

The Future of Pediatric Education II
A Project of the Pediatric Community

Summary of Survey Findings:
Adolescent Health

Sponsoring Organizations:

American Academy of Pediatrics
American Board of Pediatrics Foundation
American Medical School Pediatric
Department Chairmen
Center for the Future of Children of The
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Introduction

The FUTURE OF PEDIATRIC EDUCATION II (FOPE II) Project is a 3 year, grant-funded initiative launched by the pediatric community in May 1996. As part of this project, key leaders in the pediatric community are addressing the future supply and training of pediatricians and the provision of pediatric care into the next millennium. They are continuing the work begun with a 1978 report entitled: "The Future of Pediatric Education."

The new report, scheduled for completion in 1999, will contain recommendations that will shape the lifelong learning process of pediatricians. Looking beyond the pediatric workforce and training of pediatricians, the recommendations encompassed in the 1999 report will also address the role and pediatric training of nonpediatricians, the financing of graduate medical education, and primary care and subspecialty issues.

The FOPE II Project consists of a 17-member Task Force that has ultimate responsibility for the development of the final report. Operating under the auspices of the Task Force are five, topic-specific workgroups:

- Pediatric Workforce Workgroup
- Pediatric Generalists of the Future Workgroup
- Pediatric Subspecialists of the Future Workgroup
- Financing GME Workgroup
- Education of the Pediatrician Workgroup

Each workgroup will provide an in-depth analysis of key issues under their purview. The workgroups are charged with generating a report that will, to the extent possible, include data-driven conclusions and recommendations for the optimal provision of pediatric care to all infants, children, adolescents, and young adults.

An important component of the FOPE II Project has been the gathering of insights, information, and data that will inform the deliberations of the workgroups and the Task Force. A number of venues are being used both to provide and solicit information. One opportunity is the Survey of the American Academy of Pediatrics (AAP) Medical and Surgical Subspecialty Sections. Seventeen AAP medical and surgical subspecialty sections have chosen to participate in this survey process. Several additional sections have provided the data and information that they acquired from independent survey initiatives.

The Survey of AAP Medical and Surgical Subspecialty Sections solicits information about career, education, and practice issues, as well as demographic information. The surveys have been sent to members of the AAP Section, as well as members of the appropriate subspecialty organizations, as identified by the Section. This report summarizes the findings from the surveys of physicians in adolescent medicine.

Methodology

This report is based on responses that were generated from two questionnaires: a standard questionnaire (the Workforce Survey for Child Health Care) and an adolescent medicine questionnaire (the Adolescent Medicine Survey). The Workforce Survey for Child Health Care was developed by the FOPE II Task Force and was designed to be applicable to most pediatric surgical and medical specialists.

The Adolescent Medicine Survey was developed by Charles Irwin, M.D., a volunteer from the AAP Section on Adolescent Health, along with that Section's chairperson, Robert T. Brown, MD. This questionnaire, which was mailed to adolescent medicine physicians along with the standard questionnaire, included questions concerning common adolescent patient characteristics (age, diagnoses, etc.), time spent with patients, other health care personnel providing care to adolescent patients, training in adolescent medicine, and adolescent medicine workforce requirements.

The surveys were mailed to a sample consisting of all 909 members of the Section, the 839 U.S. physicians who belong to the Society for Adolescent Medicine (SAM), and the 201 physicians who had been sub-board certified as of summer of 1997 in adolescent medicine by the American Board of Pediatrics.¹ Five mailings of the survey went out between March and June of 1998 to a total of 1,447 physicians (there was some overlap between those who belong to the Section, those who belong to SAM, and those who are sub-board certified by ABP). Each mailing contained the standard questionnaire and the Adolescent Medicine Survey, a cover letter emphasizing the importance of the survey, and a return envelope. The survey had an effective sample size of 1,262 and a response rate of 69.7% (880 out of 1,262). Physicians most likely to respond belonged to both the Section and to SAM and were also sub-board certified by ABP (82%). Least likely to respond were physicians who belonged only to SAM (56%).

The respondents were divided into two groups: the 771 who reported that they had trained in general pediatrics (87.6%) and the 109 who did not report training in general pediatrics (12.4%).

¹ Subsequent to the inception of this survey process, the American Board of Pediatrics conducted another certifying exam. As of December 1998, there are now 341 physicians who have been sub-board certified in adolescent medicine.

Acknowledgments

THE FUTURE OF PEDIATRIC EDUCATION II (FOPE II) Project acknowledges the participation of all who facilitated the development and implementation of the Adolescent Medicine Workforce Survey for Child Health Care and this report on the survey findings. The FOPE II Project Task Force and Workgroup members provided the overall framework for the surveys of pediatric medical and surgical subspecialists and those non-pediatrician physicians who provide pediatric care. Of particular note are Charles E. Irwin, Jr., MD, a volunteer from the AAP Section on Adolescent Health, and Robert T. Brown, section chairperson, who wrote the questions for the adolescent medicine questionnaire. Sarah E. Brotherton, PhD, and Judy Karacic of the AAP Department of Research worked diligently on construction of the survey instrument, fielding the survey, and analysis of the results. Thomas M. Gorey, JD, of Policy Planning Associates, wrote the final report. Angela Lipinski, AAP Department of Education, handled all aspects of the production and distribution of this report. The FOPE II Project extends grateful thanks to the many individuals who took time from their busy schedules to complete and return the survey. The participation of these respondents has informed the deliberations of THE FUTURE OF PEDIATRIC EDUCATION II Project.

The Future of Pediatric Education II Project is made possible through the support of the following sponsoring organizations: American Academy of Pediatrics, American Board of Pediatrics Foundation, Association of Medical School Pediatric Department Chairmen, Center for the Future of Children of The David and Lucile Packard Foundation, and Project #MCJ379381 from the Maternal and Child Health Bureau.

Jimmy L. Simon, MD
Project Chairperson

Russell W. Chesney, MD
Project Vice Chairperson

Errol R. Alden, MD
Principal Investigator

Holly J. Mulvey
Director

Workforce Survey for Child Health Care

Demographics of Respondents

On average, the respondents were 48 years of age and said they planned to retire fully from the practice of medicine at age 65. Fifty one percent (51%) of the respondents were female and 49% were male. In terms of ethnicity, 80% were White/Non-Hispanic; 7%, Asian/Pacific Islander; 5%, White/Hispanic; 5%, African American; and 3%, other racial or ethnic groups.

Eighty six percent (86%) of the respondents were graduates of U.S. medical schools, 2% were graduates of Canadian medical schools, and 12% were graduates of medical schools in other countries. The respondents' average year of graduation from medical school was 1977.

Specialty, Residency Training, and Board Certification

The survey instrument asked respondents to list the specialties and subspecialties in which they have been trained, to specify the year they completed residency training, and to indicate for each specialty/subspecialty listed whether they are board certified. Respondents could list up to three specialties/subspecialties.

Table 1 below presents a summary of the specialty, residency training, and board certification information on those who responded to the survey. Nearly 90% of the respondents listed general pediatrics as one of the specialties in which they had trained, while just over 50% said they had trained in adolescent medicine. In addition, 6% said they had trained in internal medicine, 5% in family practice, and 15% in other specialties. Of those who had trained in general pediatrics, 92% were board certified in that specialty; of those who trained in adolescent medicine, 56% reported they were board certified in that field.²

² The number of respondents who said they are sub-board certified in adolescent medicine – 250 – differs from the number reported by the American Board of Pediatrics as of summer 1998 – 201. The fact that the numbers reflected in Table 1 are self-reported accounts for this discrepancy.

Table 1. Residency Training and Board Certification of Survey Respondents

Specialty	Number	Percent of Total	Percent Board Certified	Residency Completion Year
	(#)	(%)	(%)	(Mean)
General pediatrics	771	87.6	92.0	1982
Adolescent medicine	446	50.7	56.1	1990
Internal medicine	53	6.0	86.8	1987
Family Practice	43	4.9	90.7	1987
Obstetrics/gynecology	11	1.3	72.7	1992
Behavioral/developmental	11	1.3	--	1983
Sports medicine	11	1.3	63.6	1994
Psychiatry/child psychiatry	10	1.1	50.0	1979
Endocrinology	10	1.1	60.0	1982
Other	79	9.0		
Total	880	100.0		

Main Practice Site

Respondents were asked to specify their main employment site; that is, the setting in which they spend the most time. Table 2 provides a breakdown of responses for this question. For the respondents overall, 30% indicated that their main practice setting was at a medical school; 22%, in a pediatric group; 11% in solo practice; and 9% in a multispecialty group. Those respondents who trained in general pediatrics were more likely to say that they worked in a pediatric group or a multispecialty group, while those who had not trained in general pediatrics were more likely to say their main practice site was a specialty group or a medical school.

Table 2. Main Practice Site

Main Site	Percentage of Respondents (%)
Medical school	29.9
Pediatric group	22.1
Solo practice	10.6
Multispecialty group	9.0
HMO staff/group model	5.9
Community health center/department	5.5
Community/staff model hospital	5.0
Specialty group	2.5
Uniformed health services clinic	1.8
Other	7.7

When asked to describe the area in which their primary practice site is located, 33% indicated that it is a suburban area; 32%, urban--not inner city; 27%, urban--inner city; and 7%, rural.

Time Spent in Professional Activities

Table 3 depicts the average percentage of time spent by adolescent medicine physicians in various professional activities. On average, over two thirds of the total time spent per week by adolescent medicine physicians in professional activities is devoted to direct patient care. (All but one of the respondents reported that they provide direct patient care.) Administration and teaching account for the next largest portions of their professional time, with adolescent medicine physicians on average spending 11% of their time in each of these activities. Those trained in general pediatrics spent more time in direct patient care than those not trained in general pediatrics (69% vs. 63%); the latter spent more time in administrative activities than general pediatricians (15% vs. 11%). On average, the respondents reported that they typically work 54 hours per week.

Seventy five percent (75%) of the respondents reported that they spend some of their direct patient care time in primary care pediatrics, 58% said they spend some time in a pediatric medical subspecialty (for the most part, adolescent medicine), 1% said they spend some time in a pediatric surgical subspecialty, and 15% indicated that they spend some time in another specialty (e.g., family practice or internal medicine). Seventy eight percent (78%) of adolescent medicine physicians who trained in general pediatrics said they spend some of their direct patient care time in primary care pediatrics, compared to 42% of adolescent medicine physicians who didn't train in general pediatrics.

Table 3. Average Percent of Time per Week in Professional Activities

Professional Activity	Percentage of Time (%)
Direct patient care	68.5
Administration	11.6
Teaching	11.1
Clinical research	3.1
Health services research	1.2
Resident or fellow in training	0.3
Basic science research	0.1
Other, non-direct patient care	4.0

Fifty percent of general pediatricians spend some of their direct patient care time in adolescent medicine; of these, the average percent time in adolescent medicine was 70%. Forty four percent of those not trained in general pediatrics spend some direct patient care time in adolescent medicine. The average percent of time for those physicians was 68%.

Referrals

Eighty two percent (82%) of the respondents reported that they receive referrals for pediatric patients. Table 4 displays the source of these referrals, by specialty.

Table 4. Source of Referrals of Pediatric Patients to Adolescent Medicine Physicians

Source of Referrals	Percentage (%)
Family physicians	73.5
Pediatric generalists	63.3
Pediatric nurse practitioners	48.0
Pediatric medical/surgical subspecialists	46.8
Obstetricians/gynecologists	43.7
General internists	35.9
Physician assistants	25.8
Adult medicine subspecialists	20.9
Others	19.9

Among those adolescent medicine physicians who receive referrals for pediatric patients, nearly three fourths said they receive referrals from family physicians and nearly two thirds said they get referrals from pediatric generalists. Between 40- 50% said they receive referrals from pediatric nurse practitioners, pediatric medical/surgical subspecialists, and obstetricians/gynecologists. Those respondents who trained in general pediatrics were less

likely than those not trained in general pediatrics to say that they received referrals from general internists and adult medicine subspecialists.

The respondents who said they receive referrals for pediatric patients also were asked whether they receive referrals from urgent care centers, community agencies, and school districts. Eighty eight percent (88%) said they receive referrals from one or more of these sources. Sixty eight percent (68%) said they receive referrals from school districts; 59%, from community agencies; and 48% from urgent care centers.

Only 19% of the respondents said that their pediatric referrals come exclusively from within their own practice or managed care network, while 71% said that some of their referrals come from sources outside of their network (10% said they are not in a network).

Among those respondents who reported that they receive referrals, just under one half (48%) said that neither the volume nor the complexity of the pediatric referrals they have received in the last twelve months has changed compared to previously, while just over one half (52%) said that either the volume, the complexity, or both have changed.

Among those adolescent medicine physicians who have experienced a change in the volume or complexity of pediatric referrals, 61% indicated that they have seen an increase in the volume of referrals and 66% said there has been an increase in the complexity of referrals. Only 17% said there has been a decrease in the volume of referrals and only 3% said there has been a decrease in the complexity of referrals. Twenty three percent (23%) said they have experienced no change in the volume of referrals and 31% said they have experienced no change in the complexity of the cases referred to them.

Respondents who have experienced a change in the volume or complexity of pediatric referrals in the past twelve months were asked to describe the factors to which this change could be attributed (more than one factor could be specified). Forty seven percent (47%) of the respondents said an increased likelihood of general pediatricians and other generalists to treat less complex subspecialty patients has caused a change in referrals, 38% said a decreased likelihood of general pediatrics and other generalists to treat more complex subspecialty patients was a cause of the change, 36% said an increased incidence of illness in their community has affected referrals, 32% cited increased competition from other pediatric subspecialists as a cause for a change in referrals, and 22% pointed to an increase in referrals from adult medicine subspecialists. (Only 18% of the respondents who trained in general pediatrics cited an increase in referrals from adult medicine subspecialists, compared to 44% of those not trained in general pediatrics.)

Of the respondents who have experienced an increase in the volume of referrals, 45% attributed it to a decreased likelihood of generalists to handle complex cases, 42% cited an increased likelihood of generalists to treat less complex cases, while 39% cited an increased incidence of illness in their community, and 28% pointed to increased referrals from adult medicine subspecialists. Of the respondents who have experienced a decrease in the volume of referrals, over one half (55%) attributed it to increased competition from other pediatric subspecialists. Of those who have experienced an increase in the complexity of the cases referred to them, over one half (53%) attributed it to an increased likelihood of generalists to handle less complex cases, while 45% cited an increased incidence of illness in their community.

Need for Additional Training

Despite whatever changes are taking place in health care, a majority of the respondents do not feel that the changes have resulted in a need for additional training on their part. Sixty seven percent (67%) of the respondents indicated that the changes in health care have not necessitated additional training in primary care, and 68% said the changes have not necessitated additional training in their subspecialty. Thirty one percent (31%) of the respondents indicated a need for a “little” additional training in primary care and 30% expressed a need for a little additional training in their subspecialty. Only 2% of the respondents indicated a need for “much more” training in primary care and only 3% indicated a need for much more training in their subspecialty. Twenty four percent indicated a need for a little more training in another specialty altogether. Seventeen percent said they required much more training in another specialty.

Competition

Fifty six percent (56%) of the respondents said they face competition for pediatric subspecialty services in their geographical area. Among those who said they face competition, the major sources of competition cited were general pediatricians and family physicians, mentioned by 70% and 67% of the respondents respectively (see Table 5).

Table 5. Perceived Sources of Competition for Pediatric Subspecialty Services

Source of Competition	Percentage of Respondents (%)
General pediatricians	70.0
Family physicians	67.3
Other pediatric subspecialists	32.7
Urgent care centers	27.6
Non-physician medical personnel (e.g., advanced practice nurses, chiropractors)	25.6
Physicians trained in adult medicine in my subspecialty	24.2
Related health professionals (e.g., psychologists, nutritionists)	13.8
Other	7.6

* Percent of respondents who said they face competition from any source

Of those respondents who said they face competition for pediatric subspecialty services in their geographic area, just under one half (49%) have modified their practice as a result of such competition. Among those who have modified their practices, 69% have increased their office hours, 36% have increased the number of physicians in their practice, 28% have increased the number and/or responsibilities of support staff, and 26% have increased the number of advanced practice nurses employed in their practice (see Table 6).

Table 6. Practice Modifications as a Result of Competition

Change	Increased (%)	Decreased (%)	No Change (%)
Office hours	68.6	0.9	30.5
Number of physicians for practice	36.3	7.2	56.5
Number/responsibilities of support staff	27.8	7.2	65.0
Number of advanced practice nurses	26.0	4.5	69.5
Fees	13.0	10.3	76.7
Amount of research/administrative activities	12.1	17.0	70.9

When asked whether, during the last twelve months, their practice had been sold to or merged with another practice or health care organization, 12% responded affirmatively.

Workforce

Just over one half (54%) of the respondents said they anticipated their communities would need additional pediatric subspecialists in the next 3-5 years. Thirty five percent (35%) said there would be a need for more pediatric subspecialists in their discipline and 19% felt there would be a need for additional subspecialists in other pediatric subspecialties. When asked whether they or their employer would be hiring additional, non-replacement pediatric subspecialists in their field in the next 3-5 years, 18% of the respondents said “yes,” 45% said “no,” and 37% said they were unsure.

Income

Adolescent medicine physicians rely on a variety of payment sources for their income, but straight salaries and fee for service payment are most common (see Table 7). Nearly one half (46%) of the respondents said they receive some income from straight salaries compared to less than 30% who said they receive some income from capitation

Table 7. Sources of Income for Adolescent Medicine Physicians

Source of Income	Percentage With Income from Each Source (%)
Traditional fee for service	40.1
Discounted fee for service	38.0
Salary	45.8
Salary with performance incentive	27.3
Prepaid, capitated, nonsalaried	29.1
Prepaid, capitated, salaried	23.9

Table 8 provides information on the percentage of adolescent medicine physicians’ income that comes from various sources. Excluding those who said they did not know the breakdown of their income by source, most of the respondents who said they receive some income from traditional or discounted fee-for-service payment indicated that this source accounts for 33% or less of their total income.

Table 8. Percent of Income by Source

Income Source	0-33%	34-66%	67-100%	Don't Know
Traditional fee for service	63.0	20.8	6.5	9.7
Discounted fee for service	48.1	32.1	9.1	10.8
Prepaid, capitated nonsalaried	57.6	23.4	3.9	15.2
Prepaid, capitated, salaried	45.6	11.1	26.1	17.2
Salary	7.8	6.6	77.7	7.8
Salary with incentive	22.6	5.3	62.0	10.1

Similarly, among those who said they receive some income from prepaid, capitated arrangements--salaried or nonsalaried--most said that this source accounts for 33% or less of their total income. For those who indicated that they receive some income from salaries--or salaries with performance-based incentives--most said this source accounts for two thirds or more of their total income.

Finally, when asked if they have used telemedicine, fax machines or other forms of information technology as part of a consultation with another practitioner because of lack of ready access to appropriate subspecialists (e.g., in a rural area), 69% of the respondents responded affirmatively.

Adolescent Medicine Survey

Physician Characteristics

Of those respondents who are not board certified in adolescent medicine, 18% said they planned to take the certifying examination in adolescent medicine in the future. Over one half (56%) of the respondents said they label themselves as adolescent medicine specialists. Of those who do not consider themselves to be adolescent medicine specialists, nearly one half (47%) view themselves as general pediatricians, while 29% perceive themselves as pediatricians with a special interest in adolescent medicine. Thirty eight percent of those not trained in general pediatrics view themselves as family physicians, and another 14% label themselves as primary care physicians.

Patient Characteristics

Table 9 displays the most common diagnoses among the respondents' adolescent patients. On average, well adolescent visits account for over one fourth (26%) of adolescent patient diagnoses, while acute medical problems and sexual health for females account for 16% and 15% of diagnoses respectively. Well adolescent visits and acute medical problems account for a greater proportion of the adolescent patient diagnoses of those physicians who were trained in general pediatrics, while mental health and substance abuse problems account for a greater proportion of the adolescent patient diagnoses of those physicians who were not trained in general pediatrics.

On average, 59% of the patients of adolescent physicians are female and 41% are male. Those trained in general The average patient distribution by age is as follows: less than 10 years old: 32%; 10-14 years old: 21%; 15-17 years old: 25%; 18-21 years old: 14%; and older than 21 year of age: 8%. Thirty five percent of patients seen by those trained in general pediatrics were less than 10 years old, and five percent were older than 21 years of age. Conversely, 14% of patients seen by those not trained in general pediatrics were less than 10 years old, and 25% were older than 21. Both groups saw equal proportions of 15-17 year olds.

Table 9. Most Frequent Adolescent Patient Diagnoses

Diagnosis	Percentage Distribution of Adolescent Diagnoses (%)
Well adolescent visit, including sports/camp physical	26.3
Acute medical problems	16.3
Sexual health for females	15.3
Acute musculoskeletal problems, including sports injuries	7.4
Mental health/behavioral disorders	6.4
Skin disorders	6.1
Learning problems, including LD/ADHD	5.8
Eating disorders	4.8
Chronic medical/handicapping conditions	4.2
Sexual health for males	3.5
Substance abuse	2.4
Other	1.7

Table 10 displays the average length of time that adolescent physicians spend with new and follow-up patients. On average, for new patients, 43% of the respondents indicated that they spend 30-44 minutes with the patient; 28%, 10-30 minutes; and 24%, 45-60 minutes. For follow-up visits with established patients, most of the respondents (84%) said they spend 10-30 minutes.

Table 10. Time Spent with Patients

Time	New Patient (%)	Established Patient (%)
Less than 10 minutes	0.2	5.9
10-30 minutes	27.7	84.1
30-44 minutes	42.7	8.8
45-60 minutes	23.9	1.2
More than 60 minutes	5.5	--

Practice Characteristics

On average, the respondents reported that 73% of their adolescent practice is devoted to delivering primary care and 27% is devoted to specialty care. Those not trained in general pediatrics report spending less time in primary care and more time in specialty care than those trained in general pediatrics. When asked what percentage of their adolescent practice is spent caring for patients in various settings, the respondents reported spending an average of 89% of their time providing outpatient care in a general ambulatory setting, 6% of their time in an inpatient hospital setting, and the remainder of their time providing care to adolescents in other settings such as schools, group homes, juvenile detention facilities, private hospitals, and community centers.

The respondents reported seeing an average of 7 adolescent patients per half-day session in their clinical outpatient setting and reported providing 7 half day sessions per week in their clinical settings.

On average, the respondents reported that their primary practice setting included six full time equivalent (FTE) physicians, five nurses, and two nurse practitioners, as well as other professionals (see Table 11). However, 19% of the respondents reported having no nurses at their primary practice site; 34%, no nurse practitioners; 60%, no psychologists; and 53%, no social workers. The respondents reported that on average the physicians at their primary practice site spent 44% of their time in adolescent medicine; the nurse practitioners, 43% of their time; the nurses, 41%; the psychologists, 48.3%; and the social workers, 51%.

Table 11. Physicians and Other Professionals Employed in

Adolescent Medicine Practices

Type of Professional	Number Of FTEs (#)	Percentage of Time Spent in Adolescent Medicine (%)
Physicians	6.4	43.5
Nurses	5.3	40.9
Nurse practitioners	1.9	43.3
Social Workers	1.0	50.5
Psychologists	0.7	48.3
Other	1.6	55.1

When asked whether they anticipated changing the size of their practice in the next two years—either by increasing or decreasing the number of professionals from the number they now have—one third said they anticipated making a change and one half said they did not (the remainder of the respondents were uncertain).

Of those who anticipated making a change in the size of their practice, 58% said they planned to increase the number of physicians; 40%, increase the number of nurse practitioners; 35%, increase the number of nurses; 20%, increase the number of social workers; 19%, increase the number of psychologists; and 25%, increase the number of other personnel (see Table 12).

Table 12. Anticipated Changes in Personnel Among Adolescent Medicine Physicians Who Plan to Make a Change in the Size of their Practice

Personnel	Gain (%)	Loss (%)	No Change (%)	Don't Know (%)
Physician staff	57.6	9.8	21.5	11.1
Nurse practitioners	40.2	4.9	39.6	15.3
Nurses	35.2	7.1	42.0	15.7
Social workers	20.4	2.9	54.0	22.6
Psychologists	19.4	3.9	54.5	22.2
Other personnel	25.3	2.5	48.1	24.1

Less than 10% of the respondents said they planned to decrease the number of personnel—in any category. When asked how many positions for physicians in adolescent medicine are unfilled at their practice, the average response among all respondents was 0.3 FTEs.

Residency Training and Workforce

Respondents were asked for their opinion regarding the adequacy of *current* training in adolescent medicine residency programs. Only 7% of the respondents described adolescent medicine training in family practice residencies as adequate (46% described it as inadequate and 47% had no opinion) and only 26% described adolescent medicine training in pediatric residencies as adequate (56% described it as inadequate and 18% expressed no opinion).

When asked for their opinion regarding the adequacy of *their own* training in adolescent medicine, 34% described the adolescent medicine training in their primary care residency as adequate and 66% characterized it as inadequate. Of those respondents who had a fellowship in adolescent medicine, 89% said it was adequate and only 11% said it was inadequate.

Just over two thirds (68%) of the respondents said they believe there is a need to expand the number of adolescent medicine specialists in the US in the next five years. When asked to specify the most important reason for this need, 57% said more specialists are needed to see adolescent patients in clinical settings; 34%, to teach in academic settings; 8% to focus on research in academic settings; and 1% to fill other needs.

Eighty six percent (86%) of the respondents said they expect to be practicing adolescent medicine five years from now. Of those who said they did not expect to be practicing in this field at that time, just over two thirds (68%) cited plans for retirement.

Summary

- The main practice setting for over one half of adolescent medicine physicians is a medical school or a pediatric group, while one fifth are either in solo practice or in a multispecialty group.
- Over one half of adolescent medicine physicians practice primarily in an urban area, while one third practice mainly in a suburban area. Less than 10% practice in a rural setting.
- On average, over two thirds of the total time spent per week by adolescent medicine physicians in professional activities is devoted to direct patient care. Administration and teaching account for the next largest portions of their professional time, with adolescent medicine physicians on average spending 11% of their time in each of these activities.
- On average, adolescent medicine physicians reported spending an average of 53% of their direct patient care in providing primary care pediatrics and reported spending an average of 39% of their time providing care in a pediatric medical subspecialty (mainly adolescent medicine).
- Eighty two percent (82%) of adolescent medicine physicians receive referrals for pediatric patients. Among those who receive referrals for pediatric patients, nearly three fourths said they receive referrals from family physicians and nearly two thirds said they get referrals from pediatric generalists. In addition, 68% get referrals from school districts; 59%, from community agencies; and 48%, from urgent care centers.
- Among adolescent medicine physicians who receive referrals, just over one half said that either the volume of pediatric referrals they receive, the complexity, or both, have changed in the last twelve months compared to previously. For most of these physicians, there has been an increase in the volume and complexity of pediatric referrals. The major reasons for the change in referrals is an increased likelihood of general pediatricians and other generalists to treat less complex subspecialty patients.
- Two thirds of adolescent medicine physicians do not feel that recent changes in health care have resulted in a need for any additional training on their part in primary care or in their subspecialty. Nearly one third, however, feel a need for a little additional training.

- Over one half of adolescent medicine physicians feel they face competition for pediatric subspecialty services in their market, with the major sources of competition being general pediatricians and family physicians. One half of adolescent medicine physicians who believe they face competition for pediatric subspecialty services have modified their practices, with the major change being to increase office hours and to increase the number of physicians in their practice.
- Just over one half of adolescent medicine physicians anticipate their communities will need additional pediatric subspecialists in the next 3-5 years. Thirty five percent (35%) believe there will be a need for more pediatric subspecialists in their discipline and 19% feel there will be a need for additional subspecialists in other pediatric subspecialties.
- Adolescent medicine physicians rely on a variety of payment sources for their income, but fee for service payment and straight salaries are most common.
- On average, well adolescent visits account for over one fourth of adolescent patient diagnoses, while acute medical problems and sexual health for females account for 16% and 15% of diagnoses respectively. On average, 59% of the patients of adolescent physicians are female and 41% are male.
- On average, 73% of the typical adolescent practice is devoted to delivering primary care and 27% is devoted to specialty care.
- One third of adolescent medicine physicians anticipate changing the size of their practice in the next two years; most of these physicians plan to increase the number of professionals they employ.
- Only 7% of adolescent medicine physicians believe current adolescent medicine training in family practice residencies is adequate, only 26% feel current adolescent medicine training in pediatric residencies is adequate, and only 34% feel the adolescent medicine training they received in their primary care residency was adequate. Of those who had a fellowship in adolescent medicine, however, nearly 90% felt it was adequate.
- Just over two thirds of adolescent medicine physicians believe there is a need to expand the number of adolescent medicine specialists in the US in the next five years, primarily to see adolescent patients in clinical settings.