

# Changes in Preparation and Practice Patterns Among New Family Physicians

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## ABSTRACT

Family physicians' scope of practice is declining despite being well prepared to provide a range of clinical services. To evaluate whether this is a new phenomenon, we compared the proportions of regional family medicine residency graduates who report practicing and those who report feeling more than adequately prepared to practice various procedures and clinical services from 2 points in time—a survey in 2000 of graduates from 1996-1999 ( $n = 293$ ) and a survey in 2012 or 2014 of graduates from 2010-2013 ( $n = 408$ ). The recent graduates felt better prepared, but reported a narrower scope of practice than those who graduated more than a decade earlier. These findings suggest that family medicine residency training has improved over time but the declining scope of practice is a concerning trend.

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## INTRODUCTION

The decline in family physicians' scope of practice in the United States over the last few decades has been well documented, with fewer family physicians practicing obstetrics, pediatrics, hospital care, and house calls.<sup>1-5</sup> At the same time, numerous studies have examined family medicine residency graduates' preparation for practice,<sup>1,6-9</sup> and a recent national report identified a clear gap between preparation and scope of practice, with graduates feeling well-prepared for clinical services that they are not using in practice.<sup>10</sup>

This study looks at the difference between both preparation for and the scope of practice among new family medicine residency graduates at 2 points in time, 2000 and 2012-2014.

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## METHODS

Every 2 to 3 years the University of Washington Family Medicine Residency Network surveyed the most recent classes of graduates on behalf of its affiliated programs in Washington, Wyoming, Alaska, Montana, and Idaho. The survey addressed what graduates are doing in their current medical practice in a variety of services and procedures. The survey also asked graduates to rate their preparation for practice for the same list.

This retrospective cross-sectional study compares practice patterns and feelings of preparation between 2 cohorts of University of Washington Family Medicine Residency Network graduate survey respondents: those who graduated residency between 2010 and 2013 ( $n = 408$ ) and completed the 2012 or 2014 survey (later cohort), and those who graduated between 1996 and 1999 and completed the 2000 survey (earlier cohort).

We used the z-test for proportions to compare demographic characteristics and the differences between cohorts who reported that a service or procedure was part of their current practice and who reported feeling more than adequately prepared for practicing them. Depending on survey year, the scale for the preparation question has changed from a 3- to a 5-point scale, though all used underprepared as the lowest option, adequately pre-

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**Table 1. Characteristics of Respondent Family Physician Cohorts**

Characteristic	1996-1999	2010-2013	P Value
Response rate, % (No.)	74 (293)	76 (408)	.486
Male, % (No.)	48 (142)	41 (167)	.048 <sup>a</sup>
Years since residency graduation, mean y	2.14	1.98	.657
Board certified by ABFM or AOBFP, % (No.)	93 (272)	94 (383)	.584
Practice size, % (No.)			
Solo or 2 physician partnership	10 (28)	5 (19)	.011 <sup>a</sup>
Single specialty group	35 (104)	29 (120)	.090
Multispecialty group	28 (83)	39 (158)	.005 <sup>b</sup>
Other (locums, military, residency, etc)	18 (53)	27 (111)	.005 <sup>b</sup>
Practice community size, % (No.)			
<5,000	16 (47)	14 (59)	.565
5,001-<25,000	22 (65)	23 (93)	.849
25,001-<100,000	24 (70)	22 (91)	.623
≥100,000 & suburbs	32 (93)	40 (163)	.027 <sup>a</sup>

ABFM = American Board of Family Medicine; AOBFP = American Osteopathic Board of Family Physicians.

<sup>a</sup>P <.05

<sup>b</sup>P <.01

pared as the middle option, and well prepared as the highest option. For the purposes of this study, we grouped responses that were more than "adequately prepared for practice" for our comparisons. Reported proportions were from those who responded to the question; missing data for any question was 5% or less. The t-test was used to compare mean years since residency graduation at time of survey.

This project was reviewed and approved under expedited review by the University of Washington Institutional Review Board.

## RESULTS

The surveys compared in this study all had >70% response rates. There are

**Table 2. Proportions of Cohorts Feeling More Than Adequately Prepared for Practice by Residency Training and Practicing Listed Services and Procedures at Time of Survey**

Services and Procedures	More Than Adequately Prepared for Practice				Part of Practice at Time of Survey			
	1996-1999 Cohort, % (N)	2010-2013 Cohort, % (N)	Change, %	P Value	1996-1999 Cohort, % (N)	2010-2013 Cohort, % (N)	Change, %	P Value
<b>Women's health</b>								
Prenatal care	73 (215)	87 (356)	14	<.001	76 (222)	57 (232)	-19	<.001
Deliveries	63 (185)	83 (337)	20	<.001	70 (205)	45 (182)	-25	<.001
C-delivery, primary	9 (27)	11 (43)	2	.565	10 (30)	10 (41)	0	.935
C-delivery, assist	53 (156)	68 (278)	15	<.001	61 (180)	38 (155)	-23	<.001
OB ultrasound	7 (20)	27 (112)	20	<.001	19 (55)	27 (112)	8	.008
Newborn CPR	24 (70)	40 (162)	16	<.001	70 (204)	62 (252)	-8	.032
Colposcopy	28 (81)	52 (212)	24	<.001	52 (153)	47 (193)	-5	.200
LEEP/LEETZ	7 (20)	17 (71)	10	<.001	12 (35)	9 (38)	-3	.261
D&C	9 (25)	13 (53)	4	.065	23 (66)	10 (39)	-13	<.001
Termination	6 (19)	13 (51)	7	.009	5 (14)	6 (25)	1	.443
<b>Services</b>								
Ambulatory care	70 (206)	91 (371)	21	<.001	95 (277)	97 (396)	2	.094
Inpatient medicine	63 (185)	88 (358)	25	<.001	78 (228)	46 (186)	-32	<.001
Emergency care	37 (107)	54 (219)	17	<.001	64 (187)	38 (153)	-26	<.001
Intensive/ICU-CCU	25 (72)	46 (186)	21	<.001	58 (170)	24 (96)	-34	<.001
Nursing home care	27 (78)	59 (242)	32	<.001	52 (152)	33 (134)	-19	<.001
End-of-life care	38 (111)	75 (308)	37	<.001	77 (225)	84 (342)	7	.020
Surgery/assist	40 (118)	48 (195)	8	.049	48 (140)	20 (82)	-28	<.001
Disability evaluation	3 (8)	14 (59)	11	<.001	61 (179)	54 (219)	-7	.052
Orthopedics	21 (61)	41 (169)	20	<.001	94 (274)	76 (309)	-18	<.001
<b>Procedures</b>								
Sigmoidoscopy	24 (71)	7 (30)	-17	<.001	42 (124)	4 (16)	-38	<.001
Full colonoscopy	3 (10)	10 (39)	7	.002	5 (14)	6 (25)	1	.443
Treadmill stress test	16 (48)	12 (48)	-4	.080	26 (75)	10 (40)	-16	<.001
Intubation	19 (56)	24 (96)	5	.163	39 (113)	23 (92)	-16	<.001
Manage ventilator	9 (25)	14 (57)	5	.028	25 (72)	14 (59)	-11	.001
Central line	11 (31)	16 (66)	5	.035	20 (59)	16 (67)	-4	.207
Interpret radiograph	23 (68)	51 (209)	28	<.001	91 (266)	85 (346)	-6	.020

C-delivery = cesarean delivery; CCU = critical care unit; CPR = cardiopulmonary resuscitation; D&C = dilation and curettage; ICU = intensive care unit; LEEP = loop electrosurgical excision procedure; LEETZ = loop electrosurgical excision of the transformation zone; OB = obstetrics

some differences in demographic and practice characteristics between the earlier and later cohorts of graduates (Table 1).

Significant differences exist between the proportion of the earlier and later cohorts who report practicing various services and procedures at the time of the survey (Table 2). The earlier cohort had a similar or significantly higher proportion of graduates practicing almost all of the listed services and procedures than the later cohort; only obstetric ultrasound and end-of-life care were more common among the later cohort.

The opposite pattern was observed when comparing the proportions of graduates who felt more than adequately prepared for practice, where a greater proportion of those in the later cohort reported feeling more than adequately prepared in most areas (Table 2).

## DISCUSSION

This study compared responses of 2 cohorts of new family physicians 12 to 14 years apart about how prepared for practice they felt and what they were doing in their practice at the time of the survey. We found that the recent cohort of graduates felt more prepared for practice than their earlier counterparts, but that the recent graduates had a much narrower scope of practice than those who graduated before 2000.

This suggests that training has improved over the last decade; it also suggests that scope of practice is declining for reasons other than lack of training. Changes in clinical practice and evidence over the last 2 decades may explain some of our findings, such as the decline in use of flexible sigmoidoscopy. The difference in practice size/type may also play a role. The trend toward practicing in larger, multispecialty groups means that family physicians may not be required (or allowed) to practice all they learned in residency.

As with all cross-sectional studies, this study cannot prove causality. There is also the possibility of response bias and an issue of generalizability, in this case to other parts of the United States. This study also has the potential for social desirability bias, as respondents may have reported feeling more prepared or practicing a broader scope of care than is true given that the surveys were sent on behalf of their residency programs.

The decline in scope of practice has negative implications for the breadth and richness of individual physicians' practices, as well as for patients' access to care

and quality of care. Although our training programs have succeeded in training a broad range of physician skills, these results suggest we may need to consider ways to adapt our current training to a new generation of practice realities and physician preferences.

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**Key words:** family practice; internship and residency; professional practice gaps; surveys and questionnaires

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