The Best Practice Guide for Strategic Planning to Increase Student Choice of Family Medicine

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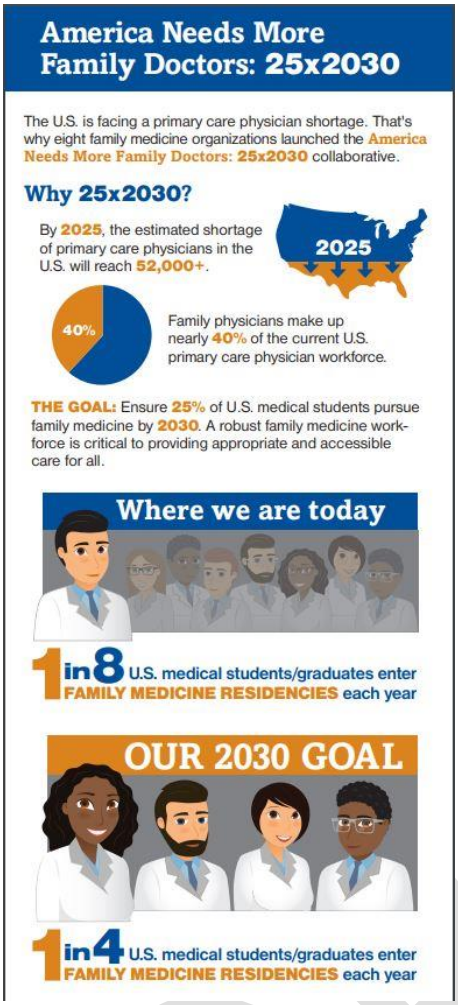

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INTRODUCTION

In 2012 the Robert Graham Center projected a shortage of 52,000 primary care physicians by 2025.[1] In 2018, the Association of American Medical Colleges (AAMC) projected a primary care physician shortage of up to 49,300 physicians by 2030.[2] This shortage will be compounded by rapid population growth of up to 12% by 2030, an aging patient population with 55% growth of those aged 65 years and older, and by the impending retirement of older physicians.[3] 30.9% of physicians currently working are aged 60 years and older, a 12% increase from 2013.[4] About 40% of the physician workforce will need to be primary care to meet the needs of the growing US population.[5] Of 24,378 medical students matched in a residency program in 2010, roughly 18% planned to practice in a primary care specialty, a 6.3% decrease since 2001.[5,6] The Council of Academic Family Medicine initiated a goal of 25% by 2030 to increase match rates and graduate medical education (GME) capacity for more family medicine trainees. This initiative is now *America Needs More Family Doctors 25 x 2030*.

The Association of Departments of Family Medicine (ADFM) recommends increasing the primary care physician workforce using four pillars for reform: pipeline, process of medical education, practice transformation, and payment reform.[7] *The Best Practice Guide for Strategic Planning to Increase Student Choice of Family Medicine* (BPG) was developed to continue the work of Family Medicine for America's Health Workforce and Education Development Tactic Team, summarize organized family medicine initiatives to increase student choice, and provide examples of implementation across the country. The four pillars will be referenced throughout the BPG, and evidence and tools provided for Departments of Family Medicine to increase student choice.

The BPG relies heavily on published evidence on increasing student choice of primary care and family medicine, as well as internally procured results of surveys of ADFM member Family Medicine Department Chairs, student surveys from the American Academy of Family Physicians (AAFP), and National Residency Match Program (NRMP) data. These sources provide valuable context and background information for recommendations. For example, based on a 2015 survey of graduating seniors who were AAFP members matching in Family Medicine, involvement in FMIG (OR=1.75) and reporting that it influenced specialty choice (OR=2.35) was associated with intention to match in family medicine (OR=2.35). For these students membership in the AAFP influenced both interest and choice of family medicine (OR=2.13 for interest, OR=2.44 for choice). Students reporting the AAFP National Conference influenced their interest also exhibited a higher intention to match in family medicine (OR of 9.77).[4]

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[1] Petterson SM, Liaw WR, Phillips RL Jr, Rabin DL, Meyers DS, Bazemore AW. Projecting US primary care physician workforce needs: 2010-2025. Ann Fam Med 2012;10(6):503-9.

[2] Markit IHS. The complexities of physician supply and demand: projections from 2015 to 2030. https://aamc-black.global.ssl.fastly.net/production/media/filer_public/a5/c3/a5c3d565-14ec-48fb-974b-99fafaeecb00/aamc_projections_update_2017.pdf. Published February 28, 2017. Accessed January 1, 2020.

[3] Association of American Medical Colleges. 2017 State physician workforce data report. https://store.aamc.org/2017-state-physician-workforce-data-report.html. Accessed January 1, 2020.

[4] Kost A, Bentley A, Phillips J, Kelly C, Prunuske J, Morley CP. Graduating Medical Student Perspectives on Factors Influencing Specialty Choice: An AAFP National Survey. Fam Med. 2019;51(2):129-136. https://doi.org/10.22454/FamMed.2019.136973.

When Department Chairs were asked in the 2018 ADFM survey to rank the top 5 efforts or activities their departments are doing to positively impact the visibility of the Family Medicine Department/Division at their respective schools, the following were the top results:

1. Family Medicine/Primary Care Clerkship
2. Presence of Family Medicine during M1/M2 years
3. Family Medicine Interest Group (FMIG) involvement
4. Family physicians from the department in leadership positions elsewhere within the medical school or health system
5. Family physicians from the department in leadership positions within the Dean's Office

While these factors all contribute to medical student experiences, known predictors of specialty choice such as family physician mentorship, and longitudinal precepting experiences were both ranked low on the list of department activity priorities. In contrast, when medical students matched in Family Medicine were asked to rank their most meaningful interactions in focus groups, students reported the following impactful experiences:[5]

1. Early clinical experiences, scope, setting (particularly rural), quality of practice, exposure to Family Medicine careers
2. Early Family Medicine mentorship opportunities
3. Early community service experiences with Family Medicine
4. AAFP Membership, AAFP National Conference, FMIG membership

While there is no direct comparison between the student and department chair surveys, students are consistently showing the community of Family Medicine a path toward increasing student choice. The BPG will include a summary of ongoing initiatives, recommendations, and examples from departments across the country to share success stories, new programs, challenges and barriers.

Each Department should consider specific activities that are most likely to make an impact on student choice considering feasibility, and the institutional, local, and regional contexts. Included in Appendix B is a worksheet to assist Departments of Family Medicine with this conversation to discuss specific tactics that would have the most likelihood of success in increasing student choice of a family medicine career.

BACKGROUND

Project Purpose

The purpose of the BPG project is to:

1. Provide evidence-based best practice resources for departments of Family Medicine regarding increasing student choice of Family Medicine careers
2. Provide a virtual community to share student choice resources for CAFM stakeholders
3. Provide a living repository of success stories and evidence-based strategic planning for Family Medicine departments.
4. Provide annual goals and objectives to the ADFM Education Transformation committee to support 25x30 activities

[5] Alavi M, Ho T, Stisher C, Richardson E, Kelly C, McCrory K, Snellings J, Zurek K, Ward Boltz M. Factors That Influence Student Choice in Family Medicine: A National Focus Group. Fam Med. 2019;51(2):143-148. https://doi.org/10.22454/FamMed.2019.927833.

Organized Family Medicine's Initiatives to Increase Student Choice

A. Family Medicine for America's Health

Family Medicine for America's Health (FMAH) was a now sunset collaboration among the eight leading US Family Medicine organizations. FMAH recommended sustaining student Family Medicine interest and increasing the likelihood of entering Family Medicine residency training by applying the following strategies:

1) Fostering a community-oriented mission
2) Incorporating ethics and social determinants of health in the curriculum
3) Introducing community learning and service into medical education, as well as training in advocacy
4) Connecting students with dedicated, full-scope family physicians and peer mentors
5) Mitigating any environment that permits specialty disrespect about students' career choices
6) Exposing students to new models of care and sustainable examples of patient-centered care, such as the patient-centered medical home
7) Establishing diverse outpatient training settings where everyone is seen regardless of ability to pay, including rural offices and community health centers
8) Creating opportunities to train students in a team-based, interdisciplinary setting
9) Developing rural tracks, tailored electives, or advanced clerkships that allow students to appreciate the full scope of Family Medicine practice, including procedures, in different settings. [6]

Key products from FMAH Workforce Education and Development Tactic Team

Family Medicine journal articles published in 2019:

1. Coutinho AJ, Bhuyan N, Gits A, Alavi M, Ho T, Shiraki J, Dakis K, Jojola C, Stisher C, Ely P. Student and Resident Involvement in Family Medicine for America's Health: A Step Toward Leadership Development. Fam Med. 2019;51(2):166-172. https://doi.org/10.22454/FamMed.2019.857539.
2. Kost A, Bentley A, Phillips J, Kelly C, Prunuske J, Morley CP. Graduating Medical Student Perspectives on Factors Influencing Specialty Choice: An AAFP National Survey. Fam Med. 2019;51(2):129-136. https://doi.org/10.22454/FamMed.2019.136973.
3. Alavi M, Ho T, Stisher C, Richardson E, Kelly C, McCrory K, Snellings J, Zurek K, Ward Boltz M. Factors That Influence Student Choice in Family Medicine: A National Focus Group. Fam Med. 2019;51(2):143-148. https://doi.org/10.22454/FamMed.2019.927833.
4. Martinez-Bianchi V, Frank B, Edgoose J, Michener L, Weida J, Rodriguez M, Gottlieb L, Reddick B, Kelly C, Yu K, Davis S, Carr J, Lee JW, Smith KL, New RD. Addressing Family Medicine's Capacity to Improve Health Equity Through Collaboration, Accountability and Coalition-Building. Fam Med. 2019;51(2):198-203. https://doi.org/10.22454/FamMed.2019.921819.
5. Kelly C, Coutinho AJ, Goldgar C, Gonsalves W, Gutkin C, Kellerman R, Fetter G, Tuggy M, Martinez-Bianchi V, Pauwels J, Hinkle BT, Bhuyan N, McCrory K, Roett MA, Snellings J, Yu K, Bentley A. Collaborating to Achieve the Optimal Family Medicine

[6] Hughes LS, Tuggy M, Pugno PA, et al. Transforming Training to Build the Family Physician Workforce Our Country Needs. Fam Med 2015; 47(8) 620-7.

Workforce. Fam Med. 2019;51(2):149-158. https://doi.org/10.22454/FamMed.2019.926312.

B. Association of Departments of Family Medicine Four Pillars Framework

Association of Departments of Family Medicine Four Pillars[7,8,9] is a useful working conceptual model to help Departments of Family Medicine organize their efforts to increase student choice for a family medicine career. Each individual pillar encompasses a series of possible activities that will increase student choice. The four pillars include the following

1. Pipeline (e.g., STEM programs, Medical School Admissions & culture, FMIG; GME expansion, new residency programs)
2. Process of Medical Education (e.g., Curriculum enhancements; community preceptor teaching experiences; residency innovations for model practice; niche programs)
3. Practice Transformation (e.g., transforming clinical practice delivery models; improving physician experience of practice)
4. Payment Reform (e.g., advocating for payment reform locally, state or federal levels)

C. Association of Departments of Family Medicine Strategic Priorities and Working Conceptual Model to Increase Student Choice for Family Medicine

Family Medicine Departments exist to advance the discipline of family medicine including attracting and training a diverse workforce of family physicians for the United States. This has been true since the beginning of the Association of Departments of Family Medicine (ADFM). ADFM's Education Transformation Committee works with the ADFM Board to create strategic priorities. The 2018-2021 ADFM Education Transformation Committee Strategic priorities are:

1. Increase the number of US medical school graduates selecting family medicine as a career.
2. Collaborate with AFMRD and other organizations to re-design GME to meet the needs of the healthcare system of the future

In the 2018 ADFM Survey, the Education Transformation Committee submitted targeted questions for department chairs. 53.8% of Department Chairs reported affirmatively that their department is involved in formal regional or statewide initiatives addressing family physician workforce needs and workforce planning. Chairs were asked about which areas they were highly engaged and achieving high impact. The results were as follows in ranked order:

1. Process of Medical Education (e.g., curriculum enhancements; community preceptor teaching experiences; residency innovations for model practice; niche programs)
2. Pipeline (e.g., STEM programs, medical school admissions & culture, FMIG; GME expansion, new residency programs)
3. Practice Transformation (e.g., transforming clinical practice delivery models; improving physician experience of practice)
4. Payment Reform (e.g., advocating for payment reform locally, state or federal levels)

[7] Hepworth J, Davis A, Harris A, et al. The four pillars for primary care physician workforce reform: a blueprint for future activity. Ann Fam Med. 2014;12(1)83. http://www.annfammed.org/content/12/1/83.full.pdf+html.FREE Full Text

[8] Matson C, Davis A, Epling J, et al; rest of the ADFM Education Transformation Committee. Influencing student specialty choice: the 4 Pillars for Primary Care Physician Workforce Development. Ann Fam Med. 2015; 13(5):494–495. FREE Full Text

[9] Diller PM, Weidner A, Roett MA, Wilke A, Davis A. Putting the four pillars for primary care physician workforce into practice locally. Ann Fam Med. 2017;15(2):189–190. http://www.annfammed.org/content/15/2/189.full.pdf+html. FREE Full Text

ADFM will participate with the AAFP initiative the *Student Choice Learning and Action Network* (SCLAN), a learning community developed in collaboration with the AAFP and STFM. SCLAN is intended to leverage data and the concept of positive deviance (tactics and behaviors that enable a person or group to overcome barriers without special resources) to gain increased knowledge of what works to increase student choice in family medicine. In 2018, 87.5% of Departments Chairs reported interest in having someone from their department participate in SCLAN.

D. Society of Teachers of Family Medicine Preceptor Expansion Project

The Society of Teachers of Family Medicine (STFM) Preceptor Expansion Project aims included:

1. Decreasing % of primary care clerkship directors who report difficulty finding clinical preceptor sites
2. Increasing % of students completing clerkships at high functioning sites

The tactic teams continue to work on several identified priority areas to achieve these goals, including: working with CMS regarding revising student documentation guidelines; increasing interdisciplinary education through integrated clerkships; developing educational collaboratives; standardizing onboarding for students and preceptors; and recommending teaching incentives and supporting a culture of teaching.

E. America Needs More Family Doctors: The 25 x 2030 Student Choice Collaborative

Thought leaders, stakeholders, and executive staff of the eight national family medicine organizations met in August 2018 to kick off a new collaborative venture, picking up from the work of the now-sunset Family Medicine for America's Health Workforce Education and Development Tactic Team. That team-initiated action on this collaborative by proposing to and securing commitment from all eight of the organizations a shared aim for 25% of all graduating US medical students to enter family medicine residencies by the year 2030. This initiative has evolved into the America Needs More Family Doctors: The 25 x 2030 Student Choice Collaborative.

Key themes prioritized from kickoff meeting and executive summary:

1) Student experience before medical school
2) Medical school admissions
3) Medical school curriculum and role modeling
4) Health system, funding, and leadership

BEST PRACTICES

Summary of Recommendations (Identified with one of the 4 Pillars Framework)*

1. Early and longitudinal community-service, community-based learning experiences with Family Medicine residents and faculty (Process of Medical Education)
2. Longitudinal clinical Family Medicine precepting experiences including continuity of preceptors, continuity of care, and continuity of patient interactions (Process of Medical Education)
3. Longitudinal one-to-one mentorship relationships with Family Medicine physicians (Process of Medical Education)

4. Specific recruitment and engagement activities directed toward medical students, pre-medical and pipeline students Under-Represented in Medicine (URIM) (Pipeline)
5. Increased exposure to under-resourced and vulnerable patient populations, including urban, rural, immigrant, refugee, asylee, and international health populations (Process of Medical Education)
6. Leadership and innovation in curricular development on social determinants of health (Pipeline-Medical School Culture; Process of Medical Education)
7. Engage students in practice-based research on health disparities and social determinants of health with longitudinal Family Medicine mentors (Process of Medical Education)
8. Medical School policy development to favor primary care interest, including admissions policies, admissions committee membership, and addressing the hidden curriculum (e.g. specialty disrespect) (Pipeline-Medical School Culture)
9. Addressing Medical Student Debt with Scholarships, Tuition Waivers, and Loan Repayment Programs (Payment Reform)
10. Implement a Student Choice Strategic Plan in each Department of Family Medicine with SMART goals aligned with the 25x2030 initiative (Pipeline-Medical School Culture)

Please note that as new evidence-based information becomes available, and Departments share their experiences and outcomes, the BPG will be updated, and is expected to be a living document to share resources.

Best Practice Guide for Strategic Planning to Increase Student Choice of Family Medicine

1. Early and longitudinal community-service, community-based learning experiences with Family Medicine residents and faculty

Evidence Summary (Process of Medical Education)

Early community-based Family Medicine clinical exposure positively influences medical students' career considerations, resulting in higher rates of students favoring Family Medicine and improved ranking of Family Medicine as a career option.[10] Several studies have also demonstrated that early community service is highly impactful on students' professional identity formation. The LCME defines service learning as "a structured learning experience that combines community service with preparation and reflection. Students engaged in service learning provide community service in response to community-identified concerns and learn about the context in which service is provided, the connection between their service and their academic coursework, and their roles as citizens and professionals." In the 2019 ADFM survey, 67% of department chairs reported faculty teaching first and/or second year Community-Based Learning, Service Learning or required community service hours.

Success Stories

Florida International University Herbert Wertheim College of Medicine Green Family Foundation Neighborhood Health Education Learning Program (NeighborhoodHELP) program

[10] Deutsch T, Hönigschmid P, Frese T, et al. Early community-based family practice elective positively influences medical students' career considerations-a pre-post-comparison. BMC Fam Pract 2013; 14:24.

features longitudinal interprofessional community-based service learning.[11] These service-based learning opportunities encourage students to incorporate community-based activities in their careers. In 2017-2018 FIU medical, nursing, social work, physician assistant, law, and education students in NeighborhoodHELP conducted 1,851 visits to 436 households, providing health education, health care, social support, and legal services. The Division of Family Medicine and the Department of Humanities, Health, and Society (a clinically integrated interprofessional academic department), play leading roles in the NeighborhoodHELP program. The University of Washington School of Medicine also has the Community-focused Urban Scholars Program, to increase diversity and reflect local communities, providing mentorship and professional development, population health training, service learning, and urban clinical experiences.

New Programs, Challenges or Barriers

Georgetown University School of Medicine piloted a longitudinal Community-Based Learning project in 2018, after 20 years of successful Service Learning with community partners, starting with 5 first year medical students who applied to participate as M1-M4s with a plan for M3/M4 students to mentor M1/M2 students, and leadership and mentorship training, and longitudinal Family Medicine faculty mentorship. The project will include tracking social empathy, cultural competence, attitudes toward the underserved, and primary care attitudes. This program became an integral component in a new Primary Care Leadership Track in 2019.

2. Longitudinal Clinical Precepting Experiences including continuity of preceptors, continuity of care, and continuity of patient interactions (Process of Medical Education)

Evidence Summary

The positive influence of student-preceptor relationships on career choice is strongest where there is continuity of preceptors, continuity of care, and continuity of patient interactions.[12] Longitudinal interactions create trusting professional and personal relationships between students and preceptors over time, allowing teaching to be anchored by an understanding of the individual student, collaborative goal-setting based not only on program objectives but also with the student as a future physician in mind.[13] In a systematic review of 36 articles on medical student career choice and preceptor relationships, the longer the duration of the primary care preceptorship the greater the influence on student career choice of primary care specialties.[14] A similar systematic review of 72 articles also concluded that longitudinal programs were the only intervention consistently associated with an increased proportion of students choosing a career in primary care.[15] The strongest drivers for students choosing family medicine nationally are having family medicine mentors, and longitudinal clinical preceptorships.

[11] Greer PJ, Brown DR, Brewster LG, Lage OG, Esposito KF, Whisenant EB, Anderson FG, Castellanos NK, Stefano TA, Rock JA. Socially Accountable Medical Education: An Innovative Approach at Florida International University Herbert Wertheim College of Medicine. *Academic Medicine*. 2018 Jan;93(1):60-65.

[12] Stagg P, Prideaux D, Greenhill J, et al. Are medical students influenced by preceptors in making career choices, and if so how? A systematic review. Rural and Remote Health 2012;12:1832.

[13] Cuncic C, Regehr G, Frost H, Bates J. It's all about relationships: A qualitative study of family physicians' teaching experiences in rural longitudinal clerkships, Perspect Med Educ. 2018; 7(2):100-109.

[14] Stagg P, Prideaux D, Greenhill J, et al. Are medical students influenced by preceptors in making career choices, and if so how? A systematic review. Rural and Remote Health 2012;12:1832.

[15] E. Pfarrwaller, J. Sommer, C. Chung, H. Maisonneuve, M. Nendaz, N. Junod Perron and D. M. Haller. Impact of Interventions to Increase the Proportion of Medical Students Choosing a Primary Care Career: A Systematic Review. J Gen Intern Med. 2015; 30(9):1349-58.

In the 2016 ADFM survey, 96% of Department Chairs reported that they had a required 3rd year Family Medicine or Primary Care clerkship that has a required family medicine component, with a family medicine educator responsible for at least that component. For clerkship length 38% reported 4 weeks, 37% 6 weeks, 13% 8 weeks, 2% 2 weeks, and 10% reporting other (including longitudinal integrated clerkships [6%] and 5 weeks [4%]). In the 2019 ADFM survey 80% of dept chairs reported faculty are teaching M1/M2 students Ambulatory Family Medicine or primary care in clinical settings but information is limited on the availability of longitudinal experiences with preceptors or patients after the preclinical years. Longitudinal integrated clerkships represents another opportunity for students to be exposed to continuity of preceptors and patient care, with several published examples of implementation in different settings with family medicine preceptors, effect on students' professional identity formation, improved faculty satisfaction and engagement, and guidelines on how to implement successfully.[16,17]

Success Stories

Virginia Commonwealth University has a distinct Family Medicine Scholars Training and Admissions Track (fmSTAT) with longitudinal clinical experiences, and preferential consideration for Family Medicine scholarships and national conference stipends. At Rush Medical College in Chicago, IL, the Department of Family Medicine started the Rush Family Medicine Leadership Program, a 4-year longitudinal program for five students per year in 2013, and graduated the third class in May 2019. Students have a small panel of patients they follow with a clinical mentor, engage in longitudinal community projects, and have an additional curriculum on leadership development. The program is small relative to the size of the class as a whole (144). The program has graduated two Pisacano scholars, and matches in competitive Family Medicine residency programs, and routinely present at national conferences.

The University of Texas Medical Branch has a longitudinal primary care preceptor program featuring continuity of preceptors and patients, called SCOPE (Student Continuity of Practice Experience). Students in the program demonstrate increasing interest in primary care between years one and three, reversing national trends by regularly attend continuity clinic, establishing a panel of patients by third year, and receiving frequent feedback from faculty mentors.[18] The University of Connecticut has the CLIC (Clinical Longitudinal Immersion in the Community) program. Each medical student is paired with a family physician, internist or pediatrician in community practice where they practice 1/2 day per week throughout their first three years in a 1:1 preceptorship relationship. This program starts after the first month of medical school and continues to the end of third year. Quinnipiac University has offered a similar program, called MeSH (Medical Student Home).

In 2014 the University of Colorado School of Medicine established an 11-month longitudinal integrated clerkship at Denver Health (DH-LIC), a public safety-net hospital partnered with nine fully integrated federally qualified health centers. Other LICs including Family Medicine preceptors, mentors or educational leadership include:

[16] Bartlett M, Couper I, Poncelet A, Morley P. Perspect Med Educ (2020) 9:5. https://doi.org/10.1007/s40037-019-00558-z

[17] Snow SC, Gong J, Adams JE. (2017) Faculty experience and engagement in a longitudinal integrated clerkship, Medical Teacher, 39:5, 527-53. https://doi.org/10.1080/0142159X.2017.1297528.

[18] Ford CD, Patel PG, Sierpina VS, Wolffarth MW, Rowen JL. Longitudinal Continuity Learning Experiences and Primary Care Career Interest: Outcomes from an Innovative Medical School Curriculum. J Gen Intern Med. 2018 Oct;33(10):1817-1821. https://doi.org/10.1007/s11606-018-4600-x.

- M3 31-week LIC at Warren Alpert Medical School at Brown University
- M2 12-month LIC at Duke University School of Medicine
- M3 24-week LIC at Georgetown University School of Medicine
- M3 28-week LIC at The University of Texas Health Science Center at Houston McGovern Medical School
- M3 12-month LIC at University of Vermont Larner College of Medicine LIC

The University of Minnesota School of Medicine (matching 18.8% in Family Medicine) has 3 longitudinal programs for medical students:

- M3 9-month UMN Rural Physician Associate Program (RPAP)
- M3 9-month UMN Metropolitan Physician Associate Program (MetroPAP)
- M3/M4 12-week Urban Community Ambulatory Medicine (UCAM)

New Programs, Challenges or Barriers

The Ohio State University started a 3-year curriculum in 2017 for targeted students after a strategic planning meeting in 2016 with a large discussion on leadership opportunities with a new medical student curriculum. The Primary Care Track started in the summer of 2017. This new medical school program offers students, who are planning a career in family medicine, an opportunity to complete their medical school studies on an accelerated pathway that covers three years and culminates into the Family Medicine Residency program. 2 students successfully completed their first year including a summer of Host Defense. They welcomed a new cohort of PCT students in July 2018. The PCT curriculum is augmented with additional longitudinal clinical time and required objectives called Ambulatory Clinical Experiences. The program expanded to accept four students for the summer of 2019.

3. Longitudinal One-to-One Formal Mentorship Relationships with Family Physicians

Evidence Summary (Process of Medical Education)

Primary care faculty and resident mentors provide students with support and encouragement to choose primary care specialties. In a clerkship-based resident-student mentoring program, students reported receiving educational and procedural instruction, personal development feedback, and career advice from resident mentors.[19] Simply having a medical school mentor may not impact match outcome, but having effective mentorship with formal, targeted interactions is associated with a more favorable match outcome.[20] Students' learning and professional development are enhanced by longitudinal and formalized mentoring relationships as an approach to medical education.[21] One-on-one mentoring with faculty mentors has the added benefit of increasing reflective capacity, emotional competence and the feeling of belonging to a community.[22] Students are often influenced by resident mentors and interactions when making career choices.[23] Longitudinal mentoring supports student interest in primary care, increasing understanding of primary care careers, and increasing the rate of choosing primary

[19] Sobbing J, Duong J, Dong F, et al. Residents as Medical Student Mentors During an Obstetrics and Gynecology Clerkship. J Grad Med Educ 2015; 7(3): 412-6.
[20] Dehon E, Cruse MH, Dawson B, et al. Mentoring during Medical School and Match Outcome among Emergency Medicine Residents. West J Emerg Med 2015; 16(6); 927-30.
[21] Taylor JS et al. Developing a peer-mentor program for medical students. Teach Learn Med 2013; 25(1):97-102.
[22] Kalén S, Ponzer S, Silén C. The core of mentorship: medical students' experiences of one-to-one mentoring in a clinical environment. Adv Health Sci Educ Theory Pract 2012; 17 (3); 389-401.
[23] Nguyen SQ, Divino CM. Surgical residents as medical student mentors. Am Jour of Surg 2007;193: 90-93.

care residency training.[24]

Peer mentoring and reflective journaling may also be impactful. M4 mentorship in clinical settings improves M1 comfort with patients, enhances M1 interactions with attending physicians, and may be associated with M1 self-reported improvements in physical exam skills.[25] Reflective journaling provides important insights on medical student progress in mentorship programs. Reflective journaling in a geriatric longitudinal student-faculty mentorship program revealed that clinical mentors challenged medical students' preconceptions of geriatric medicine, students learned new medical knowledge and techniques, and provided candid mentor assessments.[26] In the 2018 ADFM survey of Department Chairs, only 38.8% of Family medicine department chairs reported their departments have formal M1-M4 longitudinal mentorship relationships with medical students.

Success Stories

Columbia University in New York features the Daniel Noyes Brown Primary Care Scholars Program accepting eight students per year, with four core faculty from Family Medicine, Internal Medicine, and Pediatrics. Students really value the longitudinal relationship with and mentoring from faculty. The Primary Care Scholars curriculum is largely already built into their schedules - first year clinical shadowing, history and physical course, primary care and pediatric Clerkships. They also complete a scholarly project related to primary care. The program also features grand rounds and get-togethers, both with the entire group and between students.

The University of Rochester Medical Center has a Primary Care Clerkship where all 1st and 2nd year medical students spend an afternoon a week from October to May in primary care. Some spend 1/2 the year with an internist and the other half with a pediatrician. If paired with Family Medicine physicians, students will spend the entire year with a family doc. This program began in the late 1980s as "Introduction to Doctoring" and has been through several iterations. The University of Kansas School of Medicine matched 18.9% of students in Family Medicine in 2017, and the department has an integral role in the M1/M2 years, including faculty curricular involvement, leadership of problem-based learning groups, capstone teaching, and mentoring.

New Programs, Challenges or Barriers

CUNY School of Medicine has a third year medical student Longitudinal Clinical Experience in primary care, and a longitudinal experience with Community Health Centers, and 7-8 1/2 days per year starting in year 3 of the 7 year BS/MD program. Limitations include capacity for students, as sites may have students from different years at different times so they have a student at some level almost 50% of the year. The students have continuity with their preceptors (over 3 years) and are exposed to health coaching, team-based care, addressing social determinants of health in clinical practice, and continuous quality improvement in ambulatory settings. The BS/MD program is specifically focused on encouraging students to become primary care physicians.

[24] Indyk D et al. The influence of longitudinal mentoring on medical student selection of primary care residencies. BMC Med Ed 2011;11:27.
[25] Choudhury N et al. Peer mentorship in student-run free clinics: the impact on preclinical education. Fam Med 2014; 46(3):204-8.
[26] Farrell TW, Shield RR, Wetle T, et al. Preparing to care for an aging population: Medical student reflections on their clinical mentors within a new geriatrics curriculum. Gerontol Geriatr Educ 2013; 34 (4):393-408.

4. Specific Family Medicine Recruitment and Engagement for URIM Medical Students, Pre-Medical and Pipeline Students (Pipeline)

Evidence Summary

America Needs More Family Doctors 25% x 2030 Steering Committee will welcome National AHEC Organization and HOSA Future Health Professionals to recognize existing and potential collaborative efforts supporting pipeline programs. In the 2019 ADFM Survey, Departments of Family Medicine reported varying levels of participation in targeted pipeline programming or teaching. 8.2% reported teaching roles with elementary schools, 23.7% high school teaching roles, 36.1% pre-med college level teaching, 18.6% post-baccalaureate pre-med teaching. Mentorship, pipeline and scholarship programs represent both enhancement and innovation. Pipeline programs in health professions foster early interest, create a pool of applicants invested in the success of future participants, and provide a supportive mechanism for students with similar career interests. Rural and underserved medical school settings have targeted high school, college and pre-medical students, successfully increasing the medical school acceptance rates for pipeline participants.[27] Historically, barriers to choosing primary care specialties include student debt, perceived disproportionate burnout, and inequities in compensation for primary care specialties. Under-represented minority (URM) and disadvantaged students are more likely to cite debt and financial obligations in their specialty choices.[28]

According to AAMC data URM students are more likely to choose primary care careers if from disadvantaged socioeconomic backgrounds. Growing up in an underserved setting is specifically associated with primary care interest, and is tracked by HRSA grantees to determine whether funding programs, such as Primary Care Training Enhancement, and Area Health Education Center funding result in more primary care physicians in underserved settings. US medical school graduates who attended community college are more likely to train in family medicine. Community college may be an important pathway to increase the primary care workforce.[29]

Success Stories

The INMED™ (Indians into Medicine) Program at the University of North Dakota School of Medicine and Health Sciences was established in 1973 to address the need for physicians to serve 24 of the most underserved American Indian reservations in the US, in North Dakota, South Dakota, Montana, Wyoming, and Nebraska. 72% of the family physicians in North Dakota graduated from the University of North Dakota, which is in the 99th percentile rank for admissions rates for American Indians, and has 10,000 graduates practicing in the state. An MCAT prep program for American Indians preparing to take or retake the MCAT examination. The University of North Dakota typically matches 20% into Family Medicine each year. At the Warren Alpert Medical School of Brown University in Providence, RI, the Family Medicine

[27] Gross DA, Mattox LC, Winkleman N. Priming the Physician Pipeline: A Regional AHEC's Use of in-state Medical School Data to Guide Its Health Careers Programming. J Health Care Poor Underserved 2016;27:8-18.

[28] Phillips JP, Petterson SM, Bazemore AW, et al. A Retrospective Analysis of the Relationship Between Medical Student Debt and Primary Care Practice in the United States. Ann Fam Med 2014;12:542-549.

[29] Talamantes E, Jerant, A, Henderson MC, et al. Community College Pathways to Medical School and Family Medicine Residency Training. Ann Fam Med 2018; 16(4):302-307.

department successfully dedicated HRSA funding to development of a new scholarly concentration and an eight-year primary care pipeline, including an AHEC partnership.[30] In the Longitudinal Integrated Clerkship at Brown University, students spend one half day per week with family medicine, internal medicine, pediatrics, obstetrics and gynecology, and surgery over 31 weeks. The Primary Care-Population Medicine

New Programs, Challenges or Barriers

Howard University has a robust undergraduate immersion programs, including the Advanced College Summer Enrichment program, Pharmacotherapy Biomedical Preview Program, and High School Summer Enrichment Science Academy to encourage under-represented minority students to pursue health careers. Georgetown University School of Medicine also has programming for under-represented minority and disadvantaged students with a summer Academy for Research Clinical and Health Equity Scholarship (ARCHES) program for college students and the Gateway Exploration Program (GEP) for students in DC Public Schools. Students shadow family physicians, receive leadership development programming, perform health disparities research, and receive intensive professional development coaching.

5. Increased Exposure to Under-Resourced and Vulnerable Patient Populations, including urban, rural, immigrant, refugee, asylee, and international health populations (Process of Medical Education)

Evidence Summary

By improving self-efficacy in interacting with diverse patient populations, learners are more likely to choose careers in primary care, Community Health Centers, and underserved areas. The medical school Social Mission Content scale (SMC) scores the degree to which medical school mission statements reflect the social mission of medical education to address inequities.[31] SMC is a positive predictor of the percentage of physician graduates entering primary care, and among primary care specialties significantly predicts percent of graduating physicians entering Family Medicine, and several measures of physician output to work in underserved areas and populations. Predictive variables in the ranking of medical schools include relating SMC to Health Professional Shortage Areas, and School-State ratio of URIM students.[32]

Increased exposure to underserved patient populations, early and longitudinal community-based and clinical experiences, and longitudinal primary care mentorship, are known predictors of choosing primary care specialties and continuing to work in underserved settings. Predictors for medical student intention to practice in underserved areas include growing up in an underserved setting, a very strong sense of calling, and a high medical school social mission score (as also noted above).[33] International health electives also significantly influence student choice of family medicine.[34] Family medicine residents are more likely to choose careers as Primary Care Physicians in Community Health Centers and underserved areas by improving self-efficacy

[30] Anthony D, et al. Building a workforce of physicians to care for underserved patients. R I Med J 2014;97(9):31-5.
[31] Morley CP, Mader EM, Smilnak T, et al. The social mission in medical school mission statements: associations with graduate outcomes. Fam Med 2015;47(6):427-34.
[32] Mullan F et al. The Social Mission of Medical Ed: Ranking the Schools. Ann Intern Med 2010;152:804-11.
[33] O'Connell, T. F., Ham, S. A., Hart, T. G., Curlin, F. A. and Yoon, J. D. A National Longitudinal Survey of Medical Students' Intentions to Practice among the Underserved. Acad Med. 2018; 93(1):90-97.
[34] Jeffrey J, Dumont RA, Kim GY, Kuo T. Effects of international health electives on medical student learning and career choice: results of a systematic literature review. Fam Med. 2011 Jan;43(1):21-8.

through interacting with diverse patient populations.[35] According to AAMC data, students with rural backgrounds, especially URM from rural backgrounds are more likely to choose primary care careers, but the number of applicants and matriculants is steadily declining.[36]

Departments of Family Medicine have been successful creating new programs, partnerships, and scholarships with directed goals to increase the number of graduating medical students who practice primary care in underserved communities. In the 2019 ADFM Survey, multiple departments reported partnerships with State AHECs, Federally Qualified Health Centers, and Departments of Health to support workforce development for family medicine. The AAFP EveryONE Project provides family physicians and teams with tools and resources to collaborate with other disciplines and organizations to promote health equity.

Success Stories

The Rural Underserved Opportunities Program (RUOP) at the University of Washington seeks to provide rural experiences for medical students with family physicians. RUOP is a four-week, elective immersion experience for medical students between first and second year rural or urban underserved communities in Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI). RUOP is a collaborative effort of the UW School of Medicine, WWAMI campuses, Area Health Education Centers, and the Washington and Idaho Academies of Family Physicians. Michigan State University College of Human Medicine ranks highly on the Social Mission scale when comparing medical school statistics for doctors who are minorities, practice primary care, and work in underserved areas. Each year, up to 12 students with extensive rural experiences or intention to practice in rural areas are accepted into the Rural Community Health Program (R-CHP). Other opportunities for students on admission include the Rural Leadership Program, and the Rural Physician Program.

The DH-LIC program created by the University of Colorado School of Medicine provides an "immersive experience caring for vulnerable populations" at partner FQHCs, with a goal of establishing a pipeline of physician leaders strongly committed to care and advocacy for urban underserved populations.

New Programs, Challenges or Barriers

Rutgers Biomedical and Health Sciences has a family medicine physician in place as Medical Director at the student-run free clinic, as do several other medical schools. Physicians for Human Rights has an established program with the Department of Family Medicine at Georgetown University School of Medicine, providing student experiences with family physicians for asylum evaluations in student-run asylum clinic, and teaching initiatives on refugee and asylee care. DC AHEC has also offered AHEC Scholar status for students rotating in underserved settings in the DC Metro area.

[35] NACHC. Access Transformed: Building a Primary Care Workforce for the 21st Century. RGC. 2008.

[36] Shipman SA[1], Wendling A[2], Jones KC[3], Kovar-Gough I[4], Orlowski JM[5], Phillips J. The Decline In Rural Medical Students: A Growing Gap In Geographic Diversity Threatens The Rural Physician Workforce. Health Aff (Millwood). 2019 Dec;38(12):2011-2018. https://doi.org/10.1377/hlthaff.2019.00924.

6. Leadership and Innovation in Curricular Development on Social Determinants of Health (Pipeline- Medical School Culture; Process of Medical Education)

Evidence Summary

In a 2012 survey of Departments of Family Medicine, researchers from the University of Michigan found that 98.1% of respondents had Family Medicine Interest Groups, 97.1% offered Family Medicine electives, 90.4% offered Family Medicine Clerkships, and 85.6% of first and second year medical school curricula featured small group discussions led by family medicine faculty.[37] Departments were less likely to have either large group courses or courses with formal career advising with family medicine faculty instructors in years 3 and 4, and less likely to have family medicine faculty leading small groups if at a larger institution (98% smaller [<605 students] vs 83% larger [>605 students], *p=0.012*). These findings suggest that traditional methods of student engagement, such as FMIG and Family Medicine electives, while important, may not be enough to increase Family Medicine interest. In the 2019 ADFM survey, 65% of chairs report faculty teach M1/M2 students on health policy, population health, and/or social determinants of health.

Departments of Family Medicine have successfully created new programs and partnerships with directed goals to increase the number of graduating medical students who practice primary care in underserved communities, including new tracks or scholarly concentrations, and primary care pipelines, including AHEC partnerships.[9] In an analysis of specialty match data from the National Residency Matching Program from 1986 to 2016, researchers demonstrated an average increase of 226 positions per year, including 19 in primary care, and 72 in specifically narrow subspecialties with no linkage to community or state needs.[38] The disproportionate growth in subspecialty training positions for physicians suggests a need for innovative approaches to encouraging medical students to choose primary care, as community needs and position availability remain unmatched.

While the ecological teaching model appropriately acknowledges social determinants of health, the biomedical model traditionally employed in medical education fails to address factors related to the larger societal context of health.[39] Primary Care-oriented students are more likely to be attracted to prevention and biopsychosocial aspects of specialties. Participatory community-based learning for medical students increases public health skills and knowledge, and enhances both understanding of communities and appreciation of social determinants and the local community.[40] In a systematic review of 57 studies addressing community placements for US medical students, the reviewers concluded that: 1) medical schools aimed to improve community health but did not routinely involve community members in identification of local health priorities; 2) educators were enthusiastic about community-based education as a method for teaching social determinants of health; and 3) community placements may be equivalent to

[37] Heidelbaugh J, Cooke J, Wimsatt L. Opportunities for Medical Student Engagement with Family Medicine. Fam Med 2013;45(7):484-491.
[38] Kozakowski SM, et al. Results of the 2016 National Resident Matching Program: 1986-2016: A Comparison of Family Medicine, E-ROADs, and Other Select Specialties. Fam Med 2016;48(10):763-769.
[39] Chamberlain LJ et al. Integrating collaborative population health projects into a medical student curriculum at Stanford. Acad Med 2008; 83: 338-344.
[40] Essa-Hadad J, Murdoch-Eaton D, Rudolf MCJ. What impact does community service learning have on medical students' appreciation of population health? Public Health 2015; 129(11):1444-1451.

traditional didactic curricula.[41]

It is well established that empathy declines over time in medical school, and empathy is generally higher for students choosing Family Medicine, IM, Peds, Psychiatry, Obstetrics and Gynecology than for those choosing any other specialties.[42] Lack of understanding of cultural differences, social situations, political and economic conditions may hamper empathic insight. A systematic review of 18 studies on empathy suggested that educational interventions may be effective for maintaining and enhancing empathy in medical students.[43] Social empathy combines measures of interpersonal empathy and the ability to understand people from different socioeconomic, racial or ethnic backgrounds, with contextual insight of inequalities and disparities. Programs designed to validate humanism in medicine may reverse the decline in empathy.[44] M3 Clinical Clerkships, especially at non-University sites, play an important role in specialty choice, particularly as students see and experience more psychosocial aspects of medicine. Medical institutions with regional campuses support primary care and both local and regional retention.[45] Introducing regional rotation blocks, such as longitudinal integrated clerkships may improve student choice.

In 2002 the National Academy of Medicine (formerly Institute of Medicine [IOM]) recommended that all medical students receive basic public health training in population-based prevention and a significant proportion of medical school graduates be fully trained at a Master of Public Health level.[46] In 2010, the Liaison Committee on Medical Education (LCME) required that public health science be included in medical education curricula.[47] Several leading organizations have called for the integration of primary care and public health as a strategy for addressing social determinants of health.[48] In 2012, NAM released *Primary Care and Public Health: Exploring Integration to Improve Population* Health, which stipulated required activities in 3 domains: 1) addressing social and environmental conditions that are primary determinants of health; 2) health care services directed to individuals; and 3) population level public health activities to address health behaviors.[6] The AAFP Health Equity Curricular Toolkit is intended for clinical and public health learners, and primary care faculty exploring social determinants of health, vulnerable populations, economics and policy.

Success Stories

Michigan State University College of Human Medicine (MSU-CHM) has immersed students in six diverse communities across Michigan since its founding. In an analysis of the clinical campuses established, Michigan State University's regional campus structure has resulted in a higher percentage of practicing primary care physicians, and higher percentage

[41] Hunt JB, Bonham C, Jones L. Understanding the goals of service learning and community-based medical education: A systematic review. Acad Med 2011; 86(2): 246-51.
[42] Newton BW, et al. Is there hardening of the heart during medical school? Acad Med 2008;83(3):244-9.
[43] Batt SA et al. Teaching Empathy to Medical Students:An Updated Systematic Review.Acad Med 2013;88:1171-7.
[44] Rosenthal S et al. Humanism at heart: preserving empathy in 3rd year medical students. Acad Med 2011;86; 350-8.
[45] Phillips J, Wendling A, Fahey C, Mavis B. The Effect of a Community-Based Medical School on the State and Local Physician Workforce. Academic Medicine 2018;93:306–313. https://doi.org/10.1097/ACM.0000000000001823
[46] IOM. Primary Care and Public Health. Exploring Integration to Improve Population Health. Report Briefs. Washington, DC: National Academies Press; March 2012.
[47] LCME Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree. May 2011. http://www.lcme.org/functions2011may.pdf
[48] American Academy of Family Physicians. Integration of Primary Care and Public Health (Position Paper). 2014.

practicing in Health Professional Shortage Areas.[49] The Warren Alpert School of Medicine at Brown University developed an innovative MD-ScM track demonstrating improved scores in attitudes towards the underserved, and cultural competency among track participants.[50]

New Programs, Challenges or Barriers

In the 2019 ADFM survey, 65.3% of department chairs reported teaching M1/M2 Health Policy, Population Health and/or Social Determinants of Health. Chairs reported that Area Health Education Centers (AHEC) were major partners supporting workforce development, along with departments of health, federally qualified health centers, and primary care associations. The AHEC Scholar program seeks to prepare health professional students for primary careers by requiring 80 hours clinical experience in underserved settings, and 80 hours of experiential or didactic learning in six core topic areas: social determinants of health, behavioral health, cultural competence, interprofessional education, practice transformation and emerging issues, such as opioid use disorders. The National AHEC Organization reports 393,819 participated in continuing education programming, and 11,473 medical students rotated through AHEC sites or centers in 2018-2019.

7. Engage Students in Practice-based Research on Health Disparities (Process of Medical Education)

Evidence Summary

In the 2019 ADFM survey 53% of department chairs reported faculty were engaged in research with medical students either in required or elective experiences, and another 40% on an ad hoc basis. For 70% of those reporting research with students the focus was health disparities and social determinants of health. Research is another established curricular activity in medical education that fosters mentoring relationships and influences career choice.[51] Community health research projects foster commitment to community involvement, regional engagement, and participatory research.[52] Although community health centers were built around the COPC framework for marrying primary care and public health,[53] implementation has lagged due in part to the lack of readily available practice and community level data and ability to apply information clinically.

Modern health care reforms and new funding mechanisms provide incentives for improving population health such as accountable care organizations,[54] but typical practices still lack actionable data. Time was cited as a key barrier to curricular success in improving public health and research training in residency settings.[55] In a Council of Academic Family Medicine Educational Research Alliance survey of Family Medicine Clerkship directors, 99% agreed that public health training is important for medical students, but cited insufficient time, lack of

[49] Phillips J, Wendling A, Fahey C, Mavis B. The Effect of a Community-Based Medical School on the State and Local Physician Workforce. Academic Medicine 2018;93:306–313. https://doi.org/10.1097/ACM.0000000000001823
[50] Monteiro KA, Dietrich K, Borkan J, et al. Contrasting Incoming Medical Students' Attitudes: Dual Degree vs Traditional Tracks. Fam Med. 2018;50(5):372-375. https://doi.org/10.22454/FamMed.2018.631070.
[51] Dodge JE, Chiu HH, Fung S, et al. Multicentre study on factors affecting the gynaecologic oncology career choice of canadian residents in obstetrics and gynaecology. J Obstet Gynaecol Can 2010:32(8):780-793.
[52] Simoyan OM et al. Public Health and Medical Education. Am J Prev Med 2011; 41(4):S220-S227.
[53] Institute of Medicine. COPC A Practical Assessment. Washington, DC: National Academy Press; 1984.
[54] Kassler WJ et al. Beyond a traditional payer: CMS role in improving population health. N Engl J Med 2015;372: 109-11.
[55] Vickery KD et al. Preparing the Next Generation of Family Physicians to Improve Population Health: A CERA Study. Fam Med 2015;47(10):782-788.

funding, and lack of faculty expertise as barriers to public health instruction.[56] Despite the consensus that a well-trained primary care workforce is necessary to achieve improved outcomes, practices and health professions training programs lack a roadmap for achieving this goal. Training is needed on research and data management for students, residents, faculty and community preceptors to use population data for community-based programs, targeted interventions and quality improvement. The Boards of Directors of the ADFM and of the North American Primary Care Research Group (NAPCRG) convened a joint task force in 2015 to develop recommendations for enhancing family medicine research capacity. Recommendations for faculty included: a longitudinal curriculum track made available online and in-person at a series of national meetings regularly attended by department chairs and Family Medicine research leaders.[57]

Success Stories

The Geisinger Commonwealth School of Medicine designed year-long community health research projects, the Longitudinal Community Health Intervention Project (L-CHIP), for M1 students by partnering with community organizations and physician research mentors to ensure students learned: to apply concepts, strategies, and tools acquired through coursework to public health research in community and clinical settings; the fundamentals of community engagement, collaboration, and service-based practice; and how to address the differing needs of population subgroups. The L-CHIP experience provides students with the opportunity to learn about communities, principles of community engagement, and the complexity of community health/public health interventions.

New Programs, Challenges or Barriers

The Keck School of Medicine at the University of Southern California offers a comprehensive Primary Care Program, as part of a Primary Care Initiative, including research programs for medical students on health disparities. The program targets early exposure to Family Medicine research mentors and along with other elements, has resulted in increased numbers of students choosing Family Medicine. Georgetown University School of Medicine offers an AHEC Primary Care Summer Research Scholar award as part of a larger institutional application process and MedStar Summer Research programs. Students are assigned to primarily Family Medicine mentors, have clinical experiences in AHEC Centers and sites, and also have seminars on AHEC core topic areas.

8. Medical School policy development to favor primary care interest, including admissions policies, admissions committee membership, and addressing the hidden curriculum (Pipeline)

Evidence Summary

In the 2016 ADFM survey, only 20% of Department Chairs reported that Primary Care or Family Medicine was specifically included in their medical school mission statement, and 30% reported their admissions committee had a specific charge to seek out applicants interested in primary care careers. Although more medical schools have been adding a social mission, this is not always connected to the admissions process and there is little evidence available to date

[56] Prunuske J et al. Extent and Methods of Public Health Instruction in FM Clerkships. Fam Med 2014;46:544-8.
[57] Ewigman B, Davis A, Vansaghi T, et al. Building Research & Scholarship Capacity In Departments Of Family Medicine: A new joint ADFM-NAPCRG initiative. *Ann Fam Med*. 2016;14(1):82–83. https://dx.doi.org/10.1370%2Fafm.1901

about any impact this connection yields.[58] There is evidence that in general, higher institutional NIH funding is associated with less support for family medicine and a lower proportion of students choosing family medicine.[59] In a 2012 survey, Departments of Family Medicine were less likely to have an admissions preference for primary care interest if private (6.9% private vs 33% public, *P=0.010*).[60]

The hidden curriculum refers to informal aspects of medical education, which are known to influence specialty choice. In one of the first studies of its kind, 95% of fourth-year students at a university medical center reported hearing negative criticism of primary care, after which 39% of those who were initially interested in family medicine chose it.[61] More recently, 1554 fourth year students were surveyed from 20 medical schools, and students who heard "badmouthing" of primary care were significantly less likely to choose it.[62] However, those with a greater number of positive experiences in primary care clerkships had an increased likelihood of practicing primary care.

Success Stories

There are several tools which can help predict if a student will enter family medicine that institutions might consider using, for example a survey and single-item screen developed at the University of Washington.[63] The vision statement at the College of Medicine at NEOMED, which has had relative success in producing primary care and family medicine graduates, is as follows: "We aspire to be a national leader in community-centered medicine, recognized for challenging and empowering its students and faculty to be leaders of transformational change to further the health of Ohio communities and address Ohio health care challenges." The University of New Mexico has also implemented innovative programming aimed at revising admissions policies and serving the community, such as the Rural and Urban Underserved Program (RUUP).

New Programs, Challenges or Barriers

The Keck School of Medicine at USC implemented a Primary Care Initiative to change the primary care culture and effect the numbers of primary care graduates. The Department of Family Medicine at Georgetown University School of Medicine has formed a task force to develop policies and procedures to address specific incidents of note reported by students, residents or faculty, as well as a plan for communicating and working with executive leadership on implementing best practices. Specialty related data from the 2019 AAMC Graduation Questionnaire (GQ), and a 2018 and 2020 Social Circle of a Medical Student survey of MD and DO students will be examined for any trends that might inform further investigation or intervention.

[58] Ellaway, R. H., Malhi, R., Bajaj, S., Walker, I. and Myhre, D. A critical scoping review of the connections between social mission and medical school admissions: BEME Guide No. 47. Med Teach. 2018; 40(3): 219-226.
[59] Mainous, A. G., III, Porter, M., Agana, D. F. and Chessman, A. W. Institutional NIH research funding and a culture of support for family medicine—their relationship to family medicine specialty choice. Fam Med. 2018;50(5):369-371.
[60] Heidelbaugh J, Cooke J, Wimsatt L. Opportunities for Medical Student Engagement with Family Medicine. Fam Med 2013; 45(7): 484-91.
[61] Hearst N, Shore WB, Hudes ES, French L. Family practice bashing as perceived by students at a university medical center. Fam Med 1995;27(6):366-70.
[62] Erikson CE, Danish S, Jones KC, Sandberg SF, Carle AC. The role of medical school culture in primary care career choice. Acad Med 2013;88(12):1919-26.
[63] Kost A, Cantone RE, Schneider B, Sairenji T, Palmer R. Validation and Comparison of a Brief Instrument vs a Single-Item Screen to Predict Entry to Family Medicine at Matriculation to Medical School. Fam Med. 2018;50(9):672-678.

9. Addressing Medical School Educational Debt with Scholarships, Tuition Waivers, and Loan Repayment Programs (Payment Reform)

Evidence Summary

In the 2019 ADFM survey 70% of Family Medicine department chairs reported sharing information with medical students regarding student debt, loan repayment and scholarships during FMIG events. However, only 11.5% included National Health Service Corps or other loan repayment programs, despite the NHSC program having a proven track record for more NHSC student scholars choosing Family Medicine. High educational debt is known deterrent for medical school graduates from choosing primary care careers. Students from relatively lower income families are more strongly influenced by debt.[1] An independent global commission found that the average cost per medical school graduate is $113,000 and $46,000 for nurses, highest in North America and lowest in China. This commission suggested that medical school accreditation should include accountability for social equity in admissions, scholarships for disadvantaged students, curricular exposure to work with disadvantaged communities, and policies that promote graduates serving in underserved areas.[64]

There are more than 67 federal and state loan forgiveness, repayment or scholarship award programs available to students.[65] Primarily state scholarship programs stipulate commitments from medical students to practice medicine in a medically underserved areas (MUAs) following medical school and completion of a primary care residency program. Reducing medical student debt may be effective in promoting a larger primary care physician workforce. A 2009 study by the Robert Graham Center revealed that participation in NHSC loan repayment programs was associated with a high likelihood of choosing Family Medicine as a career.[66] NHSC scholars had much lower average debt. Participation in the NHSC scholarship program was associated with a quadrupling of the odds of choosing primary care and family medicine careers.

The disparate salary ratio of primary care physicians to specialists also plays an important role in student choice. Altaram Institute data analyzed from 1985 to 2010 demonstrated that primary care choice fell as income for primary care physicians fell from 0.78 of specialty physician income to 0.5. While experiencing similar lows over the same time frame, Canada has maintained 0.83 ratio of primary care to specialty income and boosted the percentage entering family medicine to 40%.[67]

Success Stories

At Texas Tech University Health Sciences Center, a Family Medicine Accelerated Track waives 1-year of tuition for medical students committing to Family Medicine. The Arizona state legislature provided additional funds to the University of Arizona to offer tuition waivers or scholarships to encourage medical students to choose careers in primary care in HPSA

[64] Frenk J, Chen L, Bhutta ZA et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. The Lancet 2010; 376(9756):1923-1958.

[65] AAMC. Loan Repayment/Forgiveness and Scholarship Programs. Accessed March 21, 2017 at https://services.aamc.org/fed_loan_pub/index.cfm?fuseaction=public.welcome&CFID=1&CFTOKEN=94EE7296-A604-9110-D9144E997955283E

[66] Specialty and Geographic Distribution of the Physician Workforce: What Influences Medical Student and Resident Choices? The Robert Graham Center: Policy Studies in Family Medicine and Primary Care . 2009: 1-82. Accessed August 1, 2019 at https://www.graham-center.org/dam/rgc/documents/publications-reports/monographs-books/Specialty-geography-compressed.pdf

[67] Kruse J. Income Ratio and Medical Student Specialty Choice: The Primary Importance of the Ratio of Mean Primary Care Physician Income to Mean Consulting Specialist Income. Fam Med 2013;45(4):284-284

(rural/urban underserved) and with an obligation to practice in a HPSA for years equivalent to the amount of time students receive support. Newly graduated doctors from four Michigan medical schools in the MIDOCs Consortium (Central Michigan University, Michigan State University, Wayne State University, and Western Michigan University Homer Stryker, MD, School of Medicine) have an opportunity to reduce their medical school loans by $75,000 in exchange for working in underserved areas, thanks to an innovative state-funded program called MIDOCs, supported by a $5 million appropriation by the state Legislature in Fiscal Year 2019. The program offers up to $75,000 in loan repayment to each MIDOCs physician in exchange for a two-year, post-residency commitment to practice in a rural or urban underserved setting in Michigan. MIDOCs will add select Graduate Medical Education residency slots in medically underserved areas of Michigan.

New Programs, Challenges and Barriers

The Ohio State University Wexner Medical Center welcomed its first class of 3-year Primary Care Track students in 2017 with acceptance into the OSU Family Medicine Residency Program on graduation. The College of Medicine at NEOMED has started an Accelerated Family Medicine Track to complete medical school requirements in three calendar years and enter a Family Medicine residency at a NEOMED affiliated hospital. The Department of Family Medicine at Penn State Hershey Medical Center has a similar 3+3 program.

10. Implement a Student Choice Strategic Plan in each Department of Family Medicine with SMART goals aligned with the America Needs More Family Doctors 25x2030 Student Choice Collaborative (Pipeline- Medical School Culture)

Evidence Summary

In the 2016 ADFM Annual Survey, 96% of Department Chairs reported interest in a shared playbook of best practices for departmental strategic planning to increase student choice of Family Medicine (Appendix A). Chairs were further responsive at ADFM conference breakfast and lunch discussions and the ADFM listserv on their student choice efforts, most sharing that they did not include these efforts in their strategic plans, but those who routinely included it were willing to share examples (See Appendix B).

Success Stories

At the University of South Florida, a clinical campus for USF Morsani College of Medicine 52 students are recruited and selected by their own committee for the MD SELECT program. It includes a special curriculum on leadership development. The Department of Family Medicine had a strategic plan goal for increasing student choice for Family Medicine for 2016-2017:

1. Primary Care Growth Plan – plan developed with initial implementation on approach to increase # of USF SELECT students going into family medicine
2. Joyful Clerkships – all spots identified & positive experiences - (design & implement evaluation process & then look for best practices and replicate & spread)

That includes creating a set of measures tracked monthly at core meetings and on the department visibility board.

New Programs, Challenges and Barriers

At the University of Arkansas for Medical Sciences (UAMS), 33 senior medical students (out of 172) matched in Family Medicine in 2016, up from 30 in 2015, 24 in 2014 and 18 in 2013, representing an 83% increase in the number of UAMS graduates who chose a career in Family Medicine. The UAMS Department of Family Medicine used a 5-year HRSA pre-doctoral grant to interest more medical students in Family Medicine. The team used a variety of strategies to accomplish this success, including:

1. improvement in several educational programs
2. enhancement of the image of Family Medicine within the medical school
3. Support for interested students
4. Marketing to students and their families.

This has been a part of the department mission for some time. Unfortunately, the associated grant funding ended and the department has had some setbacks. 26 students matched in Family Medicine in 2017.

APPENDIX A: Worksheet to Guide Discussion on Departmental Strategies to Increase the Primary Care Workforce

A. Initial Considerations:
   1. Define the local/regional/state need.
      How many PCPS are needed? Over what time period?

For each strategic pillar below (Pipeline/Process of Medical Education/Practice Transformation/ Payment Reform) *Keep in Mind Difficulty, Resources & Partners*
   1. Where can you make impact?
   2. How difficult will it be to make impact?
   3. Do you have the right people? Resources?
   4. Who are your partners? Who do you need as an ally or collaborator to be successful?

B. Discussions Related to the Four Pillars for Workforce Reform

PILLAR: PIPELINE

Student Characteristics and Likelihood Ratio for choosing a Family Medicine Career*

Positive	Negative
Born in rural county 1.84	Male 0.91
Married 1.47	High Income expectation 0.54

Pre-Medical Stage
1. Do you have STEM programs with high schools?
2. Do you have a linkage with College pre-med majors that:
a. Exposes students to see the role and satisfactions of PCPs.
b. creates personal relationships with PCPs?
c. opportunities for research?
d. offer helpful clinical experiences?
3. Capture students' experiences with their own PCP.

Medical School Stage
1. Culture
   a. Is the school's mission inclusive of valuing PC? How to change?
   b. Are there –ive attitudes and behaviors toward primary care from other disciplines? How to combat?
   c. Do the DFCM values align with the school's mission? The health system's mission? Where are the win-wins?
2. Admissions Committee
   a. Are Family Physicians on the admissions committees? Do they influence decisions on applicants?
3. Department of Family Medicine
   a. Engaged with students? In what way? How effective?
   b. How respected?
   c. Has seat at strategic leadership table?
   d. Enjoys strong collaborative partnerships with primary care specialties?

Residency Stage

1. Number of GME positions for Family Medicine? Are there enough?
    a. How to increase? -new programs at hospitals with no GME
        -Community Partner to fund
        -Expand at Hospital
2. GME financing reform?
    a. Local & Federal

PILLAR: PROCESS OF MEDICAL EDUCATION

Medical School Characteristics and Likelihood Ratio for choosing Family Medicine Career*

Positive		Negative	
Public Medical School	1.77	Student debt	
Rural Medical School	1.38	> $250K	0.72
Title VII funds medical school	1.12		
Medical School Community related	1.20		

Medical School Stage

1. Curriculum
    a. Clerkship experiences: Are they present? How relevant? Transformative? Excellent? Meets student's needs
    b. Do you offer meaning-filled offerings, address social issues on national and local level?
    c. Skill building offerings that addresses the fundamentals of doctoring
    d. Niche offerings—global & underserved health? health policy? sports medicine? leadership skills?

2. Experience with Community preceptors?
    a. Positive or negative? How to address? Make more impactful?
    b. How to showcase outstanding community preceptors?
    c. Mentorship programs?

3. Experience with Family Medicine residents.
    a. What sort of residency experience does a student see?
    b. What do the resident's communicate to students?
    c. Any Mentorship program? How effective?

Residency Stage

1. Training Program specifics
    a. How strong is reputation? What are the strengths and weakness from student perspective? What needs to change?
    b. Faculty: Strength of ? Satisfaction? Enthusiasm for the work?
    c. Resident Satisfaction/Contentment

d. Resident readiness for practice/stepping on to next stage in career?

e. Scope of practice modeling

f. Hospital /Culture—how is Family Medicine viewed by Administration and specialty colleagues.

2. Curriculum

a. FMC experience—PCMH features;

b. Core offerings of required experiences—how effective? Performance areas needing improvement.

c. Niche offerings-- global & underserved health? health policy? sports medicine? leadership skills? Fellowships

PILLAR: PRACTICE TRANSFORMATION

What does the student observe and experience in the office?

1. Physician Experience of Family Practice

a. Lifestyle management of professional & personal

How well managing the work-life balance?

b. Joys of practice & Physician satisfaction in an environment of change

Are Physicians experiencing burnout or role modeling resilience/mindfulness?

c. Learning in practice

Role model enthusiasm for learning and discovery in practice?

d. Value of continuity in the Health System

Exposure to value of continuous patient relationship?

e. Physician-Patient relationships: Gratitude

Experience of gratitude of patients toward the family physician?

f. Scope of Practice--Diversity

2. Transformed Care Models & Outcomes of Care

a. Delivery of care: *Check list "How well are these implemented?"*

i. Patient Centered
ii. Team based care
iii. Comprehensive care
iv. Data driven/Risk Adjusted Population Health
v. Determinants of Health incorporated
vi. Optimized Technology
vii. Procedures
viii. Scope of practice

b. Patient Safety & Quality of Care Outcomes

How well achieved? Transparent Metrics?

c. Change engagement

Managed Well?

PILLAR: PAYMENT REFORM

1. Federal & State Advocacy

"Engaging in the national conversation with AAFP and partnering organizations?"

a. Medicare Programs
b. MACRA
c. GME reform
d. Federal Loan Repayment Programs
   i. NHSCorps loan repayment 5.29*
   ii. NHSCorps Scholarships 4.47*

2. State & Local Advocacy

a. State Initiatives

i. Medicare Payment Reform
ii. Education for Primary Care payment
iii. PCMH incentive payments
iv. State Loan Repayment Programs

b. <u>Local Health System Initiatives</u>. "What is being done or should be done on these concerns?"

i. Support of new practice infrastructure from health system in the PCP office
ii. Conversations about Shared Savings / Funds flow
iii. Loan Forgiveness for starting physicians
iv. Compensation model conversations
   -Average Base Compensation for Salary
   -Quality of care incentive payments
v. Family Medicine role in the Health System?
   -Value added? Alignment?

APPENDIX B: Best Practice Guide Summary

BEST PRACTICE GUIDE

FOR STRATEGIC PLANNING TO INCREASE STUDENT CHOICE OF FAMILY MEDICINE

Developed by the ADFM Education Transformation Committee as a project of the Family Medicine for America's Health Initiative

PROJECT PURPOSE

The purpose of this project is to:

1. Provide evidence-based best practice resources for departments of Family Medicine regarding increasing student choice of Family Medicine careers
2. Provide a virtual community to share student choice resources for CAFM stakeholders
3. Provide a living repository of success stories and evidence-based strategic planning for Family Medicine departments.
4. Provide annual goals and objectives to the ADFM Education Transformation committee to support 25x30 activities

SUMMARY OF RECOMMENDATIONS

#1
Early and longitudinal community-service, community-based learning experiences with Family Medicine residents and faculty

#2
Longitudinal clinical Family Medicine precepting experiences including continuity of preceptors, continuity of care, and continuity of patient interactions

#3
Longitudinal one-to-one mentorship relationships with Family Medicine physicians

#4
Specific recruitment and engagement activities directed toward medical students, pre-medical and pipeline students Under-Represented in Medicine (URM)

#5
Increased exposure to underserved patient populations, including urban, rural, immigrant, refugee, asylee, and international health populations

#6
Leadership and innovation in curricular development on social determinants of health

#7
Engage students in practice-based research on health disparities and social determinants of health with longitudinal Family Medicine mentors

#8
Medical School Admissions Committee membership, policy development to favor primary care interest

#9
Addressing Medical Student Debt with Loan Repayment Programs

#10
Implement a Student Choice Strategic Plan in each Department of Family Medicine with SMART goals aligned with the 25x30 initiative

powered by PIKTOCHART

APPENDIX C: Department Chair Responses

9/27/16 Listserv query sent to ADFM
Fellow chairs,

The ADFM Education Transformation Committee is partnering with the AAFP Education Division and Family Medicine for America Health Workforce team to facilitate moving the needle on medical student choice for family medicine (one of ADFM's goals is to increase the percentage of medical students entering into primary care). At the 2015 ADFM Winter Meeting during one of the breakfast roundtables we learned that one department out of about 20 at the table had a written strategic plan that included specific tactics to increase the number of medical students choosing family medicine.

As a first step, we would like to know:
1. Does your Dept have a goal of increasing student choice for family medicine in your written strategic plan?
2. If so, would you send us a copy of that section of your strategic plan?

Please respond to michelle.roett@georgetown.edu. We appreciate your responses.

Michelle Roett, MD, MPH, FAAFP, Project Team Leader, Student Choice Strategic Planning, Family Medicine for America's Health; member, ADFM Education Transformation Committee
Phil Diller, MD, PhD, Chair of the ADFM Education Transformation Committee
Christina Kelly, MD, Leader, Workforce Education and Development Team, Family Medicine for America's Health
Jay Fetter, MSA, Operations Manager, AAFP Medical Education Division; member, Workforce Education and Development Team, Family Medicine for America's Health.

Summary Data Collected

	Strategic Plan/Outcomes if available	Contact Person
Medical University of South Carolina	Strategic Plan to become a top 10 producing school for Family Medicine by 2020 (of note AAFP is not producing a top 10 list this year). 15% of graduates are matching in Family Medicine. Internal goal of 20% right now as we think that is achievable in the near term (5-7 years), 40% would be a huge reach.	Terrence Steyer, MD
Ohio State Mary Jo Welker, MD	Starting a 3-year curriculum in 2017 for targeted students. Strategic planning meeting August, 2016 in which large discussion on Leadership	Kristen Rundell, MD Co-Director, Family Medicine Clinical Track Kristen.Rundell@osumc.edu

	Opportunities with New Medical Student Curriculum 1. Small Group Facilitators 2. Longitudinal Practice Facilitators 3. Portfolio Coaches 4. Patients Within Populations 5. Advanced Clinical Skills 6. Advanced Competency Tracks 7. Expert Educators 8. Program Directors	
University of Arkansas for Medical Sciences (UAMS), College of Medicine	33 senior medical students (out of 172) matching in Family Medicine in 2016, up from 30 in 2015, 24 in 2014 and 18 in 2013. This represents an 83% increase in the number of UAMS graduates who chose a career in Family Medicine over the past 3 years. Used a 5-year HRSA pre-doctoral grant to interest more medical students in Family Medicine. The team used a variety of strategies to accomplish this success, including: 5. improvement in several educational programs 6. enhancement of the image of Family Medicine within the medical school 7. Support for interested students 8. Marketing to students and their families. This has been a part of the department mission for some time. We are currently writing our strategic plan for the next five years. In that plan, we will include maintaining and improving a high-level of students choosing Family Medicine.	Daniel Knight, MD
University of Mississippi Medical Center	Goal #7 – Increase number of Medical Students choosing Family Medicine Increased FM involvement in the M1M2 preclinical years Redesign 4th year as a FMAT or advanced year	

	Take a lead in teaching students about ambulatory care, population health, PCMH Remain active in MS Rural Physicians Scholarship Program and the Office of MS Physician Workforce initiatives Design longitudinal educational programs for primary care exposure	
University of Washington	1. To improve the health of public in WWAMI region by increasing the number of UWSOM students who enter family medicine residencies. Metric for Goal 1: By the end of academic year 2015-16 UWSOM will be among the top five (top three by end of 2018-19) medical schools recognized by AAFP for the highest percent of students (three year rolling average) going into family medicine residencies. a. **Sub Goal 1a:** Engage UWSOM and promote strategies including admissions policies directly aimed at increasing students interested in family medicine / primary care. UWDFM will continue to support the faculty who serve on the admissions committee in any capacity. b. **Sub Goal 1b:** Emphasize programs for students who are interested in family medicine and practicing in rural and other underserved settings. c. **Sub Goal 1c:** Our programs will expose all students, regardless of specialty choice, to family medicine and how it functions as the	Paul James, MD

	foundation of our health-care system. 2. UWDFM Medical Student Education Section will develop new and innovative models of medical student education, including more sites, more use of informatics, increased use of simulation, and additional use of longitudinal integrated clerkships such as TRUST and WRITE will be developed and implemented. 3. Provide support for quality education at regional sites. MSE will seek to actively engage the WWAMI campuses to enhance collaboration across all courses and programs. 4. Emphasize interprofessional integration in educational programs and settings. 5. Nurture Scholarly work that assesses and studies goals 1-5. 6. Decrease dependence on HRSA grants.	
University of Utah Michael Magill, MD	No department strategic plan specific to medical student increases but Medical Student Education division (Karly Pippitt) has set goals. Long term goals: 1. Increase number of medical students choosing family medicine to 25% 2. Double the number of students participating in FMIG and PCP 3. Increase the number of preceptors by 30% 4. Double the faculty in Medical Student Education (10) We have not set a deadline for these or developed more of a plan for how to get there. We currently do not have a specific strategy to address this, but we are optimistic given many changes to the clerkship (expansion to 6 weeks, ability	

	to allow students to choose 3 weeks rural and 3 weeks urban or 3 weeks at 2 different sites or 6 weeks in one location – previous option was 4 weeks in 1 location), that we will see a small bump in students choosing FM. We are working on reaching out to students more and developing more of a mentoring relationship. This summer, we created our "reason we exist" - *To inspire and mentor students to champion family medicine* – this goes for all faculty and staff within MSEFM.	
University of South Florida Morsani College of Medicine William Miller, MD	We do have a goal for increasing student choice for FM in our strategic plan for this current year. Note: we are a clinical campus for USF Morsani College of Medicine & our 52 students are recruited and selected by our own committee and our program is called SELECT as it has a special curriculum on leadership development. The wording in our plan is: **<u>USF-SELECT</u> – Katerina Valavanis with Davida Leayman** Ø Primary Care Growth Plan – plan developed with initial implementation on approach to increase # of USF SELECT students going into family medicine - Julie Dostal with Katerina Valavanis Ø Joyful Clerkships – all spots identified & positive experiences - Katerina Valavanis with Davida Leayman (design & implement evaluation process & then look for best practices and replicate & spread) You'll notice that this year's strategic plan (we do them each year so really called "strategic planning with yearly priorities") calls for developing a plan. That includes creating a set of measures that we will track monthly at core meetings and on the department visibility board.	

Louisiana State University (Mary Coleman, MD)	The Department of Family Medicine at LSU, in an effort to increase student interest in FM, set as one action item in writing from a faculty retreat the following: Increase exposure of FM to L1 and L2 students. The action items have resulted in: 1. Creation of elective dermatology workshop for L2 students sponsored by the Department of FM. 2. Creation of an elective nutrition course for L2 students sponsored by Department of FM. 3. Continuation of interprofessional care management course for diabetic patients sponsored by Department of FM (including L2 med students) 4. FM Resident volunteers as preceptors at LSU Student run free clinics. 5. FM Resident volunteers as small group leaders for L2 students in physical diagnosis.	

No strategic plan:

1. University of Kansas School of Medicine (Rick Kellerman, MD)

We have a goal of increasing student choice, but do not have it written down in a strategic plan.

2. University of Wisconsin (Val Gilchrist, MD). No
3. University of Illinois College of Medicine at Rockford (Inis Bardella, MD)

Our Department at The University of Illinois College of Medicine Rockford is in the midst of developing a new strategic plan. At this phase we have a core goal about increasing student interest in family medicine. By the end of December we should have specific objectives and strategies. If you are willing to remind me I would be happy to send this when completed.

4. Brody School of Medicine at East Carolina University (Chelley Alexander, MD)

We are #4 in the country as rated by the AAFP for percent of students entering family medicine. (I believe their annual article ranking departments comes out October 6th – Annals of FM? I think) As such, we do not have a strategic plan for this, but rather aim to keep doing what we are doing. You might think about also reaching out to the top 10 or so departments to see what they currently do that works. I think what works for us is a huge presence in the first and second years of medical school. We do most of the teaching in terms of physical diagnosis, etc. We also have a large presence on the admissions

committee, and a strong FMIG supported by money from our local North Carolina academy.

Let me know if you need more info.

5. Medical University of South Carolina. (Terrence Steyer, MD)

6. Western Michigan University (Allan Wilke, MD). In the process of developing one
7. Loyola University Meidcal Center and Stritch School of Medicine (Aaron Michelfelder, MD)

Our department does not have increasing student choice as part of strategic plan. But we want to!! Would you mind sharing with me any plans that come your way?

8. Marshall University JCE School of Medicine. (Stephen Petrany, MD).
   At Marshall Family Medicine we are constantly working to increase medical student knowledge of Family Medicine and recruit quality students to our specialty. We meet frequently (faculty, residents, and students) to discuss strategies and implement creative ideas that support that goal. However, we do not have a formal document that outlines a specific approach. These efforts remain flexible and responsive to fluid student interests and needs. To be honest, I am not sure that having our ideas formalized in a written strategic plan would improve upon our success.