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My Vision for Family Medicine

Yeri Park, MD

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It is a busy evening in the emergency room. I walk through the eerie corridor with the loud beeps of the IV machines ringing in my ears; I arrive in the room of my next patient being admitted. I introduce myself with the same sentence, "Hello, I'm Dr Park. I am a resident who will take care of you tonight. I work with your family doctor." With that sentence, my patient's eyes brighten. Eyes that were once filled with uncertainty and fear of being admitted to the hospital, immediately change to relief knowing that I was someone who worked with *their* doctor. This type of encounter is common in our training. Many patients tell me that they have known their primary care physician for numerous years—their family doctors knew everything about their health, took care of their children, cousins, parents, and next-door neighbors. These patients trust their primary care doctors (most of whom are my faculty members) and in turn also trust me to take care of them. Through long, caring relationships, family physicians provide a sense of comfort, trust, and reassurance, which I find to be rewarding and attractive aspects of our field.

As I complete my final months in residency, I am excited to envision my career as I reflect on my own training. Did I create that trust in my patients? What continues to inspire me for my future practice and the future of our field? When I applied to residency, my goal was simple: become a family physician who would provide excellent care and advocate for my patients. Learning patient care came with time, however it was the following three aspects that I learned from my faculty that continues to bring me joy in our field similar to the day I applied to the Match.

Full Scope

As a resident, I am inspired by faculty members who practice full-scope family medicine. Our family medicine training should continue to encourage exposure to a variety of experiences including pediatrics, maternity care, and procedures, with the goal of achieving competency in these areas, allowing incorporation of this knowledge into future careers. There are fewer family physicians providing pediatric and maternity care despite a need in rural and underserved areas.[1,2] Procedures performed by primary care physicians also continue to decrease. These trends will lead to a decline in exposure to clinicians who practice with breadth of skills, leading to a cycle in which trainees cannot imagine themselves in full-spectrum practice. While factors such as lifestyle choices and area of practice will ultimately play a role in a trainee's decision to provide comprehensive care, continued exposure to physicians with these skills throughout residency training will allow residents to build confidence as well as competence when considering incorporating these aspects of practice into their future careers. Importantly, recruiting faculty members who practice full-scope family medicine and model the range of possibilities within family medicine practice will allow residents to see themselves in such roles.

Adaptability

I am inspired by how faculty members understand and can change health systems. Society's need for physicians will continue to change, and in order to meet these needs,

From the Lawrence Family Medicine Residency, Lawrence, MA.

understanding health systems should be emphasized. With the opioid epidemic, physicians learned and began to provide medications for opioid use disorders. The COVID-19 pandemic entirely changed our norm of how we practice medicine to include modalities such as telehealth. These two examples were made possible because residents and faculty developed innovative ideas together to meet the needs of our patients, utilizing knowledge of health systems to implement change. Ideas remain simply ideas if they cannot be put into action. Innovative ideas should be supported, and the development of skills to incorporate these ideas into our current systems will allow family physicians to be at the frontline of medicine.

Community Involvement

Finally, I am inspired by faculty who actively engage with our community, not only in hospitals or clinics, but in homes, long-term facilities, shelters, streets and local organizations. Our patients' zip codes determine the outcome of their health to a greater extent than genetics or biology; disparities in health care exist with worse health outcomes, especially in people of color and low socioeconomic status. Learning about social determinants of health is not enough. Family physicians are not only physicians for individuals but we are physicians for our communities. Community engagement and participation should be considered an essential part of our training to become true advocates for the population that we serve, and we should assist in implementing upstream ideas together with our community members to improve their health.

The Future

The new Accreditation Council for Graduate Medical Education (ACGME) guidelines will ask many questions about what and how to teach future family physicians. Breadth of care and training to competency, understanding of health systems and community engagement are aspects of family medicine training that should be considered essential components in the training. In order to do so, we need faculty members with a wide variety of skills and areas of expertise, such as those who are experts at viral hepatitis and round on inpatient medicine, those who transform prenatal care to a COVID-appropriate telehealth model, to those who teach ultrasound and deliver babies. They will serve as role models of the possibility of providing full-spectrum care, share innovative ideas, and understand health care systems to implement changes based on what the population needs. These role models serve as guides for residents at work, and importantly, toward the first chapters in our lifelong careers. I hope that the ACGME revisions will provide guidelines that will train the next set of physicians broadly enough to continue to brighten patients' eyes in times of uncertainty.

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CORRESPONDENCE: Address correspondence to Dr Yeri Park, Lawrence Family Medicine Residency, 34 Haverhill St, Lawrence, MA 01841. 978-686-0090. yeri.park@glfhc.org.

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COMMENTARY

— Shaping the Future of the Specialty —

Diversity in the Family Medicine Workforce

Yalda Jabbarpour, MD; John Westfall, MD, MPH

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Racial inequality impacts the health of every community in the United States. The family medicine workforce of the future can address these racial inequalities by promoting diversity and inclusion in residency training.

How Do We Define Diversity?

Diversity in the workforce can take many forms, including racial/ethnic diversity, language diversity, cultural diversity, gender diversity, diversity in economic or rural upbringing, and family educational background (Table 1). Although the concept of diversity can take many forms, attention to racial diversity is paramount to the health and well-being of our communities.

Why Is a Racially Diverse Workforce Important?

We know that a physician's background and upbringing influences where and how they practice. Physicians raised in rural communities are more likely to work in rural communities. Underrepresented minorities (URM) are more likely to work in underserved communities of color. Medical students who are the first generation to go to college are more likely to choose a primary care career. All these factors have implications for our workforce and the health of the communities we serve. Residencies should train a workforce that can meet the unique needs of the patient population they serve. For some communities, this means addressing rural workforce shortages, for others it means addressing lack of access to obstetric care or mental health care, but for all communities in the United States it means addressing structural racism and racial inequality.

One way we can start to address structural racism and racial inequality is by looking inward at our discipline. Physicians are not immune to racial bias or stereotyping, and as the Institute of Medicine report *Unequal Treatment* demonstrated, these internal biases can lead to worse outcomes for patients of color.[1] In addition, multiple studies have shown that patient/provider racial concordance leads to better patient-provider communication, better adherence to medical advice, and higher patient satisfaction.[2,3] As a discipline, we have an opportunity to influence racial inequalities by fostering a family physician workforce where everyone is represented and valued.

Where Is Family Medicine on the Path Toward a Racially Diverse Workforce?

Although 13.4% of the United States population is Black and 18.5% of the population is Hispanic, only 7.8% of family medicine residents in 2019 were Black and 9.1% of family medicine residents were Hispanic.[5] The family medicine workforce still lags behind other primary care specialties in their representation of Black and Hispanic physicians, yet family medicine residencies are achieving higher levels of Black and Hispanic representation than some of their primary care counterparts.[4] Over the last 5 years, family medicine residencies have had a higher percentage of Black

From the Robert Graham Center for Policy Studies in Primary Care and Family Medicine, Washington, DC.

residents compared to internal medicine and pediatrics, and a higher percentage of Hispanic residents compared to internal medicine. Yet, there is work to be done given the plateau in rates of URM in family medicine residencies over this same time period (Figures 1-3). To this end there are steps we can take in residency recruitment and structure to promote the growth of a more racially diverse workforce.

Steps Toward Achieving Workforce Diversity and Health Equity

The Accreditation Council for Graduate Medical Education (ACGME) has begun to tackle the need to increase diversity through accreditation by enacting several common program requirements.[6] These include recruitment and retention of a diverse workforce and cultivating environments that are free from discrimination or harassment. Family medicine should set processes in place to not only achieve these goals but to exceed them. A recent study published in *Family Medicine* outlines steps one

Table 1: Diversity of Primary Care Workforce

	Family Medicine	Internal Medicine	Pediatrics	All Physicians	NP/PAs	NPs	PAs
% DO	16.1	6.0	4.9	8.3	n/a	n/a	n/a
% IMG	12.4	17.6	12.7	12.2	n/a	n/a	n/a
% Female	41.9	38.3	64.3	35.6	82.1*	90.2*	67.6*
% Rural**	15.1	6.0	5.7	6.8	12.2*	13.1*	10.5*

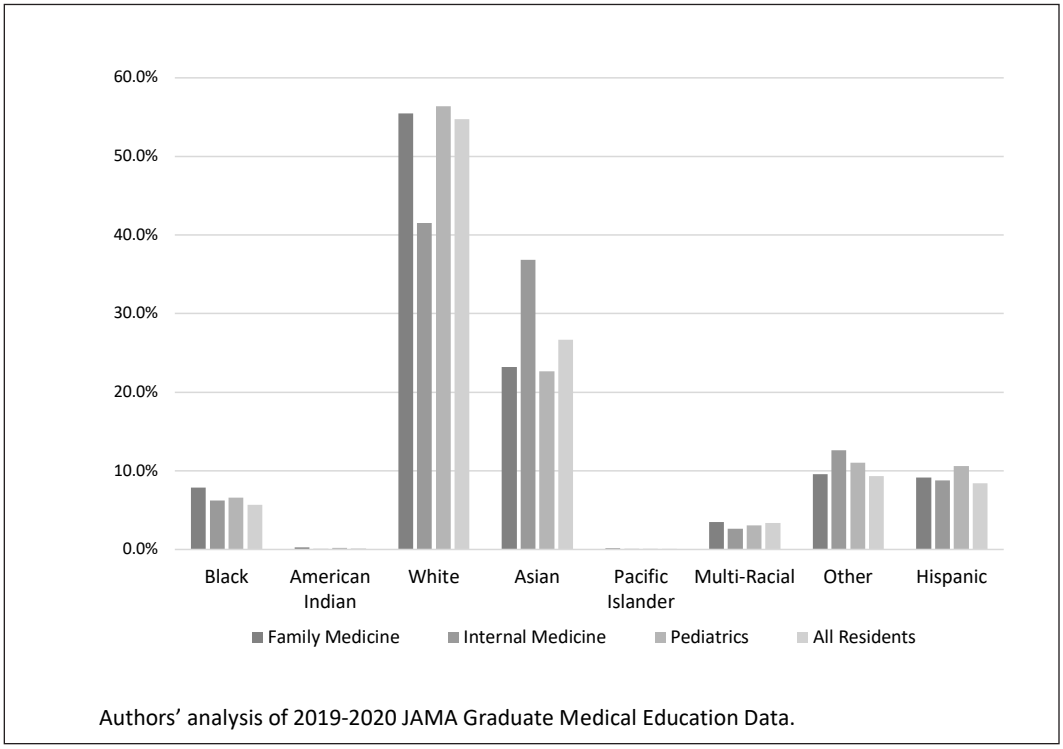
Abbreviations: NP, nurse practitioner; PA, physician assistant; DO, doctor of osteopathic medicine; IMG, international medical graduate.

Data source: 2020 American Medical Association Masterfile.

*AMA Masterfile data linked to 2020 Provider Enrollment, Chain, and Ownership System (PECOS) and National Plan and Provider Enumeration System (NPPES) data.

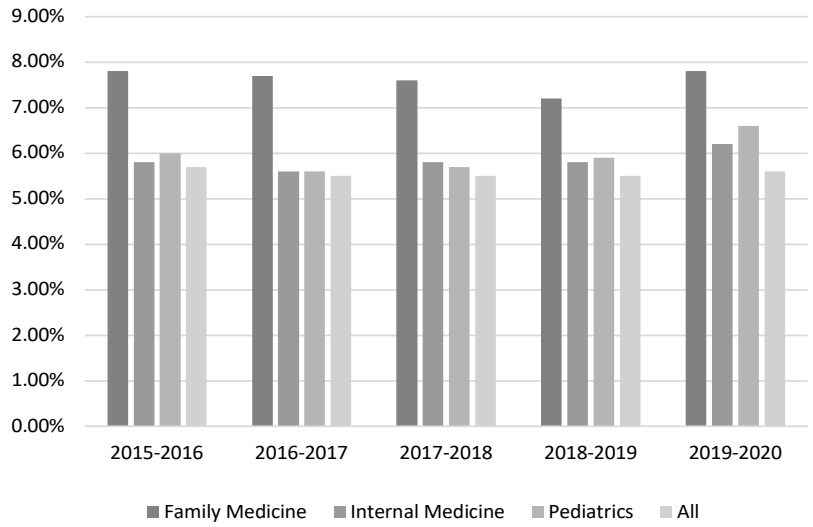
**Rural defined as Rural-Urban Continuum Code (RUCC) cutoff of 3 or below.

Figure 1: Race of Residents in ACGME-Accredited Programs, 2019-2020



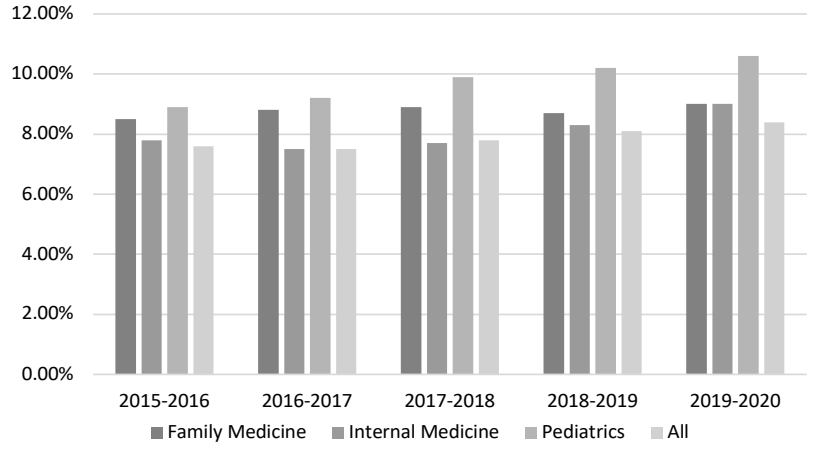
Authors' analysis of 2019-2020 JAMA Graduate Medical Education Data.

Figure 2: Trend in Black Residents Over Time, by Specialty



Authors' analysis of 2015-2019 JAMA Graduate Medical Education Data.

Figure 3: Trend in Hispanic Residents Over Time, by Specialty



Authors' analysis of 2015-2019 JAMA Graduate Medical Education Data

residency took to achieve the goal of increased diversity in their program, steps that can be adapted for residencies nationwide.[7] The first step would be to increase the numbers of URM choosing family medicine. This could be done through increasing outreach to URM communities, hiring a director of diversity in the residency to ensure diversity recruitment, revising residency interviews to be less biased, and analyzing recruitment data so that residencies can track their progress over time. The second step would be fostering an environment where diversity is valued, and residents feel that they are represented. This would mean ensuring that there are URM on faculty, pairing each resident with a mentor who reflects their culture and values, and ensuring there are processes to discuss discrimination or bias without fear of retaliation. Because every residency is unique, the goal would not be to dictate the exact interventions, but to ensure that there is implementation of a strategic plan for recruitment and support of a racially diverse resident workforce.

Improving racial diversity in our residencies is only part of the answer to achieving health equity for our patients. Although it is important to grow the numbers of URM in

residency, much of the work of diversifying the physician pipeline starts well before residency and may be out of the hands of the residencies themselves. Where many residencies may have more control is in preparing residents of all backgrounds to understand implicit bias, structural racism, and how these factors impact health. Implicit bias training has been shown to reduce implicit bias in individuals as demonstrated by lower implicit association test scores.[8] But whether these effects are long lasting or actually change behavior has been questioned, and implicit bias training done incorrectly can actually perpetuate biases. Meaningful change will require our residencies to do more than just offer implicit bias didactics. We must create venues to openly discuss racism and its effects on our trainees and patients. We must include upstander training for our residents so that they have the tools to advocate for their colleagues and patients. Finally, we must train our learners on the importance of not only the social determinants of health, but also the political determinants of health. We can no longer pretend that health care only happens within the four walls of our exam rooms. In fact, it is more obvious now than ever, that improving the health of our minority communities is completely dependent on fixing the policies that have negatively impacted their health for decades. It is incumbent upon our residencies to train a workforce that understands how to effectively advocate for change at a local, state, and national level. Community Advocacy is included in our current ACGME Milestones and must be emphasized by programs as much as patient care and medical knowledge. Physicians have always been leaders in their communities, and for the family physician of the future this means influencing policy, and not allowing policy to influence them.

Although racial inequality is arguably the most important factor plaguing the health of our communities, diversity of the family physician workforce and how it impacts community needs is not as straightforward as simply focusing on race. Table 1 outlines some of the ways in which the family medicine workforce is unique in terms of who they are and where they practice. To examine each one of these factors individually is beyond the scope of this commentary. But the philosophic constructs described here could be applied to any one of these factors. A residency must have processes in place to recruit a diverse workforce (however they define that), foster an environment of inclusion, and provide a curriculum that teaches their residents to address the diverse needs of their community and advocate for policies that impact the health of their patients.

There are over 10,000 physicians being trained in family medicine—over 4,000 new graduates per year. With the right attention to diversity and health equity, family medicine has the opportunity to truly improve the health of each of our patients, and the life of all of our communities.

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CORRESPONDING AUTHOR: Address correspondence to Dr Yalda Jabbarpour, Robert Graham Center, 1133 Connecticut Ave NW, Washington, DC 20036. yjabbarpour@aafp.org.

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COMMENTARY

— *Shaping the Future of the Specialty* —

Recruiting, Developing, and Supporting Family Medicine Faculty for the Future:

Three "T's" to Enable Achieving the Additional "C" Required of Family Medicine Educators

Stephen A. Wilson, MD, MPH; Tomoko Sairenji, MD, MS

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"Excellence is an art won by training and habituation." —Aristotle

Family medicine (FM) delivers first-contact, complex, comprehensive, coordinated care over a continuous period of time in the context of community. Learners do not leave medical school prepared to do this; the transformation occurs during residency. This is neither accident nor magic, but due to deliberate competency-based education (CBE). Hence, an additional "C"—competency for faculty in delivering CBE—becomes of paramount importance as for family medicine educators.

Competency-Based Education Changed FM Education

The advent of CBE followed by duty-hours regulations hastened the evolution of FM education to meet the changing needs of its context and community. The demands of CBE moved us past the anachronistic days of, "See one, do one, teach one." Educators had to become more than resident trainee safety guardrails with keen clinical acumen and exemplary bedside skills. "No news is good news" was no longer acceptable feedback. To meet the requirements of CBE, FM educators needed to add and develop educational skills in areas such as curriculum development, direct observation, feedback (formative and summative), scholarship, quality improvement, population health, and team-based education, many of which had not been part of their own education.

Problem

There are three main challenges posed by CBE and the evolving context of FM education: (1) faculty skills required to effectively fulfill CBE; (2) increasing number of FM residents, especially with the expressed goal of 25% of US medical school graduates choosing FM by 2030; and (3) the relative youth and inexperience of those becoming FM faculty, which will only increase as the number of residents increases.

Strategy

CBE is intentional and requires resources: time, treasure, and training. Time, for faculty to develop skills and to execute the requirements of milestone-guided CBE. Treasure, for there is a financial cost to educating, observing, and evaluating. Training, because becoming a competent educator requires skills additional to being a competent clinician.

Time. Effective delivery of CBE requires more time and trained people (faculty and administrative support) than the historical training model. The Accreditation Council for Graduate Medical Education (ACGME) describes the role of core faculty and set a ratio of one core family physician faculty, additional to the program director, for every six residents.[1] It

From Boston University/Boston Medical Center, Boston, MA (Dr Wilson); and University of Washington, Seattle, WA (Dr Sairenji).

does not, however, indicate the amount of time they should dedicate to the educator portion of clinician-educator. The Society of Teachers of Family Medicine (STFM) is finalizing "Joint Guidelines for Protected Non-Clinical Time for Faculty" to standardize this.

Core faculty should have 20%-30% time dedicated to nonclinical tasks vital for effective medical student and resident education, eg, direct observation, feedback, video review, assessment (learner and program), curriculum development, advising/mentoring/coaching, and remediation.

Faculty 3 or less years removed from residency should be 80%-90% clinical, directly seeing their own patients or precepting (directly and indirectly seeing patients with learners). Many of the founders of FM were "clinical giants." Too often program needs results in prematurely introducing junior faculty into managerial or leadership roles before their formations as physician and educator are complete. This rush is a disservice to them and their learners, and can result in faculty attrition due to anxiety, burnout, or a sense of imposterism.

How do we enable the thing most vital to FM education: recruiting, developing, and retaining our best and brightest as faculty? In addition to describing the work of faculty and providing them time to do it, we do this by investing additional treasure and supporting their training.

Treasure. Leaders in FM education frequently recount stories of losing their most promising faculty prospects to private practice due to salary and/or debt issues. According to the American Association of Medical Colleges, the 50th percentile indebtedness of 2020 graduates was $184,009 (10th percentile, $123,692; 90th percentile, $230,878). Other disciplines have salary gaps between clinical and academic practitioners; however, for FM there is an additional gap of FM vs specialist compensation. For some the gap is thrice widened given the propensity for academic practices to be in areas with higher proportions of uninsured or Medicaid patients. This occurs concomitantly with call that often carries an enhanced intensity related to managing residents of variable and developing abilities, volume, and patient demographics. As such, faculty salaries should be reasonably commensurate with their local market. Loan forgiveness should be available where faculty patient practice demographics are consistent with those in federally qualified health centers. This could come from federal, state, local, and health systems, all entities who benefit from faculty and resident work in this population.

In addition to aiding the salary aspects of recruitment and retention, financial support is also necessary to equip faculty with adequate training.

Training. Faculty skills training should be required, both initially and ongoing. A "see one, do one, teach one" approach is as inadequate for the educator training side of clinician-educator as it is for the clinical side.

Being FM faculty goes far beyond precepting and clinical consulting. Much has been written about the core domains, competencies, and skills required to become a competent FM faculty.[2-7] Within each of the typically included core domains for clinician-educators (Table 1) are a number of competencies. While it is outside the scope of this commentary to lay out a comprehensive list, here are two examples. Competencies in the domain of teaching include developing a climate conducive to learning; actively engaging learners; assessing learner's knowledge, skills, and attitudes; facilitating learners' educational goals; providing effective feedback; and reflecting on and assessing one's own teaching competence. Each of those in turn has demonstrable actions or principles.[8] Competencies under professional development include leadership; administration and management; and communication, both written and oral.

Many excellent faculty prospects are either dissuaded from or desert an educator path due to personal concerns about lack of faculty skills, both academic and clinical. Despite that, FM faculty are getting younger.[9] STFM membership increased 8% from 2017 to 2020 with members under 40 years of age rising from 28% to 39%.[9] This suggests FM educator is a first-line career pathway, no longer reserved for those who pursue private practice prior to becoming faculty. The youth movement is a by-product of interest and need for more faculty given the increased number of residency programs and the increased requirements to effectively execute CBE. However, faculty attrition

Table 1: Core Domains of Clinician-Educators

• Teaching and lifelong learning
• Professional development
• Scholarship and research
• Clinical skills and care delivery

is high; only 43% of first-time assistant professors at medical schools are in the same place 10 years later.[6]

Requiring and completing adequate training might encourage high-quality graduates to choose and remain in academic careers. Part-time, early-career, structured faculty development (FD) bolsters academic skills, strengthens professional identity, and increases confidence.[6] Completion of a full-time, 2-year FD fellowship decreased faculty attrition from academia and increased faculty scholarship (peer-reviewed publications and presentations) by 67% compared to nonfellowship-trained faculty.[6]

Training in faculty skills should be required by the Accreditation Council for Graduate Medical Education (ACGME), both initially and ongoing. Given that fellowship programs, especially full-time, are few and underfunded, how could this necessity be fulfilled? The answer is that it would occur like it did for trainees; the ACGME should develop a faculty competency list and framework. These core faculty requirements could be acquired and demonstrated, for examples in FD fellowship, through a master's degree in education, or they could be part of a 4-year residency program. If those options are unavailable or infeasible, an online certificate or fellowship program could be completed during the first 2 years of being faculty. Inexpensive programs like this already exist, one example being the STFM Faculty Fundamental Programs.[10,11] This initial training should be fortified annually via dedicated educator continuing medical education that counts toward the American Board of Family Medicine's Continuous Certification process. This would encourage competency-based faculty development to routinely refine skills and incorporate new evidence from education and medical education literature.

Addressing these 3T's will help address the needs for greater numbers of more skilled faculty as the number of FM residents increases. It will also increase the ability to recruit (salary, debt load, preparation), develop (skills and professional identity), and retain (on-going training and work environment) faculty. The ACGME Family Medicine Review Committee has an opportunity to advance the recruitment, development, and support of future FM faculty (Table 2).

CBE was introduced to set expectations and increase patient safety by decreasing variance in training and increasing transparency and accountability. The roles and tasks of FM educators are substantial and growing. It will take time, treasure, and training to recruit, develop, and support FM faculty who are equally clinician and educator, and fully-equipped to deliver effective, competency-based resident education.

Table 2: Proposed ACGME Family Medicine Review Committee Revisions to Support Recruitment, Retention, and Development of Faculty

- Develop competencies for core faculty.
- Describe and set parameters for competency-based faculty development.
- Recognize programs that have faculty who have acquired and demonstrated competence in competency-based education.
- Provide guidelines for the amount of core faculty time to be dedicated to nonclinical work.

CORRESPONDING AUTHOR: Address correspondence to Dr Stephen A. Wilson, 1 Boston Medical Center Place, Dowling 5 South, Room 5309, Boston, MA 02118. stephen.wilson@bmc.org.

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COMMENTARY

— *Shaping the Future of the Specialty* —

Family Medicine Researchers—Why? Who? How? When?

Diane M. Harper, MD, MPH, MS

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Family medicine is a relationship. A relationship between physicians and their partners: patients, families, and communities. These relationships are enriched by the medical sciences, hard and soft, that we continually learn over our lifetime. Family physicians translate science to all of our partners in the belief that we can provide guidance toward better health in context of each partner's needs. Nonetheless, research not done in a primary care setting or with a primary care perspective may fail to ask the most important questions facing our partners. Why the disconnect?

Family medicine is a service profession with strong educational, organizational, and empathetic systems for health care delivery. But we do not feed ourselves well. Our discipline needs family medicine researchers to ask and answer questions important to creating a healthy population. But our research community is few in number and underfunded to answer the solvable problems we tackle with our partners. Perhaps we have not named the gap that hinders us from undertaking research as a career? We need evidence. We need research. We need commitment to continual inquiry and measured creative outcomes. This evidence is fed back into many aspects of our practice, and equally importantly to the policy level that sustains our health care delivery, our reimbursement, our teaching institutions, and our commitment to underserved populations. Having ownership of the data representing our research provides family medicine with the ability to answer the questions we need answered, to drive our own destiny at the pace and in the direction we have prioritized. How do we do this? Where are the role models?

Our most renowned ancestors of family medicine research were Curtis G. Hames and Maurice Woods, both of whom harnessed the power of quantitative data organization describing community-based populations. They both had unquenchable curiosity. They engaged in research that would change the social fabric of their communities studying questions and implementing results in communities that were often invisible to the outside world. Their inspiration continued to motivate future family medicine researchers until a collective birthed the North American Primary Care Research Group, now known as NAPCRG. This small initial group survived by sheer wit, exuberance, and fire in the belly that would not quit. They were not blessed with extramural funding and there were few established peer-reviewed journals in which to publish their work. They were not well known throughout all of family medicine, nor given wide berth in our clinical practices. We should change that!

We have evolved as family medicine researchers, recognizing that our work feeds the evidence base and understanding of our community-based practices. But we can no longer sustain our research by sheer grit alone. Many have had the crucial support of colleagues within and beyond family medicine to get through the creation and implementation of new work; others have had further formal education in research methods financed personally or through training grants; still others have had mentored fellowships that provide rigorous research training as well as career counseling and ready-made networks for launching new

From the University of Michigan, Department of Family Medicine, Ann Arbor, MI.

research initiatives. But these research opportunities, to date, have been only in a few settings, subject to private organizational funding or training grant awards To solidify our pipeline of family medicine researchers, we need a formalized process to foster and embolden family physicians to be curious, to have the freedom to ask how, why, and where, to have role models from whom they seek guidance, and have the rigorous training to be fundable scientists.

Since the 1990's, evidence-based medicine has been adopted in the undergraduate medical school curriculum and reinforced by our continuing medical education requirements. But just as clinical skills become rusty without use, the overwhelming work of clinical care and the logistics of documentation on service often smother the understanding of how evidence becomes a basis for the practice of medicine both during medical school and residency. We can change this!

The American Board of Family Medicine (ABFM) wisely added quality improvement practices to board (re)certification as a first step toward educating all of our family physicians how to collect, interpret, and act on data. This evolved into the patient centered medical home which required more data collection, and more advanced patient outcomes tied to specific interventions. Now we are at an inflection point where we must ask ourselves what is necessary in the training of all family medicine residents regarding research rigor, and what must be gained in postdoctoral experiences. We must prioritize the changes needed to enhance the quantity and quality of family medicine researchers.

For ACGME Consideration

All family medicine residency graduates must, at a minimum, and regardless of employment status, have the competency to contribute their patient experiences to shared data resources, whether that is to a reimbursement consortium's dashboard for patient outcomes, or to a research network's ongoing data collection or some future manner of data aggregation. The Accreditation Council for Graduate Medcial Education must name this requirement. This competency is increased rigor for quality assurance/quality improvement that will contribute to better patient outcomes (improving the health of the population) of the quadruple aim.[1] There must be an established shared health registry to which each family medicine residency links its clinical data, and reciprocal use of this registry for practice improvement. Residents must graduate feeling a responsibility to contribute to the data of primary care improvement.

All family medicine-trained physicians must be able to interpret data for practice improvement. The ABFM has provided the groundwork for these specific requirements. All residents must demonstrate curiosity and recognize what gaps they face in their clinical care outcomes, then be trained in a process in which they (1) act on developing an improvement goal with mentors; (2) decide on the data (clinical, survey, economic, etc) to be collected; (3) organize the data collection in a way that can be shared with others; (4) analyze the data; (5) draw a conclusion; and (5) implement their new knowledge for an improved patient outcome. This set of skills is a minimum for scholarship. Having clinical quality mentors in each program is a must. The ACGME Residency Review Committee for Family Medicine can name this requirement.

Further advancements will be optional. There will be other family medicine residents who have a fire-in-the-belly curiosity that always ask "Why?" For these residents, having a specific track could provide them with a tribe of like-minded family physicians with whom to grow. Many specialized tracks within family medicine lead to a certificate of added qualification (CAQ) with postresidency training, such as addiction medicine, brain injury medicine, clinical informatics, adolescent medicine, geriatric medicine, sports medicine, sleep medicine, hospice and palliative medicine, pain medicine and hospital medicine. Research tracks in residencies should be added, perhaps linked to schools of public health, public health departments, academic research centers, translational research groups, or even a health insurance company[2] that could provide a small taste of how to frame a question of interest, how to create sample sizes, what data must be collected, the cost of collecting the data, and how the process for interpretations are planned.

Mentors and Role Models

A list of qualifications to define research mentors and role models to foster the pipeline of primary care researchers is needed. Not all residencies will have access to such mentors, as has been seen in the limited number of bright spots of family medicine.[3] Nonetheless, we must develop this tribe of mentors. Whether in person or virtually, we must coalesce to create experiences that will allow residents full

exposure to a research-based primary care future. NAPCRG is a prime organization to convene researchers for the purpose of mentoring and seeking career guidance. Several programs shared between NAPCRG and the Association of Departments of Family Medicine promote the Grant Generating Project, the Building Research Capacity, and the Patient and Clinician Engagement Program, where new skills and colleagues come together routinely to support the research efforts of the family medicine departments in the United States and Canada. Whether on site or virtually, every residency must have access to such faculty mentors, and this needs to be clear in the ACGME faculty scholarship requirements.

Family medicine research is maturing. A congressionally-mandated study was independently completed showing the need for family medicine to produce and disseminate evidence for critical clinical and policy changes.[4-6] We need to continue to grow. As a field developing from a counter spirit to specialization, family medicine has not embraced research as a traditional activity that other established fields have. Now we must continue the hard work to expand family medicine research, developing future sets of researchers so that primary care can indeed direct the improvement of population health with excellent patient experiences at reduced costs.

We can do this! When we know that a particular clinical skill is mandatory for a resident to attain, we, as educators, figure out the solution, which often comes at a price we are willing to bear. As educators, we must also decide how to increase the minimum research skills necessary to complete residency training and offer a track for those who seek skills beyond this minimum. We must create professional pathways that allow both the fiscal support and infrastructure for faculty success after training.

Much has been accomplished in the 50-year history of our discipline. We have family medicine researchers on the United States Preventive Services Task Force to influence at a national level, practice guidelines that become clinical standards of care for patients. We have family medicine researchers occupying leadership positions in public health departments because of the breadth of understanding of community needs. We have family medicine researchers embedded in many organ-specific funded research work because there is an unattended need for the primary care lens to contribute to patient outcomes. Family medicine has taken the lead on practice-based research networks and community-based participatory research, using both qualitative and quantitative methods.[7]

Now and in the future, family medicine must continue to encourage, nurture, support, and develop our future researchers!

CORRESPONDENCE: Address correspondence to Dr Diane M. Harper, University of Michigan, Department of Family Medicine, 1018 Fuller Street, Ann Arbor MI 48105. harperdi@med.umich.edu.

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COMMENTARY

— *Shaping the Future of the Specialty* —

Leadership Development for the Future of Family Medicine:

Training Essential Leaders for Health Care

Myra Muramoto, MD, MPH; Patrick Rankin, MD, MMM; Anthony D. Rodgers, MSPH

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A key goal of residency redesign should be to include development of the future leaders of medical schools and health systems. To improve health and health care, we need to work toward having family physicians leading institutional implementation of Accreditation Council for Graduate Medical Education (ACGME) guidelines, integrating family medicine residency graduates into the workforce, and leading the changes in education, research, clinical care, and community engagement necessary to adapt and thrive in the rapidly changing world of health care.

How do we get there? The professional lifetime of family medicine residency graduates will span three to four decades. As we look that far into the future, many things are already known. The current model of US health care is economically unsustainable, intolerably inequitable, and rapidly burning out the health care workforce. The COVID-19 pandemic has shown a bright spotlight on these harsh realities and there is growing political pressure to change this unsustainable model. Because the decades ahead will present many unknowns, family medicine needs physician leaders with the vision, knowledge, leadership qualities, and skills to anticipate and navigate these unknown challenges. Future leaders will need better preparation than ever before. Leadership development must start in residency with formal leadership training, and be inspired by leaders in health care systems, community organizations, government, as well as academia.

Family medicine has traditionally focused on developing leadership for academic departments and programs.[2-5] Nationally, 15-20 department chair positions are open each year.[2] Academic family medicine is undergoing generational change in senior leadership, concurrent with increased demand for physician leaders in both academic and non-academic settings. In responding to upcoming ACGME revisions, we must embrace the role and responsibility of residency education in developing family medicine leaders for an evolving health system characterized by mergers and acquisitions, changing payment models, technology-enabled innovation in care delivery, changing patient needs and preferences, increasing emphasis on population health management and community-based care (vs hospital acute care system), and the imperative to control health care costs. We also need family physicians who are prepared and interested in shaping how academic medicine responds to health care industry changes, such as new partnerships and governance structures, hospital-owned medical groups competing with private practice, and weakening financial commitment to support residency education.

Why be concerned with preparing family physicians for leadership roles beyond academia? The current model of federal graduate medical education funding ensures that residency programs are inextricably intertwined

From the Department of Family and Community Medicine, University of Arizona College of Medicine – Tucson (Dr Muramoto); Banner Medical Group, Phoenix, AZ (Dr Rankin); and VBCARE Network, Phoenix, AZ (Mr Rodgers).

with the perspectives and decisions of hospital and health system executives. Traditional academic department leadership is evolving toward new roles and responsibilities that increasingly are hybrids of academic and health system leadership (eg, department chairs and service-line leaders). Health system and health plan leaders want innovation to reduce cost of care and improve health outcomes, but often have little awareness of how family physicians can further these goals. Moreover, as health systems focus more attention on social determinants of health, there is an important role for family physicians to build partnerships between communities and health systems. We must ensure that training and paths to leadership are open to underrepresented minorities and women so that family medicine leaders reflect the diversity of our discipline and the communities we serve.[6,7]

Family medicine residency education, with its distinctive biopsychosocial perspective of caring for patients within the context of family and community and experience across the spectrum of care, uniquely prepares family physicians for multidisciplinary and system-level leadership roles. Our training also extends beyond the walls of clinical facilities and out into the community—necessary for complex system thinking, understanding social determinants of health, impacting the health of whole populations, and effective community-based approaches to health care. Future family medicine leaders also will need competencies in information science and use of new digital assistive technologies to bridge the gap between office visits and patients in their homes.

One example of thinking broadly about family medicine leadership for the future has emerged from the Association of Departments of Family Medicine (ADFM) fellowship, Leadership Education for Academic Development and Success (LEADS Fellowship), visioning and planning summit held in November 2019.[2] Stakeholders determined a need to embrace a view of family medicine leadership that extends beyond academia to encompass leadership of multidisciplinary service lines; codeveloping and coleading interdisciplinary education, research, and clinical programs; chief medical officers and other executive leaders of multispecialty medical groups, health systems, government agencies, community organizations, and advocacy groups.

Development of leadership skills in medical school and residency are increasingly recognized as essential to delivering interdisciplinary team-based care.[8-10] Leadership curricula must also include collaboration skills as vital for team-based patient care, and interdisciplinary team-based research and education.[11,12] Others assert the need for leadership development customized for academic medicine.[13] In response, family medicine residencies have begun to incorporate leadership development into residency curricula, but these efforts have yet to achieve a clear model for preparing residents to become leaders at the highest levels. Leadership training in residency must be reenvisioned with the goal of graduating family physicians who are also pluripotent physician leaders aware of and prepared to pursue the full range of health care industry leadership roles early in their careers.

Expanding leadership training does not require adding more didactic teaching. Robust quality improvement (QI) projects serve as experiential learning opportunities for teaching leadership skills as well as meeting ACGME requirements and milestones.[14,15] Accessing and using data for QI can be a hands-on introduction to health informatics and data analytics, skills also applicable in research and scholarly projects. Collectively, these learning opportunities can all be woven together in learning population health management. Collaborating with health plans, medical groups, hospital and health system leaders can help expose residents to those in senior leadership positions. The health care industry, including academic medicine, has acknowledged social determinates of health (SDH) significantly impact health care outcomes and total cost of care. There is growing realization that physician engagement and collaboration with communities is necessary to find community-based solutions to address SDH.[16] Integrating leadership training into experiential longitudinal community-based projects can make community medicine and hands on advocacy curricula come alive.[17] These opportunities could be integrated with other advocacy, legislative, and governance activities such as participation in organized medicine at the state or national level. Finally, the practice management curriculum can teach leadership skills while meeting ACGME Milestones. Engaging residents to help lead clinical process improvement and primary care practice transformation can provide practice in applying these leadership skills in tangible ways, applicable in their own residency practice.

How should all this fit together? The future will require a longitudinal and developmental

perspective on leadership training in residency that posits a core curriculum of fundamental leadership skills most applicable to residents' stages of development and training. Interns should be members of interdisciplinary teams with opportunities to learn and practice organization and time management, communication, interpersonal and collaboration skills. Senior residents should lead clinical teams and develop skills for leading meetings, managing others, providing feedback, promoting team resilience, working with other clinical service lines, and negotiation and conflict resolution. Chief residents[3] typically have administrative roles requiring additional leadership skills such as budgeting, organizational decision-making, preparing and presenting an "ask," and representing constituents to residency and institutional leadership.

Building on a foundation of a leadership core curriculum, residency electives or focused curriculum tracks should address advanced or focused leadership skills. Residency tracks could lead to postresidency fellowship training in topically-focused areas such as health policy, community engagement, primary care research, diversity and health equity, education, clinical informatics, data science, or health care administration. Such tracks are already available in internal medicine and pediatrics. Curriculum tracks or fellowship training can also be coupled with formal education leading to additional credentials or academic degrees. Such credentials can help prepare for later career job opportunities.

Faculty development will be required to integrate such leadership training throughout residency education. To develop innovative and immersive experiential learning, faculty will need their own skills development for engaging and negotiating with health system leaders, community organizations and other external entities to create resident learning opportunities. Skills in stakeholder and conflict management also will be needed to cultivate and manage the organizational relationships surrounding resident activities.

As we contemplate the future of family medicine and re-envision residency education, now is the time to think broadly, envision creatively, and act boldly to develop physician leaders for the future of family medicine and all of healthcare. In education, family medicine educators in medical schools and residencies can drive curricular innovation to better meet the needs of patients, communities, and society, not just hospitals and healthcare systems. Family medicine researchers can bridge the gap between medical innovation and its implementation in the real world of primary care. In clinical care and administration, family physicians can help drive health system innovation and policy with a more holistic approach to meeting the needs of patients, families, and communities. In community engagement, family medicine leaders can build partnerships with public health and community organizations to find better ways to improve population health. In summary, with their distinctive training and perspective, family physicians bring unique leadership value in all the domains essential to the future of their specialty: clinical care, education, research, and community engagement. Let us inspire and prepare the next generation of family physicians to be at the center of health system change—both as leaders and as change agents.

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CORRESPONDING AUTHOR: Address correspondence to Dr Myra L. Muramoto, Family and Community Medicine, 655 N. Alvernon Way, Suite 228, Tucson, AZ 85711. myram@arizona.edu.

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