

# A Focus on Primary Care: Effective Strategies for Recruiting Students

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## INTRODUCTION

Rhode Island, much as the United States as a whole, is facing a shortage of primary care physicians. In the recent public debate about health care reform and in several aspects of the Affordable Care Act, there is a considerable and justified focus on the role of primary care in improving health and reducing healthcare costs. The availability of primary care physicians is associated with fewer preventable hospitalizations, fewer hospital readmissions, reduced health disparities, reduced mortality and lower costs.<sup>1,2,3</sup> Even in areas of the country densely populated with physicians, there frequently exists a maldistribution of primary care providers. When it instituted its own version of healthcare reform in 2006 and large numbers of citizens newly enrolled in insurance plans, Massachusetts found itself dramatically short on primary care physicians. Within Rhode Island, there are ten Primary Care Health Provider Shortage Areas. These include all of Providence and Pawtucket, where the academic departments of the **Warren Alpert Medical School of Brown University (AMS)** are located.

Despite the clear evidence in favor of its importance, the number of US medical school graduates who enter primary care residencies dropped steadily between 1997 and 2008.<sup>4</sup> Policy makers most commonly cite the smaller salaries of primary care physicians relative to procedural specialties, in particular. In light of the increasing level of educational debt accumulated by medical students, this is often cited as an explanation for this trend. However, it is likely that there are other factors as well. These may include a lack of quality exposure of some medical students to primary care physicians during their training, a perceived lack of prestige of the primary care disciplines, and the focus of medical schools on prominent external rankings (such as the prestigious *US News and World Report* research medical school rankings) that do not take primary care into account in their algorithms.

Among the several roles that medical schools have, none is more vital than training the next generation of physicians and guiding those future physicians in choosing their specialties. Given the recent national focus on reforming the healthcare system, there are calls for medical schools to consider the importance of their social mission in making curricular and other decisions.<sup>5</sup> A recent and somewhat controversial publication developed a social mission score for medical schools based on the number of graduates working in primary care, working in **Health Professional Shortage Areas (HPSAs)**, and the number of underrepresented minority graduates.<sup>6</sup> At the top of the resulting rank list were the historically black universities (which score highly on all three metrics) and state universities, which graduate a higher proportion of primary care physicians and those who work in underserved areas. Private medical schools, medical schools in the Northeast, and those with greater NIH funding scored lower. Such a ranking system prompts consideration of the factors that influence students' choices regarding primary care and care of the underserved, and whether medical schools such as AMS can influence these choices.

## Factors that impact medical students' decisions to work in primary care and underserved communities

Research on students' choice of a primary care specialty has investigated a range of factors, including student demographics, financial concerns, personal beliefs, clinical training, and prior experience. This body of literature demonstrates that students who chose careers in primary care are more likely to be female, older, from non-physician families, interested in caring for the underserved, and possessing a stated interest in primary care specialties at matriculation.<sup>7,8,9,10</sup> School factors that influence primary care specialty choice include having a required family medicine clerkship and a longitudinal experience in

primary care. As mentioned above, state schools, some of which have a stated mission to do so, graduate more primary care physicians. This phenomenon may in part be due to the decreased debt burden of graduates. National and state programs designed to decrease debt burden, such as the National Health Service Corps and state loan repayment programs, have been shown to be effective and can be promoted by medical schools. More recently, some medical schools have produced tracks and scholarships that provide support and mentored primary care experiences in exchange for a commitment to work in primary care in the state. In a novel partnership, the North Carolina Academy of Family Physicians has joined forces with all four medical schools in the state and with Blue Cross/Blue Shield of North Carolina to produce a three-year track and scholarship that medical students apply for at the end of the first year of medical school. Students in the track are assigned a family physician mentor, funded to attend three family medicine conferences per year, and are awarded a \$10,000 scholarship in exchange for a commitment to complete a family medicine residency in the state.<sup>11</sup>

Research indicates that medical schools and policy makers can influence students' decisions to work in underserved communities as well. Training in a program with Title VII funding (funding from the **Health Research and Services Administration [HRSA]** devoted to primary care education) is associated with working in a **community health center (CHC)**.<sup>12</sup> Medical school tracks located in urban and rural settings tend to increase the number of graduates working in those communities.<sup>13,14</sup> In response to the primary care physician shortage and published literature, the Josiah Macy, Jr. Foundation recently recommended medical schools take several steps, including the following: implementation of primary care tracks; creation of longitudinal experiences in community primary care settings; promotion of early primary care

exposure for students; changes in the the admission process.<sup>15</sup>

While AMS does not produce as many primary care physicians as many state schools, it has led the Ivy League medical schools. Also, AMS consistently has a high rate of graduates who go on to work in underserved communities, regardless of specialties. In the past several years, a series of coordinated activities at AMS have aimed to further increase interest in primary care and, consequently, in care for underserved populations.

### **RECENT DEVELOPMENTS AT ALPERT MEDICAL SCHOOL DESIGNED TO INCREASE INTEREST IN PRIMARY CARE**

In its required curriculum, AMS supports primary care in several ways. The two-year Doctoring course provides many pre-clerkship students with longitudinal experiences in primary care settings. In the third year core clinical clerkships, all AMS students spend two weeks with a general pediatrician, four weeks with a general internist, and six weeks with a family physician. This experience provides for a comprehensive exposure to ambulatory primary care. In addition, there are numerous elective activities and programs designed to enhance the primary care experiences of AMS students. Of these, we will describe in detail three: the nationally award winning **Family Medicine Interest Group (FMIG)**, a recent Title VII HRSA Predoctoral Training in Primary Care grant, and a new Rhode Island Foundation Grant to support primary care education.

#### **The Family Medicine Interest Group**

One means of providing an early introduction of medical students to primary care is through student-led initiatives. The AMS FMIG is the leader amongst AMS medical student-run groups in increasing student awareness of primary care. In addition to exposing students to the diverse activities led by family physicians, the FMIG aims to “raise awareness among medical students about key issues related to primary health care at the local, national, and global levels.” To achieve these objectives, the student leaders and faculty sponsors of the AMS FMIG developed a three-pronged strategy:

- Organize events within the medical school community
- Promote student activity within the community
- Connect faculty and students interested in family medicine.

The Brown FMIG has organized an average of seven events per semester over the past three years, including lunchtime talks, panel discussions, and workshops. Talks have ranged in content from primary care in the global arena to lead poisoning in Rhode Island to debt relief for primary care physicians. Skills workshops have included phlebotomy, splinting and casting, and IUD insertion. Open to all medical students, some of these events are co-sponsored with other student groups; and attendance ranges from 15 to 50, depending on the event. Such activities not only broach important topics within primary care, but they also enable students to network with primary care physicians and advocates from around the state.

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The Brown FMIG has also become active within the Rhode Island community. Since January 2009, its members have worked with two primary care faculty members to develop the skills of **community health supporters (CHS)** who come from and work within Providence refugee communities. This work, located at the Refugee Resettlement Program at the International Institute in Providence, recently led to a \$1,000 grant to carry out two communication training sessions with the CHS and to organize subsequent community educational sessions based on topics chosen by the CHS that are of special importance to their communities.

In the fall of 2009, the FMIG began a listserv that currently has more than 125 recipients, including students from all four years of medical school and medical school faculty. In this way, students and

faculty alike are able to share information about events and opportunities both within Rhode Island and elsewhere. The listserv is a powerful way of promoting a community of students and faculty with an interest in primary care. In 2010, the national American Academy of Family Physicians presented its annual Program of Excellence Awards to Family Medicine Interest Groups for their outstanding activities in generating interest in family medicine. The FMIG at AMS was one of ten programs selected for this national honor.

#### **Title VII HRSA Predoctoral Training Grant in Primary Care**

The overall purpose of this \$1.42 million dollar, five-year, federally-funded project is to train medical students at AMS to provide outstanding primary care for underserved populations. The project has two overarching goals: to increase the number of graduating medical students who intend to practice primary care in underserved communities, and to prepare 100% of AMS graduates to care for underserved patients regardless of their specialty choice.

The first goal, which focuses on professional development, will take place on the university campus. It spans eight years of training from the freshman year of college through the fourth year of medical school. The project team is in the process of engaging and longitudinally mentoring students interested in caring for the underserved by creating a new Scholarly Concentration at AMS called “Caring for Underserved Populations.” This new three-year concentration will include a one-year didactic curriculum, a summer experience in a CHC, a focused clinical experience in a CHC during the Family Medicine Clerkship, and an independent mentor-supervised scholarly project in a cross-disciplinary field. It is hoped that these students will complete their scholarly projects at the CHCs where they previously trained, thereby employing the energy and initiative of AMS students to help Rhode Island’s underserved communities.

In addition to developing this innovative Scholarly Concentration, the team will also recruit *pre-medical* students with an interest in practicing in underserved communities. This will be

accomplished by establishing an eight-year, coordinated primary care pipeline at Brown University in partnership with the undergraduate-graduate **Program in Liberal Medical Education (PLME)**, the medical school's Admissions Committee, and the on-campus Rhode Island Area Health Education Center.

The second goal, which focuses on curriculum development, will take place at the Department of Family Medicine at Memorial Hospital of Rhode Island. The clerkship team aims to improve the content knowledge and clinical skills of all AMS graduates in the care of underserved patients by enhancing the six-week required Family Medicine Clerkship. The clerkship faculty recently developed and implemented a six-week virtual family curriculum that focuses on knowledge and skills required for caring for vulnerable and underserved patients. Topics include health literacy, cross-cultural communication, inter-partner violence, addressing adherence to therapy, and teen pregnancy. In addition to the new didactic experiences, the team has commenced the systematic recruitment of family medicine clinical training sites at community health centers. It is hoped that by developing a network of CHC clinical training sites, AMS will increase the number of graduating students who have had high-quality experiences working in CHCs, an exposure associated with later work in underserved communities.<sup>14</sup> Medical students' understanding of the social and community context of health will also be enhanced by linking an existing Family Medicine Clerkship project to AMS's six-week Community Health Clerkship in the fourth year of medical school. The project team plans to then systematically evaluate the impact of these diverse programs on students' knowledge, skills and attitudes in the care of the underserved, the number of students choosing primary care careers, and the number of students who go on to work in underserved settings, regardless of their specialty choice.

#### **A Grant from the Rhode Island Foundation**

Among the multiple challenges to providing students with quality, high-impact experiences in primary care settings is the many competing demands faced by primary care clinicians. They are frequently under pressure to see more

patients, and have not historically been directly supported for their teaching efforts. Such an environment understandably makes it difficult for primary care physicians to add clinical teaching to their list of responsibilities. Aiming to address the challenge head-on and, ultimately, to increase the number of primary care physicians in the state, the Rhode Island Foundation has partnered with AMS and Lifespan to support primary care physicians for teaching third- and fourth-year AMS students. The almost \$100,000, year-long grant (with the potential of funding during subsequent years) provides a stipend to all community-based primary care physicians who host students during their pediatric, internal medicine, and family medicine clerkships. After an initial pilot year at a lower funding level in 2011, it is anticipated that the stipends will increase in the summer of 2012 to their expected long-term level. To satisfy a requirement for the funding, AMS has committed to continuing the stipends after the Foundation funding ends. The medical school administration sees this as a sustainable and long-term investment in Rhode Island's primary care infrastructure. In addition to the stipends, the project will support professional development and continuing medical education sessions for primary care physicians at the new medical school building. While the stipends do not, and are not intended to, fully reimburse physicians for their teaching time, they do represent a substantive commitment from the school to support primary care education and enhance the primary care experiences of all AMS students.

#### **CONCLUSION**

The changing demographics of the United States and Rhode Island have exacerbated the existing shortage of primary care physicians, particularly in communities serving economically disadvantaged and ethnically diverse populations. As the various features of the Affordable Care Act roll out and the number of citizens with health coverage increase, the shortage is only expected to worsen. The addition of primary care physicians to any health system is strongly associated with improved measures of health and reduction of health disparities. AMS is taking deliberate steps to provide students

with positive experiences in primary care, particularly in underserved settings, and to provide early and frequent exposure to primary care mentors. One possible avenue to boost the number of AMS graduates entering primary care careers, particularly in Rhode Island, the school may consider starting a primary care track and scholarship. This could be done with support from the state and/or a partnership of local insurance companies. Such tracks have been effective in other settings and could enhance the already rich array of programs available.

#### **REFERENCES**

1. Chetty VK, Culpepper L, Phillips RL Jr, Rankin J, Xierali I, Finnegan S, Jack B. FPs lower hospital readmission rates and costs. *Am Fam Physician*. 2011;83(9):1054.
2. Macinko J, Starfield B, Shi L. Quantifying the health benefits of primary care physician supply in the United States. *Int J Health Serv*. 2007;37(1):111-26.
3. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q*. 2005;83:475-502.
4. Jeffe DB, Shelan AJ, Andriole DA. Primary care specialty choices of United States medical graduates, 1997-2006. *Acad Med*. 2010;85:947-58.
5. Woollard RE. Caring for a common future: Medical schools' social accountability. *Med Educ*. 2006;40:301-13.
6. Mullan F, Chen C, Petterson S, Kolsky G, Spagnola BA. The social mission of medical education: Ranking the schools. *Ann Intern Med*. 2010;152:904-11.
7. Pland Cj, Meurer LN, Maldonado G. Determinant of primary care specialty choice: a non-statistical meta-analysis of the literature. *Acad Med*. 1995;70(7):620-41.
8. Lawson SR, Hoban JD. Predicting career decisions in primary care: a theoretical analysis. *J Cont Ed Health Prof*. 2003;23:68-80.
9. Bazargan M, Lindstrom RW, Dakak A, Ani C, Wolf KE, Edelstein RA. Impact of desire to work in underserved communities on selection of specialty among fourth-year medical students. *J Natl Med Assoc*. 2006;98(9):1460-65.
10. Senf JH, Campos-Outcalt D, Watkins AJ, Bastacky S, Killian C. A systematic analysis of how medical school characteristics relate to graduates' choices of primary care specialties. *Acad Med*. 1997 Jun;72(6):524-33.
11. URL: <http://www.bcbsncfoundation.org/about/news/2010-6-2/innovative-program-tackles-shortage-in-primary-care/>. Accessed 6/9/2011.
12. Rittenhouse DR, Fryer GE Jr., Phillips RL Jr., Miyoshi T, Nielsen C. Goodman DC, Grumbach K. Impact of Title VII training programs on community health center staffing and National Health Service Corps participation. *Ann Fam Med*. 2008;6(5):397-405.
13. Rabinowitz HK, Diamond JJ, Markham FW, Hazelwood CE. A program to increase the number of family physicians in rural and underserved areas: Impact after 22 years. *JAMA*. 1999;281(3):255-60.

14. Ko M, Edelstein RA, Heslin KC, Rajagopalan S, Wilkerson L, Colburn L, Grumbach K. Impact of the University of California, Los Angeles/Charles R. Drew University Medical Education Program on medical students' intentions to practice in underserved areas. *Acad Med.* 2005;80(9):803-8.
15. Josiah Macy Jr. Foundation. Co-Chairs' Summary of the Conference on Who Will Provide Primary Care and How Will They Be Trained? January 2010. Available at: <http://macyfoundation.org/>. Accessed March 2010.

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#### **Disclosure of Financial Interest**

The authors and/or their spouses/significant others have no financial interests to disclose.

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