

Recently Trained General Pediatricians: Perspectives on Residency Training and Scope of Practice

Gary L. Freed, MD, MPH^{a,b}, Kelly M. Dunham, MPP^{a,b}, Kara E. Switalski, MPH^{a,b}, M. Douglas Jones, Jr, MD^c, Gail A. McGuinness, MD^d, and the Research Advisory Committee of the American Board of Pediatrics

^aChild Health Evaluation and Research Unit, Ann Arbor, Michigan; ^bDivision of General Pediatrics, University of Michigan, Ann Arbor, Michigan; ^cDepartment of Pediatrics, University of Colorado Denver, School of Medicine, Aurora, Colorado; ^dExecutive Vice-president, American Board of Pediatrics, Chapel Hill, North Carolina

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

ABSTRACT

OBJECTIVE. Because of the increase in both the prevalence and complexity of chronic diseases in children, there is heightened awareness of the need for general pediatricians to be prepared to comanage their patients with chronic disorders with subspecialists. It is not known currently how well prepared general pediatricians believe themselves to be for these roles after residency training. This study was conducted to determine the perspectives of recently trained general pediatricians in practice regarding their decisions on residency choice, career choice, and adequacy of training.

METHODS. A random sample of 600 generalists whose initial application for general pediatric certification occurred between 2002 and 2003 (4–5 years out of training) and 600 generalists who applied for board certification between 2005 and 2006 and who were not currently enrolled in or had completed subspecialty training (1–2 years out of training) received a structured questionnaire by mail. The survey focused on decision-making in selection of residency programs, strength of residency training in preparation for clinical care, and scope of practice.

RESULTS. The overall response rate was 76%. The majority of generalists reported that their residency training was adequate in most subspecialty areas. However, a large proportion of generalists indicated that they could have used additional training in mental health (62% [$n = 424$]), sports medicine (51% [$n = 345$]), oral health (52% [$n = 356$]), and developmental/behavioral pediatrics (48% [$n = 326$]). Most generalist respondents reported that they are comfortable comanaging cases requiring subspecialty care with a subspecialist. However, generalist respondents without local access to subspecialists were more likely to report that they are comfortable managing patients who require subspecialty care.

CONCLUSIONS. The training of general pediatricians, and the needs for their adequate preparation to care for patients, should be a dynamic process. As the nature and epidemiology of pediatric care change, our educational system must change as well. *Pediatrics* 2009;123:S38–S43

www.pediatrics.org/cgi/doi/10.1542/peds.2008-1578J

doi:10.1542/peds.2008-1578J

Key Words

residency, training, career choice

Abbreviation

FOPE II—Future of Pediatric Education II

Accepted for publication Sep 22, 2008

Address correspondence to Gary L. Freed, MD, MPH, University of Michigan, 300 N Ingalls, Building 6E08, Ann Arbor, MI 48109-0456. E-mail: gfreed@med.umich.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275). Copyright © 2009 by the American Academy of Pediatrics

THE SCOPE AND manner of residency training and physician decision-making regarding career choice for pediatricians was last assessed systematically in 1995 as part of the Future of Pediatric Education II (FOPE II) Project.¹ However, that project relied mostly on expert opinion and small-scale, limited research studies to assess nationally the then-current educational programs.²

Since the FOPE II Project, there have not been significant changes in the structure of pediatrics resident education. However, the prevalence of the types of patients encountered by pediatricians today is different from at the time of the FOPE II Project. Currently, pediatricians provide care to more children with chronic illnesses than in years past.³ In addition, new technologies have created the need for pediatricians to be aware of new genetic and other types of recently discovered illnesses and conditions.⁴

Because of the increase in both the prevalence and the complexity of chronic diseases in children, there is heightened awareness of the need for general pediatricians to be prepared to comanage their patients with chronic disorders with subspecialists. Furthermore, emphasis on cost containment and the shift to high-volume ambulatory pediatrics has increased focus on prevention, health maintenance, and treatment of “minor” acute illnesses. It is unknown how well prepared general pediatricians believe themselves to be for these roles after residency training.

This study was conducted to determine the perspectives of recently trained general pediatricians in practice regarding their decisions on residency choice, career choice, and adequacy of training.

METHODS

Sample

The American Board of Pediatrics maintains a database of all physicians who are certified as generalists within the field of pediatrics. The list includes all those who have ever applied for board certification and the years in which they applied. To characterize the strengths and weaknesses of residency training from the perspective of recently trained general pediatricians, we selected a random sample of 600 generalists whose initial application for general pediatrics certification occurred between 2002 and 2003 (4–5 years out of training) and 600 generalists who applied for board certification between 2005 and 2006 and who were not currently enrolled in or had completed subspecialty training (1–2 years out of training).

Survey Instrument

In collaboration with the American Board of Pediatrics Research Advisory Committee and the Residency Review and Redesign in Pediatrics (R³P) Committee, we developed a structured questionnaire to be administered by mail. The survey contained 14 items and was designed to be completed in 10 minutes or less. The survey focused on decision-making in selection of residency programs, strength of residency training in preparation for clinical care, and scope of practice. The questionnaire was a composite of fixed-choice and Likert-scale questions.

Questionnaire Administration

The first mailing of questionnaires was sent via priority mail to the 1200 physicians in the sample in August 2007. The survey packet contained a personalized, hand-signed cover letter, the instrument, a business reply mail envelope, and a \$5 bill as an incentive to complete the questionnaire. Two additional mailings were sent to nonrespondents in September and October 2007. The second and third mailings were sent via first-class mail and contained a personalized cover letter, the instrument, and a business reply mail envelope.

Data Analysis

First, frequency distributions were calculated for all survey items. Next, χ^2 statistics were used to compare respondents according to gender and between respondents who indicated that they had local access to subspecialists with those who did not.

The study was approved by the University of Michigan Medical School Institutional Review Board.

RESULTS

Response Rate

Of the 1200 survey packets mailed, 103 were returned as undeliverable by the postal service, and 830 physicians returned the survey; this yielded an overall response rate of 76%. One hundred twenty-two respondents were ineligible because they were pursuing pediatrics subspe-

TABLE 1 Practice Setting and Demographics

	Overall, % (n)
Current clinical practice (N = 683)	
General pediatrics outpatient care with little or no inpatient care	55 (377)
General pediatrics outpatient care with substantial inpatient care	32 (214)
Inpatient care with little or no outpatient care	12 (83)
Primary patient population (N = 681)	
Mostly privately insured	34 (234)
Equal publicly and privately insured	33 (221)
Mostly publicly insured/underserved	30 (207)
Military	3 (19)
Clinical practice setting (N = 681)	
Private practice	55 (375)
Community-based health center	17 (113)
Academic health center	15 (101)
Private hospital	8 (55)
Other	5 (37)
Local access to most subspecialists (N = 685)	
Yes	83 (570)
Female	73 (503)
International medical graduate	15 (104)

cialty training or no longer working in the field of pediatrics.

On review of the data, 23 of the generalists were determined to be ineligible for the survey because they had completed residency training before 2002. These generalists were removed from the data analysis, which left a total of 685 respondents for analysis.

Respondent Characteristics and Practice Setting

Three fourths of the respondents were women (75% [$n = 503$]), and 15% ($n = 104$) were international medical graduates. More than half (55% [$n = 377$]) of the respondents described their current clinical practice as general pediatrics outpatient care with little or no inpatient care. Approximately one third (32% [$n = 214$]) of the generalist respondents described their current clinical practice as general pediatrics outpatient care with substantial inpatient care. More than half (55% [$n = 375$]) of the respondents reported their current clinical practice setting to be in private practice, 17% ($n = 113$) provide care in a community-based health center, and 15% ($n = 101$) work at an academic health center. A majority (83% [$n = 570$]) of the respondents practice in an area with local access to most of the pediatrics subspecialists they need (Table 1).

No meaningful differences were seen for any response among those who had completed residency training 4 to 5 years before the survey and those who completed training 1 to 2 years before the survey.

Residency Training

When asked to identify the 2 most important factors in selection of their specific residency program, generalists most commonly reported location (65% [$n = 439$]) and lifestyle or overall fit (40% [$n = 270$]). Approximately one third of the respondents indicated that subspecialty expertise or training opportunities (29% [$n = 199$]) and

TABLE 2 Could Have Used Additional Residency Training (N = 681)

Specialty Areas in Training	Could Have Used Additional Training, % (n)
Mental health	62 (424)
Oral health	52 (356)
Sports medicine	51 (345)
Developmental/behavioral pediatrics	48 (326)
Ophthalmology	47 (318)
Physical rehabilitation	39 (259)
Rheumatology	37 (254)
Dermatology	35 (238)
Allergy/immunology	27 (182)
Genetics	25 (173)
Adolescent medicine	25 (171)
Neurology	23 (156)
Endocrinology	22 (146)
Nephrology	21 (142)
Radiology	19 (132)
Child abuse	19 (129)
Coordination of care for complex illnesses	18 (124)
Otolaryngology	18 (122)
Cardiology	17 (114)
Critical care medicine	10 (68)
Patient safety	10 (65)
Well-child care	9 (61)
Hematology/oncology	8 (52)
Pulmonary	8 (52)
Gastroenterology	7 (48)
Patient communication	6 (37)
Normal newborn care	5 (35)
Neonatology	4 (31)
Infectious diseases	4 (30)

program prestige (28% [$n = 189$]) were the most important factors.

The majority of generalists reported that their residency training was adequate in most subspecialty areas. However, a large proportion of generalists indicated that they could have used additional training in mental health (62% [$n = 424$]), sports medicine (51% [$n = 345$]), oral health (52% [$n = 356$]), and developmental/behavioral pediatrics (48% [$n = 326$]) (Table 2).

Generalists were asked to report what they would have done differently if given 6 to 12 months of additional flexibility in their 3-year residency program. The largest proportion of respondents indicated that they would have added additional outpatient subspecialty care (59% [$n = 400$]) and additional outpatient general care (45% [$n = 308$]). Only 14% ($n = 95$) of the respondents reported that they would have added additional inpatient general or subspecialty care, and 9% ($n = 60$) reported that they would not have made any changes to their residency training experience.

Postresidency Career Choice

Thirty-seven percent ($n = 250$) of generalist respondents would have been more likely to choose a subspecialty if combined residency and subspecialty training were 5 years instead of 6. Approximately one third (32% [$n = 219$]) reported no desire to pursue subspecialty training.

When asked to identify the 2 most important factors

TABLE 3 The 2 Most Important Factors in Deciding on a Postresidency Career According to Gender (N = 674)

	Category, % (n)		P
	Male	Female	
Structured hours/lifestyle	61 (110)	75 (371)	.0006
Earning potential	23 (41)	15 (74)	.0153
Interest in specific disease or organ system	8 (14)	3 (13)	.0024

in determining a postresidency career, generalists reported lifestyle (eg, work hours) (71% [$n = 481$]) and location (52% [$n = 350$]) most often. Overall, women were more likely than men to report structured hours or lifestyle as 1 of the 2 most important factors in their career choice; men were more likely than women to cite earning potential (Table 3).

Scope of Practice

Approximately half of the generalists reported that they routinely care for children who require subspecialty expertise in areas such as adolescent medicine (51% [$n = 342$]), developmental or behavioral pediatrics (47% [$n = 315$]), allergy or immunology (49% [$n = 327$]), dermatology (47% [$n = 314$]), and reading radiographs (52% [$n = 351$]). The majority of respondents reported that they never or rarely care for children who require subspecialty care in areas such as genetics (64% [$n = 433$]), rheumatology (74% [$n = 495$]), and critical care medicine (69% [$n = 467$]). Table 4 provides additional details on the frequency of patients requiring subspecialty expertise.

Most generalist respondents reported that they are comfortable comanaging cases requiring subspecialty care with a subspecialist. This was most common for cardiology (87%), neurology (87%), endocrinology (86%), rheumatology (78%), and genetics (77%). More

TABLE 4 Overall Frequency of Patients Requiring Subspecialty Expertise (N = 677)

Specialty Area	Never/Rarely, % (n)	Sometimes, % (n)	Routinely, % (n)
Neonatology	36 (242)	42 (287)	22 (148)
Critical care medicine	69 (467)	25 (167)	6 (39)
Adolescent medicine	24 (165)	25 (168)	51 (342)
Developmental/behavioral pediatrics	14 (98)	39 (262)	47 (315)
Allergy/immunology	13 (90)	38 (259)	49 (327)
Cardiology	20 (133)	64 (433)	16 (111)
Endocrinology	27 (184)	59 (401)	14 (91)
Genetics	64 (433)	32 (217)	4 (27)
Gastroenterology	11 (73)	47 (320)	42 (282)
Hematology/oncology	59 (400)	34 (228)	7 (47)
Infectious diseases	29 (196)	33 (220)	38 (259)
Nephrology	51 (342)	44 (296)	5 (37)
Neurology	20 (136)	61 (412)	19 (126)
Pulmonary	23 (157)	43 (291)	34 (228)
Rheumatology	74 (495)	23 (153)	3 (24)
Mental health	19 (128)	48 (327)	33 (220)
Dermatology	13 (92)	40 (268)	47 (314)
Sports medicine	33 (226)	41 (272)	26 (174)
Reading radiographs	22 (151)	26 (172)	52 (351)

TABLE 5 Overall Comfort Level in Providing Patient Care (N = 679)

Specialty Area	Uncomfortable Participating in Care, % (n)	Comfortable Comanaging Most Cases With Subspecialist, % (n)	Comfortable Managing Most Cases Alone, % (n)
Neonatology	16 (109)	70 (466)	14 (95)
Critical care medicine	52 (342)	46 (304)	2 (13)
Adolescent medicine	1 (9)	24 (162)	75 (499)
Developmental/behavioral pediatrics	4 (24)	65 (436)	31 (209)
Allergy/immunology	1 (5)	53 (354)	46 (311)
Cardiology	11 (75)	87 (593)	2 (11)
Endocrinology	10 (68)	86 (586)	4 (25)
Genetics	21 (141)	77 (521)	2 (11)
Gastroenterology	1 (5)	64 (435)	35 (236)
Hematology/oncology	24 (163)	74 (496)	2 (16)
Infectious diseases	1 (5)	51 (346)	48 (325)
Nephrology	12 (80)	85 (573)	3 (21)
Neurology	10 (65)	87 (590)	3 (21)
Pulmonary	2 (14)	59 (395)	39 (264)
Rheumatology	21 (139)	78 (522)	1 (9)
Mental health	20 (132)	73 (493)	7 (50)
Dermatology	0 (3)	47 (315)	53 (356)
Sports medicine	10 (68)	60 (401)	30 (199)
Reading radiographs	13 (90)	59 (395)	28 (185)

than half of the respondents indicated that they are comfortable managing adolescent medicine (75% [$n = 499$]) and dermatology (53% [$n = 356$]) patients without the assistance of a subspecialist. On the other hand, only a minority felt comfortable managing mental health (7%), sports medicine (30%), and developmental/behavioral pediatrics (31%) without the assistance of a subspecialist, which mirrors their desire for more training in those areas (Table 2).

Half (52% [$n = 342$]) of the respondents reported that they are uncomfortable participating in care for patients who require critical care. Approximately one fifth of general pediatricians reported that they are uncomfortable participating in the care of patients who require genetic (21% [$n = 141$]), hematology or oncology (24% [$n = 163$]), rheumatology (21% [$n = 139$]), or mental health (20% [$n = 132$]) subspecialist expertise. Table 5 provides additional details on the comfort level of generalists in managing patients who require subspecialty care.

Respondents who indicated that they did not have local access to subspecialists were more likely to report that they are comfortable managing patients than those who indicated that they did have such access: neonatology (25% vs 12%; $P = .0003$), adolescent medicine (85% vs 72%; $P = .0118$), pulmonary (50% vs 37%; $P = .0194$), dermatology (63% vs 51%; $P = .0341$), and sports medicine (44% vs 27%; $P = .0009$). Generalist respondents without local access to subspecialists were also more likely (38% vs 26%; $P = .0047$) to report being comfortable reading radiographs without the assistance of a subspecialist.

DISCUSSION

The most important finding from our study was that approximately half of the generalists reported that they could have used additional residency training in mental health, oral health, sports medicine, and developmental/behavioral pediatrics. This is consistent with the results of previous studies.⁵⁻⁷ It is also consistent with the descriptions of reasons for specialty and subspecialty referrals from general pediatricians reported by Forrest et al,⁸ who found that, taken together, orthopedic symptoms, behavioral problems, fractures, traumatic joint injuries, developmental delay, depression/anxiety/neurosis, and attention-deficit/hyperactivity disorder accounted for 21% of referrals. Referrals for oral health were not reported. Forrest et al also found that referrals occurred in 2.3% of office visits; thus, a busy pediatrician is likely to refer a child on an almost-daily basis. Thus, referral patterns provide further insight on where and how to make targeted improvements in residency training.

Although there have been opinions published regarding a “training-practice gap”⁹ between what residents are taught and what they need to be able to do once they are in practice, our findings show the difficulty with generalizations. We found that the respondents believed that they were trained adequately in most subspecialty areas. In contrast to other studies that focused on a specific clinical area and demonstrated perceived deficiencies, our questionnaire asked respondents to rate all subspecialty rotations and training areas, which allowed physicians to assess residency training as a whole.^{5,10-15} Although pediatricians found training to be adequate overall, specific shortcomings in residency training were noted for general pediatricians. A recent survey of pediatrics subspecialty fellows revealed a different pattern of perceived deficiencies,¹⁶ indicating that “one-size-fits-all” training may not be appropriate.

We specifically studied physicians who had recently completed training to reduce the possibility of recall bias associated with their assessment of residency training experiences. This was balanced with the need to study physicians who actually had some experience in caring for patients after their residency. Our study population was different from that of previous studies that attempted to assess some of the same issues. It was not limited to fellows of the American Academy of Pediatrics, a specific geographic region, or a single program. In addition, our response rate of >75% decreases the likelihood of significant response bias.

If given increased flexibility in their residency training, the majority of respondents would have added additional outpatient subspecialty care or outpatient general care.

It is of interest that two thirds of our respondents reported that they never or rarely care for children who require subspecialty care from a geneticist. It is likely that the increasing use of expanded newborn screening and the rapid rise in the private availability and use of genetic testing kits will result in greater demand for general pediatricians with a stronger knowledge base in this area and for a greater referral capacity from geneticists.¹⁷ Although there has been a significant amount

written in the lay press regarding the availability and use of genetic screening and testing, there seems to be little impact on primary care providers thus far. Most (77%) stated that they feel comfortable comanaging patients with a geneticist, but 21% reported feeling uncomfortable participating in the care of a child who requires subspecialty genetic involvement.

There were several other subspecialty areas in which the majority of respondents reported that they never or rarely cared for patients, including rheumatology and nephrology. For some, this may suggest that the experience with these subspecialties should be only a minimal part of residency education. However, the issue of correspondence between experiences during residency and postresidency practice is larger than whether exposure to individual subspecialty disciplines is appropriate. A central responsibility of residency education is training for management or comanagement of problems that are new or unfamiliar. These could be problems for which training was unavailable in a particular residency program, problems for which training was available but not utilized, or problems or approaches to diagnosis and/or management that did not exist at the time residency education took place.

Unfortunately, for many pediatrics subspecialties there is also a paucity of subspecialists who can either provide such training or can act as consultants for their patients once out in practice.^{18,19} General pediatricians who practice in areas without local access to subspecialists for their patients were only slightly more comfortable managing patients with specific subspecialty-related conditions alone; this raises the issue of whether there should be more targeted training during residency in specific subspecialty areas for those who intend to practice in rural or other areas without easy subspecialty access.

Previous studies have asked respondents to list the reasons why they chose a specific residency program. These studies have uniformly provided unranked lists of reasons with several factors being named very frequently. To better define the relative importance of such factors, we asked our subjects to identify the 2 most important factors in their selection of residency programs. Interestingly, the 2 most commonly cited factors for residency program selection were the same as those in the selection of postresidency career choice: location and lifestyle. This consistency identifies a pattern of priorities for those who pursue generalist careers that precede their matriculation into residency training. This method of questioning also demonstrated that, in contrast to findings in other studies, earning potential, although important, is likely not the defining factor in such decisions.²⁰⁻²³

Although internal medicine requires only 2 years of fellowship training to become a subspecialist, pediatrics subspecialty training requires 3 years. This has been considered a contributing factor in the proportion of pediatricians who enter fellowship training. More than one third of our respondents reported that they would have been more likely to choose a subspecialty if combined residency and subspecialty training were 5 years'

long instead of 6. This finding has important implications in light of the relative shortage of pediatrics subspecialists.

CONCLUSIONS

The training of general pediatricians should be a dynamic process. As the nature and epidemiology of pediatrics care change, our educational system must change as well. The challenge has been and will continue to be to ensure excellence of care across a broad spectrum of clinical areas while preserving a measure of flexibility relative to the individual interests and needs of each trainee.

ACKNOWLEDGMENTS

This work was funded by the American Board of Pediatrics Foundation.

We gratefully acknowledge the assistance of the Residency Review and Redesign in Pediatrics Committee and the project group in formulation of the research questions.

REFERENCES

1. Task Force on the Future of Pediatric Education. The Future of Pediatric Education II: organizing pediatric education to meet the needs of infants, children, adolescents, and young adults in the 21st century: a collaborative project of the pediatric community. *Pediatrics*. 2000;105(1):163-212
2. Johnson RL, Charney E, Cheng TL, et al. Final report of the FOPE II Education of the Pediatrician Workgroup. *Pediatrics*. 2000;106(5):1175-1198
3. Newacheck PW, Halfon N. Prevalence and impact of disabling chronic conditions in childhood. *Am J Public Health*. 1998; 88(4):610-617
4. Cunniff C; American Academy of Pediatrics, Committee on Genetics. Prenatal screening and diagnosis for pediatricians. *Pediatrics*. 2004;114(3):889-894
5. Demorest RA, Bernhardt DT, Best TM, Landry GL. Pediatric residency education: is sports medicine getting its fair share? *Pediatrics*. 2005;115(1):28-33
6. Krol DM. Educating pediatricians on children's oral health: past, present, and future. *Pediatrics*. 2004;113(5). Available at: www.pediatrics.org/cgi/content/full/113/5/e487
7. Olson AL, Kelleher KJ, Kemper KJ, Zuckerman BS, Hammond CS, Dietrich AJ. Primary care pediatricians' roles and perceived responsibilities in the identification and management of depression in children and adolescents. *Ambul Pediatr*. 2001;1(2): 91-98
8. Forrest CB, Glade GB, Baker AE, Bocian AB, Kang M, Starfield B. The pediatric primary-specialty care interface: how pediatricians refer children and adolescents to specialty care. *Arch Pediatr Adolesc Med*. 1999;153(7):705-714
9. Lesky LG. The ever-widening training-practice gap. *Acad Med*. 2007;82(3):219-221
10. Boreman CD, Thomasgard MC, Fernandez SA, Coury DL. Resident training in developmental/behavioral pediatrics: where do we stand? *Clin Pediatr (Phila)*. 2007;46(2):135-145
11. Bowen KA, Ball TM. Pediatricians' evaluations of their residency curriculum in emergency medicine. *Pediatr Emerg Care*. 2003;19(2):79-83
12. Flaherty EG, Sege R, Price LL, Christoffel KK, Norton DP, O'Connor KG. Pediatrician characteristics associated with child abuse identification and reporting: results from a national survey of pediatricians. *Child Maltreat*. 2006;11(4):361-369

13. Grant E, Macnab A, Wambera K. The effectiveness of pediatric residency education in preparing graduates to manage neurological and neurobehavioral issues in practice. *Acad Med.* 2007; 82(3):304–309
14. Guevara JP, Feudtner C, Romer D, et al. Fragmented care for inner-city minority children with attention-deficit/hyperactivity disorder. *Pediatrics.* 2005;116(4). Available at: www.pediatrics.org/cgi/content/full/116/4/e512
15. Sneed RC, May WL, Stencel CS. Training of pediatricians in care of physical disabilities in children with special health needs: results of a two-state survey of practicing pediatricians and national resident training programs. *Pediatrics.* 2000;105(3 pt 1):554–561
16. Freed GL, Dunham KM, Switalski KE, Jones MD Jr, McGuinness GA; Research Advisory Committee of the American Board of Pediatrics. Pediatric fellows: perspectives on training and future scope of practice. *Pediatrics.* 2009;123(1 suppl):S31–S37
17. Rosas-Blum E, Shirsat P, Leiner M. Communicating genetic information: a difficult challenge for future pediatricians. *BMC Med Educ.* 2007;7:17
18. Mayer ML. Are we there yet? Distance to care and relative supply among pediatric medical subspecialties. *Pediatrics.* 2006; 118(6):2313–2321
19. Mayer ML, Brogan L, Sandborg CI. Availability of pediatric rheumatology training in United States pediatric residencies. *Arthritis Rheum.* 2006;55(6):836–842
20. Colquitt WL, Zeh MC, Killian CD, Cultice JM. Effect of debt on U.S. medical school graduates' preferences for family medicine, general internal medicine, and general pediatrics. *Acad Med.* 1996;71(4):399–411
21. Cull WL, Chang CH, Goodman DC. Where do graduating pediatric residents seek practice positions? *Ambul Pediatr.* 2005; 5(4):228–234
22. Harris MC, Marx J, Gallagher PR, Ludwig S. General vs subspecialty pediatrics: factors leading to residents' career decisions over a 12-year period. *Arch Pediatr Adolesc Med.* 2005; 159(3):212–216
23. Pan RJ, Cull WL, Brotherton SE. Pediatric residents' career intentions: data from the leading edge of the pediatrician workforce. *Pediatrics.* 2002;109(2):182–188

Recently Trained General Pediatricians: Perspectives on Residency Training and Scope of Practice

Gary L. Freed, Kelly M. Dunham, Kara E. Switalski, M. Douglas Jones, Jr and Gail A. McGuinness

Pediatrics 2009;123;S38

DOI: 10.1542/peds.2008-1578J

Updated Information & Services	including high resolution figures, can be found at: http://pediatrics.aappublications.org/content/123/Supplement_1/S38
References	This article cites 21 articles, 7 of which you can access for free at: http://pediatrics.aappublications.org/content/123/Supplement_1/S38#BIBL
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): Medical Education http://www.aappublications.org/cgi/collection/medical_education_sub Administration/Practice Management http://www.aappublications.org/cgi/collection/administration:practice_management_sub
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.aappublications.org/site/misc/Permissions.xhtml
Reprints	Information about ordering reprints can be found online: http://www.aappublications.org/site/misc/reprints.xhtml

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Recently Trained General Pediatricians: Perspectives on Residency Training and Scope of Practice

Gary L. Freed, Kelly M. Dunham, Kara E. Switalski, M. Douglas Jones, Jr and Gail A. McGuinness

Pediatrics 2009;123;S38

DOI: 10.1542/peds.2008-1578J

The online version of this article, along with updated information and services, is located on the World Wide Web at:

http://pediatrics.aappublications.org/content/123/Supplement_1/S38

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2009 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

