

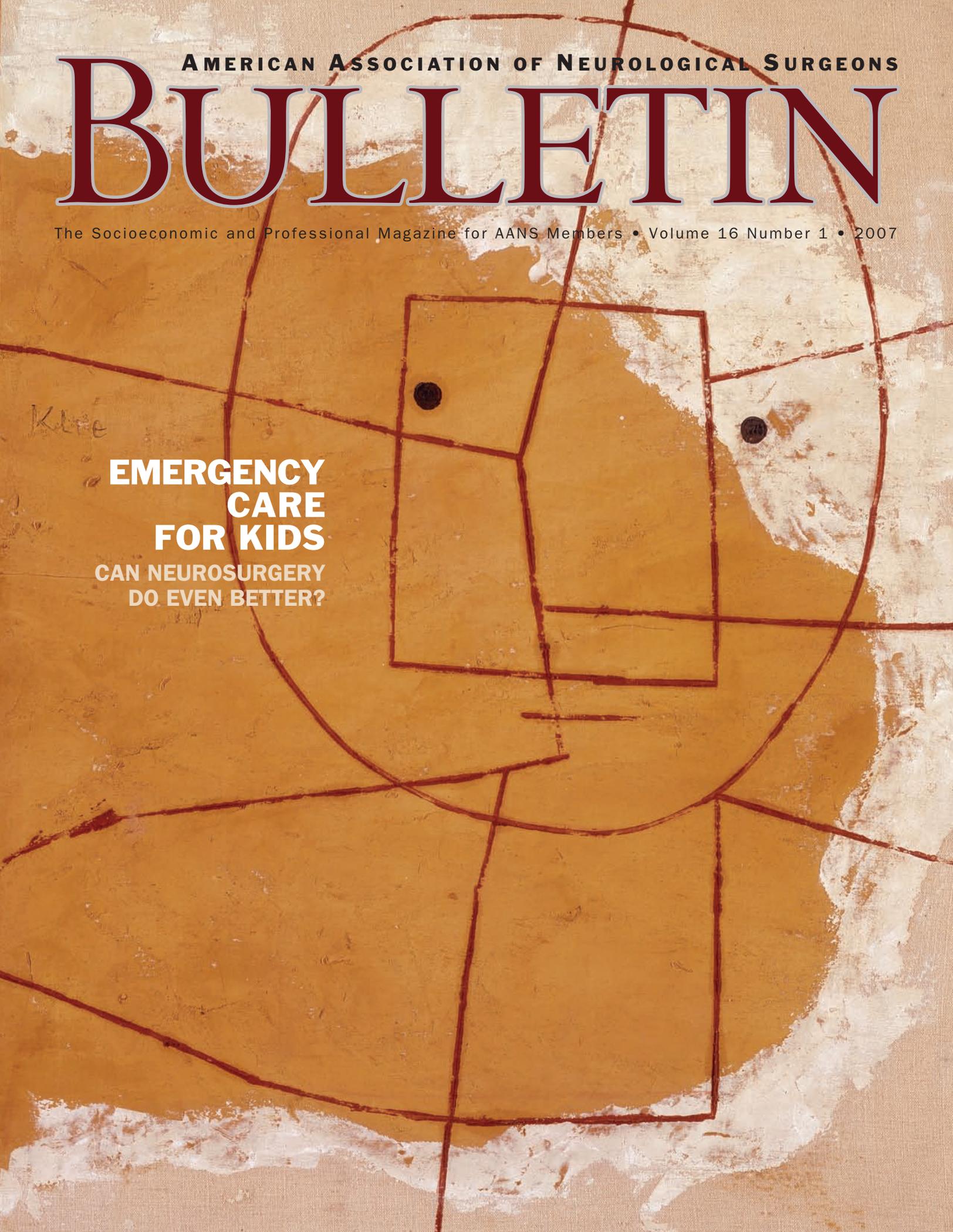
AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS

BULLETIN

The Socioeconomic and Professional Magazine for AANS Members • Volume 16 Number 1 • 2007

Klee

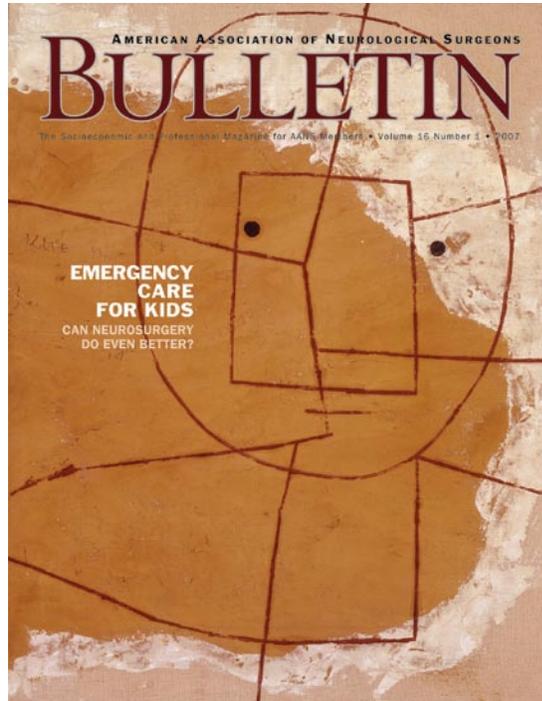
**EMERGENCY
CARE
FOR KIDS**
CAN NEUROSURGERY
DO EVEN BETTER?



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Paul Klee (German, born Switzerland, 1879–1940), "The One Who Understands," 1934, oil and gypsum on canvas. See page 6 for complete information.



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AANS MISSION

The American Association of Neurological Surgeons (AANS) is the organization that speaks for all of neurosurgery. The AANS is dedicated to advancing the specialty of neurological surgery in order to promote the highest quality of patient care.

AANS BULLETIN

The official publication of the American Association of Neurological Surgeons, the *Bulletin* features news about the AANS and the field of neurosurgery, with a special emphasis on socioeconomic topics.

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Articles or article ideas concerning socioeconomic topics related to neurosurgery can be submitted to the *Bulletin*, bulletin@AANS.org. Objective, nonpromotional articles that are in accordance with the writing guidelines, are original, and have not been published previously may be considered for publication.

The AANS reserves the right to edit articles for compliance with publication standards and available space and to publish them in the vehicle it deems most appropriate. Articles accepted for publication become the property of the AANS unless another written arrangement has been agreed upon between the author(s) and the AANS.

PEER-REVIEWED RESEARCH

The *Bulletin* seeks submissions of rigorously researched, hypothesis-driven articles concerning socioeconomic topics related to neurosurgery. Selected articles are reviewed by peer-review panelists. Papers must comport with the writing guidelines at www.aans.org/bulletin.

Peer-Review Panel led by Deborah L. Benzil, MD
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LETTERS

Send your comments on articles you've read in these pages or on a topic related to the practice of neurosurgery to bulletin@AANS.org. Correspondence may be published in a future issue edited for length, clarity and style. Correspondence is assumed to be for publication unless otherwise specified.

BULLETIN ONLINE

The current issue and searchable archives since 1995 are available at www.aans.org/bulletin.

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American
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75th AANS Annual Meeting

April 14–19, Washington, D.C.

Of all of the responsibilities I have undertaken during this past year, preparing for the 75th AANS Annual Meeting has been one of the most enjoyable. I believe the upcoming meeting will prove to be a most rewarding experience for AANS members and for the entire neurosurgical community.

The diamond jubilee anniversary celebration of the AANS founding will be held April 14–19 at the 2007 AANS Annual Meeting in Washington, D.C. This is a time to honor the past achievements of neurosurgery as well as an opportunity to look forward to the future.

The educational program is outstanding with a multitude of practical courses, breakfast seminars, superb oral and poster presentations, and plenary and subspecialty section sessions. There are exceptional invited speakers. Award-winning journalist and Middle-East expert Thomas Friedman will deliver the Cushing oration, while Johannes Schramm, MD, will provide the Van Wagenen lecture and Nick Hopkins, MD, the Schneider lecture. Additional speakers and their topics are Eric Kandel, MD, cognitive neuroscience; Lisa Randall, PhD, the multidimensional universe, revealed through particle physics and string theory; Joseph Piepmeier, MD, ontogeny of glial cells and glioma-specific targets; Michael Gazzaniga, PhD, the ethical brain; and Sally Ride, encouraging young people and women to enter scientific fields.

The meeting's increased focus on socioeconomic and governmental affairs complements the Washington location. For this reason and many others, the nation's capital is an ideal venue for the AANS celebration.

The Washington Convention Center is state of the art and a beautiful light, airy, and modern facility conducive to education and communication. The city also is replete with outstanding restaurants, and the mid-

April weather should be delightful.

Washington itself is filled with beautiful and monumental architecture and provides a wealth of unique and varied opportunities to explore art, history, culture, and more. Among the multiple outstanding attractions waiting to be explored are the National Museum of Natural History, the Folger Shakespeare Library, and the International Spy Museum. The numerous art museums



Donald O. Quest, MD, is the 2006–2007 AANS president.

include the newly opened National Portrait Gallery, the Freer and Sackler galleries featuring Asian Art, the National Museum of African Art, the American Art Museum, the National Gallery of Art, the Corcoran Gallery, and the Phillips Collection of modern art.

The history of the United States is palpable at the Washington Monument, the Lincoln and Jefferson memorials, the Capitol, the Library of Congress, the White House, and the National Mall. Magnificent museums include the multiple branches of the Smithsonian Institution. One such branch is the Smithsonian Air and Space Museum, the world's most visited museum and the venue for the opening reception.

The opening reception marks the official start of festivities, and this year's anniversary-themed gala will be an event to remember. The Navy band will welcome all to the party, followed by an enjoyable evening with musical offerings by the Neurosurgical Jazz Quintet. This 75th anniversary gala offers a prime opportunity to forge

new friendships and renew acquaintances before the meeting with its multitude of activities gets under way.

The 75th AANS Annual Meeting represents a wonderful opportunity to expand knowledge and celebrate neurosurgery. The extent to which the event will be rewarding for me is directly related to the positive experience of each and every attendee.

To help ensure an educational and enjoyable experience for all, many people have worked diligently throughout the year to create a unique meeting. Among them are Annual Meeting Chair Mitchel Berger, MD, and Social Program Co-chairs Lisa and Kevin McGrail, MD. Scientific Program Chair Timothy Mapstone, MD, has led his committee in planning a program of which the AANS founders would be proud, if not astonished, at the breadth and depth of issues and information that confront neurosurgeons today.

That the 75th anniversary of the AANS is celebrated at the 75th AANS Annual meeting is symbolic of the organization's roots in education and fellowship. The AANS was conceived as an educational organization by founders who recognized the essential values of coming together to share ideas and information, to support one another in serving patients, and to improve the profession. For 75 years our forebears have accepted this responsibility, carried the torch and inspired successors to carry on the tradition.

I will pass the torch of AANS leadership to the organization's 75th president in April feeling honored to have served as the AANS president during this landmark year. I invite and encourage you to attend the 75th AANS Annual Meeting in April, and I hope the experience will inspire you to continue striving to maintain the excellence of our profession and enhance its prospects for the future. ■

NEWSLINE

News Members Trends Legislation

AskDrWiki?

A new Web site seeks to function as a “collective online memory for physicians, fellows, residents, and medical students.” Askdrwiki.com allows any medical professional to contribute or edit medical articles as well as to publish clinical notes, pearls, EKGs, and other images.

- **Important Neurosurgical Procedural Statistics Survey Underway** In March and April neurosurgeons across the country are being asked to participate in an independently conducted and confidential AANS survey recording by CPT code the numbers of procedures performed in 2006. The survey is expected to yield insight into how neurosurgeons are practicing today and how practice patterns may have changed since the late 1990s. Participants will receive a copy of the results in aggregate when they become available.
- **MedPAC Releases Report on Medicare Physician Payment Options** On March 1, the Medicare Payment Advisory Commission submitted a report to Congress outlining various options for fixing the Medicare physician payment system. Unless Congress intervenes, the flawed sustainable growth rate formula, which determines Medicare’s annual payment update, will result in a 9.9 percent physician payment cut on Jan. 1, 2008. As an interim measure, MedPAC recommended that Congress increase physician payments by 1.7 percent in 2008. MedPAC failed to reach consensus on any single methodology for fixing the SGR formula in the long term. Instead, MedPAC provided alternative paths for changing the current physician payment system: Path 1 would repeal the SGR and adopt new approaches to contain costs. Path 2 would adjust the existing SGR target to end the large annual cuts, and extend an expenditure target to all Medicare providers, not just physicians. MedPAC also recommended that Medicare adopt programs to emphasize efficiency and quality, such as increasing the accuracy of payments, bundling payments, and creating new payment policies that reward providers for coordination of care. The report, *Assessing Alternatives to the Sustainable Growth Rate System (March 2007)*, is available at www.medpac.gov/publications/congressional_reports/Mar07_SGR_mandated_report.pdf.
- **Medical Liability Reform Legislation Introduced in U.S. Senate** A medical liability reform bill, S. 243, the Medical Care Access Protection Act, was introduced Jan. 10 by Sen. John Ensign, R-Nev. This legislation is modeled after the Texas reform legislation and includes the following provisions: (1) a \$250,000 cap on noneconomic damages against physicians; (2) a three-year statute of limitations for filing a lawsuit; (3) limits on attorneys’ fees to 40 percent of the first \$50,000, 33.3 percent of the next \$50,000, 25 percent of the next \$500,000 and 15 percent of any amount exceeding \$600,000; (4) standards for expert witnesses; (5) elimination of joint and several liability; and (6) a fine for attorneys who file frivolous lawsuits. The bill currently has 15 cosponsors. On the same day, Sen. Judd Gregg, R-N.H., introduced S. 244, the Healthy Mothers and Healthy Babies Access to Care Act, which applies the reform provisions of S. 243 to obstetrics and gynecology services only. This legislation has 12 cosponsors. Additional information and a “Contact Congress” link are available in the Doctors for Medical Liability Reform’s Action Center at www.protectpatientsnow.org.
- **New Physician Quality Reporting Initiative** On Feb. 16, the Centers for Medicare and Medicaid Services announced the availability of a new Web page for the 2007 Physician Quality Reporting Initiative. Created through a provision in the Tax Relief and Health Care Act of 2006, PQRI provides financial incentives for physicians who voluntarily report on certain quality measures for applicable Medicare patients from July 1 to Dec. 31, 2007. Physicians participating in this program may earn a lump-sum bonus payment of 1.5 percent of total allowed charges (subject to a cap) for all covered Medicare physician fee schedule services. Bonus payments are estimated to be between \$1,000 and \$2,000, although the reimbursement amount will vary depending on the individual physician’s Medicare practice. A number of measures included in the PQRI program (for example, perioperative antibiotic and venous thromboembolism prophylaxis) are applicable to neurosurgical practice. The new Web page, www.cms.hhs.gov/pqri, will be updated regularly to reflect the program’s development.

Send news briefs for Newsline to bulletin@AANS.org.

Emergency in Pediatric Neurosurgery

Neurosurgery Must Unite in Care for Kids

The cover story in this issue of the AANS *Bulletin* addresses a vexing problem facing neurosurgery in the United States: limited availability of pediatric neurosurgeons and variable coverage of pediatric neurosurgical emergencies.

The Institute of Medicine's June 2006 report on emergency care highlighted the national problem of children's access to such care, including their access to emergency neurosurgical care.

As a neurosurgeon who typically provides pediatric care for only unusual skull base and vascular cases, I offer my thoughts on the issue and provide some suggestions for solutions to this current problem. The main issues can be summarized as follows:

ER Coverage Crisis There is limited availability of pediatric neurosurgery coverage in many regions of the country. This limited availability is delaying care for emergent neurosurgical problems because pediatric patients must be transferred to a regional children's hospital with dedicated pediatric neurosurgeons.

Reduced Reimbursement There is a large and apparently increasing number of uninsured and underinsured families, which translates to increasing numbers of people, including children, presenting to the ER and stressing the available resources. In addition, physician reimbursement levels for providing pediatric services are less than for the equivalent services provided to adults, creating a disincentive to care for children.

Waning Workforce Few graduates of neurosurgical residencies—fewer than 10 individuals per year entering pediatric fellowship training for the last several years—are interested in pursuing careers in pediatric neurosurgery. The number of pediatric neurosurgeons retiring approximates the current number entering the subspecialty, which portends a larger problem in the future. The pediatric neurosurgical shortage is far more extreme than that for general neurosurgery.

What Are Our Potential Solutions?

■ **Neurosurgeons must cover pediatric neurosurgical emergencies.** Neurosurgeons must increase their participation in the coverage of pediatric neurosurgical emergencies such as shunt malfunction and head or spine trauma. These are routine procedures and remain part of core neurosurgical

William T. Couldwell, MD, PhD, is editor of the AANS Bulletin. He is professor and Joseph J. Yager Chair of the Department of Neurosurgery at the University of Utah School of Medicine.



training and competency. To enhance coverage of pediatric critical emergencies and to avoid delay of patient care with transfer, there should be a general understanding and acknowledgement as a specialty that pediatric emergency care does not require advanced training beyond residency. Such acknowledgement should help neutralize the perception that providing pediatric care will increase one's liability.

It should be noted that currently there are no neurosurgical subspecialties accredited by the Accreditation Council for Graduate Medical Education; recently, the directors of the American Board of Neurological Surgery reviewed this issue at length and for the present have decided not to proceed with subspecialty accreditation through the ACGME. Instead, to reflect the true mix of the individual's practice, recognition for subspecialty practice will be through the ABNS Maintenance of Certification process. This decision supports the reality that many subspecialty areas significantly overlap those of general neurosurgery, and further that formal recognition of a subspecialty area can produce disenfranchisement of the generalist who is providing important care in subspecialty areas.

■ **Better financial support must be provided.** While better reimbursement for pediatric neurosurgical procedures is a long-term goal, in the short term, given the relatively poor reimbursement for these procedures, increased financial support of pediatric neurosurgeons is necessary. While one source of such support has been through cross-subsidization in large neurosurgical groups, other sources exist. For example, hospital reimbursement for Medicaid in most states is quite reasonable, and the hospital often sustains a profit for this care. Many institutions now are recognizing this and are able to help surgical subspecialties through support of medical directorships or pay for on-call activity. Additionally, given the limited availability of such providers in most areas, children's hospitals such as our own in Utah have been successful in negotiating enhanced reimbursement from third parties for pediatric tertiary care.

■ **More neurosurgical trainees must be encouraged to pursue careers in pediatric neurosurgery.** Part of the solution lies in the specialty sharing the load of covering pediatric emergencies and in finding ways to curtail financial disincentives for providing pediatric care. In addition, good mentorship is crucial to encouraging careers in pediatric neurosurgery. In our own neurosurgical department, neurosurgeons in the pediatric group function as excellent mentors for our residents, many of whom have subsequently sought pediatric fellowship training, and the department currently is far exceeding the national percentages of residents entering the pediatric neurosurgery subspecialty.

To solve neurosurgery's current and worsening problem in the coverage of emergency pediatric neurosurgery requires a combined effort as a specialty. The first step is recognition of the problem; given the limited number of pediatric subspecialists, all neurosurgeons will have to pitch in until the availability of pediatric subspecialists increases to meet demand. ■



Paul Klee (German, born Switzerland, 1879–1940), "The One Who Understands," 1934, oil and gypsum on canvas, H. 21 1/4 in., W. 16 in. (54.0 x 40.6 cm.); The Metropolitan Museum of Art, Jacques and Natasha Gelman Collection, 1998. (1999.363.31). Photograph © 1988 The Metropolitan Museum of Art; © 2007 Artists Rights Society (ARS), New York/VG Bild-Kunst, Bonn

Emergency Care FOR KIDS

Can Neurosurgery Do Even Better?

FREDERICK A. BOOP, MD, AND MANDA J. SEAVER

Few physicians doubt that patients in need of neurosurgical care are best treated by neurosurgeons. Similarly, few physicians doubt that children—particularly young children—in need of neurosurgical care are best treated by pediatric neurosurgeons. However, stresses in the emergency care system and on the neurosurgical profession have created a particular threat for children who need emergency neurosurgical care.

To alleviate this situation in the short term and to resolve it in the long term will require the participation of all neurosurgeons in local or regional emergency planning as well as organized neurosurgery's advocacy at the national level. To facilitate both processes with the goal of swift and appropriate delivery of neurosurgical care to children, a description of the current situation and short- and long-term solutions are presented.

What We Know

Neurosurgical emergency care has been explored recently in the *Bulletin's* pages in "Baseline ER Survey Explores System's Cracks," one of a collection of articles on the topic in the Winter 2004 *Bulletin*, and in "Completing the Picture," a report on the AANS 2006 Workforce survey. More information was added to the mix with the June 2006 release of three Institute of Medicine reports evaluating the emergency medical system in the United States. The report *Emergency Care for Children: Growing Pains*, summarized in this issue, focuses on how children are faring in the nation's emergency care system. In short, there is great capacity for improvement, and the same might be said with respect to the delivery of neurosurgical emergency care to children.

The IOM report notes that 27 percent of all emergency room visits are for children, with more than 30 million children seen in emergency rooms each year. However, the report asserts that the needs of children were largely overlooked in the design of the emergency care system. It documents that only 6 percent of emergency rooms are fully equipped to handle the spectrum of pediatric emergencies and only half of hospitals that lack pediatric emergency care capabilities have formal transfer agreements. Further, it finds

that few healthcare providers in the emergency system have formal training in pediatric emergency care, and that neurosurgeons are among the specialists in limited supply.

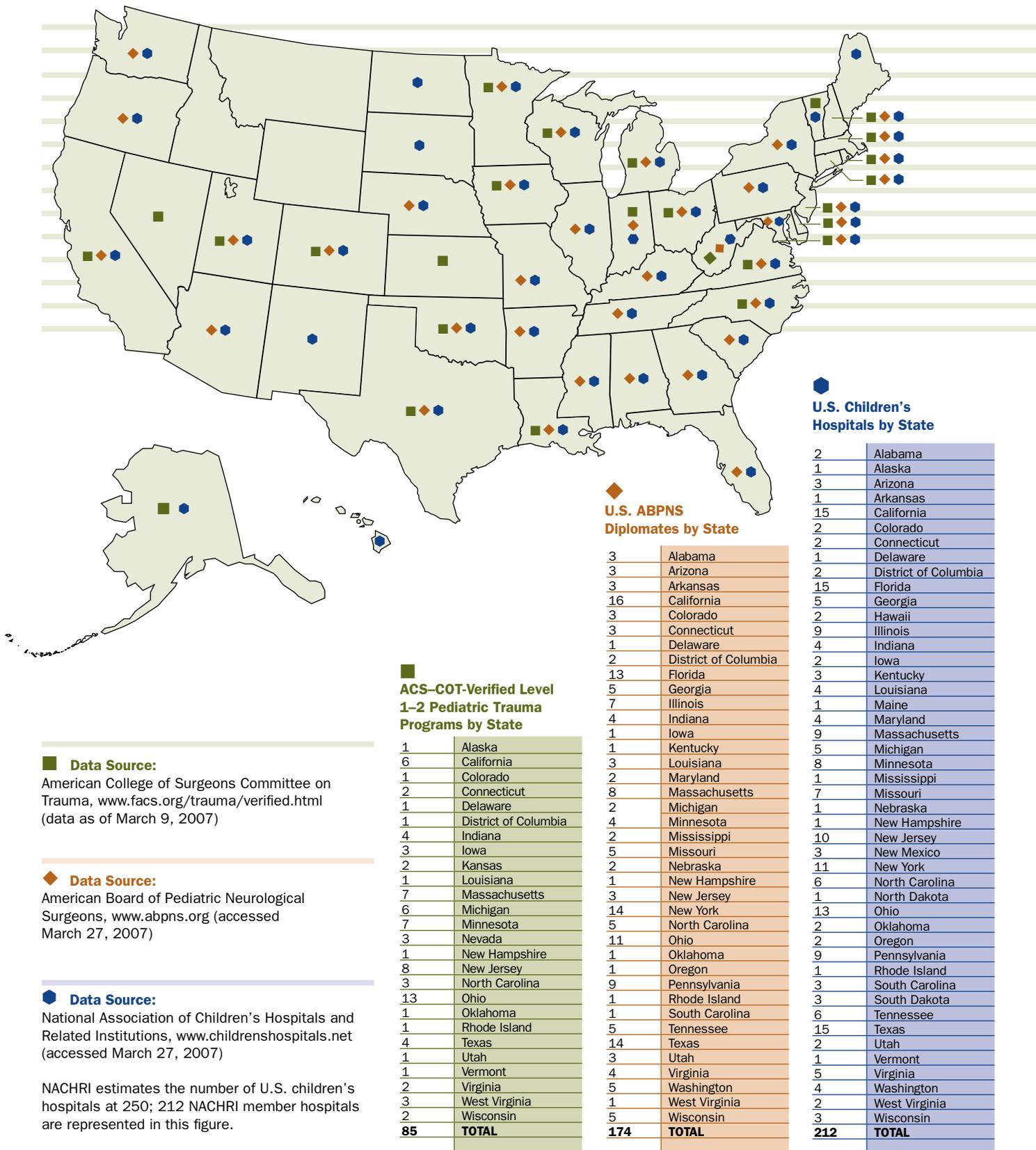
The AANS 2006 Workforce survey found that while 94 percent of neurosurgeons are taking ER call, 76 percent feel that emergency call is a problem in their areas. A most disturbing finding is that of the 94 percent of respondents taking call, only 22 percent are covering pediatric neurosurgical emergencies; this translates to about 530 survey participants. Extrapolating the percentages to the approximately 3,200 neurosurgeons certified by the American Board of Neurological Surgery—the certification for which includes the care of pediatric patients—about 662 neurosurgeons are providing neurosurgical emergency care for the nation's children.

Given the lack of ERs adequately supplied and staffed for pediatric emergency care, it is little wonder that when faced with a pediatric neurosurgical emergency, ER staff is quick to call for transport to the nearest children's hospital.

Children's hospitals represent about 5 percent of the 4,908 hospitals in the United States, according to the National Association of Children's Hospitals and Related Institutions. They include 50 to 55 freestanding general acute care children's hospitals (20 percent); 110 to 125 non-freestanding general acute care children's hospitals, also known as children's hospitals within larger hospitals (44 percent); and 90 to 100 orthopedic and other specialty children's hospitals (36 percent). The distribution in the United States of 212 NACHRI member hospitals is shown in Figure 1 on page 8.

Also shown in Figure 1 is the state-by-state distribution of 85 pediatric level 1 or level 2 trauma centers verified by the American College of Surgeons Committee on Trauma. Similarly depicted are 174 pediatric neurosurgeons certified by the American Board of Pediatric Neurological Surgery. Of the 174 pediatric neurosurgeons listed, 13 are retired and a larger number are nearing retirement. ABPNS certification for a 10-year period requires: completion of a postgraduate fellowship in pediatric neurological surgery accredited by the Accreditation Council for Pediatric Neurosurgical Fellowships Inc.; certification by the American Board of Neurological Surgery or the Royal College of Physicians and Surgeons of

FIGURE 1: U.S. Distribution of ACS-COT Pediatric Level 1–2 Trauma Programs, ABPNS Diplomates, and Children’s Hospitals



■ Data Source:

American College of Surgeons Committee on Trauma, www.facs.org/trauma/verified.html (data as of March 9, 2007)

◆ Data Source:

American Board of Pediatric Neurological Surgeons, www.abpns.org (accessed March 27, 2007)

● Data Source:

National Association of Children’s Hospitals and Related Institutions, www.childrenshospitals.net (accessed March 27, 2007)

NACHRI estimates the number of U.S. children’s hospitals at 250; 212 NACHRI member hospitals are represented in this figure.

Canada; submission of surgical logs confirming that 75 percent of operative cases for the year preceding application were in patients age 21 and under, or that 125 operative cases were in patients age 12 and under; and a passing score on the ABPNS written examination.

With the availability of so few facilities that are tailored to emergency pediatric care, and very few pediatric neurosurgeons available across the country to care for children with neurosurgical emergencies, the trend has been toward regionalized care.

Pediatric Neurosurgery: A Model for Regionalized Care?

The IOM and others have touted regionalization as the primary remedy for the emergency healthcare system as a whole and for pediatric emergency care in particular. Indeed, pediatric neurosurgery is becoming a model for regionalized care.

However, a reliably functioning system of pediatric emergency care has not yet been achieved. As the IOM report points out, the emergency care system is highly fragmented, and while some areas of the country have developed admirable systems, “a state-by-state analysis shows that many states still have not formally regionalized pediatric intensive or trauma care.”

Further, the IOM cites a 2004 study by Gauche-Hill and colleagues that puts the number of children’s ER visits to a children’s hospital at only about 7 percent. Therefore, the vast majority of children are seen at community ERs, a setting where, according to the 2006 AANS Workforce Survey, 59 percent of neurosurgeons provide care.

Everyone can agree that it is daunting to see children suffer death or permanent injury, but this is particularly true when children must bypass facilities where board-certified neurosurgeons are on call but cannot care for a child because their practices are limited to adults.

Two true-life cases illustrate this problem. TS, a 14-year old male, accidentally ran into the schoolyard wall while playing at recess. He was briefly unconscious. School personnel called an ambulance, but en route to the

local hospital he began vomiting and became disoriented. An emergent CT scan showed a linear skull fracture and associated acute epidural hematoma. Even though a neurosurgeon was on call for that emergency room, he no longer cared for children and thus was not called. By the time emergency transfer to the nearest children’s hospital could occur, the child had herniated and, despite emergency craniotomy, he lives with severe, permanent neurological sequelae.

BG, who had been born prematurely and shunted for hydrocephalus, had mild cerebral palsy but had only required one shunt revision as an infant. At age nine, she presented to her local ER with headaches of one week duration. She had vomited repeatedly in the preceding 24 hours and had become very lethargic. In the ER her pulse was in the 50s and her blood pressure was elevated. An emergent CT scan was consistent with a shunt malfunction, and her shunt series showed that her abdominal

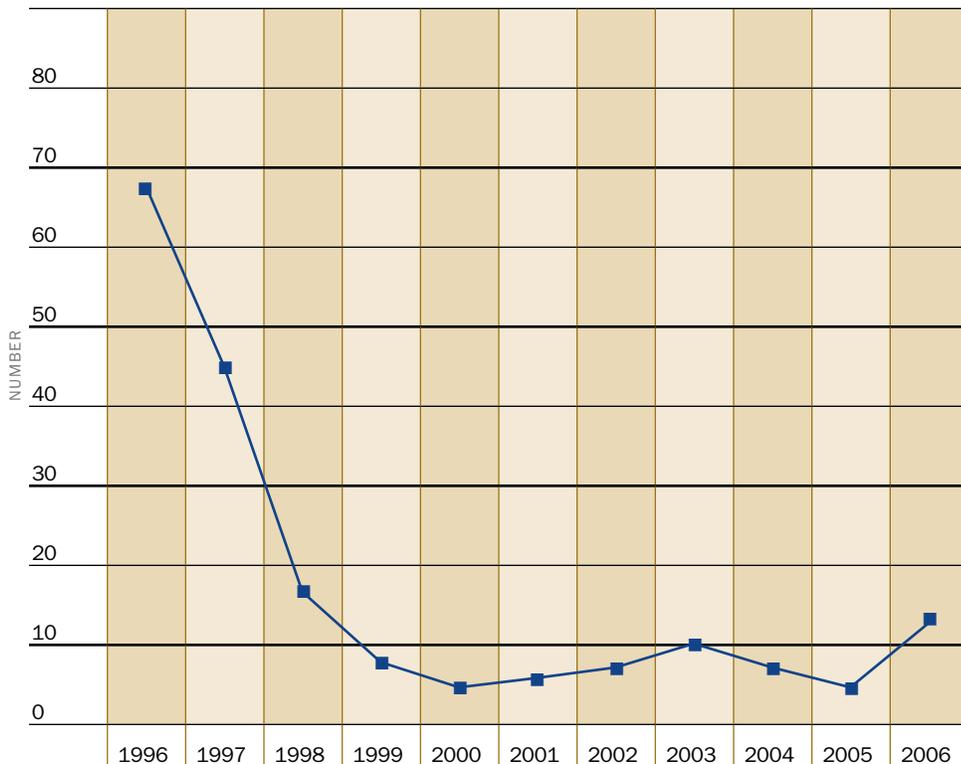
catheter was no longer in the peritoneum. There was a neurosurgeon on call for the hospital but he no longer treated children and advised the ER physicians that she should be transferred to the regional children’s hospital. A helicopter transport was arranged, but in flight BG suffered a respiratory arrest. By the time she arrived at the children’s hospital, she was beyond salvage.

Certainly, in the absence of pediatric anesthesia and pediatric critical care at a hospital, it is not feasible for a neurosurgeon to do more than place an intracranial pressure monitor or tap a shunt before transporting the child to the nearest pediatric trauma center. However, in an emergency older children often can be treated in a community setting, and in any case, a local neurosurgeon is needed to ensure a child is stable for transport.

Barriers to Providing Pediatric Emergency Care Locally

There are a number of factors that influ-

FIGURE 2: Diplomates Certified by the American Board of Pediatric Neurological Surgery (ABPNS) 1996–2006



IOM: GROWING PAINS

Key Findings of Report on Emergency Care for Children

System fragmentation; lack of funding, service coordination and accountability; and a limited workforce—particularly the scarcity of available specialists—are among the notable findings of the three Institute of Medicine reports released in June 2006. The reports' recommendations include improving hospital efficiency and patient flow; creating a coordinated, regionalized, and accountable system; increasing resources; and attending to the needs of children.

The report *Emergency Care for Children: Growing Pains* notes that children's needs were largely overlooked when the emergency care system initially was developed and that the outcomes for children served in the system have trailed those for adults.

Growing Pains recognizes that children's medical needs are impacted by their anatomical, physiological, developmental and emotional attributes and that these attributes need to be taken into account in healthcare providers' assessment and treatment of children. ("Children," as defined in the report, are age 18 or younger, and "infants" are under age 1.) Healthcare providers need specialized training and skills as well as access to specialized equipment and supplies. Furthermore, children's needs should be fully integrated into all aspects of emergency care planning.

Among the problems identified:

- **Unavailable Pediatric Equipment and Supplies**—Although children make up 27 percent of all visits to the emergency department, only 6 percent of U.S. emergency departments have all of the supplies for handling pediatric emergencies and only about half of hospitals have at least half of these supplies.
- **Lack of Written Transfer Agreements**—Of the hospitals that lack the capabilities to care for pediatric patients, only half have written transfer agreements with other hospitals.
- **Lack of Continuing Education in Pediatric Care**—Continuing education in pediatric care is not required or is limited for many emergency care providers including pre-hospital emergency medical technicians.

- **Medications Inadequately Tested for Children**—Many medications prescribed to children have not been adequately tested or approved by the FDA for pediatric populations.
- **Undertreated, Unstabilized Children**—Many providers undertreat children in comparison to adults and do not properly stabilize seriously injured or ill children.

Among the recommendations:

- **Further Developed and Defined Regionalization**—Although regionalization of pediatric emergency care is required in some states, regionalization should be formalized in all states. A nationally recognized and easily understood system for categorization of emergency department pediatric capabilities should be implemented.
- **Strengthened Workforce**—All emergency care providers should possess a level of competency to deliver emergency care to children. Education, evidence-based guidelines and standards of care, and pediatric leadership all should help providers attain this competency.
- **Family-Centered Care**—Emergency providers should acknowledge and utilize the family's presence, skills and knowledge of the child's condition when caring for the child.
- **Improved Evidence Base**—Pediatric emergency care is a young field, and a national commitment to emergency care research is needed to ensure that treatments and management strategies are supported by scientific evidence.
- **Increased Funding**—Funding for the federal Emergency Medical Services for Children Program should be increased to \$37.5 million per year for five years.

ence the local neurosurgeon's ability to care for critically ill children in a nonpediatric setting, some of which have been discussed. Two main areas that deserve individual attention are those of medical liability pressures and a "poor" payer mix.

Medical Liability Pressures Medical liability plays a role in some neurosurgeons' reluctance to treat children, but their reluctance may be based on perception rather than reality. Treating a pediatric patient in a general hospital emergency room, in the absence of pediatric emergency physicians and the ancillary support necessary to care for children, may expose a neurosurgeon to undue risk. And it is true that there is longer exposure to the possibility of lawsuits when treating pediatric patients. In most states, the statute of limitations for medical malpractice is one-to-two years beyond the "age of discovery." For neurosurgeons caring for adults the exposure risk is one-to-two years, but for those caring for children it is one-to-two years beyond the age of legal adulthood. A neurosurgeon's liability exposure after caring for an infant therefore can be as long as 20 years.

But despite the longer liability exposure, pediatric neurosurgeons are not sued more frequently than other neurosurgeons. According to Data Sharing System information for 2005 from the Physician Insurers Association of America, in 2005 alone and cumulatively between 1985 and 2005, neurosurgeons were most frequently sued for procedures involving the spine.

While liability insurance rates have been a great concern recently for all neurosurgeons, rates for pediatric neurosurgeons are the same as those of other neurosurgeons. Further, there is little evidence that liability insurers reduce premiums for those not treating children. With regard to premium reductions for neurosurgeons not taking any type of emergency call, only 2 percent of AANS 2006 Workforce Survey respondents said they received such a break.

"Poor" Payer Mix For treatment of privately insured children, the rates of reimbursement are the same as for adults.

However, the care for a large percentage of children presenting at the ER is either unfunded or underfunded. This in part reflects the large number of uninsured people in the United States— 44.8 million or 15.3 percent of the population in 2005, according to the U.S. Census Bureau—many of whom must use the ER as their local clinic.

It may also reflect the fact that for children with chronic disabilities such as spina bifida, seizures, hydrocephalus and cerebral palsy, the insurance often runs out or won't cover them, leaving them to state spin down programs for coverage.

Bolstering the Pediatric Workforce

Not only have medical liability and payer mix issues influenced children's accessibility to receive care at their local hospitals, these factors impact pediatric neurosurgeons daily. Most pediatric neurosurgeons find themselves either having to perform some general adult neurosurgery or having their salaries supplemented by their hospitals or their employer in order to achieve a standard of living commensurate with the rest of the neurosurgical community. A commitment to pediatric neurosurgery translates to more nighttime emergencies, more time away from family, longer liability exposure, and all for less remuneration than other areas of neurosurgery.

Whereas a decade ago the majority of pediatric neurosurgical cases were done by community neurosurgeons, today pediatric neurosurgeons across the country are reporting that their clinical practice volume is steadily increasing. According to Rick Abbott, MD, chair of the AANS/CNS Section on Pediatric Neurological Surgery, there are currently 44 jobs available in the United States for pediatric neurosurgeons. But too few people are pursuing careers in pediatric neurosurgery to keep up with the growing demands. To support a fully functional emergency medical system one day, neurosurgery as a specialty needs to encourage people now to enter the field of pediatric neurosurgery.

Pediatric neurosurgery entered an encouraging period of development in 1978 when the American Society of Pediatric

Neurosurgery was founded by 16 neurosurgeons, according to Leland Albright in his 2004 Matson Lecture. These people "established standards for pediatric neurosurgeons" and "were committed to advancing the development of pediatric neurosurgery through laboratory and clinical research" with "impressive foresight as to how we should advance our field."

The American Society of Pediatric Neurosurgeons currently has 150 active members who are fellowship trained in pediatric neurosurgery and committed to providing neurosurgical care for children. As of March 2007 the American Board of Pediatric Neurological Surgery has 174 neurosurgeons certified as diplomates in the United States. The number of ABPNS diplomates certified each year since 1996 is shown in Figure 2 on page 9. In 1996 and 1997 the original members of the American Society of Pediatric Neurosurgeons were grandfathered into membership. Since that time, the number of pediatric neurosurgical fellows entering the job market has remained between six and 10 per year. One or two of those individuals per year ultimately will become frustrated with the demands of a pediatric neurosurgical practice and will enter a general neurosurgical practice. At the present pace, the number of senior pediatric neurosurgeons who are retiring is about the same as the number entering the workforce.

To stimulate the interest of trainees in a pediatric neurosurgery career certainly will require adequate exposure to the field during training. Disturbingly, a recent survey of resident participants in a pediatric neurosurgery review course found that the majority of attendees had only three to six months of pediatric neurosurgery experience during their clinical neurosurgery training. While such training may be adequate to care for a 15-year-old "child" with a sports injury, it is hardly adequate for most neurosurgeons. It also may contribute to a lack of comfort with the pediatric population which may decrease the likelihood that these neurosurgeons will make themselves available to treat children, even on an emergency basis.

Stimulating the interest of trainees in pediatric neurosurgery no doubt will also require reimbursement levels comparable to those of other neurosurgical subspecialty areas.

In the typical pediatric neurosurgical practice, 30 percent to 60 percent of the payer mix is Medicaid and another 10 percent to 15 percent is self pay. Because a number of state Medicaid programs are unable to overcome budgetary shortfalls, reimbursement is either untimely or nonexistent.

Oftentimes children's hospitals are able to help their pediatric neurosurgeons negotiate reasonable Medicaid and third party contracts through global pricing or carve-outs for subspecialty services. A growing number of children's hospitals are subsidizing their surgical subspecialty divisions either through emergency call pay arrangements or through medical directorships.

Also, a certificate of added qualification in pediatric neurosurgery may allow pediatric neurosurgeons to better negotiate reasonable rates of reimbursement with both third party payers and with their employers.

Demand Is High Because demand for pediatric neurosurgeons now is outstripping the supply, reimbursement may be less of a barrier in the future for those who want to pursue careers in pediatric neurosurgery. Some academic and larger multispecialty groups have recognized that they may have to pay extra for a pediatric neurosurgeon to join them and assume that component of their practices. This allows other members of the practice to subspecialize in complex spine, adult tumor or cerebrovascular areas.

Many academic institutions find themselves "growing their own"; that is, encouraging one of their graduating residents to pursue pediatric fellowship training with the promise of a faculty position when they complete their fellowship. Some academic departments are even supplementing fellowship training by making the fellow a "clinical instructor" and starting faculty salary early with the stipulation that the graduate will join the department's faculty upon completion of the fellowship.

Other groups find themselves offering inordinate starting salaries in order to even

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An Overlooked Source for Recruiting the Next Generation of Neurosurgeons

Editor:

A recent article in the *AANS Bulletin* [Benzil DL, von der Schmidt E: Toward harnessing forces of change: Assessing the neurosurgical workforce. 15(4):7–11, 29, 2006, article ID 43102] discussed the current need for more neurosurgeons in the United States. Several methods of recruitment were discussed but one potential source was overlooked—undergraduate premedical students. Exposing medical students to the challenge and excitement of clinical neurosurgery is well and good but offering the same shadowing opportunities to undergraduate students can be just as effective.

For 22 years I have offered a one-month “Externship in Neuroscience” to undergraduate students who participate as part of their January term (in 4-1-4 calendar programs). Without exception these younger premedical students found clinical neurosurgery to be fascinating, and a large percentage planned to head in that di-

rection after medical school. I would urge other clinicians not to overlook this potential pipeline of future neurosurgeons.

If anyone is interested in sponsoring such a shadowing program, I’d be happy to explain how it works.

*Douglas B. Kirkpatrick, MD
Medford, Ore.*

Send Letters

Express your point of view regarding workforce issues, delivery of neurosurgical emergency care, pay-for-performance initiatives, reimbursement, or other issues in neurosurgery. Send a letter to the editor at bulletin@AANS.org. Letters are assumed to be for publication unless otherwise specified. Correspondence selected for publication may be edited for length, style and clarity. Detailed writing guidelines are available at www.aans.org/bulletin.

Emergency Care for Kids

Continued from page 11

get a pediatric neurosurgeon to interview.

The few graduates entering pediatric fellowship training generally have a job in hand before they even start their fellowship training. In many instances, hospitals are now offering to pay off student loans as a signing bonus in return for a minimum commitment of two-to-three years.

Keep Pediatric Patients in Mind

Pediatric neurosurgery is an intellectually stimulating and wonderfully rewarding career for those who like working with children (whose only goal is to get back to playing again), have a love for developmental anatomy, and enjoy performing spine, brain, tumor, and peripheral nerve procedures all in one practice.

The trend toward regionalization is positive in many respects, but as yet the emergency care system, particularly for pediatric patients in some areas, is flawed. Although children’s hospitals are eager to develop their neuroscience programs, the limited availability of pediatric neurosurgeons is starting to reach crisis proportions.

Neurosurgery as a specialty has a responsibility to ensure that a neurosurgeon is available to children when there is a need. All neurosurgeons can:

- perform basic triage, tap shunts and perform craniotomies to stabilize children before transfer.
- participate in local planning for appropriate transfers of children when their facility lacks the capability to care for them; and
- participate in pediatric refresher courses to gain comfort with handling the complexities of neurosurgical care in infants and younger children.

Most importantly, neurosurgeons must keep pediatric patients in mind in all aspects of neurosurgical care. ■

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Training Neurosurgical Residents in Pediatrics

Recent Nationwide Trends Create Challenges

Recent nationwide trends in pediatric neurosurgery have created challenges to resident training in this subspecialty. Some of the major changes surrounding pediatric neurosurgery especially over the past decade have been: (1) the centralization of pediatric subspecialty care to large children's hospitals; (2) the standardization of fellowship training for board certification in pediatric neurosurgery; and (3) the overall trend of families increasingly demanding that surgical care be given by the senior-most members of the neurosurgical team.

The first trend is part of a nationwide regionalization of specialized pediatric care to larger children's hospitals. Medical centers with lower volumes of pediatric patients are increasingly becoming deficient of pediatric neurosurgeons. This trend is largely attributable to economic factors, according to R. Michael Scott, MD, neurosurgeon-in-chief at Children's Hospital Boston and professor at Harvard Medical School.

"Pediatrics is an expensive milieu," he said. "You can't do state-of-the-art pediatric neurosurgery without pediatric intensivists, cardiologists, endocrinologists, neuroradiologists, etc., and hospitals can't afford to fully staff a children's hospital if they don't have the volume."

Further, the American Board of Pediatric Neurological Surgery requires applicants for certification or recertification to submit case logs demonstrating that their practices center on pediatric neurosurgery. Therefore, hospitals cannot attract pediatric neurosurgeons if there are not enough cases.

As a result, many residents train in programs that do not have a pediatric neurosurgeon at their hospital. Over the past decade, the Residency Review Committee has been citing neurosurgery training programs for not having enough pediatric volume, putting those programs at risk of probation or losing accreditation.

"There is some uncertainty as to whether regional demographics allow adequate numbers of pediatric neurosurgical cases for all 90-plus programs," explained Howard Eisenberg, MD, professor and chair of the Department of Neurosurgery at the University of Maryland.

Some programs have responded by sending their residents to rotate at larger children's hospitals. For example, at Children's Hospital Boston, in addition to residents from the Brigham and Women's/Children's Hospital program, neurosurgery residents rotate yearly from three outside programs. Residents from these institutions must spend considerable time away from their home institutions, leading these institutions to experience increased expenditures for housing and traveling expenses and increased pressure on resident time allocations.

The standardization of fellowships in pediatric neurosurgery has also significantly impacted resident training in this subspecialty. The ABPNS was founded in 1996, and shortly thereafter firm guidelines for pediatric neurosurgical fellowships were defined. There are currently 21 accredited fellowship programs in North America. At these hospitals, fellowship training may potentially interfere with resident training because the fellow usually operates on the more complex cases and therefore valuable educational opportunities for residents on service may be lost. Ironically, less resident exposure to pediatric neurosurgery because of fellows may reduce resident interest in pursuing a pediatric fellowship.

Recent data from the pediatric match indicates that some pediatric fellowships have difficulty filling their slots. This further reduces the pool of qualified pediatric neurosurgeons and increases the trend toward regionalization of care. Currently there are 44 open pediatric neurosurgery positions across the country, according to

Rick Abbott, MD, professor of neurosurgery at Children's Hospital at Montefiore and chair of the AANS/CNS Section on Pediatric Neurological Surgery.

Another factor that affects direct resident involvement in pediatric neurosurgical cases is the increasing demand by families that care is given directly by the attending surgeons. While this trend is a challenge for all neurosurgical training, this demand arguably may be more emphatic from the parents of pediatric patients. In addition, there is a notion that pediatric neurosurgeons may have a continued stake in the outcome of an individual operation because they may follow their patients for several decades after the procedure. Because of this combination of factors, attending neurosurgeons may feel compelled to take a more active role in operations, which limits the major decision-making by residents throughout the surgical procedure.

Residents now face new challenges in obtaining pediatric experience: regionalization of pediatric care, standardization of fellowship training, and the increasing demand for delivery of care exclusively by attending surgeons. Underlying these factors is the gradual conversion to subspecialty care on a nationwide basis, both in academic and private practices.

"It's a natural outcome of what's happening in America in every profession from the law to medicine," said Dr. Scott. "Patients as consumers are demanding subspecialty care."

Pediatric neurosurgeons as a group think their subspecialty is improving patient care, but as in other neurosurgical subspecialty areas, data that support this idea are still being gathered. ■

Edward S. Ahn, MD, is completing a pediatric fellowship at Children's Hospital Boston. **Lawrence S. Chin, MD**, is chair of the Department of Neurosurgery at Boston University School of Medicine and chair of the AANS Young Neurosurgeons Committee.

Medicare Payment Reduction Halted in 2007

Funding Structure and Quality Reporting Provisions Raise Serious Concerns

Going into the final days of the 109th Congress, the key issue facing all physicians was the scheduled 5 percent cut in Medicare reimbursement. Although a long-term permanent solution for fixing the flawed sustainable growth rate formula—on which physicians' Medicare reimbursement is in part based—remained elusive, there was widespread, bipartisan support to prevent the cut and a corresponding sense of urgency that this needed to be accomplished before Congress adjourned for the year. Unfortunately, while legislation to prevent the pay cut did pass, physicians were forced to swallow a number of bitter pills in the form of several new Medicare policies that will negatively impact neurosurgeons.

Passing by a margin of 79 to 9 in the Senate and 367 to 45 in the House, H.R. 6111, the Tax Relief and Health Care Act of 2006, freezes Medicare physician payments at 2006 levels. The bill also prevents additional cuts (particularly for physicians living in rural areas) due to changes in the geographic practice cost index. Lastly, the legislation includes an additional 1.5 percent bonus payment for those physicians who report certain quality measures between July 1 and Dec. 31, 2007, although these bonus payments will not be paid until 2008.

Although the legislation freezes the conversion factor at 2006 levels, other changes to the Medicare fee schedule implemented by the Centers for Medicare and Medicaid Services will go forward, causing reduced fees for many neurosurgical procedures. While the magnitude of these cuts will depend on individual neurosurgical practice and case mix, on average neurosurgeons will be facing a 3 percent Medicare payment cut in 2007: one percent is attributed to



changes from the statutory five-year review of work relative values, 1 percent is due to changes to practice expense values, and 1 percent is due to statutory reductions in reimbursement for imaging services. While it may be of little comfort, previous iterations of the legislation and CMS policies could have produced a cut for neurosurgery in the 8 percent to 12 percent range.

The bill includes \$1.35 billion for the Physician Assistance and Quality Initiative Fund. While Members of Congress indicated that this fund could be used to reduce the 2008 physician payment cut, the statute does not require that the funds be used in such a manner. Rather, the statute indicates that the Secretary of Health and Human Services may use the funds for an adjustment to the conversion factor for 2008 as well as for quality improvement activities. Thus, given the Bush administration's current commitment to implementing quality

reporting for all physicians, it is highly likely that these funds will be used primarily to create a larger and more expansive quality reporting program.

Why Neurosurgery Didn't Support the Tax Relief and Health Care Act of 2006

Despite being pleased that Congress stopped the 5 percent pay cut for 2007, the AANS and CNS did not support this legislation because:

- the way in which the payment freeze is financed is extremely problematic and will cause physicians to be in an even deeper hole next year;
- the bill creates a new fraud and abuse program; and
- the new "quality" reporting system is unworkable, overly burdensome and inadequately funded.

Flawed Financing Structure The bill includes a budgetary gimmick that will lead to a steeper Medicare physician payment cut in 2008 and beyond. While Congress shifted money from the Medicare managed care stabilization fund to pay for the freeze in 2007, it did not change the underlying payment formula. As a result, the sustainable growth rate formula is still in place, and the cumulative nature of the SGR formula creates steeper cuts in future years than the already anticipated annual 5 percent cuts. In fact, the Congressional Budget Office recently analyzed the legislation and estimated that physicians are now facing at least a 10 percent cut in 2008.

New RAC "Bounty Hunter" Program Congress expanded the recovery audit contrac-

tor program, currently a demonstration program operating in California, Florida and New York, to all 50 states. Under the RAC program, the CMS works with special contractors who are authorized to audit physician practices in search of improper Medicare payments that may not have been detected through the existing fraud and abuse programs. These contractors essentially are bounty hunters who are paid a percentage of any overpayments they collect. A major complaint among physicians is that these contractors are disruptive to their practice and do not educate the practice regarding their common billing errors. They simply collect the “overpayments” and disappear.

Burdensome “Quality” Program The legislation is structured in a way that creates a burdensome new quality reporting program that may do little to actually improve quality. Initially, the CMS is required to build on the existing Physician Voluntary Reporting Program, which was launched in 2006 as an opportunity to test data collection and reporting methods before tying Medicare reimbursement to a physician quality reporting program. Starting in July 2007, physicians can qualify for the 1.5 percent bonus payments if they report to the CMS on at least three of the program’s quality measures for at least 80 percent of the cases in which the measures apply. The bonus payment will be a lump sum payment applied to all Medicare claims for the six-month period if the provider’s participation qualifies for the bonus payment. According to the Congressional Budget Office, approximately \$300 million will be available in the bonus pool in 2007, although physicians who qualify for this program will not receive the bonus payments until sometime in 2008. The CMS has not

yet clarified many of the rules involved in this new program, and a great deal of uncertainty about how it will operate remains. Several measures, including antibiotic and venous thromboembolism prophylaxis, are applicable to neurosurgery.

In 2008, the CMS has broad authority to implement a quality reporting program that could potentially morph into mandatory pay for performance. Although the legislation states that the CMS will select measures that have been developed under a consensus-based process and adopted or endorsed by a consensus organization, the AANS and CNS are concerned that this language is too vague and gives the CMS free reign over the selection of measures without appropriate oversight, direction and input from physicians.

Charting a Course for Fixing the Medicare Reimbursement Problem

The AANS and CNS, along with others in organized medicine, will be implementing an aggressive advocacy effort aimed at educating the new Congress about the problems with the Medicare physician payment system, as well as our serious and ongoing concerns about the new quality reporting program and pay for performance. Part of this strategy will be an immediate effort to repeal (or make significant changes to) the recently passed legislation, particularly the provisions related to the quality program. Of course, the focus of significant attention will be on averting the pending 10 percent payment cut in 2008 by repealing the current SGR formula and replacing it with a more sustainable reimbursement system. The Medicare Payment Advisory Commission released a report to Congress in March that outlines the problems with the currently broken Medicare physician pay-

ment system and recommends a number of potential options for reform, including preventing further cuts in 2008.

Given the high costs associated with both of these efforts—over \$20 billion to prevent the 2008 pay cut and over \$200 billion to repeal the SGR—medicine faces a tough, uphill battle. To complicate an already daunting task, the new “pay-go” budget rules that the Democrats have implemented require any additional federal spending to be offset by either increased taxes or decreases in spending.

Physicians will need to play an active part in the political process to realistically have any hope of success. The AANS and CNS will be calling on all neurosurgeons to contact their legislators throughout the year. Please respond to these “Calls to Action” so policymakers hear the voices of neurosurgeons and their patients from all parts of the country, throughout the year. Your involvement is imperative. ■

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For More Information

- Detailed summary of the Tax Reform and Health Care Act of 2006 legislation, [www.aans.org/legislative/aans/Summary and Legislation 2006.pdf](http://www.aans.org/legislative/aans/Summary%20and%20Legislation%202006.pdf)
- Tally of Congressional votes on the Tax Reform and Health Care Act of 2006, <http://capwiz.com/noc/keyvotes.xc/?M=C>
- Recovery Audit Contractor Demonstration Program, www.cms.hhs.gov/RAC/
- Comprehensive list of quality measures applicable to neurosurgical practice, [www.aans.org/legislative/aans/Neurosurgical Quality Measures.pdf](http://www.aans.org/legislative/aans/Neurosurgical%20Quality%20Measures.pdf)
- CMS Physician Quality Reporting Initiative, [www.cms.hhs.gov/PQRI/40_TransitionFrom PVRP.asp](http://www.cms.hhs.gov/PQRI/40_TransitionFromPVRP.asp)

Bulletin Enters New Era

New Online Article Submission Portal Facilitates Peer Review

MANDA J. SEAVER

In conjunction with the 75th anniversary celebration of the AANS, in February the AANS *Bulletin* launched a new online manuscript submission and review portal that further professionalizes the publication, encourages open submissions, and facilitates a rigorous peer-review process for socioeconomic research papers.

“The new online submission system is a linchpin of publishing peer-reviewed socioeconomic research in the *Bulletin*,” said William T. Couldwell, MD, editor of the *Bulletin*. “The easy-to-use system also will encourage open submissions of articles, an important element in a vehicle for information and analysis that seeks to represent all of neurosurgery.”

This advancement follows several permutations of the AANS’ premier communication vehicle for members. More importantly, it demonstrates the leadership of the AANS in the area of socioeconomic and professional issues as they affect the specialty of neurosurgery and its commitment to advancing the specialty by encouraging research in these areas.

The AANS began ongoing publication of a newsletter in 1975. Citing Frank Mayfield’s 1965 presidential proclamation that the organization had become the “official organization representing the neurological surgeons of the United States,” Richard Schneider wrote in his Presidential Newsletter that “it is believed that the AANS should present vital and pertinent material to all neurosurgeons.”

The following year the publication became known as the AANS *Newsletter*. Topics addressed in the early issues may sound familiar: continuing medical education, coding, Washington activities, and neurosurgical workforce. Issues being tackled by the Socioeconomic Committee included relative value scales, density and distribution of neurosurgeons and delivery systems of neurosurgical care, and medicolegal problems.

Sixteen years later Michael L.J. Apuzzo, MD, was named newsletter editor with the goal of making the publication the “premier source of neurosurgical news throughout the 1990s.” In Vol. 1, No. 1, Dr. Apuzzo introduced the new AANS *Bulletin* and predicted that “Throughout the 1990s and beyond, the *Bulletin* will serve as a prime source of general neurosurgical and association-related news.” The format was upgraded with a full-color cover, and the content was assembled with “special attention...to critical issues, including reimbursement and legislative challenges.”

In 1998, A. John Popp, MD, was appointed editor of the *Bulletin*. By the Winter 1998 issue, the publication had “taken on a new look and a new focus, evolving into a more member-friendly publication with a strong focus on socioeconomic topics,” he wrote in his Personal Perspective. “This change,” he continued, “was in direct response to AANS members’ expressed interest in hearing more from

The screenshot shows a web form for registration. At the top, it says "User ID / Password". The "User ID" field contains "ABReviewer@rev.org" and has a "req" icon. The "Password" field has a "Change Password" link. Below that is a question: "Are you willing to be a reviewer for AANS Bulletin?" with a dropdown menu set to "Yes". There is a "Select:" dropdown with options "No" and "Yes". To the right is a "Special Characters" checkbox. The "Keywords" section has a search box containing "AANS" and a "Search" button. Below the search box is a list of keywords: socioeconomic, spine, Stark laws, stereotactic radiosurgery, training, tumor, unfunded mandate, uninsured, work hours, and workforce. To the right of this list is an "Add" button. Further right is another list of keywords: workforce, health policy, and resident work hours. Each of these keywords has a "req" icon and a "Clear" button.

Peer Reviewers Needed Those interested in occasionally reviewing socioeconomic research papers are invited to register as reviewers for the AANS *Bulletin* at <http://mc.manuscriptcentral.com/aansbulletin>. Those creating an account: In step three of the process, select “Yes” to the question, Are you willing to be a reviewer for the AANS *Bulletin*? Those who have an account already should see an Author Center and a Reviewer Center after login. If only an Author Center is available, select “Edit Account” at the top of the screen, go to step three, and follow the same instruction. Be sure to select appropriate key words and to enter enough information about yourself so that your interests and expertise in socioeconomic topics are indicated.

the association about practice management issues, reimbursement concerns and other socioeconomic topics.” In 1999 the eight-member Bulletin Advisory Board was formed to “ensure that our membership magazine is the best in the field.”

James R. Bean, MD, who had served as associate editor, became the *Bulletin*’s editor in 2003. In 2004 the AANS Member Survey found the *Bulletin* to be a premier member benefit and a top predictor of members’ satisfaction with their membership. In 2005 the first peer-reviewed socioeconomic research paper was published in the *Bulletin*, and eight reviewers agreed to support the peer-review process.

Today, the Bulletin Advisory Board includes 20 members, among them Dr. Couldwell, editor, and Patrick W. McCormick, MD, associate editor. A core group of nine peer-review panelists, many of whom are active in the Council of State Neurosurgical Societies, is led by Deborah L. Benzil, MD.

“The CSNS, acting on the initiative of Mick J. Perez-Cruet, MD, has been very instrumental in the development of the *Bulletin*’s peer-review component,” said Dr. Benzil. “The continuing support of this project by the CSNS is both important and greatly appreciated.”

Writing Guidelines for the AANS Bulletin

The *Bulletin's* detailed writing guidelines are available from the *Bulletin's* home page, www.aans.org/bulletin; the direct link is www.aans.org/bulletin/writing.asp. A link to the online submission portal is provided in the guidelines.

The following is intended as a summary of the online submission process and the writing guidelines for research papers and for general articles. Before articles are submitted to the *Bulletin*, the complete guidelines online should be carefully reviewed and the manuscripts, accordingly prepared.

The *Bulletin* considers for publication original, nonpromotional articles that have not been published previously. The AANS *Bulletin* reserves the right to print accepted articles in the vehicle it deems most appropriate.

Online Article Submission All articles must be submitted online through the AANS *Bulletin's* secure electronic submission platform, available 24 hours a day and seven days a week at <http://mc.manuscriptcentral.com/aansbulletin>. From this main page:

- Those with an account enter their User ID and Password where indicated on the login screen and select "Submit."

- Those with an account but who do not know their password select the "Forgot Your Password?" link to generate an e-mail message containing a temporary password and additional instructions.

- Those without an account select the "Create Account" link and follow the three brief steps. In step three of the process, those who wish to participate as peer reviewers of socioeconomic research papers should select "Yes" to the question, Are you willing to be a reviewer for the AANS *Bulletin*?

The manuscript submission process consists of six steps. Selecting the "Next" arrow at the bottom of each page will save the submission to that point. The system is intuitive and includes step-by-step instructions. User tutorials also are accessible from the login page. The "Get Help Now" link at the top right of every page provides 24-hour access Monday through Friday to help online or by telephone.

Submission Requirements

Authors are required to (1) submit a completed copyright release form, one for each author; (2) disclose conflicts of interest; (3) submit a cover letter certifying that the manuscript has been read and approved by all of the authors and that each author believes that the manuscript represents honest work, among other requirements; and (4) provide at least two key words.

Manuscripts must be submitted as Microsoft Word files. Figures, including tables, graphs and charts, must be submitted as separate Microsoft Excel files. Digital photographic images must be submitted at no greater resolution than 150 DPI, and full-size files at 300 DPI will be required if the paper is accepted for publication.

When an article is accepted, an editor will work with the author to finalize the article for publication. Articles will be edited for length, clarity and style, and final copy will be provided for the author's review. Authors are responsible for the content of their articles. Unless specifically stated otherwise, the opinions expressed and statements made in the AANS *Bulletin* are the authors' and do

not imply endorsement by the AANS.

Articles accepted for publication become the property of the AANS and the *Bulletin* unless otherwise stated in a written agreement between the author and the AANS *Bulletin* prior to publication. Two copies of the issue in which the article is published will be provided to the author(s) with thanks for participating in a developing dialogue that advances the specialty of neurological surgery.

Research Papers The AANS *Bulletin* seeks submissions of hypothesis-driven research articles, which are evaluated by the *Bulletin's* peer reviewers, to encourage research into socioeconomic topics related to neurosurgery and to disseminate this valuable information among neurosurgery's decision-makers.

The expectation for length of research articles is between 1,500 and 3,000 words. To facilitate the AANS *Bulletin's* double-blinded peer-review process, a title page must not be included. The manuscript must be submitted with an abstract of 250 words or less. The text of most manuscripts should be divided into Introduction, Materials and Methods, Results, Discussion, and Conclusions. References must be formatted as endnotes, alphabetized by author last name and cited in text parenthetically. See the online instructions for details.

General Articles The AANS *Bulletin* welcomes feature articles, and occasionally articles for specific departments, that are written by neurosurgeons and others who have knowledge of topics that directly affect neurosurgeons and the practice of neurosurgery.

General articles in the AANS *Bulletin* usually are 750 or 1,500 words. Articles published in the AANS *Bulletin* typically are written in the journalistic style of a magazine and lead with a brief introduction that communicates the current significance of the topic or stresses what is current and newsworthy about the subject at hand. A topic sentence that follows the introduction clearly conveys the main idea of the article to the reader and previews what the article will cover. The article's following paragraphs support the main idea expressed in the topic sentence, and assertions are supported by evidence. Resources may be published with the article to assist readers interested in pursuing additional information. See the online instructions for details.

Other Items The *Bulletin* additionally encourages submission of letters to the editor, news briefs and calendar items. These items should be submitted to bulletin@AANS.org. See the online instructions for details. ■

Manda J. Seaver is staff editor of the AANS *Bulletin*, www.aans.org/bulletin.

For More Information

- Couldwell WT: AANS Bulletin's momentum continues: New editor considers peer review, practice survey impact. AANS Bulletin 14(3):16, 2005. Article ID 37080

- Seaver MJ: Bulletin spurs research: Peer-reviewed papers will deepen pool of socioeconomic data. AANS Bulletin 14(3):17, 2005. Article ID 3708

AANS Welcomes 701 New Members in 2006

In 75th Year AANS Membership Exceeds 7,000

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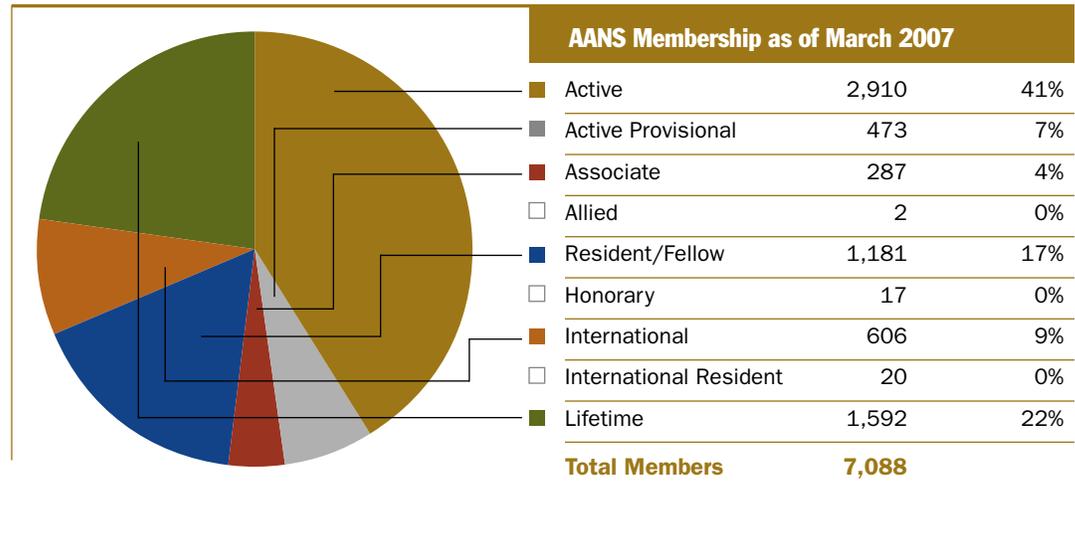
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For more information, contact the Development Coordinator at (847) 378-0535 or tlb@aans.org.



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A Living Monument to AANS and Neurosurgery

Celebrate AANS' Diamond Jubilee April 14–19 in Washington, D.C.

In a city replete with monuments to people and events that shaped U.S. history, the AANS holds its 75th Annual Meeting and 75th anniversary celebration as a living monument to people and events that have shaped both the association and the profession of neurosurgery. Plans are for this very special meeting to be worthy of superlatives, with a core of top-notch science complemented by a festive atmosphere and Washington, a city connected to the AANS by the common threads of honoring the past and aspiring to future advancement.

“The 75th Annual Meeting represents a wonderful opportunity to expand knowledge and celebrate neurosurgery,” stated AANS President Donald O. Quest, MD. “The educational program is outstanding, and the meeting’s increased focus on socioeconomic and governmental affairs complements the Washington location.”

The expanded role for socioeconomic topics at this meeting is one of several new facets this year. In addition to the socioeconomic session on Thursday morning, these sessions will be held each afternoon. Topics include Medicare and its so-called pay for

performance initiatives, neurosurgical emergency care delivery, and patient-centered practices. The Thursday session centers on new paradigms for malpractice reform and includes oral presentations of socioeconomic research.

To enhance the 75th Annual Meeting’s festive atmosphere, the AANS is exhibiting historical photographs from its archives, and a commemorative book will be presented to all medical attendees. The Historical Trivia Contest, online at www.aans.org/annual/2007/TriviaContest.pdf, offers an enjoyable way to participate in the celebration with the possible reward of a portable DVD player complete with a DVD of Harvey Cushing’s two thousandth verified tumor operation.

The “75th” theme continues at the Sunday evening opening reception. The setting is the Smithsonian’s National Air and Space Museum, which boasts an array of flying machines and artifacts in 23 exhibits that trace the rapid developments in aeronautics during the 20th century. The gala event promises to be a memorable evening of food, fun and entertainment and an apt kick-off for the historic meeting. ■

Related Article

■ 75th AANS Annual Meeting: April 14–19, Washington, D.C., President’s Message, page 3.



New Books Honor AANS, Neurosurgery

Two new books honoring the AANS and neurosurgery will be released in conjunction with the AANS' diamond jubilee celebration. Additional information for both books is available from AANS Member Services or the Online Marketplace at www.AANS.org.

The Legacy of Harvey Cushing: Profiles of Patient Care, edited by Aaron Cohen-Gadol, MD, and Dennis D. Spencer, MD, features previously unpublished patient photos (such as the photo at right) and case accounts, including histories as well as operative and other notes, from the Cushing Tumor Registry at Yale University.

"The current generation of neurological surgeons may understand that the roots of their discipline are found in the stories of these patients," writes Dr. Cohen-Gadol in the book's Preface. "This book is a recognition of the Cushing patients for their gift to neurosurgery...In this book, we witness their suffering and we renew our oath to care for our patients with passion and to honor their trust in our hands."

The *History of the American Association of Neurological Surgeons—Seventy-Fifth Anniversary* offers essays on the development and progress of the Harvey Cushing Society, now the AANS, intermingled with photos from the AANS archives (see inset) and a trove of data showcasing people, places and publications throughout AANS history.

The commemorative book is a gift to AANS members. Medical attendees of the 75th AANS Annual Meeting will receive a copy at the meeting with their registration materials. The book additionally is available to AANS members for the cost of shipping.



Mother holding child with cervical meningocele. Harvey Cushing in surgery.

2007 Annual Meeting Program At A Glance

Friday, April 13

Early Registration	5:00 PM–7:00 PM
Tumor Section Biennial Meeting	12:30 PM–5:40 PM

Saturday, April 14

Registration	7:00 AM–5:30 PM
Practical Clinics	8:00 AM–5:00 PM
Tumor Section Biennial Meeting	7:45 AM–5:00 PM

Sunday, April 15

Registration	7:00 AM–6:00 PM
Practical Clinics	8:00 AM–5:00 PM
Opening Reception – National Air and Space Museum	7:00 PM–9:00 PM

Monday, April 16

Registration	6:45 AM–4:00 PM
Breakfast Seminars	7:30 AM–9:30 AM

Exhibits	9:00 AM–4:00 PM
Plenary Session I	9:45 AM–1:00 PM
<i>Rhodon Family Lecture – Lisa Randall, PhD</i>	
<i>Hunt-Wilson Lecture – Eric Kandel, MD</i>	
<i>Cushing Orator – Thomas Friedman</i>	
Lunch/Poster Viewing	1:00 PM–2:00 PM
YNS Lunch Session	1:00 PM–2:00 PM
Scientific and Socioeconomic Sessions	2:45 PM–5:30 PM
<i>Ronald L. Bittner Lecture – Joseph M. Piepmeier, MD</i>	
Joint Annual Business Meeting of the AANS and the American Association of Neurosurgeons	
	5:30 PM–6:30 PM

Tuesday, April 17

Registration	6:45 AM–4:00 PM
Breakfast Seminars	7:30 AM–9:30 AM
Exhibits	9:00 AM–4:00 PM
Plenary Session II	9:45 AM–1:00 PM
<i>Presidential Address – Donald O. Quest, MD</i>	
<i>Louise Eisenhardt Lecture – Sally Ride, PhD</i>	
Lunch/Poster Viewing	1:00 PM–2:00 PM

Section and Socioeconomic Sessions	2:45 PM–5:30 PM
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Wednesday, April 18

Registration	6:45 AM–3:30 PM
Breakfast Seminars	7:30 AM–9:30 AM
Exhibits	9:00 AM–3:30 PM
Plenary Session III	9:45 AM–1:00 PM
<i>Richard C. Schneider Lecture – L. Nelson Hopkins III, MD</i>	
<i>Theodore Kurze Lecture – Michael S. Gazzaniga, PhD</i>	
<i>Van Wagenen Lecture – Johannes Schramm, MD</i>	

Lunch/Poster Viewing	1:00 PM–2:00 PM
Section and Socioeconomic Sessions	2:45 PM–5:30 PM
International Reception	7:00 PM–8:30 PM

Thursday, April 19

Registration	6:45 AM–10:00 AM
Breakfast Seminars	7:00 AM–9:00 AM
Socioeconomic Session	9:00 AM–10:45 AM
Special Scientific Session	10:55 AM–12:30 PM
<i>Neurosurgery with the Masters: In My Experience</i>	

NeurosurgeryPAC

Makes Its Mark in 2006 Elections

GARY M. BLOOMGARDEN, MD, AND KATIE O. ORRICO, JD

More than 30 years ago, the AANS realized that the decisions made by Congress have a profound effect on neurosurgeons, their patients and their practices. For some of the most important issues facing neurosurgeons, including the need for medical liability reform, stabilization of reimbursement rates, pay-for-performance, clarification of emergency on-call requirements and increased research funding, the road leads through Washington, D.C. Like it or not, federal policymakers have a huge impact on how we practice, when we practice, and what we get paid to practice. And this influence is only growing.

To maximize our effectiveness, the AANS added another tool to its advocacy arsenal: a political action committee. Established in August 2005, NeurosurgeryPAC is a nonpartisan political action committee, which does not base its decisions on party affiliation, but instead focuses on the voting records, official positions and campaign pledges of the candidates. Simply put, NeurosurgeryPAC supports candidates for federal office who support neurosurgery's advocacy goals.

Considering that NeurosurgeryPAC was created just over one year in advance of the November 2006 elections, we did fairly well with our limited fundraising efforts. As a result of direct mail, telephone solicitations and personal requests at the AANS Annual Meeting, 404 neurosurgeons contributed \$313,540. Special thanks to those AANS members who made one or more contributions.

On the giving side, the NeurosurgeryPAC Board approved contributions totaling \$184,795.50 to 40 candidates and one leadership PAC, with 87 percent of the funds supporting Republican candidates and 13 percent going to Democratic candidates. These contributions were based solely on the candidates' positions on neurosurgery's priority issues: Medicare reimbursement, medical liability reform and improving access to emergency neurosurgical services. Of the 38 candidates who ran for election or reelection, 29 won their races and nine lost, for a win/loss ratio of 76 percent to 24 percent. One candidate re-

tired and another was not up for reelection in this cycle. Candidates receiving NeurosurgeryPAC support and their election results are shown in the table.

With the Democrats taking over both the U.S. House of Representatives and the Senate, major changes are afoot. Although it is too early to tell what effect these changes will have on physicians, NeurosurgeryPAC will continue to support candidates who embrace neurosurgery's positions on key issues. High priority issues for the 110th Congress including preventing a 10 percent cut in Medicare reimbursement for 2008, passing a permanent fix to the Medicare physician payment formula problem, repealing (or significantly modifying) the quality/pay-for-performance provisions that were included in the Tax Relief and Health Care Act of 2006, and promoting legislation that will improve on-call requirements and access to emergency neurosurgical services. While organized neurosurgery will continue to press for federal medical liability reform legislation, given the makeup of the new Congress, finding a bipartisan solution to this vexing problem will be a challenge—although we will not give up this fight. ■

Gary M. Bloomgarden, MD, is chair of NeurosurgeryPAC. **Katie O. Orrico, JD**, korricoo@neurosurgery.org or (202) 628-2072, is director of the AANS/CNS Washington office. NeurosurgeryPAC, www.aans.org/legislative/aans/neurosurgerypac.asp.

NeurosurgeryPAC-Supported Candidates—November 2006 Election

CANDIDATE	RESULT	CANDIDATE	RESULT
Jon Kyl (R-AZ-Senate)	Won	Fred Upton (R-MI-6)	Won
John Shadegg (R-AZ-4)	Won	Joe Schwarz, MD (R-MI-7)	Lost Primary
J.D. Hayworth (R-AZ-5)	Lost	John Dingell (D-MI-16)	Won
Bill Thomas (R-CA-22)	Retired	Mark Kennedy (R-MN-Senate)	Lost
Xavier Becerra (D-CA-31)	Won	Chip Pickering (R-MS-3)	Won
Nancy Johnson (R-CT-6)	Lost	Roy Blunt (R-MO-7)	Won
Jeff Miller (R-FL-1)	Won	John Ensign (R-NV-Senate)	Won
Dave Weldon, MD (R-FL-15)	Won	Tom Kean (R-NJ-Senate)	Lost
Tom Price, MD (R-GA-6)	Won	Frank Pallone (D-NJ-6)	Won
Charlie Norwood, DDS (R-GA-9)	Won	Jeff Bingaman (D-NM-Senate)	Won
Nathan Deal (R-GA-10)	Won	Sue Myrick (R-NC-9)	Won
Phil Gingrey, MD (R-GA-11)	Won	Earl Pomeroy (D-ND-At-Large)	Won
Mark Kirk (R-IL-10)	Won	Sherrod Brown (D-OH-Senate)	Won
John Shimkus (R-IL-19)	Won	David P. Hunter, MD (D-OK-5)	Lost Primary
Michael Whalen (R-IA-1)	Lost	Rick Santorum (R-PA-Senate)	Lost
Charles Boustany, MD (R-LA-7)	Won	Bart Gordon (D-TN-6)	Won
Olympia Snowe (R-ME-Senate)	Won	Joe Barton (R-TX-6)	Won
Peter Beilenson, MD (D-MD-3)	Lost Primary	Shelley Sekula-Gibbs (R-TX-22)	Won Special
Steny Hoyer (D-MD-5)	Won	Michael Burgess, MD (R-TX-26)	Won
Dave Camp (R-MI-4)	Won	Michael Enzi (R-WY-Senate)	NA

Neurosurgery Locum Tenens

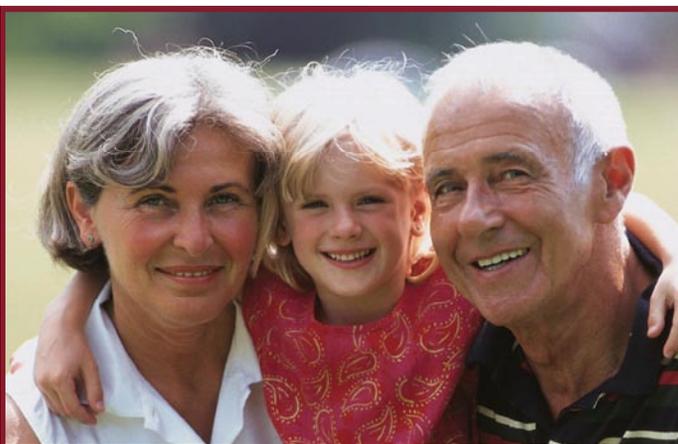
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Five-Year Review Results

Neurosurgery Sees Significant Successes

The five-year review, mandated by Congress, compels the Centers for Medicare and Medicaid Services to examine the physician fee schedule for misvalued procedures in terms of relative value units. This Coding Corner reviews some of the codes that the CMS recommended for analysis as well as those brought forth by the AANS and CNS and reports the outcome of the process.

The CMS brought forward a group of cranial and spinal codes for revaluation. Codes for burr hole drainage of a subdural hematoma, code 61154, and craniotomy for evacuation of a subdural hematoma, code 61312, were resurveyed. While the surveys of 61154 supported the current value, the surveys completed by neurosurgeons for 61312 identified the procedure as undervalued, predominantly as a result of increased postoperative work. As a result, in 2007 there was a modest increase for 61154 to 30.96 RVUs from 28.68 RVUs, and a substantial increase in the value of 61312 to 51.60 RVUs from 45.95 RVUs.

The AANS and CNS brought forward four craniotomy-for-aneurysm codes and two epilepsy codes.

Aneurysm Codes Several years ago when complex aneurysm codes were developed, the codes were valued identically to the simple aneurysm codes. This allowed for a period of volume tracking in order to make accurate assumptions in the budget neutrality adjustment required when one code is split into two codes. The 2005 survey process identified all of the codes as undervalued; consequently, the AANS/CNS Coding and Reimbursement Committee made the strategic decision to bring the codes to the five-year review.

The neurosurgeons completing surveys identified substantive increases in postoperative work for patients with complex

aneurysms. Despite the Relative-Value Update Committee's reticence to assign some intensive care services to the initial postoperative care, the volume and level of postoperative visits increased significantly, supporting higher values. While the value of craniotomy for simple anterior circulation aneurysm, code 61700, decreased modestly to 90.41 RVUs from 91.30 RVUs, the craniotomy for simple posterior circulation aneurysm, code 61702, increased to 97.28 RVUs from 85.21 RVUs. More significant increases were seen in the craniotomy for complex anterior circulation aneurysm, code 61698, to 104.40 RVUs from 91.34 RVUs, and for craniotomy for complex posterior circulation aneurysm, code 61697, to 109.87 RVUs from 87.61 RVUs.

Epilepsy Codes Two codes for craniotomy for temporal lobe epilepsy also were identified as misvalued. Code 61537 for temporal lobectomy without electrocorticography increased to 58.80 RVUs from 46.66 RVUs, while the code for temporal lobectomy with electrocorticography, 61538, increased to 62.55 RVUs from 49.04 RVUs.

Spine Codes The CMS also requested examination of seven spine codes. After mini-surveys were presented in cooperation with the North American Spine Society, thoracic vertebroplasty and posterior nonsegmental instrumentation were recommended and accepted for no change. As a consequence of reduced hospital length of stay, anterior cervical discectomy, code 63075, and anterior cervical arthrodesis, code 22554, were recommended for reduced values. With the budget neutral adjustments, 63075 was revalued at 33.97 RVUs from 36.12 RVUs, while 22554 was revalued at 35.97 RVUs from 35.42 RVUs. As these procedures often are performed together, the net reduction is less than 1 RVU after the -51 multiple procedure modifier is

applied to 63075. It is important to note that the value of 22554 is now higher than that of 63075 and should be coded as the primary service. Lastly, modest increases occurred in posterior lumbar laminectomy, code 63047, to 28.25 RVUs from 27.74 RVUs, and adjacent level laminectomy, code 63048, to 5.77 RVUs from 5.64 RVUs.

E&M Codes Neurosurgeons also may benefit from the nearly complete examination of evaluation and management services, which the primary care coalition identified as undervalued. These E&M codes, comprising office and hospital visits, were last examined 10 years ago. There were some substantial increases in the values of E&M codes for performing office visits and hospital consultations, and some of the budget neutrality adjustment to procedure codes was mitigated by increases in the calculated E&M component of the postoperative global period.

In summary, there were significant successes in this five-year review process. Despite CMS concerns regarding overvalued cranial and spinal codes, only a small reduction was seen in anterior cervical decompression. The values of several codes were reaffirmed, whereas craniotomy codes for subdural evacuation, temporal lobectomy for epilepsy, and aneurysm clipping saw substantial improvements in total value.

On behalf of the Coding and Reimbursement Committee, I personally would like to thank all of the neurosurgeons who participated in the survey process that led to a successful result for all neurosurgeons. We are all greatly indebted in this endeavor to the tireless efforts of RUC advisers John Wilson, MD, and Rick Boop, MD, as well as Cathy Hill in the AANS/CNS Washington office. ■

Gregory J. Przybylski, MD, is chair of the AANS/CNS Coding and Reimbursement Committee and a member of the CMS Practicing Physicians Advisory Council. He also plans and instructs coding courses for the AANS and the North American Spine Society.

For More Information

■ Przybylski, GJ: Five-year-review for Medicare fee schedule. *AANS Bulletin*. 14(1): 22-23, 2005. Article ID 27702

“Sunday School” Lessons: A Ruminantion

Critical Reading Helps Digest Neurosurgical Literature

During my research year at the University of Virginia, with no danger of exceeding the soon-to-be-implemented 80-hour workweek, the tradition was for the laboratory residents to meet at Dr. Jane's house every Sunday at noon, either before or possibly after lunch (I could never tell, since I rarely during my residency saw him eat) to review and discuss a neurosurgical journal in its entirety.

At first “Sunday School” was somewhat time-consuming, necessitating the rapid development of efficiency in quickly reviewing and evaluating the neurosurgical literature. While hardly groundbreaking, I humbly submit some lessons learned at the knee of a master, lessons that since have proven their worth.

What Is the Exact Question Being Asked?

Every research paper should properly start with some sort of question. Otherwise it starts with an answer, and the resulting paper is likely to be biased, since one is likely to attach undue weight to confirmatory evidence while ignoring contradictory evidence. Determining the question is usually self-explanatory, but particularly in complex randomized controlled trials, it may be much more specific than one would first think.

For instance, given the title “Anterior Versus Posterior Fusion for Thoracolumbar Burst Fractures” one might be tempted to assume that the question being asked is simply which approach is better for this type of fracture. However, after further reading, it may be that the actual question is, “In a neurologically intact patient with a thoracolumbar burst fracture of less than 50 percent canal stenosis, is there a benefit to either an anterior or posterior approach?” which can be further shortened



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to, “Does the method of fusion matter in a patient who could, because of the nature of the fracture, have either approach?”

How Important is the Question?

Each subspecialty in neurosurgery has its important and unsolved questions, be it sagittal balance, vasospasm, or gross total resection of gliomas. If the importance of the question is not obvious, the question either is not important or the reader lacks the information to put the paper into its proper context.

Also, is the intervention something that can be generally implemented in practice? If not—because it involves a procedure that requires special skills, technology, unavailable resources, or is just plain clinically impractical—the importance of the paper will be somewhat diminished.

How Well Has the Question Been Answered?

Entire books have been written on this topic. Suffice to say that a double-blind, randomized controlled trial trumps a randomized controlled trial, which in turn is more valid than a case-control trial, case series, and lastly, a case report and review of the literature. As previously noted, however, the scope of either a double-blind RCT or an RCT sometimes can be so narrow as to not be clinically useful.

Other important questions:

- Are the numbers large enough to mini-

mize false positive or false negative errors?

- Is the treatment or intervention standardized in each patient?

- Is the measurement instrument well-known, valid, accurate, and reproducible, and is the effect measured, even if statistically significant, a clinically important effect? For example, given enough patients, a statistically significant difference of 1 point in the Oswestry Disability Index probably could be determined. However, this would not represent a significant difference in terms of how a patient actually feels after back surgery. Also, one should be wary if a paper uses a relatively unknown outcomes measure or statistical test to determine significance.

Are the Figures and References Appropriate?

I learned this lesson the hard way. Figures should be easily understood and readable, and should match what is written in the text. When a statement should be referenced, make sure it is referenced and check to see if the references are actually the seminal, important papers in the subject, rather than obscure papers obviously selected to fit the data or confirm the author's viewpoint.

What Constitutes “Discussion”?

The discussion section rarely makes or breaks a paper but, particularly in more narrowly focused papers, “discussion” should place the current study in its proper context. Additionally, the results should be compared to the current literature, and potential biases and flaws in the paper, noted.

In conclusion, critical, efficient reading of the literature is important during training, when both time and the need to learn and assimilate new information are at a premium. The same skills also serve to improve the quality of one's own research papers. ■

K. Michael Webb, MD, is in practice with Neurosurgical Associates PSC in Lexington, Ky.

Celebrating 25 Years of Research

NREF Donors July 1–Dec. 31, 2006

The Executive Council of the Neurosurgery Research and Education Foundation of the AANS gratefully acknowledges the individuals, groups, corporations and members of the general public who generously supported the NREF between July 1 and Dec. 31, 2006. We thank these donors for continuing to recognize the need for and understanding the importance of providing critical funding for some of the specialty's brightest scientists and their promising neurosurgical investigations. These studies have set a high standard in the neuroscientific community, serving as key indicators of our ability to enhance science and technology, while also improving patient care. The investment these NREF supporters have made in the future of neurosurgery will reap positive rewards: new advances in the areas of brain tumors, strokes, epilepsy, and disorders of the spine. Ultimately, we hope the outcomes of NREF-funded research projects will translate into medical breakthroughs and longevity of life. The AANS members, general public and corporations supporting NREF over the past six months include:

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NREF and Spine Section Announce New Award Opportunity

The AANS/CNS Section on Disorders of the Spine and Peripheral Nerves and the Neurosurgery Research and Education Foundation are pleased to announce the establishment of the new, cosponsored NREF/Spine Section Young Clinician Investigator Award.

Annually, the NREF offers residents and junior neurosurgical faculty members two different grant opportunities: the NREF Research Fellowship and NREF Young Clinician Investigator Award. The Young Clinician Investigator Award supports faculty in the early years of their academic careers, pursuing neurosurgical research in a hospital or university setting.

Applicants for this new, cosponsored spine award must be neurosurgeons who are full-time faculty in North American teaching institutions. The purpose of this award is to fund pilot studies that will yield data to be used to strengthen applications for longer-duration funding from other sources. The research application

must be in the area of spinal cord, vertebral column or peripheral nerve disorders.

“In recognition of the reality that spinal care and spinal surgery are a major component of most neurosurgeons’ practices, the section has always considered opportunities to expand research and knowledge in this field,” said Charles F. Branch Jr., MD, chair of the Spine Section. “Partnership with the NREF to establish a YCI award in the field of spinal care facilitates the pursuit of this goal and adds value not just to neurosurgery, but to the entire universe of spine care.”

The NREF’s Scientific Advisory Committee will review and score the applications, as part of the overall NREF grant review process. “The NREF is pleased to join in this partnership with the Section on Disorders of the Spine and Peripheral Nerves,” said Martin H. Weiss, MD, FACS, chair of the NREF Executive Council. “We anticipate great interest in this cosponsored award, not only this year, but for many years to come.”

The first NREF/Spine Section Young Clinician Investigator awardee is Jason Huang, MD. ■

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2007 Van Wagenen Fellowship Awardee Selected The Van Wagenen Fellowship and Van Wagenen Selection committees announce that James C. Miller, MD, of Indiana University has been awarded the 2007 William P. Van Wagenen Fellowship. As the 2007 Van Wagenen Fellow, Dr. Miller will travel to Germany to study with Michael Weller, MD, at the University of Tubingen. Through this fellowship, Dr. Miller will continue his research in neuro-oncology. He will study antitumor immunity involving CD70/CD27 interactions, and evaluate the antagonism of the immunosuppressive molecule transforming growth factor (TFG)-B with the agent SD-208. Training will begin July 1, 2007, and will be completed within the 12-month period of the grant. Awarded annually, the William P. Van Wagenen Fellowship is offered for postresidency study in a foreign country for a period of 12 months. The award stipend for this fellowship is \$60,000 with an additional \$6,000 available for family travel expenses and \$15,000 of research support available to the laboratory sponsoring the Van Wagenen Fellow. Additional information is available at www.aans.org/research/fellowship/aans.asp or from the AANS at (847) 378-0500.

Kyphon Inc. Matches NREF Donations 100 Percent to \$25,000 The Neurosurgery Research and Education Foundation, in partnership with Kyphon Inc., announces the renewal of the Kyphon Challenge Grant for 2007. Beginning in March, Kyphon Inc. will match 100 percent of all donations to the NREF in 2007 up to \$25,000. Donors can renew and increase previous donations or give for the first time online at www.aans.org/research/make/donation.asp.

AMA, AANS and CNS to Conduct Physician Practice Information Survey The American Medical Association, with the support of the American Association of Neurological Surgeons, the Congress of Neurological Surgeons and more than 60 other medical specialty societies, will begin conducting a multispecialty survey of America's physician practices beginning in 2007. The purpose of the survey is to collect up-to-date information on physician practice characteristics in order to develop and redefine AMA, AANS and CNS policy. Data related to professional practice expenses will also be collected. The AMA, AANS and CNS will survey thousands of physicians over

the year from virtually all physician specialties to ensure accurate and fair representation for all physicians and their patients. During 2007, neurosurgeons may be contacted by the Gallup Organization to participate in this study. The AMA, AANS and CNS encourage participation in this survey as the data obtained will be a critical source of information. Those called upon to participate in the survey are asked to complete it in a thorough and accurate manner so that the information collected will represent the concerns of participants and their patients to national policymakers.

Neurosurgical Patient Stories Sought To help educate the public about the role of the neurosurgeon in treating a wide range of medical conditions and diseases, the AANS is soliciting personal accounts of patient experiences with neurosurgery. Patients themselves, parents on behalf of their children, and family members on behalf of immediate relatives may submit their stories using the online form at www.neurosurgerytoday.org/what/patientstory. Patients whose stories are published will receive a small honorarium as a token of appreciation. Previously published stories can be viewed at www.neurosurgerytoday.org/what/neurosurgical_patient_stories.asp.

AANS Releases Two Position Statements

*Complete Text: www.AANS.org,
Article ID 43088, 43527*

One Suggested Evaluation Process for Neurosurgeons' Return to Work after Neurological Injury

Individuals who sustain a new neurological injury should avail themselves of appropriate medical assessment of their condition prior to returning to the practice of neurosurgery in the interest of ensuring patient safety and competence to practice.

Sympathectomy for Hyperhidrosis Position Statement

Endoscopic sympathectomy is safe and highly effective for providing a permanent cure for palmar and axillary hyperhidrosis. These disorders impair the function and activities of daily living of affected individuals. Insurance reimbursement for this procedure is appropriate and justified.

Strategic and Tactical Planning

Risk of Advancement Outweighs Any Plan Not to Fail

The turning point in my career came with the realization that Black should play to win instead of just steering for equality. —BOBBY FISCHER

Whether you're a chess devotee or just once knew the moves, regardless of whether your knowledge of the 1972 "Match of the Century" between then-World Champion Boris Spassky and the eccentric American challenger Bobby Fischer in Reykjavic, Iceland, is from 34-year memory or only hearing it spoken of, no matter if you view Fischer as hero, demon, or merely an unstable genius, his quotations over the decades are legendary.

Infuriating, intelligent, polarizing, divisive—they can be all those. But dismissing Fischer's chess quotes out of hand ignores the ability they have to instruct in arenas well beyond the 64-square cauldron that forged them.

This Fischer quote is one of my favorites. It appears often in the present, history books are filled with examples of how it affected the past, and its lessons are arguably most crucial in how they can be applied in the future.

In venues of organizational management, the quote has relevance far beneath its surface. It cuts to a subtle nuance of strategic vision that is constantly reaffirmed in successful institutions.

In too many instances, organizations aim their strategic sights merely at "equality"—setting their goals of reputation, service, innovation and mission on the target of maintaining status quo. Duplicating previous levels of achievement is mistaken as success, and sacrificing organizational identity to maintain calm is viewed as wisdom.

At first glance, who would argue with that no-risk vision? Maintaining status quo offers safety, cooperation, peaceful coexistence and self-satisfaction—as well as a swarm of debilitating illusions.

For one thing, settling for indistinct equality siphons off an organization's most



*Thomas A. Marshall
is AANS
executive director.*

critical fuel: motivation to grow. There is a "gravitational pull" on systems that merely tread water in an ocean of sameness, and that undertow is often invisible. The cost of resources spent to maintain "status quo" rises annually, while revenue that should be reinvested into services for members diminishes as it is required to absorb operational shortfalls.

When an organization changes its strategic mentality to achieve increasing degrees of excellence, however, it establishes a mindset of vigorous growth and instills vibrancy in its constituents. Significantly, the dollars available after meeting operational costs are then increasingly reinvested to expand programs that are meaningful and innovative.

Moreover, robust organizations that strive for this type of prominence underscore a critical distinction: They understand the subtle difference between collaboration and independence.

Organizations should collaborate. Partnerships can be mutually advantageous, realize beneficial economies of scale, and create systems evolutions for the partners that might not occur independently.

But the more advanced, developed and diverse the individual collaborators are, the better the joint outcomes of their combined efforts. All partners should have compatibly diverse resources to achieve the most satisfying outcomes. And the momentum born of organizations establishing their own definition of "winning" fuels the strength of the collaboration. Truly successful partnerships are most often realized

by organizations that have already identified their own independent potential.

Once the AANS secured its financial foundation and redefined methods of accurately identifying its members' needs, it moved from a "new year/same service" mentality to a robust system of producing the new services members were demanding.

In Fischer's terms, the victory the AANS was playing for was not over external organizations. The opponent was its own historical mindset that numbed attentiveness to innovative planning in serving its members' increasingly complex needs.

By any measure, this change of organizational mindset was clearly the modern turning point of the AANS' "career." The intrinsic planning processes now in place within AANS assure reinvesting annual successes, rather than merely "equaling" past, outdated benchmarks.

AANS members' comprehensive needs are now more directly embedded into its organizational culture than ever before. This was an intentional strategy, implemented by successive years of AANS leaders who determined that merely achieving historical equality was no longer satisfactory.

No organization, management, or decision-maker should allow the loftiness of a goal to obscure the fact that errors of commission can and likely will be made. But the error of planning not to fail is without question more fossilizing than the risk of advancement. Any organization is stifled by lack of momentum and rigidness to antiquated expectations. When that occurs within service providers, innovation and quality are the first casualties of repetition and complacency.

AANS' governance functions assure that your voice as a member will always be the momentum that drives the association forward. That your needs are now intrinsic in our strategic and tactical planning may be the most valuable benefit of the AANS' change in how it plays the Black pieces. ■

Inspirations and

The AANS 75th anniversary celebration culminates during the 75th AANS Annual Meeting April 14–19 in Washington, D.C. In recognition that the history of modern neurosurgery closely parallels that of the AANS, during the past year neurosurgeons have taken the opportunity to record influential circumstances and individuals that affected their careers. Their accounts, published in the pages of the *AANS Bulletin*, record for posterity the moments of inspiration, challenges to personal fortitude, and the people who have carried and are carrying the profession forward.

While today the idea of clipping a cerebral aneurysm without a microscope—a procedure Dr. Mohr recounts in this issue—might cause discomfort for some, 75 years hence others may find it odd that residents once worked until their attendings decided the day's job was done, or that in 2006 women were just starting to enter neurosurgery in numbers.



Cushing drawing, circa 1900

One truth that seems unchanged in 75 years is the importance of personal and professional mentors to the profession. The father of neurosurgery himself, Harvey Cushing, considered pursuing chemistry or architecture before settling on medicine. In his biography of Cushing, John Fulton reports that Cushing was greatly affected by a talk on the art and science of medicine given by Bryson Delavan in 1891: “I well remember the informal talk you

gave...on the medical career,” Cushing wrote to Delavan in 1939. “At that time I was disposed to take up architecture and indeed was making vague plans with Grosvenor Atterbury to open an office in New York with him....” Cushing and Atterbury did work together years later to create what became the Harvey Cushing/John Hay Whitney Medical Library at Yale.

In the early 20th century Harvey Cushing told young doctors, “There is no profession in which such surprises are more likely to happen than in that you are entering, no profession which offers greater opportunities for development of character, provided you will consecrate your lives unselfishly to your tasks as others you would wish to emulate have done before you.” Today he might borrow a phrase from popular culture and simply say, “Pay it forward.”

Passion Counts

I never intended to be a neurosurgeon. It was purely accidental that I even did a neurosurgery rotation. However, during my first week of clinical work, I was assigned to a busy neurosurgery service instead of neurology, and my challenging journey to become a neurosurgeon began. I could not have experienced success on this voyage without the help of others.

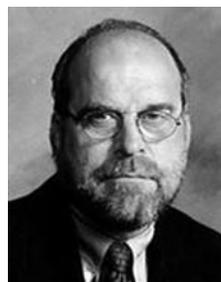


Deborah L. Benzil, MD

First, I recognize my grandmother, who unflinchingly supported my drive to enter neurosurgery when few others did. In her uniquely insightful way, she said, “Debbie, it is better to work 80 hours a week at something you love than 40 hours a week at something you hate.” My challenges were undersized compared to the struggles in her life, but she taught me that passion is what matters most; you must love what you do in life.

My husband and children have also provided unwavering love and support. During my residency, I married and had two children (not missing a single call) while receiving a grant, doing more than 1,200 cases, and landing an academic appointment. My marriage is 20 years strong, my children will soon leave for college; we remain a close family despite my demanding career.

There were neurosurgeons who motivated, taught, and encouraged me. The first was Ernesto Botero, the chief resident where I did my first neurosurgery rotation. His passion and skill for neurosurgery were noteworthy. He had the confidence to stand aside while I performed my first lumbar puncture, and a week later he took me through a craniotomy. Others I credit are my close colleagues in



Ernesto Botero, MD

Women in Neurosurgery; Neville Knuckey, for his dedication to teaching and meticulous patient care; Christer Lindquist, for the finer points about Gamma Knife, arteriovenous malformations, and much more; Arno Fried, for boosting my confidence in the technical aspects of neurosurgery; William Couldwell, my strongest academic chair; and Ed Benzil, my philosophical soul mate.

Beating the odds, becoming one of the early women neurosurgeons, was an arduous challenge. My passion for neurosurgery and the passionate commitment of these notable individuals made the unlikely happen.

—Deborah L. Benzil, MD, Hartsdale, N.Y.

Epiphanies

Pioneering Neurosurgeon an Inspiration

Upon entering medical school, age 17, at the University of Strasbourg, I was attracted by neuropsychiatry. During my third year as an “externe” in 1965, I rotated through the neurosurgery service, still part of general surgery at “Clinique Chirurgicale B.” The first case was a craniotomy for epidural hematoma on a priest who fell from a hay wagon at a summer camp; his recuperation from the initial “coning” was spectacular. The neurosurgeon, Prof. Demeter Philippides, was impressive. Originally from Thessalia (Greece), he completed medical school in 1929 in Leipzig, Germany, and became a general surgeon under the renowned Prof. Martin Kirschner in Tübingen.

Prof. Philippides obtained special neurosurgical training under Tonnin in Berlin and during WW II moved to Strasbourg, France, where he stayed after the liberation, establishing the first organized neurosurgery. He was obliged to sit the French “Baccalaureat” and to repeat his entire medical school, finally completing another doctoral thesis in 1959.

I attended his first anterior cervical corpectomy with tibial bone graft for spinal fracture. I sometimes had to get up early for the “ice bath” of patients undergoing deep hypothermia for cerebral aneurysms, clipped at that time without microscope. I also witnessed retro-gasserian neurotomies in sitting position under local anesthesia through a small subtemporal craniectomy (Spiller-Frazier procedure). We used to be in the OR until 1:30 p.m., and after a quick lunch we started pneumograms, carotid angiograms, myelograms, then went on rounds. I rotated again as “interne” on his service in 1968 at Pavillon Clovis Vincent. As the junior member of the team, I occasionally had to confirm the thermocoagulation with a stethoscope on the patient’s head during stereotactic operations done with the Riechert frame.



Strasbourg, France

Prof. Philippides was a brilliant pioneering neurosurgeon and a hardworking physician. As a teacher, he was rather intimidating, yet his example was remarkable, and I will forever be grateful to him for inspiring my passion for neurosurgery.

—Gerard Mohr, MD, FRCS(C), Montreal, Canada

Search for the Elusive 2 Percent

I started medical school without any fixed specialty interest but figured I probably would end up in internal medicine. Small problem: I didn’t like cardiac, gastrointestinal or pulmonary physiology. Fortunately, at the University of Michigan there was a two-year interdisciplinary course called Neuro-Behavioral Science, and I fell in love with it. It was so orderly, and the logic of clinical diagnosis fascinated me. From then on, the decision was narrowed to neurology, pediatric neurology or neurosurgery.



Alexa Canady, MD



Shelley Chou, MD

It was in Shelley Chou’s clinic that I learned what a thoughtful neurosurgeon is. A young man who had fractured his aorta wrestling and had become paralyzed came in two years after the event to see if something could be done. My response was no, because it had been two years. Dr. Chou was more thoughtful and insisted that we figure out why he was paralyzed before we even thought of giving him an answer. He spent 30 minutes analyzing all the possibilities

and in the end concluded that we could do nothing, but he had taught me that the process is more important than the answer and that 98 percent of the time you can skip the process, but in doing so you will miss that 2 percent of cases where you might identify a way to help. That afternoon, he made me want to be like him and search for that 2 percent that distinguishes an excellent physician from a good one.

Today, the most fun cases still are the very complicated ones with long histories where you curl up in the corner of the ICU for hours poring over old charts and papers and figure out some small details that allow you to crack the case. The excitement of that discovery never dulls. It keeps you coming back for more.

—Alexa Canady, MD, Pensacola, Fla.

Continued on next page

Inspirations

Continued from page 35

I Wanted to Do What He Did

It was my first time in the operating room. My 32-year-old patient, a bright and articulate Washington, D.C., lawyer had been a rising star in his profession until just the previous week, when he slurred his words in court. Since then, his entire life had changed. Here he was, six days later, under anesthesia for a craniotomy to remove the tumor that had been discovered.



Gail Rosseau, MD

I watched transfixed as the professor and chairman of the neurosurgery department, Hugo Rizzoli, assuredly performed all the moves that are now so familiar to me: incision, bone flap, opening the dura, adjusting the microscope. The surgeon's skill, his deft use of simple cottonoids and fine microinstruments, his command of the anatomy and his confidence appealed to me as no other activity I had ever observed. The decision was simple, immediate and crystal clear. I wanted to do what he did.



Hugo Rizzoli, MD

And, 25 years later, I still do. I love to plan operations, perform operations, discuss operations. I love being the one who first gets to share the good news with the patient's family, as well as helping to bear the bad news. Along the way I have been inspired by patients' stories and their courage: helping a man with a spinal cord ependymoma walk for the first time after surgery, fighting back tears as both mother and grandmother describe how they feel about being completely well while the

23-year-old young woman with glioblastoma slips away before their eyes, and seeing the dramatic change over time in the appearance of a young woman cured of acromegaly.

We learn medicine patient-by-patient, and we learn surgery mentor-by-mentor. If it is an intensely personal thing to put your hands inside another as a surgeon, it is also intensely personal to train or be trained by another. Hippocrates likened the intimate

“The surgeon's skill, his deft use of simple cottonoids and fine microinstruments, his command of the anatomy and his confidence appealed to me as no other activity I had ever observed. The decision was simple, immediate and crystal clear. I wanted to do what he did.”

relationship between doctor and apprentice to that between father and son.

While the number of those to whom I am forever grateful is far too long to list here, there are some whose daily influence upon my life and my practice for over two decades must be mentioned: Hugo Rizzoli, for the inspiration; Ed Laws, for the uncompromising insistence on excellence in patient care and the responsibility to give back; Jeff Jacobson, Ed Engle and Harvey Ammerman, for how to treat patients and staff kindly while remaining firmly in charge; Norman Horwitz, for an appreciation of history; Peter Jannetta and Laligam Sekhar, for creativity and innovation; and all my fellow residents, for teaching a girl with only sisters how to get along in what had traditionally been a man's profession. Other than my immediate family, no one ever has or ever will influence me more.

—Gail Rosseau, MD, Chicago, Ill.

Fascinating Problems to Solve

I wanted to be a physician from a very young age, with much encouragement from my parents. My father, a research biochemist, fostered my interest in science and learning. Medical school was a foregone conclusion, but my direction in medicine began during the summer awaiting entrance. I religiously watched reruns of Ben Casey, the dashing young neurosurgery chief resident of the 1960s. I was fascinated by the program's content, and thus began the trek during medical school to explore the amazing world of neurosurgery. After two summers of neuroscience research, the last at the National Institutes of Health in the neural transplantation laboratory, where I witnessed the living brain for the first time, my decision was made.



Jamie S. Ullman, MD

Unfortunately, I did not match in neurosurgery during my last year of medical school. After the initial devastation, “Plan B” brought me to Mount Sinai Medical Center in New York as a surgical intern. A September rotation on the neurosurgical service of the trauma affiliate sealed my destiny. My senior resident,



Leonard Malis, MD

Kathryn Ko, was one of three women in the program. The Mount Sinai Department of Neurosurgery, under the chairmanship of the legendary Leonard Malis (and subsequently Kalmon Post), possessed an open-door policy to women compared to other institutions that I had seen. I will always be grateful to Dr. Malis for accepting me into the residency program, the only one I listed, during that internship year. I am also grateful for Dr. Post's encouragement and mentorship throughout my residency and beyond.

Today, I am a faculty member of the Mount Sinai School of Medicine and the director of neurosurgery at the same neurotrauma af-

filiate where I started. My experience as a neurosurgeon has been full of the ups and downs inherent to our patient responsibilities. Anyone considering entrance into the discipline should know that it not as glamorous as the general public thinks. However, I love the fact that each day brings a variety of fascinating problems to solve in the OR and at the bedside. Also, participating in resident education and watching each resident evolve is extremely gratifying. Quite simply, if I can positively affect at least one life at the end of the day, it will have been worth the long road to get here.

—*Jamie S. Ullman, MD, Elmhurst, N.Y.*

Support of Mentors a Source of Strength

My experience as an ER nurse had directed my interest toward orthopedics. That is until late one evening when, as fate would have it, a young boy was admitted with a malfunctioning shunt. He was scheduled for surgery the following morning but died that night. I witnessed the autopsy where the ventriculojugular shunt was found occluded by a thin membrane. He was a charming youngster, top of his class, defeated by a small plug of tissue. Something inside me said, “That isn’t right.”

Almost two years later I met with William Collins to discuss applying for a neurosurgery residency at Yale. I was the first woman to apply, so he made the following proposal: Do the laboratory year first, attend rounds, cover for vacationing house staff and then a decision would be made. I was struck by his honesty and openness. He remained a strong support throughout my career. Indeed it was the remembrance of the camaraderie of residency and the support of mentors along the way that were a source of strength when I later encountered instances of the undisguised bias of peers because of my sex. My only real regret is that for medical reasons I was forced to retire early from the profession I loved.

—*Joan Venes, MD, Auburn, Calif.*



Joan Venes, MD



William Collins, MD

“I was struck by his honesty and openness. He remained a strong support throughout my career. Indeed it was the remembrance of the camaraderie of residency and the support of mentors along the way that were a source of strength when I later encountered instances of the undisguised bias of peers because of my sex.”

“Anyone considering entrance into the discipline should know that it not as glamorous as the general public thinks. However, I love the fact that each day brings a variety of fascinating problems to solve in the OR and at the bedside.”

Just One of the Guys

When I was a child growing up in Tehran, Iran, the way my mother, my whole family, and neighbors reacted with respect when someone mentioned the local family physician imprinted on my young mind the idea of becoming a doctor. When I finished high school, I competed with several thousand other students for top scores on the university entrance exam, hoping for a spot in medical school. There were only two major universities in Iran at the time, one in Tehran and the other in Shiraz. Medical school in Iran included a straight seven years of premedical and medical studies together, with the internship served in the final year. The top 200 candidates would be selected for medicine, the next 50 for pharmacology, and the next 40 for dentistry.

I managed to get into medical school, and my interest in neurosurgery started in the third year, when I became consumed with neuroanatomy and neurophysiology. I knew that to get into a good U.S. neurosurgery program, I would need to start in straight surgery in a very respectable hospital. After a year in general surgery, I was lucky enough to get into the New York University neurosurgery program under Joseph Ransohoff.



Joseph Ransohoff, MD

The program was brutal. There were times when I was on call two nights in a row in addition to daily responsibilities. As if the specialty itself were not challenging and demanding enough, Dr. Ransohoff’s program demanded even more.

As a foreign graduate, I had a very thick accent. I will never forget that one day after I had presented a case, Dr. Ransohoff took me aside and said, “Yaz, you still sound like a goddamn foreigner. Go to Berlitz and improve your English.” I was not offended at all because he was right. Now, of course, he has left us and I miss him. I have been in practice now for 36 years and am proud to be just one of the guys.

—*David A. Yazdan, MD, Brick, N.J.*

TIMELINE: NeurosurgeryThroughHistory

Pediatric Neurosurgery: New Kid on the Block

MICHAEL SCHULDER, MD

was taught as a resident that “adults may be big kids, but kids ain’t little adults.” Medicine is an ancient art, but pediatrics, the art of caring for the young, is a young branch of medicine. From antiquity onward, physicians understood that children were subject to different diseases than adults, and treatises on children’s care were written by Roman, Arab, and Renaissance European physicians. However, premodern doctors usually were reluctant to care for sick children, who “give no other light into the knowledge of their diseases than what we are able to discover from their uneasy cries and the uncertain tokens of their crossness,” as Walter Harris noted in *Acute Disease in Infancy*, published in 1689.

The emergence of scientific medicine in the 19th century was accompanied by an interest in improving public health. Increasing urbanization worked to increase infant and childhood mortality, because of overcrowding, unsanitary living conditions, and the adulteration of food and cow milk. Children above all bore the brunt of these problems, and their distinct needs began to be addressed by the increasingly organized field of medicine. In 1858, the German-educated American physician Abraham Jacobi coined the term “pediatrics,” and this specialty was officially born.

Neurological surgery itself, barely 100 years old, is even younger as a discipline. The early brain surgeons operated on children as well as adults. This included Harvey Cushing, who recognized the preponderance of posterior fossa tumors in children, and who described the clinical syndromes associated with these lesions. Pediatric neurosurgery was born out of this experience in 1929 when Cushing sent Franc Ingraham to take charge of his practice at the Boston Children’s Hospital. It would take another

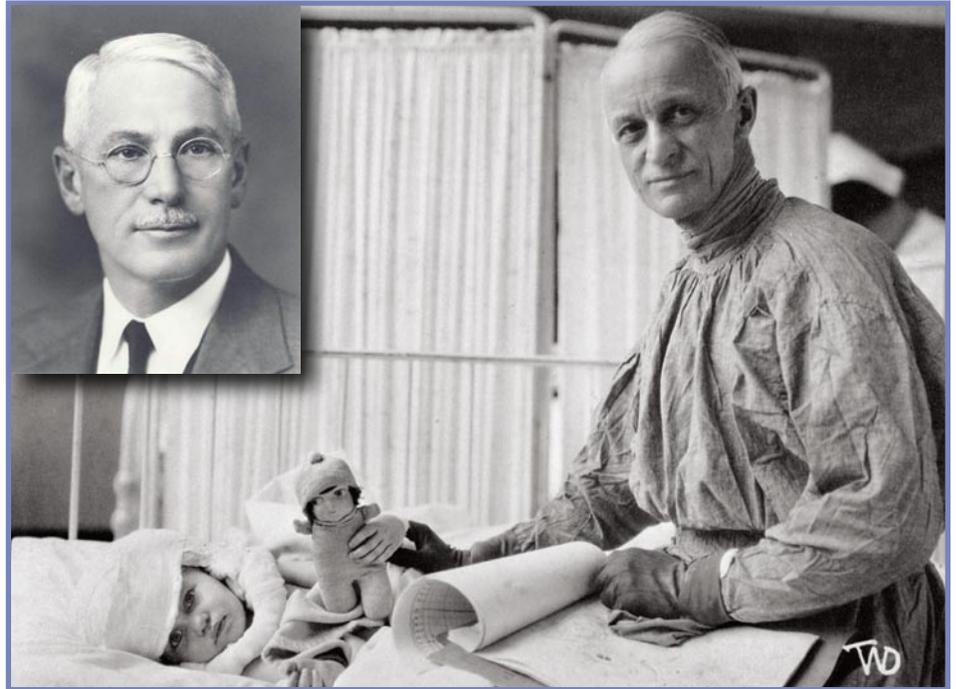


Photo Credit: Walter W. Boyd – Yale, Cushing / Whitney Historical Library

40 years before a pediatric neurosurgical meeting was organized by Ken Shulman. The Cushing photo is from the forthcoming book “The Legacy of Harvey Cushing: Profiles of Patient Care,” edited by Aaron Cohen-Gadol, MD, MSc, and Dennis Spencer, MD, and published by the AANS and Thieme.

40 years before a pediatric neurosurgical meeting was organized by Ken Shulman.

The first fellowship in pediatric neurosurgery was at the Toronto Hospital for Sick Children, starting in 1972. At this time, not very long ago, there were few neurosurgeons dedicated to caring for children. Many department chairmen scoffed at the idea, but in 1978 the American Society for Pediatric Neurosurgery was founded. Much of the society’s attention in its early years was devoted to discussion of “enforcement”—who should do pediatric cases, and what exactly was the scope of practice of a pediatric neurosurgeon, a question that perhaps remains unresolved.

Should only pediatric neurosurgeons operate on children? Should pediatric neurosurgeons operate only on children? As Larry Page wrote, “A pediatric neurosurgeon is difficult to define, but easy to identify.” They are neurosurgeons who understand that the kids for whom they care ain’t little adults. ■

Michael Schulder, MD, is professor and vice chair in the Department of Neurological Surgery at New Jersey Medical School in Newark.

What if the Cure Is Worse Than the Disease?

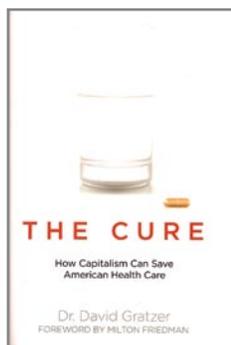
New Book Says Healthcare System Needs Bigger Dose of Capitalism

David Gratzner, a psychiatrist with a Canadian background, is a senior fellow at the Manhattan Institute for Policy Research. His economic hero, the late Milton Friedman, wrote the foreword to this book. If you listen to talk radio, you've probably heard Dr. Gratzner expressing his cure for the American healthcare system. He fervently believes that the answer to our present healthcare mess is a free market economy.

This book presents a three-part vision for revolutionary change of the U.S. healthcare system. First of all, healthcare must be individual; secondly, the FDA must be reformed and downsized; and thirdly, today's workers must be allowed to save for the healthcare expenses of their elderly years.

We've Done Everything Wrong

Dr. Gratzner documents well our past failures and supplies the history of how our present system evolved. His conclusions: We have done everything wrong. Giving choice to government and corporate bureaucrats has robbed patients of choice and flouted the laws of basic economics. Modern American healthcare, which began only six decades ago, is an accidental system that largely arose from a fluke tax ruling during World War II. That's when our employer-based health insurance system began, a system which does not tax employers on employee health insurance costs. This employer-based system has robbed individuals of choice and sent costs spiraling into the stratosphere. To this point, four decades of attempted reform have been disastrous. Every federal law passed has had unintended consequences. Federal meddling has led to rationing and price controls.



The Cure: How Capitalism Can Save American Health Care,

David Gratzner, MD, 2006, Encounter Books, New York, 233 pp., \$25.95.

Dr. Gratzner does not believe that there are 46 million Americans on any given day without health insurance. He thinks that 93 percent of Americans either have insurance or have ready access to insurance and that the government's efforts to help the remaining 7 percent of people are deeply misguided. His documentation of his statistics is footnoted as a story told him by a colleague.

Healthcare costs have escalated because state governments require so many things to be covered. As a result he recommends a national market for health insurance and just state voucher programs for dealing with the uninsured. He believes that Medicaid is a failed experiment that should go the way of other federal welfare programs.

The Medicare Disaster

Medicare is also a disaster that must be reformed. If you have never been an admirer of Rep. Wilbur Mills, you will enjoy Gratzner's ridicule of this former chair of the House Ways and Means Committee and the father of Medicare. The problem with Medicare, says Gratzner, is that it is inadequate, inefficient, inequitable, and insolvent. Combine

these four I's with poor physician participation, regulatory excess, and uneven service and you have a program that needs to be junked. Gratzner's solution is to immediately replace Medicare with a system like the Federal Employees Health Benefits program that would give older Americans choice, competition and minimal regulation. He also does not think anyone under 70 needs to be covered by such a system.

Because pharmaceuticals are costing so much, this part of healthcare also needs reform. The FDA is identified as the problem because it takes too long to approve new drugs. The solution is to get rid of hungry trial lawyers and Washington bureaucrats, make the approval process for pharmaceuticals quick, just evaluate safety (don't worry about whether a drug does any good) and the result will be more and cheaper drugs produced.

Learn From Others' Mistakes

We can learn from mistakes made by Dr. Gratzner's home country where rationing is draconian and patients in need of healthcare have to travel to the United States. Although he deplores a single-payer system, Gratzner believes that the European-style mix of government and private universal healthcare is no better; all healthcare systems except ours are anti-innovation.

His prescription for America: By making health insurance an individual responsibility, employment will be taken out of the equation and insurance made truly portable. By allowing individuals to direct their own healthcare and by promoting health savings accounts, healthcare in the United States can be saved. Bring competition back to American healthcare.

Dr. Gratzner closes this book with these words. "Capitalism is not the cause of America's healthcare problems. It is the Cure."

And if you believe this, I've got this great piece of property in Colorado for sale. ■

Gary Vander Ark, MD, is clinical professor of neurosurgery at the University of Colorado Health Sciences Center. He is the 2001 recipient of the AANS Humanitarian Award.



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E V E N T S

Calendar of Neurosurgical Events

2007 AANS/CNS Section on Tumors Seventh Biennial Satellite Symposium⁺

April 13–14, 2007
Washington, D.C.
www.tumorsection.org

75th Annual Meeting of the American Association of Neurological Surgeons (AANS)

April 14–19, 2007
Washington, D.C.
www.AANS.org

UCLA Shaped Beam Radiosurgery Tutorial Course (Basic)

April 24–25, 2007
Los Angeles, Calif.
[www.neurosurgery.ucla.edu/
conferences](http://www.neurosurgery.ucla.edu/conferences)

4th Low Back Pain Symposium

April 30–May 3, 2007
Bodrum, Turkey
www.vitalmedbodrum.com

LEVY Visiting Professorship

May 2, 2007
Shreveport, La.
www.universityneurosurgery.com

Skull Base Surgery—Multimodality Management⁺

May 2–5, 2007
Prague, Czech Republic
www.esbs2007.com

8th Congress of the European Skull Base Society

May 3–5, 2007
Prague, Czech Republic
www.esbs2007.com

19th Annual International Bethesda Spine & Peripheral Nerve Workshop⁺

May 4–10, 2007
Bethesda, Md.
www.bethesdaspine.com

2007 Society of Neurological Surgeons Annual Meeting⁺

May 6–8, 2007
San Francisco, Calif.
www.societyns.org

Principles and Practice of Gamma Knife Radiosurgery⁺

May 14–18, 2007
Pittsburgh, Pa.
[www.neurosurgery.pitt.edu/
training/gamma_knife.html](http://www.neurosurgery.pitt.edu/training/gamma_knife.html)

ABNS Oral Board Exam

May 22–26, 2007
Houston, Texas
www.abns.org

2nd Biennial International Vocational Outcomes in Traumatic Brain Injury Conference

May 24–26, 2007
Vancouver, Canada
www.tbicvancouver.com

Neurosurgical Society of America Annual Meeting⁺

June 3–6, 2007
Kohler, Wis.
www.neurosurgicalsociety.com

Gamma Knife Radiosurgery Training Program⁺

June 4–8, 2007
Cleveland, Ohio
[http://cms.clevelandclinic.org/
neuroscience/body.cfm?id=727](http://cms.clevelandclinic.org/neuroscience/body.cfm?id=727)

Complications of Spine Operations⁺

June 9–10, 2007
Rosemont, Ill.
(312) 670-2550

UCLA Shaped Beam Radiosurgery Tutorial Course (Basic)

June 12–13, 2007
Los Angeles, Calif.
[www.neurosurgery.ucla.edu/
conferences](http://www.neurosurgery.ucla.edu/conferences)

42nd Annual Meeting of the Rocky Mountain Neurosurgical Society⁺

June 16–20, 2007
Jackson Hole, Wyo.
[www.rmns.org/meetings/2007/
annmtg_07.asp](http://www.rmns.org/meetings/2007/annmtg_07.asp)

Michigan Association of Neurological Surgeons

June 22–24, 2007
Mackinac Island, Mich.
(248) 440-2162

8th Biennial Congress of the International Stereotactic Radiosurgery Society

June 23–27, 2007
San Francisco, Calif.
www.isrs2007.org

Computed Assisted Radiology & Surgery—21st International Congress & Exhibition

June 27–30, 2007
Berlin, Germany
www.cars-int.org

11th Annual Conference of the International Society for Computer-Aided Surgery and 13th Computed Maxillofacial Imaging Congress

June 27–30, 2007
Berlin, Germany
www.cars-int.org

Pennsylvania Neurosurgical Society Annual Scientific Meeting

July 27–28, 2007
Hershey, Pa.
(717) 558-7850

⁺These meetings are jointly sponsored or cosponsored by the AANS. The frequently updated, comprehensive Meetings Calendar and continuing medical education information are available at www.aans.org/education.

AANS Courses

For information or to register, call (888) 566-AANS or visit www.aans.org/education.

- **Managing Coding and Reimbursement Challenges in Neurosurgery**
*Coding for Pros requires attendees to have taken a coding course within the past three years.
June 29–30, 2007* Chicago, Ill.
Aug. 24–25, 2007* Charleston, S.C.
Sept. 7–8, 2007 Las Vegas, Nev.
- **Practice “Check-up”: Is Your Practice Running Optimally?**
July 1, 2007 Chicago, Ill.
- **Goodman Oral Board Preparation: Neurosurgery Review by Case Management**
May 20–22, 2007 Houston, Texas
Nov. 4–6, 2007 Houston, Texas
- **Neurosurgeon as CEO: The Business of Neurosurgery**
June 9, 2007 Chicago, Ill.



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