



How Many Graduating Family Medicine Residents Have Chosen Financial Support for Service Commitments?

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BACKGROUND AND OBJECTIVES: New family physicians have opportunities to avoid accruing educational debt or have loans repaid by making a commitment to public service. Little information is available about the numbers of early career family physicians who have made service commitments to fund their education. The purpose of this study is to describe the proportion of graduating family medicine residents who have enrolled in US military and National Health Service Corps (NHSC) scholarship and loan repayment programs, thus obligating them to future public service.

METHODS: The study was a secondary analysis of de-identified data from the 2014 and 2015 American Board of Family Medicine examination registration questionnaire, which is required of all residents applying for board certification. Descriptive statistics were used to indicate the numbers and proportions of respondents who indicated military or NHSC financial support. Chi square analyses were used to analyze differences between groups.

RESULTS: Of the 6,231 residents studied, 271 (4.4%) had either obtained military support ($n=191$, 3.1%) or enrolled in the NHSC ($n=80$, 1.3%). More men had enrolled in the military than women (4.2% vs 2.2%, $P<0.01$), but there was no significant NHSC gender difference. Underrepresented minorities (URM) were twice as likely to have enrolled in NHSC as non-URM residents (2.5% vs 1.0%, $P<0.01$).

CONCLUSIONS: Only a small fraction of graduating family medicine residents have used either military enrollment or NHSC scholarships to fund their education. Family medicine should advocate strongly for expansion of the NHSC scholarship program, which receives many more applications than it can support.

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Most (82%) graduating family medicine residents have educational debt: 58% will graduate with more than \$150,000, and 26% with more than \$250,000.¹ However, the impact of debt on new family physicians, and the consequences for the family physician workforce, are not well understood.²

New family physicians have opportunities to avoid accruing debt or have loans repaid with a commitment to public service. The NHSC offers scholarships to selected medical students.³ Physicians may also apply for NHSC loan repayment after graduation, in exchange for a commitment to care for an underserved

population.⁴ Most states (37 of 50) also offer primary care physician loan repayment in exchange for service.^{5,6} The US military fully funds undergraduate medical education for participating students, and offers loan repayment to graduates who enroll. Participants are then obligated to military service.⁷⁻⁹

Little information is available about how many new family physicians have made service commitments to fund their education. The purpose of this study is to describe the proportion of graduating family medicine residents who have obtained financial support from military and NHSC programs, obligating them to future public service.

Methods

This study was a secondary analysis of de-identified data from the American Board of Family Medicine (ABFM) examination registration questionnaire, which is required of all residents applying for initial board certification, with each question being required. Ninety percent of graduating US family medicine residents register for the examination.¹⁰ The American Academy of

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Family Physicians (AAFP) Institutional Review Board approved this study. In 2014 and 2015, residents were asked, “Did you participate in a loan repayment program?” Those who indicated participation were asked to indicate participation in NHSC, military, or another option (Table 1).

Descriptive statistics were used to describe numbers and proportions of respondents who indicated military and NHSC participation. We also identified military residencies through the AAFP and Uniformed Services Academy of Family Physicians residency directories and calculated the proportion of graduates of these programs who had indicated military support.^{11,12} A variable was created for racial and ethnic groups underrepresented in medicine (URM), using the Association of American Medical Colleges definition.¹³ Chi square analyses were used to analyze differences between groups.

Results

Of the 6,231 residents studied, 271 (4.4%) had either obtained military support (n=191, 3.1%) or enrolled in the NHSC (n=80, 1.3%) (Table 2).

Although more men had enrolled in the military than women (4.2% vs 2.2%, $P<0.01$), there was no significant difference by gender in NHSC enrollment (1.2% vs 1.4%). Compared to non-URM students, URM students were somewhat less likely to have obtained military support (2.3% vs 3.1%, $P<0.01$), but twice as likely to have enrolled in NHSC (2.5% vs 1.0%, $P<0.01$). Of all graduates of military programs, 61.8% (118 of 191) indicated military financial support.

Discussion

Although rising medical education debt is a significant concern,¹⁴⁻¹⁷ our study of most graduating family medicine residents indicates that only a small fraction have used military support to fund their education. This is problematic because the US military has a primary care physician shortage.¹⁸ As of 2015, 3,113 medical students were enrolled in military Health Professions Scholarship Programs (HPSP),¹⁹ representing only 3.6% of 86,746 enrolled US medical students.²⁰ Military service is also less often chosen by women²¹ and unavailable to noncitizens and students with disqualifying health

problems.²² The military’s financial support for medical education could be increased by recruiting more women to service.²³

Similarly, very few graduating residents have benefitted from NHSC scholarships. While the NHSC loan repayment program has recently expanded, scholarship support has not increased²⁴ and demand from medical students far exceeds supply.²⁵ Of 1,725 students who applied for new NHSC scholarships between 2013 and 2016, only 283 (16.4%) received awards.²⁶ As has been described previously, URM residents were much more likely to have enrolled in the NHSC than non-URM residents.²⁵ Women residents in our study had participated in this program in equal numbers to men, consistent with their growing role in the rural physician workforce.^{27, 28} Family medicine leaders should advocate strongly for expansion of this program, which would benefit future family physicians and increase access to care for underserved communities.

While participation in NHSC and military scholarship loan repayment is relatively low at the time of graduation, a 2014 survey found that 62% of medical school graduates planning

Table 1. ABFM Certification Practice Demographic Questionnaire: Questions on Financial Support and Service Obligations

2014 to 2016 Questions (Used in this Study)		2017 Question	
Did you participate in a loan repayment program?	a. No b. Yes	In which of the following incentive programs are you participating or do you plan to participate? (Select all that apply)	a. None b. J-1 visa waiver (Conrad State 30, Appalachian Regional Commission, Delta Regional Authority, or other) c. National Health Service Corps scholarship d. National Health Service Corps loan repayment e. National Institutes of Health Loan Repayment Program (extramural or intramural) f. Public Service Loan Forgiveness Program g. State-sponsored scholarship h. State-sponsored loan repayment i. US Military scholarship or loan repayment j. Hospital- or employer-sponsored loan repayment k. Indian Health Service scholarships / loan repayment l. Other service obligation, scholarship, or loan repayment program
If yes, what type of loan repayment?	a. J1 Visa b. National Health Service Corps c. Military d. Hospital Sponsored e. Employer Sponsored f. State Sponsored g. Federal Sponsored h. Other (free text)		

Table 2. Graduating Family Medicine Residents With Service Commitments, 2014-2015

	Military	National Health Service Corps	Total
Medical School			
U.S.	180 (4.4%)*	74 (1.8%)*	4,090
International	11 (0.5%)*	6 (0.3%)*	2,139
Race			
American Indian or Alaska Native	3 (4.4%)	2 (2.9%)	68
Asian	17 (1.1%)*	6 (0.4%)*	1,546
Black or African American	9 (1.9%)	13 (2.8%)*	467
Native Hawaiian or Other Pacific Islander	1 (2.4%)	2 (4.8%)	42
White	161 (3.9%)*	57 (1.4%)	4,106
Ethnicity			
Hispanic or Latino	13 (2.5%)	11 (2.1%)	529
Non-Hispanic	178 (3.1%)	69 (1.2%)	5,700
Representation in Medicine			
Underrepresented Minority (URM)**	24 (2.3%)*	26 (2.5%)*	1,044
Not URM	167 (3.2%)*	54 (1.0%)*	5,185
Gender			
Female	75 (2.2%)*	48 (1.4%)	3,441
Male	116 (4.2%)*	32 (1.2%)	2,788
Age			
Mean (S.D.)	33 (5.0)	33 (4.1)	33 (4.4)
Median	32	32	32
Totals			
	191 (3.1%)	80 (1.3%)	6,229

Displayed percentages are percentages of each subgroup (percentage across rows).

* statistically significant difference from other groups ($P < 0.01$)

** American Indian or Alaska native; black or African American; native Hawaiian or other Pacific Islander; and Hispanic or Latino

family medicine, internal medicine, internal medicine-pediatrics, pediatrics, or preventive medicine careers intended to pursue loan repayment through the Public Service Loan Forgiveness (PSLF) program.²⁹ Through PSLF, physicians in all specialties are eligible for loan forgiveness after 10 years of payments and employment by a government or non-profit organization.³⁰ These criteria are more lenient than the NHSC and state loan repayment programs, which require primary care career choice and care of an underserved population.^{5,24} The promise of the PSLF may make a career in family medicine more attractive to students. However, this costly program does not incentivize primary care

specialty choice or service-oriented careers, and could undermine the attractiveness of NHSC and military programs.²⁹

This study is the first descriptive analysis of NHSC and military service obligations of the emerging family medicine workforce. However, the study has limitations. The survey described these programs as “loan repayment programs”, but they functioned as medical school scholarships for most residents at this stage. We were unable to distinguish between residents who had enrolled in the military’s HPSP, attended the Uniformed Services University, and joined the military after medical school graduation. Only 61.8% of residents in military

programs answered the question affirmatively, suggesting that the data under-report the total proportion of residents who have obtained military financial support. The question also would not have identified residents who intend to apply for state or NHSC loan repayment after graduation. The ABFM has modified its questionnaire to better capture these complexities in the future (Table 1). Further, the ABFM does not collect examinees’ citizenship status, which impacts eligibility for these programs and reduces our estimate of the proportion of eligible residents participating.

In summary, although service obligations are an important mechanism for allowing family physicians

to avoid educational debt, few residents have enrolled in these programs as they approach graduation. The NHSC scholarship program would recruit more students with additional federal support. More study is needed to better understand the changing landscape of financial support for new family physicians and its subsequent effects on the workforce.

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