Don't Know, Don't Care: Medical Students' Knowledge of and Attitudes toward Military Medical Career Opportunities and Medical Educational Cost Reimbursement

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We assessed indebtedness of graduating physicians and dentists in the class of 1996, University of Medicine and Dentistry of New Jersey, and found the percentage of students with debt to average 80% (range, 77–84%) among the five schools of the university. Mean indebtedness was $73,000 per student. We then surveyed the graduates of one of the four medical schools in the university (New Jersey Medical School) regarding attitudes toward established programs for financial assistance to medical students and physicians and alleviation of educational indebtedness in return for military service. More than half (57%) of the students were unaware of any program that would repay part of their educational loans in return for military service. Of those who professed such knowledge, few could name the programs. A similar number of students (55% of the graduates) said that they would not consider serving in the military under any circumstances. Despite considerable indebtedness among today's medical students, most do not know about career opportunities offering financial assistance with tuition or educational loans in return for military service. Worse yet, they do not care.

Introduction

During the Persian Gulf War (Operation Desert Storm), the United States deployed in excess of 500,000 service personnel in the Kuwaiti theater of operations. In support of this force, and included within it, were 2,500 physicians in the Medical Corps (MC) of the three services (Army, Navy, and Air Force). More than half of these physicians in the MC were derived from the reserve components (RC) of our armed forces. The RC consists of the reserves (all services) and the National Guard (Army and Air Force, but not Navy). In the event of mobilization, 75% of military medical assets (MC plus nurses, corpsmen, etc.) come from the reserves.[1] Traditionally, the United States does not engage in armed conflict without its medical assets, and Operation Desert Storm was no exception; the ground war did not begin until 25,000 patient beds were in theater.

Success in combat is dependent on morale, and morale is a function of the three "C"s: conviction, collaboration, and care. Soldiers fight best when they believe that their cause is a just one, when they are convinced that they are not alone, and when they are confident that they will receive good care if they are wounded.[2] The latter "C" may be the most important one. For this reason, an ample and well-trained Medical Corps is not only of tactical but also of strategic importance to national security.

A recent Department of Defense (DoD) survey[3] found that only 71% of physician positions in the RC were filled. It also concluded that a fill rate of 90% or more was essential for combat readiness. Added to this deficiency was the observation that the number of physicians in wartime specialties was inadequate. For example, combat casualty care requires appropriate numbers of general surgeons, orthopedic surgeons, neurosurgeons, anesthesiologists, etc. The fill rate of these specialties is especially low in the RC of the armed forces.

The U.S. military medical deficiencies coincide with the rising cost of medical education[4] and an anticipated decline in physician incomes[5] in the United States. Medical students commonly report indebtedness of $100,000 upon graduation from medical school (W.M.L., personal observations, 1996). They are distressed by the knowledge that their futures are mortgaged by the cost of their medical education. Only a relatively few medical students (estimated at less than 20%) are not under some financial obligation upon graduation.[4] Ironically, there exists within the armed forces medical departments many unique opportunities for financial assistance with medical education in return for military service.[3] Most of these programs have been in place for years.

The federal medical school (The Uniformed Services University of the Health Sciences, Bethesda, Maryland) provides a medical education with salary and allowances in return for 7 years of active duty. The Health Professional Scholarship Program underwrites the cost of medical education in a civilian medical school in return for 4 years of active duty. Most military physicians are graduates of the Health Professional Scholarship Program. After graduation from medical school, physicians can apply for one of three programs to defray their educational debt. The Specialized Training Assistance Program provides a monthly stipend of $865 during each year of residency training in a specialty critical to wartime requirements (e.g., orthopedic surgery, anesthesiology, etc.). Upon completion of residency training, the physician owes 2 years as a reservist for each year in the program. The Health Professional Loan Repayment Program provides $3,000 per year, up to a total of $20,000, for physicians in the reserves who are board-eligible in a wartime critical specialty. This loan is in addition to military pay and goes directly to the lending institution. The Health Professional Bonus Program provides a $10,000 recruitment bonus each year for a total of 3 years, or $30,000, to board-eligible physicians in critical wartime specialties in return for service in a reserve unit. The Financial Assistance Program provides physicians in training in certain specialties critical to peacetime requirements (e.g., family

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medicine, preventive medicine, psychiatry, etc.) with an annual grant of $18,330 plus a monthly stipend of $865 and allowances throughout their residency in return for active duty service on a year-for-year basis. This translates into a resident in general surgery receiving from the DoD $141,645 in addition to the resident's salary. The former sum would pay for all of most medical student loans as of this writing. Two pointed questions then arise: What is the magnitude of indebtedness among recent graduates of medical schools? And why have medical students and young physicians not taken advantage of these financial opportunities to alleviate this indebtedness?

Methods

To address these questions, we obtained from the Financial Aid Office of the University of Medicine and Dentistry of New Jersey data regarding the indebtedness of all graduates of its five schools granting doctoral degrees in the health professions. These are the New Jersey Medical School and The New Jersey Dental School, both in Newark, the Robert Wood Johnson Medical Schools in New Brunswick and Camden, and the School of Osteopathic Medicine in Stratford. These data included the percentages of each graduating class with educational debts from either undergraduate or graduate schools, the mean value of indebtedness, and the range of indebtedness for each school's graduates.

In addition, we developed a questionnaire in conjunction with the Office of the Inspector General, Department of Defense. We surveyed students of the New Jersey Medical School's class of 1996 during their financial aid exit interviews.

The survey instrument (questionnaire) is shown in the Appendix. All responses were collated and data are presented in terms of mean ± SE or are expressed as percentages of samples. The significance of apparent differences was assessed with the chi-square test and Fisher's exact test.[6]

Results

The mean percentage of students with debt within the five schools of the university was 80% (range, 77–84%). Excluding the Dental School, the rate was 81%. The mean indebtedness was $73,000 per graduate. This figure rose to $75,000 if data from the Dental School were excluded. The highest debt belonged to a dental student: $159,000; the largest medical student debt was $150,000. These data are summarized in Table I.

There are 176 members of the class of 1996. Fifty-five percent of the graduates were men. Sixteen percent were married. The most common ethnic description, which reached 53%, was white, not of Hispanic origin. Two percent were veterans. More than half of the students (57%) were unaware of any programs that would repay a portion of their medical educational loans in return for military service. Of those who alleged such awareness, less than 10% correctly identified any program, such as the Health Professional Loan Repayment Program. Even more students (74%, $p = 0.0063$) were unaware of any program that would pay a monthly stipend during their residency in exchange for military service. Among the 26% who professed such knowledge, none could name such a program.

TABLE I

EDUCATIONAL INDEBTEDNESS: 1996 GRADUATES OF UMDNJ*

School	Indebtedness (%)	Mean ($)	Range ($)
NJDS	77	66,000	15,000–159,000
NJMS	78	75,000	4,000–150,000
RWJMS-C	84	74,000	25,000–132,000
RWJMS-P	76	72,000	4,000–140,000
SOM	83	77,000	8,500–139,000
$\bar{X}$	80	73,000	11,300–145,000

* 600 doctoral graduates.

The most appealing financial program was one that would pay up to $50,000 of a medical educational loan, but only 36% of the students concurred. An equal number (36%) found none of the programs appealing. When queried regarding military service, only 16% of the students would be willing to serve their country as a physician, if it were at war. More than half (55%) would not consider serving in the armed forces under any circumstances. The most commonly cited constraint against military service was "family" (57%). Only 11% of students felt that patriotic service was most important for them. An equal number felt that travel opportunities and continuing medical education were more important. For most students, the highest academic level attained was a bachelor's degree.

Discussion

Several conclusions can be drawn from these observations. Most medical and dental students, at least in one state (New Jersey), are deeply in debt upon graduation and before they begin to be remunerated for their services as health care deliverers. Their salaries as interns or first year residents ($32,000–38,000)[4], although seemingly generous by traditional standards, in all likelihood will not enable them to significantly decrease their debt for many years, during which time interest on the debt continues to accrue. Despite this financial burden, medical school graduates, at least those at the University of Medicine and Dentistry of New Jersey/New Jersey Medical School, are ignorant of career opportunities in military medicine and the accompanying financial incentives available to them to help pay a part or all of their medical educational indebtedness. Is this their fault? The answer, of course, is yes, at least in part. The programs enumerated are not military secrets. Nor are the students, by their very nature, reticent about seeking out ways to ameliorate their lot financially. Nonetheless, they cannot be the sole target of blame. The very same programs are not commonly known to financial aid and career advisers at the same institutions (K.G.S., personal observations, 1996). Added to the complexity of the informational void is the fact that the DoD is apparently unaware of the ignorance. This unfortunate set of circumstances is further compounded by the fact that military recruiters for such programs are now enlisted personnel, who report to recruiting commands rather than to the Surgeons General. Rather than pooling their resources, they tend to

MILITARY MEDICAL CAREER OPPORTUNITIES—MEDICAL STUDENT QUESTIONNAIRE

Instructions: Please indicate your responses to the questions in this survey directly on the survey form. Please provide only one response for each question unless otherwise indicated.

10. Are you aware of any Program that will pay for your medical education in exchange for military service?
    a) Yes
    b) No
11. If you answered "Yes" to #10, please specify. _____
12. Are you aware of any programs that will repay a portion of your educational loans in exchange for military service?
    a) Yes
    b) No
13. If you answered "Yes" to #12, indicate which ones by writing their titles in the spaces below.

    _____
    _____
    _____
14. Are you aware of any programs that will pay you a monthly stipend while in residency training in exchange for military service?
    a) Yes
    b) No
15. If you answered yes to #14, indicate which ones by writing their titles in the spaces below.

    _____
    _____
    _____
16. Which one of the following programs is most appealing to you?
    a) a program to repay part of my medical educational loans ($7,500.00 annually, up to a maximum of $50,000.00).
    b) a program to pay me a monthly allowance ($865.00) while in residency training.
    c) a program to pay me $10,000.00 annually as a board eligible physician in a reserve unit of the military.
    d) none of the above.
17. Which of the following programs would appeal to you?
    a) joining one of the military services as a physician.
    b) joining a local military reserve unit as a physician.
    c) assisting the military as a physician if my country was at war.
    d) assisting the military as a physician in a peacekeeping force.
    e) continuing in my current capacity in the reserve forces.
    f) I would not consider serving in the military in any capacity.
18. Using the indicated scale, please rate the following in terms of their importance to you by writing the appropriate number in front of each item. 1 = not at all important 2 = somewhat important 3 = very important 4 = most important
    ____ Reputation of residency training program
    ____ Financial prestige
    ____ Professional prestige
    ____ Physically challenging, adventurous activities
    ____ Travel opportunities
    ____ Performing a patriotic service for my country
    ____ Attending continuing medical educational conferences
19. Which of the following potential constraints would influence your decision to join the military in return for relief from your educational debt? Please indicate all that apply.
    a) geographic constraints
    b) family constraints (e.g., spouse's employment situation)
    c) moral objections to serving in the military
    d) military protocol/regimentation
    e) health constraints (e.g., own health might be impaired)
    f) other
20. What is the highest degree you have obtained to date in your educational career?
    a) associate's (e.g., A.A.S.)
    b) bachelor's (e.g., B.A., B.S.)
    c) master's (e.g., M.S., M.P.H.)
    d) doctoral (e.g., Ph.D., D.D.S.)
    e) professional (D.D.S., D.O., L.L.B.)
    f) other

MILITARY MEDICAL CAREER OPPORTUNITIES—MEDICAL STUDENT QUESTIONNAIRE

Instructions: Please indicate your responses to the questions in this survey directly on the survey form. Please provide only one response for each question unless otherwise indicated.

21. Using the enclosed list of self-designated practice options, please put an "X" next to the *single* best description of your intended post-graduate career choice. If you are undecided, circle the last choice.

___ Aerospace Medicine
___ Allergy and Immunology
___ Anesthesiology
___ Critical Care Medicine
___ Dermatology
___ Emergency Medicine
___ Family Practice
___ General Practice
___ General Internal Medicine
_____ Cardiovascular Disease
_____ Diabetes
_____ Diagnostic Laboratory Immunology
_____ Endocrinology
_____ Gastroenterology
_____ Geriatrics
_____ Hematology
_____ Infectious Diseases
_____ Nephrology
_____ Nutrition
_____ Medical Oncology
_____ Pulmonary Diseases
_____ Rheumatology
___ Neurology
___ Obstetrics and Gynecology
___ Occupational Medicine
___ Ophthalmology
___ Otolaryngology
___ Pathology
___ Pediatrics
___ Physical Medicine & Rehabilitation
___ General Preventive Medicine
___ Psychiatry
___ Public Health
___ Radiology
___ General Surgery
_____ Cardiovascular Surgery
_____ Colon and Rectal Surgery
_____ Critical Care Surgery
_____ Facial Plastic Surgery
_____ Head and Neck Surgery
_____ Hand Surgery
_____ Neurological Surgery
_____ Orthopaedic Surgery
_____ Pediatric Surgery
_____ Plastic Surgery
_____ Thoracic Surgery
_____ Vascular Surgery
_____ Urology
___ Other Specialty
___ Undecided

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