Don't Know, Don't Care III

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The knowledge of and interest in Department of Defense programs to help medical students with their educational expenses in exchange for military service as a physician was studied at three medical schools representing the eastern (University of Medicine and Dentistry of New Jersey/New Jersey Medical School [UMDNJ/NJMS]), midwestern (University of Missouri at Kansas City), and western (University of Utah) United States. Despite staggering indebtedness (40% of the class of 1998 at the University of Medicine and Dentistry of New Jersey were in debt in excess of $100,000 at graduation), surprisingly few students were aware of programs such as the Health Professions Scholarship Program, the Health Professionals Loan Repayment Program, and the Specialized Training Assistance Program. Even fewer were interested when made aware of such financial assistance. Hostility to military service as a physician was common. "Patriotism" was seemingly anathema. Dwindling recruitment and retention of medical corps officers in the reserve components of our nation's armed forces is of grave concern to national security and flies in the face of medical students', hence young physicians', indebtedness for their education. Clearly Department of Defense programs must become more imaginative, certainly more financially appealing.

Introduction

The last declared war involving the armed forces of the United States of America is now more than 7 years in the past. Many world crises have involved and continue to involve our soldiers, sailors, marines, and aviators around the globe, but none involve the numbers sent to Operation Desert Storm in the Persian Gulf in 1991. Almost 500,000 service personnel were deployed there. This number is dwarfed by the nearly 9 million personnel mobilized for the Vietnam War (1964–1973), the nearly 6 million personnel who served during the Korean War (1950–1953), and the 16 million personnel mobilized for World War II (1941–1946).[1] Despite the range in number of combatants, these four wars had one or both of two features in common: (1) our government did not appear to know that the war was imminent; and (2) our armed forces were not ready to fight it. The latter was not the case in Operation Desert Storm, but the former observation was. Thus, a new war could test our armed forces again at any time.

Critical to combat readiness is the availability of medical support, which is now experiencing shortfalls, especially in the reserve components (Reserve and National Guard forces). This is especially true in the U.S. Army, whose Surgeon General recently stated that his number one problem was the shortage of medical corps officers in the reserves (R. Blanck, personal communication, 1998). Because 75% of medical assets, for deployment in time of war, are in the reserve components,[2] shortfalls there become critical to national war-fighting capability. For reasons relevant to tradition, morality, and morale, the nation's armed forces do not like to wage war without their "medics" in place.

What motivates a physician, or physician-to-be, to join the nation's armed forces when the nation is not at war? Traditionally, patriotism, a sense of obligation to country, and a search for adventure have been the motives for military service, even for physicians. More recently, added income has become an incentive.

The experiences of physician/reservists in Operation Desert Storm had a negative effect on physician recruitment, as is well known. This phenomenon prompted a survey of a potential applicant pool for future military physicians, namely, the graduates of the University of Medicine and Dentistry of New Jersey and its New Jersey Medical School in Newark.[3] The title of that article, "Don't Know, Don't Care," says it all.

Among the graduating class of 1996, few were aware of any of the many and varied financial incentives offered them by the nation's armed forces in exchange for military service. Worse yet, when made aware of such programs, few seemed interested. These observations were made in the setting of severe financial stress among the same class. Eighty percent were in debt for their education, and average indebtedness was $73,000.[3] That inquiry was broadened to include four additional classes at New Jersey Medical School: 1997, 1998, 1999, and 2000.

The preliminary results of this survey[4] are strikingly similar. Eighty-seven percent of the class of 1997 was in debt at graduation. Mean indebtedness increased to $79,000 and further increased to $85,000 for the class of 1998. Almost 40% of the class of 1998 had debts in excess of $100,000. Comparable financial data concerning the two remaining classes (1999 and 2000) are not available. Few students in these four classes were aware of financial aid to medical education by Department of Defense programs; fewer still were interested, and, in fact, a distinct hostility to military service was apparent. Fully 30% of respondents to question 17 ("Which of the following programs would appeal to you?") replied, "I would not consider serving in the military in any capacity." We considered the possibility that these attitudes by medical students might reflect regional bias, recognizing the well-known moderate philosophy attributed generally to metropolitan New York and New Jersey. A more representative sampling of the midwestern and western United States was clearly indicated.

The subjects of the current report include medical students from the University of Missouri in Kansas City and the Univer-

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sity of Utah in Salt Lake City. Their responses are compared with those of medical students from New Jersey.

Methods

A questionnaire (Appendix) was developed in conjunction with the Office of the Inspector General, Department of Defense. It has 21 questions. These were answered by each class of students as a unit. This prevented respondents from communicating with one another regarding questions and answers, which might have resulted from a direct-mail survey. Questionnaires were collected from the class as a whole as soon as they were completed. The time allowed for completion was about 20 minutes. Answers to the questionnaires were collated and expressed as percentages of total participation. The significance of apparent differences was assessed by the χ^2 test using original numbers.[5]

Results

The student body (classes of 1997–2000) of the University of Medicine and Dentistry of New Jersey/New Jersey Medical School (UMDNJ/NJMS) is mostly male (61%), between 20 and 30 years old (92%), single (86%), and white, not of Hispanic origin (52%). Few (<2%) are veterans, have military obligations (2%), or are currently serving in the armed forces, National Guard, or Reserves (<2%). These data are presented in Table I. Less than half of the students (41%) were aware of a program that would pay for their medical education in exchange for military service (question 10). Less than 5% of those students who alleged knowledge of such a program (Health Professions Scholarship Program) could name it (question 11). Less than one-third of the students (29%) were aware of a program that would repay a portion of their educational loans in return for military service (question 12). Of these, only 2% could name the program (Health Professionals Loan Repayment Program). Less than one-fifth of the students (19%) were aware of a program that would pay a resident a monthly stipend, throughout residency, in return for military service (question 14). None of these could name the program (Specialized Training Assistance Program). These data are presented in Table II.

Among the three financial aid programs outlined in question 16, the most popular was a program to repay part of the student's medical educational loans ($7,500 annually to a maximum of $50,000). More than one-third of the students (37%) selected this program as most appealing. An almost equal number (31%) selected "none of the above." These data are presented in Table III.

Among the five possible roles as a military physician (question 17), the most popular choice was assisting the military as a physician if the country was at war; however, only a few of the students (21%) chose it. In fact, the most popular answer to this question was, "I would not consider serving in the military in any capacity!" More than one-third of the student body (37%) selected this option. These data are presented in Table IV.

Among seven choices of importance to New Jersey medical students (question 18), the one that ranked highest (3.27 on a scale of 1 to 4, 4 being the highest) was "reputation of their residency training program." Next highest (2.87) was "professional prestige." Lowest (2.07) was "performing a patriotic duty for my country." These data are presented in Table V.

Among five factors dissuading the medical students from military service in exchange for financial assistance in educational

TABLE II

MEDICAL STUDENTS' AWARENESS OF DEPARTMENT OF DEFENSE FINANCIAL AID PROGRAMS

Medical School	*n*	HPSP (Question 10)	HPLRP (Question 12)	STRAP (Question 14)
NJ	547	41% (5%)	29% (2%)	19% (0%)
UMKC	205	48% (7%)	26% (1%)	19% (1%)
U. Utah	42	80% (12%)	40% (0%)	33% (0%)

Medical students' awareness of Department of Defense financial aid programs are tabulated according to medical school, sample size (*n*), and percentage of students indicating "yes" to questions 10, 12, and 14. Parenthetical percentages are responses to questions 11, 13, and 15 ("name it").

HPSP, Health Professions Scholarship Program; HPLRP, Health Professionals Loan Repayment Program; STRAP, Specialized Training Assistance Program.

TABLE III

APPEAL OF DEPARTMENT OF DEFENSE LOAN REPAYMENT PROGRAMS (QUESTION 16)

Medical School	HPLRP (a)	STRAP (b)	Bonus Test Program (c)[a]	None of the Above
NJ	37%	20%	11%	29%
UMKC	32%	18%	11%	38%
U. Utah	48%	19%	26%	10%

Appeal of Department of Defense loan repayment programs to medical students at the three medical schools surveyed. Percentages refer to the number of positive responses to question 16. Parenthetical letters refer to choices in question 16.

HPLRP, Health Professionals Loan Repayment Program; STRAP, Specialized Training Assistance Program.

[a]Currently known as the Health Professionals Critical Wartime Skills Special Pay.

TABLE I

MEDICAL STUDENT DEMOGRAPHIC DATA (QUESTIONS 1–9)

Medical School	*n*	Male	Age 20–30	Single	White	Veteran	Military Obligation	Current Service
NJ	547	61%	92%	86%	52%	<2%	2%	2%
UMKC	205	58%	61%	91%	66%	<1%	3%	2%
U. Utah	42	93%	100%	21%	90%	5%	2%	5%

Demographic data of the medical students in the three schools, University of Medicine and Dentistry of New Jersey (NJ), University of Missouri at Kansas City (UMKC), and University of Utah (U. Utah), are presented as percentages of positive responses to questions 1 to 9.

TABLE IV

ATTITUDES TOWARD MILITARY SERVICE (QUESTION 17)

	NJ	UMKC	U. Utah
Active duty as a physician	7%	10%	21%
Reserve service as a physician	18%	14%	36%
Assisting as a physician in time of war	21%	17%	10%
Assisting as a physician in peacekeeping operations	10%	18%	10%
Continuing in the reserves	3%	2%	5%
"Would not serve in any capacity"	37%	48%	26%

Attitudes toward military service as a physician are presented as percentages of positive responses to question 17 at the three medical schools surveyed.

TABLE V

IMPORTANCE TO A MEDICAL STUDENT (QUESTION 18)

	NJ	UMKC	U. Utah
Reputation of their residency program	3.27	3.34	3.23
Financial prestige	2.25	2.17	2.21
Professional prestige	2.87	2.91	2.53
Adventurous activities	2.25	2.42	2.46
Travel opportunities	2.24	2.33	2.26
Patriotic service	2.07	1.71	2.32
Continuing medical education	2.55	2.44	2.68

Factors of concern to medical students from the three medical schools are graded according to a scale of 1 to 4, with 4 being the highest or most important.

indebtedness (question 19), geographic constraints (48%) and family constraints (52%) received the most votes. These data are presented in Table VI.

There were 42 questionnaires completed by members of the class of 2000 at the University of Utah School of Medicine in Salt Lake City. The class is composed of 90 students (47% response rate). This class sample is mostly male (93%), between 20 and 30 years old (100%), married (79%), and white, not of Hispanic origin (90%). Few (5%) are veterans, obligated to the armed forces (2%), or currently serving in the Reserves/National Guard (5%) (Table I).

Eighty percent of the questionnaires indicated awareness of a program that would pay for medical education in return for military service, but only 12% of those queried could name the program (questions 10 and 11). Only 40% of the students were aware of the loan repayment program, and none could name it

TABLE VI

DETERRENT CONCERNS REGARDING MILITARY SERVICE (QUESTION 19)

	NJ	UMKC	U. Utah
Geographic constraints	48%	42%	55%
Family constraints	52%	48%	57%
Moral objections to military	13%	14%	5%
Military protocol/regimentation	30%	29%	40%
Health constraints	12%	16%	5%
Other or none	12%	20%	10%

Factors deterring medical students from considering military service in exchange for educational indebtedness are presented as percentages of positive responses from students at the three medical schools.

(questions 12 and 13). Only 33% of the students were aware of the monthly stipend program for residents, and none could name it (questions 14 and 15) (Table II).

Almost half of the students (48%) favored a loan repayment program; 10% preferred "none of the above" (question 16) (Table III). Thirty-six percent of the students favored joining a local military reserve unit as a physician; 26% would not serve in the military in any capacity (question 17) (Table IV). The reputation of their residency training program was the most important (3.23) of the choices available in question 18 (Table V). The most commonly cited constraints against military service were geographic (55%) and family (57%) among the choices in question 19 (Table VI).

There were 205 questionnaires answered by medical students from the University of Missouri at Kansas City. They were mostly male (58%), between 20 and 30 years old (61%), single (91%), and white, not of Hispanic origin (66%). Less than 1% were veterans, 3% were obligated to the armed forces for a portion of their medical educational expenses, and 2% were currently serving in a U.S. military Reserve or National Guard unit (Table I). Less than half of the students (48%) were aware of a program that would pay for their medical education in return for military service as a physician (question 10). Of those, only 7% could name it (Health Professions Scholarship Program). Only 26% of the students were aware of a program to repay a portion of their medical education in return for military service as a physician (question 12). Of those, less than 1% could name it (Health Professionals Loan Repayment Program). Only a small number of students (19%) were aware of a program that would pay them a stipend during their residency training in return for military service (question 14). Less than 1% of these students could name the program (Specialized Training Assistance Program) (Table II).

The most appealing of three military financial aid programs to medical school graduates (question 16) was the medical educational loan repayment program, which almost one-third of the students (32%) selected. A larger number (38%), however, selected "none of the above."

The most popular option for military service (question 17) was assisting the armed forces as a physician in a peacekeeping mission, but only 18% of the students selected it. Almost half of the students (48%) "would not consider serving in the military in any capacity" (Table IV).

The reputation of their residency training program was of greatest concern to the students at the University of Missouri at Kansas City (3.34); of least importance (1.71) to these students was "performing a patriotic service for my country" (question 18) (Table V). The most significant deterrent against willingness to serve as a physician in return for financial assistance in relief of medical educational debt (question 19) was family constraints (48%); the next most significant deterrent was geographic constraints (42%) (Table VI).

Discussion

Clearly, the opinions expressed in earlier reports concerning medical students' attitudes toward service as physicians in the nation's armed forces are not unique to the state of New Jersey. In fact, the remarkable similarity of responses to the questionnaire suggests that the class year and school location have little

influence on medical student attitudes to military service. Despite heavy and probably sustained indebtedness for medical education that will be rewarded with a lower income in years to come, military service as a physician is not perceived as an option to relieve the burden of debt.

Part of the problem may be informational, because only a relatively small percentage of medical students were familiar with any of the four major financial aid programs for medical education offered by the Department of Defense (questions 10–15). Even so, when made aware of them through further questioning (questions 16 and 17), medical students from all classes in the three states showed little interest in these programs. The fact that such a large percentage of students (48% at the University of Missouri at Kansas City) would not consider military service as a physician under any circumstances suggests an antipathy toward such service that is unprecedented and invites speculation regarding its cause. Unfortunately, our data do not offer insight into this phenomenon.

The response to question 18 suggests that "patriotism," at least as the authors perceive it, is not high among American medical students. This interpretation is not meant to impugn the altruism of these future physicians but to point out a probability. The youth of America does not necessarily believe that the wearing of a military uniform is the ultimate expression of "pro patria."

Conversely, not wearing a uniform does not necessarily imply lack of respect for country. The current generation of medical students was born after the Vietnam War. Its only contemporary experience with its country at war has been Operation Desert Storm. That war was one in which physicians, especially those in reserve units, generally condemned their wartime experiences as adversely affecting their professional and family lives.[6]

Perhaps the incentives are not sufficient to attract the attention of the prospective physician. In view of the progressive increase in indebtedness (80% with an average debt of $73,000 in 1996, 90% with an average debt of $85,000 in 1998), the lure of $50,000, parceled out in $7,500 annual allotments, may be insufficient enticement. At the time of this writing, the proposed increase in the Health Professionals Loan Repayment program is a significant improvement over the current plan ($20,000 divided over 7 years). Unfortunately, loan repayment plans are not keeping pace with medical educational indebtedness. All this comes at a time when recruitment and retention of medical corps officers is deteriorating. Our first report[3] described a medical corps fill rate within the U.S. Army Reserve of only 73%. The current figure is 61%.[3] What can be done to address this relentless decline in reserve component medical corps strength?

It would seem that a new and innovative approach to recruitment and retention of physicians in the selected reserves is needed and perhaps long overdue. The stereotypical U.S. Army Reserve physician is as traditional as a Norman Rockwell cover for the *Saturday Evening Post*. Usually, he is at a U.S. Army Reserve center, some distance from home and family, in uniform, trying to look busy, and resentful that another whole weekend, one per month, is being wasted. It is not with pride, but rather with embarrassment, that he relates to his civilian colleagues his weekend reserve activities. The pay is only a modest amount and certainly does not compensate for the harassment that will come his way if he arrives late or asks to leave early for professional reasons. And, as if his on-call schedule isn't enough to stress his marriage, the lost weekend, once a month, adds a credibility concern to essential family commitment. The perquisites of PX, commissary, and officer's club privileges are anachronistic. And for the physician who stays in for 20 or even 30 years, the highly touted retirement benefit is very modest—about $500 annually per year of service. Despite obvious exceptions to these generalities, there should be little surprise that there are so few takers.

There may be a better way to go. It may even be a cheaper way to go. It may be so logical that it's rejected. Let's try anyway.

We tell the senior student in medical school, one who has been accepted in a civilian residency leading to board certification in a specialty we need, that we will assume his educational debt, all of it, all $100,000 of it, plus whatever interest has accrued. All he has to do in return is join the U.S. Army Reserve Medical Corps. He's assigned to a troop program unit but attached to something akin to the National Army Augmentation Detachment. His commitment is 10 years. His only training/drilling requirement is 1 week per year at the Army Medical Department School at Fort Sam Houston, where he is updated on current concepts in military science, military medicine, combat casualty care, and his own specialty. He is in uniform, conforms to military courtesy, etc., and interacts with the large number of his colleagues in attendance. He gets pay and allowances, transportation, housing, etc., for this week at temporary duty or annual training rates. He receives no other pay during the year and does not qualify for retirement unless he chooses to stay beyond his 10 years. What a bargain for both sides.

The medical student/physician sees instant resolution of his educational loan and its interest; he belongs to an elite group of military medical reservists, who train together for 1 week per year at the Academy of Health Sciences, Fort Sam Houston, and, if he likes it, he can get credit for those years and convert to regular reserve status after the 10 years of obligated service are completed. If he chooses not to remain, both parties separate with no obligation other than maybe individual ready reserve status for the reservist. If at any time during the 10 years a national need for his specialty arises, he agrees to mobilization. In fact, he's all ready to go. He has security clearance, dog tags, health records, basic training, uniforms, even a troop program unit slot already in place. In today's climate, he's likely to complete 10 years without mobilization; but if he's called, he's probably better prepared for deployment than any of his predecessors because of that annual week in Texas, assuming it is done right.

The Department of Defense, on the other hand, has a stable of qualified, but also current, specialists in combat casualty care and other wartime essential skills. The stable is sufficiently large that reserve component medical corps strength increases to 100%, or even greater. It becomes competitive, and applicants are turned away. Some are told to reapply the next year. Health-related attrition will always cause some vacancies. The price is a bargain. Each participant costs the government $100,000 (approximate indebtedness). The program includes 2,500 personnel, or $250 million over 10 years. The annual training costs $2,000 per participant, or another $5 million per year ($50 million over 10 years). The equivalent of 300 Tomahawk missiles (we just used 75 in raids over Sudan and Afghanistan) approximates the total costs of the program. But consider the savings.

The annual salary for a medical reservist is about $10,000. Ten years' worth is $100,000, and that salary for 2,500 individuals would cost the same $250 million. This figure would double with retirement eligibility at 20 years. The numbers speak for themselves. The educational plan would have to be established, and the product would have to be tested, but preliminary estimates are that it would be significantly better than that from the existing program. But, then again, wouldn't anything be better?

Appendix

Military Medical Career Opportunitues–Medical Student Questionnaire

1. Your Gender:
   a) Male
   b) Female
2. Your Age:
   a) <20
   b) 20–30
   c) 31–40
   d) 41–50
   e) >50
3. Marital Status:
   a) Single
   b) Married
4. How do you identify yourself?
   a) Black, not of Hispanic origin
   b) White, not of Hispanic origin
   c) American Indian or Alaskan native
   d) Asian or Pacific Islander
   e) Mexican American/Chicano
   f) Puerto Rican (Mainland)
   g) Puerto Rican (Commonwealth)
   h) Other Hispanic
5. Are you a veteran?
   a) Yes
   b) No
6. Are you currently obligated to any of the US Armed Forces (Army, Navy, Air Force, Marines) for any of your medical education expenses?
   a) Yes
   b) No
7. Please specify.
8. Are you currently serving in any US Military Reserved/Guard for any reason?
   a) Yes
   b) No
9. Please specify.
10. Are you aware of any program that will pay for your medical education in exchange for military service?
    a) Yes
    b) No
11. Please name it.
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. Please name it.
14. Are you aware of any program that will pay you a monthly stipend while in residency training in exchange for military service?
    a) Yes
    b) No
15. Please name it.
16. Which one of the following programs is most appealing to you?
    a) a program to repay part of my medical education loans ($7500 annually, up to a maximum of $50,000.)
    b) a program to pay me a monthly allowance ($865) while in residency training
    c) a program to pay me $10,000 annually as a board eligible physician in a reserve unit in 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 of 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 importnat, 4 = most important).
    a) reputation of residency training program
    b) financial prestige
    c) professional prestige
    d) physically challenging, adventurous activities
    e) travel opportunities
    f) performing a patriotic service for my country
    g) 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 the military
    d) 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
    b) Bachelor's
    c) Master's
    d) Doctoral
    e) Professional
    f) Other
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.
    a) No response
    b) Dermatology
    c) Emergency medicine
    d) Family Practice
    e) General Surgery
    f) Ob/Gyn
    g) Oncology
    h) Ophthalmology
    i) Orthopaedic Surgery
    j) Pediatrics
    k) Pediatric Surgery
    l) PM & R
    m) Psychiatry
    n) Radiology
    o) Rheumatology
    p) Undecided

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