BRIEF
REPORTS

Fellowship or Further Training for Family Medicine Residents?

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BACKGROUND AND OBJECTIVES: The breadth of family medicine (FM) generates debate about the length of residency training. One argument used by proponents for lengthening training is that residents feel unprepared for practice. The objectives of our study were to (1) identify the proportion of FM residency graduates intending to pursue fellowship training and those who would have done an additional year of core residency training had it been available, and (2) determine whether an association exists between these two variables.

METHODS: We used data collected by the American Board of Family Medicine (ABFM) as part of resident certification examination application in 2014 and 2015. Data included fellowship intention, and interest in pursuing another year of residency training if it were available. We used descriptive and bivariate statistics.

RESULTS: The questionnaire was completed by 6,235 residents, of which 17.0% (n=1,063) intended to enroll in a fellowship. Overall 54.2% of residents were "not at all likely" to extend residency training, with 19.9% "extremely/moderately likely". Forty-six percent of those intending a fellowship were "not at all likely" to extend training and only 29% of those "extremely/moderately likely" to extend residency training intended to enroll in a fellowship.

CONCLUSIONS: We found a disconnect between fellowship intention and desire for another year of residency training. Desire for fellowship may be more about obtaining specific skills and expertise or additional certifications, and less about being prepared for general practice in family medicine.

(Fam Med. 2017;49(8):618–21.)

For many years, a debate has existed over the length of family medicine (FM) residency training. The discussion relates to how long it takes to equip physicians with the comprehensive skill set needed for primary care, with most discussion centering on whether training should be expanded from 3 to 4 years.[1-3] Others believe that core residency training should be shortened to 2 years, followed by optional additional training similar to the Canadian system. [4,5] Arguments for lengthening training have included the increased complexity of patient care, expanded skill sets needed for primary care practice, and contracted duty hours.[6,7] A national survey of FM residents found that 37% of respondents supported expanding training to 4 years because there is "so much to learn, so little time".[8] Some programs that have already expanded to 4-year curricula suggest that it has increased their programs' competitiveness.[9,10] Conversely, arguments against expansion include the time commitment, the delay of a physician's income, the lack of funding, and a potential decrease in the yearly number of graduates.[3,11] Proponents of a 2-year program suggest that it would be more "nimble, adaptable and cost-effective", and likely to increase student recruitment into FM.[4]

Fellowships offer a different strategy for further training. However, data is scant on the proportion of FM residency graduates who choose to pursue this option, and show conflicting results regarding this trend. One study showed an increase in fellowship completion, while another showed a decrease in graduates who pursued fellowships with Certificates of Added Qualifications (CAQ).[12,13] To our knowledge, there is no research on whether the desire for fellowship training is related to the desire for more general residency training.

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Our aim was to investigate the proportion of FM residency graduates who intended to pursue fellowships and those who may have chosen to do another year of residency, and to determine whether these two decisions are associated.

Methods

We analyzed data from the American Board of Family Medicine (ABFM) Family Medicine Certification Examination registration questionnaire from 2014 and 2015. Graduating residents complete the questionnaire when registering for the examination, usually in December through February of the final year of residency. Items on the questionnaire asked about future employment, practice type, and intention to perform procedures and provide various clinical activities. We focused on two items: "Are you planning on completing a fellowship after residency?" (yes / no / unsure), with a follow-up asking what type of fellowship if responding yes, and "If another year of residency were available in your residency program, how likely would you be to pursue that?" (not at all likely / somewhat likely / moderately likely / extremely likely). We collapsed the categories "moderately likely / extremely likely" together for analysis.

We used ABFM administrative data to gather resident demographics. We also tracked fellowship enrollment of those who intended a fellowship in 2015 to verify if they enrolled in one of the Accreditation Council for Graduate Medical Education (ACGME) accredited fellowships in 2016. Fellowship enrollment data were only available for 2016.

Descriptive statistics were used to characterize the data. We used chi-square tests to determine the association between likelihood of intending a fellowship and extreme / moderate interest in an additional year of training. SAS version 9.4 was used for all analyses. The study was approved by the American Academy of Family Physicians Institutional Review Board.

Results

Demographics of the 6,235 residents who completed the questionnaire are shown in Table 1. Of the responders, 17.0% intended to enroll in a fellowship and 19.6% were unsure (Table 2). Of residents, 54.2% were "not at all likely" to pursue another year of residency training, with 19.9% "extremely / moderately likely". We found little overlap between intentions to enroll in a fellowship and a desire for another year of training. For example, 46.1% of those intending a fellowship were "not at all likely" to desire a fourth year of training and only 26% (311/1241) of those "extremely / moderately likely"

Table 1. Demographic Information of Residents Applying for the American Board of Family Medicine Certification Examination in 2014 and 2015

	2014	2015
N	**3,038**	**3,197**
Mean Age (SD)	32.9 (4.5)	32.9 (4.4)
Male Gender	1,403 (46.2%)	1,388 (43.4%)
Race		
White	1,998 (65.8%)	2,109 (66.0%)
Asian	754 (24.8%)	795 (24.9%)
Black or African American	234 (7.7%)	235 (7.4%)
Native Hawaiian or Other Pacific Islander	18 (0.6%)	24 (0.8%)
American Indian or Alaska Native	34 (1.1%)	34 (1.1%)
Hispanic Ethnicity	254 (8.4%)	275 (8.6%)
Degree MD	2,523 (83.0%)	2,566 (80.3%)
International Medical Graduate	1,056 (34.8%)	1,086 (34.0%)

Table 2. Fellowship Intentions and Desire for One More Year of Residency Training

		Desire for one more year of residency training		
Fellowship Intention	**Total**	**Extremely / Moderately Likely**	**Somewhat Likely**	**Not at All Likely**
Yes	**1,063 (17.0%)**	311 (29.3%)	262 (24.7%)	490 (46.1%)
Unsure	**1,220 (19.6%)**	358 (29.3%)	388 (31.8%)	474 (38.9%)
No	**3,952 (63.4%)**	572 (14.5%)	964 (24.4%)	2,416 (61.1%)
Total	**6,235 (100%)**	1241 (19.9%)	1,614 (25.9%)	3,380 (54.2%)

Total column sums to 100%. Other percentages are row percentages. *P*-value for chi-square test is <0.001.

to desire more training intended to enroll in a fellowship. However, the desire for additional residency training was significantly associated with whether a fellowship was intended ($P<0.0001$).

The three most common fellowship choices were sports medicine, geriatrics and maternity care (Table 3). A CAQ would be achievable for 53.5% of the fellowship types chosen. Seventy-four percent of those intending an ACGME fellowship in 2015 did enroll in a fellowship in 2016 (Table 4).

Table 3. Type of Fellowships Intended by Residents, 2014 and 2015 (n=1,063)

Type of Fellowship	Frequency	Percent
Sports Medicine	**330**	**31.0**
Geriatrics	**139**	**13.1**
Maternity Care / OB	134	12.6
Hospice and Palliative Medicine	**72**	**6.8**
Integrative Medicine	55	5.2
Emergency Medicine	51	4.8
Academic / Faculty Development	50	4.7
Hospital Medicine	34	3.2
Women's Health	24	2.3
International / Global Health	22	2.1
Sleep Medicine	**19**	**1.8**
Preventive Medicine	16	1.5
Addiction Medicine	11	1.0
Neuromuscular / Osteopathic	11	1.0
Public health	9	1.0
Research	11	1.0
HIV Care	10	0.9
Adolescent Medicine	**8**	**0.8**
Rural Health	8	0.8
Community medicine	7	0.7
Other**	7	0.7
Urgent/critical care	6	0.6
Occupational	4	0.4
Aerospace medicine	3	0.3
Behavioral Medicine	3	0.3
Dermatology	3	0.3
Second residency or fourth year residency	3	0.3
Wilderness	3	0.3
Diabetes	2	**0.2**
Endoscopy	2	0.2
Family Planning	2	0.2
Pain Management	**2**	0.2
Wound Care	2	0.2

* Bolded fellowships are ACGME accredited and lead to CAQs.

** Community Medicine, Geriatric/Psychiatry, Headache, Leadership/Administrative, Phlebology, Practice Improvement, Ultrasound.

Discussion

It is clear that our country is facing a severe deficit in the primary care workforce, and FM is heavily relied upon to fill this gap.[14,15,16] One projection estimates that 44,000 additional primary care physicians will be needed by 2035, and primary care residencies need to expand by 1,700 slots to avoid this shortage.[15] We found that almost one in five residents planned to do a fellowship after residency. One concern for increasing fellowships is that some graduates of FM fellowships disappear from the primary care workforce. Studies using data from the ABFM CAQ examinations for sports medicine and geriatrics showed that the majority of both types of physicians spend most of their time providing sub-specialty care and less time providing primary care.[17,18] However, narrowing of scope of practice may not occur with all fellowship types. For example, maternity care fellowships can help keep obstetrics and likely pediatrics a vibrant part of a family physician's scope of practice, and also fill crucial gaps in rural and underserved areas.[19, 20] Overall, it may be important to reevaluate societal need for primary care subspecialists, consider the role of various fellowships within the FM discipline, and understand how expansion of these might further impact the primary care workforce.

We found little overlap between residents intending fellowship training and those who would consider extending FM residency, suggesting that desire to pursue fellowship does not necessarily equal desire for more core residency training. It is possible that fellowship training indicates specific skill set development and not a sense of being underprepared for general primary care with 3 years of residency training. A notable comment from a previous survey of FM residents was "Unless restructured,

Table 4. Proportion of Family Medicine Residents in 2015 Intending to Enroll in an ACGME Accredited Fellowship Who Actually Enrolled in 2016 (n=294)

	Number Intended	Number Enrolled (percent)
Sports Medicine	168	136 (81%)
Geriatrics	69	54 (79%)
Hospice and Palliative Medicine	38	27 (71%)
Sleep	11	0 (0%)
Adolescent	2	0 (0%)
Pain	6	0 (0%)
Total	294	217 (73.8%)

doubt that it [the fourth year] would add much to our education", and this could still be a sentiment behind the lack of enthusiasm for this path.[8]

Our study is not without limitations. First, the survey questions do not directly inquire whether further training relates to a sense of unpreparedness, and the response options to the close-ended questions do not tell us why respondents are or are not likely to pursue either a fourth year of residency or fellowship. Additionally, resident responses to questions could have been influenced by the stage of training they were in at the time of the survey. Further qualitative research to investigate reasoning could help explain the underpinnings of these findings.

In conclusion, although a moderate proportion of residents are interested in pursuing fellowships, there seems to be little enthusiasm among graduating family medicine residents for a fourth year of residency. As a specialty it will be important to reevaluate the need for fellowship graduates, and consider how FM fellowships can be integrated into practice to expand scope of care and support the primary care workforce.

ACKNOWLEDGEMENTS: We would like to thank Sarah Safranek, MLIS, at the University of Washington who helped us with our literature search.
Conflict Disclosure: Dr Peterson and Dr Dai are employees of ABFM.
Financial Support: ABFM internal funding. No external sources of funding.

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