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

Summary of Survey Findings:
Plastic Surgery

Sponsoring Organizations:

American Academy of Pediatrics
American Board of Pediatrics Foundation
American Medical School Pediatric Department Chairmen, Inc.
Center for the Future of Children of the David and Lucile Packard Foundation
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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 plastic surgeons.

Methodology

This report is based on responses that were generated from two questionnaires, which were fielded simultaneously: a standard questionnaire (the *Workforce Survey for Child Health Care*) and a plastic surgery questionnaire (the *Pediatric Plastic Surgery Survey*). (Copies of both surveys are included in an appendix to this report.)

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 Pediatric Plastic Surgery Survey was developed by a volunteer from the AAP Plastic Surgery Section, Mutaz B. Habal, MD, working with the section's chairperson, John A. Persing, MD. This questionnaire was mailed to plastic surgeons along with the standard questionnaire, and included questions as to percent of time spent treating children, distribution of surgeries, number of child patients, distribution of payment sources, teaching programs, and research.

Mailing lists were compiled of plastic surgeons to whom the surveys would be sent. The total sample included: all 62 members of the AAP Plastic Surgery Section (Section); 710 members of the American Cleft Palate-Craniofacial Association (ACPCA), whose primary specialty is plastic surgery; 50 plastic surgeons on staff in US Shriners Hospitals for Children (Shriners); and 292 members of the American Society of Maxillofacial Surgeons (ASMS). There was some overlap in membership: 14% of the sample belonged to both the ACPCA and ASMS, and 4% belonged to the Section, ASMS, and the ACPCA. Altogether, nearly 59% of the sample was made up of plastic surgeons who belonged to only the ACPCA and another 14% who belonged to only the ASMS.

Four mailings of the survey went out between March and June of 1997. Each mailing contained the standard questionnaire and the plastic surgery questionnaire, a cover letter emphasizing the importance of the survey, and a return envelope. The survey had an effective sample size of 824 and a response rate of 42.5% (350 out of 824).

The response rate varied by membership. Plastic surgeons most likely to respond belonged to all three of the following groups: the Section, ACPCA, and ASMS (57%). Also more likely to respond were physicians who belonged to both ACPCA and ASMS (48%). Those least likely to respond were physicians who belonged to only the Section (14%), who were on staff in US Shriners hospitals and ACPCA (27%), and those who belonged to only ASMS (33%).

Cursory examination of the results suggested that the majority of plastic surgeons' patients were not children, and the majority of their surgical procedures were not performed on children. For reporting purposes, respondents were divided into those who indicated that more than 30% of their procedures were performed on children (who, for purposes of this report, are referred to as “pediatric plastic surgeons”) and the rest of the respondents, who appeared to have more of an adult plastic surgery focus (who, for purposes of this report, are referred to as “adult plastic surgeons”). The former group is made up of 106 physicians, who on average reported that 60% of their surgical procedures were performed on children, and the latter group is made up of 244 physicians, who on average reported that 14% of their surgical procedures were performed on children.

Acknowledgments

THE FUTURE OF PEDIATRIC EDUCATION II (FOPE II) Project acknowledges the participation of all who facilitated the development and implementation of the Pediatric Plastic Surgery 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. The Project is grateful to the members and staff of the American Academy of Pediatrics (AAP) and particularly the AAP Plastic Surgery Section; the American Cleft Palate-Craniofacial Association (ACPCA), the 50 plastic surgeons on staff in the US Shriners Hospital for Children (Shriners) and the American Society of Maxillofacial Surgeons. Of particular note is Mutaz B. Habal, MD, a volunteer from the AAP Plastic Surgery Section, and John A. Persing, MD, section chairperson, who wrote the questions for the plastic surgery 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.

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Workforce Survey for Child Health Care

Demographics of Respondents

On average, the respondents were 49 years of age and planned to retire fully from the practice of medicine at age 65. Of the respondents, 93.6% were male; 87.6%, White/Non-Hispanic; 4.5%, Asian/Pacific Islanders; 3%, White/Hispanic; 1.2%, Native American; 0.9% African American; and 2.7% classified themselves as "Other."

Specialty/Subspecialty Composition

The survey instrument asked respondents to list the specialties and subspecialties in which they had been trained, to specify the year they completed residency training, and to indicate for each specialty/subspecialty listed whether they were board certified (or had a certificate of specialty competence). Respondents could list up to three specialties/subspecialties. Of the 350 physicians who responded to the survey, 62% (216) indicated that they had a second specialty, and 18% (64) listed a third specialty.

Board Certification and Residency Training

All but two of the respondents (99.4%) listed plastic surgery as one their specialties. In addition, 41% listed general surgery as one of their specialties, 17% listed craniofacial surgery, 12% listed hand surgery, 5% listed otolaryngology, and 5% listed some other specialty or subspecialty.

Among those who listed plastic surgery as one of their specialties, 82% indicated they were board certified in that specialty, with the mean year for completion of their plastic surgery residencies being 1983. Among those who listed general surgery as one of their specialties/subspecialties, 75% said that they were board certified in that specialty. The average year for completion of their residency training was 1980.

Main Practice Site

Respondents were asked to indicate their main employment site, that is, the setting in which they spend the most time. Table 1 provides a breakdown of responses for plastic surgeons. For the respondents overall, 37% indicated that they were in solo practice; 25% said that they were in a specialty group practice; 28% indicated their main practice setting was a medical school; and 5% responded that they were in a multispecialty group. The remaining 3.9% of respondents practiced either in a pediatric group, an HMO, a community health center or health department, or a community hospital.

Table 1. Respondents Report of Main Practice Site

Main Site	Pediatric Plastic Surgeons (%)	Adult Plastic Surgeons (%)	All Plastic Surgeons (%)
Solo practice	22.9	44.0	37.5
Pediatric group	1.0	0	0.3
Specialty group	15.2	30.3	25.7
Multispecialty group	5.7	4.7	5.0
HMO	0	2.1	1.5
Community health center	1.0	0.4	0.6
Medical School	52.4	17.1	28.0
Community hospital	1.9	1.3	1.5

As Table 1 illustrates, there were significant differences between what have been described for purposes of this report as “adult plastic surgeons” (those that spend 30% or less of their time providing care to pediatric patients) and “pediatric plastic surgeons” (those that spend more than 30% of their time providing care to pediatric patients) in terms of practice setting. Most significantly, over half of pediatric plastic surgeons (52%) spend most of their time in a medical school setting, compared to only 17% of adult plastic surgeons. On the other hand, adult plastic surgeons are roughly twice as likely as pediatric plastic surgeons to practice in either a solo setting or as part of a specialty group: 44% of adult plastic surgeons are in solo practice compared to 23% of pediatric plastic surgeons, and 30% of adult plastic surgeons are in a specialty group compared to 15% of pediatric plastic surgeons.

When asked to describe the area in which their primary practice site is located, close to half of all respondents (46%) indicated that it is an urban area (but not inner city); 29% said it was an urban-inner-city area; and 20% described it as a suburban area. There were significant differences between pediatric plastic surgeons and adult plastic surgeons on this question. Pediatric plastic surgeons are over twice as likely to practice in an urban-inner-city area as are adult plastic surgeons: 46% of pediatric plastic surgeons practice in an urban-inner city environment compared to 22% of adult plastic surgeons, and 51% of adult plastic surgeons practice in an urban (not inner-city) area compared to 35% of pediatric plastic surgeons.

Time Spent in Professional Activities

On average, plastic surgeons spend 66.2 hours per week in professional activities. Pediatric plastic surgeons spend an average of 70.5 hours per week in professional activities and adult plastic surgeons spend an average of 64.2 hours. Table 2 depicts the average percentage of time spent by plastic surgeons in various professional activities.

Table 2. Average Percent of Time per Week in Professional Activities

Main Site	Pediatric Plastic Surgeons (%)	Adult Plastic Surgeons (%)	All Plastic Surgeons (%)
Residency/fellowship	2.1	1.0	1.3
Direct patient care	68.7	80.2	76.8
Administration	8.5	6.9	7.4
Teaching	11.7	6.7	8.2
Clinical research	4.5	1.6	2.4
Basic science research	1.7	0.8	1.1
Health services research	0.2	0.3	0.3
Other, non-direct patient care	2.8	2.6	2.7

On average, slightly over three-fourths (77%) of the total time spent by plastic surgeons in professional activities is devoted to direct patient care. Teaching (8%) and administration (7%) account for the next most significant portions of time spent by plastic surgeons on professional activities.

There are significant differences in the ways in which pediatric plastic surgeons and adult plastic surgeons allocate their professional time, which are primarily attributable to the fact that pediatric plastic surgeons are far more likely than adult plastic surgeons to practice in an academic environment. For example, on average, pediatric plastic surgeons spend 69% of their time in direct patient care activities; adult plastic surgeons, 80%. Pediatric plastic surgeons spend 12% of their time in teaching; adult plastic surgeons, 7%. Pediatric plastic surgeons spend 4.5% of their time in clinical research; adult plastic surgeons, 1.6%.

Of the total time that plastic surgeons spend in direct patient care, on average 30% is devoted to a pediatric surgical subspecialty and approximately 70% is spent in another specialty (including an adult specialty or subspecialty). Among pediatric plastic surgeons, 84% spend some time in plastic surgery as a pediatric surgical subspecialty, 10% spend

some time in craniofacial surgery as a pediatric surgical subspecialty, and 79% report some time spent in plastic surgery as an adult surgical specialty. Among adult plastic surgeons, 75% spend some time in plastic surgery as a pediatric surgical subspecialty and 90% spend some time in plastic surgery as an adult surgical specialty.

Pediatric plastic surgeons spend on average 60% of their direct patient care time in pediatric plastic surgery as compared to adult plastic surgeons, who spend on average 21% of their direct patient care time in pediatric plastic surgery. Pediatric plastic surgeons spend an average of 48% of their direct patient care time in an adult surgical specialty, compared to adult plastic surgeons who spend 87% of their time in an adult surgical specialty.

Referrals

Virtually all (98.6%) plastic surgeons receive referrals for pediatric patients. Table 3 displays the source of these referrals, by specialty. The three biggest sources of referrals of pediatric patients to plastic surgeons are pediatric generalists, family physicians, and pediatric medical and surgical subspecialists. Nearly 90% of plastic surgeons indicated that they receive pediatric referrals from general pediatricians; 85% said they receive pediatric referrals from family physicians; and 76% of plastic surgeons said they receive pediatric referrals from pediatric medical and surgical subspecialists. Thirty percent or more of plastic surgeons also indicated that they receive pediatric referrals from obstetricians/gynecologists, general internists, and pediatric nurse practitioners.

Table 3. Source of Referrals of Pediatric Patients to Plastic Surgeons

Source of Referrals	**Percentage (%)**
Pediatric generalists	89.0
Family physicians	85.5
General internists	33.6
Obstetricians/gynecologists	39.4
Adult medicine subspecialists	26.1
Pediatric medical/surgical subspecialists	75.9
Pediatric nurse practitioners	30.1
Physician assistants	26.1
Others	18.3

The only significant differences between pediatric plastic surgeons and adult plastic surgeons in regard to referrals is that pediatric plastic surgeons are more likely to receive referrals from adult medicine subspecialists and from pediatric medical and surgical

subspecialists than are adult plastic surgeons: One in three pediatric plastic surgeons reported that they receive referrals from adult medicine subspecialists compared to 23% of adult plastic surgeons, and 89% of pediatric plastic surgeons reported that they receive referrals from pediatric medical and surgical subspecialists compared to 70% of adult plastic surgeons.

Plastic surgeons also were asked to report whether they receive referrals from urgent care centers, community agencies, and school districts. Of the respondents, 62% indicated that they receive referrals from urgent care centers; 49% from community agencies; and 33% from schools. One in four plastic surgeons said that they receive no referrals from urgent care centers, community agencies, or school districts. Pediatric plastic surgeons were more likely than adult plastic surgeons to receive referrals from community agencies (60% versus 44%) and from school districts (45% versus 27%).

Plastic surgeons also were asked whether their pediatric referrals come only from within their own practice or managed care network. Only 13% indicated that their pediatric referrals were restricted in that manner.

Almost half of plastic surgeons said that the volume *or* complexity of the pediatric referrals they have received in the last 12 months has changed. (see Table 4). Among those that have experienced a change in the volume or complexity of pediatric referrals, 43% indicated they have seen a decrease in the volume of referrals and 35% said there has been an increase in the complexity of the pediatric cases referred to them.

Table 4. Percentage of Plastic Surgeons Reporting a Change in the Volume *or* Complexity of Pediatric Referrals in the Past 12 Months

Pediatric Referrals Past 12 Months Versus Previous Referrals	Pediatric Plastic Surgeons (%)	Adult Plastic Surgeons (%)	All Plastic Surgeons (%)
Change	62.7	42.3	48.5
No change	37.3	57.7	51.5

There were interesting differences between pediatric and adult plastic surgeons on this series of questions. For example, pediatric plastic surgeons were much more likely than adult plastic surgeons to say that the volume or complexity of their pediatric referrals has

changed: 63% of pediatric plastic surgeons indicated that they have experienced a change, compared to 42% of adult plastic surgeons.

Among the plastic surgeons who indicated that they have experienced a change in the volume or complexity of pediatric referrals in the last 12 months, 59% of pediatric plastic surgeons said that the volume of pediatric referrals has *increased,* compared to 20% of adult plastic surgeons. Only 25% of pediatric plastic surgeons said that the volume of pediatric referrals has *decreased*, compared to 55% of adult plastic surgeons. Finally, among plastic surgeons who indicated that they had experienced a change in the volume or complexity of pediatric referrals in the last 12 months, pediatric plastic surgeons were more likely than adult plastic surgeons to say that the complexity of pediatric cases referred to them has increased (44% versus 29%).

Plastic surgeons who indicated that they have experienced a change in the volume or complexity of pediatric referrals in the last 12 months were asked to describe the factors to which this change could be attributed. Of the respondents, 42% said that an increased likelihood of general pediatricians and other generalists to treat less complex subspecialty patients has caused a change in the volume or complexity of pediatric referrals, and almost half (46%) said that the change can be attributed to increased competition from other pediatric subspecialists. Nearly four out of five respondents (79%) did not think that an increase in the incidence or severity of illness in the community was responsible for the change in the volume or complexity of pediatric referrals.

Need for Additional Training

Despite whatever changes are taking place in health care, respondents to this survey generally did not feel that the changes have resulted in a need for additional training, particularly with respect to primary care. Nine out of ten respondents (92%) indicated that the changes in health care have not caused a need for retraining in primary care and 84% said that the changes have not caused a need for retraining in their subspecialty, while 7% indicated a need for a “little more” retraining in primary care and 16% indicated a need for a “little more” retraining in their subspecialty. Adult plastic surgeons overall tended to feel that they needed a “little more” retraining in their subspecialty (19%) as a result of changes in health care, compared to pediatric plastic surgeons (7%).

Competition

Seven out of ten plastic surgeons indicated that they face competition for pediatric subspecialty services in their geographical area, with the biggest source of competition being other pediatric subspecialists, followed by physicians trained in adult medicine in the same subspecialty (see Table 5). Although approximately 70% of respondents indicated that they face competition for pediatric subspecialty services in their geographical area, three-fourths of these respondents said that they have not modified their practice as a result of such competition. There was a significant difference, however, between pediatric and adult plastic surgeons on this question. While only 16% of adult plastic surgeons said that they have modified their practice as a result of competition, 41% of pediatric plastic surgeons indicated they have modified their practice in response to competition.

For those plastic surgeons who have modified their practices in order to respond to competition, the most common changes were either to make some alteration in support staff or to increase office hours. Over half (57%) of those who have made changes to respond to competition have changed the number and/or responsibilities of support staff and close to half (47%) have increased their office hours, compared to 28% who have decreased their fees, 14% who have increased their fees, and 28% who have decreased their research and administrative activities.

When asked whether, during the last 12 months, their practice had been sold to or merged with another practice or health care organization, only 2% responded affirmatively.

Table 5. Perceived Source of Competition for Pediatric Subspecialty Services

Source of Competition	Plastic Surgeons* (%)
General pediatricians	7.5
Family physicians	9.6
Other pediatric subspecialists	71.1
Physicians trained in adult medicine in respondent's subspecialty	41.7
Non-physician medical personnel (eg, advanced practice nurses, chiropractors)	4.4
Related Health Professionals (eg, psychologists, nutritionists)	1.3
Urgent care centers	14.0
Other	13.2

* Percent of respondents who said they face competition

from each of the listed sources.

Workforce

An overwhelming percentage of the respondents (95%) did not anticipate that there would be a need for additional pediatric subspecialists--or other subspecialists in their disciplines--in their communities in the next 3 to 5 years. Only 3% felt there would be a need for other pediatric subspecialists (not in their disciplines).

When asked whether they or their employer would be hiring additional, non-replacement pediatric subspecialists in their field in the next 3 to 5 years, 70% said "no," 23% said they were unsure, and only 8% said "yes." Pediatric plastic surgeons expressed far more uncertainty than adult plastic surgeons on this question: over one third (34%) of pediatric plastic surgeons said they were unsure as to whether they would be hiring additional pediatric subspecialists, compared to only 18% of adult plastic surgeons. Three-fourths of adult plastic surgeons said they would not be hiring additional pediatric subspecialists, compared to 56% of pediatric plastic surgeons.

Income

Although plastic surgeons rely on a variety of payment arrangements for their income, traditional payment arrangements, such as fee-for-service and discounted fee for service, are generally more common than salaried or capitated arrangements. As Table 6 illustrates, a clear majority of plastic surgeons receive some income from traditional fee-for-service (80%) or discounted fee-for-service (71%) arrangements, compared to 40% of plastic surgeons who receive some income from prepaid, capitated, nonsalaried arrangements and one third who receive some income from prepaid, capitated, salaried arrangements. Only 28% receive any income from salary arrangements with performance-based incentives, and only 22% receive any income from salary without performance-based incentives.

Table 6. Sources of Income for Plastic Surgeons

Source of Income	Percentage Who Receive Income From Each Source (%)
Prepaid, capitated, salaried	33.2
Prepaid, capitated, nonsalaried	40.2
Discounted fee for service	71.3
Traditional fee for service	79.8
Salary	22.4
Salary with performance incentive	28.1

There are significant differences between pediatric and adult plastic surgeons in terms of source of income, with adult plastic surgeons being more likely to receive income from

fee-for-service arrangements and pediatric plastic surgeons being more likely to receive income from salaried arrangements. The specific differences between the two groups are as follows:

- 61% of pediatric plastic surgeons receive some of their income from discounted fee-for-service payment arrangements, compared to 76% of adult plastic surgeons.

- 66% of pediatric plastic surgeons receive some of their income from traditional fee-for-service arrangements, compared to 86% of adult plastic surgeons.

- 32% of pediatric plastic surgeons receive income from a salary (without performance-based incentives), compared to 18% of adult plastic surgeons.

- 42% of pediatric plastic surgeons receive income from a salary with performance-based incentives, compared to 22% of adult plastic surgeons.

Table 7 provides information on the percentage of plastic surgeons' income that comes from various sources. For those plastic surgeons who indicated that they receive some income from prepaid, capitated arrangements (salaried or nonsalaried), roughly three-fourths said that these payment arrangements account for only 0%-33% of their total income.

For those plastic surgeons who indicated that they receive some income from discounted fee-for-service payment arrangements, roughly half said that these payment arrangements account for only a third or less of their total income. Another 30% said these payment arrangements account for one third to two thirds of their total income.

For those plastic surgeons who indicated that they receive some income from traditional fee-for-service payment arrangements, there was a much more even distribution of their income by payment source: 39% said that these payment arrangements account for a third or less of their income, 28% said these payment arrangements account for one-third to two-thirds of their income, and 21% said these payment arrangements account for two-thirds to 100% of their total income.

Table 7. Percentage of Income by Source

Income Source	0%-33%	34%-66%	67%-100%	Don't Know
Prepaid, capitated salaried	74.3	2.8	4.6	18.3
Prepaid, capitated nonsalaried	75.4	8.5	0.8	15.4
Discounted FFS	49.8	29.5	7.9	12.8
Traditional FFS	38.6	27.5	20.7	12.0
Salary	38.2	2.9	33.8	25.0
Salary with incentive	37.9	3.4	36.8	21.8

For those plastic surgeons who indicated that they receive some income from salaries--or salaries with performance-based incentives--such sources either accounted for a substantial portion (67% to 100%) or a minor portion (0% to 33%) of their total income. Over one third of plastic surgeons who indicated that they receive some income from salaries, or salaries with performance-based incentives, said that these payment arrangements account for 0% to 33% of their income and over one third said they account for 67%-100% of total income. Very few respondents (approximately 3% or less) said these payment arrangements accounted for a third to two thirds of their total income.

Finally, when asked whether they have used telemedicine, fax machines, or other forms of information as part of a consultation with another practitioner because of lack of ready access to appropriate subspecialists (eg, in a rural area), only 25% responded affirmatively (36% of pediatric plastic surgeons and 20% of adult plastic surgeons).

Pediatric Plastic Surgery Survey

All of the respondents to the pediatric plastic surgery survey provide direct patient care and virtually all provide some services for pediatric patients (ie, those younger than 18 years of age). Approximately 9 out of 10 (92%) provide care to emergency pediatric patients. On average, respondents indicated that 28% of their surgical procedures are for pediatric patients and 29% of their patients are pediatric patients. Pediatric plastic surgeons said that 60% of their surgical procedures are for pediatric patients and 60% of their patients are pediatric patients. In comparison, adult plastic surgeons indicated that 14% of their surgical procedures are for pediatric patients and 15% of their patients are pediatric patients.

Just under half (47%) of the survey respondents indicated that they work in a children's hospital. As one would expect, a far greater proportion of pediatric plastic surgeons (three out of four) as compared to adult plastic surgeons (approximately one out of three) work in a children's hospital.

Pediatric Problems Handled by Plastic Surgeons

As Table 8 illustrates, trauma cases and craniofacial deformities account for nearly two thirds of the pediatric patient problems handled by plastic surgeons. Birth defects (other than head and neck related deformities) account for 21%, burns account for 8%, and cancer accounts for another 2% of the pediatric patient problems cared for by plastic surgeons. Trauma accounts for a greater proportion of the pediatric patient problems handled by adult plastic surgeons (39% versus 15% for pediatric plastic surgeons). Craniofacial deformities account for a greater proportion of the pediatric patient problems handled by pediatric plastic surgeons (51% versus 24% for adult plastic surgeons).

Table 8. Diagnostic Category as a Percentage of Pediatric Patient Problems

Diagnostic Category	Percentage (%)
Trauma	31.9
Burns	8.2
Birth defects (other than head and neck)	20.7
Craniofacial deformities	32.6
Cancer	2.4
Other	4.2

Number and Type of Pediatric Patient Encounters

On average, plastic surgeons see 5.7 new pediatric patients and 12.7 follow-up pediatric patients during a typical week in the clinic. As would be expected, pediatric plastic surgeons see more new pediatric patients than adult plastic surgeons (8.9 versus 4.2 per week) and more follow-up pediatric patients (25.2 versus 6.8 per week).

Plastic surgeons on average have 2.7 pediatric inpatients on their service per week and perform 1.7 pediatric inpatient consults per week. Pediatric plastic surgeons have an average of 5.9 pediatric inpatients per week compared to 1.3 for adult plastic surgeons.

They have an average of 2.9 pediatric inpatient consults per week compared to 1.1 for adult plastic surgeons.

Plastic surgeons on average spend 34.5 minutes with new pediatric patients and 17 minutes with follow-up pediatric patients. For pediatric patients, plastic surgeons on average spend 1.3 hours per week in team care conferences, 1.0 hours in parent conferences, and 1.1 hours in phone conferences. Pediatric plastic surgeons spend more time on team conferences than adult plastic surgeons (2.4 hours versus .8 hours per week), more time on parent conferences (1.5 versus 0.8 hours per week), and more time on phone conferences (1.8 versus 0.7 hours per week).

When asked whether they could see more pediatric patients per week, 81% of the respondents said that they could. (Eighty six percent of adult plastic surgeons indicated that they could see more patients compared to 69% of pediatric plastic surgeons.) Table 9 illustrates the reasons given for not being able to see more pediatric patients.

Nearly three-fourths of respondents said it was because they did not have enough time, one-fourth said it was because of administrative commitments, one-fourth cited teaching commitments, and 24% mentioned personal/family commitments. Twenty percent said they could not see more pediatric patients because of research commitments and 29% cited payment restrictions. Another 9% cited various other reasons.

Table 9. Reasons Plastic Surgeons Cannot See More Pediatric Patients

Reason	**Percentage (%)**
Not enough time	72.7
Research commitments	20.0
Administrative commitments	25.5
Teaching commitments	25.5
Personal/family commitments	23.6
Payment restrictions	29.1
Other	9.1

Pediatric plastic surgeons were more likely than adult plastic surgeons to cite research commitments as a reason for not being able to treat more pediatric patients (40% versus 3%), as well as being more likely than adult plastic surgeons to cite teaching commitments (40% versus 13%) and personal/family commitments (36% versus 13%).

<u>Payment for Services</u>

As Table 10 illustrates, on average over half of the pediatric patients seen by plastic surgeons are covered by private insurance (eg, indemnity, HMO, PPO) and another 30% are covered by Medicaid. Roughly 10% are uninsured or self-pay patients; 2% are Medicare patients; and another 5% have some other payment system. Pediatric patients of adult plastic surgeons, on average, are more likely than those of pediatric plastic surgeons to have private insurance (55% versus 47%).

Table 10. Pediatric Patients of Plastic Surgeons by Payment Type

Payment Type	Percentage (%)
Medicaid	30.1
Uninsured/self-pay	10.3
Private insurance	52.8
Medicare	2.0
Other	4.6

Medical School Affiliations and Programs

Overall, three fourths of the respondents said that they are affiliated with a medical school. Again, there are significant differences between pediatric and adult plastic surgeons on this measure. Over 90% of pediatric plastic surgeons (93%) said they are affiliated with a medical school, compared to just over two thirds (67%) of adult plastic surgeons.

Of those plastic surgeons who are affiliated with a medical school, 38% indicated that they are full-time faculty; 4% part-time faculty; and 53%, clinical faculty members. Among those plastic surgeons who have a medical school appointment, pediatric plastic surgeons are more likely than adult plastic surgeons to be full-time faculty members (51% versus 30%), while adult plastic surgeons are more likely than pediatric plastic surgeons to be clinical faculty members (61% versus 41%).

Respondents who indicated that they are affiliated with a medical school were further asked whether their medical school offered certain types of programs. Just over half (54%) said that they have a pediatric plastic surgery elective for students; 69% said they have a pediatric plastic surgery program for residents; and 24% said they have a pediatric plastic surgery fellowship program. As would be expected, pediatric plastic surgeons who were affiliated with a medical school were more likely than adult plastic surgeons to indicate that their medical school has a pediatric plastic surgery elective for students (72% versus 43%),

that they have a pediatric plastic surgery program for residents (82% versus 61%), and that they have a pediatric plastic surgery fellowship program (32% versus 19%).

Among those respondents who are affiliated with a medical school that has a pediatric plastic surgery fellowship program, two thirds said that they currently have fellows in their program. (Pediatric plastic surgeons were more likely than adult plastic surgeons to indicate that their fellowship program currently has fellows: 87% versus 46%.) When asked how many 12-month fellowship training positions their program can support currently, almost all of the respondents (85%) said one. When asked how many 6-month fellowship positions their program can support currently, the majority of respondents (62%) said none.

Among those plastic surgeons who are affiliated with medical schools that have fellowship programs, 22% indicated that grants are a source of salary support, 82% indicated that the medical school hospital is a source of salary support, and 33% said that there are other sources of salary support.

Research Activities

Just less than half (46%) of survey respondents said that they conduct research as part of their professional activities. Over three fourths of pediatric plastic surgeons (76%) conduct research, compared to roughly one third (32%) of adult plastic surgeons.

Among those plastic surgeons who do conduct research, 41% indicated that they have outside funding for their research. The amount of such funding ranged from $0 to $50,000 for indirect costs (with a mean of $14,452 and a median of $6,000), and from $0 to $400,000 for direct costs (with a mean of $59,347 and a median of $20,000). Over 90% of the respondents who conduct research indicated that none of their salary is supported through research grants. On average, for those plastic surgeons who conduct research as part of their current professional activities, 68% of their research time is devoted to clinical research, 17% is spent on basic (lab-based) research, and 3% is spent on other (eg, epidemiological research).

Summary

The majority of plastic surgeons' patients are not children, and the majority of their surgical procedures are not performed on children.

Pediatric generalists represent the single biggest source of referrals of pediatric patients to plastic surgeons, followed by family physicians and pediatric medical and surgical subspecialists.

Despite the changes that are taking place in health care, plastic surgeons generally do not feel that the changes have resulted in a need for additional training in either primary care or in their subspecialty.

Most plastic surgeons do not anticipate that there will be a need for additional pediatric subspecialists--or other subspecialists in their disciplines--in their communities in the next 3 to 5 years.

Most plastic surgeons feel that they could see more pediatric patients per week than they currently are seeing.

Although plastic surgeons rely on a variety of payment arrangements for their income, traditional payment arrangements, such as fee-for-service and discounted fee-for-service, are generally more common than salaried or capitated arrangements.

On average, over 80% of the pediatric patients seen by plastic surgeons are covered by private insurance or Medicaid.

There are significant practice-related differences between what have been described for purposes of this report as “adult plastic surgeons” (those that spend 30% or less of their time providing care to pediatric patients) and “pediatric plastic surgeons” (those that spend more than 30% of their time providing care to pediatric patients), including the following:

--*Practice Setting*: Pediatric plastic surgeons are more likely to practice in a medical school setting, while adult plastic surgeons are more likely to practice in either a solo setting or as part of a specialty group.

--*Professional Activities*: Pediatric plastic surgeons are far more likely than adult plastic surgeons to practice in an academic environment and, therefore,

tend to spend more time in teaching and research, and less time in direct patient care, than adult plastic surgeons.

--*Volume/Complexity of Cases*: Pediatric plastic surgeons are much more likely than adult plastic surgeons to say that the volume or complexity of their pediatric referrals has changed. Among plastic surgeons who say that they have experienced a recent change in the volume or complexity of pediatric referrals, pediatric plastic surgeons are far more likely than adult plastic surgeons to say that both the volume *and* complexity of pediatric referrals has increased. Plastic surgeons who have experienced a change in the volume or complexity of pediatric referrals generally do not attribute the change to an increase in the incidence or severity of illness in their community.

--*Competition*: While most plastic surgeons say they face competition for pediatric subspecialty services in their geographical area, pediatric plastic surgeons are far more likely than adult plastic surgeons to modify their practice (eg, make changes in support staff or office hours) in response to competition.

--*Source of Income*: Pediatric plastic surgeons are more likely than adult plastic surgeons to receive income from salaried arrangements.

--*Pediatric Problems Handled by Plastic Surgeons:* Trauma cases and craniofacial deformities account for nearly two thirds of the pediatric patient problems handled by plastic surgeons. Craniofacial deformities account for a greater proportion of the pediatric patient problems handled by pediatric plastic surgeons, while trauma cases account for a greater proportion of the pediatric patient problems handled by adult plastic surgeons.