Jobs and Career Plans of New Pediatric Subspecialists

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abstract

OBJECTIVES: The issues of importance in selecting a first job for new pediatric subspecialists, and their ability to find positions that match their professional and clinical goals, are unknown. The objectives were to (1) describe current employment patterns, practice characteristics, factors influencing choice of first position, and future work goals of new pediatric subspecialists; and (2) examine the relationship of these variables with the actual professional time allocation and clinical responsibilities compared with the desired first job.

METHODS: The authors surveyed 3010 individuals sitting for ≥1 of the 14 subspecialty certification exams. The main outcomes were (1) most important factors in choosing employment; (2) ability to gain employment in positions that matched their goals; and (3) variation in employment characteristics among men versus women, time since completion of training, and part-time versus full-time status.

RESULTS: Response rate was 97%. Lifestyle/spousal or family considerations was the factor identified as most important in the choice of first position after fellowship training for half of respondents (50%; n = 1277). There was a median of 75% of actual time spent in direct and/or consultative inpatient or outpatient care, with 5% in medical education, 5% in administration, and 5% in research. A majority (74%; n = 1825) reported this proportion to be approximately what they wanted. Most respondents (89%; n = 2194) reported that their allocation of patient care responsibilities (ie, inpatient versus outpatient) was approximately what they wanted.

CONCLUSION A large majority of pediatric subspecialists found initial positions matching their goals for professional responsibilities and clinical care.

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Drs Althouse, Freed, and Leslie conceptualized and designed the study; Drs Althouse and Leslie supervised data collection; Drs Althouse and Leslie, Ms Moran, and Mr Van critically reviewed the manuscript; Dr Freed carried out the initial analyses and reviewed and revised the manuscript; Ms Moran and Mr Van analyzed the data; and all authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the funding agency. The sponsor did not have a role in the management, analysis, or interpretation of the data.

DOI: 10.1542/peds.2015-3298

Accepted for publication Dec 14, 2015

WHAT'S KNOWN ON THIS SUBJECT: Studies in other specialties suggest problems in the ability to find desired jobs and dissatisfaction with positions available and report debt at end of training to be a primary motivator in job selections. No similar data exists for pediatric subspecialists.

WHAT THIS STUDY ADDS: For the majority of pediatric subspecialists sitting for subspecialty examinations, lifestyle/spousal and family considerations was the most important factor in choosing a first job. The vast majority are able to find jobs that match their professional and clinical desires.

To cite: Freed GL, Moran LM, Althouse LA, et al. Jobs and Career Plans of New Pediatric Subspecialists. *Pediatrics.* 2016;137(3):e20153298

The issue of career satisfaction and potential burnout among the medical workforce has been the focus of many studies,[1–3] with an often-cited 2015 report labeling the state of physician morale as "low" and worsening over the past 2 years.[4] Additionally, a 2014 study found that large proportions of physicians would not choose medicine again or would not choose the same specialty.[5] Another found that 44% of physicians planned to reduce patient access to their services.[6] Research has also shown that physicians have significant concerns regarding income, debt, and financial status;[4,7] women physicians have a 60% higher burnout rate than their male peers;[8] and younger physicians report higher rates of burnout.[4] A 2015 study from a major physician recruiting firm reported that 25% of residents regretted choosing medicine as a career.[9] However, many of the findings of these studies make their interpretation difficult. For example, those that aggregate results across multiple specialties, or highlight specific specialties, may mask important interspecialty differences. Specifically, existing studies often group pediatric and adult subspecialties together or have low numbers of pediatric participants.[10] Others with unreported response rates may suffer from response bias.

Studies examining recent trends in career satisfaction and longer-term career goals of pediatric subspecialists are limited. However, there have been some reports of dissatisfaction or workload concern.[11,12] Studies of subspecialists at various stages in their careers found that among pediatric oncologists, pediatric nephrology fellows, and pediatric rheumatologists, practice type, perceived workload, and levels of burnout on the Maslach Burnout Inventory are major factors influencing career satisfaction.[11–13] However, it is unclear if these findings represent the current status of young subspecialty pediatricians who have newly entered the workforce.

With workforce shortages in some pediatric subspecialties, factors such as clinical autonomy, job stress, and clinical workload are important considerations for the pediatric profession when addressing both career longevity and physician retention.[1,3,14–16] Indeed, current trends indicate that the younger generation entering the pediatric subspecialty workforce aims to establish a more proportional work-life balance.[17,18]

Examining the status of recently trained pediatric subspecialists has critical implications for both subspecialty training and workforce planning. Over the past 15 years, the number of individuals entering pediatric subspecialty training in the United States has increased, and the gender distribution of new subspecialists reflects an overall growing proportion of women in the pediatric workforce.[19] Although there continue to be gender differences among the pediatric subspecialties, the proportion of women in all subspecialties has grown. However, the current literature suggests that women are not advancing through academia at the same rates as their male counterparts, which affects the gender balance in leadership and administrative roles in pediatrics.[17,20–23] As such, women represent a much smaller proportion in those roles than their overall presence in the pediatric profession. It is unknown whether the initial trajectories of men and women subspecialists are different and whether such a difference influences career outcomes. Understanding the current scope and the presence of any gender variation in patient care responsibilities, research and clinical workload, and future career goals among pediatric subspecialists is imperative as more women complete subspecialty training.

Given the increasing importance of lifestyle among young professionals regardless of gender, current job duties and responsibilities may differ from future goals. The impact of lifestyle considerations such as flexible scheduling, part-time work, and family considerations on the current employment and future workplace goals of the population of pediatric subspecialists entering the workplace/completing training is unknown. These are important factors when assessing the current and future available workforce supply and demand.[24,25]

The specific goals of this study were to (1) describe the current employment patterns, practice characteristics, factors influencing choice of first position, and future work goals of new pediatric subspecialists; and (2) examine the relationship of these variables with the actual professional time allocation and clinical responsibilities compared with their desired ideal first position of employment. We analyzed data collected by the American Board of Pediatrics (ABP) at the time pediatric subspecialists in 14 different subspecialty areas sat for their subspecialty initial certification exams. Historically, most fellows take the exam the first date it is offered after completing their board-approved fellowship program. This sampling frame allows for the analysis of data from almost all new pediatric subspecialists, thus providing a true population-based assessment of these issues and eliminating one of the most significant limitations (eg, response bias) that plagued previous studies of these topics.

METHODS

Survey Instrument and Sample

In collaboration with the ABP's Research Advisory Committee, the research team developed a structured questionnaire designed

to be completed in ≤10 minutes. The survey focused on exploring trends associated with career choice, career paths, time spent in professional activities, and current practice characteristics of subspecialists at the time of initial certifying exams.

The survey was constructed via an iterative process with staff at ABP and the research team. Based on examination of previous studies in the area, workforce foci of the leadership of the ABP (both professional and lay leaders), and the goal to have questions consistent with the other surveys as part of the ABP longitudinal study, an initial list of survey topics was created. From these topics, questions were developed to match information goals. Content validity of survey items was assessed with regard to the current literature, gaps in the literature, and information goals. Face validity was assessed by the research team and ABP senior staff and leadership.

As of March 2013, the ABP administers this survey as an addendum to each of its subspecialty initial certification exams to all individuals who complete their examinations.

Data Analysis

Exam data from 2013 and 2014 were used in all analyses to ensure inclusion of respondents from all 14 subspecialties certified by the ABP. Each subspecialty examination is offered once every 2 years in an alternating fashion; 8 are offered in 1 year and 6 in the next. Data were reviewed for accuracy in terms of survey branching and imported into software for statistical analysis (SAS, version 9.3, SAS Institute, Research Triangle Park, NC).

Frequency distributions were calculated for all survey items for the group of respondents self-identified as currently in practice. Univariate statistics were calculated for ratio-scale survey items related to time spent in professional activities. Median percentages were also calculated for questions related to time spent in professional activities. Next, we generated χ^2 statistics based on cross-tabulation frequencies to examine the relationship of the survey items to gender (women versus men), site of medical education as designated by American medical graduate (AMG) vs international medical graduate (IMG), and years since completion of training (<1 vs 1–5 vs >5 years). Fisher's exact test was used for small cell sizes. A P value <0.05 was considered statistically significant.

Two logistic regression models were constructed to examine the independent association of the demographic variables with subspecialists finding having their desired (a) allocation of professional time and (b) specific clinical responsibilities.

This project was approved by the Institutional Review Board for the Protection of Human Subjects at the University of Michigan.

RESULTS

Of the 3010 people who sat for the 14 subspecialty initial certifying examinations in 2013 and 2014, 2916 (97%) completed the survey. Of these, 92% (n = 2684) were no longer in any other training program (eg, advanced subspecialty training, second fellowship). Most had been out of training for either <1 year (34%; n = 929) or 1–5 years (54%; n = 1441).

Of these 2684 subspecialists, 95% (n = 2549) were currently engaged in direct or consultative pediatric clinical care. The remainder of the analyses presented in this study were conducted on those 2549 respondents, 62% (n = 1568) of whom were women (Table 1).

There was occasional item nonresponse to specific questions. As such, there may be slightly different n values for some items. Additionally, due to the branching logic of the survey, not all items were answered by each respondent.

Employment Patterns, Practice Affiliations, and Work Patterns

The majority (77%; n = 1963) held an academic appointment of some type. Most were employed in full-time faculty positions (57%; n = 1455), with a further 8% (n = 204) having part-time faculty appointments and 12% (n = 304) adjunct/courtesy faculty. Only small differences were noted between women and men, but a significantly greater proportion of those having completed training within the last year had full time academic appointments compared with those who completed training >5 years ago (61% vs 40%; P < .0001) (Table 2).

Expected duration of employment in their current position did not vary among women and men, with the greatest proportion expecting to be in their current job for >5 years (46%; n = 1162). Overall, 23% of respondents (n = 585) expected research to be a major part of their career, with a greater proportion of men than women endorsing that plan (26% vs 21%; P = .04) and more IMGs versus AMGs (24% vs 23%; P < .0001) (Table 2).

Women subspecialists were more likely than men to be employed part-time (12% vs 2%; P < .0001), and a greater proportion of women planned to work part-time at some point in the next 5 years (15% vs 4%; P < .0001) (Table 2).

The number of hours worked each week varied for both part- and full-time subspecialists. Some subspecialists who reported being employed part-time worked >40 hours per week. In addition, some part-time subspecialists reported

TABLE 1 Demographics of Entire Sample (n = 2549)

Subspecialty	Overall	Gender		Medical Education		Time Since Training, y		
		Women	Men	AMG	IMG	<1	1–5	>5
All	100 (2549)	62 (1568)	38 (975)	69 (1763)	35 (786)	34 (876)	54 (1385)	11 (288)
Adolescent medicine	2 (46)	85 (34)	15 (6)	76 (35)	24 (11)	44 (20)	52 (24)	4 (2)
Cardiology	9 (234)	44 (102)	56 (132)	71 (165)	29 (69)	34 (79)	60 (140)	6 (15)
Child abuse	3 (75)	68 (51)	32 (24)	89 (67)	11 (8)	16 (12)	12 (9)	72 (54)
Critical care	11 (285)	53 (152)	47 (133)	66 (187)	34 (98)	35 (100)	59 (167)	6 (18)
Developmental-behavioral	3 (80)	63 (50)	37 (30)	84 (67)	16 (13)	29 (23)	40 (32)	31 (25)
Emergency medicine	11 (275)	60 (166)	40 (109)	74 (203)	26 (72)	36 (99)	51 (141)	13 (35)
Endocrinology	8 (197)	85 (167)	15 (30)	69 (136)	31 (61)	38 (74)	50 (99)	12 (24)
Gastroenterology	8 (209)	52 (108)	48 (101)	66 (138)	34 (71)	32 (67)	56 (116)	12 (26)
Hematology-oncology	11 (289)	59 (170)	41 (119)	70 (202)	30 (87)	32 (92)	56 (162)	12 (35)
Infectious diseases	5 (127)	59 (75)	41 (52)	73 (93)	27 (34)	35 (44)	51 (65)	14 (18)
Neonatal-perinatal	18 (461)	66 (303)	34 (158)	64 (295)	36 (166)	36 (168)	59 (270)	5 (23)
Nephrology	4 (98)	68 (67)	32 (31)	58 (57)	42 (41)	38 (37)	59 (58)	3 (3)
Pulmonology	5 (118)	72 (85)	28 (33)	64 (75)	36 (43)	32 (38)	64 (75)	4 (5)
Rheumatology	2 (55)	69 (38)	31 (17)	78 (43)	22 (12)	42 (23)	49 (27)	9 (5)

Values are expressed as % (n).

working more hours than some full-time subspecialists (Table 3).

Choice of First Position After Training

The most common factor identified in the choice of first position after fellowship training was lifestyle/spousal or family considerations (50%; n = 1277). Although this factor was chosen most frequently by both women and men, there were significant differences by gender (54% women vs 44% men; P < .0001) and by education (AMGs 52% vs IMGs 46%; P = .02). Approximately one-fifth of respondents identified interest in a specific disease/patient population or influence of a mentor as the most important factor. Financial considerations, including debt at the end of training, were chosen as the most important consideration by a much smaller proportion and by fewer women than men (Table 4).

Current Position and Duties

When asked about the proportion of actual time spent in specific tasks undertaken in their current position, the median response for direct and/or consultative inpatient or outpatient care (including billing and charting) was 75%, with 5% in medical education, 5% in administration, and 5% in research. A majority of respondents (74%; n = 1825) reported that this allocation of time was approximately what they wanted in their current position, with a slight difference between men and women (76% vs 73%; P = .04).

The 26% (n = 640) whose time allocation in their current position was not what they wanted reported that they would like to spend a median of 60% of time in patient care (including billing and charting), 15% in research, 10% in medical education, and 5% in administration.

Most respondents (89%; n = 2194) reported that their allocation of patient care responsibilities (ie, inpatient versus outpatient) was approximately what they wanted in their current position, with no significant differences between women and men.

Although a large majority of all subspecialists found positions with the professional responsibilities they wanted, the regression analysis found that women were less likely than men (odds ratio [OR] 0.787; 95% confidence interval [CI] 0.649 to 0.953), and IMGs were less likely than AMGs (OR 0.681; 95% CI 0.561 to 0.827), to do so. With regard to clinical responsibilities, although a large majority of all subspecialists found a position with the desired duties and responsibilities they wanted, those who had been out of training for >5 years at the time they were sitting for their examination were less likely to have done so, compared with those who had been out of training <1 year (OR 0.554; 95% CI 0.369 to 0.834). In addition, those who worked part time were less likely than those who worked full time (OR 0.589; 95% CI 0.392 to 0.885), and IMGs were less likely than AMGs (OR 0.702; 95% CI 0.536 to 0.92), to report doing so (Table 5).

DISCUSSION

Among the most important findings in our study is that a clear majority of both men and women reported that the allocation of their professional time and clinical activity in their current position is what they wanted in their job. This suggests that initial positions are available that meet the professional needs and goals of most new pediatric subspecialists. However, there may be other issues, including lifestyle considerations, that affect overall job satisfaction. We also found that the majority of respondents planned to stay in their current position for >5 years. Although this may be a result of many factors besides satisfaction with their

TABLE 2 Work Status and Practice Characteristics, by Gender, Education, and Experience

Status	Overall	Gender			Medical Education			Time Since Training, y			
		Women	Men	*P*	AMG	IMG	*P*	<1	1–5	>5	*P*
All	100 (2549)	62 (1568)	38 (975)	.03	69 (1763)	31 (768)	.005	35 (876)	54 (1385)	11 (288)	<.0001
Academic appointment											
No	23 (586)	23 (362)	23 (224)		21 (372)	27 (214)		21 (189)	22 (304)	32 (93)	
Yes; full-time academic faculty	57 (1455)	57 (886)	58 (566)		59 (1038)	53 (417)		61 (531)	58 (809)	40 (115)	
Yes; part-time academic faculty	8 (204)	9 (144)	6 (59)		8 (146)	8 (58)		7 (62)	8 (108)	12 (34)	
Yes; adjunct, volunteer, or courtesy faculty	12 (304)	11 (176)	13 (126)		12 (207)	12 (97)		11 (94)	12 (164)	16 (46)	
Planned duration of employment in current position, y				.10			<.0001				.001
≤1	5 (116)	5 (75)	4 (41)		5 (86)	4 (30)		6 (48)	4 (55)	4 (13)	
>1–5	24 (621)	24 (385)	24 (233)		20 (352)	34 (269)		27 (233)	25 (346)	15 (42)	
>5	46 (1162)	44 (687)	49 (473)		50 (887)	35 (275)		42 (372)	46 (640)	52 (150)	
Unsure	25 (650)	27 (421)	23 (228)		25 (438)	27 (212)		25 (223)	25 (344)	29 (83)	
Research plans during career (basic, clinical, or health services research)				.04			<.0001				<.0001
Yes; research is/will be a major part of my career	23 (585)	21 (334)	26 (251)		23 (400)	24 (185)		23 (204)	24 (330)	18 (51)	
Yes; research is/will be a minor part of my career	47 (1205)	48 (742)	47 (457)		45 (804)	51 (401)		49 (430)	47 (657)	41 (118)	
No	17 (438)	18 (286)	15 (152)		20 (350)	11 (88)		15 (128)	18 (247)	22 (63)	
Unsure	13 (321)	13 (206)	12 (115)		12 (209)	14 (112)		13 (114)	11 (151)	19 (56)	
Full- or part-time employment				<.0001			.008				<.0001[a]
Full-time	92 (2334)	88 (1383)	97 (945)		91 (1602)	93 (732)		94 (827)	92 (1269)	83 (238)	
Part-time	8 (205)	12 (182)	2 (23)		9 (157)	6 (48)		6 (48)	8 (113)	15 (44)	
Not employed or volunteer	0 (10)	0 (3)	1 (7)		0 (4)	1 (6)		0 (1)	0 (3)	2 (6)	
Work intentions over the next 5 y				<.0001			.18				.06
Yes; I plan to work exclusively part-time during the next 5 y	2 (40)	2 (30)	1 (10)		2 (24)	2 (16)		1 (6)	2 (28)	2 (6)	
Yes; I plan to work part-time at some point during the next 5 y	9 (213)	13 (182)	3 (30)		9 (144)	10 (69)		9 (72)	9 (115)	11 (26)	
No	70 (1637)	59 (807)	88 (826)		71 (1144)	67 (493)		69 (573)	71 (898)	70 (166)	
Unsure	19 (444)	26 (364)	8 (79)		18 (290)	21 (154)		21 (176)	18 (228)	17 (40)	

Values are expressed as % (*n*).

[a] Expected counts <5 in 22% of cells; χ^2 may not be a valid test.

TABLE 3 Average Number of Hours Worked Each Week, by Employment Status and Gender (n = 2539)

Work Hours	Overall			Full-time			Part-time		
	Full-time	Part-time	*P*	Women	Men	*P*	Women	Men	*P*
All	92 (2334)	8 (205)		59 (1383)	41 (945)		89 (182)	11 (23)	
Hours worked per wk			<.0001			.0005			0.25[a]
<20	0 (10)	9 (19)		1 (8)	0 (2)		10 (18)	4 (1)	
20 to <30	2 (38)	29 (59)		2 (25)	2 (13		30 (55)	18 (4)	
30 to <40	8 (191)	28 (57)		8 (114)	8 (76)		28 (51)	26 (6)	
40 to <50	32 (736)	16 (34)		34 (472)	28 (262)		16 (29)	22 (5)	
50 to <60	33 (779)	11 (22)		33 (461)	33 (315)		10 (19)	13 (3)	
≥60	25 (580)	7 (14)		22 (303)	29 (277)		6 (10)	17 (4)	

Values are expressed as % (n).

[a] Expected counts <5 in 33% of cells; χ^2 may not be a valid test.

employment, such as reticence to move or spousal work opportunities, the finding is encouraging. It is in contrast to previous research incorporating data from multiple specialties suggesting that early career physicians overall have low levels of satisfaction with their career choice.[4,26] Thus, such reports may be misleading if used to represent all physicians.

However, despite most of our respondents finding a position with the professional and clinical responsibilities they desired, we found a lower likelihood among some groups. Women and IMGs were less likely to find positions consistent with their desire with regard to overall professional responsibilities, and IMGs, those who had been out of training for >5 years, and those who worked part-time were less likely to find jobs in which their clinical responsibilities were what they desired.

Those who completed training >5 years before but have still had not achieved initial subspecialty certification are likely a unique group. They represent only 14% of the sample and include those who have failed previous examination attempts, those who have not been practicing in their subspecialty and thus did not require certification, and those who may have had a period of clinical inactivity after completion of training. All of these characteristics may affect the ability to find a position matching their desires.

Also noteworthy is that for the majority of these pediatric subspecialists, lifestyle/spousal and family considerations were the most important factor in choosing a first job after fellowship training. Although a greater proportion of women chose this response, it was also selected by the majority of males.

Although many in organized medicine have posited that debt at the end of training may be the most important factor in career decisions,[15,27–31] for our respondents, only 5% reported financial considerations to be the most important factor in selecting their initial job. Similarly, only 4% cited potential long-term earnings as the most important factor in an initial job. This may be due to the notion that pediatricians are a self-selected group for whom financial issues are less important than for other specialists.

A greater proportion of women respondents held part-time academic appointments. However, it is important to note that we are reporting only initial employment parameters after completion of training. It is possible that more women or men may opt for part-time work in the first decade of their careers, and our data suggest they plan to do so. Understanding the potential need for flexibility in careers for women in academic medicine will assist in future workforce planning at academic institutions.[17] Still, the decision to pursue part-time work may affect tenure attainment for both men and women, as tenure policies vary among institutions.[17]

Another aspect of a successful academic career is the role of research. We found only a small, yet statistically significant, difference between the proportion of men and women planning to have research as a part of their career. However, a greater proportion of men plan to have research as a major part of their career. Research roles may affect future career success and, as such, the significant difference in research career goals could affect the academic advancement of women going forward.

As work schedule flexibility becomes increasingly commonplace, the definition of full- and part-time positions is critical. Although we found that the vast majority (92%) of pediatric subspecialists initially work full-time, understanding the implications of part-time work arrangements on the available workforce and its impact on career satisfaction and advancement is essential. Our findings reveal that overall, a greater proportion of women than men pediatric subspecialists (12% vs 2%) work part-time early in their careers, and that nearly 40% of women currently in part-time positions do not intend to begin working full-time in the next 5 years. These part-time pediatricians were also less likely

TABLE 4 Most Important Factor in Choice of First Position After Completion of Fellowship Training, by Gender, Education, and Experience

Factor	Overall	Gender			Medical Education			Time Since Training, y			
		Women	Men	*P*	AMG	IMG	*P*	<1	1–5	>5	*P*
All	100 (2549)	62 (1568)	38 (975)		70 (1763)	30 (768)		35 (876)	54 (1385)	11 (288)	
Lifestyle factors				<.0001			.02				.04
Lifestyle/spousal or family considerations/ structured hours	50 (1277)	54 (843)	44 (452)		52 (916)	46 (361)		52 (455)	50 (698)	43 (124)	
Financial considerations: debt at end of training	5 (122)	4 (65)	6 (57)		5 (84)	5 (38)		6 (49)	5 (63)	4 (10)	
Financial considerations: potential for long-term earnings (aside from debt at end of training)	4 (97)	2 (34)	7 (63)		3 (58)	5 (39)		3 (28)	4 (61)	3 (8)	
Interest in specific disease/patient population (eg, ethnic composition, socioeconomic characteristics)	22 (558)	22 (340)	22 (216)		22 (382)	22 (176)		21 (186)	21 (293)	27 (79)	
Career path of role model or mentor	19 (495)	18 (286)	21 (207)		18 (323)	22 (172)		18 (158)	20 (270)	23 (67)	

Values are expressed as % (*n*).

to have jobs in which their clinical responsibilities were what they wanted.

Our findings are especially important as the number of women in the pediatric subspecialty workforce is continuing to increase.[19] Previous studies have found that women are advancing less quickly than men within academia and are less likely to be considered for leadership positions.[17,20–22] One concern expressed has been that leadership opportunity and advancement may be hampered by part-time employment. A recent qualitative study identified key obstacles for the advancement and satisfaction of women in academia, including work-life balance, gender equity in compensation, and retention of female faculty.[23] The study also found conflicting perceptions of female leadership advancement, suggesting modest and slow progress.[23] In our study, we found that men were only slightly more likely to hold a full-time academic appointment. This finding demonstrates that roughly similar proportions of men and women start on the same full-time trajectory. Although predictions are impossible at this stage, our results suggest that the gap between men and women in academic medicine may grow if early career choices magnify these small initial differences in work patterns. The longitudinal nature of the ABP data collection effort will allow future tracking of the careers of these subspecialists.

Another important consideration is that the actual hours worked by those with part-time pediatric subspecialist positions had been unknown. Despite the definitional variability between full- and part-time positions, a potential concern for those who desire to work part time is that they may be paid less but actually work as much as, or more than, some of their full-time colleagues. This is especially relevant to women pediatricians who are more likely than men to work

TABLE 5 Regression Analysis for Finding Desired Positions With Regard to Overall Duties and Clinical Responsibilities

Variable and Effect	OR	95% CI
Overall duties		
Gender: F vs M	0.787[a]	0.649–0.953
Time since training when sitting for examination, y		
1–5 vs <1	0.935	0.766–1.143
>5 vs <1	0.823	0.605–1.12
Employment status		
Not currently employed versus full-time	0.784	0.193–3.188
Part-time versus full-time	1.031	0.737–1.443
IMG vs AMG	0.681[a]	0.561–0.827
Clinical responsibilities (inpatient vs outpatient care)		
Gender: F vs M	0.817	0.62–1.077
Time since training when sitting for examination, y		
1–5 vs <1	0.848	0.632–1.137
>5 vs <1	0.554[a]	0.369–0.834
Employment status		
Not currently employed versus full-time	0.607	0.126–2.932
Part-time versus full-time	0.589[a]	0.392–0.885
IMG vs AMG	0.702[a]	0.536–0.92

[a] Values are statistically significant.

part-time. Our study found that 34% of those who reported working in part-time positions actually work >40 hours per week, whereas 10% of full-time subspecialists reported working <40 hours per work. Considering the difference between hours worked and hours paid will become increasingly important as part-time work and flexible scheduling become more prevalent.

STRENGTHS AND LIMITATIONS

As response and selection biases are essentially nonexistent, this study provides a true population parameter for our analyses. The data presented in this study aggregate the 14 pediatric subspecialties and give an overall view of this component of the pediatric workforce. As with any aggregation, it is likely that differences among pediatric subspecialties exist. Over time, as more data are collected as part of the American Board of Pediatrics longitudinal data collection effort, trends for each subspecialty can be observed and highlighted. Additionally, our study assessed only whether new subspecialists were able to find a position that matched their professional and clinical goals. Additional studies will need to address whether personal considerations such as lifestyle, location, and salary goals were also met.

CONCLUSIONS

This study provides a unique pediatric specialty-specific report of the initial career decisions, work patterns, and ability of pediatric subspecialists to find positions with the professional and clinical roles and responsibilities they desired. Our study found that a large majority of pediatric subspecialists were able to find initial positions matching these professional and clinical desires after the completion of training. Future research is necessary to also explore whether these positions also offer other attributes of importance that affect overall job satisfaction. Yet, gender variation in part- and full-time positions is already evident at this stage of their careers. Additional studies over time are required to understand the impact of part-time work on the career trajectories of women in academia.

ACKNOWLEDGMENTS

The authors acknowledge the Research Advisory Committee of the American Board of Pediatrics, Maria T. Britto, Tina L. Cheng, Dimitri A. Christakis, Lewis R. First, Gary L. Freed, Julia A. McMillan, David L. Rubin, Kathryn A. Sabadosa, Joseph W. St. Geme III, Daniel C. West, Christopher A. Cunha, Laurel K. Leslie, and David G. Nichols.

ABBREVIATIONS

ABP: American Board of Pediatrics
AMG: American medical graduate
CI: confidence interval
IMG: International medical graduate
OR: odds ratio

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PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose.

FUNDING: This work was supported by the American Board of Pediatrics Foundation.

POTENTIAL CONFLICT OF INTEREST: Drs Althouse and Leslie are employed by the American Board of Pediatrics, Chapel Hill, NC.

REFERENCES

1. Landon BE, Reschovsky J, Blumenthal D. Changes in career satisfaction among primary care and specialist physicians, 1997-2001. *JAMA*. 2003;289(4):442–449
2. Leigh JP, Kravitz RL, Schembri M, Samuels SJ, Mobley S. Physician career satisfaction across specialties. *Arch Intern Med*. 2002;162(14):1577–1584
3. Shugerman R, Linzer M, Nelson K, Douglas J, Williams R, Konrad R; Career Satisfaction Study Group. Pediatric generalists and subspecialists: determinants of career satisfaction. *Pediatrics*. 2001;108(3). Available at: www.pediatrics.org/cgi/content/full/108/3/e40
4. Peckham C. Physician burnout: it just keeps getting worse. *Medscape Family Medicine*. 2015. Available at: www.medscape.com/viewarticle/838437. Accessed February 20, 2015
5. Kane C, Peckham L. Medscape Physician Compensation Report 2014. 2014. Available at: www.medscape.com/features/slideshow/compensation/2014/public/overview. Accessed February 20, 2015
6. The Physicians Foundation. 2014 Survey of America's Physicians: Practice Patterns and Perspectives. 2014. Available at: www.physiciansfoundation.org/healthcare-research/2014-survey-of-americas-physicians-practice-patterns-and-perspectives. Accessed February 20, 2015
7. Brooks M. Less money, more rules for US physicians in 2015. *Medscape Family Medicine*. 2015. Available at: www.medscape.com/viewarticle/837493. Accessed February 20, 2015
8. Linzer M, Levine R, Meltzer D, Poplau S, Warde C, West CP. 10 bold steps to prevent burnout in general internal medicine. *J Gen Intern Med*. 2014;29(1):18–20
9. Lowes R. Residents are flush with job offers and career regrets. *Medscape Family Medicine*. 2015. Available at: www.medscape.com/viewarticle/838082. Accessed February 20, 2015
10. Friedberg MW, Peggy G, Chen KR, et al. *Factors Affecting Physician Professional Satisfaction and Their Implications for Patient Care, Health Systems, and Health Policy*. Boston, MA: RAND Corporation; 2013
11. Weinstein AR, Reidy K, Norwood VF, Mahan JD. Factors influencing pediatric nephrology trainee entry into the workforce. *Clin J Am Soc Nephrol*. 2010;5(10):1770–1774
12. Roth M, Morrone K, Moody K, et al. Career burnout among pediatric oncologists. *Pediatr Blood Cancer*. 2011;57(7):1168–1173
13. McNearney TA, Hunnicutt SE, Maganti R, Rice J. What factors relate to job satisfaction among rheumatologists? J Clin Rheumatol. 2008;14(3):133–137
14. Ferris M, Iglesia E, Ko Z, et al. Wanted: pediatric nephrologists! Why trainees are not choosing pediatric nephrology. *Ren Fail*. 2014;36(8):1340–1344
15. Jewett EA, Anderson MR, Gilchrist GS. The pediatric subspecialty workforce: public policy and forces for change. *Pediatrics*. 2005;116(5). Available at: www.pediatrics.org/cgi/content/full/116/5/e1192
16. Henrickson M. Policy challenges for the pediatric rheumatology workforce: Part I. Education and economics. *Pediatr Rheumatol Online J*. 2011;9:23
17. Women Chairs of the Association of Medical School Pediatric Department Chairs. Women in pediatrics: recommendations for the future. *Pediatrics*. 2007;119(5). Available at: www.pediatrics.org/cgi/content/full/119/5/e1000
18. Commins J. In: Media HL, ed. Job offers abundant for new doctors. *HealthLeaders Media*. 2015. Available at: healthleadersmedia.com/content/HR-312026/Job-Offers-Abundant-for-New-Doctors. Accessed February 20, 2015
19. The American Board of Pediatrics. 2013–2014 Workforce Data. 2015. Available at: https://www.abp.org/sites/abp/files/pdf/workforcebook.pdf. Accessed January 14, 2016
20. Nonnemaker L. Women physicians in academic medicine: new insights from cohort studies. *n Engl J Med*. 2000;342(6):399–405
21. Jagsi R, Guancial EA, Worobey CC, et al. The "gender gap" in authorship of academic medical literature—a 35-year perspective. *n Engl J Med*. 2006;355(3):281–287
22. Ash AS, Carr PL, Goldstein R, Friedman RH. Compensation and advancement of women in academic medicine: is there equity? *Ann Intern Med*. 2004;141(3):205–212
23. Carr PL, Gunn CM, Kaplan SA, Raj A, Freund KM. Inadequate progress for women in academic medicine: findings from the national faculty study. J Women Health. 2002. 24(3):190–199
24. Freed GL, Dunham KM, Switalski KE, Jones MD Jr, McGuinness GA; Research Advisory Committee of the American Board of Pediatrics. Recently trained pediatric subspecialists: perspectives on training and scope of practice. *Pediatrics*. 2009;123(Suppl 1):S44–S49
25. Freed GL, McGuinness GA, Althouse LA, Moran LM, Spera L. Long-term plans for those selecting hospital medicine as an initial career choice. *Hosp Pediatr*. 2015;5(4):169–174
26. Dyrbye LN, Varkey P, Boone SL, Satele DV, Sloan JA, Shanafelt TD. Physician satisfaction and burnout at different career stages. *Mayo Clin Proc*. 2013;88(12):1358–1367
27. McDonald FS, West CP, Popkave C, Kolars JC. Educational debt and reported career plans among internal medicine residents. *Ann Intern Med*. 2008;149(6):416–420
28. Greysen SR, Chen C, Mullan F. A history of medical student debt: observations and implications for the future of medical education. Acad Med. 2011;86(7):840–845
29. Bodenheimer T, Berenson RA, Rudolf P. The primary care-specialty income gap: why it matters. *Ann Intern Med*. 2007;146(4):301–306

30. Rosenblatt RA, Andrilla CHA. The impact of U.S. medical students' debt on their choice of primary care careers: an analysis of data from the 2002 medical school graduation questionnaire. *Acad Med*. 2005;80(9):815–819

31. American Academy of Pedatrics. Pediatrics 101: A Resource Guide. Available at: www.aap.org/en-us/professional-resources/pediatrics-as-a-profession/documents/peds101book.pdf. Accessed January 7, 2016

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Pediatrics; originally published online February 19, 2016;
DOI: 10.1542/peds.2015-3298

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