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## AOA Critical Issues

# Workforce, Work, and Advocacy Issues in Pediatric Orthopaedics\*

By Steven L. Frick, MD, B. Stephen Richards, MD, Stuart L. Weinstein, MD,  
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The subspecialization of the orthopaedic surgery profession has led to a division of work; competition among orthopaedic subspecialties with regard to graduating residents seeking fellowships and patients seeking care for problems involving different subspecialties; potential splintering of the profession regarding reimbursement and advocacy initiatives; and disagreement about the role, responsibilities, and work of a so-called general orthopaedic surgeon. The issues of cost and access are now prominent in the ongoing health-care reform discussions and pending legislation, and legislative decisions may profoundly impact patients and physicians. This symposium reviews how these issues are affecting pediatric orthopaedics.

### **Pediatric Orthopaedic Workforce Issues**

In a survey at the 2007 Annual Meeting of the American Orthopaedic Association<sup>1</sup>, 59% of the audience considered pediatric orthopaedic surgery to be the most undersupplied subspecialty. Trauma was a distant second at 17%, and oncology was third at 8%. The reasons considered for the perceived undersupply include the burden of taking pediatric trauma call, medicolegal liability risks that may extend for many years, the lower pay differential compared with other orthopaedic subspecialties, too much nonoperative time, and dealing with parents. Today, this perception remains. But is pediatric orthopaedics

undersupplied at the present time and, if so, why? Statistics from the Annual Meeting of the Pediatric Orthopaedic Society of North America (POSNA) in May 2009 showed continued growth, with 807 members in the United States, sixty-four members in Canada, and seventy-six members from the remaining countries worldwide<sup>2</sup>. Of the North American POSNA members, however, many have retired or will do so in the next several years. As almost 20% of the members have senior status, 80% of the 871 North American POSNA members can be considered full-time pediatric orthopaedic surgeons. Do these 648 U.S. and forty-nine Canadian full-time practicing pediatric orthopaedic surgeons represent a sufficient number to provide orthopaedic care for the pediatric population among the 305 million citizens in the United States and the thirty-three million citizens in Canada? POSNA continues to study this issue and to work to attract residents to pediatric orthopaedics as a career choice.

In 2006, the Association of American Medical Colleges (AAMC) recommended a 30% increase in medical school enrollment by 2015 to prevent an expected physician shortage<sup>3</sup>. Others believe the future orthopaedic workforce will be insufficient to care for the growing population<sup>4,5</sup>. Each year, 650 to 670 residents enter into, and graduate from, allopathic orthopaedic residency programs, and 3% to 4% of graduates pursue pediatric orthopaedic fellowships. Thus, twenty to twenty-seven pediatric orthopaedic fellowship positions are usually filled each year. Recently, there has been increased interest, best illustrated by the 2009 pediatric orthopaedic fellowship inter-

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view process, which resulted in forty-eight positions being filled for the 2010-2011 fellowship year. To enhance opportunities for pediatric orthopaedic fellowship training, a new formal match process for fellowships began in September 2009 for the 2011-2012 fellowship year.

Possible explanations for the increased interest are (1) a greater understanding by residents of a pediatric orthopaedic surgeon's career, made possible in part by scholarships to the annual International Pediatric Orthopaedic Symposium in Orlando, Florida (provided by POSNA, the Shriners Hospitals for Children, and grants from industry); (2) mentoring in residency programs substantially impacts career choices, and earlier exposure to pediatric orthopaedic rotations in some programs allows contact with influential faculty; (3) recent recognition of desirable subspecialization opportunities within pediatric orthopaedics, such as spinal deformity, sports medicine, and hand surgery; and (4) the demand for pediatric subspecialists by practices, departments, and hospitals has increased, resulting in attractive employment packages.

To assess the balance between retiring and new pediatric orthopaedic surgeons, POSNA has assessed the expected length of a professional career, population growth, and the evolving changes in the professional lifestyle of a pediatric orthopaedic practitioner. Considering that an average pediatric orthopaedic career extends approximately thirty-four years (beginning at an average age of thirty-one at the conclusion of training and ending with retirement at the age of sixty-five), POSNA estimates that maintaining a steady state of the current supply of North American practitioners would require twenty to twenty-two graduating fellows every year. Another consideration on the supply-side projection is the evolving emphasis on lifestyle preferences by young physicians, which may decrease the effective workforce, as work-sharing opportunities and jobs with fewer duty hours are sought. The demand for pediatric orthopaedic expertise is likely to increase, combining population growth with societal expectations for easily accessible subspecialty experts. Thus, POSNA estimates an additional eight to ten pediatric orthopaedic fellowship graduates may be needed each year over the next twelve years to accommodate these growth projections and lifestyle changes in practice.

The economic downturn in 2008 to 2009 adversely affected charitable pediatric orthopaedic institutions, especially the Shriners Hospitals for Children system. The Shriners system employs more pediatric orthopaedic surgeons than any other institution in North America, with over 370 orthopaedic surgeons on the Shriners' medical staffs. In July 2009, at the annual national Shriners convention, the organization decided on a new direction by agreeing to accept third-party reimbursement as a method of cost recovery. Current plans call for all twenty-two North American Shriners Hospitals to remain open, although some may become outpatient care centers<sup>6</sup>, and some will begin billing professional fees. Reorganization of the medical staffs from Shriners Hospital employment status to university faculty in some locations will facilitate changes. This evolving situation may have sub-

stantial workforce effects and will be followed closely by POSNA.

### **Pediatric Urgent Orthopaedic and Trauma Care**

In the past, pediatric orthopaedic fellowships offered training focused primarily on complex elective conditions such as spinal deformity, hip dysplasia, clubfoot, skeletal dysplasia, and limb deformity. Less emphasis was placed on acute-care pediatric orthopaedics, such as trauma or infection, because these were regularly addressed by general orthopaedists in the community. Changes in practice and referral patterns, as well as societal desires for subspecialist care, have called into question which patients need to see a pediatric orthopaedic surgeon. In many areas now, community orthopaedists are less comfortable with the care of urgent pediatric orthopaedic problems and more readily seek to refer the patients, resulting in increasing pressure on pediatric orthopaedic practices to do work that was once considered to be in the realm of the general orthopaedist. Further, the emergence of pediatric trauma referral centers has facilitated the ease for trauma referrals from outside community hospitals, increasing the need in referral centers for pediatric orthopaedists focusing more on acute-care trauma and infection<sup>7,8</sup>. Kasser studied supracondylar fractures in New England and found that, in 1991, 63% of supracondylar humeral fractures were treated by general orthopaedists, while 37% were treated at centers with pediatric orthopaedic subspecialists available<sup>8</sup>. In 2004, this changed, with general orthopaedists caring for only 32% of pediatric supracondylar fractures. In California, Hennrikus et al. showed that, from 1996 to 2004, the number of trauma cases done by pediatric orthopaedists in a single hospital increased almost ninefold<sup>9</sup>. In this same eight-year period, with the number of clubfeet treated used as a marker of pediatric population growth and of complex elective pediatric orthopaedic referrals, no substantial changes in the number of patients treated was noted<sup>5</sup>. A recent study found that fracture care may account for half of the workload for an urban pediatric orthopaedic practice<sup>7</sup>. Such a practice may benefit from an increase in physician extenders, primarily nurse practitioners or physician assistants<sup>10</sup>.

Trauma is the leading cause of death and disability in the pediatric population: more children between the ages of one and fourteen years die of injury-related causes than all other causes combined<sup>11</sup>. Some studies have documented that injured children have higher survival rates when treated at pediatric centers rather than at adult level-I trauma centers<sup>12-15</sup>. Pediatric trauma emergency departments, however, face the same difficulties as their adult counterparts: increases in patient volume, the number of underinsured patients, and liability concerns, with decreased numbers of orthopaedists on call and lower reimbursements for emergency department services. In the U.S., an estimated seventeen million children younger than fifteen years of age do not have access to a pediatric trauma center within one hour of travel time<sup>11</sup>. In addition to the issues of access to care for children with life-threatening multisystem injuries, the lack of pediatric trauma centers can create access problems for patients to receive care for isolated fractures, as many communities with-

out a pediatric trauma center do not have pediatric orthopaedists. If general orthopaedic surgeons are unwilling to provide care for isolated musculoskeletal injuries in children, the patients and families have to travel long distances for pediatric fracture care, even for simple fractures.

Orthopaedic trauma work often comes at inconvenient times and involves patients for whom the treatment is linked with poor reimbursement<sup>7,16-18</sup>. Historically, taking emergency department call was a way to build a practice base, and the financial loss incurred by caring for underinsured or uninsured patients was offset by the number of insured (so-called private) patients gained during call. Also, taking emergency call was part of professionalism in practice, a way of giving back for the privilege of practicing medicine. A 2008 survey of members of POSNA revealed that most respondents (77%) continued to believe that taking trauma call is an integral part of being a pediatric orthopaedist, but a number of reasons for not wishing to take emergency department call were also cited: disruption of lifestyle, inadequate compensation, disruption of elective practice, high volume of underinsured patients, increased liability risks, inadequate training to manage complex trauma, and the inpatient trauma practice versus outpatient practice setting<sup>19</sup>. The survey also noted that many cited trauma coverage as the main reason for early retirement<sup>19</sup>. This may be an indication that the increased trauma demand has led to lifestyle issues for many pediatric orthopaedic surgeons, not just as a career decision factor for residents.

Disruption of the elective practice of an orthopaedist is a major factor in the reluctance to be on call for the pediatric emergency department. Many on-call surgical procedures are done the same night as the emergency department visit, while others occur the next day or later in the same week, which can disrupt the elective surgery and clinic schedules. Not only do emergency department-generated surgical procedures conflict with normal surgery and clinic schedules, but these procedures often are inadequately compensated because of the large numbers of underinsured or uninsured patients seen in the pediatric emergency departments. Add to these factors the increased liability risk inherent in the extended period of the statute of limitations for children in many states, and it is clear why many orthopaedists may see pediatric emergency department call as a so-called lose-lose situation.

Of those responding to the POSNA survey, only 28% were receiving additional compensation for taking emergency department call. Call compensation ranged from \$100 to \$2000 per night on call, with \$1000 the most common rate<sup>19</sup>. Whether this compensation is adequate or appropriate is debatable. Other suggested plans for call coverage reimbursement include a so-called activation fee, which is paid to the physician each time he or she is called to the emergency department; a subsidy for uninsured patients based on a set percentage of Medicaid-Medicare reimbursement; or a subsidy for malpractice insurance. One potential solution to the reimbursement issue is to make hospitals aware of the value of call coverage and the possible financial benefits to the institution. Several studies have documented financial and logistic benefits to hospitals

that have committed to providing orthopaedic trauma care<sup>20-22</sup>, and these benefits also may accrue to hospitals with pediatric emergency departments.

In 2006, the Orthopaedic Trauma Association (OTA) and American Academy of Orthopaedic Surgeons (AAOS) released position statements on emergency call coverage by orthopaedic surgeons. Some recommended components were funded call pay, the provision of midlevel providers, and operating-room availability. Althausen et al. showed that, when these provisions have been met by the hospital, it is possible to have an economically viable orthopaedic trauma program at a level-II regional hospital<sup>23</sup>. Increasingly, hospitals will need to provide the same support to the subspecialists providing pediatric orthopaedic trauma care as is done in other areas, such as neurosurgery, adult trauma surgery (including orthopaedics), and hand surgery, if they expect to attract and retain quality pediatric orthopaedists.

### Advocacy for Pediatric Orthopaedic Issues

Of the 824,000 physicians currently in the United States, only 2.4% are practicing orthopaedic surgeons and only 3% of these orthopaedic surgeons are pediatric orthopaedic surgeons (0.07% of practicing U.S. physicians). In addition to the AOA and AAOS, POSNA and the Scoliosis Research Society (SRS) are the two primary professional organizations that pediatric orthopaedic surgeons rely on for education and advocacy. As POSNA and SRS are small in size, their advocacy resources are limited. In 1997, the Academy formed a 501(c)6 organization, the *American Association of Orthopaedic Surgeons*, to become more active in advocacy on behalf of all of the Board of Specialty Societies that make advocacy a part of their mission, including POSNA and SRS. In 1999, the AAOS formed the AAOS Political Action Committee (PAC). The PAC is the vehicle that advances the legislative agenda of the AAOS and the specialty societies. The AAOS PAC is the number-one funded medical specialty society PAC in America<sup>24</sup>, and through connections to pediatric orthopaedic surgeons via membership or specialty societies, is the primary vehicle for political advocacy for pediatric orthopaedic issues.

Some of the main advocacy issues for pediatric orthopaedic surgeons include reimbursement under Medicaid and other government programs; the Medical Liability Reform initiative and its effect on practice and recruiting; device development and approval; and general pediatric-specific health-care issues, such as obesity, wellness, disease and injury prevention, and school screening for scoliosis, to name a few.

The President, the United States Congress, and the American public care about health-care issues for children, which was evidenced by the reauthorization of the Children's Health Insurance Program (CHIP) as the first accomplishment of the Obama administration and the 111th Congress<sup>25</sup>. In addition, the health-care reform legislation passed in 2010 will have as yet undetermined effects on health-care resources and access for children. Of the seventy-four million children currently in the U.S.<sup>26</sup>, thirty-six million are on Medicaid and CHIP, and eight million children are uninsured<sup>27</sup>. Thus, 60% of the pedi-

atric orthopaedic population is either on a government program or uninsured. Reimbursement under Medicaid and CHIP is thus critical to pediatric orthopaedic surgeons<sup>28</sup>.

Medicaid uses public dollars to buy services, often in the private health-care sector, and has a defined benefit package. The contribution to state budgets from Medicaid alone is 44% of all federal funds appropriated to states and is the single largest source of federal funds to each state<sup>29</sup>. Overall, the federal government funds 57% of Medicaid spending. As states must balance their budgets, Medicaid presents a substantial challenge. The most common way that states deal with controlling costs under Medicaid is to cut physician reimbursement. Thus, the average reimbursement is only 69% (range, 29% to 108%) of Medicare rates. In theory, patients with Medicaid coverage should have a very good health-care package. In reality, the low reimbursement paid to physicians results in access problems for Medicaid patients. In Michigan, for example, an article in *The Wall Street Journal* noted that treatment under traditional Blue Cross insurance plans for a broken arm reimbursed the physician at \$416.50, and physicians caring for patients under Medicare received \$357.58, while the reimbursement for patients under Medicaid totaled only \$184.51<sup>30</sup>. Studies by Skaggs et al. documented the lack of access experienced by Medicaid patients for pediatric orthopaedic care<sup>16-18</sup>.

The main issue thus created for children covered by Medicaid and CHIP is access to care, which led the AAOS to take an aggressive stance with a position statement on existing government programs specifically dealing with Medicaid and CHIP<sup>31</sup>. The AAOS has also advocated for Medicaid reimbursements to physicians to be at least equal with Medicare rates. Medicare reimbursement itself is flawed. While the AAOS continues to advocate for a fix to Medicare's flawed formula for physician reimbursement, it is critical for future access to health care for children that, in any health-care paradigm that evolves, Medicaid should have parity with Medicare.

Physician concerns about medical liability issues continue, with the key concerns being the contributions to poor access to care and rising health-care costs and their effects on medical student and resident career choices. In a recent survey of residents finishing their training in Pennsylvania, 81% stated that they viewed every patient as a potential malpractice lawsuit, 33% stated that they were less candid with their patients than they once were, 67% stated that they were less eager to practice medicine than they once were, and 28% regretted choosing medicine as a career<sup>32</sup>. One of the reasons often cited by senior residents for not choosing a career in pediatric orthopaedic surgery is the long-term medical liability concerns<sup>5</sup>. A recent article looked at the interstate variability of the statute of limitations for medical liability and noted that, in most regions, pediatric practitioners faced increased liability risk based on substantially longer statute-of-limitation periods for minor patients, which in some cases last until the patient is twenty-three years of age<sup>33</sup>. Medical liability reform is thus a major advocacy issue for pediatric orthopaedics.

### Practice Management and Pediatric Orthopaedics

The POSNA Workforce Committee noted that POSNA is an aging organization and that until recently orthopaedic residents were less likely to go into pediatric orthopaedics<sup>1,5</sup>. Although many reasons were given by residents for not choosing pediatric orthopaedics, two major reasons were concerns about compensation and lifestyle<sup>5</sup>. These areas are critical to career and life satisfaction among practicing orthopaedists also, as compensation and call issues are frequently the most divisive issues facing practice leaders in groups and departments.

Some attempts at benchmarking productivity have found the work relative value units (wRVUs) produced by pediatric orthopaedic work to be less than those of adult orthopaedists. When separated out by orthopaedic subspecialties, pediatric orthopaedists had lower average annual wRVUs than did foot, trauma, sports medicine, hand, joint, shoulder and elbow, and spine orthopaedic surgeons<sup>34</sup>. The wRVUs for frequently performed pediatric orthopaedic procedures according to Common Procedural Terminology (CPT) codes are often less than those for commonly performed procedures in adults. Thus, pediatric orthopaedists may see more patients on an outpatient basis<sup>35</sup>, may have similar or greater numbers of call shifts, and may perform similar numbers of procedures as adult orthopaedic surgeons, yet the discrepancy in wRVUs per performed CPT codes can result in lesser annual wRVUs. In the practice group of one of the authors (J.M.W.) with over fifty orthopaedists, the pediatric orthopaedists generated only 80% of the wRVUs of the practice average in 2008. No physician in pediatric orthopaedics generated >85% of the average wRVUs of the group. Other surveys have found the wRVUs for pediatric orthopaedists to be similar or slightly higher than general, foot, hand, and trauma orthopaedic specialists but less than hip, spine, and sports medicine specialists. Despite similar wRVUs, pediatric orthopaedic physicians have a lower average compensation than other subspecialists<sup>35</sup>. Because of a limited sample size of pediatric orthopaedic surgeons for these surveys, the information may not be accurately generalized. The methodology of some productivity and salary information can also vary between reports, as some use survey data rather than so-called hard data pulled from practice or departmental billing and accounting databases<sup>34</sup>.

As noted above, reimbursement for the medical care of children is frequently less than that for adults, particularly from government payers. Another factor for orthopaedic surgeons has been the shift in reimbursements from specialists to primary care providers by Medicaid<sup>36</sup>. Despite this, salaries for pediatric orthopaedists have been increasing. Between 2003 and 2006, the average salary for pediatric orthopaedists increased approximately 35%<sup>35</sup>. What would lead to such a large increase? Increasingly, physicians are relying on other forms of income for compensation outside of direct patient care. These sources of income include pay for call coverage, service line agreements with hospitals, and income from practice ancillaries such as physical therapy, radiographic imaging studies, durable medical equipment sales, and ambulatory surgery centers. For the pediatric orthopaedists employed by hospitals, it

could be that the market was reacting to a perceived shortage of pediatric orthopaedists, with a commensurate increase in salary for pediatric orthopaedists as demand rose for their services at hospitals. There may also have been an increase along with those in other orthopaedic subspecialties, as salaries in all areas of orthopaedics have increased in the past few years.

Increasingly, mid-level providers are playing an important role in pediatric orthopaedic practices. In many cases, they are able to see children with more simple orthopaedic problems, allowing more patients to be seen in a practice, while decreasing the workload of the pediatric orthopaedic surgeon. For many practices, mid-level providers are able to generate income, another potential method leading to increased salaries for pediatric orthopaedists<sup>10</sup>.

Given the financial pressures of fee-for-service practice, with increasing costs and decreasing reimbursement for direct patient care, pediatric orthopaedists may not survive in the private practice model. Compared with other orthopaedic surgeons, they see a much higher percentage of Medicaid patients and generate fewer wRVUs than their counterparts. If other group members do not share the call coverage responsibilities with their pediatric partners, the combination of lower salary and the adverse impact of pediatric call coverage on lifestyle may lead pediatric orthopaedic surgeons to seek employment in other venues.

### Looking Forward

There has been a recent increase in the number of applicants for pediatric orthopaedic fellowships, which it is hoped will provide an adequate workforce to deliver access to quality care for pediatric patients. Changing physician practice patterns and expectations from patients' families and referring physicians

has blurred the defining line between pediatric conditions cared for by general orthopaedic surgeons and those needing fellowship education and/or subspecialty expertise. Recent health-care reform legislation is expected to have substantial effects on pediatric orthopaedics, as many more children in the U.S. are expected to have government-backed health care. These issues will be tracked carefully by leadership from the AOA, POSNA, and AAOS.

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