

Who Chooses to be a Family Physician?

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KEYWORD:

Family Medicine
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Medical Specialty Choice

The US population is predicted to increase by 18% between 2005 and 2025. The over 65 population will increase by 73% during this same period.¹ These are contributors to the predicted shortage of primary care physicians in the United States. The American Academy of Family Practice (AAFP) has predicted a 51% shortage of 40,000 primary care physicians by 2020.² It is understood that family physicians are more likely to practice as generalists, and along with general internal medicine and pediatrics, provide 52% of all ambulatory visits in the United States. These visits include 80% of all hypertension visits and 69% of all diabetic and COPD visits.² Efforts to expand allopathic medical school size by 30% are well under way across the United States. In 2009, 7.5% of US medical school graduates were first year family medicine graduates, compared with 8.2% in 2008 and 8.3% in 2007.³ Osteopathic medical school numbers and class sizes are growing rapidly with a nine-fold increase in number of osteopathic students in the last 40 years and nine new osteopathic medical schools (including branch campuses) in the past five years.⁴ Attention must be paid to the types of physicians produced with this expansion. The factors that affect medical students' choices regarding specialty choice are varied and complex. Positive influences such as strong family medicine role modeling and aggressive recruitment for family medicine tend to help students select family medicine careers. Negative influences, such as educational debt and lifestyle, have also grown in importance to medical students.¹⁶ The Affordable Care Act has identified primary care physicians as the foundation for cost effective, efficient care for our nation. It is imperative that medical educators work to influence students' choices as well as promote public policy that would support such a choice.

This question has been evaluated extensively and accurate assessments can be made with regard to demographics, character traits and backgrounds of recent medical school graduates who chose family medicine as a specialty.^{3,5} The more difficult question is how do we influence specialty choice in our medical schools? As an osteopathic family medicine residency director, this question intrigues me. Are there proven methods that steer medical students to choose family medicine? Have our medical colleges studied schools that seem to repetitively graduate large numbers of family medicine residents? Are there novel programs to encourage this choice? Should we focus on retention of students interested in family medicine upon matriculation? The literature provides us with review of the problem at hand, a few fresh approaches to increasing the number of medical students who choose to pursue family medicine residencies, and accounts from several colleges who have witnessed the successes of such approaches.

Family medicine residency positions offered in 2010 numbered 2,630 through the National Residency Matching Program (NRMP) and 608 (in 2008) through the American

Osteopathic Association (AOA) Match.⁸ More graduates in the United States chose family medicine in 2010 than anytime since 2004. However, there continues to be an overall preference in subspecialty careers. Even with a small increase in the US seniors choosing family medicine, these rates are very low and still below the number of graduates needed to fill the anticipated shortage in 2020.⁹

Students who chose family medicine residencies in 2011 were more likely to be female than male, from rural areas, experienced with volunteer work in a third world country, and married.³ They also were more likely to have parents without postgraduate degrees when viewed against their classmates who choose other, non-primary care specialties.⁵

In a prospective Canadian study, the strongest predictor of family medicine as career choice was the students' stated interest in family medicine upon entrance into medical school.³ Students who switched career choice into family medicine after entrance into school were most likely to be students that had identified internal medicine or pediatrics as their initial interest. In contrast, students who changed from family medicine to other specialties were most likely to change to internal medicine for a residency choice. Although this study was completed in Canada, their findings had high predictive value in a health care system highly dependent on family medicine.

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In addition to demographics, there are also attitudinal characteristics that play a role in student's choice of family medicine. Strong predictors in favor of family medicine as a choice include varied scope of practice, medical lifestyle, and societal orientation. Students who tend to choose family medicine during their medical school experience are more often students who have identified these same attitudinal characteristics.³

It is wise to consider what factors drive students away from choosing family medicine as a specialty. A survey of third year medical students yielded telling answers to this question. Seventy-two percent answered that family medicine was the most "bashed" specialty by faculty and residents in other specialties.¹⁰ Negative remarks made to students who identify family medicine as their specialty interest are common occurrences. Many students also relate negative experiences on their family medicine clerkships as reasons that they are discouraged to choose family medicine.⁶ They cite unhappy, overtired preceptors and lack of academic rigor as contributors to negative perceptions of family medicine. Other students report concerns that family medicine is "too hard" in terms of scope of practice and the expectation of expertise across many fields in the current environment of evidence-based care.³

Some medical students also indicate medical school debt to future salary ratio as a strong factor influencing specialty selection.⁷ Data also points to the linear association of the higher paying specialties and high match rates. The average debt of a graduating medical student in the United States is now \$150,000.⁷ This potentially indicates that graduating medical students in 2033 would use 25% of their after tax income to repay loans for 25 years.⁷ Philips, et al. concluded in their cross sectional survey study in 2010 that medical students from middle income families tend to be the most sensitive to debt in their choices of specialty training programs. In their survey, they did not demonstrate a relationship between anticipated debt and career choices when they examined student responses as a whole. There have been several confounding factors suggested for this including considering the "safety net" of parental income experienced by students from wealthier families. It has also been suggested that students who would likely cite this as a reason for not choosing family medicine are not choosing to apply to medical school in the first place. This may include older students, students from economically depressed backgrounds and students from rural backgrounds. The perception of "insurmountable debt" may cause them to steer away from medicine altogether, therefore reducing the number of students who may have been more likely to choose family medicine in the first place.

Programs that facilitate choice of family medicine are often described by schools in a self reflective manner. Very few studies exist that have data to prove a program may or may not influence medical student choices. However, the reflective narratives from individuals who are involved with nationally ranked colleges who produce high numbers of family medicine physicians deserve review.

Michigan State University College of Osteopathic Medicine (MSUCOM) is one college of osteopathic medicine ranked nationally in US News and World Report as a top 10 school for primary care.⁶ West Virginia School of Osteopathic Medicine (WVSOM) also holds this designation. The success of family medicine as a specialty choice in students graduating from MUSCOM is reviewed in the Journal of the American Osteopathic Association (JAOA), 2008. Although the research focused on determining factors that motivated their preceptors to return to teaching osteopathic students each year, a common theme throughout the published research was the success of the Family Medicine Preceptorship Program. Community preceptors apply for the program and are rigorously trained and evaluated by faculty and students to determine their effectiveness as an "early clinical experience" for the medical students. The program is continuously updated and improved in response to student evaluations and needs. The goal is to foster collegiality, provide mentoring, and to allow for early clinical training. A small number of surveyed volunteer preceptors in this program cite that their reason for participating is to influence student's career choices.⁶ Many physicians self report that they believe they play an important role in medical student's choice of family medicine but a formal study has not been carried out at this time. The authors of this particular paper echoed the conclusions of a similar project carried out by University North Texas Health Science Center/ Texas College of Osteopathic Medicine (UNTHSC/TCOM). They report "the specialties pursued by osteopathic medical students may be the result of experiences gained during their participation in the (Family Medicine Preceptorship) program."^{6,11} This college of osteopathic medicine is also a US News and World Report designee as "Top 50 Primary Care Schools." One would have difficulty denying the association between their "success" and the strong family medicine experience afforded to their second year students.

A similar self-reflective narrative provided by the late dean of West Virginia School of Osteopathic Medicine (WVSOM), James Stookey, D.O., reports the school's success in family medicine is due to several factors.¹² Recent statistics show 54% of WVSOM's graduates have entered family medicine. This college of osteopathic medicine also named in US News and World Report's Primary Care top rankings. The school is well known for its orientation toward primary care, its

admissions policies that favor students motivated toward rural primary care, and the strong influence of family practice mentors within the curriculum. At the time of this particular article, WVSOM's policy was to start all third year students on a family medicine clerkship for 6 weeks with an osteopathic family physician. This required committed community faculty to accommodate students each year. The hope each year was that positive early experiences in family medicine will help future decisions toward family medicine. This first experience, followed by three additional months of family medicine during the 3rd and 4th years, helped reinforce the positive experience of family medicine and its importance to the schools mission. Students tend to return to early experiences that are experienced well. The school also promotes family medicine by having family medicine physicians provide leadership for committees such as curriculum and admissions committees and having family physicians teach in the first and second year curriculum; not only are they intimately involved in physical diagnosis, but also in basic science courses.¹²

One allopathic school has described a strategy to encourage family medicine in their student population.¹⁵ Boston University School of Medicine describes a program called FaMeS (Family Medicine Student Track). The school had a strong bias toward subspecialty training and even lacked a department of family medicine until 1997. The family medicine department developed a program to foster interest for 1st year medical students to improve the number of students matching into family medicine. They offer extracurricular events, classroom teaching, and a summer grant program to help encourage and maintain interest. One highlight of their program was a stipend offered to students who applied for a summer externship with a family physician. Students applied for a limited number of externships between 1st and 2nd year that provided positive family medicine experiences with approved mentors. This was combined with panel discussions during the academic year where students learned about career options in family medicine. Support was offered for the FaMeS students during the Match process as well. Services to review personal statements and to discuss specific residency programs were offered to students. This family medicine interest track showed preliminary success during the study period with doubling of students who chose family medicine residencies. It is true that during this time the total number of US students choosing family medicine nationally did begin to slowly increase. However, the program appeared to be very successful locally and has been continued. The writers were pleased with the overall numbers of students who were choosing family medicine with the onset of the FaMeS program. They also acknowledged that they simply may have

been identifying students who were already interested in family medicine and simply preventing attrition. However, the end result was increased numbers of students matching into family medicine.¹⁵

There has been extensive support by the AAFP in area of encouraging family medicine at the medical school level. They have established the Comprehensive Student Interest Initiative which was designed to implement activities to encourage awareness of family medicine on medical school campuses. The initiative includes encouraging students to become members of AAFP and supporting family medicine interest groups on campuses. It helps fund and encourage family medicine sponsored events and projects on campuses. Both the AAFP and ACOFP encourage collaborative efforts by medical schools, family medicine interest groups, and residency directors to expose students to positive role models in family medicine.

In July 1995, Bland, Meurer, and Maldonado performed a meta-analysis of literature pertaining to primary care as a specialty choice for medical students.⁵ They reviewed six years of literature and made recommendations to medical schools with regard to factors that could actually be manipulated in their favor to improve chances of medical students choosing family medicine. Each recommendation was supported by data summarized from the 73 journal articles and 2 monographs. Most were cross sectional surveys, with fewer studies being cohort or case controlled designs. Experimental designs were rare.

The following list is a summary of their recommendations which were supported with data.⁵

1. Ensure medical schools have active, credible departments of family medicine.
2. Begin a systematic approach to changing schools' culture to value primary care.
3. Use admissions policies that favor students motivated towards primary care and having admissions committee members who attempt to choose students who match into family medicine.
4. Use recruitment techniques that attract students who will choose family medicine.
5. Require longitudinal primary care experiences.
6. Mandate third year family medicine clerkships.
7. Consider offering courses on the health care needs of society.
8. Offer career counseling programs.
9. Petitioning federal and state government for funding to promote research and training in primary care.

CONCLUSIONS:

Increasing family medicine graduates in order to meet the health care needs of our nation is a goal of our medical colleges. Change must be embraced at the medical school level. The change should begin as early as recruitment efforts for application and continue throughout the four year medical school experience. Setting goals for numbers of students choosing family medicine may be the first goal for many colleges. This should be represented in mission statements that reflect this priority. Involving family physicians in all areas of the academic experience during the first two years and then ensuring positive, challenging experiences with family physicians who model desirable practice styles in the community is imperative. Early identification of students interested in family medicine and efforts to foster this interest must become priority. Administration must encourage innovative programs on campuses and seek to support these programs with funding and time. Positive mentoring and modeling is foundational. Post match surveys need to be developed and analyzed to determine current factors influencing students' choices. This research needs to be a large scale collaborative effort by both allopathic and osteopathic educators to gather data that will support changes in public policy and funding of medical education and reimbursement in primary care. The shift will not happen overnight, but it is imperative that we recognize the important role that well trained, energetic, competent family physicians will play in healthcare in the upcoming years.

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