AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS

# BULLETIN

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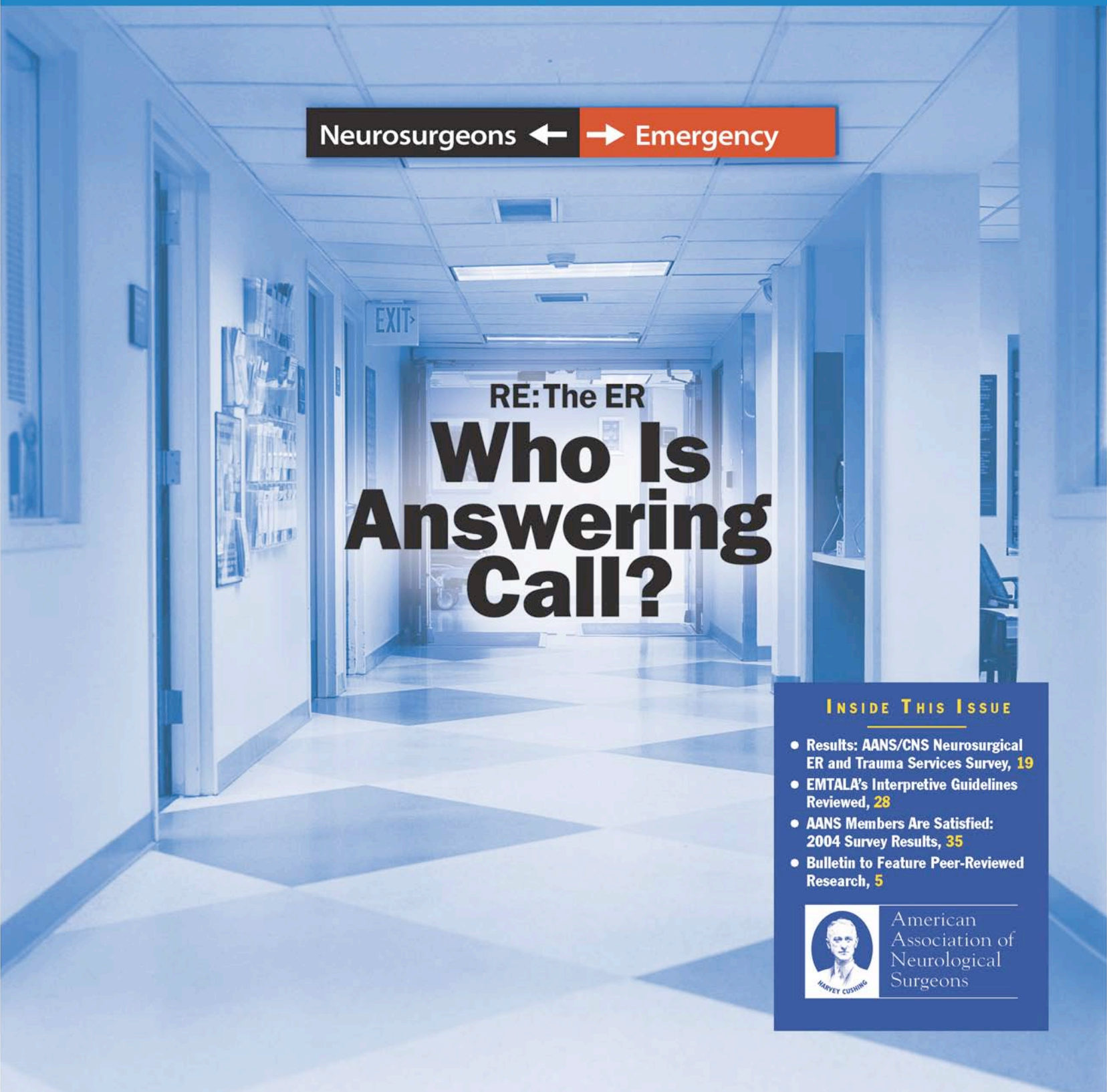


## RE: The ER
# Who Is Answering Call?

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American Association of Neurological Surgeons

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American Association of Neurological Surgeons

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VOLUME 13 NO. 4

**AANS MISSION**

The AANS is dedicated to advancing the specialty of neurological surgery in order to provide the highest quality of neurosurgical care to the public.

**AANS BULLETIN**

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

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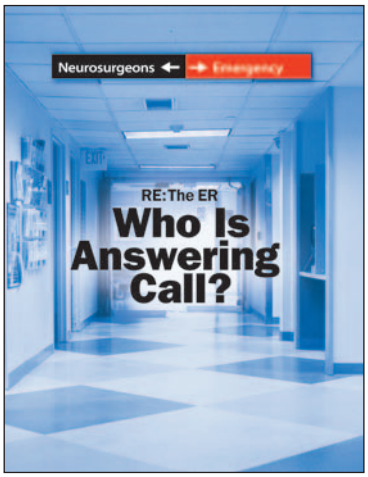
## COVER STORY






## FEATURES



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# As Simple As Possible

## *AANS CME Plus MOC Equals Education Innovation*


Robert A. Ratcheson, MD

Albert Einstein, one of history's great minds, reportedly observed that "Everything should be made as simple as possible, but not simpler." This dictum makes sense when considering how best to provide neurosurgical continuing medical education in the 21st century.

My column in the fall *Bulletin* followed neurosurgical CME as it evolved through the 20th century and offered comments on the rationale associated with the new maintenance of certification requirements which have been mandated by the American Board of Medical Specialties, and adopted by the American Board of Neurological Surgery. As noted in the column, there are complexities associated with MOC, as with nearly every aspect of CME today, and just as sure, some of these complexities are not easily simplified. This is where the American Association of Neurological Surgeons can be most effective on your behalf.

The AANS understands that significant concerns exist among neurosurgeons regarding the time and cost that will be necessary to fulfill these new requirements. Our members need, if not a simple solution for handling CME, then at least a solution that is as simple as possible.

The AANS has been working with the ABNS to ensure that AANS members' participation in the CME aspect of the ABNS MOC Program will be as seamless as possible. Extensive planning by the AANS over the last few years will come to fruition in 2005 when AANS members start their new three-year CME cycle on Jan. 1, and ABNS diplomates are scheduled to receive the first MOC application on July 1. I would like to highlight for you the AANS services which have been developed to augment fulfillment of CME requirements and MOC.

The AANS has developed a CME program that has undergone considerable expansion and will meet the needs of its members. The AANS already offers secure, online CME tracking at MyAANS.org. In addition, there are several innovations to the AANS CME programs that you will find beneficial.

**The AANS CME Mechanism for Diplomates** The AANS will continue to track credit for educational activities that are jointly sponsored and endorsed by the AANS and also for those that the ABNS has deemed acceptable for MOC credit. The service is free of charge for AANS members; however, a fee will be charged for this service to nonmembers. The AANS also is tracking CME by subspecialty, as a service for those members who need this information to satisfy state and local CME subspecialty requirements. MyAANS.org additionally provides information on the state CME requirements and offers the ability to track your CME for relicensure.

**New CME Content for MOC** The AANS CME program includes a newly created category of endorsed CME programs which not only will be acceptable for category 1 credit toward the membership requirements of the AANS, but will also offer members considerable assistance in obtaining the requisite credits to satisfy the MOC requirements of the ABNS. Programs sponsored or jointly sponsored by the AANS will be accepted for MOC credit. In addition, upon application, the AANS Education and Maintenance of Certification Committee will review ACCME-accredited programs for endorsed status.

In general, programs eligible for AANS endorsement will have to meet the following criteria:

- The program is of importance for neurosurgeons.
- The program is not sponsored by a commercial entity.
- The program already has ACCME accreditation.
- The program must have meaningful neurosurgical input in the planning stage.

**"The AANS has developed a CME program that has undergone considerable expansion and will meet the needs of its members."**

Meetings fulfilling these criteria should be eligible for category 1 neurosurgical credit that would be acceptable for the membership requirement of the AANS through the endorsed and cosponsored CME program. All accredited providers of CME would be eligible to fill out an application, with only a nominal fee to have their meetings endorsed by the AANS. The review by the Education and Maintenance of Certification Committee would be less comprehensive and costly than for a direct or jointly sponsored program. All nonaccredited providers of CME will still have to apply to the AANS for joint sponsorship.

On a parallel course, the ABNS is developing criteria for CME courses. Since MOC will require credits in addition to those required for AANS membership, the ABNS will accept some courses that do not fulfill either AANS membership requirements or

ABNS neurosurgical credit requirements. I suspect that many category 1 educational courses that meet the American Medical Association's guidelines for the Physician's Recognition Award will be acceptable toward MOC. That decision, however, remains in the hands of the ABNS. It is important to remember that the distinction between CME offerings that meet AANS membership requirements and CME offerings that meet ABNS MOC requirements may not be identical. It is also important to remember that ultimate discretionary power regarding ABNS Maintenance of Certification CME approval rests with the ABNS and that the AANS may suggest, but does not accredit CME offerings for the ABNS.

I would like to review with you some additional features of the AANS' CME program.

■ **New CME Content for MOC** The AANS Committee on Education and Maintenance of Certification continues to implement our project to develop CME content whereby diplomates can obtain the requisite creditsfor the six competencies.

■ **Neurosurgical Focus Available for CME** Monthly articles in the online journal *Neurosurgical Focus* have been enhanced with a CME test. Takers read the articles and then access the test questions in "My AANS.org" Web site for immediate uploading into the members CME record. One category 1 credit is available per month with a maximum of 12 credits per year. We anticipate that the same process will be implemented for the *Journal of Neurosurgery* beginning in 2005.

We believe that the addition of online, no cost CME credits for AANS members answers the concern expressed regarding additional expense and time away from practice necessitated by attending "AANS certified CME courses." In fact, the number of online credits available could potentially reduce the need to attend some meetings.

I hope you find the above enhancements to the AANS CME programs both reassuring and desirable. However, please remember that the AANS is not prepared to accept every category 1 educational course to satisfy its membership requirements. We believe that the organization has the obligation to set membership standards which will assure the public of the organization's commitment to appropriate continuing medical education specifically for neurosurgeons.

An excellent way to launch the new AANS CME cycle is to attend "Education and Innovation in Neurosurgery," the 2005 AANS Annual Meeting, April 16-21 in New Orleans. This scientific meeting not only fulfills the requirement for neurosurgeon members to attend one AANS annual meeting every three years, but attendees also are eligible for 21.5 credits toward the AANS Continuing Education Award in Neurosurgery.

Of course, the core reason to attend the 2005 AANS Annual Meeting is simply to immerse oneself in the new ideas and techniques presented by our colleagues from around the world. For all of these excellent reasons, I hope you will join me in New Orleans. ■

**Robert A. Ratcheson, MD**, is the 2004-2005 AANS president. He is the Harvey Huntington Brown Jr. professor and chair of the Department of Neurological Surgery at Case Western Reserve University and at University Hospitals of Cleveland.

**For Further Information**

**American Association of Neurological Surgeons**

www.AANS.org/education

- AANS CME requirements and opportunities
- Breaking information on AANS programs and services related to the ABNS MOC Program

**American Board of Neurological Surgery**

www.abns.org/maintenance.html

- ABNS MOC Program information
- MOC brochure—includes important dates for MOC implementation

**American Board of Medical Specialties**

www.abms.org/moc.asp

# NEWSLINE

News Members Trends Legislation

## FROM THE HILL

**HHS GETS NEW SECRETARY**
Michael O. Leavitt was sworn in as the 20th secretary of the U.S. Department of Health and Human Services on Jan. 26. He previously served as administrator of the U.S. Environmental Protection Agency and governor of Utah. He succeeds Tommy Thompson, who resigned in December.

- **OIG Won't Prosecute Hospital for Subsidizing Neurosurgeons' Liability Insurance** In an advisory opinion issued Dec. 30, the HHS inspector general's office declined to prosecute a hospital for subsidizing two neurosurgeons' professional liability insurance coverage for two years. The opinion noted that the arrangement could have violated the anti-kickback statute and that the OIG's decision was applicable only to the specific parties involved. As described in the opinion, the subsidy was enacted when the neurosurgeons' liability insurance carrier gave them two weeks' notice that their coverage would not be renewed. The carrier offered to provide "tail coverage" at no cost if the physicians would retire immediately. The neurosurgeons agreed to stay in practice if the hospital would subsidize the entire cost of tail coverage from the old carrier; a portion of the increased premiums charged by the new carrier; and all or part of the cost of tail coverage from the new carrier. The hospital did so for several reasons, including that otherwise the community would not have had neurosurgical services, "especially for emergency care." The opinion is available at www.oig.hhs.gov/fraud/docs/advisoryopinions/2004/ao0419.pdf.

- **Neurosurgeon to Serve on EMTALA Tech Group** In January Tommy G. Thompson, the secretary of health and human services, appointed John A. Kusske, MD, to serve as the neurosurgery representative on the newly created EMTALA Technical Advisory Group. Dr. Kusske will serve a 30-month appointment beginning with the group's first meeting, which is yet to be scheduled. The Technical Advisory Group is charged with reviewing regulations and interpretive guidelines related to the Emergency Medical Treatment and Labor Act and making recommendations for appropriate changes. The American Association of Neurological Surgeons and the Congress of Neurological Surgeons nominated Dr. Kusske for the post last June. Current EMTALA interpretive guidelines pertaining to on-call service are reviewed in this issue's Washington Update.

- **DMLR Successes Pave Way for 2005 Medical Liability Reform Campaign** In November senators who support federal medical liability reform were elected in Alaska, Georgia, North Carolina, Oklahoma and South Carolina—five of the six states targeted by the Protect Patients Now campaign conducted by Doctors for Medical Liability Reform. The DMLR's 2005 campaign will target five or six key states and will feature a combination of paid and earned radio, television and print media and a robust grassroots program. The American Association of Neurological Surgeons and the Congress of Neurological Surgeons are DMLR members through Neurosurgeons to Preserve Health Care Access. "The AANS and CNS will complement the DMLR's public education and media campaign with lobbying activities on Capitol Hill," said A. John Popp, MD, chair of the NPHCA. "The goal is to educate the public about the medical liability crisis and encourage citizens to contact their senators in support of federal medical liability reform." Dr. Popp noted that the campaign will require significant financial resources. "I encourage neurosurgeons to help fund this effort," he said. Detailed information is available at www.neuros2preservecare.org and protectpatientsnow.org.

- **Americans Support Liability Reform, but Rank It Below Other Concerns** Americans see malpractice lawsuits as a significant factor in rising healthcare costs, but ranked the problem 11th on a list of priorities for the federal government, according to a survey conducted in November 2004 by the Kaiser Family Foundation and the Harvard School of Public Health. The top concern was lowering the costs of healthcare and health insurance (63 percent). Results of the survey "Health Care Agenda for the New Congress" are available online at www.kff.org/kaiserpolls/pomr011105pkg.cfm.

For frequent updates to legislative news, see the Legislative Activities area of www.AANS.org.

# NEURO NEWS

**".MD" Domain Available**
Doctors and others in healthcare now are able to adopt ".md" Internet addresses. For a fee, the company MaxMD is registering Internet addresses ending in ".md" online at www.maxmd.md. One such address, www.physician.md, is a pathway to the National Institutes of Health Web site.

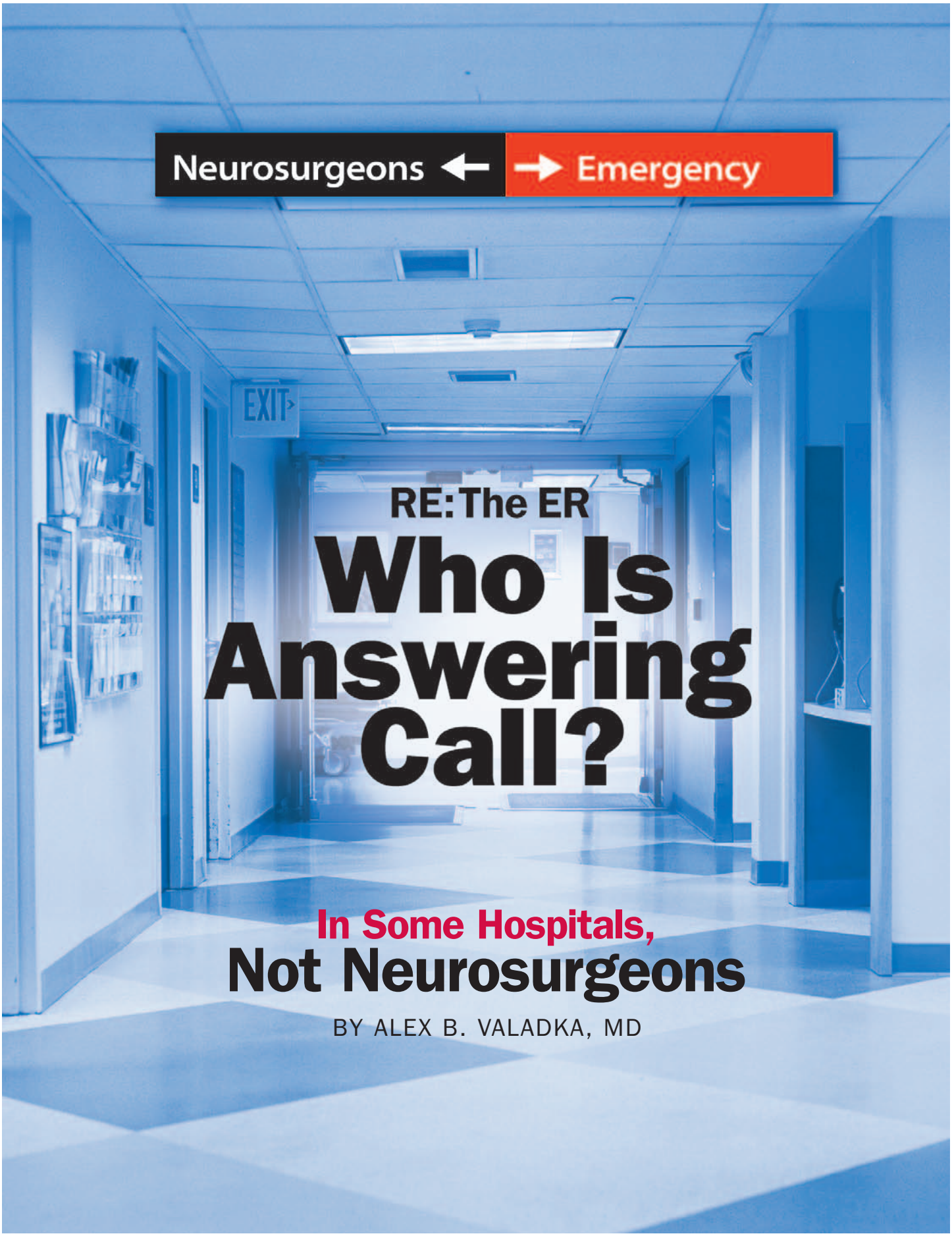
Send Neuro News briefs to the *Bulletin,* bulletin@AANS.org.

- **ABNS To Begin Tracking CME for MOC in January 2006** Neurosurgery's certifying board, the American Board of Neurological Surgery, announced at its November directors' meeting that tracking of continuing medical education credit for the ABNS Maintenance of Certification Program would begin Jan. 1, 2006. Neurosurgeons certified in 1999 are affected by the decision. "The ABNS will be preparing for the 2006 start date during 2005," said ABNS Chair Ralph G. Dacey Jr., MD. "The first date of note is July 1, when the ABNS will send MOC applications to diplomates with time-limited certification; when the ABNS receives the completed applications, the diplomates will be sent user names, passwords and MOC information." A brochure detailing the four MOC components and important program dates is available at www.abns.org.

- **AANS *Bulletin* To Feature Peer-Reviewed Research** The *Bulletin,* the socioeconomic and professional quarterly for AANS members, seeks submissions of rigorously researched articles concerning socioeconomic topics related to neurosurgery. Selected articles will undergo a peer-review process. "The *Bulletin* is expressly charged with the exploration of topics related to the practice of neurosurgery," said Editor James R. Bean, MD. "By adding a peer-reviewed article to each issue of the *Bulletin* we are encouraging the focused research that will allow development of sound policy that impacts neurosurgical practice, as well as aiding neurosurgeons and staff in making informed business decisions." Dr. Bean asked Mick Perez-Cruet, MD, to lead the peer-review effort. "We are initiating the process with an article in this issue which was reviewed by five colleagues," said Dr. Perez-Cruet. "This initial experience bodes well for the future, and I encourage neuroscience professionals to accept this challenge, undertake the research, and submit their articles." The peer-reviewed article in this issue is Byrne and colleagues' study, "Academic Center ERs Bear Brunt of Chicago-Area Transfers," which was reviewed by William E. Bingaman, MD, Fernando G. Diaz, MD, David F. Jimenez, MD, Lyal G. Leibrock, MD, and Mark E. Linskey, MD. Articles can be submitted to bulletin@AANS.org. Additional information will be posted at www.AANS.org/bulletin.

- **Using Steroids for Head Injuries May Increase Risk of Death** In January the British-based Cochrane Library published a review of 17 studies which found that the use of anti-inflammatory sterioids for traumatic head injuries may increase the risk of death. In the absence of meta-analysis, authors Phil Alderson and colleagues weighted the largest trial, which included 10,008 patients; this large study found that patients treated with corticosteroids were 18 percent more likely to die from their brain injury than those who did not take the drugs. The authors concluded that steroids should no longer be routinely used in people with traumatic head injury. Further information is available at www.cochrane.org.

- **NPH Registry Now Online** A new source of clinical information on adult normal pressure hydrocephalus launched in October. Data collected via the new NPH Registry, online at www.nphregistry.org, will be used to examine NPH management practices and patient outcomes, including symptom amelioration and failure rates, and to explore the differences in the treatment of NPH with various valve shunt systems. "The overall aim of the registry is to develop a longitudinal, observational database on adult patients with NPH that surgeons can use as a source of clinical information," said Robert E. Harbaugh, MD, a member of the registry's advisory committee. "This registry also will generate a repository for scientific inquiry and publications." The NPH Registry is a Neuro-Knowledge™ project commissioned by Codman & Shurtleff Inc. Neuro-Knowledge is a program of the American Association of Neurological Surgeons and Outcome, a Web-based research company. Up to 250 neurosurgeons at 200 sites are expected to participate in the registry. AANS members will be compensated for their participation. Additional information is available at www.AANS.org/nph_registry.asp.




## RE:The ER

# Who Is Answering Call?

## In Some Hospitals, Not Neurosurgeons

BY ALEX B. VALADKA, MD

**An elderly man falls and strikes his head,** immediately becoming comatose. He is brought to the emergency room of the nearest hospital, where a computed tomographic scan reveals a large acute subdural hematoma. It is determined that he must be transferred in order to receive appropriate care, but more than a half-dozen hospitals in the region are unable to accept him because their intensive care units or emergency rooms are full. Eventually, the patient is accepted at a trauma center hundreds of miles away. Although he undergoes a craniotomy immediately upon arrival, he remains neurologically devastated. He expires after his family decides to withdraw care.

Tragically, this true-life scenario occurred just within the last few years. Similar situations are said to be occurring with increasing frequency, suggesting a breakdown in the system of neurosurgical emergency care. It may seem convenient to lay the blame for this breakdown on a single source, such as pressures related to the Emergency Medical Treatment and Labor Act, the medical liability crisis, decreasing reimbursements for neurosurgical services, or inadequate numbers of neurosurgeons.

In reality, however, the situation is quite complex, and blaming inadequate neurosurgical emergency coverage on only one source is just as simplistic as stating that every headache is caused by a brain tumor. This article will explore the primary factors that impact neurosurgical emergency coverage, examine the relevant and available evidence, and consider the perils and possibilities of various paths toward change.

## Scope of the Problem

**Anecdotal Evidence** Neurosurgeons and others involved with emergency care have been outspoken on the topic of neurosurgical emergency care, which has been the focus of presentations and sometimes intense debate in neurosurgical venues. Publications have delved into the subject; the newsletter of the AANS/CNS Section on Neurotrauma and Critical Care has devoted portions of several issues to the topic.

Scientific meetings also have provided an arena for discussion. At the annual meeting of the Eastern Association for the Surgery of Trauma in 2003, participants of one session discussed the topic, "Craniotomy in the Field: Why Does It Take Neurosurgeons Seven Years?" The double entendre is obvious: first, why is such a long training period required for such a "simple" procedure; and second, why does it take neurosurgeons so long to respond to calls about emergency patients? Some trauma surgeons have opined that trauma craniotomies are as easy to perform as appendectomies. Others feel that they should be credentialed to perform trauma craniotomies after being proctored on as few as 10—or even five—such procedures.

Through such discussions, barriers to the delivery of neurosurgical emergency care have become recognized, inspiring several studies which further characterized a system under stress.

**Survey Data** In a 1992 report by the U.S. Department of Health and Human Services Office of the Inspector General, 67 percent of hospitals reported that they experienced problems ensuring coverage for at least one of the specialty services offered in their emergency rooms. Neurosurgery was the specialty most likely to pose a problem, with 49 percent of hospitals that offer neurosurgical services reporting difficulty ensuring coverage. A follow-up report in 2001 found that neurosurgery retained the dubious distinction of being the service most likely to be associated with problems in obtaining specialist coverage.

A 2004 survey conducted by the American College of Emergency Physicians found that two thirds of hospital emergency departments reported problems with inadequate specialty on-call coverage—the same proportion as that described in the 1992 OIG report. Apparently, little progress was made during the 12 years that separated the two reports.

Data from the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey, reported in this issue of the *Bulletin*, showed that while the great majority of neurosurgeons were covering neurosurgical emergencies for at least one hospital, there were significant gaps in coverage. These gaps often fell along the lines of practice type, practice setting, trauma center level, and types of neurosurgical emergency services provided. Perhaps not surprisingly, neurosurgeons in private practice and those in a solo practice setting were less likely to provide emergency services. Level 3 trauma centers and hospitals without a trauma designation were less likely to offer neurosurgical emergency coverage. A significant finding was that nearly half of neurosurgeons who served on call limited their services in some way: Two thirds of respondents did not treat children, slightly less than one third did not treat cranial or spinal cases, and about 4 percent did not treat any trauma cases.

In a 2001 survey of the membership of the American Association for the Surgery of Trauma, more than 40 percent of respondents complained that neurosurgeons did not answer pages

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promptly when they were on call for trauma, more than one third stated that neurosurgeons were too slow in taking patients to the operating room, and 44 percent complained that neurosurgeons were too reluctant to insert intracranial pressure monitors. More than 40 percent felt that specialists other than neurosurgeons, such as emergency physicians, should be allowed to insert intracranial pressure monitors.

In response to the increasing dissatisfaction of all parties involved in the provision of emergency coverage, various responses and actions have been initiated by the federal government, by hospitals, by neurosurgeons, and by other physicians.

**By the Numbers**

| | |
|---|---|
| Emergency Rooms in the United States* | 4,079 |
| Trauma Centers in the United States* | 1,480 |
| Practicing Neurosurgeons in the United States** | 3,213 |

*Data Source: AHA Hospital Statistics (2005 edition)
**Data Source: 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey (actively practicing AANS and CNS neurosurgeon members solicited for survey participation; AANS data.)

## The Federal Government Response: The Emergency Medical Treatment and Labor Act

At its core, EMTALA requires hospitals that participate in the Medicare program—the vast majority of hospitals in the United States—to provide a screening examination (including ancillary services as needed) and necessary stabilizing treatment to patients presenting with emergency medical conditions, regardless of their ability to pay for these services. A hospital must also accept emergency transfers from other facilities if it has the ability to care for such patients and if the sending facilities declare that they are not able to care for them.

While EMTALA is discussed at length elsewhere in this issue, its relevance to neurosurgeons can be summarized as follows: When on call, neurosurgeons cannot refuse to see patients and cannot refuse transfers from other hospitals if the other hospital declares that patient to be an "emergency." A transfer or consultation cannot be refused without good cause. If an on-call physician does refuse to accept a patient, the reason for the refusal must be documented and must be capable of withstanding subsequent scrutiny, such as genuine lack of availability of a physician because he or she is treating another patient.

Because EMTALA itself does not provide for reimbursement, a physician who is required to provide a patient with emergency treatment might not receive payment for those services. Ironically, this is true even if that patient has health insurance because, in a true emergency, there may not be time to obtain preauthorization from the insurance carrier. Waiting for preauthorization is permissible only if it does not delay treatment; if treatment is delayed, it could be inferred that emergency treatment was delayed for financial reasons, which is an EMTALA violation.

EMTALA was crafted with the best of intentions. However, like many such measures, it soon caused more problems than it fixed. Anecdotes describing arbitrary and illogical interpretations of EMTALA, as well as tales of draconian penalties imposed on physicians who allegedly violated the law, created so much fear and insecurity that many physicians sought ways to avoid providing emergency care altogether. Although the number of physicians who have ever been fined for EMTALA violations is quite small—less than 2 percent of neurosurgeons said they had ever been investigated for an EMTALA violation, according to the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey—the pervasive fear that "it could happen to me" has made many physicians very cautious.

**EMTALA Clarifications** In September 2003 the Centers for Medicare and Medicaid Services clarified certain EMTALA provisions that had been of great concern to neurosurgeons. The following May, the CMS issued interpretive guidelines for their state and regional investigators. Briefly, surgeons now may be on call simultaneously at more than one hospital and may perform elective surgeries while on call. The clarifications also put to rest the persistent urban legend that the presence of a certain minimum number of specialists on a hospital's staff mandates that those physicians provide continuous, "24/7" coverage of the emergency room.

It is permissible for a hospital's on-call schedule to stipulate that emergency care will not be provided by certain specialties on certain days as long as policies and procedures are in place to deal with emergencies on those days, such as documented transfer arrangements with appropriate facilities. Such flexibility allows the hospitals in a given region to coordinate the allocation of their resources in order to provide the most comprehensive care with the greatest efficiency.

While these changes were welcome news to neurosurgeons, many hospitals and emergency physicians believe that these clarifications have "weakened" EMTALA and are now exacerbating the current emergency medical services "crisis." It is more appropriate, however, to view these changes as clarifications that acknowledge the only conditions under which neurosurgeons and other specialists can continue to participate in the trauma system.

Importantly, neurosurgeons should bear in mind that EMTALA merely sets forth the *minimum* requirements for on-call coverage. States and hospitals may impose stricter rules.

## Hospital Responses

In the United States, the number of registered hospitals exceeds the number of practicing neurosurgeons certified by the American Board of Neurological Surgery. Therefore, it is physically impossi-

ble for every hospital to have its own neurosurgeon always available to handle emergencies. To make matters worse, early retirement and other reasons for leaving practice recently caused a decline in the number of board-certified practicing neurosurgeons (see "Too Many? Too Few," www.AANS.org, article ID 21462).

The decreased availability of neurosurgeons for emergency coverage has created major problems for hospitals because the EMTALA obligation to provide emergency coverage falls on hospitals, not on the physicians who practice there. Thus, hospitals are forced to find solutions to the problems of arranging neurosurgical coverage for their emergency rooms.

Hospitals have responded to this challenge in varying ways. At institutions where a requirement of medical staff membership is emergency room coverage, hospitals may attempt to force neurosurgeons to take as much call as the hospital needs. If only one or two neurosurgeons are on staff at a smaller facility, this requirement to cover the emergency room can quickly become overwhelming.

**Stipends for On-Call Services** Other hospitals have recognized the burden that emergency call places on neurosurgeons, including the frequent need to cancel billable activities involving insured patients in order to care for emergency patients who frequently have no financial resources. These facilities have begun to offer compensation, often through per diem stipends, to those who serve on call.

In 2001, the American Association of Neurological Surgeons and the Congress of Neurological Surgeons adopted a position statement that supports compensation to neurosurgeons for serving on call (see "Improving Access to Emergency Neurosurgical Services" in this issue). While the statement does not specify a level of compensation, it does state that such compensation should supplement any reimbursement that the neurosurgeon may receive for professional services rendered as a result of on-call obligations.

Until recently, little if any data existed regarding the prevalence and amount of on-call stipends for neurosurgeons. The results of the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey shed light on the provision of stipends and provide neurosurgeons with valuable data that they can use in discussions with their hospitals. The survey found that one third of neurosurgeons received some compensation for emergency call coverage. However, there was wide variation by practice type, practice setting, trauma center level, and region in terms of who was compensated and the amount received. In general, compared with neurosurgeons in full-time academic practice, neurosurgeons in private practice were twice as likely to receive compensation for emergency coverage.

**"Blaming inadequate neurosurgical emergency coverage on only one source is just as simplistic as stating that every headache is caused by a brain tumor."**

Some have bemoaned the payment of on-call fees, complaining that they represent a loss of physicians' sense of community obligation to cover emergency rooms and provide uncompensated care. Furthermore, neurosurgeons have been accused of demanding fees that are so exorbitant, they are "bankrupting" the entire trauma care system. Others, however, point out that decreasing reimbursements—which often are pegged to federally created Medicare reimbursement schedules—combined with skyrocketing practice expenses, out-of-control liability insurance premiums, and multiplying unfunded regulatory mandates (like EMTALA requirements), have radically changed the landscape of medical practice from what it was in years past. Gone is the margin by which neurosurgeons could provide uncompensated care and absorb or cross-subsidize the losses associated with emergency room coverage.

Others point out that payment of some type of stipend is already a very common practice for hospitals that transfer funds to medical schools in exchange for clinical services; one might say that the discussion of stipends for emergency call simply puts different labels on the services and funds.

## Neurosurgeons' Responses

Stipends can take the sting out of neurosurgeons' financial losses incurred through their provision of emergency care. However, as the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey demonstrated, most neurosurgeons (nearly 70 percent) do not receive such compensation.

Some neurosurgeons have resigned from hospital staffs in order to avoid the potentially untenable position of being on call simultaneously for several different facilities. For those in small communities, resigning from the only hospital in the area means relocating one's practice and family, often leaving the region without neurosurgical services. Others have downgraded their category of medical staff membership, such as from "Active" to "Courtesy." The most common reason given for such a change is that, at many hospitals, physicians in the "Courtesy" category are not required to cover emergency call.

Still other neurosurgeons have chosen to limit the types of neurosurgical services they perform at a hospital. Frequently the services limited are cranial surgery or treatment of pediatric patients. A common reason for relinquishing such privileges is that doing so decreases exposure to lawsuits. For some, a perceived advantage of limiting one's practice to treatment of spinal disorders is the decreased burden of emergency call. The frequency and urgency of emergencies involving the spine are not nearly as great as those of trauma and other emergencies affecting the brain and skull.

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**Professional Liability Insurance Premiums** Another commonly cited disincentive to neurosurgeons' participation in emergency care is the effect of such participation on professional liability insurance premiums. It is widely believed that on-call service increases these premiums. At least one neurosurgeon in a western state was told by his insurance company that he could cover the emergency room no more than 10 nights per month or his premiums would increase to prohibitive levels.

Other neurosurgeons have related that their professional liability insurance carriers have offered discounted premiums to those who limit their neurosurgical services to "less risky" procedures. In Texas, at least some insurers lower their premiums if neurosurgeons do not perform cranial work, but colleagues in other parts of the country report that their insurers do not offer such a discount.

While it seems clear that at least some insurers do charge less if neurosurgeons do neither cranial nor emergency work, the inconsistency of the available data suggests that such reduced rates may be a regional or carrier-specific phenomenon (see "The Ohio Experience" in this issue).

Neurosurgeons who limit the scope of their practices, however, should be aware that the CMS has stated that physicians who practice in a narrow subspecialty may still be competent in their larger specialty, especially in terms of possessing more skill and expertise than emergency physicians when it comes to dealing with emergency conditions. Thus, a neurosurgeon whose elective practice is limited to spinal disease may still be expected to have more knowledge and expertise than an emergency physician when it comes to treating acute subdural hematomas. In an attempt to solve this problem, hospitals may soon specify required core privileges for many specialties.

**Specialty Hospitals** Some neurosurgeons have created their own specialty hospitals. The majority of these facilities focus on elective spine care and on other nonemergency neurosurgical conditions. From the surgeon's point of view, a major benefit of these hospitals is that they allow physicians to practice in a more controlled setting. However, the proliferation of these centers has raised concerns that they "cherry-pick" insured patients who are comparatively healthy, increasing the proportion of sicker, uninsured, and emergency patients who must be cared for at local safety net hospitals.

Moreover, when neurosurgeons move their practices to the spe-

# Improving Access to Emergency Neurosurgical Services

## What Can Neurosurgeons Do To Improve Reimbursement for On-Call Services?

In an effort to be responsive to the needs of neurosurgeons obtaining reimbursement for providing on-call services, the American Association of Neurological Surgeons and the Congress of Neurological Surgeons issued the following position statement on April 20, 2001. Neurosurgeons around the country are now successfully using this statement to negotiate with their hospitals the payment of on-call stipends.

### AANS/CNS Position Statement on Improving Access to Emergency Neurosurgical Services

**Background** The emergency medical services system is in the midst of a growing crisis because of a recognized shortage of on-call specialists. This problem extends to the provision of emergency neurosurgical care. Since neurosurgeons are a vital component of the EMS system, their active participation is essential. Reimbursing neurosurgeons for serving on-call to hospital emergency departments is therefore appropriate.

**Justification** Within their capabilities, hospitals have a legal obligation under the Emergency Medical Treatment and Labor Act to provide screening and stabilization services to patients who come to emergency departments. As part of this obligation, hospitals are required to maintain a list of physicians who are on call to treat patients in the emergency room and to ensure that on-call physicians respond when called.

Neurosurgeons have a variety of financial and contractual problems with managed care plans. In many instances, these contracts have no on-call arrangement, or require on-call availability without reimbursement, or have reimbursement rates that are extremely low. Because of these and other economic pressures, neurosurgeons are finding it increasingly difficult to subsidize emergency medical care through internal "cost-shifting," thus limiting their ability to subsidize their own on-call activities.

Neurosurgeons are faced with increased risks and liability when providing emergency care. Because of the seriousness of cases in the emergency medical setting and because of the lack of a pre-existing physician–patient relationship, neurosurgeons have a greater potential to be part of a medical malpractice action. In addition, neurosurgeons who provide on-call services must also comply with the mandates of EMTALA, subjecting them to potential fines of $50,000 for any violations of this complex law and regulations.

**Position Statement** Hospitals should provide neurosurgeons with reasonable compensation for serving on the on-call panel. This compensation should supplement any reimbursement the neurosurgeon receives for services rendered while serving on call.

*AANS position statements are available in the Library at www.AANS.org. This position statement is article ID 9760.*

cialty hospitals, fewer neurosurgeons remain available to share the responsibility of covering their area's emergency rooms. Such concerns prompted Congress to pass an 18-month moratorium on physicians referring patients to new specialty hospitals in which they have an ownership or investment interest. The moratorium, which went into effect in January 2004, does not apply to facilities that already are in existence. In September 2004, the Medicare Payment Advisory Commission reported initial findings suggesting that while patient volumes declined in many hospitals because of the growth of physician-owned specialty facilities, most of the affected hospitals were able to remain profitable and recoup lost business.

**Physician Extenders** Other neurosurgeons have broadened their use of physician extenders. Use of PEs, including physician assistants and nurse practitioners, helps neurosurgeons continue to provide emergency care. Expanded roles for PEs include emergency room assessment and critical care management. Some neurosurgeons even have taught their PEs to insert intracranial pressure monitors. The propriety of these actions has become the subject of controversy. In terms of patient care, the most important concern seems to be that PEs have "adequate supervision," although the exact meaning of that term remains a matter of debate.

The 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey found that the vast majority of neurosurgeons did not use PEs, but far more of those in full-time academic practice used them compared with those in other practice types. Interestingly, 42 percent of respondents said PEs should be trained to perform trauma-related procedures such as placement of intracranial pressure monitors or subdural drains. Of the few private practice neurosurgeons who did use PEs, all but one thought they should be trained to perform trauma-related procedures.

## Responses of Other Specialties

Some neurosurgeons have found it impossible or undesirable to care for emergency or critically ill patients without assistance from other specialties. Neurocritical care, for example, is a rapidly growing subspecialty that has formed its own professional society and is moving toward creation of its own certifying board. So far, however, trauma surgeons continue to be the group that most frequently provides care for patients with brain or spine injuries when neurosurgeons are not involved.

Reports from the United States and from other countries have described treatment of neurotrauma patients by non-neurosurgeons, including insertion of intracranial pressure monitors and performance of trauma craniotomies. Several centers have published data intending to show that placement of intracranial pressure monitors by other physicians or by midlevel practitioners is as safe as insertion by neurosurgeons. Some of these authors analyzed only placements of fiber-optic monitors into the subdural space (which is not a technique recommended in the Brain Trauma Foundation's Guidelines for the Management of Severe Traumatic Brain Injury), but others reviewed insertions of ventriculostomy catheters.

**"Gone is the margin by which neurosurgeons could provide uncompensated care and absorb or cross-subsidize the losses associated with emergency room coverage."**

A report from rural America describes a group of trauma surgeons and an orthopedic surgeon who were distant from the nearest neurosurgical facility and who received special neurosurgeon-directed cranial surgery training, which included laboratory sessions with cadavers. These surgeons created a burr hole (which was occasionally enlarged) in each of eight patients who exhibited rapid neurological deterioration and who were thus deemed too unstable for fixed-wing transport to the nearest neurosurgical facility, a trip which lasts a minimum of one hour each way. These eight patients were among a total of 60 head-injured patients with a Glasgow coma scale score of 13 or less who were treated during the 75 months of the review period. The neurosurgeon was consulted by phone for all cases. A radiologist assisted with determining the location for the burr holes. Immediately after surgery, the patients underwent air evacuation to the neurosurgical facility. At a minimum follow-up interval of one year after injury, one patient had died, two had Glasgow outcome scale scores of 4, and the remaining five had GOS scores of 5.

This reasoned and cautious approach contrasts with the much more aggressive stance adopted by other trauma surgeons. After seeing neurosurgical midlevel practitioners or interns routinely inserting intracranial pressure monitors, the more aggressive trauma surgeons may assume that they also should be allowed to do those procedures. Others have been influenced by military general surgeons, who may have had to perform cranial procedures on deteriorating patients when prompt transport to a neurosurgeon was not possible. Even in such cases, however, neurosurgical involvement is usually sought to the greatest extent possible, such as by phone or radio.

Should trauma surgeons be given a green light to perform invasive cranial procedures without the knowledge of the nearest neurosurgeon? It is important to note several reports describing the poor performance of non-neurosurgeons who attempted to evacuate acute extra-axial hematomas. Many such operations were deemed inadequate because only a small amount of the clot was removed, perioperative bleeding was not controlled, or the hematoma was not found. Clinical outcomes were better when patients were immediately transferred to a neurosurgical center

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than when they first underwent attempted surgery by a non-neurosurgeon. On the other hand, deterioration was rare among patients who were sent immediately to the nearest neurosurgeon without first undergoing a craniotomy by a non-neurosurgeon. These reports suggest that patients would be served better by rapid detection of their mass lesions and expeditious transfer to a neurosurgeon rather than by delaying definitive care while a non-neurosurgeon attempts a craniotomy.

Frequently overlooked in these debates is that insertion of an intracranial pressure monitor or performance of a craniotomy is often only a small, initial step in a lengthy, complicated stay in an intensive care unit. In many ways, knowing what to do with these patients in the intensive care unit is just as important—if not more so—than resuscitating and stabilizing them.

Of relevance to neurosurgeons is that, according to at least one survey, the aggressiveness with which trauma surgeons wished to perform neurosurgical procedures was related to their dissatisfaction with local neurosurgeons' responses to the needs of trauma patients. Interestingly, while one might expect that the availability of neurosurgery residents in a hospital would ease the need for trauma surgeons to perform neurosurgical procedures, the survey indicated that the presence or absence of neurosurgery residents did not seem to be related to trauma surgeons' desire to perform such procedures. This same survey found that many trauma surgeons would prefer greater involvement of neurosurgeons—or even a primary role for neurosurgeons—in caring for neurotrauma patients.

When the opinions of neurosurgeons were solicited on this topic in the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey, one third of respondents said that general surgeons should be trained to insert intracranial pressure monitors where neurosurgeons were unavailable. Only 20 percent thought they should be trained to perform emergency craniotomies in the same circumstance.

**A New Surgical Specialty?** The desire of general surgeons to expand their role in the management of neurotrauma may filter down to general surgical residency training. A major revamping of trauma surgeons' training is receiving serious consideration by the American Board of Surgery, the American College of Surgeons, the American Association for the Surgery of Trauma, and similar organizations.

The revised scheme would call for several years of broad-based surgical training, followed by several years of training concentrated in a new specialty that might be called "emergency surgery" or "acute surgery." In addition to trauma, these new specialists would be expected to handle nontrauma surgical emergencies, such as abscesses or gastrointestinal obstructions. Such a plan is relevant to neurosurgeons because these new trainees additionally would receive instruction in neurosurgery and orthopedics, with the expectation that, in addition to appendectomies and splenectomies, they would be able to perform emergency craniotomies and insert intracranial pressure monitors.

## Who Will Be Answering Call?

When we consider the future of neurosurgical emergency care, we must be aware that every one of us shapes that future every day. Ideally, neurosurgeons, hospitals, and other physicians on hospital medical staffs would be able and willing to work together to find ways to provide appropriate emergency care. However, if neurosurgeons are not involved (for whatever reason) in crafting solutions to these problems, other specialists are more than willing to step in and fill the niche vacated by neurosurgeons. Will we allow this loss of a major part of our professional identity?

Neurosurgical critical care, emergency craniotomies, and spinal cord injuries historically have been the exclusive province of neurosurgeons. Most, if not all, neurosurgeons believe that our extensive training has rendered us the most qualified to best help patients with these injuries. Ultimately, as a profession we must determine whether neurosurgeons will continue to play a dominant role in neurosurgical emergencies, or if instead someone else will answer when the ER calls. ■

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### For Further Information

Emergency Room Coverage: What Every Neurosurgeon Should Know. Informational packet available on the Web site of the AANS/CNS Section on Neurotrauma and Critical Care, www.neurosurgery.org/sections/TR/emc.pdf.

EMTALA regulations and interpretative guidelines: www.cms.hhs.gov/providers/emtala/default.asp.

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# EMTALA Top 10

## Saying This Could Bring the Inspector General to Your Door

KATIE O. ORRICO, JD, AND BARBARA E. PECK, JD

Complying with the Emergency Medical Treatment and Labor Act has been a challenge for many physicians over the past 19 years, during which time the law has evolved considerably. Most recently the federal government published a clarification of EMTALA in the Federal Register on Sept. 9, 2003, and issued revised interpretive guidelines the following May. These updates are reviewed in greater detail in this issue's Washington Update.

While few neurosurgeons have been investigated or cited for an EMTALA violation—less than 2 percent according to the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey—a quick test will serve as an EMTALA refresher and may save you from peril: If you find yourself uttering any of the following 10 sentences, you may find the inspector general at your door.

**1. I'll see the patient in the morning.** The ER physician, not the on-call specialist, determines if a patient can wait for specialty treatment. If you refuse to see a patient until morning and the ER physician decides to transfer the patient to another facility, you have violated EMTALA. Being "right" is not a defense.

**2. Have the patient come to my office.** The new EMTALA rules make it nearly impossible for you to see in your office a patient who has presented in the ER. Unless your office is located on the hospital campus and you share the same Medicare provider number with the hospital, you must go to the ER to see the patient.

**3. I do not treat those types of patients.** If you have general neurosurgery privileges, you must treat or stabilize all patients in need of neurosurgical care who come to the ER with an emergency while you are on call. If you do not treat certain types of disorders (aneurysms, for example) or patients (such as children), your hospital privileges should be altered to reflect these exceptions.

**4. I won't be on call unless I am paid.** Stipends in exchange for on-call service must be the result of a negotiated contract between the hospital and physician. Such a contract must meet specific criteria in the anti-kickback and Stark laws. If you have not negotiated a written contract, you cannot suddenly refuse to take call without payment.

**5. I'll be there when I get there.** According to the new interpretive guidelines, physician response times must be noted in terms of minutes. General terms such as "reasonable" or "prompt" are not permitted. The specific amount of minutes it took you to make your way to the hospital ER will be noted in the patient chart.

**6. I am seeing another patient so I do not have to respond.** While the EMTALA regulation allows a neurosurgeon to take simultaneous call and schedule elective surgeries, that does not mean you can do so without informing the hospital of your plans. Hospitals must have backup call lists or plans to fill in if you are unavailable. While simultaneous call and elective surgery is allowable, being unresponsive is not, particularly if it delays a hospital in implementing its backup plan.

**7. I'll evaluate the patient using telemedicine.** Unless the patient is outside of your metropolitan area, you must physically evaluate him or her. The EMTALA regulations allow the use of telemedicine only in very limited circumstances.

**8. If the federal law doesn't require it, I don't have to do it.** Your state laws and your medical staff bylaws may also have provisions regarding on-call responsibilities. EMTALA sets forth the minimum requirements; states and hospitals may require more of their physicians.

**9. Only the hospital, not the doctor, gets in trouble for violating EMTALA.** While hospitals ultimately are responsible for filling their on-call panels, if treatment is delayed or a patient is transferred as a result of a physician violating EMTALA, both the transferring and receiving hospitals are required by law to report the physician within 72 hours. Physicians who violate EMTALA are subject to civil monetary fines of up to $50,000 and exclusion from all federal healthcare programs.

**10. I am only on call for patients who already are seen by my practice.** The new EMTALA interpretative guidelines (which appear to be a departure from the actual EMTALA regulations) state that neurosurgeons may not refuse to be included on a hospital's on-call list while at the same time being on call for their own patients, particularly if the hospital's coverage for neurosurgical services is not adequate. For example, if you are willing to see established patients in the hospital over the weekend or after hours, you must also be willing to serve on the hospital's on-call panel. The practice of "selective call" is not generally permissible because it encourages disparate treatment. (The American Association of Neurological Surgeons and the Congress of Neurological Surgeons are seeking clarification of this issue.) ■

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### For Further Information

The EMTALA Final Rule, revised Emergency Medical Treatment and Labor Act (EMTALA) Interpretive Guidelines and other information are available from the Centers for Medicare and Medicaid Services, www.cms.hhs.gov/providers/emtala/default.asp.

# Academic Center ERs Bear Brunt of Chicago-Area Transfers

## Study Suggests Problem Will Worsen

Richard W. Byrne, MD, and Brad Bagan, MD

Academic medical centers traditionally have acted as safety nets for community emergency rooms. Most Chicago-area emergency rooms have enjoyed complete neurosurgical coverage until recently, when a significant increase in transfers of neurosurgical ER cases from community hospitals to academic centers has been noted.

In order to quantify transfers and evaluate their impact on patients' outcomes, data was collected for one month at a single academic center in Chicago, Rush University Medical Center. In addition, historical data on transfers was analyzed. Further, to gain insight into the underlying causes of the transfers, a survey on neurosurgical ER coverage in the Chicago area, including Cook and other surrounding counties, was undertaken. Results of these studies suggest that neurosurgical ER coverage is declining in northeast Illinois, and that in Cook County the lack of neurosurgical ER coverage has become a public health concern which must be addressed.

### Neurosurgical ER Transfers to Rush UMC: One 28-Day Period

Data on neurosurgical ER transfers in a four-week period were gathered. The condition of each patient at the outside emergency room was obtained from transfer records and compared to the patient's condition on arrival at Rush UMC. Only dramatic changes in the patient's condition were considered significant.

In the 28 days studied, Rush UMC fielded 23 requests for transfer and accepted all cases (see table 1). Thirteen patients were transferred from emergency rooms in Cook County. The time period for patient transfer—from admission at the outside emergency room to arrival at Rush UMC—ranged from 3.5 hours to 9 hours, with a mean time of 6 hours.

Twelve patients were transferred from emergency rooms that did not have neurosurgical coverage. The condition of four of these 12 patients was significantly worse upon arrival at Rush UMC than at evaluation at the outside emergency room. Each of these patients was awake and alert at the outside emergency room.

By the time of arrival at Rush, three of the four patients had developed anisocoria. A computed tomographic scan on arrival documented that two patients with subdural bleed had experienced significant enlargement of their hematomas and had declined from a Glascow coma scale score of 15 to a score of 7. One patient with hydrocephalus went from GCS 15 to GCS 5. The CT scan of the fourth patient, who experienced both subarachnoid hemorrhage and hydrocephalus, showed no evidence of rebleeding, but the patient declined from GCS 12 to GCS 3.

All four of these patients underwent emergency surgery upon arrival; two of them died. The two surviving patients experienced significant impairment.

### Comparative Data: Neurosurgical ER Transfers in 2002 and 2004

In order to determine whether a trend in the number of neurosurgical transfers exists, the number of transfers to Rush UMC from January through September 2004 was compared with the number of transfers in same period in 2002 (see table 2).

The number of transfers in this two-year period rose from 116 to 224, a 97 percent absolute increase. The number of transfers from hospitals without neurosurgical ER coverage increased from 25 to 125, an increase of 400 percent; most of these transfers, 80 percent, originated at Cook County hospitals.

### Survey Data: Neurosurgical ER Coverage in Chicago-Area Community Hospitals

A telephone survey of emergency department directors and medical staff offices of all 74 active emergency rooms in Cook and its

**Table 1: Neurosurgical ER Transfers to Rush UMC: One 28-Day Period**

| | |
|---|---|
| Intracranial Hemorrhage—Subdural | 2 |
| Intracranial Hemorrhage—Parenchymal | 9 |
| Intracranial Hemorrhage—Subarachnoid | 7 |
| Hydrocephalus | 1 |
| Tumor/Seizure | 1 |
| Spine | 2 |
| Cerebellar Infarct | 1 |
| **Total Emergency Transfers** | **23** |

**Table 2: Neurosurgical ER Transfers to Rush UMC: 2002 and 2004 Data**

| Year | Total Transfers | Transfers from Hospitals Without Neurosurgical ER Coverage |
|---|---|---|
| **2002** | 116 | 25 (22%) |
| **2004** | 228 | 125 (55%) |

surrounding counties provided additional data associated with neurosurgical ER coverage. A representative of the Illinois State Medical Society independently rechecked our data.

Neurosurgical ER coverage is considered to be present if a neurosurgeon was on call more than 50 percent of the days in each month. All of the responses regarding current neurosurgery coverage were the same on each query with two exceptions: One hospital erroneously had stated that they had no neurosurgery coverage, and another reported that it had lost coverage since the first inquiry. Past neurosurgical ER coverage is defined by an affirmative answer to the question, "Have you traditionally had neurosurgical ER coverage over the last 10 years?"

As table 3 demonstrates, neurosurgical ER coverage declined in several counties. Kane County experienced a 50 percent decline in coverage, while Kankakee and Will counties experienced a 100 percent decline, leaving them without neurosurgical ER coverage.

In Cook County, where 53 active emergency rooms are available to serve the county's more than 5 million people, eight emergency rooms are at academic centers and 45 are at community facilities. In the past, 40 of the 45 emergency rooms in community facilities had neurosurgical coverage, but today only 20 are covered—a 50 percent decline. Eleven community emergency rooms lost neurosurgical coverage in the last two years.

**Table 3: Neurosurgical ER Coverage in Cook County-Area Community Hospitals**

| County | Number of Community Hospital Emergency Rooms | Past Neurosurgical ER Coverage (1994-2003) | Current Coverage (2004) | Decline (%) |
|---|---|---|---|---|
| **Cook** | 45 | 40 | 20 | 50 |
| **DuPage** | 6 | 6 | 6 | 0 |
| **Kane** | 4 | 4 | 2 | 50 |
| **Kankakee** | 2 | 2 | 0 | 100 |
| **Lake** | 5 | 5 | 5 | 0 |
| **McHenry** | 2 | 2 | 2 | 0 |
| **Will** | 2 | 2 | 0 | 100 |

## Is Medical Liability at the Root of the Problem?

Most of the emergency department directors responding to our survey cited medical liability concerns as the causal factor in the loss of neurosurgery coverage. In fact, Illinois has been labeled a crisis state by the American Medical Association and Doctors for Medical Liability Reform, a coalition of medical specialties. Some data suggest that problems concerning medical liability are particularly pressing in Cook County.

A March 2004 survey of Illinois neurosurgeons conducted by the Illinois State Neurosurgical Society showed that 90 percent of the respondents had been sued, and that there was an average of five medical liability claims per neurosurgeon. According to Crain's Chicago Business, in 2003 there were 1,066 medical liability cases filed in Cook County, while only 60 such cases were filed in Lake and DuPage counties. Even after adjusting for population, medical liability actions are five times more common in Cook County than in adjacent well-populated counties. According to ISMIE, the largest underwriter of professional liability insurance in Illinois, the average premium to be paid in 2005 by a mature neurosurgeon in Cook County will be $235,000 for $1 million in coverage.

Given that in 2003 there were 46 settlements in malpractice actions in Cook County above $2 million, and 11 were $10 million or higher, according to Chicago Lawyer, it becomes clear why $1 million of liability insurance in Cook County seems inadequate to the many neurosurgeons who have left the county, retired, or restricted their practices—some no longer perform intracranial procedures, for example—in order to limit their liability exposure.

According to our survey of ER directors, long waits for ambulance transfer service, long ambulance rides, and prolonged searches for beds available in the intensive care unit have become common. Although neurosurgical ICU bed availability was not addressed in this study period, their availability has become a problem at all Cook County academic centers despite efforts to increase their number. Transferred patients have filled additional beds quickly.

Steps are being taken to address what evidence suggests is a growing problem. Neurosurgical department chairs of all of the Cook County academic programs met recently to discuss neurosurgical ER coverage, and it was noted that the problem of increased numbers of transferred patients is an experience shared by all of the academic medical centers in Cook County. In order to further define the scope of the problem, each center will begin collecting data on emergency transfers and evaluate the impact it has on patients. This data will be pooled, analyzed, and summarized for report to the Illinois State Medical Society and the state trauma commission. Recommendations will be made to enact changes in the current emergency and transfer systems to accommodate the shrinking number of neurosurgeons available in community hospital emergency rooms.

It is clear that the lack of neurosurgical ER coverage in Cook and some surrounding counties is straining the emergency system and that patients are being adversely affected when their treatment must be delayed while appropriate care is sought. Unfortunately, this problem might be expected to worsen. According to the AANS *Journal of Neurosurgery*, the average neurosurgeon retires around age 61. At 14 of the 20 community hospitals in Cook County that still have neurosurgical ER coverage, the average age of neurosurgeons is 61. ■

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# Private Practitioner Feels "Emergency" Pressures

## 24/7 ER Coverage Proves Too Much for Two-Neurosurgeon Practice

MANDA J. SEAVER

"It's a huge issue for everyone," said Clark Allen, MD, referring to neurosurgical emergency coverage. Dr. Allen is one partner of a two-neurosurgeon practice in Pocatello, Idaho. The city of about 70,000 in southeastern Idaho is home to Idaho State University and the Portneuf Medical Center, a level 3 trauma center. For five years Dr. Allen and Scott Huneycutt, MD, provided the facility with continuous neurosurgical emergency coverage, but in October 2004 the duo made the difficult decision to discontinue on-call services.

"We were covering neurosurgical emergencies 24/7, so each of us was on call every other night," Dr. Allen said. "Beyond the significant pressure this schedule places on one's personal life, it also effectively destroys an elective practice."

He noted that emergency services, particularly trauma, are reimbursed at low rates if at all. "To survive, we have to generate income from our elective practice," he said. However, when emergency cases run long, elective cases must be rescheduled, creating a situation in which a neurosurgeon might operate all night on a trauma case for which no payment will be received, and then be forced to reschedule a surgery that would have been fully compensated.

"A neurosurgeon in private practice is a business owner," said Dr. Allen. "If we don't make enough to cover overhead and meet payroll, we can't keep the practice open and that means no neurosurgical service for anyone in our area."

To compensate specialists for financial losses resulting from on-call responsibilities, some facilities offer a per diem stipend. Dr. Allen's practice had received a stipend for two years, and while he thinks that reaching an agreement with the hospital on a stipend would help with reestablishment of on-call coverage, he also believes that stipends represent a short-term solution to a complex problem.

"Overhead costs keep rising while our reimbursement for services is declining," he said. "This means that stipends would need to increase each year in order to even come close to adequate reimbursement for on-call services. Few, if any, facilities can continue these increases indefinitely."

Into this conundrum, enter the medical liability crisis.

"Idaho is a tort reform state with a $250,000 cap on pain and suffering damages, but even so my medical liability premiums have increased 20 percent to 25 percent each year," Dr. Allen related. "If the situation is this bad here, I can't imagine what my colleagues in other areas are going through."

He believes that liability related to trauma, particularly for head and spine cases, is the driving force behind the premium increases, and further, that liability exposure at a community facility may be greater for specialists like neurosurgeons because many neurosurgical procedures rely on the availability of state-of-the-art technology.

"A community facility just can't afford to keep up with the 'whiz bang' technology available at the level 1 trauma centers, which usually are located at major academic centers," he said. "We grapple with

# ICU W/O Walls Eases N.Y. Academic Center's ER Crunch

## Neurosurgeons Still On Call 24/7

MANDA J. SEAVER

"I'm on call as we speak," said James T. Goodrich, MD, pausing on a Friday afternoon for a brief telephone discussion of neurosurgical emergency coverage at a busy New York academic medical center.

Dr. Goodrich, the director of pediatric neurosurgery at Montefiore Medical Center in the Bronx and a professor of neurosurgery at Albert Einstein College of Medicine, is one of Montefiore's five neurosurgeons.

In the last five years Montefiore, a level 1 trauma center for which there is neurosurgical emergency coverage at all times, has experienced a 45 percent increase in ER patients. According to a hospital statement, a program implemented in 1998 has helped handle the current 180,000 ER visits annually without becoming overwhelmed.

Through its "ICU without walls" program, the hospital established a rapid response team of 16 critical care specialists. These specialists, who are cross-trained in all critical care disciplines, are present at all times to treat patients in the intensive care unit and in the emergency room, as well as medical and surgical patients who become critically ill.

According to Montefiore's director of critical care medicine, Vladimir Kvetan, MD, the program contrasts with the typical ICU, where "specialists practice only in their own discipline in a specific type of unit and only during daytime hours."

Kvetan stated that the program's objective is to expand services to patients and improve the quality of care without increasing the number of ICU beds. "Another important benefit...is that we treat continuously the most severely ill post-op neurosurgical, cardiothoracic, and general surgery patients," he said. "Through our services, they get better care sooner. This frees up the OR more quickly for other patients."

From a neurosurgeon's perspective, the program does help extend care for neurosurgical patients in emergencies. "An intensivist is available to respond quickly and can order a computed tomographic scan and other tests," said Dr. Goodrich. "But they can't perform neurosurgical procedures, such as place intracranial pressure monitors."

Neurosurgical residents also are part of the rapid response team. "The chief resident can start a case, but the attending still needs to oversee it," Dr. Goodrich said. "So the program hasn't affected the call schedule; we're still on call 24/7."

He has seen an increase in transfers of neurosurgical patients to Montefiore. "A level 1 trauma center is an enormous expense, and reimbursement hasn't kept pace," he explained. "The result is that relatively few hospitals are equipped to handle neurosurgical emergencies, and when either the facilities or the neurosurgeons to staff them aren't available to care for patients locally, those patients come to us."

While the benefits of the "ICU without walls" program are many, finding beds for neurosurgical patients in the intensive care unit remains a challenge. "The ICU bed crunch is real," said Dr. Goodrich, a circumstance he attributed in part to changes in practice patterns, such as increased interventional work performed by neuroradiologists.

When asked if changing lifestyle expectations are contributing to the availability of neurosurgeons for emergencies, Dr. Goodrich conceded that operating on an epidural hematoma at 3 a.m. is always tough when one's regular schedule starts at 7 a.m., but said that such a scenario is nothing new.

"The key thing is the environment," he said. "Neurosurgeons practicing now have much greater medicolegal exposure, while at the same time reimbursement is declining."

These twin pressures are particularly apparent with regard to emergency cases. "When we see a patient in the ER, we're often not paid," he observed. "Yet our liability exposure is enormous."

The result is that neurosurgeons at both ends of the career spectrum are feeling squeezed. "Senior level neurosurgeons are retiring early, while others are limiting their practices," he said. He related one example that hits close to home: "One of my best and brightest former residents recently told me that he is no longer doing cranial procedures. He didn't even want to tell me—cranial work is a big part of what he trained for—but he saved $100,000 on his liability insurance premium and felt he had to make the practical decision." ■

**Manda J. Seaver** is staff editor of the *Bulletin*.

the pressure to provide a service that sometimes may be beyond the reach of our facility."

Dr. Allen and his partner are expanding their practice into the surrounding rural areas, mindful that the population base of 150,000 to 200,000 is barely enough to support two neurosurgeons. "There is economic pressure for one of us to leave, but it would make life difficult for the one who remains and it would be nearly impossible for one person to provide continuous neurosurgical emergency coverage."

The irony is that Dr. Allen and his partner were recruited by Portneuf Medical Center to bring neurosurgical care and emergency coverage to Pocatello. Dr. Allen, who just received his certification from the American Board of Neurological Surgery in 2004, knew he wanted to live in the West and made the move from Virginia to Idaho especially for the opportunity in Pocatello.

"In a community like this, you see your patients at the Wal-Mart," he said. "You feel an obligation to provide a service to the community."

For the present, neurosurgical emergency cases are stabilized at Portneuf and transported by Life Flight helicopter to the University of Utah Medical Center's level 1 trauma center in Salt Lake City, about 150 miles away. ■

**Manda J. Seaver** is staff editor of the *Bulletin*.

# The Ohio Experience

## Neurosurgical Liability Insurance Premiums Explained

**Patrick W. McCormick, MD**

In Ohio, professional liability insurance premiums do not vary based on the scope of a physician's neurosurgical practice. Stated another way for the sake of clarity, there is no reduction in physician premiums for limiting one's neurosurgery practice to spine surgery.

There currently are five large professional liability insurance carriers underwriting liability policies for physicians in Ohio. Some of these carriers have multistate portfolios and do not offer a specialized rate for neurosurgeons who limit their practice to surgical spine care in any market. These carriers and their approximate Ohio market share include: GE Medical Protective (30 percent), Medical Assurance (20 percent), OHIC (13 percent), American Physician Assurance Corporation (7 percent), and The Doctors Company (6 percent).

Despite the fact that there is no formal premium reduction for eliminating cranial surgery, many neurosurgeons in Ohio are quick to point out that, although base premiums are not modifiable by limiting their scope of practice, premium escalation secondary to a single claim settlement is a major issue. It is their belief that such episodes can be mitigated by limiting exposure to areas of practice that are most likely to result in lawsuits. Typically the practice areas limited are cranial surgery cases involving emergency or trauma.

Several neurosurgeons further pointed out in focused discussions of this topic that on one hand price controls limit reimbursement while on the other hand practice operating costs escalate. The resulting financial stress on the practice makes it necessary for some to limit their scope of practice to routine low-risk, high-volume procedures and avoid the interruption of emergency cases. The pressure to adopt these practice habits is increasing as professional liability insurance premiums continue to increase because, for the average general neurosurgery practice, insurance premiums are a major driver of operating overhead cost. In Ohio, neurosurgeons' liability premiums have grown at an annualized rate of 30 percent over the past four years, even for those with a good claims history.

**"Although base premiums are not modifiable by limiting scope of practice, premium escalation secondary to a single claim settlement is a major issue."**

Neurosurgeons in Ohio are not alone in their sentiments. A cross section of physicians in Ohio was surveyed to determine how factors related to medical liability are affecting their practices. The 696 survey respondents said they are modifying their practices in response to liability pressures. Already 37 percent have begun to limit their practice to low-risk patients, and another 15 percent have indicated an intention to do so. Even more striking is that 57 percent of physicians who perform high-risk procedures have indicated that they are already less willing to perform some high-risk procedures, and another 28 percent indicated that they are planning to begin limiting performance of some high-risk procedures.

The evidence demonstrates that rather than a simple premium reduction, there is a complex set of factors underlying the decision by neurosurgeons to limit practice to spine surgery only. This complex set of factors similarly affects other Ohio surgeons who perform high-risk specialty procedures, as well as the general population of physicians. Given the underlying drivers of this situation, it is predictable that without significant and effective reforms the number of neurosurgeons who choose to limit the scope of their practice will increase, aggravating the workforce strains that currently exist within our specialty. ■

**Patrick W. McCormick, MD, MBA**, is a neurosurgeon in private practice in Toledo, Ohio.

# Baseline ER Survey Explores System's Cracks

## 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey

> "The neurosurgical ER coverage situation is the biggest crisis I have seen in my 20-year career as a neurosurgeon."

> "I am distressed by the number of patients who seem to be coming in from other hospitals (for whatever reason) and who are in much worse condition than if they had gotten care immediately."

> "I had to voluntarily withdraw my cranial privileges because I was being swamped. Not only can we not find a new neurosurgeon to help me out, but our transfers [of patients] out have increased 300 percent since I stopped covering intracranial cases. It is clear that access to timely care is being dramatically affected (patients are being transported sometimes 100 miles away to get help; patients are waiting two months to see me in the office)."

> "My partner and I are the only remaining neurosurgeons to cover a level 2 trauma center with 3,000 visits per year. One neurosurgeon is unable to cover because he cannot obtain malpractice insurance approved by the hospital. The other neurosurgeon who covered is retiring in two weeks."

**Manda J. Seaver**

These comments reflect some of the many concerns related to neurosurgical emergency and trauma coverage expressed by respondents to the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey. Solicited for participation in this Web-based survey were 3,213 neurosurgeon members of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons who were actively practicing in the United States.

The return of 1,031 completed surveys represents what Perception Solutions, the independent company which conducted the survey, called an "impressive" 32 percent rate of return. The sample size of 900 or more for most questions provides a 95 percent level of confidence that results are accurate within 5 percentage points. Simply said, one can be 95 percent certain that the answers observed in the sample also are true for all those whose participation in the survey was solicited.

Respondents were generous with their insights, offering more than 350 comments via open text fields. Moreover, greater than half the respondents volunteered their personal contact information and their availability for follow-up inquiries. These indicators, combined with the high rate of return, demonstrate neurosurgeons' intensity of feeling on the subject of neurosurgical emergency coverage.

"Numerous discussions at neurosurgical meetings large and small coupled with pleas for help from neurosurgeons across the nation have left no question that neurosurgeons as a group are concerned about who provides neurosurgical emergency coverage, how such coverage is provided, and a host of related issues, including patients' well-being," said James R. Bean, MD, a member of the AANS Executive Committee and immediate past chair of the AANS/CNS Washington Committee. "But until now there was little reliable, independent data available that could begin to give

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# Where Are the Pressure Points?

**Differences in ER Stresses Found Between Neurosurgeons in Private and F/T Academic Practice**

The survey consistently found significant differences between neurosurgeons in private practice and those in full-time academic practice. Some of those differences are illustrated in this table.

| Action | Private Practice | Full-Time Academic Practice |
|---|---|---|
| Do not provide "full" 24/7/365 ER coverage. | 23% | 2% |
| Of those who limit ER coverage, percentage of those who do so because there are too few neurosurgeons in the practice or location to provide 24/7/365 coverage. | 44% | 0% |
| Of those who limit ER coverage because there are too few neurosurgeons, percentage in solo practice. | 40% | 0% |
| On call every night or every other night. | 23% | 11% |
| Of those on call every night or every other night, percentage in solo practice. | 31% | *—— |
| Of those on call every night or every other night, percentage on call for two or more hospitals. | 45% | 28% |
| On call every fifth to eighth night or less often. | 28% | 57% |
| Hospital requires emergency to be evaluated within 30 minutes. | 64% | 56% |
| Having difficulty negotiating ER call schedules with their hospitals. | **41% | 18% |
| Receive a stipend for on-call service. | 38% | 15% |
| Weighted average stipend per day (as of July 1, 2004). | $1,127 | $895 |
| Have been sued by a patient seen through the emergency department. | 42% | 25% |
| Professional liability carrier offers a discount for limiting or eliminating neurosurgical emergency services. | 17% | 5% |
| Cover all neurosurgical emergency services (do not limit provision of pediatric, trauma, cranial or other emergency services). | 43% | 74% |
| Use a physician extender.*** | 15% | 54% |
| A physician extender should be trained to perform trauma-related procedures.*** | 33% | 55% |
| Practice at a level 1 or level 2 trauma center. | 63% | 95% |
| Practice at an academic health center or level 1 or level 2 trauma center and have noticed an increase in transfers [of patients] during the past two years. | 33% | 62% |

Data Source: 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey

**Sample size is too small to be statistically valid.*

***Of the private practice neurosurgeons experiencing difficulty negotiating emergency call schedules with their hospitals, 55 percent are in private, solo practice. Of this group, 73 percent do not receive a monetary stipend for emergency call coverage.*

****A "physician extender" usually is defined as a physician assistant or nurse practitioner. Some respondents commented that they included residents in this category.*

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shape to the complex web of issues surrounding neurosurgical emergency coverage and aid us in developing guidance for our members."

Dr. Bean called the survey a valuable baseline study and observed that repeating it at intervals in the future would help organized neurosurgery identify trends in neurosurgical emergency care. "Our ultimate goal is to help neurosurgeons proactively address pressures that prevent the delivery of timely neurosurgical emergency care and empower them to implement changes in their local systems that ultimately will improve patient outcomes and accessibility to such care."

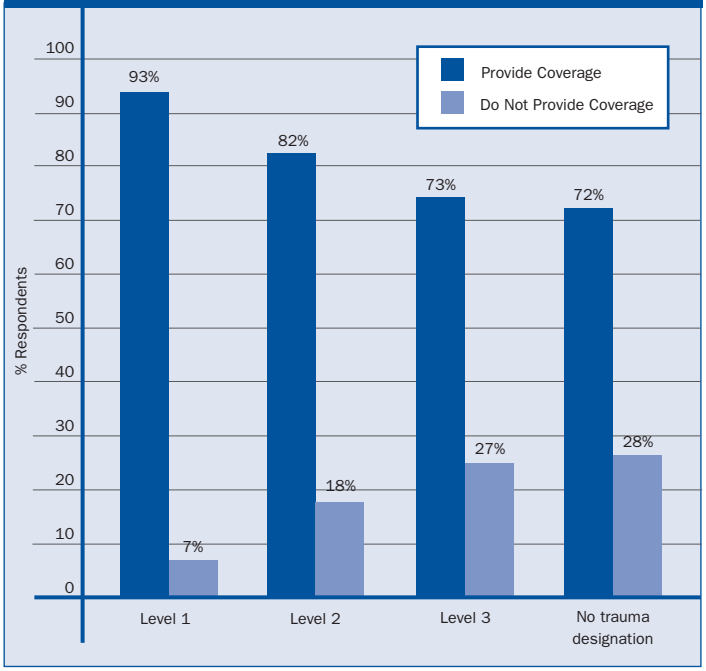
### A Snapshot of Respondents

Survey results were representative of neurosurgeons across the United States. Nearly 50 percent of respondents were in private practice. Almost 30 percent were in full-time academic practice, while just over 16 percent were in private practice with an academic appointment. About 6 percent were with the federal government or "other."

Of the nine practice types the survey specified, all were represented. The majority of responses were from small groups of two to five neurosurgeons (37 percent) and medium groups of six to 20 neurosurgeons (24 percent).

Slightly more than half of all respondents took call at more than one facility. However, when asked what level of trauma care their hospital provides, they were asked to indicate the facility with the highest level of trauma care. The majority were on call for level 1

**Neurosurgical Emergency Coverage by Trauma Center Designation**




Data Source: 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey

## Trauma Center Levels

**While state emergency medical services authorities designate trauma centers, a hospital can ask the American College of Surgeons Committee on Trauma to verify that it meets the criteria for a level 1, level 2, level 3, or level 4 trauma center. "Essential" and "desirable" criteria for each of the four levels of verification are delineated in Resources for Optimal Care of the Injured Patient, published by the ACS. A listing of verified trauma centers is available at www.facs.org/trauma/verified.html; a brief summary of criteria for each level follows.**

### LEVEL 1

At the apex of emergency care is the level 1 trauma center, a comprehensive regional resource that can provide total care for every aspect of injury. Key elements include 24-hour in-house coverage by general surgeons and prompt availability specialists, including neurosurgeons.

### LEVEL 2

The level 2 trauma center can initiate definitive care for all injured patients. Key elements include 24-hour immediate coverage by general surgeons and coverage by specialists, including neurosurgeons.

### LEVEL 3

The level 3 trauma center has demonstrated an ability to provide prompt assessment, resuscitation, stabilization of injured patients, and emergency operations. Key elements include 24-hour immediate coverage by emergency medicine physicians, the prompt availability of general surgeons and anesthesiologists, and transfer agreements with level 1 and level 2 trauma centers for patients who require more comprehensive care.

### LEVEL 4

The level 4 trauma center has demonstrated an ability to provide advanced trauma life support prior to transfer of patients to a trauma center that can provide more comprehensive care.

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(42 percent) and level 2 (34 percent) trauma centers, which require neurosurgical availability. About 8 percent served at level 3 centers and 17 percent said their hospital had no trauma designation.

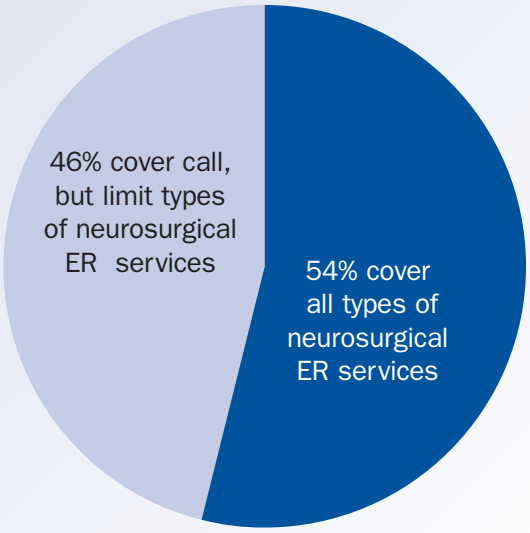
Although the survey did not specify geographic region, this information was available for 576 of the respondents who volunteered their contact information. There was representation from all geographic regions: South, 34 percent; Midwest, 28 percent; Northeast, 17 percent; Pacific, 13 percent; and Rocky Mountain, 7 percent. This information was judged statistically valid and is included in analysis of selected results.

### The Developing Picture

A solid majority of neurosurgeons or their practices, 83 percent, still provide at least one hospital with "full" neurosurgical emergency coverage, defined as 24 hours a day, seven days a week, 365 days a year. However, a closer look at the data showed significant differences in call coverage by practice type and setting.

Full-time academicians in large or medium neurosurgical groups provided the highest percentage of full emergency coverage for a hospital, 98 percent, compared with other respondents. The percentage of full coverage dropped to 77 percent for those in private practice and declined even further for those in solo practice (48 percent).

**Nearly Half of On-Call Neurosurgeons Limit ER Services**




Data Source: 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey

There also was a significant difference in the percentage of full neurosurgical emergency coverage by trauma center designation. The survey showed a span of 20 percentage points between respondents' coverage of a level 1 facility (93 percent) and a level 3 facility (73 percent); neurosurgical coverage of a hospital without a trauma designation was slightly less (72 percent).

Most neurosurgeons who covered emergency or trauma cases, 66 percent, said they were on call every third, fourth, or fifth to seventh night. But a significant number, 19 percent, were on call every night or every other night. When called, the majority of respondents, 60 percent, were required by their hospital to respond within 30 minutes; for another quarter of respondents, a "prompt" response was required.

Of the 17 percent of respondents who did not provide full neurosurgical emergency coverage, more than one third gave as their principal reason that there are not enough neurosurgeons in their practice or location to provide full coverage. Another 29 percent said "other"—several commenters indicated that the underlying reasons were a combination of factors—while 17 percent cited professional liability risk. Differences were starkly apparent between neurosurgeons in private practice and those in full-time academic practice: 44 percent of private practitioners cited as their principal reason too few neurosurgeons in the practice or location compared with none of the academicians, and 18 percent of private practitioners cited professional liability risk, compared with none of the academicians.

The vast majority of respondents, 87 percent, said their professional liability insurance carrier did not provide a discount for limiting or eliminating some types of neurosurgical emergency services (but see "The Ohio Experience" in this issue for an explanation of how reducing risk by limiting services may result in a lower premium). Of those who had been sued, slightly more than one third said the suit was initiated by a patient seen through the emergency room. Spinal (27 percent) and cranial (27 percent) trauma cases together accounted for more than half of these lawsuits. When nontrauma cases are included, cranial lawsuits (50 percent) occurred more frequently than spinal suits by 10 percentage points. The remaining lawsuits involved pediatric trauma and nontrauma (7 percent) as well as a small percentage of other cases.

The likelihood of a lawsuit varied significantly by practice type and setting. Full-time academic practices, medium and large group practices, and large multispecialty practices were at significantly less risk of being sued than other practice types and settings. At greatest risk of being sued were those in private practice and those in a solo practice setting.

Interestingly, while neurosurgeons said they were sued most often for cranial and spinal cases, respondents limited pediatric services far more often. Nearly two thirds of respondents limited emergency coverage for children, including both trauma (31 percent) and nontrauma (34 percent) cases. Neurosurgeons also limited

cranial trauma and nontrauma (15 percent) and spinal trauma and nontrauma (15 percent). About 4 percent of respondents did not take any trauma call. In summary, only 54 percent of neurosurgeons who provide emergency call coverage performed all neurosurgical services; nearly half of respondents, 46 percent, limited the types of cases they cover in some way.

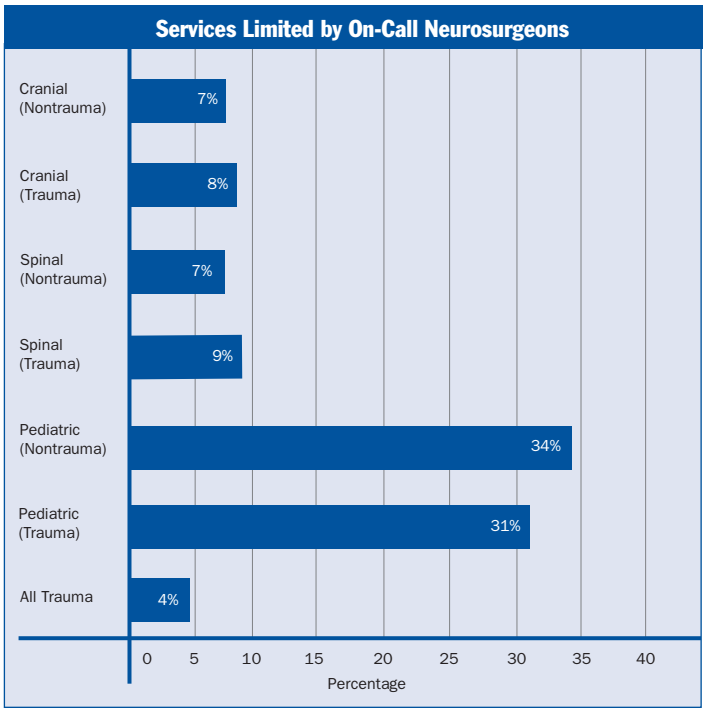
Nearly half of those practicing at an academic medical center or at a level 1 or level 2 trauma center said they had noticed an increase in the number of neurosurgical trauma cases in the last two years. Nearly one third of respondents attributed this increase to on-call neurosurgeons who transfer patients under Emergency Medical Treatment and Labor Act rules to a "higher level of care" facility. The remaining two-thirds of respondents were fairly equally divided in their assessment of the cause, indicating that in their area:

- there are sufficient numbers of neurosurgeons, but some or all do not provide emergency call coverage;
- there are insufficient numbers of neurosurgeons available to provide full emergency call coverage; or
- neurosurgeons' withdrawal of cranial privileges has necessitated the transfer of all cranial emergencies to a facility where cranial services are provided.

One third of all survey respondents reported difficulty negotiating emergency contracts with their hospitals. Significant differences were reported among geographic regions, trauma center levels, practice settings and practice types. Those in the Rocky Mountain area reported experiencing the most difficulty (45 percent), closely followed by those in the Pacific region (43 percent) and in the South (41 percent). By trauma center designation, those practicing at a level 2 trauma center (41 percent) were most likely to have trouble negotiating call schedules, as were those in solo practice (53 percent) and those in solo practice with shared facilities (46 percent). There was a difference of 23 percentage points between private practitioners who reported difficulty negotiating their call schedules (41 percent) and those in full-time academic practice (18 percent).

Very few differences were found among all groups when asked what type of neurosurgical emergency call coverage their hospitals were requiring. There was a statistical tie at 32 percent for the top complaints: hospitals are insisting on full, "24/7/365" call coverage, and hospitals do not provide a stipend for call coverage. About 20 percent of respondents said their hospitals are insisting that they respond to non-neurosurgical emergencies. Despite the fact that most neurosurgeons across the board said they are required by their hospitals to respond to emergencies within 30 minutes, very few respondents (6 percent) said their hospitals were imposing an unreasonable or unrealistic response time.

"What all this means is that even though most neurosurgeons are still providing full neurosurgical emergency coverage, there are some cracks in the system," said Dr. Bean. "The picture that is forming suggests that some neurosurgeons are straining to provide emergency coverage, particularly those in private practice and in solo or small group settings, and that some patients, particularly trauma victims and children distant from a level 1 trauma center, may be at risk for not receiving timely and appropriate neurosurgical emergency care."




Data Source: 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey

## Shoring up the System: Stipends and PEs

The survey asked specifically about two measures undertaken by some facilities to shore up neurosurgical emergency coverage: paying stipends for on-call coverage and using physician extenders for some procedures.

**Stipends** About one third of respondents were compensated for emergency coverage by a stipend, which partially covers low reimbursement for emergency cases and lost revenue from elective cases. The likelihood of receiving a stipend varied by practice type, practice setting, and by trauma center designation. Neurosurgeons in private practice or in solo or small-group practice settings and those on call at level 1 or level 2 trauma centers were significantly more likely than others to receive stipends. Those practicing in the Pacific and Rocky Mountain regions also were more likely to receive stipends.

Many survey respondents commented on how emergency cases are disruptive to respondents' regular clinical and surgical schedule and why stipends are helpful.

One respondent who did not receive a stipend explained the

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situation this way: "I am not paid to take call and in fact, [taking emergency call] is clearly a money-losing proposition. I can't bill enough for [cases that] come through the ER to offset the time spent and the ill effect it has on my [elective] practice... it is high-liability work and as one of the few independent, solo practitioners, one of my greatest concerns is that my [professional liability insurance] rate could force me [out of solo practice].

Another respondent, who received a stipend, commented, "The hospital is helping to cover costs by paying an on-call stipend...As with most of us, the stipend allows me to continue in practice."

While stipend amounts varied somewhat by region, trauma designation, practice type and practice setting, analysis revealed a weighted average stipend of $866 per day. About a quarter of those who received a stipend received $1,001 to $1,500 per day, and this range held true with the following exceptions. Those in the Pacific region were more likely to receive $750 per day or less. Those on call at level 3 trauma centers were as likely to receive $500 per day or less as $1,001 to $1,500 per day. Full-time academicians and those in "other" practice types were more likely to say they were "not paid by the day." By practice setting, all large neurosurgical groups that received stipends were paid $501 to $750 per day, while small multispecialty groups were significantly more likely to receive $2,001 to $3,000 per day.

**Physician Extenders** Three questions looked at current practices and opinions regarding the use of physician extenders, a collective term that commonly refers to physician assistants and nurse practitioners, although a few respondents commented that they included residents in their responses to these questions. Slightly less than one third of respondents said they currently were using a PE to first evaluate emergency patients. Even less, about 15 percent, said they currently use a PE to perform invasive neurosurgical trauma services such as placement of intracranial pressure monitors. However, 42 percent of respondents thought that PEs should be trained to perform trauma-related invasive procedures.

Two questions involved the training of general surgeons to perform some neurosurgical procedures. When asked if general surgeons should be trained to insert intracranial pressure monitors where neurosurgeons are not available, one third of respondents said yes. Affirmative responses dropped to one fifth when asked if general surgeons should be trained to perform emergency craniotomies where neurosurgeons are not available.

The survey recorded several comments related to this topic, which has been the subject of much debate particularly in neurotrauma and critical care circles. Two respondents volunteered summaries of their viewpoints:

- "I feel we need to train physician assistants and nurse practitioners to provide initial neurosurgical evaluation and care under the direct supervision of a neurosurgeon who is available and can review X-rays...via teleradiology. We should train these people and certify them so that they, and neurotrauma, remain under the direct control of neurosurgery. This is the only way I see to extend care in the face of a decreasing neurosurgical workforce and increasing demand while preserving the quality of care we want our patients to receive."

- "Neurosurgeons need to remain intimately involved in providing neurosurgical care coverage and neurocritical care, and it is a mistake to start the slippery slope [by which] we remove our involvement. The problem is that we need help, including liability exclusion for trauma care (good Samaritan type help); better reimbursement for [trauma procedures]...; and training of more neurosurgeons [as there are] not enough...to cover all the trauma centers without stressing the system."

Complete survey results, including additional data analysis, are expected to be available this spring at www.AANS.org.

"Our intention in conducting this survey was to provide neurosurgeons and their practices with detailed and practical information related to neurosurgical emergency care," said Dr. Bean. "While we recognize that one survey alone cannot provide exhaustive data or solve this complex problem, we believe it is a step in the right direction." ■

**Stipend Distribution and Amount, as of July 1, 2004, by Practice Type***

| Amount | Private | Private (academic affiliate or appointment | Full-Time Academic | Other |
|---|---|---|---|---|
| N= Neurosurgeons who received a stipend | 182 | 75 | 46 | 18 |
| $500/day (night) or less | 18% | 13% | 24% | 6% |
| $501 to $750/day | 13% | 15% | 2% | 6% |
| $751 to $1000/day | 15% | 15% | 22% | 28% |
| $1001 to $1500/day | **25%** | **28%** | 20% | 11% |
| $1501 to $2000/day | 9% | 11% | 0% | 6% |
| $2001 to $3000/day | 8% | 3% | 2% | 0% |
| over $3000/day | 1% | 3% | 0% | 11% |
| Not paid by day | 12% | 13% | **30%** | **33%** |

Data Source: 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey. Percentages are rounded.

**About one third of all survey respondents received a stipend for on-call services. The weighted average stipend was $866 per day.*

**Manda J. Seaver** is staff editor of the *Bulletin*.

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# Tradition Transition

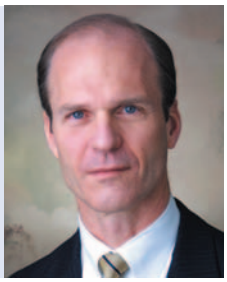
## *Socioeconomic Factors Underlie ER Rifts*

The American College of Emergency Physicians surveyed 4,444 U.S. emergency department directors between April and August 2004. Thirty-two percent responded, with 66 percent reporting inadequate on-call specialist coverage. Of those who reported specialty shortages, the largest group, 27 percent, thought the greatest harm resulting from lack of specialty coverage was "risk or harm to patients who need specialty care," followed by 21 percent whose response was delay in care, and 18 percent whose response was growing frequency of transfers. This survey, undertaken some eight months after revisions to the Emergency Medical Treatment and Labor Act became effective, asserted that the easing of EMTALA requirements has worsened, rather than improved, specialty on-call coverage.

Last fall 3,213 neurosurgeons practicing in the United States were asked to respond to the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey. The survey sought answers to questions about which neurosurgeons limit emergency call and why, how much call coverage is being provided, what problems are encountered with hospitals, what alternative coverage arrangements are established with hospitals, what stipends are received for coverage, and the like. Thirty-two percent responded; survey results are reported in this issue.

The two surveys illustrate, in principle, the opposite sides of the emergency call coverage debate. On the one hand, hospitals have a charitable tradition of providing emergency care to the communities they serve. This tradition is one of generally providing, without discrimination between rich or poor at the time of urgent need, the safety net to anyone. This tradition was transformed into a federal mandate in 1986 by EMTALA, which established by law the responsibility of hospitals to treat trauma, and to prevent worsening of injury by withholding urgently needed and available resources, based on a patient's ability to pay. EMTALA defined an unfunded national social policy of a citizen's right to emergency care.

On the other hand, it is physicians who provide the emergency care. Specialists, such as neurosurgeons, who bear much of EMTALA's load by virtue of their affiliation with a hospital, see the other side of the policy: practice disruption, uncompensated work, heightened malpractice risk in a storm-tossed liability climate, unrelenting call assignment, irreplaceable loss of private or off-duty time, recurring sleep deprivation, thankless personal sacrifice, and substantial civil liability if sanctioned for EMTALA violation.



*James R. Bean, MD, is editor of the* Bulletin *and the AANS treasurer. He is in private practice in Lexington, Ky.*

Today, the medical community and neurosurgeons nationwide are deeply concerned about patients who must be transferred in order to receive neurosurgical emergency care. Judging by numbers alone, there are not enough neurosurgeons to provide emergency coverage for all the nation's emergency rooms. Some of those who are available are insisting on more bearable call schedules, relinquishing cranial surgical privileges, resigning from hospital staffs, instituting ER diversion policies, and demanding stipends in compensation for covering emergency call, all in an effort to find refuge from liability risk and decreasing reimbursement for professional services, among other concerns.

This emergency call conflict has contributed to what only can be termed a profound cultural shift in neurosurgeons' perception and conduct with respect to professional responsibility. While neurosurgeons once accepted unlimited demands on time and attendant unending personal sacrifice, now many demand time protection. They once accepted disruption of their practices, unquestioned hospital call duty, unacknowledged charitable contribution of time and expertise, and unshielded medical liability in a high-risk setting. They now expect reasonable scheduling stability, reasonable duty limits, compensatory remuneration, and protection from unwarranted lawsuit exposure.

This cultural change marks a break in the tradition of a neurosurgeon's unquestioning acceptance of a community service obligation that is counterbalanced by the opportunity to use the community's hospital and medical support system resources for neurosurgical practice. It is a break also from a more strictly defined traditional medical staff obligation to provide emergency room services in exchange for medical staff privileges. In both respects, the professionalism which once dictated public and personal duty has been replaced by the more formal dictates of public law (EMTALA) and private contracts between neurosurgeons and hospitals.

This issue of the *Bulletin* examines the socioeconomic and legal issues affecting neurosurgical emergency care. We, a profession in transition, are searching for a new equilibrium and a means for ensuring that the neurosurgical emergency safety net is dependably in place. ■

## Neurosurgeons: Old Hands at Emergencies

Long before there were emergency rooms, or neurosurgeons, there were neurosurgical emergencies. The prehistoric trephined skulls of Peru and elsewhere may reflect attempts to deal with some sort of head injury. The Smith papyrus of ancient Egypt indicates an understanding of the severity of brain and spinal cord injuries. Hippocrates described skull fractures and their surgical treatment in a systematic way.

In the treatment of head injury and infection, surgeons of the 17th through 19th centuries set the stage for the development of what we now call neurosurgery. The French surgeon Henri Le Dran was the first to propose that it is the accumulation of intracranial blood, rather than a skull fracture itself, that causes decreased consciousness. Percival Pott expanded on this work and described the clinical difference between a hematoma and an intracranial infection. The first craniotomy based on neurological signs may have been performed in 1871 by Paul Broca. A laborer, having sustained a parietal skull fracture, became aphasic, hemiplegic, and then comatose. After localizing the lesion to his eponymous area, Broca removed a large epidural abscess.

**"Hey, we've got a guy here for you to see …"**

The evolution of modern neurosurgery was driven in large part by the need to deal with emergencies. Cushing's first research, in Kocher's laboratory, was on a dog model of increased intracranial pressure. The two world wars provided an unfortunate context for establishing standards for training and technique in neurosurgery.

What has made neurosurgical emergency coverage seem like an unwanted stepchild? Neuroimaging, improvements in operating tools and techniques, and third party insurance all have made elective cases the great majority of most neurosurgeons' practice and interest. Several factors, among them increasing numbers of lawsuits, have made emergency call more and more burdensome. But before abandoning the ER, consider neurosurgeons' ongoing fight for their role in such other subdisciplines as spine surgery, endovascular procedures, and stereotactic radiosurgery. It ill behooves us to voluntarily give up our role in such an important and historical part of our still-young profession. ■

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KATIE O. ORRICO, JD

# The "New" EMTALA Regulations

*What Every Neurosurgeon Needs to Know to Comply*

Since the enactment of the Emergency Medical Treatment and Active Labor Act in 1986, EMTALA's ever-changing rules have made it increasingly difficult for neurosurgeons to determine just what the law requires of them. This is a particularly frustrating circumstance considering that, although EMTALA enforcement has been uneven, both hospitals and physicians can be fined up to $50,000 for each EMTALA violation and in some cases excluded from the Medicare program.

In an effort to clarify several EMTALA issues, the Centers for Medicare and Medicaid Services issued a proposed regulation on May 9, 2002, which elicited more than 650 comments. The American Association of Neurological Surgeons and the Congress of Neurological Surgeons submitted comments, as did more than 75 individual neurosurgeons. On Sept. 9, 2003, the CMS issued a "new" final rule, which went into effect on Nov. 10, 2003. Subsequently, on May 13, 2004, the CMS published the revised Appendix V: Interpretive Guidelines—Responsibilities of Medicare Participating Hospitals in Emergency Cases. The interpretive guidelines do not have the force of law, but they contain authoritative interpretations and clarifications of statutory and regulatory requirements to assist the CMS in making consistent determinations about a provider's compliance with EMTALA. Taken together, these two documents constitute the current EMTALA "rules of the road."

The revised regulations do not fundamentally alter EMTALA, which requires hospitals with emergency departments to provide a medical screening examination to any individual who comes to the emergency room and requests such an examination and, if an emergency medical condition exists, necessary stabilizing treatment within a hospital's capability and capacity.

Clearly, the revisions are a vast improvement over past regulations. They are not perfect, however, and a number of unintended consequences may stem from them. For example, many hospitals and emergency physicians are reporting increased difficulties in getting neurosurgeons to serve on call. In addition, neurosurgeons who are practicing at academic centers or level 1 or level 2 trauma centers are reporting an increase in the number of patient transfers from these community hospitals. The regulations were meant to address those situations in which hospitals were forcing neurosurgeons to provide continuous, "24/7/365" call. Unfortunately, while the regulations do state that such coverage is not required, the CMS leaves it to the hospitals and physicians to work out call schedules amongst themselves, and neurosurgeons may still find themselves in situations where their hospitals are requiring onerous call schedules.

## Provisions and Guidelines for On-Call Requirements

The new regulations now include additional provisions related to EMTALA's on-call requirements, and the interpretive guidelines provide additional clarification on what is expected of both hospitals and on-call physicians to meet these requirements.

**Regulation Provision:** §489.24(j) *Availability of on-call physicians.*

(1) Each hospital must maintain an on-call list of physicians on its medical staff in a manner that best meets the needs of the hospital's patients who are receiving services required under this section in accordance with the resources available to the hospital, including the availability of on-call physicians.

**Interpretive Guidelines:**

■ **Hospitals have the ultimate responsibility for ensuring adequate on-call coverage.** How to provide on-call coverage is a decision made by hospital administrators and the physicians who provide such coverage for the hospital. Each hospital has the discretion to maintain the on-call list in a manner that best meet the needs of the hospital's patients who are receiving services required under EMTALA in accordance with the resources available to the hospital, including the availability of on-call physicians.

■ **No physician is required to be on call at all times.** On-call coverage should be provided for within reason depending upon the number of physicians in a specialty.

■ **There is no predetermined ratio that CMS uses to identify how many days a hospital must provide on-call coverage based on the number of physicians on staff for that particular specialty.** In particular, the CMS has no rule stating that whenever there are at least three physicians in a specialty, the hospital must provide continuous "24/7" coverage in that specialty.

■ **All relevant factors will be considered in determining EMTALA compliance,** including the number of physicians on staff, other demands on these physicians, the frequency with which the hospital's patients typically require services of on-call physicians, and the provisions the hospital has made for situations in which a physician in the specialty is not available or the on-call physician is unable to respond. The CMS has stated, "We are aware that practice demands in treating other patients, conferences, vacations, days off, and other similar factors must be considered in determining the availability of staff."

■ **The on-call physician must go to the emergency room if called.** The treating emergency physician determines whether the

on-call physician must physically assess the patient in the ER. The decision as to whether the on-call physician responds in person or directs a nonphysician practitioner (such as a physician assistant) as his or her representative to respond to the ER is made by the on-call physician. The on-call physician is ultimately responsible for the individual regardless of who responds to the call.

■ **Repeatedly or typically directing patients to be transferred to another facility may be an EMTALA violation.** The on-call physician must come to the hospital when called.

■ **Patients cannot be transferred to the physician's office for treatment.** The physician must come to the hospital to examine the individual if requested by the treating emergency physician.

■ **Individuals must be listed on the call list.** Physicians' group names are not acceptable for identifying the on-call physician. Individual physician names are to be identified on the list.

■ **Physicians are not considered on call just because they are visiting their own patients.** Physicians are not required to be on-call for their specialty if they are not on the hospital's on-call list.

■ **Response time must be stated in minutes.** Hospital policies should state the expected response time in minutes. Terms such as "reasonable" or "prompt" are not enforceable by the hospital and therefore are inappropriate in defining a physician's response time.

**Regulation Provision:** §489.24(j) *Availability of on-call physicians.*

(2) The hospital must have written policies and procedures in place—

(i) To respond to situations in which a particular specialty is not available or the on-call physician cannot respond because of circumstances beyond the physician's control.

**Interpretive Guideline:**

■ **Hospitals must have backup plans when the on-call physician is not available.** The hospital must have policies and procedures (including backup call schedules or the implementation of an appropriate EMTALA transfer) to be followed when a particular specialty is not available or the on-call physician cannot respond because of situations beyond his or her control. A CMS representative has stated orally that such a backup plan can include going on diversion status.

(ii) To provide that emergency services are available to meet the needs of patients with emergency medical conditions if [the hospital] elects to permit on-call physicians to schedule elective surgery during the time that they are on call or to permit on-call physicians to have simultaneous on-call duties.

**Interpretive Guidelines:**

■ **Physicians are permitted to perform elective surgery while on call.** However, a hospital may have its own internal policy prohibiting elective surgery by on-call physicians to better serve the needs of its patients seeking treatment for a potential emergency medical condition. When a physician has agreed to be on call at a particular hospital during a particular period of time, but also has scheduled elective surgery during that time, that physician and the hospital should have planned backup in the event that the physician is called while performing elective surgery and is unable to respond to the situation, or an appropriate EMTALA transfer should be implemented.

■ **Physicians can be on call simultaneously at more than one hospital.** When the on-call physician is simultaneously on call at more than one hospital, all hospitals involved must be aware of the on-call schedule as each hospital independently has an EMTALA obligation. The medical staff bylaws or policies and procedures must define the responsibilities of the on-call physicians to respond, examine and treat individuals with emergency medical conditions. The hospital must have policies and procedures that are to be followed when a particular specialty is not available or the on-call physician cannot respond because of situations beyond his or her control. The CMS has stated that a patient may be transferred to the location of the on-call physician provided that the benefits of transfer outweigh the risks of the patient's condition materially deteriorating.

## Unresolved Issue: Selective Call May Be a Violation

Although the new regulation and interpretive guidelines have served to improve the understanding of what EMTALA requires, one provision seems to suggest that physicians are not permitted to take "selective" call:

Physicians who refuse to be included on a hospital's on-call list but take calls selectively for patients with whom they or a colleague at the hospital have established a doctor-patient relationship, while at the same time refusing to see other patients (including those individuals whose ability to pay is questionable), may violate EMTALA. If a hospital permits physicians to selectively take call while the hospital's coverage for that particular service is not adequate, the hospital would be in violation of its EMTALA obligation by encouraging disparate treatment.

This provision could be interpreted in at least two ways. First, it seems to suggest that EMTALA mandates that physicians serve on call. However, the regulations and other elements of the interpretive guidelines state that physicians are not required to be on call at all times and that hospitals have the discretion and flexibility to set forth on-call schedules that best meet their needs. Further, the guidelines note that hospitals are permitted to exempt certain medical staff members (such as senior physicians) from their call schedules. Secondly, the provision could be interpreted to mean that physicians who are seeing established patients in the hospital must be available to the emergency department. Again, the regulations and guidelines do not support this interpretation. The AANS and CNS are seeking further clarification of this provision. ■

**Katie O. Orrico, JD**, is director AANS/CNS Washington office.

# Considering On-Call Compensation?

*Informal Interviews Illustrate Stipend Disparities*

In a survey of emergency department medical directors conducted April-August 2004 by the American College of Emergency Physicians to evaluate problems with on call coverage, researchers concluded that "the decrease in the number of medical specialists willing to be on call in the nation's emergency departments is a looming national healthcare crisis."

The lack of specialist backup is causing delays in patient treatment, an increase in patient transfers between emergency rooms and untimely access to specialists, thereby placing patients at risk. These shortages are intensified by the medical liability crisis, which is forcing many specialists, including neurosurgeons, out of practice or requiring them to seek revenue generation elsewhere.

Neurosurgeons are negotiating with their hospitals for fewer on-call hours and/or to be paid by the hospital for call coverage. Requests by neurosurgeons nationwide to be compensated for on-call service seem to be growing in frequency, but although according to the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey, only about one third of neurosurgeons currently receive a stipend. These requests have, however, been met with mixed responses by affiliated hospitals.

Several informal interviews with representatives of neurosurgical practices in the south and northeast demonstrate the disparities among those who do and do not receive stipends for on-call service.

In the mid-south, a group of neurosurgeons tried to negotiate an equitable arrangement for on-call coverage. After an unsuccessful negotiation, the group withdrew its medical privileges from that hospital. The hospital responded by hiring *locum tenens* to cover emergency call, but after six months hired the group to cover at $2,000 per day. In the same region, a neurosurgeon in solo practice exclusively covers one local hospital's emergency room for $1,500 per day.

**Requests by neurosurgeons nationwide to be compensated for on-call service are growing in frequency.**

A northeastern group reported that they have been paid for on-call coverage for more than 10 years. Initially the stipend was based on a percentage of their charges for the patients seen in the trauma unit, and then it became a fixed rate per relative value unit. The group now receives a daily stipend of $2,000 per day with a cost of living adjustment built into the contract.

Another neurosurgeon stated that he was paid $2,200 for each day that he covered emergency call more often than one day in seven. For example, if five neurosurgeons were taking call, each would average two more days per month than the "1 in 7" and would receive $4,400 per month on average.

A group in the northeast covers one main hospital and receives $75,000 per year, which is paid to the corporation and in which all of the group's physicians share equally. Additionally, some physicians cover a hospital 45 miles away on select weekends. Call begins at 5 p.m. on Friday and ends at 7 a.m. on Monday; they receive $8,000 per weekend.

Other physicians have not been as successful in their negotiations and have elected to limit their on-call availability. One southeastern group tried to negotiate compensation with two large hospitals, without success. Although the hospital requested to schedule the group for full "24/7/365" emergency call, the group declined and elected to be unavailable to the two hospitals for emergencies every other weekend, Tuesdays and Wednesdays. Neither hospital has developed a plan for the days that there is no neurosurgical emergency service available, but tries to transfer patients to other emergency rooms. As a result, sometimes no emergency room will take the patient.

In the mid-south recently, after 18 years of service with a local hospital, a four-physician group notified one of the three hospitals they had covered routinely that they would limit their unassigned call to 10 days per month. Notification occurred after the hospital had hired an osteopathic physician to cover neurosurgery. (The physician was a hospital employee.) The physicians stated they would like to negotiate compensation for emergency call coverage for anything more then 10 days per month. The hospital responded by placing the four physicians on a 14-day suspension of privileges, but would not "officially" respond to inquiries by the physicians as to why they had been placed on the suspension. Unofficially, a high-ranking hospital administration representative cited "call" as the reason for the suspension. The physicians were not given adequate notice and time to appear before the Credentials Committee, which met without the physicians' input. The "unofficial" notice the physicians received was that the committee had recommended that they be placed on permanent suspension. The group promptly resigned their medical privileges at that hospital.

While the ideal resolution has not been reached in many areas, there clearly is a need to balance hospital and physician duties with the practical realities of overcrowded emergency rooms and the concerns and practice demands of on-call specialists. ■

**Tresa Sauthier, PhD**, is the liaison of NERVES, www.nervesadmin.com, to the AANS/CNS Washington Committee. She is chief executive officer of Neurosurgical Associates of Northeast Arkansas PA, Jonesboro, Ark.

# Emergency and Critical Care Services

*Knowing Nuances of E&M Coding Can Speed Payment*

Although the majority of a neurosurgeon's practice occurs in the office or operating room, the nature of neurosurgical problems also may require evaluating and managing patients in the emergency room. This Coding Corner will examine the options for describing these emergency services.

Until a patient is admitted to the hospital, the patient is considered an outpatient, according to Current Procedural Terminology, CPT. Services performed in the office or other ambulatory care facilities are coded using CPT's Office or Other Outpatient Service codes. If an ER physician asks a neurosurgeon to consult on an ER patient's case, the neurosurgeon has several options for proper coding of this service. If the patient is discharged from the ER by the ER physician, then the neurosurgeon may use Office and Other Outpatient Consultations codes 99241–99245. If the neurosurgeon admits the patient to the hospital, then the Initial Hospital Care codes 99221–99223 should be used. However, if another attending physician admits the patient, then the Initial Inpatient Consultation codes 99251–99255 should be used.

It is important to understand that coders may run into difficulties with these claims based on where the particular evaluation and management service was performed. Some insurers expect ER services of any sort to be coded with the ER Service codes 99281–99285. While it is correct that these codes can be used by any physician, it is expected that ER physicians will bill for their services with these codes. If a neurosurgeon asks a patient to go to the ER for evaluation by the neurosurgeon (outside of the normal scope of services associated with a procedure previously done) and the patient is not admitted, then these codes are most appropriate for the neurosurgeon to use. However, if the ER physician also has seen the patient and will use the same codes, the insurer might not pay another identical code that is submitted by the neurosurgeon. It is possible to use Office and Other Outpatient Service codes for ER services when the patient is not admitted to the hospital, since the ER is an ambulatory care facility.

**Although a series of ER Service codes are available, there are several circumstances in which the other codes described in this article more accurately reflect the service that has been provided.**

As with any evaluation and management service provided within 24 hours before performing a procedure, for payment of both the service and the procedure, a modifier must be appended to the code. There are two modifiers that are used to designate an evaluation and management code as the encounter during which the decision for surgery or other procedure was made. If a procedure such as a nerve injection is performed at the bedside, then the –25 modifier would be appended to the code, while if a procedure is performed in the operating room, then the –57 modifier would be used.

There may be circumstances, such as acute trauma, for which the neurosurgeon provides critical care services. Although Critical Care Service codes are commonly associated with intensive care unit patients, these codes are chosen based upon the type of service provided rather than where the service is provided. In order to use a critical care code, the patient must be critically ill or injured such that the malady impairs one or more vital organ systems with a high probability of imminent or life-threatening deterioration in the patient's condition. These services require decision-making of high complexity in assessing, manipulating and supporting single or multiple organ systems.

The codes 99291–99292 reflect the total time spent by the physician providing critical care services, even if the time is not continuous. However, the time recorded should be that exclusively devoted to treating the patient, including review of test results or imaging, consultation with other medical staff, discussing management with the patient's family, or documenting these services in the medical record. CPT allows for critical care and other evaluation and management services to be reported by the same physician treating the same patient in a single day to account for those services that do not meet the criteria of critical care services. The code 99291 is used for critical care service between 30 minutes and 74 minutes, and subsequent time is billed using 99292 for every additional 30 minutes.

It is important for the neurosurgeon to be familiar with the nuances of coding for emergency services. Although a series of ER Service codes are available, there are several circumstances in which the other codes described in this article more accurately reflect the service that has been provided. Proper coding of these services should lead to appropriate compensation for the actual service provided. ■

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# Survey: AANS Members Are Satisfied

*Meeting Discounts, CME Services, Bulletin Top Member Favorites*

KATHLEEN T. CRAIG

What are the three best predictors of members' satisfaction with the American Association of Neurological Surgeons? A higher number of contacts with the AANS Executive Office, high ratings on the AANS *Bulletin*, and satisfaction with member discounts offered on course or annual meeting registration, according to the latest AANS survey.

In August 2004, the AANS surveyed 2,540 members who were certified or eligible to be certified by the American Board of Neurological Surgery and who were practicing in the United States and Canada, and asked them to evaluate the AANS and its services. Over 600 members told the AANS how they want their education delivered, what their most important priorities are and which AANS services are most important to them. The survey registers a 95 percent confidence level that results are accurate plus or minus 5 percent or better. This essentially means that the same survey conducted 100 times would yield the same results 95 times.

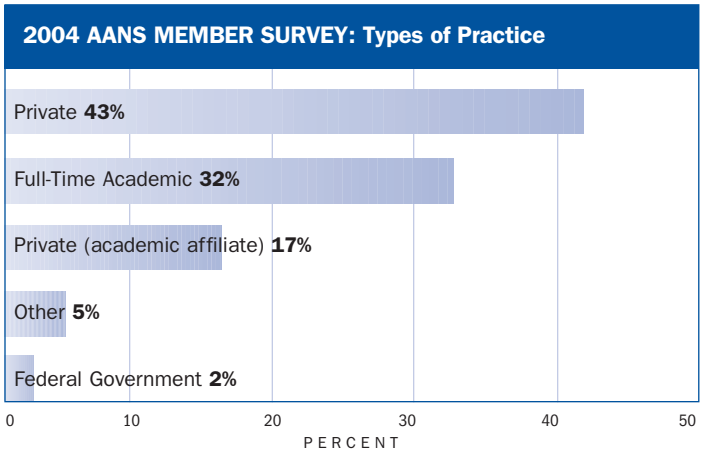
It is no surprise that concerns about malpractice premiums and reimbursement issues were the most frequently reported major challenges facing neurosurgeons. And, AANS representation/collective strength was the most-cited reason for members renewing their membership (more than 40 percent). In fact, 98 percent of members indicated they would renew their membership.

Statistical analysis based on age, number of years in practice, practice location, practice type or practice setting revealed few significant differences in how respondents answered survey questions.

**Continuing Education** The core of the AANS' mission is to advance the specialty of neurological surgery, and a substantial portion of the survey was dedicated to learning about members' educational needs. At times what is most interesting is what was *not* found. The survey asked members what criteria, other than course topic, they use in deciding whether or not to attend a meeting. Faculty, meeting dates (scheduling) and an "enjoyable destination" played the greatest roles in members' decision to attend a meeting; meeting locations near their practices were less important.

An open-ended question about topic preferences for courses yielded many write-in suggestions for minimally invasive spinal fusion, spinal instrumentation, endoscopy and cerebrovascular techniques. Neurosurgical coding and risk management also received high interest ratings of 78 percent and 69 percent, respectively.

In addition to course attendance, the AANS also wanted to learn about members' interest in self-education opportunities. Members of all ages and demographics were equally interested in DVDs and 'archived" online education such as case studies (84 percent) or articles (79 percent respectively). Educational CDs received 75 percent of responses, and almost 74 percent were interested in online courses. The AANS asked members for their single most important deciding factor when purchasing self-education products. Respondents indicated:




- Presenter/faculty/author: 28 percent
- Ability to obtain CME: 26 percent
- Product price: 21 percent

When asked which scientific journal they would read if they could read only one, 42 percent of members chose *Neurosurgery,* and 41 percent selected the AANS *Journal of Neurosurgery*.

**Member Services** Member discounts on course or annual meeting registration was the highest rated member benefit (89 percent), followed by:

- complimentary CME tracking: 87 percent
- AANS *Bulletin:* 82 percent
- complimentary personalized online CME transcripts and award certificates through MyAANS.org: 81 percent

Members also reported that maintaining a Web site to educate the public about neurosurgery and the role of neurosurgeons was important (80 percent).

**Demographics** About 43 percent of the respondents indicated they were in private practices, while 32 percent were full-time academicians. There is a 10-point shift from private practice to full-time academic compared to the 2002 survey. It is possible that more members from academic settings chose to respond to the survey. However, due to the large sample size demographic representations were maintained.

When asked about percentage of time spent in subspecialty areas, about 58 percent selected "spine," while 31 percent chose "pediatrics" and 25 percent selected "endovascular."

A demographic profile of AANS membership based on this survey is available in the membership area of www.AANS.org. ■

**Kathleen T. Craig** is AANS director of marketing.

# Beyond the Blood-Nervous System Barrier

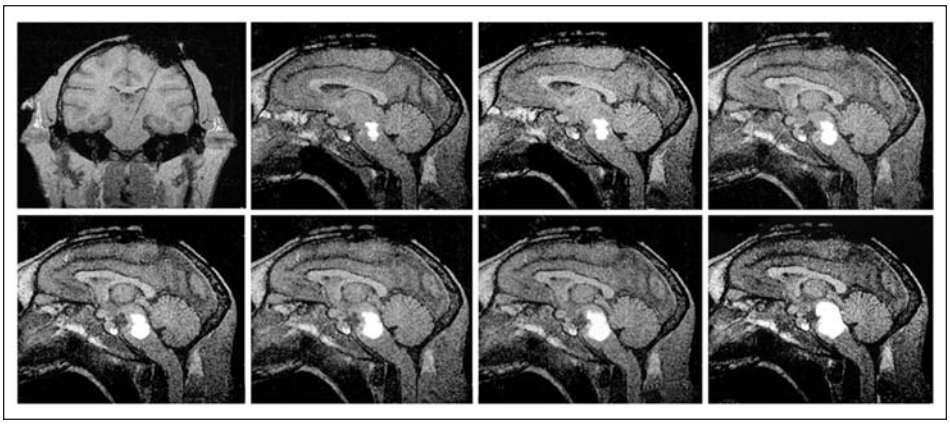
## *Convection-Enhanced Delivery Targets CNS Disorders*

Effective drug delivery remains the single greatest obstacle to the treatment of many central nervous system, or CNS, disorders. Despite the development of numerous compounds that have promising therapeutic effects in the laboratory, the clinical application and efficacy of these agents has been restricted by the limitations associated with currently available delivery techniques.

Current CNS delivery techniques rely on systemic delivery, intrathecal or intraventricular administration, and polymer implantation. However, systemic delivery is restricted by systemic toxicity, nontargeted distribution, and the inability of many substances to cross the blood-nervous system barrier. Diffusion-dependent methods, which include intrathecal or intraventricular administration and polymer implantation, similarly are limited by nontargeted distribution, nonuniform dispersion, and ineffective volumes of distribution.

To overcome these obstacles, Edward Oldfield, MD, and colleagues at the National Institutes of Health developed a method of drug delivery in the late 1980s called convection-enhanced delivery. This method employs bulk flow rather than diffusion to distribute small and large molecules within a targeted region of the CNS. Direct perfusion of the CNS interstitial spaces using convective force is achieved by a slight hydrostatic pressure generated by a syringe pump. Convective delivery allows for the safe, targeted, homogeneous delivery of agents into small and large tissue volumes (multiple orders of magnitude larger than diffusion-driven processes for large molecules) in a manner that bypasses the blood-nervous system barrier.

An emerging advantage of convection-enhanced delivery is the ability to use imaging technology that allows drug distribution to be seen during infusion. Recent animal studies have shown that gadolinium- and iodine-based imaging compounds can be used as surrogate tracers to safely and accurately track drug distribution in real-time using magnetic resonance imaging, as shown on these pages, and computed tomography imaging. These tracers show the distribution of both small- and large-molecular-weight compounds with similar convective properties during infusion. Real-time monitoring that ensures precise drug delivery to the desired location will be a critical component for investigating the use of convection-enhanced drug delivery and attaining optimal treatment results in humans.



Real-time T1-weighted magnetic resonance imaging in the coronal and midsagittal planes of a monkey brain at various times during the infusion of gadolinium-bound albumin (total volume of infusion 85 microliters). Upper left: The coronal image demonstrates the position of the cannula tip (arrow) just before starting the infusion of gadolinium-bound albumin. Midsagittal images reveal that the region infused with gadolinium-bound albumin (white) increased as the infusion progressed (approximately every 20 to 40 minutes; left to right and top to bottom), filling large portions of the pontine and midbrain regions of the brainstem. The volumes of infusion seen in these midsagittal images include 7.5, 15, 30, 40, 50, 65, and 85 microliters. From R.R. Lonser et al., *Journal of Neurosurgery*, 97:905-913, 2002

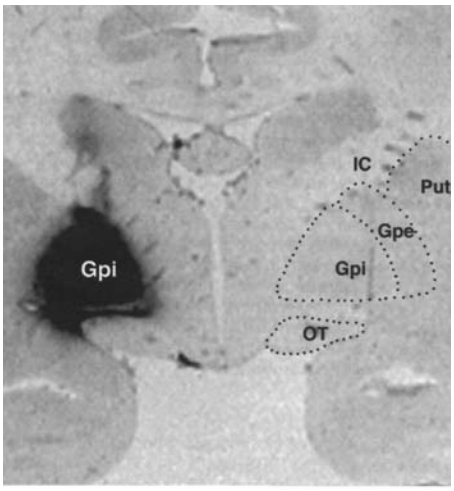
The unique properties of convection-enhanced delivery and the new imaging techniques have led to development of new treatment paradigms for various CNS disorders.

**Malignant Tumors** Because glial neoplasms are locally invasive, usually spread along white matter tracts, and have an exceptionally low metastatic potential, the properties of convection-enhanced delivery offer a promising new approach for their treatment. Convection-enhanced delivery can perfuse large regions of the CNS with high concentrations of small- or large-molecular-weight therapeutic agents. Several ongoing clinical trials have shown that convective delivery can distribute small-molecular-weight chemotherapeutic agents and large-molecular-weight toxins conjugated to tumor-specific proteins, such as transferrin conjugated to diptheria toxin, to treat high-grade glial neoplasms. While the efficacy of the various infused agents remains to be determined, early evidence from these trials suggests that convection can be used safely for drug delivery while at the same time overcoming many problems associated with other drug delivery techniques used for tumor therapy.

**Parkinson's and Other Neurodegenerative Diseases** Convection-enhanced delivery is being investigated for treatment of specific aberrant CNS nuclei or regions that underlie the pathophysiology of a number of neurodegenerative diseases, including Parkinson's disease. Recently, convection-enhanced delivery of quinolinic acid was used to create lesions in targeted areas of the globus pallidus interna and effectively treat primates that have Parkinson's disease induced by MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine). Based on this success, a clinical protocol was developed in which a surrogate imaging tracer is co-infused with a reversible chemical agent (such as muscimol, a gamma-aminobutyric acid agonist) to show the distribution of the infused agent and temporarily block neuronal activity in specific regions or all of the globus pallidus interna. This treatment paradigm permits functional testing to determine the clinical consequences before selective neuronal lesioning with quinolinic acid. The combination of these techniques should allow precise anatomical placement of lesions and determination of lesion distribution; it also will provide careful clinical assessment of the treatment effects before definitive therapeutic intervention. Using similar convective delivery techniques, surgeons eventually could tailor a lesion to maximize patient benefit, while avoiding difficulties inherently associated with conventional surgical methods.

In addition, the convection-enhanced delivery of commonly used therapeutic agents to overcome the physiological causes of Parkinson's disease is being investigated. These agents locally enhance the production of dopamine, enhance or support striatal neurons such as glial cell line-derived neurotrophic factor, or manipulate gene products via viral delivery. It also may be possible to employ convective delivery of such agents for the treatment of Alzheimer's disease and other neurodegenerative and metabolic disorders.

**Epilepsy** The ability to pharmacologically alter the activity of precise regions of the brain with a reversible neuron-specific suppressive agent may provide a new method for treatment of medically intractable epilepsy. A clinical trial is being designed to selectively and temporarily suppress neuronal activity using targeted convective infusion of muscimol to suppress neurons in the epileptic region. As an increasing number of neurons in and around the epileptic focus are suppressed, clinical effects—cessation of seizures and/or deterioration in neurological function—will be analyzed. This approach could identify the epileptic focus and subsequently may more accurately define the minimum treatment area that is required for surgical success. The data obtained from this clinical trial may also support the use of convection-enhanced delivery of either neurotransmitter-specific or lesioning agents into an epileptic focus to treat patients with medically intractable epilepsy.




Coronal section of monkey brain stained for biotin (black region) through the globus pallidus interna (white lettering, Gpi) in an animal infused with 5 microliters of biotinylated albumin. The infusate completely fills the Gpi with minimal extravasation in the globus pallidus externa (Gpe) or adjacent structures. Abbreviations on the side opposite the infusion indicate regions of the internal capsule (IC), putamen (Put), Gpi, Gpe, and otic tract (OT). From R.R. Lonser et al., *Journal of Neurosurgery*, 91:294-302, 1999.

**Pain** Because convection-enhanced delivery can be used to uniformly perfuse cranial and peripheral nerves as well as their associated structures, there are a number of disorders, including pain, that may be treated by perfusion of these areas. Recent animal studies have shown that convective delivery of resinferatoxin (a vanilloid receptor 1 agonist that selectively ablates type 2 A-delta-fiber and C-fiber neurons) into peripheral nerves or their associated ganglia can eliminate pain and associated inflammation. Because A-beta-fiber, type 1 A-delta-fiber and motor neurons are not affected by resinferatoxin infusion, normal tactile sensation, perception of harmful heat, acute pain sensation and motor function are reliably preserved after infusion. These findings suggest that intraganglionic perfusion with resinferatoxin may provide a new site-specific, physiologically based treatment of painful disorders such as trigeminal neuralgia.

In conclusion, convection-enhanced delivery of various therapeutic compounds in conjunction with real-time imaging of distribution should permit a number of new treatment paradigms for CNS disorders to be developed. Greater understanding of the molecular basis of neurological disorders and further development of new compounds are expected to expand the potential role of convection-enhanced delivery in the future. ■

**Russell R. Lonser, MD**, and **Edward H. Oldfield, MD**, are neurosurgeons in the surgical neurology branch of the National Institute of Neurological Disorders and Stroke, the National Institutes of Health, in Bethesda, Md.

The NS Innovations column explores neurosurgical innovations that are changing the way neurosurgeons practice. The column's emphasis is applied science, including topics such as new instrumentation and novel applications of familiar technology, but discoveries in basic science that have the potential to impact neurosurgery and aid our patients will be considered as well. I invite you to send your ideas for this column to me at william.couldwell@hsc.utah.edu.

*William T. Couldwell, MD, NS Innovations editor*

# The Second Revolution in Medical Education

*What Course Should Neurosurgery Take?*

Nearly 100 years since American medical education was rocked by an uprising, another revolution is underway which may have equally significant and long-term impact. A century ago, the revolt was mostly about *what* was being taught to qualify one as a physician, while today's battle is over *how* to provide physicians with appropriate education and training. Both conflicts have wide ranging impact on the entire scope of medical practice. Understanding the history surrounding the first revolution and what followed can provide insight into an approach to the current issues.

In 1800s America, an intellectual debate raged between allopathic medicine and homeopathic medicine. The American Medical Association commissioned a report through the Carnegie Endowment for the Advancement of Teaching to evaluate all medical education programs. Abraham Flexnor's landmark report in 1910 strongly favored the allopathic model and specifically endorsed the John Hopkins model of medical education: formal basic science classroom work followed by an apprenticeship model of clinical education. In the wake of this report, economic advantage was bestowed by the Carnegie Endowment and other foundations on selected medical schools, forcing the majority of medical schools to close their doors. This allowed the AMA to acquire firm control over both medical education and licensure. Strong pharmaceutical support (drug sales depended on the disease model promoted by allopathy) and legislative initiatives ensured that the monopoly flourished.

During the next few decades, the effects of this medical revolution were fully realized. Specialty medicine took root and specialty boards began advanced licensure. The system then seemed to flourish and grow for the next 50 years. However, hidden within this unfettered growth of a monopoly were the seeds of the second revolution.

As the 21st century neared, American medicine and medical education faced a number of daunting challenges. One was the exponential growth of medical science and increasing subspecialization, an occurrence that particularly strained graduate medical education. Rapidly rising healthcare costs were another strain which led politicians and consumers to look more closely at the medical profession. Consumerism and public demands for accountability were on the rise. Organized medicine was slow to respond and, as a result, external solutions were imposed.

## The Second Revolution

The current upheaval in American medicine is about how to provide the best medical education and institute a career-long educational process which will limit errors and achieve the best quality of patient care. In an attempt to achieve these goals, a spectrum of mandates was imposed on medicine. The mandates with the greatest impact on graduate medical education are the work hour regulations and the components of the Accreditation Council for Graduate Medical Education core competency project.

Neurosurgery, a specialty of only about 3,200, is particularly vulnerable to these mandates. Our training programs are among the longest and most stressful, and the work hour restrictions are particularly difficult to accommodate in the residency programs. Neurosurgery faculty traditionally has adhered to educating as role models rather than as mentors.

The future of neurosurgery depends on the profession's ability to successfully train neurosurgical residents after making the necessary adjustments to the constraints of the changed environment. Many in neurosurgery have spent considerable time and effort fighting the changes and trying to win exemptions for our "unique" specialty, with little success to date. A more productive approach might be to accept the changes and find ways to make them benefit our residents, our patients, our faculty, and our specialty.

To accomplish this, neurosurgery as a whole must work to redefine our relationships with each other. Collaborative rather than competitive efforts among training programs can ease the burden of meeting the ACGME core competency project. Without such collaboration, we may be forced to endure less desirable solutions utilized in programs quite different from ours such as internal medicine and psychiatry.

Embracing and instituting a more effective educational program may pay unexpected dividends in job satisfaction, quality of training, and loyalty to the training institution. Cooperative efforts between those in academic and nonacademic practice could help ease the burdens of time restrictions and extending shared endeavors to the wider scope of a neuroscience program would bring even greater strength and flexibility to all neurosurgeons. Engaging the public, patients, and perhaps even government will raise confidence rather than skepticism and help restore to neurosurgery its independence.

American medicine and neurosurgery must survive this second great revolution in medical education. Many lives depend on it. If the rise of the AMA during the 20th century taught us one thing, it should be that there is strength in unity. Working together and looking forward may be the only choice we have. ■

**Deborah L. Benzil, MD**, is associate professor in the Department of Neurosurgery at the New York College of Medicine, Valhalla, N.Y.

# NEWS.ORG

AANS/CNS Sections Committees Associations Societies

**NPHCA Chair Appointed** A. John Popp, MD, will lead Neurosurgeons to Preserve Health Care Access, the organization through which the AANS and CNS advocate medical liability reform. Dr. Popp, the 2003-2004 AANS president, succeeds Stewart B. Dunsker, MD, who was the driving force behind the successful 2004 medical liability reform campaign conducted by Doctors for Medical Liability Reform. The DMLR is composed of medical specialty societies, among them the NPHCA.

**AANS Launches Resident Mentoring Program** A new, no-cost AANS program matches residents with mentors who can advise them on the concerns and demands of a career in neurosurgery. The AANS Resident Mentoring Program, led by Samuel Hassenbusch, MD, PhD, matches each participating resident with a seasoned neurosurgeon mentor based upon the criteria that the resident deems most important, such as the type of neurosurgical practice—private, academic, military, geographic location and subspecialty. "Mentoring is one of the most important things that we can do for residents, who are our future colleagues," said Dr. Hassenbusch. "Like many of my colleagues, I have acted as a mentor informally for many years; I expect that formalizing the mentoring process through the AANS will broaden the experience beyond one's own program, allowing participants at either end of the career spectrum to benefit from new perspectives that are bound to enrich their experience." Program participants additionally have the opportunity to attend the invitation-only Resident Mentoring Program reception, which will be held during the 2005 AANS Annual Meeting, April 16-21 in New Orleans. Residents and neurosurgeons interested in participating in the Resident Mentoring Program can contact Vanessa Garlisch at (847) 378-0550 or vlg@AANS.org.

**ACS Installs Neurosurgeon President** In October the American College of Surgeons installed Edward R. Laws, MD, as its 85th president. Dr. Laws, professor of neurosurgery at the University of Virginia, Charlottesville, is currently president of the World Federation of Neurosurgical Societies. He also served as AANS president from 1997 to 1998.

**WINS Program Looks at Neurosurgeons' Value to Hospitals** *(Contributed by Deborah L. Benzil, MD)* Martha Marsh enlightened a crowded room of neurosurgeons about the value that neurosurgeons bring to a hospital as the 2004 Alexa Canady Lecturer. Marsh, president and chief executive officer of Stanford Hospital and Clinics, delivered her address during the Women in Neurosurgery meeting held during the CNS Annual Meeting in San Francisco. Her subject was the delicate balance between neurosurgeons and hospitals, a particularly timely topic as finances dominate the concerns of many neurosurgeons throughout the country. Marsh, a nationally recognized leader in healthcare administration, asserted that close examination of fixed costs (primarily personnel), constraints to cost reduction (personnel shortages, increasing technology), the demographics of an aging American population (all baby-boomers will reach the age of 40 in 2004), and unfunded mandates are all critical components of the current healthcare crisis as seen from the hospital perspective. As cardiac surgery declines with the success of medical intervention, neurosciences are emerging as the premier service line and revenue source for many hospitals. Finding ways to work together will be essential for financial security for both hospitals and neurosurgeons. This spring the AANS will introduce a new practical course devoted entirely to this important concept, "Maximizing Opportunities: Building Success with your Hospitals and Community."

**WFNS to Hold 13th World Congress in Marrakesh** The World Federation of Neurosurgical Societies will hold "Bridging the Gap in Neurosurgery in Marrakesh: Crossroads of the World's Cultures" in Marrakesh, Morocco, June 19-24. "The 13th Congress of Neurological Surgery promises to offer extraordinary scientific, professional and social events for all members of our profession," said Edward R. Laws, MD, WFNS president. The early registration deadline is March 25. Information is available at www.marrakesh2005.org.

**Applications for 2005 NASS Grants Due May 6** The North American Spine Society is offering research grants for investigative research on the spine. Offered are the Clinical Traveling Fellowship and the Research Traveling Fellowship. The deadline for applications is May 6. Information is available at www.spine.org/research/researchprogram.cfm.

**2005 Van Wagenen Fellowship Award Recipient Named** Devin Binder, MD, of the University of California-San Francisco is the 2005 William P. Van Wagenen Fellowship awardee. Dr. Binder will study surgical techniques and approaches to epilepsy treatment at the University of Bonn with Dr. Johannes Schramm and colleagues, who have established an epilepsy research and treatment center. Awarded annually, the William P. Van Wagenen Fellowship is offered for post-residency study in a foreign country for a period of 12 months. In 2004, the award stipend was increased to $60,000 with an additional $15,000 award to the laboratory sponsoring the Van Wagenen Fellow. For more information about past fellows or the William P. Van Wagenen Fellowship, visit www.AANS.org/research/ fellowship/aans.asp.

**Nominations Sought for 2005 Young Neurosurgeons Public Service Citation** The deadline for nominations for the 2005 Young Neurosurgeons Public Service Citation is March 18. The award is for extraordinary or unusual public service that is not specific to organized neurosurgery. To nominate a candidate, contact Chris Ann Philips at cap@AANS.org.

**Stereotactic Section/ASSFN Pick Boston for 2006 Meeting** (*Contributed by Michael Schulder, MD*) In June 2006 the AANS/CNS Section on Stereotactic and Functional Neurosurgery and the American Society for Stereotactic and Functional Neurosurgery will meet in Boston. After many years of meeting only once every four years, the group is moving toward a biannual conference schedule that reflects the burgeoning interest in stereotactic and functional neurosurgery. The most recent meeting, in May 2004, focused on neuromodulation. This had been planned as a "transitional" meeting leading toward a biannual spring conference. However this was the group's most successful meeting ever with more than 300 registered attendees. Additional information is available at www.assfn.org. ■

# Four AANS Members Suspended

## *Board Considers Six Complaints of Unprofessional Conduct*

Six complaints of unprofessional conduct were considered at the November meeting of the American Association of Neurological Surgeons Board of Directors. As recommended by the AANS Professional Conduct Committee, the board dismissed one complaint and imposed sanctions in five cases. In one of those cases, the member will appeal the board's sanction to the AANS membership at the annual meeting in April of this year.

The following is a highly condensed summary of the reasons for the four sanctions imposed:

**Abbott J. Krieger, MD: AANS Membership Suspended One Year.** In a letter supporting a medical malpractice lawsuit, Dr. Krieger wrote that it was below the neurosurgical standard of care to perform an anterior C4–5 fusion for a painful C4–5 mobile subluxation. Dr. Krieger stated that because there was not a disc herniation, the standard of care required that the procedure be done posteriorly. Dr. Krieger further testified that dysphagia (secondary to pharyngeal plexus injury) following the anterior procedure indicated that "excessive force" had been used during surgery. There was no independent evidence that excessive force had been used, and Dr. Krieger admitted in the hearing that some dysphagia is not uncommon following anterior cervical spine surgery.

**Joseph P. Krzeminski, MD: AANS Membership Suspended One Year.** This case involved an infection following a repeat lumbar disc surgery. Dr. Krzeminski, who appeared as the plaintiff's medical expert, failed to review any of the imaging studies, testified erroneously that prophylactic antibiotics had not been ordered, and that the standard of care required ordering a C-reactive protein in addition to the erythrocyte sedimentation rate and white blood cell count in a patient with rheumatoid arthritis. He further testified erroneously that a cyst found during the second surgery was an infected abscess when cultures from the area of the surgically opened cyst were negative. The board agreed with the committee's conclusion that Dr. Krzeminski's testimony was careless, poorly prepared, and in violation of the Expert Witness Guidelines.

**Philip E. Stieg, MD, PhD: AANS Membership Suspended Six Months.** This case involved a prominent athlete with a long history of refusing to take anticonvulsants for a seizure disorder. Dr. Stieg provided biased deposition testimony by refusing to accept detailed and appropriate medical care records as representative of the care and advice given because these records were not included in a hospital 23-hour short stay record. (The full records were included in the plaintiff's office file and had been transmitted to the patient's personal physician both verbally and in writing). Dr. Stieg also gave biased testimony in his deposition statements that the neurologist's initial use of the word "declined" and his subsequent use of the word "reluctant" in describing the patient's attitude toward taking anticonvulsants indicated that the neurologist had changed his mind about the need for giving anticonvulsants to the patient. Dr. Stieg further showed bias in his preference for accepting one party's perceptions of the facts, rather than being neutral as to the validity of the conflicting perceptions.

**Joel W. Winer, MD: AANS Membership Suspended Three Months.** This was a complicated case that also included an operating room fire but the basis for the committee recommendation and the board's action was Dr. Winer's statement that it was below the neurosurgical standard of care to have explored the proximal carotid artery intracranially without first having exposed the carotid artery in the neck when, during surgery, a small posterior communicating aneurysm or infundibulum was found to not be the source of a subarachnoid hemorrhage. Dr. Winer also demonstrated bias and improper advocacy by refusing to answer the opposing counsel's properly posed questions.

The AANS Professional Conduct Committee was established in 1982 to evaluate complaints of one or more AANS members about another member or members and to make recommendations to the Board of Directors. The majority of complaints brought before the committee involve expert witness testimony in medical malpractice lawsuits. The committee currently hears about 12 complaints yearly (up from three to four complaints per year several years ago).

The AANS Professional Conduct Program was the subject of a 7th Circuit Court of Appeals opinion published in June of 2001 (*Austin v. AANS*). This opinion is readily available via Internet search (7th Circuit Court, case number 00–4028). The program also received an honor roll designation by the American Society of Association Executives in 2002 and has been the model for similar programs adopted by several other professional associations.

**W. Ben Blackett, MD, JD**, is chair of the AANS Professional Conduct Committee.

### For Further Information

**Code of Ethics**
www.AANS.org/about/aanscodeofethics_12_04.pdf

**Expert Witness Guidelines**
www.AANS.org/about/membership/ExpWitness03Dec04.pdf

# Celebrated Biographer Is Cushing Orator

*Seven Exceptional Speakers to Highlight AANS Annual Meeting*

The 2005 Annual Meeting of the American Association of Neurological Surgeons is set for New Orleans April 16-21. The insight of seven exceptional speakers will complement an excellent scientific program. Frequently updated meeting information is available at www.AANS.org.

### Richard C. Schneider Lecture

Monday, April 18

**Julian T. Hoff, MD**, is the Richard C. Schneider Professor in the Department of Neurosurgery at the University of Michigan. He received his bachelor's degree from Stanford University in 1958 and his medical degree from Cornell University in 1962. He has had a long interest in cerebral circulation and metabolism, focusing on intracerebral hemorrhage in recent years. Dr. Hoff was elected to the Institute of Medicine in 1999. He was AANS president from 1993 to 1994, and he received the Cushing medal from the AANS in 2001.

### Ronald L. Bittner Lecture

Monday, April 18

**Darell D. Bigner, MD, PhD**, is director of the NINDS Specialized Research Center on Primary and Metastatic Tumors of the Central Nervous System. He earned both his degrees at Duke University and in 1972 joined the Duke faculty. He helped establish the neuro-oncology program at the Duke University Comprehensive Cancer Center. Dr. Bigner is one of the few scientists in the nation to have held three consecutive MERIT awards from the National Cancer Institute.

### Van Wagenen Lecture

Tuesday, April 19

**Charles Warlow, MD**, is a clinical researcher specializing in stroke and functional symptoms, with a secondary interest in motor neuron disease and multiple sclerosis. He was the principal investigator for the European Carotid Surgery Trial and he initiated the Oxfordshire Community Stroke Project. He studied at Cambridge University and St. George's Hospital Medical School in London, earning his medical degree in 1968, and he currently works as a general neurologist in Edinburgh and Falkirk. He is editor of the journal Practical Neurology.

### Theodore Kurze Lecture

Wednesday, April 20

**Martin H. Weiss, MD**, is professor of neurosurgery and chair of the Department of Neurological Surgery at the University of Southern California. He has served as editor in chief of the journal Clinical Neurosurgery and was a member of the original editorial board of the journal Neurosurgery. A member of the editorial board of the AANS *Journal of Neurosurgery* since 1987, he is currently associate editor. He served as AANS president from 1999 to 2000.

### Cushing Oration
### Tuesday, April 19
### Edmund Morris

Celebrated biographer Edmund Morris is the author of The Rise of Theodore Roosevelt, which won both the Pulitzer Prize and the American Book Award in 1980. As President Ronald Reagan's official biographer he wrote, Dutch: A Memoir of Ronald Reagan, published in 1999.

In 2001, he published Theodore Rex, the second volume of a projected trilogy on the life of the 23rd president. It became an immediate bestseller and won the Los Angeles Times Book Prize for biography. The Times Literary Supplement called it "one of the great histories of the American presidency, worthy of being on a shelf alongside Henry Adams's volumes on Jefferson and Madison."

He lectures across the United States at top universities and Fortune 500 companies. He has appeared extensively on national television, and in 1999 was the subject of a two-part profile on CBS 60 Minutes. CBS retained him as a commentator for the state funeral of President Reagan.

Born and educated in Kenya, Edmund Morris currently lives in New York City and Washington, D.C.

### Rhoton Family Lecture

Wednesday, April 20

**Robert G. Grossman, MD**, is professor and chairman of the Department of Neurosurgery at Baylor College of Medicine and chief of the neurosurgical service at The Methodist Hospital and St. Luke's Episcopal Hospital in Houston. He received his medical degree in 1957 from Columbia University College of Physicians and Surgeons. Dr. Grossman is the co-principal investigator of the NINDS-supported head injury clinical research center at Baylor College of Medicine. He was one of two neurosurgeons at Parkland Hospital in Dallas who examined President Kennedy in trauma room 1.

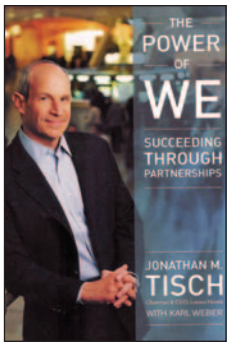
### Hunt-Wilson Lecture

Wednesday, April 20

**Henry J. (Peter) Ralston, MD**, is professor of anatomy and a member of the W.M. Keck Foundation Center for Integrative Neuroscience at the University of California, San Francisco. He received his clinical education in San Francisco and in New York and his research training in London. He is engaged in research on changes in the brain after nerve and spinal cord injury, and in the development of new therapies to treat chronic pain. ■

# The Power of Creative Partnerships

## *Partnering With Patients Is Crucial*




**The Power Of We: Succeeding Through Partnerships**, by Jonathan M. Tisch with Karl Weber, 2004, John Wiley & Sons, Hoboken, N.J., 260 pp. $24.95

This book may seem like a strange choice for review in a neurosurgical publication, but after reading it I was convinced that the message is for neurosurgeons. Jonathan Tisch is the third generation of a business empire family and chief executive officer of Loews Hotels. Success in business, according to this book, is achieved through creative partnerships.

The partnerships described in this book are those with employees, customers, other businesses, government and owners. Obviously the same partners are not applicable for neurosurgeons but the connection with the six corresponding categories of employees, partners, communities, other physicians, government and hospitals is easily understood.

Tisch's chapter on employees is entitled "The Employee Comes First." If this principle were applied to neurosurgical practice, doctors would experience a dramatic decrease in employee turnover and would greatly improve the atmosphere in their offices.

I think the crucial message of this book has to do with our partnerships with our patients. Measuring customer satisfaction is essential and then responding by making appropriate changes is necessary. Being responsive to patients is a trait which may not characterize all neurosurgeons' offices.

Tisch suggests that partnership with your community means a shared commitment to the long-term social and economic health of the area and its people. He's not talking about putting on a tux and attending a benefit each year. He means really getting involved and rolling up your sleeves. He means giving to the community by volunteering and serving on boards.

Partnering with other businesses (other physicians) benefits everyone. This can be done on a one-on-one basis or through organizations. Adding the efforts of two businesses often has a multiplying effect. Cooperation leads to collaboration.

Partnering with government may seem contrary to your instincts but government involvement in business and particularly in the healthcare business is here to stay. We have a huge task in educating those involved in government. Legislators understand little about healthcare and practically nothing about the business of healthcare.

I have chosen to substitute hospitals for owners in making this book practical for neurosurgeons. Obviously we own our businesses so the analogy is imperfect. Yet partnering with hospitals is one of the most essential and profitable ventures, although it requires time and energy on a daily, weekly and yearly basis. Neurosurgery is a profitable part of a hospital's business. Neurosurgeons must make certain that both sides of this partnership benefit.

A good portion of this book is self-serving and gratuitous, but the main message is worthwhile. Every neurosurgery resident ought to read this book before going into practice. ■

**Gary Vander Ark, MD**, is director of the Neurosurgery Residency Program at the University of Colorado and past president of the Colorado Medical Society. He is the 2001 recipient of the AANS Humanitarian Award.

# Research Shapes Neurosurgery's Future

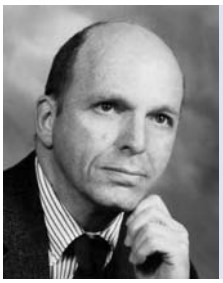
## *New Chair Shares Vision, New Ideas for the NREF*

The future of neurosurgery is dependent upon our ability to advance our understanding of disease processes that afflict the nervous system and develop the technical and biological resources that will enable us to combat neurological disorders. To that end, our future is inextricably bound to the activities of the Neurosurgery Research and Education Foundation of the American Association of Neurological Surgeons. By supporting talented clinician scientists in their efforts to unravel the mysteries of neurological disease and define the technologies by which neurosurgeons may affect a resolution of these disorders, we are shaping the future of our specialty.

As the newly appointed NREF chair, I believe it is my responsibility and the responsibility of my colleagues on the NREF Executive Council to heighten awareness among AANS members about the NREF, its mission, goals and plans for the future.

Like any good business leaders, we have a business plan for the NREF. It is a plan that includes financial growth, leadership development and long-term stability. We intend to increase the financial support of the NREF, both from members and the corporate community, to a higher level and support the scientific research studies that are essential for our future. We plan to empower the current and past research grant recipients to become ambassadors who will share with prospective funders all that NREF is and what, with their support, it can be. Finally, we will develop relationships with each other as well as with other foundations and corporations, establishing collaborative partnerships in the name of science and improved patient care.

Through the Research Fellowship and Young Clinician Investigator award programs, the NREF provides the mechanism for young investigators to establish their research efforts. Their energies are directed at studies that define the fundamental biological processes underlying diseases of the nervous system in order for us to design treatment modalities that combat these disorders. Their discoveries provide the infrastructure upon which we can build therapeutic ventures of the future. NREF Research Fellows and Young Clinician Investigators are shaping the future of neurosciences. Currently they are working with minimal support; my colleagues and I would like to change that.



*Martin H. Weiss, MD, FACS, the 1999-2000 AANS president, is the NREF chair. He is a professor of neurosurgery at the University of Southern California in Los Angeles.*

In addition, the principles of science as well as the agencies responsible for administering healthcare increasingly demand verification of the efficacy of the technologies that we employ in our present practices. The dynamic of evidence-based medicine is part of our present professional lives, and the support of scientifically based outcome analysis of neurosurgical procedures by the NREF provides a vehicle by which we can analyze, improve and promulgate our efforts of today. Without such support and evidence, our practice patterns are at risk for disenfranchisement by those agencies charged with oversight of medical care delivery. We can and will demonstrate the efficacy of our therapeutic ventures in alleviating the medical problems of our patients as we move forward in alliance between the NREF, its funded investigators and our practitioners.

I am honored to have the opportunity to captain the leadership team of the NREF. My predecessor, Julian T. "Buz" Hoff, MD, has done an outstanding job in developing the resources that we require to move forward in our efforts and promulgating the programs that we now offer. His shoes indeed will be difficult to fill. But I am optimistic that with continued participation from you, the dedicated supporters of this noble and vital effort, we will be successful in achieving our mission. Research and development are the lifeblood of any profession; it is certain that, working together, we can assure that the future for neurosurgery will indeed be bright. I look forward to traveling the road ahead with you, with the success of the NREF and improved patient care as the ultimate destination. ■

### About NREF

Two award programs are sponsored annually; applications are due each year in October.

- Research Fellowship: $70,000 for a two-year commitment; $40,000 for a one-year commitment
- Young Clinician Investigator Award: $40,000

The NREF's Giving Programs:

- Celebrate a Life Memorial and Tribute Program
- Corporate Associates Program

**Information:** (847) 378-0500; www.AANS.org/research
**Secure Online Donation:** www.AANS.org/research/neurosurgery/donation_f.asp

For advertising information, see the Bulletin's rate card at http://www.aans.org/bulletin/ or contact Bill Scully, bscully@cunnnasso.com, (201) 767-4170.

# EVENTS

## Calendar of Neurosurgical Events

**Pre-Olympic International Neurosurgical Winter Meeting**
Feb. 20–27, 2005
Sestriere, Italy
www.csrcongressi.com

**Winter Clinics for Cranial & Spinal Surgery**
Feb. 27–March 4, 2005
(513) 569-5251
www.mayfieldclinic.com

**Southern Neurosurgical Society 2005 Annual Meeting+**
March 3–6, 2005
Key West, Fla.
(888) 566-2267
www.southernneurosurgery.org

**Interurban Neurosurgical Society+**
March 4, 2005
Chicago, Ill.
(715) 542-3201

**AANS/CNS Section on Disorders of the Spine and Peripheral Nerves 2005 Annual Meeting+**
March 9–12, 2005
Phoenix, Ariz.
(888) 566-2267
www.spinesection.org

**24th Annual Scientific Meeting of the American Pain Society**
March 30–April 2, 2005
Boston, Mass.
(847) 375-4715
www.ampainsoc.org

**2005 American Association of Neurological Surgeons Annual Meeting**
April 16–21, 2005
New Orleans, La.
(888) 566-2267
www.AANS.org

**2005 AANS Section on the History of Neurological Surgery Annual Dinner**
April 18, 2005
New Orleans, La.
(888) 566-2267
www.neurosurgery.org/sections/section.aspx?Section=HI

**American Society of Neuroradiology 43rd Annual Meeting**
May 21–27, 2005
Toronto, Canada
(630) 574-0220
www.asnr.org

**87th Annual Meeting of The Endocrine Society**
June 4–7, 2005
San Diego, Calif.
(301) 941-0200
www.endo-society.org

**Canadian Congress of Neurological Sciences**
June 14–18, 2005
Ottawa, Canada
(403) 229-9544
www.ccns.org

**13th World Congress of Neurological Surgery**
June 19–24, 2005
Marrakesh, Morocco
www.wfns.org

**CARS 2005—Computer Assisted Radiology and Surgery**
June 22–25, 2005
Berlin, Germany
www.cars-int.org

**Modern Treatment of Tumors of the Nervous System**
July 23–29, 2005
Merida, Mexico
www.xviiicmcn.org

**33rd Annual Meeting of the International Society for Pediatric Neurosurgery**
Sept. 11–15, 2005
Vancouver, Canada
www.ispn.org

**52nd Annual Meeting of the American Association of Neuromuscular & Electrodiagnostic Medicine**
Sept. 21–24, 2005
Monterey, Calif.
(507) 288-0100
www.aanem.org

**American Neurological Association Annual Meeting**
Sept. 25–28, 2005
San Diego, Calif.
(952) 545-6284
www.aneuroa.org

**Congress of Neurological Surgeons**
Oct. 8–13, 2005
Boston, Mass.
(847) 240-2500
www.neurosurgeon.org

+These meetings are jointly sponsored by the American Association of Neurological Surgeons. The frequently updated Meetings Calendar and continuing medical education information are available at www.AANS.org/education.

## 2005 AANS Courses

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

■ **Managing Coding & Reimbursement Challenges in Neurosurgery**
Jan. 28–29, 2005 . . . . . .Miami, Fla.
Feb. 18–19, 2005 . . . . . .Phoenix, Ariz.
March 18–19, 2005 . .Dallas, Texas (Advanced)
May 20–21, 2005 . . . . . .San Francisco, Calif.
Aug. 26–27, 2005 . . . . . .Chicago, Ill.
Sept. 16–17, 2005 .Nashville, Tenn. (Advanced)
Dec. 2–3, 2005 . . . . . .Washington, D.C.

■ **Neurosurgery Review by Case Management: Oral Board Preparation**
May 22-24, 2005 . . . . . .St. Louis, Mo.
Nov. 6-8, 2005 . . . . . .Houston, Texas

■ **Innovation in Spinal Fixation: An Advanced Course**
Feb. 26-27, 2005 . . . . . .Memphis, Tenn.

■ **Anatomy & Terminology**
Jan. 27, 2005 . . . . . .Miami, Fla.
Aug. 25, 2005 . . . . . .Chicago, Ill.