

Supplemental Digital Appendix 1

Questionnaire E-Mailed to 797 Fourth-Year Medical Students Participating in the 2008 Military Match

Editor's note: The following represents only the exact text of the survey instrument; formatting was not able to be retained from the original SurveyMonkey questionnaire.

This questionnaire is being sent to all 4th year medical students with an Army, Navy, or Air Force obligation. It is completely voluntary and anonymous. Your participation in this survey will have no effect on your current residency selection. It will take approximately 15 minutes of your time to complete.

We are conducting this survey to learn more about why some students select primary care and others do not. As you may have read in the Journal of the American Medical Association in the Fall of 2008, this is a very important problem for the U.S. medical system. The military is no exception. Your participation in this survey is very important as it may help shape future policy.

If you have any questions, please feel free to contact any of the investigators below:

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We sincerely appreciate your time in completing this survey. Thank you!

Section 1:

- 1) Are you currently a 4th year medical student with a service obligation to the Army, Navy, or Air Force? [yes/no]
- 2) What residency was your first choice in the match? Please list your first choice even if you didn't get picked up for it. [drop down list—Family Medicine, Internal Medicine, Pediatrics, Emergency Medicine, General Surgery, Dermatology, Ophthalmology, Radiology, Anesthesia, Orthopedics, Psychiatry, Pathology, Neurology, Physical Medicine and Rehab, Urology, ENT, Neurosurgery, OB-GYN, other]
- 3) If your first residency choice in the military match was Internal Medicine, Family Medicine, or Pediatrics, which of the following applies to you?
 - I intend on practicing general medicine, family medicine, or pediatrics
 - I will definitely apply for fellowship training straight out of residency
 - I am unsure between being a generalist or subspecialist
- 4) What other specialties did you consider? Choose up to three. [Family Medicine, Internal Medicine, Pediatrics, Emergency Medicine, General Surgery, Dermatology,

Ophthalmology, Radiology, Anesthesia, Orthopedics, Psychiatry, Pathology, Neurology, Physical Medicine and Rehab, Urology, ENT, Neurosurgery, OB-GYN, no other specialties considered)

5) What was your top specialty choice when you entered medical school? [drop down list: Family Medicine, Internal Medicine, Pediatrics, Emergency Medicine, General Surgery, Dermatology, Ophthalmology, Radiology, Anesthesia, Orthopedics, Psychiatry, Pathology, Neurology, Physical Medicine and Rehab, Urology, ENT, Neurosurgery, OB-GYN, other, undecided]

6) At what point in medical school were you most interested in a primary care career? [drop down list: before medical school, during the basic science years, during the core clerkship year while NOT rotating on family medicine, internal medicine, or pediatrics, during the core clerkship year WHILE rotating on family medicine, internal medicine, or pediatrics, after the core clerkship year, always interested, never interested]

7) When did you decide on the specialty you applied for? [drop down list: before medical school, during the basic science years, during the core clerkship year while rotating on the specialty you chose, during the core clerkship year but not rotating on the specialty you chose, after the core clerkship year]

Instructions:

If you chose Internal Medicine, Family Medicine or Pediatrics as your first choice in the military match, then you are considered a primary care resident. If you chose anything else, you are considered a non-primary care resident.

Choice: I am a primary care resident [skip next section]

I am a non primary care resident [continue next section]

Section 2 (Non-primary care residents):

Which of the following factors would make it more likely for you apply for a primary care residency?

[all on a 9 point Likert scale, anchored by no effect as the far left choice, some effect in the middle, and large effect on the far right]

- 1) Guaranteed support staff, such as your own competent nurse and medical assistant
- 2) Minimum appointment length of 20 to 30 minutes
- 3) Guaranteed site stabilization for 4 years (no change of duty station for 4 years)
- 4) Maximum deployment length of 6 months
- 5) Dedicate research time or other protected time
- 6) Opportunity for outpatient only practice
- 7) Opportunity for advanced degrees, such as MBA, MPH, etc.
- 8) Opportunity for part time work with increased military obligation (for example working ½ days but doubling the time on active duty)

9) Opportunity for a flexible work, 40 hour work week (such as 4 days working 10-12 hours/day then 3 days off)

10) Robust social services to handle patient's social issues

11) Option for a practice that does not require obstetric care after residency (Family Medicine Only)

12) Have you had experience with AHLTA, the military's electronic medical record? [yes/no]

13) If yes, how does that effect your decision for a primary care residency?[9-point Likert, anchored by much less likely on the far left, no effect in the middle, and much more likely on the far right]

14) Assume the military has made a new policy, where only primary care residents will receive a bonus at the start of internship and at the end of residency. No other residents were to receive this bonus. How much of a monetary bonus (in thousands of dollars) would have it taken for you to have applied for primary care? For example, to answer "\$5,000" for the bonus just write "5". Enter "999" if no amount of money would have changed your mind. Please be reasonable and realistic. [text field]

15) Assume the military has made a new policy to boost the pay of primary care physicians. For what annual salary (in thousands of dollars), as an attending physician in internal medicine, pediatrics, and family medicine, would you have considered applying for a primary care residency? For example, to answer "\$125,000" for the salary just write "125". Enter "999" if no amount of money would have changed your mind. Please be reasonable and realistic. [text field]

16) Which of these hypothetical pay increases would have made it more likely to have applied for primary care? [drop down: the bonus at internship and end of residency, the increase in attending pay, a mix of both, neither of these interest me]

17) Let's say that everything about medical practice in the United States remains the same, except that all attending physicians are paid the same amount for every hour worked per week. Assume that the pace of work (patients seen per day) remains the same. How would that have effected your decision to apply for a primary care residency [9 point Likert, anchored with still would not have applied on the far left, possibly would have applied in the middle, and definitely would have applied on the far right]

18) Typically, attending physicians in the civilian sector are paid a higher salary than their military counterparts. To what extent has the pay of attending physicians in the civilian sector effected your decision not to apply for primary care residency in the military? (9 point Likert, anchored with no effect on the far left, some effect in the middle, large effect on the far right)

19) What is the most important reason you didn't apply for primary care? [text field]

20) What is the most important thing(s) that could be changed that would have changed your mind to apply for primary care (if nothing, please state so)? [text field]

21) If the most important thing you just listed were changed, how would this have effected your applying for primary care [9 point Likert, anchored by not at all on the far left, a little, somewhat in the middle, a great deal, and Definitely would have applied on the far right]

Skip to section 3.

Section 2 (primary care residents):

Which of the following would make it more likely for you to stay in primary care?
[all on a 9 point Likert scale, anchored by no effect as the far left choice, some effect in the middle, and large effect on the far right]

- 1) Guaranteed support staff, such as your own competent nurse and medical assistant
- 2) Minimum appointment length of 20 to 30 minutes
- 3) Guaranteed site stabilization for 4 years (no change of duty station for 4 years)
- 4) Maximum deployment length of 6 months
- 5) Dedicate research time or other protected time
- 6) Opportunity for outpatient only practice
- 7) Opportunity for advanced degrees, such as MBA, MPH, etc.
- 8) Opportunity for part time work with increased military obligation (for example working ½ days but doubling the time on active duty)
- 9) Opportunity for a flexible work, 40 hour work week (such as 4 days working 10-12 hours/day then 3 days off)
- 10) Robust social services to handle patient's social issues
- 11) Option for a practice that does not require obstetric care after residency (Family Medicine Only)

12) What do you believe should be the salary (in thousands of dollars) of the following primary care specialties when practicing as an attending physician in the military 2-3 years after residency training? If \$125,000, write "125". If money does not make a difference, then write "999".

Internal Medicine [text field]

General Pediatrics [text field]

Family Medicine [text field]

13) Let's say that everything about medical practice in the United States remains the same, except that all attending physicians are paid the same amount for every hour worked per week. Assume that the pace of work (patients seen per day) remains the same. How would that have effected your decision to apply for a primary care residency [9 point Likert, anchored with still would not have applied on the far left, possibly would have applied in the middle, and definitely would have applied on the far right]

14) Have you had experience with AHLTA, the military's electronic medical record?
[yes/no]

15) If you answered yes, [9-point Likert, anchored by made choosing primary care harder on the far left, no effect in the middle, and made choosing primary care easier on the far right]

End skip pattern. All respondents continue to section 3.

Section 3:

1) How many weeks of rotations have you completed in the following primary care specialties? Please add together weeks spent in both civilian and military facilities.

Family Medicine [text field]

Internal Medicine [text field]

Pediatrics [text field]

2. Please rate how much you liked the following rotations [9 point Likert scale, anchored by not at all on the far left, somewhat in the middle, and favorite rotation on the far right]

Family Medicine

Internal Medicine

Pediatrics

3. Please rate how your rotations on the following rotations affected your likelihood of going into that specialty [9 point Likert scale, anchored by much less likely on the far left, neutral in the middle, and much more likely on the far right]:

Family Medicine

Internal Medicine

Pediatrics

4. How happy were the resident you worked with on a day to day basis on Family Medicine, Internal Medicine, and Pediatrics? [9 point Likert scale, anchored by extremely unhappy on the far left, euthymic in the middle, and extremely happy on the far right]:

Family Medicine

Internal Medicine

Pediatrics

5. Did you have a mentor in the following specialty rotations [yes/no]

Family Medicine

Internal Medicine

Pediatrics

6. Did you identify with a role model in [yes/no]

Family Medicine
Internal Medicine
Pediatrics

7. Please rate how primary care physicians are respected at your medical school [9 point Likert scale, anchored by not at all on the far left, average in the middle, and most respected on the far right]

Family Medicine
Internal Medicine
Pediatrics

The next few questions ask about “bad mouthing”. An example of badmouthing would be a non-primary care residency saying “you shouldn’t go into internal medicine” or an attending saying “it’s impossible to learn everything in general pediatrics...pick something else”.

During your time as medical student.... [possible answers: never, once, 2-3 times, 4-5 times, 5-10 times, 11 or more]

8) I have heard “badmouthing” by non primary care residents about primary care

9) I have heard “badmouthing” by primary care residents about primary care

10) I have heard “badmouthing” by non primary care staff about primary care

11) I have heard “badmouthing” by primary care staff about primary care

During your time as a medical student, how often have heard “badmouthing” about any of these specialties [possible answers: never, once, 2-3 times, 4-5 times, 5-10 times, 11 or more]

- 13) Emergency Medicine
- 14) General Surgery
- 15) Dermatology
- 16) Ophthalmology
- 17) Radiology
- 18) Anesthesia
- 19) Orthopedics
- 20) Psychiatry
- 21) Pathology
- 22) Neurology
- 23) Physical Medicine and Rehab
- 24) Urology
- 25) ENT
- 26) Neurosurgery
- 27) OB-GYN

28) Regarding badmouthing of primary care: What effect did badmouthing have on choosing a primary care residency? [9 point Likert scale, anchored by no effect on the far left, some effect in the middle, and large effect on the right]

29) Regarding your final specialty choice: What effect, overall, did badmouthing have on your final specialty choice? [9 point Likert scale, anchored by no effect on the far left, some effect in the middle, and large effect on the right]

Section 4:

To what degree do you agree or disagree with the following statements?
[9 point Likert scale, anchored by strongly disagree on the far left, somewhat disagree, neither agree or disagree in the middle, somewhat agree, and strongly agree on the far right]

- 1) I value long term relationship with patients
- 2) I enjoy the challenge of taking care of patients with complex patients
- 3) I want to take care of the whole patient
- 4) Primary care physicians are an important part of the medical system.
- 5) I would rather know a lot about many problems than a lot about a few problems
- 6) I enjoy thinking about problem solving
- 7) I like a wide variety of medical problems
- 8) I want to have a job with predictable work hours
- 9) It is important that my job gives me time to pursue activities outside of work
- 10) I chose my specialty because it allowed more leisure time
- 11) I chose my specialty because it allowed me time to spend with my family
- 12) I prefer doing things (surgery, delivery babies, reading X-rays, biopsies, etc.) rather than talking to patients
- 13) I want to care for the elderly
- 14) I want to care for patients with chronic diseases
- 15) I find that treating depression and anxiety is rewarding
- 16) If a patient has unexplained symptoms after testing, I don't want to see them as a patient anymore
- 17) If a patient has a symptom that can't be cured, only controlled, I don't want to see them as a patient anymore.
- 18) I want a significant portion of my practice to be preventing disease.
- 19) I really only want to make a diagnosis or start a treatment plan. I'd rather someone else carry out the plan.
- 20) If I am seeing a patient who has a problem unrelated to the one I am treating, I want someone else to deal with it.
- 21) When someone says "that specialty has a good lifestyle", what does that mean to you? [text field]

Please rank the specialties' lifestyle, with "1" being the "worst" and "9" being the "best" [9 point Likert scale, anchored by "worst" on #1, "average" on #5, and "Best" on #9]

- 22) Family Medicine
- 23) Internal Medicine
- 24) Pediatrics
- 25) Emergency Medicine
- 26) General Surgery
- 27) Dermatology
- 28) Ophthalmology
- 29) Radiology
- 30) Anesthesia
- 31) Orthopedics
- 32) Psychiatry
- 33) Pathology
- 34) Neurology
- 35) Physical Medicine and Rehab
- 36) Urology
- 37) ENT
- 38) Neurosurgery
- 39) OB-GYN

Section 5:

1) What do you believe is the median civilian salary nationwide (in thousands of dollars) of the following specialties when practicing as an attending physician 2-3 years after residency training? For example, to answer "\$125,000" for a specialty, just write "125".

Internal Medicine [text field]

General Pediatrics [text field]

Family Medicine [text field]

The specialty you applied for, if not Internal Medicine, Pediatrics, or Family Medicine [text field]

Section 6:

1) What is your current age? [drop down 24 or less, individual ages 25-34, 35 or more, prefer not to answer]

2) What is your gender? [drop down male, female, prefer not to answer]

3) What is your marital status [drop down single, married, separated, divorced, prefer not to answer]

4) Do you have children [drop down yes, no, prefer not to answer]

5) What best describes your medical school [drop down USUHS, MD public, MD private, DO public, DO private, prefer not to answer]

6) How much educational debt (in thousands of dollars) will you have at the end of medical school? For example, if you will have “\$200,000” of debt just write “200”. [text field]

7) If you are married, how much educational debt (in thousands of dollars) does your spouse have? For example, if your spouse will have “\$200,000” of debt just write “200”. [text field]

Have you attended an interest group meeting in any of the following specialties [each with a yes/no choice]?

- 8) General Internal Medicine
- 9) General Pediatrics
- 10) Family Medicine
- 11) Emergency medicine
- 12) General Surgery
- 13) Dermatology
- 14) Ophthalmology
- 15) Radiology
- 16) Anesthesia
- 17) Orthopedics
- 18) Psychiatry
- 19) Pathology
- 20) Neurology
- 21) Physical Medicine and Rehabilitation
- 22) Urology
- 23) ENT
- 24) Neurosurgery
- 25) OB-GYN

If you attended an interest group in Internal Medicine, Family Medicine, or Pediatrics, how did this effect your applying for these residencies? [9 point Likert, anchored by made much less likely on the far left, no effect in the middle, made much more likely on the far right].

- 26) Internal Medicine
- 27) Family Medicine
- 28) Pediatrics

29) Regarding your overall impression of interest groups: What effect did attending any interest groups have on your choice of specialty? [9 point Likert, anchored by no effect on the far left, some effect in the middle, and large effect on the far right]

Supplemental digital content for DeZee KJ, Maurer D, Colt R, et al. Effect of financial remuneration on specialty choice of fourth-year U.S. medical students. Acad Med. 2011;86(2).

Thank you for taking the time to complete this survey. Your answers may help to shape military medicine policy regarding primary care.