrates that among students with more debt, a greater percentage reported that debt influenced their first job choice. Pearson χ^2 (df = 1, N = 90) = 12.84, $p < .001$.

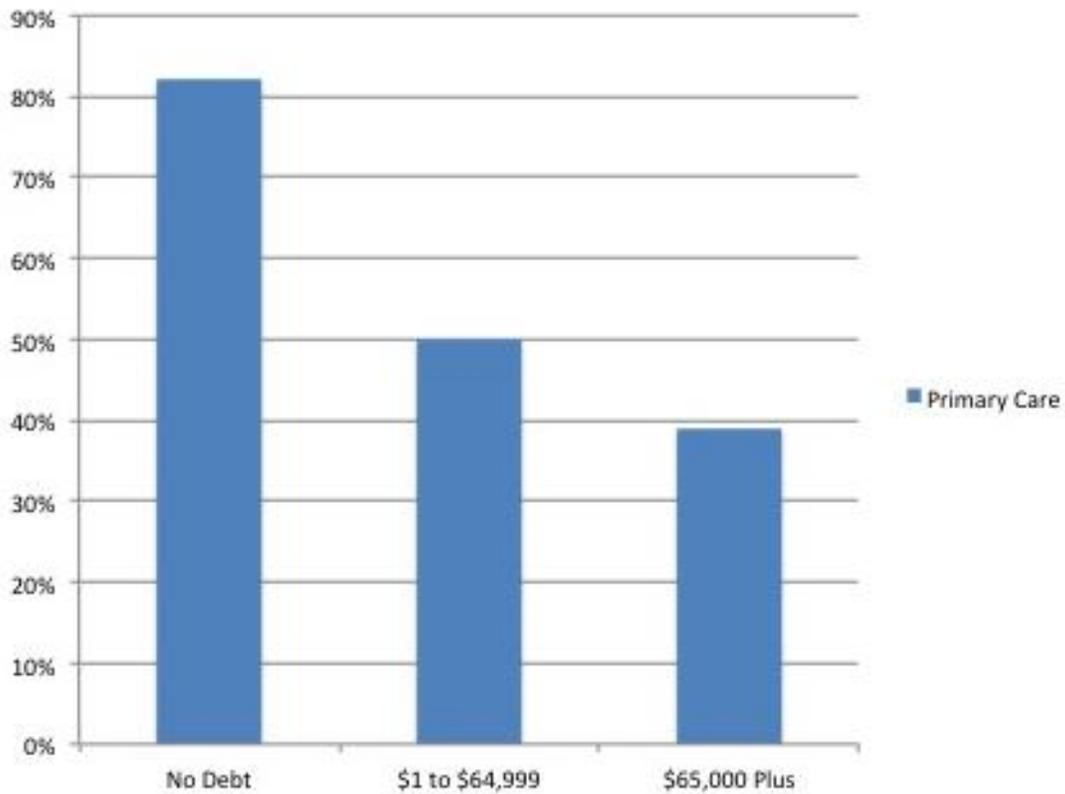


Figure 2. The relationship between PA education debt and entry into primary care. This figure illustrates an decrease in PAs entering primary care relative to an increase in PA education debt. Pearsons χ^2 (df = 1, N = 111) = 10.25, p<.006.

Table 1

Demographic Characteristics by First PA Job after Graduation

| | Primary Care (N = 57) N (%) | Specialty Care (N = 54) N (%) | p Value |
|---------------------------------|-----------------------------------|-------------------------------------|---------|
| Ethnicity | | | |
| Non-Minority | 43/57 (75.4) | 49/53 (92.5) | 0.016 |
| Minority | 14/57 (24.6) | 4/53 (7.5) | |
| Marital Status in School | | | |
| Yes | 27/57 (47.7) | 31/53 (58.5) | 0.243 |
| No | 30/57 (52.6) | 22/53 (41.5) | |
| Gender | | | |
| Male | 21/53 (39.6) | 25/54 (46.3) | 0.486 |
| Female | 32/53 (60.4) | 29/54 (53.7) | |
| Age when Graduating | | | |
| 39 and under | 46/57 (80.7) | 44/50 (88.0) | 0.303 |
| 40 and over | 11/57 (19.3) | 6/50 (12.0) | |
| Home Income in HS | | | |
| 0 to \$49,999 | 30/50 (60.0) | 26/46 (56.5) | 0.730 |
| \$50,000 and More | 20/50 (40.0) | 20/46 (43.5) | |

Note: p values are based on chi-square tests.

Table 2

PA Job Goal Before Starting PA School by Actual First PA Job

| | | Actual First PA Job | | |
|------------------------|----------------|---------------------|----------------|-------|
| | | Primary Care | Specialty Care | Total |
| Desired First Job When | Primary Care | 53 (55.2) | 43 (44.8) | 96 |
| Entering PA School | Specialty Care | 4 (26.7) | 11 (73.3) | 15 |
| N (%) | | | | |
| Total | | 57 (51.4) | 54 (48.6) | 111 |
| N (%) | | | | |

Note: McNemar $\chi^2 = 31.54$; $p < .001$.