ORIGINAL ARTICLE



Setting the Target: Comparing Family Medicine Among US Allopathic Target Schools

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ABSTRACT

Background and Objectives: Despite the persistent primary care physician shortage over 2 decades of allopathic medical school expansion, some medical schools are absent a department of family medicine; these schools are designated as "target" schools. These absences are important because evidence has demonstrated the association between structured exposure to family medicine during medical school and the proportion of students who ultimately select a career in family medicine. In this study, we aimed to address part of this gap by defining and characterizing the current landscape of US allopathic target schools.

Methods: We identified allopathic target schools by reviewing all Liaison Committee of Medical Education (LCME) accredited institutions for the presence of a family medicine department. To compare these schools in terms of family medicine representation and outcomes, we curated descriptive data from publicly available websites, previously published family medicine match results, and school rankings for primary care.

Results: We identified 12 target schools (8.7% of all US allopathic accredited medical schools) with considerable heterogeneity in opportunities for family medicine engagement, leadership, and training. Target schools with greater family medicine representation had increased outcomes for family medicine workforce and primary care opportunities.

Conclusion: With growing primary care workforce gaps, target schools have a responsibility to enhance family medicine presence and representation at their institutions. We provide recommendations at the institutional, specialty, and national level to increase family medicine representation at target schools, with the goal that all schools eventually establish a department of family medicine.

INTRODUCTION

Ample evidence has associated health care systems that have strong primary care bases with increased access to care, higher quality of care, longer life expectancy, increased equity, and lower costs. ^{1–3} Some of the characteristics of primary care thought to explain these effects include its focuses on coordinating care, integrating acute and chronic illnesses, addressing mental and behavioral health, maintaining preventive health, and frequently being the first point of contact for patients within the health care system. Family medicine is the second largest, most widely distributed, and broadly scoped medical discipline in the United States and is widely considered a cornerstone specialty of primary care. ^{4,5} At nearly 40%, family medicine is the largest contributor to the total primary care workforce. ³ Research has estimated that more than 90% of

residency-trained family physicians continue to practice in primary care. ⁶ Family physicians play a critical role in the primary care physician workforce by practicing in underserved communities (both urban and rural) more commonly than other primary care specialties. ⁷

While the demand for primary care is high, the US primary care physician workforce is declining. Medical schools are not producing enough primary care doctors, and the US Health Resources & Services Administration has predicted a shortage of 35,260 full-time primary care physicians by 2035. In 2023, the family medicine fill rate (ie, the percentage of residency positions filled out of positions available) in the National Resident Matching Program (NRMP) Main Residency Match was 88.7%, the lowest since 2007. Moreover, the 2023 fill rate of allopathic MD students who matched family medicine

positions was the historic lowest (29.4%), 9 even though allopathic schools have grown significantly with the total number of MD students increasing by 35% since 2002. 10 These findings raise concern for medical school social accountability: As schools are expanding, they should train future physicians toward the specialties of greatest need for our population and communities, specifically primary care specialties. 11

Some medical schools in the United States lack a family medicine department. These medical schools have been labeled by some as family medicine "orphan" or "target" schools, indicating their lack of a parental home for the discipline and designating them as future targets for development of a family medicine department.¹² Such an absence can have consequences. Documented challenges of students interested in family medicine at target schools include limited exposure to the specialty and lack of faculty mentorship. 13-16 Without these, misconceptions toward family medicine often are perpetuated through the hidden curriculum—where implicit biases and informal messaging in academic experiences can deride primary care specialties. 17 A department of family medicine can help institutions be more responsive to student interest in family medicine and can provide an academic and clinical environment that meets their needs. The presence of a department has been associated with meaningful institutional influence, which in turn has been associated with student specialty choice. 18 Therefore, further understanding of the impact of not having a family medicine department at every medical education institution is essential.

In this study, we built upon prior efforts to support family medicine at target schools, including work by the American Academy of Family Physicians' (AAFP's) Family Medicine Interest Group Network (FMIG) and Workforce Development and Student Initiatives, which have noted the absence of an updated assessment of target schools across the United States since 2015. 19 Our team identified and further characterized US allopathic target schools by comparing the presence of family medicine curriculum, extracurricular activities, faculty representation, student specialty choice outcomes, and specialty exposure. We also proposed several solutions to advance family medicine across these academic institutions.

METHODS

We constructed our study cohort from all medical schools with full Liaison Committee of Medical Education (LCME) accreditation as of August 31, 2022 (N=144), according to publicly available data. ²⁰ We narrowed our focus to allopathic medical schools, having determined that all previously identified target schools are allopathic, not osteopathic, medical institutions. We excluded four schools that did not organize academic departments by clinical specialty and two that had a first graduating class in or after 2020. The remaining 138 schools were screened for the absence of a family medicine department, and 12 allopathic target schools were identified. To compare these schools, we collected and curated descriptive data from September 2022 to April 2023 using institutional websites and AAFP state chapter websites and publications.

To capture student interest and engagement across time, we categorized student interest activities or any family medicine-focused events hosted by students in the last 10 years as Family Medicine Interest Group chapters. We found these events through (a) institutional websites, (b) online event advertisements, (c) social media posts (search terms FMIG, family medicine, FM with school name in Facebook, Instagram, and X (formerly Twitter), and (d) AAFP state chapter websites and publications. To account for target school social accountability and primary care contribution, we reported the outputs of targets schools through previously published family medicine match results by the AAFP and recent *US News & World Report (US News*) medical school rankings for primary care and percentage of graduates practicing primary care. ^{18,21,22}

RESULTS

Through our study methodology, we found 12 allopathic target schools, which we characterized according to family medicine exposure and primary care outcomes (Table 1). More than half of these schools had a division or section of another specialty department labeled family medicine. One-quarter of the schools had an affiliated family medicine residency program. Only two schools had formal family medicine clerkships integrated into the curriculum; however, every school offered at least one family medicine elective in their course catalog. We found student interest activities at all target schools. One-quarter of the target schools had a family medicine faculty member within a senior administrator role—defined as appointment of dean, associate dean, or assistant dean.²³ Among the target schools assessed by our criteria, we found that Florida International University Herbert Wertheim College of Medicine and Stanford University School of Medicine had every aspect of family medicine represented and were the two greatest contributors to graduates entering family medicine residencies (Table 1). While target schools varied in overall US News primary care rankings, five target schools were ranked among the bottom 10 producers of graduates who practiced primary care. 21

DISCUSSION

Target schools constituted 8.7% of all US allopathic accredited medical schools yet had considerable heterogeneity in opportunities for family medicine engagement, leadership, and training. On average, only 2.5% of the graduating class at target schools entered family medicine residency programs between 2011 and 2017. This percentage is substantially lower than nontarget allopathic schools, where 9.23% of the graduating class matriculated into family medicine. ¹⁸ However, target schools with more family medicine opportunities (Florida International University and Stanford University) had a higher proportion of students graduating into family medicine. These findings are in accordance with several studies that have shown the importance of specialty exposure and institutional stature of family medicine for student specialty choice. ^{18,23,24}

Medical schools must be held responsible for upholding the social mission of medical education. The social mission

TABLE 1. Comparison of US Allopathic Target Schools by Family Medicine Representation and Outcomes

Medical school	Family medici	ne representati	on				Outcomes	Outcomes		
	Division or section	Student interest activities	Residency affiliation	Clerkship	Elective	Faculty in senior admin	% of graduates entering FM resi- dencies, 2011- 2017	US News ranking: primary care ^b	US News ranking: graduates practicing primary care ^b	
Columbia University Vagelos College of Physicians and Surgeons	Yes	Yes	Yes	No	Yes	No	2.60	75	157	
Joan & Sanford I. Weill Medical College of Cornell University	Yes	Yes	No	No	Yes	No	2.50	45	138	
Charles E. Schmidt College of Medicine, Florida Atlantic University	Yes	Yes	No	No	Yes	Yes	2.80	94-124	104	
Florida International University Herbert Wertheim College of Medicine	Yes	Yes	Yes	Yes	Yes	Yes	6.60	94-124	110	
The George Washington University School of Medicine & Health Sciences	Yes	Yes	No	No	Yes	Yes	4.30	78	140	
Harvard Medical School	Yes	Yes	No	No	Yes	No	3.00	9	145	
The Johns Hopkins University School of Medicine	No	Yes	No	No	Yes	No	1.40	52	155	
New York University Grossman School of Medicine	No	Yes	No	No	Yes	No	0.50	48	153	
Stanford University School of Medicine	Yes	Yes	Yes	Yes	Yes	Yes	5.10	30	133	
Vanderbilt University School of Medicine	No	Yes	No	No	Yes	No	1.50	43	149	
Washington University School of Medicine (St Louis)	No	Yes	No	No	Yes	No	1.80	56	155	
Yale School of Medicine	No	Yes	No	No	Yes	No	1.50	68	159	

^a Data adapted from Phillips, Wendling, Bentley, Marsee, and Morley¹⁸

is defined as the role medical schools have in educating physicians to care for the national population by enhancing health equity and addressing the health disparities of society. 11,25 Evaluation of medical school commitment to the social mission has relied heavily on primary care outcomes. 25,26 Target schools, lacking family medicine representation, do not contribute as fully to primary care workforce gaps and miss opportunities to invest in the social mission. To increase transparency in primary care rankings, *US News* recently modified its ranking criteria to integrate social mission metrics. 27,28 While reputation still largely drives overall primary care ranking,

graduate outcomes reflect considerable differences. ²⁸ In 2023, 161 institutions were ranked by *US News*. ²⁷ Target schools were only 7.5% of all ranked institutions but comprised 50% of the 10 lowest ranked schools.

Despite clear institutional barriers, interest in family medicine remains at target schools, and every institution in our study had evidence of student engagement activities. Many accounts have been published about student and faculty resilience and institutional growth toward family medicine at target schools. 15,16,29,30 For family medicine to continue to grow in these schools, we propose a series of recommendations

^bRetrieved from US News & World Report

(summarized in Table 2) that address the findings in this study. The recommendations lay the framework for creating departments of family medicine at target schools. For effective change, this work cannot be done solely by individuals or leaders within target schools but also must engage family medicine advocates, the greater public, medical education accreditation bodies, and national policy. We organized our recommendations by institution, specialty, and national level (Table 2). With ongoing primary care workforce gaps, target schools have a responsibility to enhance family medicine presence at their institutions.

At target schools, opportunities should exist for increasing the required family medicine exposure during undergraduate and graduate medical education. While the LCME requires a primary care experience during the clerkship years, family medicine is not explicitly mandated. 31 Only two of 12 target schools required a family medicine clerkship experience in the clinical curriculum. Primary care clerkship directors should consider the institution's target school status and any gaps in family medicine education. The recruitment and curricular integration of high-quality family physician clinical preceptors is vital because clerkship experiences often seed specialty choice for medical students.²³ In addition, the United States has more than 700 family medicine residency programs.9 Exposure to a family medicine residency and collaboration between undergraduate and graduate medical education can increase medical student engagement and mentorship in family medicine along the pipeline. 14,32 Stanford, Columbia, and Florida International University are the only target schools identified within this study that potentially connect medical students with affiliated family medicine residencies. While exposure can help with specialty choice, target school students interested in family medicine should have appropriate academic advising from leadership that is knowledgeable of family medicine training and career pathways. With only onethird of target schools having family medicine physicians as deans or senior leaders, support for family medicine likely suffers. Representation of family medicine faculty in senior positions must exist to foster a positive learning environment for primary care and increase the visibility and possibility of a family medicine career.

Growing family medicine outputs from target schools is demonstrably difficult. The absence of a family medicine department may inhibit academic funding or institutional support, and external sources are vital for strengthening family medicine initiatives. National professional institutions, including AAFP, Society of Teachers of Family Medicine, and American Board of Family Medicine, work to strengthen and advance family medicine. We applaud current efforts to recognize target school students through scholarship opportunities from these organizing bodies. Additional initiatives from these organizations can include mentorship of target school faculty, scholarly activity support, and increased awareness of target schools during the residency recruitment process (Table 2). Furthermore, advocacy for family medicine at target

schools will need greater national support for primary care. High-value primary care is a common good.³⁴ As more public policies align with primary care values and federal investment increases, target school administrators also will value primary care, thereby family medicine as well

Limitations to this study include its reliance on publicly available information. Few mechanisms were available to validate published online data on individual medical schools or access internal research and individual program data. In addition, osteopathic medical schools (DO) were not included in this study. Previous research has suggested that family medicine departmental presence has no relationship to student specialty choice among DO schools. 18 DO schools traditionally have stronger primary care presence and primary care educational support compared to allopathic medical schools (MD).35 In recent years, DO graduates have continued to represent a substantial contribution to the US family medicine workforce and, in 2023, more DO seniors matched to family medicine than MD seniors—the first time for any medical specialty in history. 9 These differences in academic culture likely contribute to differences in graduate outcomes. Consequently, the exclusion of these academic institutions may alter the true representation of all US target medical schools.

CONCLUSIONS

Students at target schools face unique challenges accessing family medicine educational experiences, mentorship, and research opportunities. While prior research on this area of medical education is sparse, this data suggests that target schools have limited family medicine clerkships, family medicine graduate medical education affiliations, and faculty in senior administrative positions; these factors likely decrease the footprint of family medicine at these institutions. On average, only 2.5% of the graduating class at all target schools entered family medicine residencies between 2011 and 2017, despite family medicine being the second largest physician specialty in the United States. This research highlights the need for further exploration of student experience within target schools and the implications of medical schools investing in family medicine. As we advocate for growth of family medicine as a pivotal primary care specialty, academic medicine should consider setting a target goal to establish family medicine departments across all medical schools.

Presentations

Society of Teachers of Family Medicine Annual Conference, April 2022, Indianapolis, IN.

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TABLE 2. Recommendations for Advancing Family Medicine at Target Schools

Institutional initiatives

- 1. Increase opportunities for FM exposure in UME.
- High-quality FM clinical preceptor recruitment
- Engagement and support with FM faculty in curriculum design and delivery
- Partnerships with local FM residencies to bridge gaps between UME and GME
- 2. Enhance FM mentorship and support for students.
- Specialty-focused advising available for FM students
- Awareness and promotion of FM specialty choice resources (eg, professional societies, conferences)
- 3. Strengthen feedback mechanisms for medical school leadership.
- Open systems that allow for students and faculty to engage with medical school leadership and advocate for FM
- Promotion of FM faculty champions and invitations for their presence on leadership committees
- 4. Reduce educational debt burden.
- Tuition waivers or scholarships for students committed to primary care
- Low-barrier loan repayment programs

External specialty support

- 1. Increase support to target schools from national FM professional societies.
- Student scholarship opportunities for conferences and training
- External mentorship pathways for target school students and faculty
- Financial and research support for scholarly activities and professional development
- 2. Expand national awareness of target schools for residency recruitment.
- Target school identifier on FM residency applications
- Briefings for residency program directors around target school presence

National advocacy

- 1. Maintain social accountability for medical education.
- 2. Implement primary care- oriented policy at state and federal levels.
- 3. Increase funding and support for primary care research.

Abbreviations: FM, family medicine; UME, undergraduate medical education; GME, graduate medical education; PC, primary care

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