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The Pediatric Subspecialty Workforce: Public Policy and Forces for Change

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ABSTRACT. Policy has not adequately addressed the unique circumstances of pediatric subspecialties, many of which are facing workforce shortages. Pediatric subspecialties, which we define to include all medical and surgical subspecialties, are discrete disciplines that differ significantly from each other and from adult medicine subspecialties. Concerns about a current shortage of pediatric subspecialists overall are driven by indicators ranging from recruitment difficulties to long wait times for appointments. The future supply of pediatric subspecialists and patient access to pediatric subspecialty care will be affected by a number of key factors or forces for change. We discuss 5 of these factors: changing physician and patient demographics; debt load and lifestyle considerations; competition among providers of subspecialty care; equitable reimbursement for subspecialty services; and policy to regulate physician supply. We also identify issues and strategies that medical and specialty societies, pediatric subspecialists, researchers, child advocates, policy makers, and others should consider in the development of subspecialty-specific workforce-policy agendas. Pediatrics 2005;116:1192–1202; pediatric subspecialists, subspecialty care, pediatric workforce, workforce policy, access to health care.

ABBREVIATIONS. GME, graduate medical education; IMG, international medical graduate; CHGME, Children’s Hospital Graduate Medical Education; ABP, American Board of Pediatrics; ACGME, Accreditation Council for Graduate Medical Education; NACHRI, National Association of Children’s Hospitals and Related Institutions.

Physician workforce planning is an inherently imprecise endeavor but one that nonetheless requires reliable, data-driven analyses of individual specialties and subspecialties to be useful and effective. To date, however, most analyses of the physician workforce have obscured the important differences between adult and pediatric practice and between the various medical and surgical disciplines, giving rise to policy proposals that may endanger the future of many pediatric subspecialties. Therefore, we suggest a framework for examining the pediatric subspecialty workforce that will assist policy makers and others in their efforts to develop workforce agendas for future policy action. Because each subspecialty differs in the size of its workforce, work hours, call schedule, proportion of academic positions, salaries, and other characteristics, most agendas will need to be subspecialty specific. This article consists of 3 major sections: (1) a review of recent workforce-policy proposals, a definition of the scope of the current pediatric subspecialty workforce, and a description of some key differences between pediatric subspecialists and their corresponding internal medicine subspecialists and other adult-oriented specialists; (2) some of the forces that are likely to dramatically alter the provision of pediatric subspecialty care in the near future; and (3) considerations for future workforce policy and conclusions.

REVIEW OF RECENT WORKFORCE-POLICY PROPOSALS

Current policy proposals on the physician workforce have been shaped largely by the emphasis on primary health care that reached its zenith in the mid-1990s. Federal funding for graduate medical education (GME) in primary care specialties was intended to create an incentive for medical students to enter these disciplines.1–4 In addition, workforce policy in the 1990s endeavored to restrict the entrance of international medical graduates (IMGs), who historically have constituted a large proportion of the workforce in many pediatric subspecialties, into GME and, ultimately, the physician workforce.5–9 In 1992, the federal Council on Graduate Medical Education recommended that first-year residency positions be restricted to 110% of US Medical Graduates and that the physician workforce consist of 50% primary care or generalist physicians and 50% non–primary care or specialist physicians. It also adopted the commonly held view that specialty care was responsible for increasing health care costs, fragmentation of care, and the discrepancy between the numbers of physicians practicing in urban and rural areas.1

A number of subsequent reports from governmental advisory bodies continued to advocate for policy action to restrict the growth of the non–primary care physician workforce through the end of the 1990s and the beginning of the new millennium.3,4,6–12 Additionally, a cadre of medical organizations, health
services researchers, health economists, and academicians produced a body of literature that helped to frame the medical community’s discussion of physician workforce policy.13–17

The result of these analyses and recommendations was a national workforce policy that had the stated goal of increasing the number of primary care physicians, while restricting the number of specialist physicians, produced by residency training programs. This policy was implemented through federal appropriations for primary care training programs, state-level incentives for careers in primary care disciplines, and other programs designed to foster expansion of primary care specialties. However, federal policy makers recognized that there was no funding stream for pediatric GME in freestanding children’s teaching hospitals equivalent to the Medicare system, which provided millions of dollars for GME in other specialties. For this reason, the Children’s Hospital Graduate Medical Education (CHGME) Payment Program was created in 1999. This was an important advance not only in the training of general pediatricians but also of pediatric subspecialists, ~50% of whom are trained in freestanding children’s teaching hospitals.18 Yet, despite this noteworthy progress, the CHGME Payment Program has not addressed the call for a stable funding stream for pediatric GME, because the program is subject to the annual budget appropriations process.

By the end of the 1990s, many specialist disciplines, including pediatric subspecialties, began to report shortages of both subspecialty residents and practicing physicians.19–22 These shortages, however, were not caused exclusively by a growth in the production of primary care physicians and a corresponding decrease in the training of physicians in many specialist disciplines. At the same time, other developments in the health care system, such as increased demand for subspecialty services, inadequate reimbursement for delivering these services, gatekeeping mechanisms that impaired access to subspecialists, and greater competition among providers, also affected the overall adequacy of the pediatric subspecialist workforce to provide patient care and to participate in other professional endeavors such as research.

DEFINING THE CURRENT PEDIATRIC SUBSPECIALIST WORKFORCE

The term “pediatric medical subspecialist” denotes a pediatrician who has obtained sub-board certification in 1 of the 16 American Board of Pediatrics (ABP)–designated subspecialties. A pediatric surgical specialist is a surgeon who has received certification from 1 of the surgical specialty boards approved by the American Board of Medical Specialties, followed by additional training recognized by the Accreditation Council for Graduate Medical Education (ACGME) and board certification in the pediatric aspects of the specialty, if available.

In addition, board-certified pediatric specialists in child neurology, child and adolescent psychiatry, genetics, allergy/immunology, anesthesiology, radiology, and dermatology are certified by different specialty boards and are not, strictly speaking, pediatric subspecialists, but they form an important and integral part of the pediatric specialty care workforce. It must be noted, however, that even the categories listed above give rise to debate. Nonetheless, for the purposes of this article, “pediatric subspecialist” will be used to signify the full range of physicians and surgeons that provide specialty care to infants, children, adolescents, and young adults. This term, therefore, excludes general pediatricians and primary care physicians in other specialties.

DIFFERENCES BETWEEN PEDIATRIC SUBSPECIALISTS AND ADULT SUBSPECIALISTS

One of the major shortcomings of most policy discussions is the failure to differentiate pediatric subspecialists from their adult medicine counterparts. In most deliberations, the debate about workforce planning focuses on determining the proper distribution of the total physician workforce between primary care and non–primary care physicians. On those rare occasions, however, when subspecialists are considered, the significant differences between adult subspecialists and pediatric subspecialists, and the impact of the latter on the workforce, are insufficiently addressed.

Pediatric subspecialists and adult subspecialists differ in numbers of both physicians and patients. The size of the pediatric subspecialist workforce, even when using the most inclusive definition of a pediatric subspecialist, is very small compared with the adult subspecialist workforce. According to 2002 data from the American Medical Association Master file, 11 053 physicians identified themselves as pediatric subspecialists in the medical subspecialty areas certified by the ABP. In contrast, 72 992 physicians classified themselves as adult medicine subspecialists in the subspecialty areas certified by the American Board of Internal Medicine. If other pediatric (sub)specialists in surgical and other fields are added, the number of pediatric subspecialists only increases to 21 410.23

The sizes of the patient populations they serve are likewise quite different. It is clear that the aging of the “baby boomer” generation and the longevity of the elderly, which are comprising a larger percentage of the US population, are increasing the demand for adult subspecialty services. The number of children requiring pediatric subspecialty services is relatively small by comparison. According to the 2000 US Census, there are 80.4 million children 0 to 19 years old, who make up 28.6% of the US population. Adults older than 19 years number 200.1 million or 71.4% of the population, of which 34.9 million are older than 65 years. In other words, if ABP board-certified subspecialists are compared with American Board of Internal Medicine board-certified subspecialists, there are ~13 pediatric subspecialists per 100 000 pediatric patients and ~36 internal medicine subspecialists per 100 000 adult patients. By the year 2020, the US Census predicts that the population 0 to 19 years old will increase by ~6.5%, whereas the population older than 65 will increase by 54%.24 This
force of numbers translates into greater political and financial clout for the adult subspecialty community among policy makers, payers, and other health care decision-makers. In addition, the financial viability of adult subspecialists is bolstered by their access to Medicare, a reimbursement stream that is generally not available to pediatric subspecialists.

Of particular significance are the financial disparities that exist between these groups of physicians in terms of both compensation and reimbursement for services. Although gaps do not exist for all subspecialties, in disciplines such as allergy, cardiology, gastroenterology, and hematology/oncology, adult subspecialists’ salaries are from 20% to nearly 40% higher than those of their pediatric colleagues. This disparity in income between adult and pediatric subspecialists’ salaries is characteristic of academic departments, as well as medical groups, as 1 study of the incomes of general and pediatric emergency medicine physicians shows. Of course, salaries depend on many factors besides specialty or subspecialty, such as geographic area, size of the practice, physician gender, whether it is a part-time practice, liability premiums, capitation, and use of performance incentives in compensation. Pediatric subspecialists have not been able to duplicate the success of adult subspecialists in securing higher reimbursement for their clinical services. In part, this is because pediatrics has relatively few expensive procedures in comparison to adult medicine subspecialties. Of greater importance, the resource-based relative value scale, which is based on the costs of providing adult care, does not take into account factors such as the need for additional reassurance regarding examinations and other interventions, fear of pain, the need to sedate many children before procedures, and the inherent difficulties in communicating directly or effectively with the younger patient, all of which can dramatically affect the cost of providing care. This prevents pediatric subspecialists from billing at a rate that captures the true time and effort necessary to provide care.

SUPPLY OF THE PEDIATRIC SUBSPECIALIST WORKFORCE

Research on the pediatric subspecialist workforce has been increasing in recent years despite low awareness among many policy makers. Prominent among these studies was a series of surveys conducted by the Future of Pediatric Education II (FOPE II) Project of 17 medical and surgical subspecialty sections of the American Academy of Pediatrics. The FOPE II surveys collected data on the practice characteristics of physicians in these subspecialties to identify issues that could be explored through additional research. Subsequent studies have examined a number of these issues and expanded our knowledge about the pediatric subspecialty workforce. However, each subspecialty has its own unique characteristics and should be considered separately. In addition, there are important differences within each pediatric subspecialty between the academic subspecialist workforce and those in practice in community settings. Although a discussion of these differences is beyond the scope of this article, they must be considered in workforce-policy development.

Research has provided evidence of a physician undersupply in many pediatric subspecialties (but not all) through a variety of indicators. Some of these indicators focus on the supply and availability of pediatric subspecialists. The difficulty in recruiting residents into subspecialty training programs and practicing pediatric subspecialists into vacant job positions is one important indicator. Recruitment problems have been reported in pediatric dermatology, pediatric radiology, child neurology, and pediatric rheumatology, with candidate searches lasting well over a year. The National Association of Children’s Hospitals and Related Institutions (NACHRI) has reported similar recruitment problems for pediatric neurology, pediatric anesthesiology, and pediatric gastroenterology (D. Shelton, MHA, written communication, September 28, 2004).

Contrary arguments that the pipeline of pediatric subspecialists is rising back to 1990 levels because of increased enrollment in fellowship programs are questionable. These increases, rather, are in large part tied directly to the growth in subspecialty certification. Of the 16 subspecialty certificates offered by the ABP, 9 (56%) have been established since 1990.44 In addition, the attrition rates of pediatric subspecialist fellows are concerning, given that many subspecialties lose ≥30% of their fellows over the 3 years of training, which, if sustained, could subsequently lead to workforce shortages. Finally, even if the ABP is correct that resident interest in pediatric subspecialty careers has increased over the last few years, it will still take several more years of continued growth to rebound from the preceding period of decline and repopulate the pediatric subspecialty workforce.

Even for those positions that are filled, pediatric subspecialists in fields such as child and adolescent psychiatry, pediatric otolaryngology, and pediatric surgery have identified that they are too busy to satisfy patient demand for services. In pediatric emergency medicine and pediatric critical care medicine, for example, the heavy workload and long hours have led to high stress and burnout. For these reasons, a significant number of physicians reported leaving both of these subspecialties, which, over time, could adversely impact workforce supply and constrain access to pediatric subspecialty services. The reasons for burnout vary, but in these 2 cases, it is partially related to overcrowding in emergency departments and the additional staffing needs generated by the considerable growth of pediatric intensive care units in the United States. In child neurology, 1 survey demonstrated that new patients must wait ~49 days for a patient clinic visit, although 12% of the survey population reported waiting ≥3 months for an appointment. In addition, an NACHRI survey found that more than three quarters of respondents indicated average wait times for appointments of >1 month in the pediatric subspecialties of pulmonology (5 weeks), gastroenterology (7 weeks), endocrinology (9 weeks), neurology
(11 weeks), and child and adolescent psychiatry (3 months) (D. Shelton, MHA, written communication, 2004). In some disciplines, such as pediatric otolaryngology, pediatric rheumatology, and pediatric nephrology, pediatric subspecialists spend considerably more of their professional time in research and teaching compared with their adult medicine counterparts. These activities, although critical to increasing medical knowledge and improving the health of patients, limits the ability of these physicians to provide clinical care to pediatric patients.56,48,53

Other indicators of undersupply are provided by evidence of barriers to accessing pediatric subspecialty care. Of course, the geographic maldistribution of physicians remains a significant barrier. Adult rheumatologists, for example, are significantly more likely to provide subspecialty care to pediatric patients (mainly adolescents) if the location of their practice is >50 miles from the nearest pediatric rheumatologist.43,53 A similar relationship between adult and pediatric otolaryngologists has also been demonstrated.37 Yet other barriers besides geography exist. Chronically ill children with Medicaid coverage, for example, experience a number of barriers to accessing subspecialty care, including transportation difficulties, cultural or language differences, and the unwillingness of some pediatric subspecialists to accept Medicaid patients because of unrealistic reimbursement levels in many states.54 In the worst cases, the combination of both geographic barriers and these other socioeconomic and systemic difficulties, particularly for chronically ill children in rural or underserved areas, make access to health care seem nearly impossible.55 Even increases in patient volume, such as the 28% increase in outpatient volume reported by NACHRI in 1998 for the average children’s hospital, can impede access to care.56

There is at least 1 exception, however, to the general trend of undersupply within pediatric subspecialties. The neonatology workforce continues to sustain robust growth, with most areas in the United States having adequate access to neonatal services. It has even been suggested that neonatology, by far the largest pediatric subspecialty, may be expanding at too great a rate, although there is no reason to suspect that the market for neonatologists will be tightening in the near future.57 Indeed, in the past 3 decades, the number of neonatologists has increased greatly while the birth rate has remained relatively stable.58 Despite the increased number of high-risk newborns associated with advances in reproductive technology such as in vitro fertilization, the workload posed by high-risk newborns does not seem to be excessive, given that ~60% of US neonatologists care for normal newborns.59 Indeed, it has been demonstrated that the supply of neonatologists in most regions of the United States exceeds the number associated with reduced neonatal mortality rates.60,61

**FORCES FOR CHANGE**

A force for change is a factor that has the ability to facilitate or restrict patient access to subspecialty care or to affect the quality of this care by controlling the operation of the health care delivery system at all levels: national, regional, local, and institutional. In the case of the workforce, this would include factors that affect the available supply of health care providers and their distribution, geographically and otherwise, within the health care system. It would also include systemic controls that regulate patient access to care, such as insurance status. For the purposes of this article, however, we have chosen 5 factors or “forces for change” that meet these criteria and merit detailed discussion.

We have selected these 5 factors for discussion because of their prominence in recent policy debates, the medical press, and health services research pertaining to pediatric subspecialties. They have not been rank ordered or prioritized. Credible arguments could be made, however, for classifying other factors as forces for change, such as the number of uninsured patients, tort reform, use of hospitalists and nonphysicians to provide pediatric subspecialty care, and the geographic maldistribution of physicians. We acknowledge the importance of these and other factors. Space limitations, however, prohibit a comprehensive treatment of these other issues.

**Changes in the Demographics of Physician and Patient Populations**

The changing demographics of both physicians and pediatric patients will figure as a key force for change. Instead of a predominantly male pediatric subspecialist workforce working full-time to provide care to a largely white patient population, there will be a predominantly female pediatric subspecialist workforce working part-time to provide care for an increasingly diverse patient population. These changes will have dramatic consequences for access to and the delivery of pediatric subspecialty care. The gender composition of the pediatrician workforce is nearing parity, and women already constitute >60% of pediatric residents. Women have historically entered pediatric subspecialties in smaller numbers than men, although many subspecialties such as pediatric radiology, pediatric neurology, child and adolescent psychiatry, and pediatric surgery have noted significant increases in the number of women in their workforces in the last couple of decades.40,42,47,49 Among female ophthalmologists seeking subspecialization, for example, pediatric ophthalmology was by far the most popular choice.62 In addition, with the increasing acceptance and popularity of part-time practice among female pediatricians,63 the number of full-time-equivalent pediatric subspecialists available to provide clinical care and perform research, teaching, and administrative roles may decline, as has been noted for pediatric neurology and pediatric surgery.42,49 Indeed, 1 study demonstrated that working fewer clinical hours results in higher quality patient care with no negative effect on patient satisfaction or cost, which suggests that part-time practice may become a more commonly accepted and expected employment option.64

Mentoring, flexibility in training pathways to accommodate family obligations, and efforts to improve professional advancement among female fac-
uitly are issues that will need to be examined in both training and practice environments. Indeed, the Federation of Pediatric Organizations has established a task force to examine some of the key issues pertaining to female pediatricians and the future of the specialty in a number of areas, including the recruitment of women into pediatric subspecialty careers.

However, many residents of both genders lack exposure to pediatric subspecialties, because residents only rotate through a limited number of subspecialties during core training and many residency programs do not have the full range of subspecialists on their faculty.

Although more women are choosing careers in pediatrics, few minority physicians are entering the specialty. This is partially explained by the relatively low numbers of racial and ethnic minority applicants to US medical schools. The pediatric patient population, however, is growing in racial, ethnic, cultural, and linguistic diversity and will challenge a comparatively homogenous physician workforce to provide culturally effective care. According to US Census Bureau projections for 2020, 42% of the US population under the age of 18 will be black, Native American, or Asian American or of Hispanic origin. The pediatric subspecialist workforce will likewise face the challenges posed by an increasingly diverse patient population. With fewer minority physicians entering residency training in the United States, the pediatric subspecialist workforce will continue to experience difficulties in reflecting the spectrum of racial, ethnic, and cultural diversity of the patient population.

Debt Load and Lifestyle Considerations

Financial concerns, such as debt load, and lifestyle considerations seem to have a significant influence on career choice among physicians-in-training, which, as a force for change, could dramatically affect the supply of the pediatric subspecialty workforce. According to 1 study, residents with higher educational debt were more likely to report general pediatrics as a career goal. This finding is made all the more relevant by data that show increases in the percentage of pediatric residents with educational debt and the amount of this debt. In 2002, pediatric residents reported an average educational debt of $113,476, a 22% increase from $92,656 in 1997.

It is also clear from the medical literature that medical students and residents, frequently driven by financial pressures such as debt are making decisions about their specialty choice based in part on the specialty’s earning potential. Because it is often claimed that specialty choice is becoming increasingly market driven, 1 study has attempted to evaluate the market competitiveness of individual medical and surgical specialties by using several key indicators to generate a composite score of relative demand for each specialty. Consequently, in New York State in 2002, pediatric subspecialties (as a group) ranked 32nd among the 35 specialties listed.

With an average starting salary of $115,000 and a median salary of approximately $155,000 for general pediatrics, the higher salaries of pediatric subspecialties may not be competitive enough to persuade many residents with high educational debt to subspecialize.

Although financial concerns play a part in the decision to subspecialize, a host of other lifestyle issues influence career choice. Of particular importance is the increasing number of residents and younger pediatrics who are seeking greater balance between their personal and professional lives. A recent survey of third-year pediatric residents found that both male and female pediatric residents identified family considerations as the most important factor in making employment decisions. Pediatric subspecialists have developed a reputation for working longer hours, taking more call, and being more susceptible to burnout resulting from work-related stress than general pediatrics. However, the rigorous demands of subspecialty practice, in many instances, are likely more attributable to the inadequacies, inequities, and inefficiencies of the US health care system.

Competition Among Providers of Subspecialty Care

Competition is fundamentally a financial issue, although, as Stoddard has shown, it is difficult to isolate the specific causes of competition or to implement strategies to address it. At the most basic level, however, it is clear that physicians and other health care providers must compete for patients to generate sufficient clinical revenue to support their practices. Competition has a significant impact on patient access to pediatric subspecialists and optimal pediatric subspecialty care and therefore qualifies as a force for change. Health care payers and others concerned about containing health care costs have tended to favor providers who claim to deliver high-quality care at the lowest cost over pediatric subspecialists, although reliable data to substantiate these claims have been lacking. In fact, some studies have demonstrated that care provided by pediatric subspecialists can be less expensive, reduce hospital length of stay, and result in fewer complications than if the same care is delivered by adult medicine physicians. Examples include orthopedic surgery, emergency medicine, and surgery.

Competition is also a function of perceptions about the needs of children. Treatment by specialists trained primarily in the care of adults in facilities that are not geared to the care of children is often considered an acceptable alternative to soliciting pediatric expertise or transferring the patient to another facility. This approach is supported by a prevailing notion that children are simply small adults. However, this view fails to appreciate the unique aspects of pediatric care, the physiologic differences between adult and pediatric patients, and the different pharmacokinetics and disease processes that are not encountered in older populations. In a similar vein, many institutions and health care providers consider that those above a certain age threshold, varying from 12 to 18 years, could and should be treated as adults in adult-oriented facilities and therefore deny these patients access to pediatric subspecialists.
Moreover, use of adult subspecialists to deliver pediatric care in some cases, such as otolaryngology and rheumatology, may be driven by geographic inaccessibility to pediatric subspecialists. Efforts such as these to provide a service to a pediatric patient. Some attempts count the unique factors that affect the costs of providing pediatric subspecialty practice.

Equitable Reimbursement for Subspecialty Services

Inadequate reimbursement is a force for change, because it severely restricts patient access to subspecialty care by limiting the amount and kinds of care that subspecialists can provide. In the pediatric community, any discussion of reimbursement emphasizes perceived inequities in coding for pediatric services, because this coding does not take into account the unique factors that affect the costs of providing a service to a pediatric patient. Some attempts have been made to quantify the higher cost associated with providing subspecialty care to pediatric patients in fields such as pediatric nephrology and pediatric cardiology. Efforts such as these to provide reliable research to educate payers and others about the different costs of providing pediatric subspecialty care have been largely unsuccessful in effecting the needed coding and reimbursement reforms. However, even certain successes, such as the approval of a Current Procedural Terminology (CPT) code, do not mandate higher reimbursement of pediatric subspecialty care by payers, and much work is still needed to secure equitable reimbursement for pediatric services in a variety of subspecialties from pediatric anesthesiology to child and adolescent psychiatry. Of considerable concern are the discrepancies between Medicare and Medicaid reimbursement, which have posed additional obstacles to providing pediatric subspecialty care to some of the country’s most vulnerable patients.

Reimbursement reform will be important in the future, because the kinds of care that pediatric subspecialists will deliver, and for which they will seek reimbursement from payers, are likely to change. For example, some pediatric subspecialists will practice primarily as consultants, both in person and through remote communication, but how these physicians will be reimbursed for their services is unclear. Indeed, subspecialists may be called on increasingly to provide unreimbursed telephone consultations to community-based physicians on subspecialty care issues for chronically ill patients. This could impact not only the revenue streams for subspecialist consultants but also could increase the number of subspecialist full-time equivalents that would be needed in the future. This and other developments could result in a change in the interface between the general pediatrician and the pediatric subspecialist in terms of how they will share patient care responsibilities for chronically ill children and ensure continuity of care.

Questions and concerns about equitable reimbursement will also arise because of changes in the way that subspecialty care will be delivered in the future. Indeed, the area that may create the greatest opportunities for both patient care and pediatric subspecialists is telemedicine, which has the potential to improve access to health care services for patients in underserved and geographically isolated communities. It is also the area that will require significant reform in reimbursement policy. In the last several years, telemedicine technologies have been used to provide a wide range of pediatric subspecialty services in child neurology, pediatric cardiology, child abuse and neglect, and many other fields. These advances enable patients, who previously were denied access to subspecialty care or who had to travel great distances for this care, to seek treatment outside of the academic medical center. Remote access to subspecialty care will consequently translate into lower costs for both the patient and the health care system. Implementing telemedicine will also involve financial investments in the necessary technologic infrastructure, modifications to state licensing laws to allow reimbursable interstate consultations, and other systemic reforms. However, in the final analysis, pediatric subspecialists will be unable to tap the potential of these new technologies to improve access to care if payers refuse to reimburse them for the services they provide through telemedicine.

Policies Aimed at Regulating Specialist Physician Training and Supply

Government and other policies that regulate the operation of the health care system, largely through financial mechanisms, have proven to be a potent force for change, and will likely remain so for the foreseeable future. In the 1990s, policy on the health care workforce was directed at restricting the supply of specialist physicians and expanding the primary care workforce. The Balanced Budget Act of 1997, which sought to reduce Medicare subsidies to teaching hospitals for GME activities, predicated its revised payment policy on the notion that there was a general oversupply of specialist physicians. However, teaching hospitals were distressed by the likely impact of these reductions on their teaching and research missions and successfully lobbied for reforms to the Balanced Budget Act that would mitigate the financial hardship. By the close of the century, health care analysts were claiming that these government policies were responsible for a current or impending undersupply of specialist physicians,
and many disciplines began to report workforce shortages.92–95

Proponents of greater access to specialty care are working to halt similarly problematic government policies that could be detrimental to patient care, research, and other key professional roles. In the wake of new evidence of shortages in some specialties, considerable effort and resources are being devoted currently to examining physician workforce policies and access to specialty care. These include physician workforce studies being conducted by medical and specialty organizations, including the American Medical Association, the Association of American Medical Colleges, and the American Academy of Pediatrics, as well as federal bodies such as the Council on Graduate Medical Education and the Maternal and Child Health Bureau. Progress is also occurring in financing, such as a temporary restoration of proposed Medicaid cuts of $15 billion dollars to the fiscal year 2006 budget,96 although other serious problems continue, such as third-party reimbursement for pediatric subspecialty care. As noted earlier, the CHGME Payment Program remains an important source of funding for pediatric GME, yet threats to its survival remain a perennial concern. President Bush’s budget for fiscal year 2006 includes a 33% cut of $101 million dollars to this program, which has prompted supporters of a stable funding mechanism for pediatric GME to advocate for program funding of at least the current 2005 level of $301 million.97

Of particular note, recent changes in immigration policy and visa regulations have emerged as a source of grave concern to many pediatric subspecialties. In the post-September 11th era, more restrictive immigration policies are proving injurious to disciplines that have historically depended heavily on IMGs, particularly those with J-1 visas, to supply the workforce pipeline.98 J-1 visas allow physicians from other countries to pursue GME activities in the United States but require them to return to their country of origin after completion of training. Pediatrics is second only to internal medicine as the most popular specialty among J-1 physicians, accounting for 9.6% of all J-1 visa holders in 2002.99 In addition, IMGs overall, including US citizens and permanent visa holders, make up 32.9% of subspecialty residents in medical subspecialties under the ABP.45 Restrictive J-1 visa policies threaten children’s access to subspecialty care, because it will restrict the number of IMGs that can enter the United States for training and require those that are granted J-1 visas to return to their country of origin after completing residency education. Policy that dramatically decreases the numbers of IMGs entering and remaining in the United States, therefore, has the potential to dry up the pipeline for pediatric subspecialties in clinical care, administration, education, and research.

CONSIDERATIONS FOR FUTURE WORKFORCE POLICY

Pediatric subspecialties are encountering numerous challenges that will require innovative reforms to survive and thrive in a rapidly evolving health care system. First, the faces of both pediatricians and pediatric patients are changing. To attract more women into careers in pediatric subspecialties, the ACGME and the Residency Review Committees, specialty boards, specialty societies, and other educational groups will have to ensure that fellowship training is structured to accommodate the changing training and practice needs of a pediatric workforce that is increasingly female. Employers will have to make similar changes in academic departments and practices. Specifically, this will require greater flexibility in training and practice options, such as part-time and shared residencies and employment arrangements, supported by adequate mentoring, institutional and employer support, and education on balancing personal and professional roles. Expansion of part-time practice arrangements, however, must be supported by key reforms in areas ranging from tenure “clocks” and other promotion requirements to health care benefit packages and call responsibilities. These changes are needed not only to recruit more women into the pediatric subspecialties but also to recruit men who view lifestyle issues as a priority for specialty choice and career satisfaction.

In addition, for organized medicine to create an environment supportive of diversity, residency programs, continuing medical education providers, academic institutions, practices, and others must ensure that all medical providers and staff receive training to become competent in addressing gender, racial, ethnic, and cultural issues among both health care providers and patients. Attracting the best and brightest of these physicians into pediatrics, moreover, will necessitate a focused recruitment plan that promotes the importance of workforce diversity. Institutions, employers, and residency programs should establish formal programs to promote active mentoring by women and minority pediatric subspecialists, who can provide encouragement and serve as positive role models. Over time, such programs will be an important step in promoting and bolstering diversity within subspecialties, academic institutions, and practices.

Any recruitment strategy will also have to address issues and priorities related to debt load and lifestyle. Of particular importance, policy makers and legislators will need to expand loan-repayment and -forgiveness programs, as well as provide other financial incentives, to make subspecialty careers more financially feasible and attractive. These incentives should include service in the National Health Service Corps, practice in urban and rural underserved areas, and practice in areas with large vulnerable racial, ethnic, or cultural patient populations, supported by adequate facilities, clinical and administrative staff, and competitive salaries. Exposing medical students and residents to the breadth of career options in pediatric subspecialties, as well as to the breadth of pediatric subspecialties themselves, as early as possible in training will help to inform physicians-in-training about the attractiveness of pediatric subspecialty careers. Indeed, early and frequent exposure will afford medical students and res-
idents adequate time and opportunity to explore the advantages of fulfilling careers in research, administration, teaching, and clinical care. In particular, the Residency Review Committee for Pediatrics will need to ensure that the new program requirements for accrediting residency programs, while making a valuable contribution to competency-based education, will allow for adequate exposure to the spectrum of pediatric subspecialties, particularly given the limits on resident duty hours mandated by the ACGME.

For these future pediatric subspecialists, however, competition will remain a vital concern. The establishment of subspecialty certification in pediatric disciplines should be continued as an effective way to promote the value and unique skills of pediatric subspecialists and to assure the public of the quality of the specialty care that children receive. In the last several years, the need for and value of subspecialty certification has been approved for developmental/behavioral pediatrics, neurodevelopmental disabilities, pediatric rehabilitation medicine, and pediatric urology. However, medical and specialty societies will need to implement a formal strategy to educate the public, payers, policy makers, legislators, and others about the unique needs of pediatric patients and the specialized knowledge and skills that pediatric subspecialists provide.

In medically underserved areas in which there are no pediatric subspecialists, competition is less of an issue. It may be advisable, therefore, to train family physicians, general pediatricians, adult specialists, nurse practitioners, physician assistants, and other clinicians practicing in underserved areas, where there are no pediatric subspecialists, in some of the most common pediatric subspecialty conditions in their respective disciplines, as has been suggested for pediatric rheumatology. This could be accomplished through existing mechanisms such as the Health Resources and Services Administration’s Area Health Education Centers program, bolstered by additional funding. Finally, there are opportunities for better coordination of primary and specialty care among the different members of the pediatric health care team. In some instances, a realignment of clinical responsibilities among the different physician and nonphysician members of the pediatric health care team, through accrediting, certifying, and credentialing bodies, educators, and individual practices and academic departments, may even be warranted to contain cost and ensure optimal patient care outcomes.

The most critical area of reform, however, is in the payment of subspecialty care. Research on relative value units, the cost of providing pediatric subspecialty care, and the comparative quality of subspecialty care delivered by different providers will be essential in changing reimbursement policy. Studies documenting to payers, policy makers, and the public the cost-effectiveness and improvements in access to and quality of pediatric subspecialty care through the use of telemedicine and other delivery mechanisms should also be conducted to secure equitable reimbursement for the delivery of pediatric subspecialty care through new delivery models. Medical and specialty societies, child advocates, and individual clinicians will need to incorporate this new research into a formal advocacy and policy strategy, with focused activities for the national, state, and local levels, and seek support from experienced advocates of pediatric subspecialists such as the National Association of Children’s Hospitals.

Finally, there are many opportunities to reform policies related to the pediatric subspecialty workforce. However, policy action to improve access to pediatric subspecialty care will have to look beyond the current health care delivery system to address the future scope of pediatric subspecialty practice, which undoubtedly will vary for each subspecialty. A “1-size-fits-all” approach focused only on the current practice environment would be neither appropriate nor effective. Fortunately, the pediatric community already has valuable subspecialty-specific workforce, practice, demographic, quality, and cost data that should be informing policy to regulate the pediatric subspecialty workforce. Specialty societies, state medical societies, child advocates, and others should call for responsible workforce policy by sharing subspecialty-specific data with their federal and state legislators and policy makers.

Indeed, these data and related organizational policy can be leveraged in a number of key policy battles related to the pediatric subspecialty workforce. There are, of course, the frequent battles over reimbursement policy and the long-term funding of the CHGME Payment Program, but there are others that may be less well known. For example, it will be especially important to advocate for GME funding that covers the full length of training for pediatric subspecialists in joint-specialty fellowship programs and for surgical specialists whose training routinely extends, particularly for research purposes, beyond the duration approved by the ACGME. In a similar vein, visa and immigration policies are subject to periodic change. Currently, these policies are poised to restrict the entry of IMGs into this country for medical education, thereby threatening the supply of many pediatric subspecialties. Policy makers and legislators should be made aware of the workforce and patient-access implications of these restrictive immigration and visa policies. It is essential, moreover, that federal and other incentive programs be enhanced to stimulate interest among graduates of US medical schools in subspecialty careers so that a more stable and permanent pipeline than IMGs can be established for the pediatric subspecialty workforce. Finally, child advocates must alert policy makers to the disastrous consequences that cuts to Medicaid and other government programs would have on patient access to pediatric subspecialty care, particularly for poor and chronically ill children.

CONCLUSIONS

Three areas of reform, loosely grouped as people, payment, and policy, must be at the top of any pediatric subspecialty workforce agenda. It is not the purpose of this article, however, to craft a precise agenda but to suggest to medical and specialty soci-
ties, pediatric subspecialists, researchers, child advocates, policy makers, and others the issues that merit consideration in such an agenda. These workforce-policy agendas will likely vary according to each pediatric subspecialty, because each of these disciplines has unique circumstances and concerns. However, in pursuing these individual agendas, each pediatric subspecialty will need to ensure that its pursuit of reform must create increased awareness. Low public awareness of the unique services, expertise, and training of pediatric subspecialists is perhaps as significant a threat to the viability of pediatric subspecialists as any of those discussed above. Payers, patients, physicians, the press, policy makers, and others must be educated about the value of pediatric subspecialists to overcome the challenges presented in this article. A significant part of this educational effort can be achieved through research, but the outcomes of this research, as well as its value to society, must be widely disseminated to health care decision-makers if reform is to be implemented. It is critical, therefore, that the pediatric subspecialty community participate actively in public-policy debates and other public venues to educate individuals about the vital role of pediatric subspecialists in ensuring the health and well-being of infants, children, adolescents, and young adults.

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REFERENCES


**COMPARING SCHIZOPHRENIA DRUGS**

“...A government-financed study has provided the strongest evidence yet that the system for approving and promoting drugs is badly out of whack. The study compared five drugs used to treat schizophrenia and found that most of the newest, most heavily prescribed drugs were no better than an older drug that is far cheaper. The nation is wasting billions of dollars on heavily marketed drugs that have never proved themselves in head-to-head competition against cheaper competitors. ... The trouble is that these new drugs were approved largely on the basis of short-term clinical trials that compared them primarily with placebos, so there was little if any evidence that they were any better than many of the older drugs. ... Surely it would make sense to force manufacturers to test their drugs not just against placebos, but against existing drugs that they are seeking to displace. And surely it would be cost-effective for the government to sponsor large studies comparing a slew of expensive drugs with their cheaper alternatives.”

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Noted by JFL, MD