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Trainee Reliance on Public Service Loan Forgiveness

Mitri K. Khoury, MD[1,2,#], **R. Ellen Jones, MD**[1,#], **Kristin M. Gee, MD**[1], **Luis R. Taveras, MD**[1], **Anna M. Boniakowski, MD**[3], **Dawn M. Coleman, MD**[3], **Kareem R. Abdelfattah, MD**[1], **John E. Rectenwald, MD**[2], **Rebecca M. Minter, MD**[2]

[1]University of Texas, Southwestern Medical Center; Department of Surgery; Dallas, TX

[2]University of Wisconsin, Madison; Department of Surgery; Madison, WI

[3]University of Michigan, Ann Arbor; Department of Surgery; Ann Arbor, MI

Abstract

Objective: The Public Service Loan Forgiveness (PSLF) program is an option to trainees to help alleviate federal education debt. The prevalence of PSLF utilization and how this may impact career decisions of trainees is unknown. The purpose of this study was to understand the prevalence, impact, and understanding of PSLF participation on trainees.

Design: IRB-approved anonymous survey asking study subjects to report demographics, financial status, and reliance on PSLF. In addition, study subjects were asked to report their participation in PSLF, the possible impact of PSLF participation on career decisions, and to identify the qualifications needed to complete PSLF.

Setting: Online anonymous survey.

Participants: The survey was offered to all physician trainees in all specialties at the University of Texas, Southwestern, University of Wisconsin, Madison, and University of Michigan, Ann Arbor.

Results—There were 934 respondents, yielding a 37.6% response rate. A total of 416/934 (44.5%) respondents were actively or planning on participating in the PSLF program with 175/934 (18.7%) belonging to a surgical specialty. Those belonging to a surgical specialty were more likely to be PSLF participants compared to medical specialties (53.1% versus 42.6%, P=.012). For those participating in PSLF, 82/416 (19.7%) stated this participation impacted career decisions. A total of 275/934 (29.4%) respondents obtained and 437/934 (46.8%) wanted to receive formal training/lectures in regards to the PSLF program. Of those actively or planning on participating

Corresponding Author: Mitri K. Khoury, MD, Department of Surgery, University of Texas Southwestern Medical Center, 5909 Harry Hines Boulevard, POB1, Suite 620, Dallas, TX 75390-9157, Phone: (951) 515-9228; FAX: (214) 645-0546, mitri.khoury@gmail.com.

[#]MK Khoury and RE Jones equally contributed to the design of the study, analysis of the data, and preparation of the manuscript.

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Core Competencies: Interpersonal and communication skills

in the PSLF program, only 58/416 (13.9%) were able to correctly identify all of the qualifications/criteria to complete the program.

Conclusion—A large proportion of trainees rely on the PSLF program for education loan forgiveness with approximately 20% reporting participation impacted career decisions. Significantly, the majority may not fully understand PSLF criteria. Programs should strongly consider providing a formal education regarding PSLF to their trainees.

Keywords

Public service loan forgiveness; education; student; resident; debt

INTRODUCTION

The amount of educational debt accumulated after graduation from medical school is rising steadily. In 2003, the median debt for a recent graduate of medical school was between $100,000-$135,000.[1] However, this increased to $190,694 by 2017.[2] The increasing amount of student loan debt represents a large financial burden on young physicians with a majority reporting significant debt challenges.[3] In addition, significant debt combined with a lack of financial education has been shown to be associated with burnout and worsening quality of life.[4–7]

The Public Service Loan Forgiveness (PSLF) program is a federal debt forgiveness pathway started in 2007 that is available to any graduate with federal education loans who meet certain criteria, including graduates of medical school. The program forgives the remaining balance of Direct Loans after one has made 120 monthly on-time payments under a qualifying repayment plan while working full-time for a qualifying employer. Qualifying employers include governmental and not-for-profit organizations, which includes the majority hospitals or health systems that employ residents. There are three types of qualifying repayment plans for PSLF: Income-Based Repayment, Pay As You Earn, or the Income Contingent Repayment Plan. The graduate must participate in one of the three qualifying repayment plans in order to participate in PSLF. However, at any point, one can elect to not participate in the PSLF program and repay their loans in full utilizing a number of repayment plans.

While the PSLF program poses a significant and cost-effective opportunity to unburden trainees with large amounts of educational debt, it has been criticized in the lay press due to its low acceptance rate (<1%) for those who applied for forgiveness. Misunderstanding of the program was postulated as a major barrier to successfully obtaining debt forgiveness. The purpose of this study aimed to assess resident/fellow reliance and understanding of the PSLF program. In addition, we aimed to assess how reliance on this program affected career decisions. We hypothesized that a large proportion of residents are relying on the PSLF program with little understanding of the qualifications.

MATERIALS AND METHODS

This study was approved by the Institutional Review Boards at the University of Wisconsin, Madison; the University of Michigan, Ann Arbor; and the University of Texas, Southwestern. Informed consent was presented to each potential study subject prior to entering the survey, with survey completion equivalent to provision of informed consent by the study participant.

We directly administered an electronic survey via email to all residents and fellows at the University of Wisconsin, Madison and the University of Michigan, Ann Arbor (Supplementary Appendix 1). Due to institutional policies, the survey was administered through the resident and fellowship coordinators at the University of Texas, Southwestern who then subsequently administered the survey via email to their trainees. The survey was administered using REDCap (Research Electronic Data Capture). Responses were de-identified and kept private in a secure database. An incentive was provided to complete the survey which consisted of a random, voluntary drawing for a free iPad. The link for prize entry was provided at the end of the main survey and prize entry was decoupled from study participation to maintain de-identification.

Trainees were first asked to report demographic and financial status, including training specialty and debt characteristics. Trainees were grouped based on surgical or medical specialties. Surgical specialties were defined as those that are recognized by the American College of Surgeons, which include: cardiothoracic surgery, colon and rectal surgery, general surgery, gynecology and obstetrics, gynecologic oncology, neurological surgery, ophthalmic surgery, oral and maxillofacial surgery, orthopedic surgery, otorhinolaryngology, pediatric surgery, plastic and maxillofacial surgery, urology, and vascular surgery. The remainder of the respondents were considered medical. Subsequently, study subjects were asked to report their participation in PSLF. The possible impact of PSLF participation on career decisions was elicited as well. Additionally, trainees were asked to correctly identify the qualifications needed to complete PSLF through set of “true/false” statements. The Association of American Medical Colleges 2020 Report on Residents was utilized to compare the demographics of our cohort to what is known nationally.

Descriptive statistics are computed as medians and interquartile range (IQR). Continuous variables were compared using the nonparametric Wilcoxon rank sum test. Categorical variables were compared using Pearson’s chi-squared test or Fisher’s exact test, as appropriate. All statistical analyses were performed in SPSS v27 (Armonk, NY). A value of $P<.05$ was considered statistically significant.

RESULTS

Study Population

A total of 934 residents and fellows responded to the online survey (Table 1). The survey response rate was 37.6%. The majority of respondents were female and belonged to medical specialties (Table 1). The median amount of total debt for the overall cohort was $230,000

[IQR $160,000-$300,000]. There were differences in regards to the demographics of our cohort of residents to what is known nationally (Supplementary Appendix 2).

PSLF Program

A total of 416/934 (44.5%) respondents were actively or planning on participating in the PSLF program. The majority (70.4%, n=239/416) of PSLF participants did not take low success rates into account when deciding to participate in or continue with the program. A total of 275/934 (29.4%) respondents obtained and 437/934 (46.8%) wanted to receive formal training/lectures in regards to the PSLF program; 15/934 (1.6%) respondents never knew the program existed prior to the survey. Out of the total cohort, 83 (8.9%) of the respondents were able to correctly identify all the qualifications/criteria of the PSLF program (Table 2). Of those actively or planning on participating in the PSLF program, only 58/416 (13.9%) were able to correctly identify the qualifications/criteria to complete the program. There were no differences in the amount of debt for those who did and did not get all the answers correct ($260,000 [$191,500-$300,000] versus $250,000 [$200,000-$315,000], P=.89). A histogram displaying the amount of debt among trainees is displayed in Supplementary Appendix 3. For those participating in PSLF, 82/416 (19.7%) either elected for longer training (academic years, additional training, etc.), chose a less lucrative specialty, or planned for an academic career in anticipation of receiving loan forgiveness.

Actively versus Planning on Participating in PSLF Program

A total of 239 participants were actively and 177 were planning on participating in the PSLF program. Patients that were actively participating in PSLF were older compared to those that were planning on participating (Table 4). There were no differences in gender, race/ethnicity, debt, or specialty between the two groups (Table 4). There were no differences in rates of correctly identifying qualifications/criteria to complete the PSLF program between those actively and planning on participating (15.9% versus 11.3%, P=.20).

Medical versus Surgical Specialties

We identified a total of 759 (81.3%) medical and 175 (18.7%) surgical respondents in our cohort. There were no differences in age, gender, or the amount of debt between surgical and non-surgical trainees (Table 3). However, there were racial/ethnic differences and those belonging to a surgical specialty were more likely to be actively or planning to participate in the PSLF program when compared to medical specialties (Table 3). Among those participating in PSLF, there were no differences between medical and surgical specialties in regards to electing for longer training (academic years, additional training, etc.), choosing a less lucrative specialty, or planning for an academic career in anticipation of receiving loan forgiveness (16.1% versus 20.7%, P=.376).

DISCUSSION

This survey of 934 trainees over three major medical centers across the country sought to explore the reliance of the PSLF program among trainees in various medical and surgical specialties. We found that approximately half (44.5%) of the cohort were relying on the PSLF program. Further, we found that trainees of surgical specialties were more likely to

participate in the PSLF program when compared to medical specialties. A large proportion of the cohort did not fully understand the criteria to complete the program despite 19.7% of participants making career decisions based on anticipation of loan forgiveness.

Post-graduate physician debt has become an increasingly worsening problem over the last two-to-three decades. Today, the median amount of debt medical students graduate with is approximately $200,000 in comparison to only $32,000 thirty years ago ($70,000 if adjusting for inflation).[8] This increasing burden of debt has impacted career choices, deterring graduates of medical schools from primary care in lieu of more lucrative specialties.[9] Johnson et al. surveyed over 13,000 medical and surgical trainees across the country and found that over 50% of respondents claimed that student loan debt will impact their type and location of practice.[10] Likewise, Julien et al. found that debt over $150,000 was associated with choosing a non-academic career given the higher salaries associated with private practice.[11] Thus, the increasing financial burden on graduating medical students will likely continue to divert physicians into more lucrative and non-academic careers. Our study suggests that participation in the PSLF program may help alleviate some of this divergence as approximately 20% of PSLF participants made career decisions (chose a less lucrative specialty, academia, longer training) in anticipation of attaining loan forgiveness.

However, despite the increasing amount of accrued debt by graduating medical students and its impact on career trajectory, overall financial literacy among trainees remains poor.[2,3,12] Despite the large proportion of respondents depending on the PSLF program in our cohort, very few could accurately identify all the qualifications/criteria to complete the program. This exemplifies the need to provide medical students and trainees with training about PSLF, and this could be delivered in the context of a broader financial curriculum aimed to increase the financial literacy of graduating medical students and residents. Many specialties and programs have implemented practice management curricula in their formal training.[13–15] However, there is no standard curriculum for residents to learn practice management concepts with even less resources available to learn personal finance.[16] Jones et al. were one of the pioneers in developing a focused finance curriculum in coding and documentation for their residents.[17] Similarly, Mizell et al. also developed a formal financial management curriculum for their residents that also encompassed education on personal finances.[16] They found that resident knowledge and responsible behavior regarding personal and practice financial management had significantly increased with implementation of their curriculum. In our study, we found that approximately a quarter of the respondents received a formal education regarding PSLF; whereas half of the cohort desired a formal education. Therefore, although education regarding financial management is not consistently part of training curriculums for residents/fellows, strong consideration should be given to implementing a formal education regarding PSLF across programs.

We also observed that residents belonging to surgical specialties were more likely to participate in PSLF when compared to medical trainees. Surgical training is usually longer than most medical specialties and that length of training leads to a greater accrual of interest on student loans over time.[18,19] However, the time-limiting factor to obtain loan forgiveness in the PSLF program is the requirement of 120 on-time payments. Therefore, upon completion of training, those in surgical specialties will have likely contributed

more payments to the PSLF program when compared to medical. Thus, those in surgical specialties may be more willing to complete the PSLF program after training instead of electing to pay off their loans.

This study has important limitations to consider. The major limitation to this study is assessing residents' dependence on the PSLF program while they are in training. It is likely that a proportion of residents/fellows will opt out of the PSLF program once they complete training, which is unable to be assessed at this time. Additionally, the PSLF program is relatively young; since it began in 2007, the first forgiveness-eligible loans were due in 2017. Forgiveness rates and program success may continue to evolve as the program matures, and this may likewise impact trainee participation in the program. Similarly, it is unknown if those currently enrolled in PSLF would have been deterred by the initial low success rates of the program. Another limitation to this study is that although we surveyed residents/fellows at three major academic institutions in different regions of the country, there were differences in the demographics of our cohort compared to what is known nationally. Therefore, it is unknown how these differences impact the results of this study and whether the data can be generalizable to all trainees nationally. Finally, it should be noted that the data related to debt represent when the survey was completed. Therefore, it is possible that the respondents may have either reduced or accrued debt between the time they have completed medical school and taking the survey, which was not captured in this study.

CONCLUSION

A large proportion of trainees are relying on the PSLF program for loan forgiveness. In addition, reliance on this program affects trainee career choices. However, the majority of trainees do not appear to understand the qualifications/criteria of this program, which may be contributing to low success rates of the program. Programs should strongly consider providing a formal curriculum in finance and loan forgiveness to their trainees.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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REFERENCES

1. Jolly P. Medical school tuition and young physicians' indebtedness. Health Aff. 2005. doi:10.1377/hlthaff.24.2.527
2. Gray K, Kaji AH, Wolfe M, et al. Influence of Student Loan Debt on General Surgery Resident Career and Lifestyle Decision-Making. In: Journal of the American College of Surgeons.; 2020. doi:10.1016/j.jamcollsurg.2019.10.016
3. Tevis SE, Rogers AP, Carchman EH, Foley EF, Harms BA. Clinically Competent and Fiscally at Risk: Impact of Debt and Financial Parameters on the Surgical Resident. J Am Coll Surg. 2018. doi:10.1016/j.jamcollsurg.2018.05.002

4. Sargent MC, Sotile W, Sotile MO, Rubash H, Barrack RL. Stress and coping among orthopaedic surgery residents and faculty. J Bone Jt Surg - Ser A. 2004. doi:10.2106/00004623-200407000-00032
5. McNeeley MF, Perez FA, Chew FS. The emotional wellness of radiology trainees: Prevalence and predictors of burnout. Acad Radiol. 2013. doi:10.1016/j.acra.2012.12.018
6. West CP, Shanafelt TD, Kolars JC. Quality of life, burnout, educational debt, and medical knowledge among internal medicine residents. JAMA - J Am Med Assoc. 2011. doi:10.1001/jama.2011.1247
7. Brazeau CMLR, Schroeder R, Rovi S, Boyd L. Relationships between medical student burnout, empathy, and professionalism climate. Acad Med. 2010. doi:10.1097/ACM.0b013e3181ed4c47
8. Grischkan J, George BP, Chaiyachati K, Friedman AB, Dorsey ER, Asch DA. Distribution of medical education debt by specialty, 2010–2016. JAMA Intern Med. 2017. doi:10.1001/jamainternmed.2017.4023
9. Phillips JP, Petterson SM, Bazemore AW, Phillips RL. A retrospective analysis of the relationship between medical student debt and primary care practice in the United States. Ann Fam Med. 2014. doi:10.1370/afm.1697
10. Johnson JP, Cassidy DB, Tofte JN, Bariteau JT, Daniels AH. Orthopedic surgery resident debt load and its effect on career choice. Orthopedics. 2016. doi:10.3928/01477447-20160315-01
11. Julien J St., Lang R, Brown TN, et al. Minority Underrepresentation in Academia: Factors Impacting Careers of Surgery Residents. J Racial Ethn Heal Disparities. 2014. doi:10.1007/s40615-014-0030-6
12. McKillip R, Ernst M, Ahn J, Tekian A, Shappell E. Toward a Resident Personal Finance Curriculum: Quantifying Resident Financial Circumstances, Needs, and Interests. Cureus. 2018. doi:10.7759/cureus.2540
13. Kolva DE, Barzee KA, Morley CP. Practice management residency curricula: A systematic literature review. Fam Med. 2009.
14. Babitch LA. Teaching practice management skills to pediatric residents. Clin Pediatr (Phila). 2006. doi:10.1177/0009922806294216
15. Dhaliwal G, Chou CL. A brief educational intervention in personal finance for medical residents. J Gen Intern Med. 2007. doi:10.1007/s11606-006-0078-z
16. Mizell JS, Berry KS, Kimbrough MK, Bentley FR, Clardy JA, Turnage RH. Money matters: A resident curriculum for financial management. J Surg Res. 2014. doi:10.1016/j.jss.2014.06.004
17. Jones K, Lebron RA, Mangram A, Dunn E. Practice management education during surgical residency. Am J Surg. 2008. doi:10.1016/j.amjsurg.2008.08.008
18. Woodworth PA, Chang FC, Helmer SD. Debt and other influences on career choices among surgical and primary care residents in a community-based hospital system. Am J Surg. 2000. doi:10.1016/S0002-9610(00)00543-2
19. Kovar A, Carmichael H, Harms B, Nehler M, Tevis S. Over Worked and Under Paid: How Resident Finances Impact Perceived Stress, Career Choices, and Family Life. J Surg Res. 2021. doi:10.1016/j.jss.2020.07.084

Highlights

- The public service loan forgiveness program is often utilized by trainees
- Utilization of public service loan forgiveness has an impact on career choices
- There is a poor understanding of the PSLF criteria among trainees

Table 1.

Characteristics of the respondents

Variable	Data (n=934)
Age, Years [a]	30 [28–32]
Gender, n (%)	
Male	391 (41.9%)
Female	450 (48.2%)
Transgender Male	1 (.1%)
Transgender Female	1 (.1%)
Prefer not to say	90 (9.6%)
Ethnicity, n (%)	
Hispanic	56 (6.0%)
Non-Hispanic	783 (83.8%)
Not specified	95 (10.2%)
Race n (%)	
American Indian or Alaskan Native	1 (0.1%)
Asian	164 (17.6%)
Black or African American	30 (3.2%)
Middle Eastern or North African	29 (3.1%)
Native Hawaiian or Other Pacific Islander	1 (.1%)
White	627 (67.1%)
Other	11 (1.2%)
Not specified	95 (10.2%)
Amount of Debt, $ [a]	230k [160k–300k]
Specialty, n (%)	
Medical	759 (81.3%)
Surgical	175 (18.7%)
PSLF Participation, n (%)	416 (44.5%)

[a]Median [Interquartile range]

k=1,000

PSLF, Public service loan forgiveness

Table 2.

Knowledge regarding Public Service Loan Forgiveness requirements

Question	Correct Answer	Correct Respondents; n (%)
…both direct and indirect loans qualify?	Only direct loans qualify.	255 (38.6)
…qualifying employers include governmental organizations, peace corps or AmeriCorps, 501c3 tax exempt organizations, and private or not for profit organizations?	This is correct.	533 (80.6)
…you must work more than 30 hours per week at a qualifying institution to be eligible?	This is correct.	553 (83.7)
…120 monthly payments?	This is correct.	617 (93.3)
…consolidation may make loans eligible for PSLF?	This is correct.	297 (44.9)
…all loan repayment plans are eligible for PSLF?	Only income-driven repayment plans are eligible for PSLF.	528 (79.9)
All answers correct		83 (8.9)

Table 3.

Characteristics between medical versus surgical specialties

Variable	Medical (n=759)	Surgical (n=175)	P-Value
Age, Years [a]	30 [28–32]	30 [29–32]	.07
Gender, n (%)			.36
Male	310 (40.8%)	81 (46.3%)	
Female	358 (47.2%)	92 (52.6%)	
Transgender Male	0 (0%)	1 (0.6%)	
Transgender Female	1 (0.1%)	0 (0%)	
Prefer not to say	90 (11.9%)	1 (0.6%)	
Ethnicity, n (%)			<.01
Hispanic	46 (6.1%)	10 (5.7%)	.86
Non-Hispanic	621 (81.8%)	162 (92.6%)	<.01
Not specified	92 (12.1%)	3 (1.7%)	<.01
Race n (%)			.02
American Indian or Alaskan Native	1 (0.1%)	0 (0%)	.63
Asian	135 (17.8%)	29 (16.6%)	.74
Black or African American	25 (3.3%)	5 (2.9%)	.77
Middle Eastern or North African	20 (2.6%)	9 (5.1%)	.09
Native Hawaiian or Other Pacific Islander	1 (0.1%)	0 (0%)	.63
White	497 (65.5%)	130 (74.3%)	.03
Other	8 (1.1%)	3 (1.7%)	.44
Not specified	91 (12.0%)	4 (2.3%)	<.01
Amount of Debt, $ [a]	230k [163k–230k]	223k [154k–300l]	.31
PSLF Participation, n (%)	323 (42.6%)	93 (53.1%)	.01

[a]Median [Interquartile range]

k=1,000

PSLF, Public service loan forgiveness

Table 4.

Characteristics of respondents actively versus planning on participating in public service loan forgiveness

Variable	Active (n=239)	Planning (n=177)	P-Value
Age, Years [a]	30 [29–32]	29 [28–31]	<.01
Gender, n (%)			.09
Male	108 (47.4%)	70 (40.2%)	
Female	119 (52.2%)	103 (59.2%)	
Transgender Male	0 (0%)	1 (0.6%)	
Transgender Female	0 (0%)	0 (0%)	
Prefer not to say	12 (5.0%)	3 (1.7%)	
Ethnicity, n (%)			.83
Hispanic	20 (8.4%)	12 (6.8%)	
Non-Hispanic	209 (87.4%)	158 (89.3%)	
Not specified	10 (4.2%)	7 (4.0%)	
Race n (%)			.70
American Indian or Alaskan Native	0 (0%)	0 (0%)	
Asian	24 (10.0%)	25 (14.1%)	
Black or African American	8 (3.3%)	7 (4.0%)	
Middle Eastern or North African	11 (4.6%)	7 (4.0%)	
Native Hawaiian or Other Pacific Islander	1 (0.4%)	0 (0%)	
White	178 (74.5%)	130 (73.4%)	
Other	1 (0.4%)	1 (0.6%)	
Not specified	16 (6.7%)	7 (4.0%)	
Amount of Debt, $ [a]	250k [200k–315k]	240k [190k–300k]	.08
Specialty, n (%)			.19
Medical	180 (75.3%)	143 (80.8%)	
Surgical	59 (24.7%)	34 (19.2%)	

[a] Median [Interquartile range]

k=1,000