

AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS BULLETIN

The Socioeconomic and Professional Magazine for AANS Members • Volume 15 Number 1 • 2006

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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.

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

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

PEER-REVIEWED RESEARCH

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in a future issue edited for length, clarity and style. Correspondence is assumed to be for publication unless otherwise specified.

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American
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The Moral of the Story

Neurosurgery's Professionals Offer Best Neurosurgical Emergency Care

From the heroic lines of Homer's Odyssey to the familiar fireside "Big Fish" tale, everyone loves a good story. This simple fact, woven into the very fabric of our humanity, allows exploitation of entertainment for our own good.

This idea is at the heart of one of the older story forms, the fable, a pithy and palatable means for communicating a message that an audience might not particularly want to hear. Consider this recounting of Aesop's The Eagle and the Arrow:

The archer saw the eagle perched high atop a rock. Taking careful aim, he shot his arrow true. The eagle, mortally wounded, saw in a single glance that he himself had furnished the arrow's feathers. "It is a double grief to me," he exclaimed, "that I should perish from an arrow feathered by my own wings."

The moral of the story? We often supply others with the means of our own destruction.

This simple tale springs to mind when considering the complex issues that contribute to what many describe as a crisis in neurosurgical emergency care. While only a very small number of neurosurgeons report that they no longer take emergency call, the fact that any neurosurgeon might feel compelled to forsake neurosurgical emergencies is a matter of great concern.

To borrow a phrase from Aesop, it is a double grief to me that some patients may not receive neurosurgical emergency services from neurosurgeons, who surely are best equipped to provide such care, and that by not providing such services, neurosurgeons themselves set in motion a chain of events which eventually may prevent their own participation in neurosurgical emergency care.

AANS Explores Neurosurgical ER Coverage

The AANS Board of Directors has been aware of the developing crisis in delivery of neurosurgical emergency care and recognizes that in selected areas of the United States, neurosurgical emergency coverage is less than optimal. As it unfolds, the tale explaining why this is so is far from entertaining.

Fremont P. Wirth, MD, is the 2005–2006 AANS president. He is in private practice at the Neurological Institute of Savannah in Georgia.



An in-depth view of the issues involved and results of the 2004 AANS/CNS Neurosurgical Emergency and Trauma Services Survey were reported in the Winter 2004 issue of the AANS *Bulletin*. The 2004 ER survey demonstrated that the great majority of neurosurgeons or their practices were providing at least one hospital with neurosurgical emergency coverage at all times. The survey also revealed serious concerns with the delivery of care, with strain most evident among neurosurgeons in solo or small-group practice. Survey results added detail to the continuing story of a strained workforce in which there remain more open positions than neurosurgeons to fill them. Subsequently, evidence has mounted that an increase in patient transfers to academic centers causes delay in patient care and stresses the resources of these facilities.

To study the problem of neurosurgical emergency care further, last fall the board organized the AANS Task Force on Neuro-

surgical Care and Physician Workforce Issues. This task force, introduced in my last column, is charged with developing and proposing a solution to this problem. It now has met twice and will meet again during the AANS Annual Meeting in April, the theme of which appropriately is Meeting the Challenges of Neurosurgery: Expanding Resources for a Growing Population.

AANS Workforce Survey Builds Case for Action

One of the task force's first acts was to commission a comprehensive study of workforce issues, including neurosurgical emergency coverage: the 2006 AANS Workforce Survey. Results include the finding that 93 percent of neurosurgeons currently take emergency call, but 76 percent perceive call coverage to be a problem in their region.

It is clear to us in neurosurgery that neurosurgical emergency care encompasses much more than nervous system trauma. It encompasses acute spinal cord compression from tumor or hematoma, intracerebral hemorrhage, subarachnoid hemorrhage, acute increased intracranial pressure from shunt malfunction as well as from expansion of intracranial mass lesions, among others. These complex problems are challenging even for neurosurgeons, who are trained specifically to manage these conditions.

Many other forces impact the provision of emergency care, limiting the availability or willingness of neurosurgeons to perform these services. These include liability costs, absent or inadequate reimbursement, and lack of hospital resources that includes neurosurgical intensive care unit beds, appropriate imaging capabilities, neurosurgical endovascular capabilities and adequately trained personnel to assist in the complex care of neurosurgical patients.

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Continued from page 3

While the task force's proposals will be released at a later date, there already is agreement that neurosurgical care is best delivered by trained neurosurgical providers. Further, we know that hospitals want to provide neurosurgical services at least in part because neurological illness is a profitable service line. We also know that there are more hospitals providing "neurology services" than there are neurosurgeons in this country. Given these facts, it is likely that the task force will recommend some reorganization of the system for providing neurosurgical care. Such an approach has the potential for improving the quality of life for neurosurgical providers as well as enhancing the availability of high quality neurosurgical care for our patients.

Acute Surgical Care Specialty?

Of course, a number of other physicians also are concerned about this problem, among them emergency physicians, hand surgeons, orthopedic surgeons, and trauma surgeons. Various solutions have been proposed. One of these is the development of an acute care surgical specialty, which would expand the current trauma and critical care specialty to include emergency neurosurgery and orthopedic surgery.

The AANS has opposed this expansion for a number of compelling reasons, chief among them training and current evidence. It is unlikely that trauma surgeons can learn to manage neurosurgical trauma with the addition of one or two years of training. The pathophysiology and anatomy of the nervous system are complex, quite distinct and unique compared to the pathophysiology of the chest and abdomen. Furthermore, a study by Knut Wester, MD, recently found that emergency neurosurgical care provided by general surgeons in Norway's community hospitals resulted in increased morbidity and mortality when compared with care of patients who were transferred to a neurosurgeon, even when this required moving patients distances of 100 miles or more. This and other evidence

suggests that an expansion of critical care trauma surgery into the field of neurosurgical trauma could be expected to negatively impact patient safety and quality of patient care.

The crisis in emergency care with respect to neurosurgery has as much to do with distribution of neurosurgical trauma care as with a shortage of it. The American College of Surgeons has developed an excellent program of trauma center designation, and there now is evidence in peer-reviewed journals, specifically a study by Demetriades and colleagues which found that level 1 trauma centers provide higher quality care than other facilities. Since most trauma surgeons work in level 1 trauma centers, additional training in neurosurgery—even if effective—is unlikely to benefit neurosurgical trauma patients because by definition neurosurgeons already are available at level 1 trauma centers.

The story of how neurosurgical emergency care delivery will be resolved remains a work in progress. The acute care surgical specialty concept is unlikely to be totally abandoned, though it may evolve into a surgical hospitalist concept. Having recently had the opportunity to meet with the leaders of other surgical specialties at an ACS-organized meeting to address the issue of emergency care, I am optimistic that surgery may be able to move forward with one voice on many aspects of this issue. Our collective goal is to develop an effective, unified message to leadership in the U.S. Congress that will facilitate a solution to the delivery of appropriate emergency care to our patients.

The Moral of the Story

Neurosurgery, a profession known to celebrate tradition, is replete with stories of its pioneers. As the AANS begins celebration of its 75th anniversary year, it seems appropriate to remember Cushing—neurosurgery's founder—and his homage to Hippocrates, the father of medicine. In a 1926 address to graduating medical stu-

dents, Cushing said this of the Hippocratic oath: "There is nothing that expresses so well...the ideals which from the first have actuated the doctor and have led to the solidarity of the profession you are entering."

Many readers will be familiar with the oath's modern version, which reads in part, "May I always act so as to preserve the finest traditions of my calling, and may I long experience the joy of healing those who seek my help."

I hope this ideal reaches beyond a fable's moral or a greeting card's sentimentality. Physicians have struggled before and since Hippocrates, before and since Cushing, with finding the difficult balance of business and profession. To abandon provision of neurosurgical emergency services now, even for compelling marketplace reasons, would be sending an arrow which we ourselves have feathered through the heart of our profession.

The AANS believes that the best neurosurgical emergency care is provided by neurosurgery professionals. AANS members have demonstrated their commitment to providing emergency neurosurgical care. Be assured that the energies of the AANS are bent upon improving the environment for doing so. ■

For Further Information

■ Demetriades D, Martin M, Salim A, Rhee P, Brown C, Doucet J, Chan L: Relationship between American College of Surgeons trauma center designation and mortality in patients with severe trauma (injury severity score > 15). *J Am Coll Surg* 202(2): 212–215, 2005

■ Wester K: Decompressive surgery for "pure" epidural hematomas: Does neurosurgical expertise improve the outcome? *Neurosurgery* 44(3): 495–500, 1999

Related Articles

- Contemporary neurosurgeons' stories, page 32
- Patients' stories, page 46
- Letters, page 23

NEWSLINE

NewsMembersTrendsLegislation

Texas Reforms Underlie TDC's 18 Percent

MedMal Rate Reduction

In March The Doctors Company announced an average 18 percent reduction in medical malpractice insurance rates for Texas physicians, including neurosurgeons. TDC, which offers a professional liability insurance program to AANS members, credits tort reform passed in Texas in 2003 that caps noneconomic damages as the impetus for the rate reduction.

- **RUC Requests Rapid Response to Physician Work Surveys** Neurosurgeons periodically are requested to complete physician work surveys that are used to estimate the intensity and work involved in performing a procedure. These surveys are examined by the multispecialty Relative-Value Update Committee, known as the RUC, which forwards its recommendations to the Centers for Medicare and Medicaid Services. "A large survey sample with accurate estimates of physician time as well as visit level and frequency is critical to determining work value," said Gregory J. Przybylski, MD, an RUC panelist and chair of the AANS/CNS Coding and Reimbursement Committee. "To ensure presentation of the most accurate estimate of physician work, broad survey participation among neurosurgeons is essential." Development of the Medicare fee schedule is based on these recommendations, and many third party payers in turn base their schedules on the MFS.
- **Study Suggests Respectful, Compassionate Physicians Can Improve Their Patients' Outcomes** A study that identified seven characteristics of a patient's "ideal" physician supports the idea that quality medical care should include a patient-centered approach. The characteristics patients selected include confident, empathetic, humane, personal, forthright, respectful and thorough, with thorough named most often. Patients who described a "worst" physician experience noted traits that reflected insensitivity or disrespect. The study suggests that interpersonal skills training for physicians could have far-reaching effects because the physician-patient relationship affects not only a patient's emotional responses, but also the patient's behaviors and outcomes, such as compliance and recovery. "A physician who pays personal attention to the patient, who is respectful, compassionate and competent, that's what every patient wants," said James Li, MD, PhD, of the Mayo Clinic Division of Allergic Diseases. The study of 192 patients was published in the March issue of Mayo Clinic Proceedings.
- **New Handheld Device Detects Brain Hematoma** A new handheld device, the InfraScanner, uses a PDA platform and a wireless probe to detect hematoma based on the near-infrared light absorption of the bleeding part of the brain. "The user-friendly device maps out the location of the hematoma with graphics onto a PDA screen and can assist paramedics and emergency room personnel in attending to those injured in traffic and sports accidents, falls and on the battlefield," said Banu Onaral, PhD, who is leading the team at the Drexel School of Biomedical Engineering, Science and Health Systems that created the InfraScanner. The device also has application for head-injured children brought to the emergency room. Pilot clinical tests of the device began in the neurosurgery department of the Hospital of the University of Pennsylvania, and the device is about to begin multicenter clinical trials. Pending FDA approval, the device will be available in the United States as early as 2006.
- **Physician Involvement Would Improve Accuracy of Medical Information in Mass Media** Errors in reporting and lack of good information from health experts create problems with the coverage of medical issues in the mass media, two recent studies have found. In a study published in the March issue of Mayo Clinic Proceedings, Caspermeier and colleagues from the Mayo Clinic and Arizona State University found that of the 1,203 newspaper articles on neurological disorders published in 2003 that they analyzed, 20 percent contained medical errors or exaggerations. In television news, researchers from the University of Michigan and the University of Wisconsin-Madison reported that medical stories comprised 11 percent of local newscasts in the one-month period studied, with the average story running 33 seconds. But the study, published in the March issue of the American Journal of Managed Care, found that most stories did not give enough specifics and some contained dangerously incorrect reporting. "Egregious errors such as these can actually harm the public," said lead author James Pribble, MD. But the authors don't find fault only with newscasts. They emphasize that public health authorities, clinical experts and researchers must learn to give reporters information that meets the unique medium of the newscasts, which tell stories quickly, visually and in plain language. "The onus is on healthcare providers, organizations and agencies," said Dr. Pribble.

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MEASURING QUALITY: First, Choose the Right Tool



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(ARS), New York.

Frank Stella

"Harran II," 1967

Polymer and fluorescent polymer paint on canvas

120 x 240 inches (304.8 x 609.6 cm)

Solomon R. Guggenheim Museum, New York

Gift, Mr. Irving Blum, 1982

82.2976

"Harran II" is part of the artist's Protractor Series of paintings based on carefully constructed geometric designs executed in flat planes of color.

"Through the device of the protractor and the use of almost psychedelic color... Stella brought abstraction and decorative pattern painting into congruence in a manner that challenged the conventions of both traditions," wrote art historian Jan Avgikos for the Guggenheim Museum, www.guggenheimcollection.org.

Lest neurosurgeons believe that the pay-for-performance bandwagon has bypassed specialists, think again. In the year since the *AANS Bulletin* focused on the rise of pay-for-performance programs and the attendant necessity of choosing an appropriate tool for measuring quality of care in neurosurgery, one thing seems certain: Pay for performance in some form will be visited upon neurosurgeons, and soon.

Though P4P programs have been under development for several years through organizations of healthcare purchasers such as the Leapfrog Group, the Centers for Medicare and Medicaid Services' unequivocal endorsement of pay for performance as a way to improve quality of care and reduce healthcare costs catapulted the concept forward in 2005. The CMS not only launched P4P demonstration projects last year, but such programs, linked to Medicare reimbursement, also were approved for the 2006 budget by both chambers of the U.S. Congress and were expected to become effective Jan. 1. Though the P4P provisions were jettisoned in last minute maneuvering that resulted in a one-year freeze on Medicare reimbursement, pay for performance and specialty participation in the CMS P4P program has remained a prominent issue. A month after the budget legislation was signed, the acting chief medical officer of the CMS, Barry Straube, MD, told *Modern Healthcare* during the March meeting of the American Board of Medical Specialties that specialties "need to develop more performance measures faster." He noted also that "a lot of specialties don't have specialty-unique measures, and some are way ahead of others."

Straube singled out the Society of Thoracic Surgeons for its leadership in developing specialty-specific quality measures. The STS has collected data on cardiothoracic surgery outcomes and quality improvement since the late 1980s and is conducting a national pilot program to measure both cost and quality. The STS discussed its 21 cardiac surgery performance measures in the Winter 2005 issue of the STS National Database News.

"The good news is that this measure set was developed largely by STS, and 15 of the 21 measures are based on data from the STS National Database," wrote Fred H. Edwards, MD, chair of the STS Workforce on National Databases. "STS involvement in the [National Quality Forum] process has ensured that the metrics by which we measure quality were developed by cardiac surgeons, not by bureaucrats."

Straube also recognized the American Board of Internal Medicine, which in March announced an arrangement that

allows those enrolled in the ABIM's Maintenance of Certification program to apply performance data provided through the CMS Physician Voluntary Reporting Program to the ABIM's self-assessment of practice performance.

"This arrangement reduces redundancy," said Christine Cassel, MD, president and CEO of the ABIM, announcing the agreement. "It permits data to be collected once, but used for multiple purposes, and provides additional incentives beyond board certification for physicians to get involved in performance assessment."

In 2005 national organizations including the American Medical Association and the American College of Surgeons examined the CMS' P4P initiatives and established respective sets of principles for physician participation. In December the AMA entered into a working agreement with Congress to develop 140 quality measures by the end of 2006 through the Physician Consortium for Performance Improvement, an agreement to which several specialty societies objected.

Organized neurosurgery participated in the AMA and ACS development of respective P4P principles and in June also articulated to Congress the specialty's concerns regarding pay for performance, among them that "the program must be designed to truly improve quality of care and patient outcomes." Organized neurosurgery also established the Quality Improvement Workgroup through the AANS/CNS Washington Committee to develop quality measures for neurosurgery.

Choosing the right tool of measurement for neurosurgery is the challenge currently facing the QIW, as well as the topic under examination in this issue of the *Bulletin*. Fernando G. Diaz, MD, offers an overview of P4P development and an analysis of the utility of guidelines as appropriate quality measures for neurosurgery. Robert E. Harbaugh, MD, explores the inherent weaknesses of randomized, controlled trials as the source for producing data on which useful clinical guidelines for neurosurgery can be based and turns attention to development of a procedure-specific registry as neurosurgery's tool of choice. ■



MEASURING PERFORMANCE

Are Guidelines a Viable P4P Tool?

FERNANDO G. DIAZ, MD

In 2005, the Centers for Medicare and Medicaid Services announced a policy of rewarding physicians for meeting quality standards in clinical practice, a program known as “pay for performance.” The announced purposes are to ensure best practice patterns among all physicians, reduce unwarranted variations in care, select quality measures that correlate with better outcomes, and reward physicians for the quality of care rather than for providing a service. The Medicare program that just became effective Jan. 1, the Physician Voluntary Reporting Program, includes 36 measures of which 16 are considered the “core starter set” as well as a surgery worksheet that lists five measures.

The purpose of P4P is to pay physicians based on quality and efficiency instead of on a fee-for-service basis. Members of the CMS and the U.S. Congress, which is considering a variety of legislation related to P4P, have been very clear that they believe the physician community, in particular physician specialty organizations, should

develop the quality measures for their specialty.

The American College of Surgeons has collaborated with surgical specialty societies through both the Surgical Care Improvement Project and the National Surgical Quality Improvement Program to develop proposals that are based on recognized best practices and avoid imposing undue administrative burdens on surgeons. These proposals utilize process measures related to the prevention of certain complications such as infection and postoperative pneumonia.

A consortium of surgical specialty societies developed the Quality Improvement Framework for Surgical Care, which represents a phased approach for implementing a pay-for-performance program and addresses the difficulty of developing surgically applicable quality of care measurements. The fundamental principles that underlie the proposed framework are:

- The primary goal of pay-for-performance programs must be improving health quality and safety.

■ Physician participation in pay-for-performance programs must be voluntary.

■ A nonpunitive audit system should be implemented to ensure the accuracy of the data.

■ To account for differences across surgical specialties and in the federal government's ability to collect and analyze meaningful data, any Medicare pay-for-performance program must be pilot tested across settings and specialties and phased in over an appropriate period of time.

■ Practicing physicians and their professional organizations must be involved in the design of Medicare pay-for-performance measures and programs.

■ Physician performance measures used in Medicare pay-for-performance programs must be evidence-based, broadly accepted, and clinically relevant.

■ The metrics must be fair and balanced across specialties and developed using evidence-based work or consensus panels of expert physicians. The metrics must also be kept current to reflect changes in clinical practice.

■ Physician performance data must be fully adjusted for case-mix composition including factors of sample size, age/sex distribution, severity of illness, number of comorbid conditions, and any other features that may influence the results.

■ The program should foster the patient-physician relationship and must not discourage physicians from treating patients with significant health problems or complications out of fear that they will have a negative influence on quality scores and reimbursement.

■ There must be a mechanism for exceptions to pay-for-performance compliance metrics for clinical research protocols and in situations where measures are in conflict with sound clinical judgment.

■ Performance measures should be scored against both absolute values and relative improvement in values, as appropriate.

■ Medicare must positively reward physician participation in pay-for-performance programs, including physician use of electronic health records and decision support tools.

■ Pay-for performance programs must compensate physicians for any administrative burden for collecting and reporting data.

■ Pay-for-performance programs must not be budget neutral within the Medicare physician payment system or be subject to artificial Medicare payment volume controls such as the sustainable growth rate mechanism.

■ Pay-for-performance programs should not penalize physicians for factors beyond their control.

■ Mechanisms must be established to allow performance awards for physician behaviors in hospital settings that produce cost savings outside the physician's Medicare fee schedule including reducing length of stay, and avoiding readmissions, which substantially reduce hospital costs covered under Medicare Part A reimbursements.

■ Physicians must have the opportunity to review and correct performance data, and those data must remain confidential and not subject to discovery in legal proceedings.

The consortium sent these criteria in July to Rep. Nancy Johnson, chair of the House Ways and Means Health Subcommittee, and she introduced the "Medicare Value-Based Purchasing for Physicians' Services Act of 2005" (H.R. 3617) based on these measures.

The legislation would restructure the Medicare physician reimbursement formula to link payment to quality incentives. The essential provisions of the bill include a phased-in, value-based purchasing program over several years starting with voluntary initial reporting beginning in 2007.

Guidelines as Quality Measures

Performance measures selected to evaluate physician performance in patient care should be based on published scientific evidence. Evidence of optimal outcomes and effectiveness frequently is summarized in practice guidelines that are created after a rigorous literature review and assessment of the quality of the evidence. According to the Agency for Healthcare Research and Quality, practice guidelines are formally defined as "systematically developed recommendations, strategies, or other information to assist healthcare decision-making in specific clinical circumstances."

Guidelines are formulated based on evidence that results from scientific research, and the strength of the recommendations is based on the quality of the evidence available in the medical literature. Evidence is ranked as:

- class I: randomized, prospective clinical trials;
- class II: nonrandomized case series, case-control studies; and
- class III: expert opinion, case report.

By convention, recommendations supported by class I evidence are termed "standards," while class II evidence recommendations are termed "guidelines" and class III recommendations are "options." Most available evidence is class II or III because well designed and conducted prospective randomized clinical trials are rarely available.

Surgical care guidelines may include: verification of appropriate side and site preoperatively, antibiotic administration within one hour prior to the beginning in operating room time-out immediately preceding the surgical procedure, appropriate imme-

Quality assurance in medical practice must remain the purview of practicing physicians and their respective professional organizations.

diate postoperative documentation of the surgical procedure, appropriate postoperative pain management, and appropriate postoperative patient care.

What constitutes appropriate postoperative care may be difficult to determine since the types of procedures performed within a single specialty, like neurosurgery, are extremely variable. Generally applicable measures to most surgical specialties which are incorporated into the American College of Surgeons Surgical Care Improvement Program may include the monitoring of perioperative events such as wound infections, cardiac events, thrombophlebitis, and development of pneumonia.

Even though these are all reasonably determined perioperative care problems, the inclusion of these events in guidelines already has resulted in unintended consequences. An example can be found in cardiac surgery. Cardiac surgeons led the way in the development of guidelines, one of which involves the occurrence of perioperative stroke. Because high incidence of perioperative stroke could negatively impact the participation of cardiac surgeons in the Medicare program, there is an immediate incentive to avoid reporting or to underreport the incidence of perioperative stroke, rather than to report it for eventual improvement in the quality of care.

In neurosurgery, guidelines have been developed to standardize treatment in some areas where controversy or variation in care existed and where evidence supported it, such as in the areas of brain trauma and cervical spine injury. Guidelines in neurosurgery have never been used to prescribe specific norms of care that must be followed by everyone in all circumstances, but simply as pathways to assist physician decision-making. A prime example of neurosurgery guidelines are the lumbar fusion guidelines published in the May 2005 issue of the *Journal of Neurosurgery: Spine*. Nearly all of the recommendations noted in the guidelines for lumbar fusion are based on class III evidence, and therefore do not fit the true definition of guidelines.

Further, little is known about barriers to physicians' adherence to clinical practice guidelines. Compliance with guidelines often is limited by a physician's disagreement with the interpretation of reported clinical trials, and other factors such as potential patient discomfort, and adverse effects. In fact, as Boyd and colleagues report in the *Journal of the American Medical Association*, the strict application of guidelines can adversely affect patient care. Moreover, the degree of non-adherence to clinical guidelines seems to be independent of the strength of the evidence in support of specific interventions reported in previous trials, even when the evidence presented is considered class I.

Potential Liability of Guidelines for Neurosurgery

A powerful argument against adopting guidelines as the yardstick to measure physician performance is the potential misuse of guidelines by plaintiff attorneys who may introduce them in medical malpractice cases as equivalent to standard of care. Standard of care is a legal concept which is used by attorneys to judge medical performance by focusing specifically on deviations from the norm. A particular act or decision in medicine is considered standard of care when a physician of similar training would have acted in a comparable manner in the care of a particular patient given the same or similar clinical circumstances.

Some argue that the use of guidelines in medical malpractice actions is not necessarily for the purpose of confining the physician to their use as standards of care. In this sense the concept is that plaintiff attorneys will review guidelines when preparing to establish a medical malpractice action, will measure the physician's performance according to the guidelines, and often will be led away from filing the malpractice action because the physician complied closely with the specific guidelines. In addition, some support the concept that a carefully written disclaimer as part of the guidelines will prevent the attorneys from using the guidelines as the recipe book of medical practice.

However, an inquiry with a variety of attorneys conducted by Monica Wehby, MD, illustrates the concern that guidelines are used rather regularly by plaintiff attorneys in medical liability actions:

■ In response to the question: "Have you ever seen guidelines used against a physician?" Attorneys from the three major malpractice defense firms in Oregon all responded

"Absolutely," and followed with a litany of recent cases. One stated he had seen dozens of instances in the past year alone.

■ Alabama: "The plaintiff always wants what I refer to as the 'Reader's Digest Condensed Version of Medicine,' a set of written standards or guidelines that make medical practice a checklist that a jury of lay persons can apply with confidence. It's easier to explain to a jury than clinical judgment. The use of clinical guidelines can sometimes tie the hands of the practitioner and is always going to be touted as the equal of standard of care. The jury will use and accept guidelines as the standard of care because it is something they understand. If you are considering promulgating practice guidelines please, please, please don't."

■ Florida: "The guidelines are always referred to, but people with Florida drivers licenses (our jury pool) think guidelines are the rules, they were broken, and therefore the physician acted wrongly."



■ Texas: “I have had evidence of the physician’s violations of the AAP [American Academy of Pediatrics], ACOG [American College of Obstetrics and Gynecology], and ACEP [American College of Emergency Physicians] guidelines come in against my clients. It is always damaging to the defense and usually raises the settlement value.”

Guidelines are used by plaintiff attorneys like a building code. With a copy of pertinent guidelines in hand, the first thing they do is look for a deviation. They then compellingly present the deviation to the jury, and the burden of proof suddenly shifts to the defendant to demonstrate the validity of his or her actions against the norm established by the specialty’s guidelines. Even an extensive disclaimer attached to the guidelines, such as the ACOG utilizes, has little effect on the jury because the differences between a standard, a guideline, and an option are difficult to communicate. As far as the jury is concerned, you broke your own rule.

The guidelines currently in use in obstetrics and gynecology, anesthesia, emergency medicine, and pediatrics have been written by specialty societies. Perhaps a similar process could evolve in neurosurgery, but the recognized liability risks would accompany guidelines development absent the certainty of improving care.

Reaction to P4P Demands

Across the country, physicians remain resistant and resentful to the implementation of P4P measures. Some may prefer the potential 1 percent to 2 percent Medicare pay cut to the consequences of being bound by reporting performance measures. Some believe that as clinical information becomes available to alter their current standards of practice, it should be incorporated in the form of educational seminars tied to the maintenance of certification process. Many also believe that literature reviews should be published as a review of clinical articles or presented as clinical options, not as practice guidelines.

In the *National Review*, Dolinar and Leininger reported:

Not only is there little evidence that the government’s version of a “pay-for-performance” scheme would actually work to the benefit of patients, but there is also the likelihood it would do the opposite. Understand that “pay for performance” in Medicare would mean that Congress would pay doctors according to how well they’ve complied with government-defined medical guidelines. That would create another layer of bureaucracy between patients and doctors, and it would involve federal bureaucrats even more in patient care. If Congress wants to improve patient care in a cost-effective fashion, another layer of bureaucracy and red tape isn’t the way to go.

At the October meeting of the Council of State Neurosurgical Societies, a resolution to oppose development of guidelines based on anything other than class I evidence was enthusiastically debated at length. Proponents of guidelines development argued for a proactive approach rather than to allow performance measures to be imposed by outside entities. Supporters of the resolution voiced concerns about the usefulness of guidelines, their application in liability cases, and even the varying connotations of the word “guidelines.” In the end, a substitute resolution passed that asked the AANS and CNS to address the matter through the Quality Improvement Workgroup of the AANS/CNS Washington Committee.

The following month, pay for performance was a hot topic at the AMA House of Delegates meeting. The AMA delegates brought forth three resolutions, 902, 908 and 910, demanding the AMA to actively oppose any P4P initiatives that do not meet the AMA Principles and Guidelines for P4P:

■ Resolution 902 asks that our American Medical Association insist that in all medical decisions, the best interests of the patients are the top priority in the doctor-patient relationship and physicians shall not be coerced, forced or required by any means to comply with clinical practice guidelines not felt by the physician and the patient to be in the individual patient’s best interests; that our AMA seek and support legislation and administrative code implementing mandatory reporting or implementation of process measures or guidelines only when the process measure or guideline has been clearly linked to an improvement of outcomes based on class I evidence and consensus position statements of specialty and other medical societies who

are qualified to review the measures; and that our AMA seek and support legislation and administrative code protecting a patient’s right to access medical care that is not subject to third party decision-making outside of the doctor-patient relationship and supporting a physician’s right to advise patients based on the patient’s best interests.

■ Resolution 908 asks that our American Medical Association strongly oppose any pay-for-performance (PFP) programs or pilot PFP programs that are not fully in compliance with AMA principles and guidelines; that our AMA develop public education materials to teach patients and other stakeholders about the potential risks and liabilities of PFP programs, especially those that are not fully compliant with AMA policies, principles, and guidelines; and that our AMA provide a report back to the House of Delegates at its 2006 Annual Meeting.

■ Resolution 910 asks that our American Medical Association



oppose the creation of the Medicare “Value-Based Purchasing Program” described in S. 1356, as well as the Deficit Reduction Omnibus Reconciliation Act of 2005 (in the 109th U.S. Congress) as required by AMA policy H-450.947 as the program is significantly out of compliance with the AMA’s Principles and Guidelines on Pay-for-Performance; and that our AMA direct all staff and leadership to aggressively pursue opposition to the Medicare “Value Based Purchasing Program” using its entire means including a significant lobbying, political and public relations campaign.

The testimony on these resolutions was impassioned and diverse. A general theme that emerged, however, was that the AMA should not compromise its well-developed and comprehensive Pay-for-Performance Principles and Guidelines as a condition to receiving a physician payment update. The Reference Committee agreed with several comments that any pay-for-performance model must not be based on cost containment, but rather on ensuring quality of care, fostering the patient-physician relationship, offering voluntary participation, using accurate data and fair reporting, and providing fair and equitable program incentives.

The Board of Trustees Report 19 recommended that the AMA: (1) continue to communicate strong objections to the CMS’ Physician Voluntary Reporting Program; and (2) work with other federation organizations to express organized medicine’s strong concerns on the proposed implementation of the Physician Voluntary Reporting Program and to offer assistance to rectify deficiencies in the program. There was a clear and potent sense of frustration that the CMS, unwilling to provide an administrative fix to the flawed sustainable growth rate formula, would expect physicians to voluntarily take on a new reporting obligation.

As a result of the pressure from the AMA and organized surgical specialties, the U.S. House of Representatives passed the Budget Reconciliation Bill in December. The bill included several elements demanded by physicians and omitted pay-for performance provisions. The bill met significant opposition in the Senate, and after extended and contentious deliberation the Senate amended the bill, forcing a return of the legislation to the House for another vote. The legislation ultimately signed by the president on Feb. 8 retained omission of pay-for-performance provisions.

Another Balancing Act

The value of improving the quality of care by guidelines development as a measure of clinical performance must be balanced against the quality and soundness of the data on which the guidelines are based and their clinical relevance as well as their ability to influence various factors such as: physician behavior; the potential abuse or misuse of the guidelines by plaintiff attorneys in their pursuit of medical malpractice actions; and the potential abuses that may result from some individuals who may want to game the system for their financial benefit.

The financial return that P4P offers to physicians represents

less than 2 percent of what they are being reimbursed in an already significantly discounted payment plan. Far greater motivators for the vast majority of U.S. physicians are pride in their work and the desire to decrease patient suffering, to use their skills to meet specific challenges, and to maintain a sterling reputation in the community.

The superficial financial rewards of Medicare’s pay-for-performance program would likely create incentives to rig the system in several ways that may cause the quality of healthcare to decline, even if a handful of indicators seem to be improving. Quality assurance in medical practice must remain the purview of practicing physicians and their respective professional organizations and should not be mandated by a paternalistic government bureaucracy that likely will make of quality assurance an abysmal failure. ■

Fernando G. Diaz, MD, PhD, is chair of the Council of State Neurosurgical Societies, www.csnsonline.org.

For Further Information

- Agency for Healthcare Research and Quality. www.ahrq.gov/clinic/ngcfact.htm.
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NEUROSURGERY'S PURSUIT OF A USEFUL QUALITY MEASURE:

Procedure-Specific Registry's the Tool of Choice



ROBERT E. HARBAUGH, MD

In this era of evidence-based medicine, substantial pressure is being brought to bear on physicians to measure quality of care. For many physicians, published clinical guidelines for patient care are the obvious tool of measurement. A basic tenet of evidence-based medicine is that of accepting randomized, controlled trials, or RCTs, as “class I evidence,” and thus as the basis for determining standard of care. Guidelines in surgery rarely are based on RCTs, the most stringent level of evidence—most guidelines rely on class II or III evidence, such as nonrandomized studies and case reports—but even when they are based on class I evidence, inherent problems with RCTs limit their usefulness in determining the effectiveness of neurosurgical procedures.

The effectiveness of neurosurgical procedures could be determined and improved by the use of prospective, continuous data collection and analysis in a well-designed, risk-adjusted, procedure-specific registry. Such a system would encourage continuous quality improvement and would be applicable to a wide range of neurosurgical procedures and practice sites. This article will explore the weaknesses of RCTs for determining quality care in neurosurgery, and the value of outcomes data analysis available through a procedure-specific registry.

Randomized, Controlled Trials Examined

The RCT methodology was developed to address three problems common to clinical research—bias, confounding and chance. To do this, the properly designed RCT has four essential components: concurrent comparisons to eliminate temporal bias; objective observation of clear endpoints to eliminate physician and patient bias; randomization to equalize the effects of unknown, confounding variables; and a representative, adequately sized patient popu-

lation to reduce the likelihood of chance errors. The ideal RCT, the adequately powered, double-blind study with unambiguous endpoints, has all of these components. Unfortunately, most surgical RCTs cannot approximate this ideal.

An RCT is performed to determine the presence or absence of a treatment effect. Before beginning the trial, the null hypothesis—a statement that there is no statistically significant difference between treatments—is accepted. In a positive study, the null hypothesis is rejected, indicating a significant difference between treatments. If the null hypothesis cannot be rejected, a negative result, the study concludes that there is not a statistically significant difference between the treatments. For positive trials the chance that the observed difference was seen, even though the null hypothesis was true, is represented by the P value. A trial with a P value of less than 0.05 tells us there is less than a 5 percent chance that results as different as those observed in the study occurred by chance alone.

For negative studies the power of the study is important. Power is the likelihood of determining a positive result if there is a real therapeutic difference between treatments. Stated simplistically, a study with a power of .80 means that there was an 80 percent chance of finding a difference of a predetermined magnitude if such a difference really existed. The power of a study is dependent on sample size, the magnitude of the treatment effect chosen and the statistical tests employed.

For many clinical studies the well-designed RCT is an immensely powerful tool. Consider a double-blind RCT evaluating mortality from myocardial infarction in patients who receive either placebo or aspirin after the event. In this RCT neither the patient nor the investigator know which compound is administered, there are no patients who cross over from one treatment to the other, and

the endpoint is unequivocal. If this study is adequately powered it will produce unambiguous results. Furthermore, if the patient population studied in this RCT is representative of the universal population of patients suffering myocardial infarction, and the trial shows a significantly better outcome with aspirin, then aspirin can be given to myocardial infarction patients with a high degree of assurance that one is delivering quality care.

Application of RCTs to Surgery

However, surgical trials differ from this example in several important ways. Because nearly all surgical trials are unblinded, patients may elect to cross over from one treatment arm to another, such as from medicine to surgery. To preserve the benefits of randomization, it is necessary to analyze patients in their assigned groups even if they cross over to another treatment arm (intention-to-treat analysis).

Crossovers create problems in any clinical trial. In trials comparing medical to surgical treatment the problems are compounded because the crossover periods often are asymmetrical. After assignment to surgery there is a short period of time, preoperatively, during which the patient may elect other treatment. Patients have a comparatively longer time span in which to consider changing from medical to surgical treatment. For example, in a trial comparing surgical to nonsurgical treatment of back pain, the patient who is randomized to medical treatment may try this for weeks or months, have persistent pain, choose to have surgery and then do well. However, the good outcome at follow-up will be assigned to the medical treatment arm; is there anyone who would consider this to be reasonable? Statistical methods exist to deal with crossovers, but these methods ameliorate rather than eliminate the problem.

It is also difficult in many neurosurgical trials to define clear endpoints. A neurosurgical RCT does not eliminate bias if endpoints are ambiguous and neither the patient nor the evaluator is blinded. Patients may experience a substantial placebo effect with surgery and investigators may harbor a surgical or nonsurgical bias. Having someone other than the operating surgeon evaluate patients postoperatively does not solve this problem. Any unblinded observer will bring his or her bias to the evaluation.

It is also more difficult in surgical trials to choose a representative patient population because of the problems of therapeutic imperative and equipoise. The surgeon has an implicit contract with the patient to offer the best care available (therapeutic imperative). If the surgeon does not believe that surgical and nonsurgical treatment arms are equally efficacious (equipoise) he or she will offer surgical treatment outside the trial to those patients he or she believes are most likely to benefit. Only those patients less likely to benefit from surgery are randomized, skewing the patient population to the detriment of the surgical treatment arm.

Surgical RCTs also suffer from problems with surgeon selection. In a study comparing aspirin to placebo it really doesn't matter if the medical student or the chief of cardiology writes the order to administer the agent. This is not the case with surgical trials, where

the skill and experience of the surgeon have profound effects on outcome. A study showing a benefit from surgery with a highly experienced group of surgeons will not be applicable if the outcomes of an individual surgeon fail to match those of surgeons in the study. Similarly, a study showing no surgical benefit may not be applicable if the study surgeons have outcomes significantly worse than a surgeon with exceptional skill and experience.

A final issue with surgical RCTs is their cost in time, effort and money. In order to have enough patients to properly power a study, large multicenter trials often are necessary. These are expensive, time consuming and labor intensive, making it difficult or impossible to repeat a trial, even if there are grave concerns about the validity of the study. Because RCTs often take many years to complete, their results may be meaningless if new technology has developed during the trial that could affect patient outcomes.

SPORT, Scrutinized

The results of the Spine Patient Outcome Research Trial, the first multicenter prospective randomized trial of surgical versus nonsurgical treatment of patients with lumbar spinal stenosis, spondylolisthesis, and disc herniation, currently are being analyzed and are likely to be published in the near future. While I do not know the results of this study, I have grave concerns because the problems inherent in surgical RCTs exist in SPORT. A summary of SPORT, based on my May 2000 report to the AANS/CNS Washington Committee, may help to illustrate some of these points.

One problem is that of patient selection. Primary care physicians will send patients with severe pain and radiographically documented structural spine problems directly for neurosurgical or orthopedic evaluation and treatment. Patients with equivocal findings are more likely to be sent to a comprehensive spine clinic. Even within the spine clinic population, the investigators estimate that they will be able to randomize only 15 percent to 40 percent of patients who meet study criteria. Those patients who are evaluated but elect not to be involved in the randomized study will be followed. It is likely that patients with more severe symptoms and more impressive structural pathology will be triaged to surgical care. This will eliminate patients from the randomized study who are most likely to respond to surgical intervention and raises the question as to whether or not the study population will be representative of lumbar surgery patients. If the patient in agony with a large free disc fragment benefits more from surgery than the patient with intermittent sciatica from a bulging disc, and if the former patient type is underrepresented and the latter, overrepresented in the study, the benefits of surgical intervention will be underestimated.

There also are problems with the methodology in regard to crossover patients. In order to retain the benefits of randomization, the study is designed as an intention-to-treat analysis. Patients are considered members of the group to which they were randomized, even when they have crossed over to the other treatment group. The investigators anticipate that up to 25 percent of the patients origi-

nally randomized to nonsurgical therapy may cross over to the surgical group. If this group of patients then does well in long-term follow-up, the benefit will be credited to the nonsurgical treatment group. This design will maximize the benefits of nonsurgical treatment and minimize the benefits of surgical care.

Attributes of a Procedure-Specific Registry

Infrastructure and opportunity currently exist to develop a procedure-specific registry that would produce the data necessary to improve quality patient care in neurosurgery. Two examples are the NeuroLog system developed by the American Board of Neurological Surgery and the NPH Registry developed by the AANS with Outcome through the Neuro-Knowledge program.

NeuroLog is an Internet-based data collection system that has been used to collect case information for residents. The system catalogs operative data that can be compared to national benchmarks established by the Residency Review Committee. The ABNS has considered plans to adapt the system to collect the case information needed for the practice performance component of ABNS Maintenance of Certification and to expand use of the system to other practitioners for practice assessment.

If each ABNS-certified neurosurgeon were to continuously submit outcomes data on one procedure that he or she performs frequently, the data generated could become a very valuable quality improvement tool. Analysis of outcomes and practice variations over wide geographic areas could be conducted efficiently, and neurosurgeons in solo practice would be able to participate in the database as easily as those at academic centers. Data in the central database could be analyzed and hypotheses generated to determine best clinical practices. Individual outcomes that differed substantially from the universal database norms would trigger educational intervention. It would then be possible to determine if the intervention had a positive effect on subsequent outcomes. Such a system could be used for Maintenance of Certification, pay-for-performance requirements, state reporting requirements and hospital-based quality improvement efforts in neurosurgery.

The Normal Pressure Hydrocephalus Registry is an example of a procedure-specific registry that establishes reliable longitudinal data. The participating surgeon establishes a patient's baseline information by completing an "initiation form" during the first visit. The form details demographics, NPH history and etiology, comorbidities that are present, imaging procedures that have been done, treatment thus far, and supplementary tests such as spinal tap. At the end of the form, the surgeon indicates a decision to follow the patient or to treat the patient surgically. If the decision is to treat the patient, the surgeon completes a "surgical treatment form" following surgery that describes the shunt procedure (new shunt, revision, endoscopic third ventriculostomy), whether a fixed or variable valve was used as well as the shunt's brand name and valve setting, and the shunt configuration at placement or revision.

Six months after the initial visit or surgical treatment, the "follow-

up form" is completed. On this form, completed after annual visits for five years thereafter, the surgeon records assessment of the patient's status, degree of improvement, any imaging procedures since the last visit, comorbidities that affect outcome, complications of surgery and recovery, and, if applicable, the date and cause of death.

Participating surgeons can access the data they have provided to the registry and compare their data on patient symptoms, complications, and shunt procedures to the aggregate information. The aggregate data will also be reviewed regularly by an advisory board whose responsibilities include guiding the scientific direction of the NPH Registry, reviewing and modifying the data collection protocol as necessary, creating and implementing a data analysis and publication review process, reviewing and evaluating domestic and international proposals for analysis and publication of data, and encouraging neurosurgeon participation.

Key elements underlying the success of the NPH Registry are unencumbered accessibility and ease of use. The Web-based information platform supports electronic practice and research tools including electronic data capture that is compliant with regulations set forth by the U.S. Food and Drug Administration and privacy laws. The system allows individual surgeons to access patient information securely through the Internet, including through a hand-held computer, whenever a registry patient presents, and to customize data forms to include additional data elements of interest to them.

A Viable Alternative

I have been involved in clinical trial design and application for many years, including service as chair of the AANS/CNS Committee for the Assessment of Quality, the AANS/CNS Cerebrovascular Section representative to the AANS Guidelines Committee, the chair of the AANS/CNS Outcomes Committee, a member of the American Heart Association Stroke Council's Guidelines Oversight Committee and presently as chair of the AANS/CNS Washington Committee's Quality Improvement Workgroup. I also have participated in guidelines development for carotid endarterectomy, secondary stroke prevention and management of subarachnoid hemorrhage. This experience with clinical trial design and application has led me to question the application of RCTs as class I evidence in surgery.

Although RCTs are powerful tools for clinical research, their inherent problems for surgical trials make it unwise to rely solely on RCTs to establish standards of care in surgery and then to codify these results in clinical guidelines. To do so lends credence to bad science. If continuous quality improvement and applicability to a wide range of neurosurgical procedures and practice sites are desired, in my judgment, a necessary addition is to develop a registry that allows continuous collection of data on neurosurgical procedures and risk-adjusted analysis of outcomes. Such data, collected and shared in a nonpunitive environment, has been shown to result in improving the quality of surgical care. So far, nothing else we have tried has worked. ■

Robert E. Harbaugh, MD, FACS, is chair of the Quality Improvement Workgroup of the AANS/CNS Washington Committee.

AANS Strategic Plan

November Planning Session Yields Four Specific Goals

DONALD O. QUEST, MD

In a recent strategic planning session, the AANS Long Range Planning Committee identified four goals for the association:

1. Generate non-dues revenue so that member benefits can be enhanced without corresponding dues increases.
2. Maintain an effective organizational structure, and continue to serve as the spokes-organization for neurosurgery.
3. Provide cutting-edge services to our membership as a whole, and to significant subgroups, with emphasis on services which are most valued by our members.
4. Serve as the advocate for all of neurosurgery within the medical field and with government and third-party payers.

The special session, conducted in November, was designed to fully reevaluate the AANS Strategic Plan using the SWOT (Strengths, Weaknesses, Opportunities, Threats) analytical method. Participants in the session included the members of the AANS Long Range Planning Committee as well as several others representing specific subgroups: Fremont P. Wirth, MD; Robert L. Grubb Jr., MD; James R. Bean, MD; Jon H. Robertson, MD; Robert A. Ratcheson, MD; Christopher M. Loftus, MD; James T. Rutka, MD; Troy M. Tippet, MD; Lawrence S. Chin, MD; William T. Couldwell, MD; and Paul C. McCormick, MD.

As the session's facilitator, A. John Popp, MD, provided expertise in monitoring the organization's progress, evaluating the relevance of ideas under discussion, and updating the goals, objectives, and strategies going forward. Dr. Popp had directed development of the initial AANS Strategic Plan in 2003 as president-elect. It was gratifying to find that many areas of concern identified three years ago have been addressed successfully. But particularly as the AANS celebrates its diamond jubilee year, recent successes will not distract the AANS from its vision for neurosurgery's future.

SWOT Assessment

The strengths of the AANS are manifold and flow directly from our membership. Expertise, prestige, commitment, effort and loyalty are but a few of the attributes that members contribute to the well-being of the organization. The endeavors of individuals in many areas enhance the quality of the organization and improve the professional lives of each member, ultimately benefiting the patients we care for. The AANS' financial stability, which makes it possible to marshal organizational energies on multiple fronts, has been achieved without increasing membership dues—in fact, the percentage of revenue derived from dues has decreased from 17 percent in 2002 to 15.6 percent in 2005.

One of our greatest strengths—the collective energy, enthusi-

asm, and expertise of members in different subspecialty areas—paradoxically can sometimes hamper the efficiency and limit the effectiveness of the AANS as neurosurgery's spokes-organization. Neurosurgery is a small and elite specialty, and in order to enhance the effectiveness of the organization all of its diverse members and groups must continue to work together.

Abundant opportunities to enhance member benefits include: closer cooperation and coordination with the American Board of Neurological Surgery facilitating the Maintenance of Certification process through Web-based data collection and the continuing development of educational opportunities; furthering neurosurgical research through the Neurosurgery Research and Education Foundation; achieving federal medical liability reform through the advocacy of AANSPAC; developing a system of care for neurosur-

gical emergencies through the Task Force on Neurosurgical Care and Physician Workforce; and increasing outreach to the international neurosurgical community in anticipation of the World Federation of Neurosurgical Societies' XIV International Congress of Neurological Surgery in Boston in 2009.

Threats to the AANS are threats to neurosurgery in general. These include marginalization of the specialty, static or even declining medical student interest in the field,

professional liability burden, reimbursement decline, pay-for-performance initiatives with imposition of outcomes parameters and guidelines by non-neurosurgical entities, and incursion by other specialties into neurosurgical domains. Professional liability and reimbursement issues are main priorities of the Washington Committee, which increases its influence through coordination with other specialty societies such as the American College of Surgeons and the American Medical Association.

As the custodian of our profession, the AANS must ensure that the specialty does not splinter into small interest groups. The AANS must develop a plan to care for neurosurgical emergencies nationwide, and it must increase interest in the specialty among medical students, with a particular focus on women, who comprise half of all medical students but only a small percentage of those entering our specialty.

More details about the AANS Strategic Plan will become available over the next few months as strategies are refined and AANS committees are charged with the plan's fulfillment. There are significant challenges ahead of us, but our organization is strong and committed. If every member remains involved and dedicated, we will continue to achieve success. ■

Donald O. Quest, MD, is AANS president-elect.

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True Collaborative Care Calls for Accountability

For Patient Safety, Product Reps Should Share the Load

The increasing integration of neurosurgical care with technology for the evaluation, treatment, care, and ultimate cure of our patients includes intraoperative guidance systems, implants, and minimally invasive surgical systems. Spinal implantation devices undergo iterative improvements, and electronic image-based guidance devices have continuous software updates. The role for biomedical products, such as bone morphogenetic protein, is expanding.

The application of technology to neurosurgical patient care, the complexity of the devices and the furious pace of change have facilitated the growth and acceptance of a collaborative care paradigm in which neurosurgeons work closely with product representatives to bring new technology-based solutions to their patients.

It is now quite common for product representatives to be present and to function in sophisticated support roles during surgical procedures, a situation that contributes to the ability of neurosurgeons to care for their patients. These representatives are well trained in the various attributes and uses of their products and often are highly educated as well. However, unlike physicians and other members of an operative team, they are not certified by any public entity and have no recognized fiduciary duty to the patient. Thus, even a well-intentioned manufacturer's representative—who essentially is a sales representative—will have an inherent conflict of interest between fulfilling employer expectations and attending to the well-being of the patient.

In the interest of patient safety, it is time to adapt the collaborative care paradigm so that the integral role played by product rep-

resentatives in bringing new and beneficial technologies to our patients is acknowledged and that attendant responsibilities also are appropriately assigned.

The Traditional OR Team—Redefined

Collaborative care is a complex phenomenon, and in one sense it has always been a part of the neurosurgical operating theater. For example, consider the surgeon, anesthesiologist, nurse anesthetist, circulating nurse, scrub technician, and X-ray technologist working together as a collaborative care team throughout a surgical case. In this



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traditional paradigm, well-defined roles and boundaries have developed over time. These team members either are professionals with a code of ethics and recognized duties and accountability under the law or they operate under the supervision of the professionals. The primary duty of every member of the care team is to the well-being of the patient, and no systemic conflicts of interest interfere with that duty.

The introduction of product representatives to the operating theater has added a new dimension to the collaborative care team. If the role of product representatives were simply that of maintenance of instrument inventory, there would be no need for them to be present during surgical procedures or to offer guidance to the surgical staff or the operating

neurosurgeon. Rather, their role is to support their employers' technology and to facilitate its use when deemed appropriate by a physician. This role becomes increasingly critical as the technology increases in sophistication.

For example, the software technology for image-guided brain biopsies is constantly updated with new features and capabilities. In addition, to improve the efficiency and accuracy of surgical steps such as registration, the user interface has become increasingly sophisticated. The surgeon who frequently uses the technology will become knowledgeable and comfortable with these features and will require little support from the product representative. A surgeon who uses the technology infrequently but considers it critical to offering the best possible patient care will need to rely more on the product representative for guidance in the proper use of the equipment and to troubleshoot any difficulties that arise throughout the case.

When during a surgical procedure unexpected issues require revision of the original surgical plan, a product representative present in the OR often suggests solutions, based on product features, that have been used effectively under similar circumstances. The representative's failure to accurately convey information or to fully disclose facts needed by the neurosurgeon in order to appropriately utilize technology could result in harm to the patient.

Apportioning Responsibility: Current Thought

A recent malpractice case, reported in the Summer 2005 issue of the *AANS Bulletin* and summarized here, illustrates this circumstance and how a jury might view the

situation. During an operative case a neurosurgeon decided not to use a cranial plating system or its titanium mesh cranioplasty alternative because of concern with scalp erosion, and he instead used a self-hardening hydroxyapatite cranioplasty material recommended by a product representative on the premises. The representative guided OR staff in preparing the product and the neurosurgeon in applying it. The cranioplasty material subsequently decomposed, and the patient required several additional surgeries.

At trial the neurosurgeon's attorney argued that the product representative in an operating room has a duty to the patient, including the duty to communicate all of the product's attributes, especially when use of the product is proposed to remedy a surgical problem that occurs during an operative case. The manufacturer's defense argued that it is the neurosurgeon's responsibility to educate himself or herself and that there is no duty for a product representative to warn a physician if the product is being used in an improper fashion, even when harm to a patient might reasonably result. The jury found in the plaintiff's favor, apportioning responsibility for the award 75 percent to the neurosurgeon and 25 percent to the product manufacturer.

Extrapolating this case for discussion purposes to other types of products and devices being developed and introduced for advancing patient care, it is unrealistic to presume that neurosurgeons can verify through their own due diligence and study of technological solutions all of the information presented by product representatives. At some point the fund of information available to a product representative who is both dedicated to and extensively trained on a small product line surpasses the treating neurosurgeon's fund of knowledge on that technology.

Neurosurgeons must be able to rely on the veracity and integrity of the information provided by product representatives in the treatment of their patients, and the

Neurosurgeons must be able to rely on the veracity and integrity of the information provided by product representatives in the treatment of their patients.

fiduciary duty to place the patient's interests above all other considerations should in part transfer to those providing advanced technological support.

If all or the majority of accountability continues to fall to neurosurgeons, then they will have to limit their use of technological solutions to those with which they are completely familiar, highly trained, and able to troubleshoot individually. This will result in a slowing of the introduction of new technology into patient care and its attendant benefits. Furthermore, it will limit the ability of neurosurgeons to rely on product representatives for education regarding products and technical solutions and will require them to take time away from patient care for independent study of these solutions if they wish to use them. It also could lead to an increase in device-driven subspecialization, which could have the unfortunate effect of decreasing patient access to neurosurgical care.

A New Model

A new model makes sense for the provision of excellent state-of-the-art patient care in an increasingly complex collaborative care environment.

When a product representative is invited to offer technological support in the operating theater during an episode of

care, then there should be a duty to provide accurate information inclusive of all facts that may influence the surgeon's decision making. This duty and the associated accountability for providing accurate and complete information regarding a particular technology should reside with the product representative.

The neurosurgeon, on the other hand, is making decisions regarding care based upon the progress of the operative intervention and the information supplied to him or her by the product representative. The duty to make reasonable, prudent decisions within the standard of care and execute them appropriately should reside with the neurosurgeon, and the accountability for that aspect of care should remain with the neurosurgeon.

Although one may envision mastering spinal instrumentation sets to the point that there would really be no need for input from a product representative, the likelihood of the neurosurgical community as a whole mastering software updates and troubleshooting electronic interfaces such as those used with intraoperative image guidance is difficult to envision. It is reasonable to assert that in the interest of patient care and patient safety, the appropriate responsibility for technology support is assigned to the product representative; but as that occurs, so too is accountability assigned.

Adoption of this new paradigm would be an adjustment for all parties concerned, but it would acknowledge that to ensure optimal patient care and safety, multiple specialized roles are necessary in the application of technological solutions to neurosurgery. ■

Related Article

■ McCormick, PW: OR friend/courtroom foe: does a product rep in your OR have a duty to your patient? *AANS Bulletin* 14(2):15, 2005. www.AANS.org, Article ID 37047

TIMELINE: Neurosurgery Through History

Who Cares About Organized Neurosurgery?

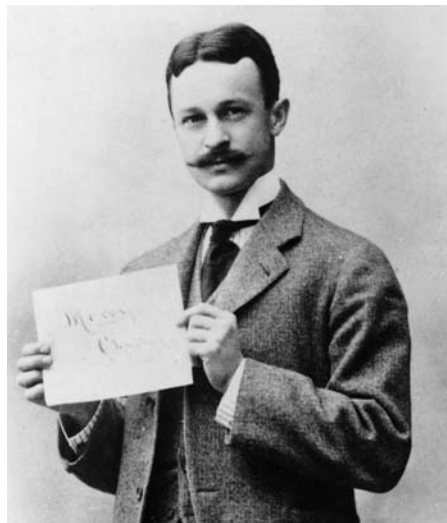
Harvey Cushing Did, and So Should You

MICHAEL SCHULDER, MD

Neurosurgery is a young specialty, barely a century old. It was on Nov. 18, 1904, that Harvey Cushing addressed the Cleveland Academy of Medicine, calling on his colleagues to recognize “The Special Field of Neurological Surgery.” However, it was not until October 1919 that the American College of Surgeons accepted neurosurgery as a distinct specialty. Five months later 11 physicians (including Cushing) founded The Society of Neurological Surgeons, whose membership was to be limited to 45 academic members.

In the coming years a new generation of young Americans chafed at being excluded from the only neurosurgical organization. In 1931—75 years ago—Temple Fay, R. Eustace Semmes, R. Glen Spurling, and William P. Van Wagenen founded the precursor of the AANS, The Harvey Cushing Society. The choice of a name was no surprise. Even then it was clear that Harvey Cushing was the founder of this new discipline. Other surgeons such as William MacEwen, Victor Horsley, and Charles Frazier had advanced the art of brain surgery and to some extent established it as a special interest of theirs. But it was Cushing who convinced his colleagues that surgery of the nervous system required full-time attention and special training.

Temple Fay of the University of Michigan, one of the founders of the Harvey Cushing Society, stated its mission as the “investigation and advancement in the fields of neurosurgery, with the fundamental needs of establishing methods of early diagnosis and postoperative treatments, directed towards the protection of the patients, and a decrease in mortality.” While the new society was founded in the fall of 1931, its first meeting occurred at the



It was Cushing (pictured in 1900) who convinced his colleagues that surgery of the nervous system required full-time attention and special training.



(clockwise from top left) Temple Fay, R. Eustace Semmes, William P. Van Wagenen and R. Glen Spurling met in Washington, D.C. on Oct. 10, 1931 and decided that a new society would be formed to encompass the disciplines of neurosurgery, medical neurology, neurophysiology, neuropathology, and roentgenology.

Peter Bent Brigham Hospital on May 6, 1932, with 23 neurosurgeons in attendance. They came from across the United States, including California. After opening remarks, Cushing operated on a patient with a third ventricular tumor (via a trans-frontal route). The afternoon featured a series of papers, and a patient clinic took place in the evening. Not averse to drama, Cushing’s presentation included examinations of the patient who had just undergone surgery that very day.

The HCS morphed into the American Association of Neurological Surgeons in 1967. This change reflected the passage of time and the rise of a new generation of neurosurgical leaders who were not Cushing trainees and who had no personal experience with him. It also acknowledged the presence of other neurosurgical “schools” such as those of Frazier and Ernest Sachs, and of Walter Dandy, Cushing’s protege turned rival. From an organizational perspective, it represented the view of the newly named AANS that it in fact was the official representative of American neurosurgeons.

On the occasion of the inaugural meeting of the HCS in 1932, Cushing himself teased the founding members of the

upstart organization that in a short time a new group of neurosurgeons would look upon them as “senile and antiquated.” While other organizations (including the American Academy, the Congress of Neurological Surgeons, and the Neurosurgical Society of America) indeed were formed as other outlets for organized neurosurgical activity, the HCS thrived, as has the AANS. Its more than 6,500 members are drawn from the world over.

Some readers of the *AANS Bulletin* may wonder, Who needs organized neurosurgery, and why should we care about its history? Well, without it, there would be no journals; no meetings where you can learn new developments and present your research; no board certification; and no national voice to represent your interests. The AANS is not the only American or international neurosurgical organization, but it is the largest and nearly the oldest. Its history—and its future—is important to all of us who work as neurosurgeons. ■

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

The Endoscopy Revolution

Illuminating the Future of Surgical Education

The evolution of endoscopy over the last two decades has changed surgery in several important ways. The transition from enteral endoscopy to laparoscopy (and thoracoscopy) ushered in the era of minimally invasive surgery that has impacted all surgical subspecialties, including neurosurgery. This technological revolution also has dramatically altered the definition of technical proficiency.

Perhaps the greatest impact, however, has been the reorientation of surgical education toward the acquisition of proficiency on models prior to participation on live patients. This approach is now standard in many surgical subspecialties but has yet to become a meaningful component of residency training in neurosurgery. Historically, neurosurgery has embraced such training—for the Midas Rex and spinal instrumentation, for example. Perhaps the time has come to reintroduce this “model” approach to all stages of neurosurgical training.

Instruments of Illumination

Rigid endoscopy was introduced in 1901 and became more widespread after semi-rigid devices became available in the 1930s. These instruments, known as gastroscopes, allowed illumination to be passed into gastrointestinal organs with little instrumentation, though the surgeon’s field of vision was limited, for rudimentary treatments such as polyp resection or biopsy. With the advent of fiber-optic illumination in 1957, the technology began to grow rapidly. Gynecologists expanded the use and indications for endoscopy throughout the 1960s, laying the foundations for general surgeons who finally jumped on board in the 1980s, performing the first laparoscopic cholecystectomies.

Since that time, laparoscopic technology has exploded, ushering in the era of minimally invasive surgery. Lengths of stay have



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plummeted in hospitals, and every surgical specialty has taken up the call. Minimally invasive surgery has allowed neurosurgeons to enter the ventricle with increasing ease and dexterity. Computer-assisted techniques have led to smaller craniotomy incisions and bone openings. Endoscopic discectomies and thoracoscopic sympathectomies have become part of the standard neurosurgical armamentarium, and neurosurgical patients have gained much by the application of this technology.

Toward a Different Dexterity

Another important change that the endoscopic revolution brought was a redefinition of technical proficiency. The dexterity and skill required to excel in laparoscopic surgery is different than in open surgical procedures. While both procedure types require a thorough understanding of anatomical principles and surgical approaches, endoscopic techniques require a greater ability to understand three-dimensional anatomy. In addition, a greater ability to coordinate both hands is essential, while hand dominance lessens in importance. Directing instruments that are remote from our hands also requires different coordination. In most cases, accomplished laparoscopic surgeons also are excellent at open techniques, but the opposite is not always the case.

The introduction of laparoscopic techniques initially led to high rates of com-

plications, prompting new supervision requirements as well as development of skills laboratories. This new approach allows surgeons to develop proficiency without exposing patients to our learning curve. While the best way to provide surgical simulation is still debated, there is clear evidence that a wide range of skills—from intubation to sentinel node biopsy to reconstructive plastic surgery—are improved when simulators are used for surgical education.

New Vision for Neurosurgical Education

Certainly, endoscopic techniques are not the only ones amenable to using simulators. During the 1960s, the Vermont laboratory of R.M. Peardon Donaghy, MD, provided the first neurosurgical courses in microvascular surgery. Throughout the period from 1970 to 1990, laboratory training for microneurosurgery continued to be required for many of us before entering our senior years of residency. Many neurosurgeons can still recall the numerous sheep scapulas that were requisite training for the Midas Rex. And sawbones were commonly used to demonstrate spinal instrumentation during the explosion of this technology in the 1990s.

At our national meetings, cadavers, simulators and other models for surgical education are still frequently employed, though their use is neither standard nor required. Certainly, current literature strongly supports the use of various models of simulation for surgical training while acknowledging that there are drawbacks to nearly all models. In addition, these studies emphasize that training on models does not guarantee proficiency and should only be viewed as a component of comprehensive education under supervision.

Despite these caveats, perhaps the time has come for neurosurgeons to embrace the successful programs of our surgical colleagues. In this era of work hour restrictions and exploding technology, surgical simulation can help all of us maintain proficiency throughout our careers. ■

To Prevail, First Prepare

How to Deliver a Successful Deposition

There is a saying among trial lawyers: “A good deposition won’t necessarily win your case, but a bad deposition will surely lose it.” In the trial of a medical malpractice case, there is nothing more important than your deposition.

The first three rules to remember before giving any deposition testimony are: (1) Prepare! (2) Prepare! (3) Prepare! Be sure to arrange a pre-deposition conference with your attorney to review pertinent dates, facts, circumstances, issues and conclusions regarding your case. Cancel your schedule the night before and on the day of the deposition, and try to rest and relax. If for some reason you can’t prepare, are worried about your command of the issues and facts, or are missing information, X-rays or records, ask your attorney to reschedule the deposition.

Do not underestimate opposing counsel. You may know more about neurosurgery, but he or she has been trained to discover and exploit doubt and inconsistency. Wrong or inconsistent deposition testimony can be made to appear as either a lack of appreciation of critical issues or intentional misrepresentation.

Working closely with your attorney is critical in order to excel at your deposition. In fact, if your team’s work product is good enough, there might not be a trial and the plaintiff may settle or drop the case.

These 10 tips for excelling at your deposition also may be helpful:

1. Be attentive and alert: Sit up straight; no slouching. Forcing yourself to be attentive will keep you focused and listening.

2. Be sincere: Sincerity always shines through. Your character and demeanor are being evaluated by opposing counsel.

3. Be humble: Avoid over-advocating and boasting. Use your usual vocabulary, but

don’t be condescending or appear ashamed of your education.

4. Be an expert listener: Physicians can sometimes be bad listeners outside of clinical situations, and they have a tendency to appear opinionated. Listen to all questions completely. Pause and understand the question, think before you speak, and then answer. Never answer a question you do not understand.

5. Always tell the truth: It is always easier to remember facts than interpretations, assumptions or rationalizations, which can cause inconsistencies that imply untruthfulness. Concentrate on addressing dispositive issues effectively and completely, which helps to establish credibility. No one is expected to be perfect, to never make a mistake or to be all-knowing. Don’t be afraid to admit your lack of knowledge.

6. Do not speculate: No one can predict the future. Never estimate or make guesses about potential circumstances.

7. Do not volunteer information: Listen carefully and then answer only the question asked, preferably in as few words as possible. Resist the temptation to fill conversational voids with unsolicited opinions.

8. Maintain your composure: Don’t react to the aggressive questioner or be lulled into a false sense of security by the mild-mannered questioner—the old good cop, bad cop routine. Don’t argue with opposing counsel; leave that to your lawyer. Concentrate on being attentive, listening and remaining unemotional.

9. Be courteous and gracious: Be sincere and respectful, especially toward parties in the litigation, opposing counsel, members of their staff and, if present at any time, the judge and jury members.

10. Trust your lawyer: Realize that your counsel, who has more experience in legal matters than you do, usually will be able to anticipate your anxieties and correct any mistakes you might feel you have made. If you have worked with and feel comfortable with him or her, you should be able to come up with a strategy together to prevail in your defense. Never disagree or argue with your attorney outside of private conversation.

Your deposition is truly the most important part of your preparation for your medical defense. You will be under careful observation by two lawyers: one attempting to solicit weaknesses and exploit them to your defeat, and the other attempting to evaluate your demeanor and strengthen your arguments so that you will prevail at trial.

It cannot be overstated that under these circumstances you must work diligently and closely with your attorney, who will help you to be a strong witness. You must inform your counsel of any shortcomings you may perceive in your conduct leading to the current litigation. You must share all concerns you may have with regard to your defense and anything that may have a harmful effect on the outcome of the case. If your attorney is aware of all potential problems that may affect your defense, strategies can be developed to address them appropriately.

Above all, don’t rush into a deposition to “get it over with.” Prepare! ■

Stanley W. Fronczak, MD, JD, FACS, is a neurosurgeon with West Suburban Neurosurgical Associates SC, Hinsdale, Ill., and chair of the Medicolegal Committee of the Council of State Neurosurgical Societies.

Related Medicolegal Programs

During the AANS Annual Meeting April 22–27 in San Francisco, Dr. Fronczak will participate in two programs: the practical clinic “Preparation for Medical/Legal Testimony,” on Sunday, April 23, and the breakfast seminar “Medical Liability: How to Develop an Action Plan,” on Tuesday, April 25. For Annual Meeting details, visit www.aans.org/annual/2006.

LETTERS

Editor:

Dr. Wohns' article "When Neurosurgeons Drop Cranial Surgery Privileges" [14(4): 30–31, 2005; www.AANS.org, article ID 37391] focuses on the economic upside of a practice essentially limited to spine surgery. He fails to mention that when a neurosurgeon drops cranial surgery and opts out of ER call, someone else has to pick up the slack. While the non-cranial neurosurgeon is browsing at the Mercedes dealership, his colleague is catching up on his sleep after last night's emergency (the poor dumb sap!).

We can't all clip aneurysms or manage pediatric cases, but what happens after a majority of us have "wised up" and aren't performing basic cranial surgery? Think of the patient with an acute subdural hematoma who shows up on a snowy night and the nearest cranial surgeon is three hours away. What if that patient were your dad? Are we a profession or a business?

*Robert J. Hacker, MD
Eugene, Ore.*

The Author Responds:

We all want to provide full service neurosurgery and, in fact, most neurosurgeons go into neurosurgery with a strong desire to do brain surgery. But the economic incentives and disincentives in our current healthcare system have made it onerous for many neurosurgeons to be full service, and the medical liability crisis has increased the pressure. If we had federal tort reform and better reimbursement for cranial procedures, Dr. Hacker's concerns would disappear as most neurosurgeons would again perform full service neurosurgery. In the meantime, analyzing and understanding the economic factors underlying a less-than-perfect practice environment can only benefit our profession and our patients by pointing the way to practical solutions.

*Richard N.W. Wohns, MD, MBA
Puyallup, Wash.*

YOUR OPINION COUNTS!

Send your comments regarding limiting practice, reimbursement, ER coverage or other issues in neurosurgery to the editor at bulletin@aans.org. Letters are assumed to be for publication unless otherwise specified. Correspondence selected for publication may be edited for length, style and clarity.

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AANS Annual



The AANS convenes in San Francisco April 22–27 for the 2006 Annual Meeting, officially beginning a year-long celebration of the AANS diamond jubilee that will culminate with the 75th Annual Meeting in Washington, D.C.

The San Francisco meeting is built on the scientific foundation of three plenary sessions, six scientific sessions that explore subspecialty areas, and six subspecialty section sessions. New scientific program topics that focus on the spine include spinal column tumors, spinal cord anomalies, complications and outcomes in lumbar interbody fusion and spinal access trauma management.

Opportunities for education and enjoyment abound at this 74th annual event. Following the Pain Section Satellite Symposium and weekend practical clinics, the Sunday evening opening reception provides an introduction to the multicultural city via a “streets of San Francisco” theme.

In the technical exhibit hall, more than 200 companies and 700 booths offer hands-on access to the latest technology. The exhibit hall also is the site of the “Top Gun: Neurosurgery Challenge,” the silent auction benefiting the NREF, and the technology pavilion, where free courses are available.

The meeting concludes on Thursday with the popular socioeconomic session, which focuses this year on pay-for-performance initiatives, the Neurosurgery With the Masters special scientific session, and the afternoon Japanese American Friendship Symposium.

Claim Annual Meeting CME in All-Online Process

With 20.75 category 1 continuing medical education credits at stake, 2006 AANS Annual Meeting registrants should be sure to claim credit by June 1 for the portions of the meeting they attended. Beginning this year, meeting registrants will use an entirely online

process to self-report CME credit for the portions of the meeting they attended. The process, accessible during and after the meeting, begins with login at www.MyAANS.org using e-mail address and password. After selection of “CME Self-Report” and then the 74th AANS Annual Meeting, online instructions will guide users through completion and submission of the form in minutes.

Meeting attendees can enter or edit credit online at any time from April 22 to June 1. An informative worksheet, viewable online at www.aans.org/annual/2006 and provided in registration packets, can be a useful tool for remembering which credits were earned during the meeting, particularly for those who prefer to enter all earned CME credit in just one visit to www.MyAANS.org.

There is no need to self-report CME credit for ticketed educational programs, including breakfast seminars, practical clinics, the Pain Section Satellite Symposium and the Japanese American Friendship Symposium. The tickets collected for program admittance will generate the addition of appropriate credit to attendees’ CME records at www.MyAANS.org. Up to 35 category 1 credits are available for attending these programs. CME certificates that meeting attendees print on or after April 28 will reflect credit earned and submitted for the plenary sessions and the Thursday socioeconomic and special scientific sessions. Credit earned at ticketed events will be added to attendees’ records, and it will be reflected when attendees print CME certificates on or after May 10.

Special Speakers Lend Expertise and Perspective



George F. Will, Cushing Orator George Will is considered one of America’s foremost political commentators and columnists. His penetrating and incisive commentary on the national political scene offers a glimpse into what the future holds for public affairs, public policy and American society.

A Pulitzer Prize-winning columnist and Newsweek essayist, Will writes a popular syndicated column for The Washington Post syndicate that reaches nearly 500 newspapers throughout the United States and Europe. As a contributing analyst on ABC News, he has been presenting his hard-hitting and witty commentary on ABC’s “This Week” since 1981. Seven collections of his Newsweek and newspaper columns have been published, and he has published two books on baseball.



Fremont P. Wirth, MD, AANS President Dr. Wirth is assistant clinical professor of the Department of Surgery (neurosurgery) at the Medical College of Georgia, and he is engaged in the practice of neurosurgery at the Neurological Institute of Savannah. A member of the AANS since 1980, Dr. Wirth served as AANS vice president from 2002 to 2003. Dr. Wirth has

served as president of the Georgia Medical Society, president of the Southern Neurosurgical Society, vice president of the Congress of Neurological Surgeons, governor of the American College of Surgeons and director and vice chairman of the American Board of Neurological Surgeons. He received his medical degree from Vanderbilt University and

The Japanese Tea Garden in San Francisco’s Golden Gate Park is pictured above. The Japanese Neurosurgical Society and the AANS come together at the Japanese American Friendship Symposium on Thursday, April 27, at the San Francisco Marriott. The afternoon scientific program is preceded by a luncheon and followed by a wine and cheese reception. (Photo: Jack Hollingsworth, San Francisco Convention and Visitors Bureau.)

Meeting in San Francisco

completed his training at Johns-Hopkins Hospital in Baltimore and Barnes Hospital/Washington University in St. Louis.



Mark Bernstein, MD, Theodore Kurze Lecturer Dr. Bernstein's topic is "The Voices of Neurosurgeons." He is co-director of the Gamma Knife Centre at Toronto Western Hospital, University Health Network. Dr. Bernstein's clinical and laboratory research interests are focused on malignant brain tumors. His current clinical interests include image guidance in surgery, awake craniotomy with cortical mapping, outpatient neurosurgery including lumbar discectomy and craniotomy for brain tumor, and outcomes and complications of neurosurgical interventions.



Mitchel S. Berger, MD, FACS, Ronald L. Bittner Lecturer Dr. Berger is chair of the Department of Neurological Surgery at the University of California at San Francisco. He is the Kathleen M. Plant Distinguished Professor and director of the Brain Tumor Research Center at UCSF. His primary clinical interests are the treatment of brain and spinal cord tumors in adults and children and epilepsy related to brain tumors, and he has extensive expertise in intraoperative mapping of the brain. Dr. Berger received his medical degree from the University of Miami School of Medicine, followed by an internship and residency at UCSF.



Arthur L. Day, MD, Richard C. Schneider Lecturer Dr. Day is professor of neurosurgery at Harvard Medical School. He is director of the Cerebrovascular Center and Neurologic Sports Injury Center, as well as associate chairman and program director of the Department of Neurological Surgery at the Brigham and Women's Hospital in Boston. His clinical interests are in cerebrovascular disease and sports medicine. He graduated from Louisiana State University Medical School and completed his neurosurgical residency training at the University of Florida.



Michael Merzenich, PhD, Van Wagenen Lecturer Dr. Merzenich discusses "Infant and 'Adult' Brain Plasticity: Relevance to Neurosurgical Practice." For more than three decades, he has been a leading pioneer in brain plasticity research. He is the Francis A. Sooy Professor at the Keck Center for Integrative Neurosciences at the University of California at San Francisco, and he leads the scientific team at Posit Science Corporation.



Volker K. H. Sonntag, MD, FACS, Rhoton Family Lecturer Dr. Sonntag will discuss "The Journey of Spinal Neurosurgery." He is currently the vice-chairman of the Department of Neurosurgery at Barrow Neurological Institute, director of the Residency Program, and professor of Clinical Surgery at the University of Arizona. A native of Germany, he graduated from the University of Arizona Medical School, followed by his internship at the University of Arizona and his residency at Tufts New England Medical Center Hospital.

Annual meeting details are available online at www.aans.org/annual/2006.

2006 ANNUAL MEETING PROGRAM AT A GLANCE

FRIDAY, APRIL 21

Pain Section Satellite Symposium	8:00 AM–5:00 PM
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SATURDAY, APRIL 22

Registration	7:00 AM–5:30 PM
Practical Clinics	8:00 AM–5:00 PM

SUNDAY, APRIL 23

Registration	7:00 AM–6:00 PM
Practical Clinics	8:00 AM–5:00 PM
Opening Reception	6:30 PM–8:30 PM

MONDAY, APRIL 24

Registration	6:45 AM–4:00 PM
Breakfast Seminars	7:30 AM–9:30 AM
Exhibits	9:00 AM–4:00 PM
Plenary Session I	9:45 AM–1:00 PM
<i>Rhoton Family Lecture – Volker K.H. Sonntag, MD</i>	
<i>Cushing Orator – George Will</i>	
Lunch in Exhibit Hall/Poster Viewing	1:00 PM–2:45 PM
Scientific Sessions	2:45 PM–5:30 PM
<i>Ronald L. Bittner Lecture – Mitchel S. Berger, MD</i>	
Business Meeting of the AANS and the American Association of Neurosurgeons	5:30 PM–6:30 PM

TUESDAY, APRIL 25, 2005

Registration	6:45 AM–4:00 PM
Breakfast Seminars	7:30 AM–9:30 AM
Exhibits	9:00 AM–4:00 PM
Plenary Session II	9:45 AM–1:00 PM
<i>Van Wagenen Lecture – Michael Merzenich, PhD</i>	
<i>Presidential Address – Fremont P. Wirth, MD</i>	
Lunch in Exhibit Hall/Poster Viewing	1:00 PM–2:45 PM
Section Sessions	2:45 PM–5:30 PM

WEDNESDAY, APRIL 26

Registration	6:45 AM–3:30 PM
Breakfast Seminars	7:30 AM–9:30 AM
Exhibits	9:00 AM–3:30 PM
Plenary Session III	9:45 AM–1:00 PM
<i>Richard C. Schneider Lecture – Arthur L. Day, MD</i>	
<i>Theodore Kurze Lecture – Mark Bernstein, MD</i>	
Lunch in Exhibit Hall/Poster Viewing	1:00 PM–2:45 PM
Section Sessions	2:45 PM–5:30 PM
International Reception	5:45 PM–7:00 PM

THURSDAY, APRIL 27

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

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The Executive Council of the Neurosurgery Research and Education Foundation of the AANS gratefully acknowledges the individuals, groups, corporations and members of the general public who generously supported the NREF between July 1, 2005 and Dec. 31, 2005. We thank these donors for continuing to recognize the need for and understanding the importance of providing critical funding for some of the specialty's brightest scientists and their promising neurosurgical investigations. These studies have set a high standard in the neuroscientific community, serving as key indicators of our ability to enhance science, technology and improve patient care. The AANS members, individuals and corporations supporting NREF over past six months include:

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2006 Van Wagenen Fellowship Awardees Selected

For the first time in 39 years, two applicants have been awarded the 2006 William P. Van Wagenen Fellowship: Yu-Hung Kuo, MD, PhD, of Weill-Cornell Medical School, and Uzma Samadani, MD, PhD, of the University of Pennsylvania.

Dr. Kuo attended medical school at Columbia University College of Physicians and Surgeons and currently is a neurosurgeon at New York Hospital, Weill-Cornell Medical School. Dr. Kuo will be studying radiation induction of gene therapy in the central nervous system with Brian Brophy, FRACS, at Flinders Medical Centre in Australia.

Dr. Samadani attended medical school at the University of Illinois and currently is a neurosurgical resident at the Hospital of the University of Pennsylvania. She will pursue her interest in minimally invasive management of intracerebral hemorrhage with



Dr. Van Wagenen

Veit Rohde, MD, at the University of Goettingen in Germany.

Their training, which will begin July 1, 2006, will be completed within the 12-month period of the grant.

The William P. Van Wagenen Fellowship was established by the estate of Dr. Van Wagenen, who was one of the founders and the first president of the Harvey Cushing Society, now the AANS. The fellowship is offered annually 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 \$6,000 available for family travel expenses and \$15,000 of research support available to the laboratory sponsoring the Van Wagenen Fellow.

Applications for the 2007 Van Wagenen Fellowship are due Oct. 1, 2006. The application is available online at www.aans.org/research/fellowship/aans.asp. ■

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Measure for Measure

P4P Implications for Neurosurgery

In this issue of the *AANS Bulletin*, we further explore the recent pay for performance, or P4P, initiative of the Centers for Medicare and Medicaid Services. This initiative is gaining traction, and neurosurgeons need to be aware of the implications.

Performance measures selected to evaluate neurosurgeon performance in patient care should be based on published scientific evidence. The problem arises when treatment algorithms are standardized without the corresponding base of strong scientific evidence.

While treatment guidelines for the management of head trauma, spine injury and lumbar fusion exist in our literature, careful perusal of these indicate that class I or class II evidence is lacking

in many of the clinical treatment scenarios. Class III evidence, if present, merely denotes “options” for treatment. Will such weak evidence provide a yardstick by which to measure physician performance?

Neurosurgeons must be aware of the negative potential for P4P and the limited financial impact (2 percent of an already deeply discounted fee).

Another cautionary note for guidelines: Rather than improving care for patients, they may be misused at trial in a naive and simplistic fashion and thus become a potential liability for neurosurgeons. Plaintiff attorneys may advocate to juries, chiefly composed of lay members of the public, that guidelines can be used to measure a neurosurgeon's adherence of care to established practice (thus applying the cookbook medicine analogy). This issue is thoughtfully reviewed by Fernando Diaz, MD.

The problems in establishing strong scientific evidence to support a “standard of care” (class I evidence by randomized clinical trial), or true “guideline” (class II evidence) in a small specialty such as neurosurgery are well discussed by Robert Harbaugh, MD. Given the limitations of using randomized clinical trials to develop robust guidelines in our specialty, he proposes the development of a procedure-specific registry to collate data in a non-punitive environment. This would enable neurosurgeons to monitor outcomes while looking at aggregate data and would provide a repository of data for later analysis to determine optimal outcome related to specific practice. ■

William T. Couldwell, MD, is editor of the *AANS Bulletin*.



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

AANS Board Disciplines Five Members

Professional Conduct Committee Recommends Seven Actions

At its meeting in Chicago on Nov. 18, the AANS Board of Directors decided seven professional conduct cases. In one case the board approved the recommendation of the Professional Conduct Committee that the charges against the member be dismissed. In six other cases the board approved the PCC's recommendations that disciplinary actions be imposed, resulting in two expulsions, a two-year suspension, two one-year suspensions and a six-month suspension of membership.

One of the suspensions is being appealed to the general membership and will be heard at the annual business meeting on April 24 in San Francisco. Brief summaries of the other five sanctions follow.

Cumulative Record of Professional Conduct Actions

As of December 2005 (excluding one matter under appeal and four awaiting presentation in April 2006), completed actions by the AANS Board of Directors fall into the following approximate percentages:

Dismissal of complaint	33%
Suspension of membership (generally six months to two years)	30%
Letter of censure	20%
Expulsion (including due to loss of ABNS certification)	12%
Unpublished letter of admonition	5%

Martin Krell, MD

Two-Year Suspension

The charges against Dr. Krell were based on his deposition testimony as an expert witness in a lawsuit involving a 10-year-old boy who was severely injured when the bicycle on which he was riding collided with a truck. In this accident the boy was thrown an estimated 40 feet, was immediately unconscious, apneic, and ultimately became a ventilator-dependent quadriplegic.

The boy was first seen by the neurosurgeon several hours after an exploratory laparotomy and a CT scan of the head. A later MRI showed a cord injury at the cervicomedullary junction. Dr. Krell testified that the CT scan showed an epidural hematoma anterior to the cord at the cervicomedullary junction and that immediate surgery plus methylprednisolone would have resulted in the patient retaining useful movement of his arms and legs and being able to breathe on his own.

The PCC concluded, and the board agreed, that the CT scan did not show an epidural hematoma and that while steroid treatment was and is widely used in spinal cord injuries, Dr. Krell's prognosis for recovery with the use of methylprednisolone was entirely too optimistic. The PCC concluded that Dr. Krell's testimony reflected inadequate subject matter knowledge in his reading of the CT scan and in his unrealistically optimistic prognosis for recovery if methylprednisolone had been used. It was unclear to what extent intentional improper advocacy may have also played a role, but in either case Dr. Krell's testimony was highly inappropriate and unprofessional.

Sidney Peerless, MD

One-Year Suspension

The charges against Dr. Peerless were based on his expert opinion letter to plaintiff counsel supporting the filing of a medical

malpractice lawsuit and his subsequent deposition testimony in that case. The patient was an obese 43-year-old man with a history of alcohol abuse, secondary liver damage, hepatitis C, and hypersplenism. He was admitted to the hospital with an acute subarachnoid hemorrhage, hypertension and lethargy, and then was transferred to another hospital for further management. There he developed reduced platelets and probable disseminated intravascular coagulopathy. A chest X-ray showed bilateral infiltrates suggestive of congestive heart failure. He had cirrhosis and an elevated blood ammonia level. With vigorous medical care he improved remarkably over the next week or so and became medically stable. He then underwent cerebral angiography that showed a large (12 mm) right pericallosal aneurysm.

After consultation with the treating neurosurgeon, the patient and his family elected to proceed with an attempted clipping of the aneurysm. The operation involved a right frontal craniotomy with interhemispheric approach, and ultimately a wrapping of the aneurysm with muslin gauze when the neurosurgeon concluded that clipping threatened continuity of the parent vessel. The operation was difficult because of adhesions and took nearly nine hours. Postoperatively, the patient was slow to arouse, was aphasic, and was not moving his lower extremities. Postoperative CT scans showed a hemorrhagic contusion of the right frontal lobe and an infarct in the distribution of the left anterior cerebral artery. Repeat angiography showed a patent left anterior cerebral artery. A subsequent neurology consultant documented a complete paraplegia with a sensory level at T6 and ordered an MRI which failed to demonstrate the cause of the paraplegia. A later MRI did show a probable T6 cord infarct. The patient developed increasing

difficulty with decubitus ulcers and urinary sepsis and ultimately died. The family brought a malpractice suit against the treating neurosurgeon which, after a full trial, resulted in a defense verdict.

Dr. Peerless testified that it was below the acceptable standard of care to have recommended surgery for this patient because of an unfavorable risk-benefit ratio and that the treating neurosurgeon was negligent for allowing decubiti and urinary infection to develop. Dr. Peerless' adamant assertion that surgery should not have been offered in this circumstance failed to represent the full range of neurosurgical thought and practice. The PCC noted that the aneurysm was large and appeared amenable to clipping. The PCC and the board considered that proceeding with surgery was reasonable and that Dr. Peerless improperly characterized the decision to proceed with surgery as substandard. The PCC and the board also considered that Dr. Peerless' testimony showed bias through inflammatory language used in several areas of his deposition.

Lawrence F. Marshall, MD *Six-Month Suspension*

The charges against Dr. Marshall were based on his statements made during a discovery deposition as a plaintiff medical expert in a medical malpractice suit involving a 58-year-old woman with lumbar scoliosis, stenosis, and complaints of persistent low back and leg pain. The patient underwent a bilateral decompression from L1 to S1 with a posterior lumbar interbody fusion at L2–L3 and L3–L4. A posterior lateral instrumented fusion was then done from L1 to the sacrum. During the decompression a dural laceration occurred at about the L3–L4 level and this was repaired. Postoperatively the patient was found to be severely paraparetic and was returned promptly to the operating room where re-exploration failed to demonstrate any neural compression. At this reoperation an L2 pedicle screw on the right was removed, an L3 pedicle screw was

revised, and an L5 pedicle screw was noted to have become "stripped." The patient gradually regained useful strength in her legs but did not recover to the level of her immediate preoperative neurological state. The patient brought suit against the treating neurosurgeon and a trial resulted in a defense verdict.

In his deposition, Dr. Marshall was highly critical of the preoperative planning and of the surgical performance. Dr. Marshall testified that the treating neurosurgeon's conduct would have resulted in a "criminal referral" in California and made references to the cord having been "whacked." The PCC concluded, and the board agreed, that Dr. Marshall's deposition testimony viewed as a whole did not adequately represent the range of neurosurgical thought and practice and that his reference to "criminal referral" and a "whacked" cord constituted improper advocacy rather than impartial testimony.

Ignacio A. Magana, MD, and Richard B. Small, MD

Expelled from AANS Membership

Ignacio A. Magana, MD, and Richard B. Small, MD, were expelled from the AANS because each lost his certification by the American Board of Neurological Surgery, which is a prerequisite for AANS membership. In addition, Dr. Magana lost his state license to practice medicine, which is also a prerequisite for membership in the AANS.

PCC: Working for Nearly 25 Years

The AANS Professional Conduct Committee evaluates complaints by one or more AANS members about another member or members and makes recommendations to the Board of Directors. Established in 1982, the PCC has served as a model for other professional associations to structure and adopt similar professional conduct programs. In June of 2001, the AANS Professional Conduct Committee's work was examined by the 7th Circuit Court of Appeals in a land-

mark case for professional associations, *Austin v. AANS*. This opinion strongly supported the AANS Professional Conduct Program and the importance to a professional association of having an internal mechanism for self-regulation. The program also received an honor roll designation from the American Society of Association Executives in 2002. ■

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

Russell M. Pelton, JD, is AANS general counsel.

For Further Information

The AANS rules for expert witness testimony, the AANS Code of Ethics and more information related to association governance is available online at www.aans.org/about in the Governance and Leadership area.

NEW!

Scientific and Practice Management DVD's

Select sessions from AANS Annual Meetings have been videotaped and made available on DVD. Topics cover Tumors, Interbody Lumbar Fusion, and risk management and financial strategies for your practice.

For DVD descriptions visit the AANS Web site www.AANS.org for more information!



American
Association of
Neurological
Surgeons

Inspirations and

Before there were worries of high medical liability rates, shrinking reimbursement and a plethora of unfunded federal mandates, there was an ideal, an individual, a moment of clarity, or an event that motivated you to apply for neurosurgical residency and that perhaps sustained you during practice of this most challenging of professions. During the AANS 75th anniversary year, when neurosurgery's origins and organizers will be recognized and remembered, accounts of inspiration and epiphany by today's neurosurgeons will be published in the AANS *Bulletin*. Consider your own career. What attracted you to neurosurgery? Who inspired you in this profession? What would you tell a medical student about your experience as a neurosurgeon? What do you still love about your daily work?

Send your account (300-word maximum) by e-mail to bulletin@AANS.org. You will receive an automatic confirmation of receipt, and you will be contacted if your item is selected for publication in an upcoming issue of the *Bulletin*.

The threads that led me to become a neurosurgeon took years to be woven, seemingly without my conscious awareness until a single moment of epiphany. As a sophomore in college I was drawn to but dissatisfied with both engineering and literature. One morning I came late into a darkened psychology class to a movie on brain lateralization in "split brain" patients. Suddenly I was transported into the operating room and an open craniotomy for corpus callosotomy. This was the first thread.

I enrolled immediately in Topics in Neural Science and became one of the first neural science concentrators at my university. Still, it was pharmacology and psychiatry that attracted me at this stage. I entered the MD/PhD program intending to become a biological psychiatrist. Yet I clearly remember sitting in the lab the first summer and conjuring up the idea that I would do brain transplantation for Parkinson's patients (a new idea in 1982), and fund my research doing so. How naive!

Still, it did not occur to me to become an actual neurosurgeon. In fact, by the time I was supposed to enter the wards at the completion of my graduate research—by then on molecular biology of signal transduction in worms (!)—I wanted to leave medical school and concentrate on basic research. However, I was convinced to finish what I started, and so I chose the hardest rotation first: surgery. After operating on trauma the whole first night of the rotation, I realized how dissatisfied I'd become with the pace of research, and that surgery was my calling. It was only natural that it would be neurosurgery. And here I am now: "splitting" the brains of patients with epilepsy, and helping to fund my research doing brain transplantation for Parkinson's patients!

Robert E. Gross, MD, PhD
Atlanta, Ga.

Montreal, the city where I grew up, was a city of medical giants. I didn't know all the names, as I didn't come from a medical family. But my father and his best friend, who also was my pediatrician, did a good job of instilling in me a sense of awe and reverence for the medical profession. The Royal Victoria Hospital, which resembles a castle and overlooks the campus of McGill University and the commercial center of Montreal, was for me an icon representing the highest attainment of human skill and learning. The Montreal Neurological Institute, housed in smaller though architecturally complimentary adjacent buildings, was on the same topographic level but even more exalted in its culture of achievement. Wilder Penfield was a living legend. I was growing up in what was then the commercial and intellectual capital of Canada, and medicine/neurosurgery was at the top, at least in my mind.



Wilder Penfield, MD

Some images from my formative years are still with me: curiosity piqued by a photograph of a team performing brain surgery in a children's encyclopedia given to me on my fifth birthday; seeing Wilder Penfield on the street (he lived a few blocks away); the shock of seeing a soon-to-be-deceased young schoolmate's shaved and recently stitched head (a medulloblastoma, I now suppose, given the location of the incision and the outcome).

I never thought that I had it in me to wage heroic battles against hopeless disease. And perhaps I don't. Neurosurgery has certainly changed in the last 40 years. But I was, and still am, impressed by the brave men who worked with limited tools and imaging in such an important place and made me want to be a neurosurgeon.

Ian B. Ross, MD
Pasadena, Calif.

I had always wanted to be a vascular surgeon.

In college I did research with a vascular surgeon in Cleveland. My role involved using PTFE grafts on the femoral artery on dogs. I continued with that focus in medical school in Cincinnati where I did research on endothelial cells within the vascular surgery division. When I was a third year student, the chair of the department of surgery threw me out of his OR and swore I'd never match in a surgery program. I had done a neurosurgery rotation with John Tew, and I was very favorably impressed with him as a gentleman, not just as a fantastic surgeon. I changed my focus and never looked back. Incidentally, my clinical focus in neurosurgery is aneurysms and AVMs.



John M. Tew Jr., MD

Robert J. Gewirtz, MD
Columbus, Ohio

Epiphanies

Since Howard A. Brown, former Harvey Cushing Society president, was my father, one could invoke the following of foot-steps as my reason for becoming a neurosurgeon. But, by age 19, I had seen the impacts on family life of being on call and having family occasions disrupted. Medicine was the one thing I would *not* do.



Howard A. Brown, MD

After two years of college I had no specific direction and paged through the college catalog making notes of the interesting possibilities. I also made a list of nonacademic time spent and was somewhat disturbed to realize that I enjoyed asking my father about neurosurgical matters. I took a series of aptitude tests and was horrified when they applied the label “doctor” to me.

But reason prevailed; I took some premed courses and found them interesting. I thought medical school might be worth a shot. I was successful in being admitted and enjoyed the curriculum. And I took a fourth year elective at Boston Children’s with Don Matson, whom I had admired throughout medical school. That sealed the deal. I returned to San Francisco and had the privilege of being a resident for my father, O.W. Jones, and Ed Boldrey. What a great group of clinicians and teachers! I became a partner of my father in what could be considered a lifelong teaching arrangement. I had the advantage of his counsel for many years after his retirement.

Since I am now retired, I can look back on my training and practice with great satisfaction. I had inspiring teachers, a great specialty, and the career-long pleasure of being able to help patients. It’s hard to beat that combination!

Congratulations to the AANS (aka Harvey Cushing Society) on its 75th anniversary! And good wishes to all the young neurosurgeons who are pursuing ever more challenging problems in our field.

*Barton A. Brown, MD
Mariposa, Calif.*

I was a sophomore medical student at the University of Pennsylvania during the winter of 1973. My intention at the time was to do full-time research after graduation, but I became disenchanted with the basic sciences, and captivated by the clinical aspects of medicine. I did not know which specialty would be a good fit, but I knew that I could never be an ob-gyn (too much howling during labor), a pediatrician (too much howling by the children), or a psychiatrist (the patients were just too crazy, and everybody smoked cigarettes).

One Saturday, I attended a large group lecture in clinical neuroscience given by Thomas Langfitt, who was the chair of neurosurgery. He is now deceased, but he was a very tall, imposing figure with a full head of silver hair and a deep, sonorous voice. He brought onto the stage a gentleman in a wheelchair with a head dressing and

elicited a history: He had been a high-powered executive at a Fortune 500 company when he suffered mental status changes. A CT scan, which was a new technique at that time, showed a frontal lobe malignant glioma, which was confirmed at surgery.

Dr. Langfitt bantered with the man a little bit while demonstrating the neurological findings, and then the patient was excused. He then addressed the group of students. He explained what a GBM was, and that it would be fatal within six months regardless of treatment. But he went on to say that despite the hopeless prognosis, the true physician still had a vital role to ease pain, prolong useful life, and allow death with dignity. His plan for this patient was to give palliative radiation, escalate steroids as needed, and, when the patient was so disabled that life was burdensome, admit him to the hospital, and with the consent of the patient and his family, abruptly stop the steroids. I was absolutely blown away by this display of compassion. As a student, I felt that my role as a physician would be to fight disease, and that if the patient died it was my failure. This was my first introduction to the idea that ultimately, our patients always die. But that this knowledge does not free us from our responsibility to provide care. Caring for a dying glioma patient is every bit as rewarding and valuable as curing a convexity meningioma. I decided on a career in neurosurgery that same day.

I suspect that most of us chose our career path because of some mentor, some larger than life figure that we encountered by chance and wished to emulate. In my case, it was a neurosurgeon, but it could equally well have been a gastroenterologist or urologist. But, for me, not an ob-gyn, a pediatrician, or a psychiatrist.

*Leslie N. Sutton, MD
Philadelphia, Pa.*

My grandfather was great friends with Garber Galbraith. When I was in college, my father, a physician, told Dr. Galbraith I was interested in neurosurgery. He invited me to the OR to watch a case; I was mesmerized. Later that year my college friend, Margaret Laws, invited me to New York to stay with her parents at the annual CNS meeting. She said, “My dad is the president, it should be fun.”



Edward R. Laws Jr., MD

Hanging out with Ed Laws and family sealed my fate. If I could join a profession that attracted people like Garber Galbraith and Ed Laws, then I knew I would be forever grateful and challenged.

Later when I was in medical school and I told Dr. Galbraith I might want to go into neurosurgery, he said, “Where do I send the letters?” Case closed.

*Charles Cobbs, MD
San Francisco, Calif.*

AANS Online Case Study

Ease of Use and Broad Appeal Characterize New Learning Tool

KATHLEEN T. CRAIG

This April, the AANS begins offering neurosurgical case studies on the password-protected pages of www.MyAANS.org. Free and accessible only to AANS members, this new interactive educational experience will be driven by members' case contributions.

"The AANS Online Case Study project is designed to serve as a repository for neurosurgical cases that present the variation in disease presentation and management within neurosurgical practice," said Bob S. Carter, MD, PhD. A member of the AANS Digital Technology Committee, Dr. Carter led the development of the case study project and will serve as its first editor.

Rather than limiting physicians to viewing an article or abstract, the AANS Online Case Study project offers a comment function that allows members to interact with each other in a secure and confidential environment. Because viewers' comments are posted almost immediately, colleagues across the country have the option of gathering online to review a case and "discuss" it, or viewing and adding to cumulative commentary over time.

"Neurosurgeons can discuss the case online and learn from each other," said Dr. Carter. "They can describe how they have managed a similar case in another way or offer insights into other aspects of the case presentation or pathophysiology."

Another quality that makes the AANS Online Case Study project valuable to members is its broad appeal. Cases can be submitted by residents, those in early practice or board-certified members.

"Cases will vary in complexity and content so that as

the repository grows, every neurosurgeon will find one relating to his or her specialty and experience," said Carter.

Submitting Cases

Members may submit cases online, using the familiar www.MyAANS.org interface. The cases may be prepared in advance and then posted, or posted by entering content directly online.

"Ease of use was important to the development team," said Dr. Carter. "We wanted the interface to be one that is familiar to members, and we wanted neurosurgeons to be able to use formats they were already proficient in, such as PowerPoint or word processing programs."

Many types of files can be added to enhance the case presentation:

- Audio (MP3, WMA, WAV)
- Video (AVI, MPEG)
- MS Office (e.g. PPT, DOC)
- Universal formats (TXT, PDF)

"The online modality makes it possible to enrich the case presentations in a way that is difficult with standard print media," said Dr. Carter. "And, any member of the AANS can submit cases that they observe in their practice, providing a wide breadth of member contribution."

To access the AANS Online Case Study project, login at www.MyAANS.org and select "Online Case" from the tool bar.

Browse cases in the index alphabetically or chronologically or search using key words.

The screenshot displays the 'Online Case' interface. At the top, there is a 'Search' section with a 'Category' dropdown menu (currently set to 'Select a Category') and a 'Title / Text' input field. A 'Search' button is located to the right of the input field. Below the search section is a 'Category' list with two columns of links: 'Alpha' and 'Chrono'. The categories listed are Test, Vascular, Spine, Pediatric, Functional, Tumor, Trauma, and Peripheral Nerve. Below the category list is a 'My Cases' section with an 'Add New Case' link. The 'My Cases' section has a table with columns for 'Title', 'Category', and 'Status'. Below this is a 'My cases for review' section with a table showing a case titled 'Basilar Apex Aneurysm' in the 'Vascular' category with a status of 'In Review'. To the right of the interface, there is a green box with text: 'Add a new case, see cases you have posted or check the status of your cases in review.'

Basilar Apex Aneurysm
Robert Carter, MD and colleagues

This is a more complicated edit. There are several aspects to it. OK. Here is a further test. That is good.

Supporting Files

File
[Figure 1. Movie of anterior communicating aneurysm.](#)
[Figure 2.](#)
[Thumbnail](#)
[Figure 3. Basilar aneurysm.](#)
[ppt](#)

Comments:

Bob Carter MD PhD 3/17/2006 12:45:00 PM
That's right. As a reviewer, if you click published, the whole world will see it. Otherwise the comments stay private between the reviewers.
[Edit](#) Published: ☐

Jack Jallo MD 3/17/2006 11:29:00 AM
Comments
[Edit](#) Published: ☐

Bob Carter MD PhD 12/8/2005 2:26:00 PM
Changed the main text again.
[Edit](#) Published: ☒

Bob Carter MD PhD 12/8/2005 2:25:00 PM
Each time a case is updated, a comment can be left describing what was done
[Edit](#) Published: ☐

Add new comment:

Supporting files such as videos, PowerPoint presentations and audio files are options for enhancing case presentation.

Reviewing and Posting Cases

The Online Case Study project is overseen by an editor who receives each submission. The editor assigns the case to one or more reviewers based on the educational content. The reviewers assess the case and recommend whether or not the case should be posted. If a favorable review is received, the editor posts the case for AANS member viewing. The editor and all reviewers will be board-certified neurosurgeon members of the AANS.

Each person who submits a case will see the status of the submission in a "my cases" area. They can develop the case presentation in multiple sessions, coming back to it as time allows and completing all of the editing before submitting the final version for review.

Viewing the Online Cases

After logging in at www.MyAANS.org, the viewer selects "Online Case" from the left-hand navigation tool bar. The size and scope of the repository will increase as cases are solicited and submitted. Cases can be viewed chronologically, so new postings are easy to spot, as well as by subject area (vascular, tumor, spine, functional, pediatric, peripheral nerve). A title search feature also is available.

After selecting the case, the viewer sees a screen with the case description at the top, supplemental material such as audio, video

Comments:

Bob Carter MD PhD 3/17/2006 12:45:00 PM
That's right. As a reviewer, if you click published, the whole world will see it. Otherwise the comments stay private between the reviewers.
[Edit](#) Published: ☐

Jack Jallo MD 3/17/2006 11:29:00 AM
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Bob Carter MD PhD 12/8/2005 2:26:00 PM
Changed the main text again.
[Edit](#) Published: ☒

Bob Carter MD PhD 12/8/2005 2:25:00 PM
Each time a case is updated, a comment can be left describing what was done
[Edit](#) Published: ☐

Add new comment:

Comments:

Jack Jallo MD 3/21/2006 1:28:00 PM
Comments can be added in real time
[Edit](#) Published: ☐

Bob Carter MD PhD 3/17/2006 12:45:00 PM
That's right. As a reviewer, if you click published, the whole world will see it. Otherwise the comments stay private between the reviewers.
[Edit](#) Published: ☐

Jack Jallo MD 3/17/2006 11:29:00 AM
Comments

Comments, shown in real time, can be edited or deleted by the person who posted them.

or slides to the right, and viewer comments below. A significant amount of information is provided in the "help" section to assist viewers with questions about all parts of the process.

CME and MOC

The AANS Online Case Study project is initially being offered without CME. However, a plan is in place to make neurosurgical continuing education credit available. "As the case index builds in size and scope, features will be added to assist members in meeting CME requirements and, in turn, the Maintenance of Certification requirements for the American Board of Neurological Surgery," said Dr. Carter.

Member Feedback

As members explore the cases, they are encouraged to send their comments and suggestions to Dr. Carter, bcarter@partners.org. Board-certified neurosurgeons interested in serving as case reviewers also can contact Dr. Carter.

The AANS Online Case Study project is a project of the Digital Technology Committee, the Education and Maintenance of Certification Committee, and the Young Neurosurgeons Committee. ■

Kathleen T. Craig is AANS director of marketing.

Learning by (Not Really) Doing

Surgical Simulators for Education—and Fun

As a medical student, I performed my first pelvic exam on a “standardized patient”—an actor specifically trained to model behaviors that simulate a clinical experience. Since this early exposure to medical simulation, nearly every first experience I have obtained has been at a real patient’s expense.

Most of my surgical training was completed through the “watch one, do one, teach one” apprenticeship model. However, this “learning by doing” approach can produce significant variability in educational experience. Today a number of developments are converging to drive the use of simulation in surgery: resident work hour restrictions, national focus on patient safety and reducing medical errors, cost of healthcare, and increased patient resistance to training in the OR. These challenges, as well as the pace at which surgery itself is developing, make the need to develop and refine surgical simulation technology a national healthcare priority.

In response to this growing interest, the Society for Medical Simulation was established in January 2004, and many companies have organized to provide education on the value of medical and surgical simulation. The American College of Surgeons has identified several ways simulators potentially can improve patient safety. These include permitting learning in a risk-free environment; refreshing techniques for surgeons returning to practice after an extended absence; correcting case-mix inequalities during training; and allowing prototyping of new procedures and testing of new devices.

The types of medical simulators can be categorized as computer-based training systems, mannequins, part-task trainers, complete or self-contained systems, and total immersion virtual reality.

Computer-based training systems in-

creasingly have incorporated mannequins. Although mannequin systems originally had little or no computer assistance, they now are sometimes indistinguishable from part-task trainers, which focus on skills that need to be acquired in the context of a larger curriculum. Examples include chest tube insertion training, central line insertion, endoscopy, laparoscopy, and neuroendoscopy. Force-feedback and auditory cues are frequently incorporated to enhance realism and increase skills acquisition. Complete training systems provide a comprehensive training course as well as an integrated simulator and have been used in courses such as advanced cardiac life support.

Total immersion virtual reality, while still only in the research phase, seeks to replicate the environment of the procedure as well as the procedure itself. An augmented virtual reality system has been developed for neurosurgical applications such as ventriculostomy.

The use of simulators for training is one thing, but their potential use for assessment and certification brings up many concerns. Although traditional observational methods of technical skill assessment vary in reliability and validity, Auger and colleagues recently reviewed surgical simulation with attention to validation methodology in the journal *Surgical Laparoscopy, Endoscopy and Percutaneous Techniques*. They found that “the surgical literature is replete with editorial, concept, and feasibility articles describing the potential of surgical simulators [but that] relatively little data has been obtained so far that examines the validity of simulators for the training and assessment of surgical skills.” During the past five years, attention has focused on validation of surgical simulators, and a higher correlation



Courtesy of ImmersiveTouch Inc.

It may look like a video game, but this virtual reality system represents the future of medical education. A simulator like the one pictured will be in the exhibit hall at the 2006 AANS Annual Meeting for use in the “Top Gun: Neurosurgery Challenge” presented by the AANS Young Neurosurgeons Committee. Participants will receive scores for their competency, and the top scorer, the Neurosurgical Top Gun, will receive a prize.

between scores on simulators and clinical performance is likely as experience with the devices increases.

The future role of simulators in surgical training and practice will be defined by several factors: refinement of simulation technology, identification of the appropriate context for their use, reduction of cost, identification of a proper set of metrics, and validation of surgical simulators for training and assessment.

Meanwhile, the Young Neurosurgeons Committee is exploring the use of surgical simulators by sponsoring “Top Gun: Neurosurgery Challenge” for residents and fellows at the 2006 AANS Annual Meeting. Events such as this can encourage our specialty to lead, rather than follow, in the field of surgical simulation and computer-assisted surgery. ■

Michael Oh, MD, is director of the Institute for Computer Assisted Neurosurgery (ICAN). He is co-director of the functional neurosurgery program, Allegheny General Hospital, Pittsburgh, Pa., and co-director of the stereotactic and functional neurosurgery program, West Virginia University, Morgantown, W.Va.

The Right Number May Be Unlisted

Coding for Placement of New Spinal Devices

Substantial growth in the development of new devices for implantation in the spine has given rise to uncertainty regarding how to appropriately code for such work. Although Current Procedural Terminology contains a variety of procedures describing use of bone, screws or prosthetic implants, it is not always evident whether existing codes can be applied to newer technology.

In CPT 2002 the American Medical Association instructed physicians not to select a code that only approximates the procedure performed but instead to report an unlisted procedure code. Therefore, neurosurgeons should use unlisted procedure codes—unless a category III code has been developed.

This Coding Corner describes category III codes and provides examples of when to use them rather than category I or unlisted codes.

Category I codes are used for procedures that have been approved by the Food and Drug Administration and that are in broad use clinically. The AMA developed category III codes as a mechanism to describe newer procedures that do not fulfill criteria for category I codes. For example, procedures using non-FDA approved devices without demonstrated clinical efficacy or broad usage may be described specifically using category III codes. Since category III codes are not valued by the Relative-Value Update Committee or reviewed by the Centers for Medicare and Medicaid Services, codes for procedures using new technology can be introduced on a semiannual basis. For example, total disc arthroplasty in the cervical and lumbar spine is described with a category III code.

However, when a procedure resembles a category I code and there is no category III code, the neurosurgeon faces a dilemma

concerning the most accurate way to describe the procedure performed. The physician may also be advised by vendors concerning coding methods that do not reflect AMA policy. Two examples of such procedures include placement of intervertebral prosthetic devices (code 22851) and placement of posterior nonsegmental instrumentation (code 22840).

Code 22851 for placement of intervertebral prosthetic devices was brought before the CPT Editorial Panel in February 1995. At the time the code described placement of methylmethacrylate or metallic mesh cages into intervertebral defects. The new development of threaded titanium cages led to the revision of the code to include this additional device. The RUC subsequently valued the code using a vignette describing placement of paired threaded cages. Since the physician work consisted of either placement of pins for methylmethacrylate reconstruction or placement of instruments for insertion of a pair of threaded cages, some surgeons recommended inclusion of a threaded bone dowel, given the similarity of physician work in placement of titanium cages.

At the same CPT meeting, the vignette for placement of a bone allograft (code 20931) was reviewed. This procedure described the physician work of measuring the defect size with calipers or a trial, fashioning the bone allograft for appropriate shape and size, and then examining the graft for appropriate fit after placement. Placement of the graft was described using arthrodesis codes. Subsequent development of machined allografts created a dilemma for neurosurgeons. Although code 22851 was intended for application of prosthetic devices, it now included the example of a threaded bone dowel. However, the threaded bone dowel is “an exception” to prosthetic device usage. In

contrast, the measurement and fitting of all nonthreaded machined bone should be described using category I code 20931.

Code 22840 for placement of posterior nonsegmental instrumentation was revised to describe single interspace pedicle screw fixation and transfacet screw fixation. New technology has been developed to preserve motion using pedicle screw fixation with a nonrigid material connecting the screws (e.g. Dynesis). Although some neurosurgeons have been advised by vendors to use code 22840 given the similarity in technique, that code was developed for single joint spinal fixation as an adjunct to spinal arthrodesis. Similarly, interspinous devices (such as X-stop) have been developed to limit motion without arthrodesis. Since the intent of these devices is not joint arthrodesis, these procedures are appropriately described with the unlisted code 22899.

It can be difficult for a neurosurgeon to keep up with the growing list of spinal devices being developed, and the timeline for determining and publishing clinical efficacy as well as the 18-month CPT cycle likewise makes it difficult for CPT to remain contemporary with practice. Since the AMA instructs physicians to report codes that reflect the procedure for which the code was developed, neurosurgeons are advised to use unlisted procedure codes unless a category III code has been developed as an interim step. It should be noted that payment policies remain at the discretion of the payer and that there are examples of both coverage and non-coverage decisions for category I codes, category III codes, and unlisted codes. ■

Gregory J. Przybylski, MD, is professor and director of neurosurgery at JFK Medical Center in Edison, N.J. He is chair of the AANS/CNS Coding and Reimbursement Committee and a member of the CMS Practicing Physicians Advisory Council, and he plans and instructs coding courses for the AANS and the North American Spine Society.

New Method for Claiming CME Debuts at AANS Annual Meeting

A simple form available at www.MyAANS.org for online completion and submission will be the only method accepted by the AANS for claiming continuing education credit earned by attending the 2006 AANS Annual Meeting. See page 24 for details.

AANS Introduces Free Spine-Related Online Course

A new course, *Minimally Invasive Microendoscopic Technique for Performing a Decompressive Laminotomy for Lumbar Stenosis*, is now available online. The activity features Richard G. Fessler, MD, providing instruction via audio-narrated slides as well as video. The course is archived online for viewing any time. While this course is available to everyone, only AANS members are eligible for 1.0 continuing medical education credit in category 1 by completing the test at the end of the presentation. The direct link is www.aans.emedtrain.com/lumbar_stenosis.

Middle of the Three-Year AANS CME Cycle Approaches

All Active and Active Provisional members of the AANS are required to document 60 neurosurgical credits between Jan. 1, 2005, and Dec. 31, 2007, to maintain membership. Members are invited to check progress toward documenting these 60 credits by logging in to their individual CME records at www.MyAANS.org. A current list of CME activities accepted by the AANS is available at www.aans.org/education/educational/cme_list.pdf.

Neurosurgical Focus Releases Upcoming Topics and Deadlines

Neurosurgical Focus, the online, indexed, rapid-publication journal of the AANS, announces new topics, submission deadlines and topic editors for upcoming issues: July 2006, Pathology and Treatment of Cavernous Malformations, April 15 submission, Giuseppe Lanzino, MD, and Eugenio Pozzati, MD, topic editors; August 2006, Treatment of Spasticity, May 15 submission, Tae Sung Park, MD, topic editor; September 2006, Cerebral Vasospasm, June 15 submission, Ralph G. Dacey, MD, and Greg Zipfel, MD, topic editors; October 2006, Role of the Neurosurgeon in Sports Medicine, July 15 submission, Julian E. Bailes Jr., MD, topic editor. Additional information is available at www.aans.org/education/journal/neurosurgical. Continuing medical education credit is available for all current issues of *Neurosurgical Focus*.

2006 ASSFN Biennial Meeting, June 1-4 in Boston

(contributed by Konstantin Slavin, MD) Over the last decade there has been a significant increase in

the volume and quality of clinical and research information in the field of stereotactic and functional neurosurgery. The importance of scientific information exchange becomes paramount as the field grows and more neurosurgeons in the United States and Canada get involved. With this in mind, a few years ago a decision was made to change the frequency of American Society of Stereotactic and Functional Neurosurgery meetings from quadrennial to biennial. The last meeting of the ASSFN took place in fall of 2004 in Cleveland. It was extremely well attended and attracted a significant number of outstanding speakers and presentations.

The next meeting of the ASSFN will be conducted in June at the Fairmont Copley Plaza Hotel in the heart of Boston. The meeting, organized by Rees Cosgrove, MD, and Emad Eskandar, MD, with scientific program chairs Ron Alterman, MD, and Robert Maciunas, MD, will include a variety of subjects and will offer current updates on surgery for movement disorders, pain and epilepsy, stereotactic radiosurgery and neuronavigation. There also will be overviews of emerging areas in functional neurosurgery, such as psychiatric surgical indications, treatment of Alzheimer's disease, and development of brain-machine interfaces. The sessions will be led and moderated by renowned experts in the field, and the level of scientific debate is expected to be high as controversial issues will be presented at most sessions, in keeping with the traditions of the ASSFN. Honored guest Ronald Tasker, MD, one of the fathers of modern functional neurosurgery, will bring wisdom, unique insight and perspective into meeting discussions. Registration and housing arrangements are available online at www.assfn.org. The meeting promises to be a success, and it is my pleasure, on behalf of ASSFN President Andres Lozano, MD, and the meeting organizers, to invite everyone.

AMA Adds Tennessee to List of Crisis States

In February the American Medical Association added Tennessee to its list of 22 states experiencing a medical liability crisis. The complete map is available at www.ama-assn.org/go/crisismap. Also, information about the specialty societies' campaign to effect federal liability reform is available at www.protectpatientsnow.com.

Louis A. Finney, MD

Neurosurgeon Led the Foray Into Federal Politics

JAMES R. BEAN, MD

In 2005 neurosurgery lost a pioneer who helped blaze the trail toward federal lobbying for national health and economic policies that shape the future of neurosurgical practice. Louis A. Finney, MD, 74, died Dec. 5 in Amarillo, Texas, from complications of a stroke.

With foresight and tireless energy, Dr. Finney led neurosurgery's first foray into federal politics. Within a decade of the enactment of Medicare and Medicaid in July 1965, the federal government became ever more deeply entrenched in funding and regulation of medical practice, training, and research. Even preceding 1965, federal involvement in healthcare had expanded substantially after World War II, with hospital construction (1946 Hill-Burton Act), NIH research funding, medical school expansion, and national health insurance proposals. The focus of federal policy shifted from expansion of medical services from 1945 to 1970 to cost containment and budgetary control during the Nixon administration.

Dr. Finney served as the first chair of the AANS/CNS Washington Committee. The committee was formed in 1975 in answer to recognition by the AANS and CNS that federal policies henceforth

would substantially change the practice of medicine and neurosurgery. Together with a core group of political activists that included Donald Stewart, MD, Russell Patterson, MD, and Charles Fager, MD, Dr. Finney worked to establish representation and a federal lobbying capability in the nation's capital.

Under Dr. Finney's leadership, the Washington Committee contracted in 1976 with Charles Plante, a former U.S. Senate administrative assistant, for part-time lobbying services. After 10 years the committee expanded from the original six members to include the president and president-elect of the AANS and CNS to accommodate the high-level policy decisions that had to be made, and representation on the Washington Committee expanded in the 1990s to include liaisons from each AANS/CNS section and the CSNS. The business of the committee has grown steadily in importance in the years since Dr. Finney held its helm.

Dr. Finney's reputation for work intensity and intellectual versatility on political issues was legendary. His leadership established a precedent for aggressive political action among neurosurgeons. He shall long be remembered as a pioneer who saw the necessity for neurosurgeons stepping outside familiar academic and hospital surroundings and entering the rough and tumble arena of public politics in order to preserve and advance the best of medical practice and solve socioeconomic problems through public policy change.

Dr. Finney served as the chief medical officer of Amarillo Military Entrance program from 1988 until 1991, the Denver Military Entrance program from 1991 until 1995, at which time he became the deputy command surgeon, U.S. Medical Processing Command.

In the 1960s he worked with Project Hope in Tunisia and participated in a U.S. State Department sponsored medical tour in the Soviet Union. He later evaluated neurosurgical programs in India for the CNS.

In addition to being an active supporter of Texas Tech Medical School, he extended his sense of compassion and quiet generosity to provide anonymous support for several students at the Virginia Military Institute.

Dr. Finney had battled melanoma and a brain metastasis, which was surgically removed in 1993. He is survived by nine children and his wife, Cynthia Collum Finney.

AANS Members Deceased in 2005

Laurence J. Adams, MD
Robert C. Atkinson, MD
Emile Berger, MSc MD
Joseph E. Bogen, MD
Maurice P. Carlin, MD
Louis A. Finney, MD
Melvyn M. Gelch, MD
Martin Gibbs, MD, FACS
Thomas W. Langfitt, MD
Lyal G. Leibrock, MD
J. Michael McWhorter, MD
Paul G. Meyer, MD
Samuel R. Neff, MD
John C. O'Loughlin, MD
Robert E. Parham, MD
Dwight Parkinson, MD
William Paxton Parker Jr., MD
Don F. Rhinehart, MD
John Morgan Thompson, MD
Gerard A. Sava, MD
John O. Sharrett, MD
Donald T. Smith, MD
Jess T. Schwidde, MD

Biography

CONTRIBUTED BY DONALD H. STEWART JR., MD

Dr. Finney, born Aug. 14, 1931, in St. Louis, Mo., was raised in Chicago and graduated from the Virginia Military Institute in 1952 with a bachelor's degree in biology. He received his medical degree from Johns Hopkins School of Medicine in 1956. He then interned at the University of Minnesota and at Johns Hopkins Hospital and was a neurosurgical resident at Jackson Memorial Hospital in Miami, Fla. He was a board-certified neurosurgeon and a member of the AANS and the Congress of Neurological Surgeons.

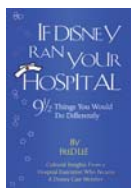
Dr. Finney had a private practice in Amarillo as a neurosurgeon from 1964 to 1987. After retiring from neurosurgery, he moved to England and received a master's degree in clinical tropical medicine from the London School of Hygiene and Tropical Medicine.

He was a captain in the U.S. Naval Reserve. While on active duty, he served at the Naval Hospital in Chelsea, Mass., and was a 5th Fleet Command Sur-

Two Titles Offer Provocative Views

Learning From Disney; Empowering Patients

If Disney Ran Your Hospital: 9 1/2 Things You Would Do Differently, by Fred Lee, 2004, Second River Healthcare Press, 215 pp., \$21.95.



As the book title implies, author Fred Lee's experience with Disney enterprises and with hospital administration provide for some interesting insights into leadership and management. While I wouldn't go so far as to suggest that a day in clinic is or ought to be a like carefree trip to Disneyland, Lee's views blend ideas of business and profession in ways that could probably benefit a neurosurgical practice.

I suppose that for the readership of the *AANS Bulletin* this book should be called *If Disney Ran Your Practice*. With that thought in mind:

If Disney ran your practice...

...everyone in your office would begin to believe that they are being judged not so much against the standards set by their neurosurgical practices but against the standards set by the nicest people giving service anywhere.

...courtesy would become more important than efficiency. When efficiency is primary, the resulting internal focus leads to turf protection. Putting courtesy first results in an external focus that produces responsiveness and ultimately an overall efficiency.

...patient satisfaction would be measured in terms of caring, comfort and empathy. Most satisfaction surveys leave out compassion, but compassion is absolutely essential to people in times of stress, pain and grief.

...systems of measurement would be used to improve, rather than to impress. Regular staff meetings would focus on improving service, generating goodwill,

solving problems and passing along compliments.

...everyone in your office would have the authority to say "yes." Every employee should be empowered to make decisions spontaneously that solve problems and give good service immediately.

...the concept of work would change from service to theater. According to Fred Lee, "If all the world is a stage, then acting, allowing ourselves to be touched by the experience of others, is the means by which the world can become connected in understanding and love." In this "play," every person in healthcare has a calling.

...the motivating power of imagination would be harnessed into a valuable asset: a shared vision of serving the patient together.

...a climate of dissatisfaction with the status quo would be created. Motivated workers find pleasure in continuous improvement.

...rather than using monetary rewards to motivate people in a competitive manner, intrinsic rewards such as helping a patient through a difficult experience would be emphasized. Similarly, the primary rewards for a string quartet are how the music sounds and how it is perceived by the audience.

Lastly, if Disney ran your practice, he would create a culture of commitment, not compliance. Commitment means that everyone in your office takes ownership. Everyone must be willing to make self-sacrificing decisions every day for the good of the whole.

I suppose there is at least one glaring difference between Disneyland and a neurosurgical practice. People go to Disneyland expecting to open their wallets. But perhaps if we ran our practices as Disney would, patients would even do that. There is not a neurosurgeon who would fail to learn something from this book.

Port in the Storm: How to Make a Medical Decision and Live to Tell About It, by Cole A. Giller, 2004, LifeLine Press, 266 pp., \$16.95

What a pleasant surprise this book is. A neurosurgeon has written a book for patients on how to make informed decisions. It is practical, useful and comprehensive, and written in approachable, understandable prose.



Dr. Giller breaks it all down into six practical steps: (1) identification of your options; (2) identification of trade-offs; (3) discovery of data; (4) interpretation of numbers; (5) gathering your beliefs; and (6) contemplation of meaning.

The chapter on the use of data alone makes purchase of this book worthwhile. It's the best summary for use in getting medical data on the Internet that I have seen. I also especially liked Dr. Giller's treatment of the "contemplation of meaning" step. Our patients don't all think the way we do or even the way we would like to have them think. For every step in the process, helpful examples are used to illustrate each part of the decision-making process.

Some readers may be shocked by the three "How to Use Your Doctors" chapters wherein Dr. Giller tells patients how to get the most out of their visits with their doctors. If patients would follow his advice, it would benefit both parties because patients would get so much more useful information and doctors could save valuable time.

I like this book, and I particularly appreciate the wonderfully humble approach this neurosurgeon has to his patients. ■

Gary Vander Ark, MD, is director of the Neurosurgery Residency Program at the University of Colorado. He is the 2001 recipient of the AANS Humanitarian Award.

While You Are Able

Consider All Options in Disability Insurance

A neurosurgeon may be well acquainted with disability as it affects a patient, but the prospect of becoming disabled oneself deserves consideration. As a highly skilled professional, you have invested a tremendous amount of time and money in your career and deserve to insure all your years of training and experience.

In today's market, disability policies vary greatly in terms of the definition of disability, the contractual provisions offered and the premiums charged. As a result, it is important to take the time to compare each of the policies that you are considering and understand how the differences might relate to you as a neurosurgeon.

The two main types of disability insurance policies available are known as

- own-occupation and
- modified own-occupation.

Own-Occupation

Own-occupation policies contain the more liberal definition of total disability. This type of policy pays benefits if you are disabled and "unable to perform the substantial and material duties of your regular occupation." Your regular occupation is your occupation at the time disability begins.

The policy also states that "if you have limited your practice to a professionally recognized specialty in medicine, the specialty will be deemed to be your regular occupation." Therefore, if an accident or sickness prevents you from performing neurosurgery, you would be considered totally disabled and would collect full disability benefits. Furthermore, any income earned in a new occupation would not reduce your monthly disability benefits.

As of this writing, only one company still allows neurosurgeons to purchase a policy with this definition for the entire



benefit period (to age 65 or longer). Other carriers either have limited the own-occupation definition of disability to a maximum of two or five years or simply no longer make it available to neurosurgeons.

Modified Own-Occupation

Modified own-occupation (also known as a "loss-of-earnings" policy) has become the more prevalent type of policy in the industry today. It typically pays benefits if you are "unable to perform the substantial and material duties of your occupation and you are not working." Therefore, unless your policy contains a residual disability rider, no benefits would be paid if you choose to work in another occupation or medical specialty.

Residual disability means that you are at work and not totally disabled under the terms of your policy but, due to sickness or injury, your loss of income is at least 20 percent of your prior income. Generally, this rider also states that if your loss of income were more than 75 percent of your prior earnings, the insurance company would deem your loss to be 100 percent and full benefits would be paid.

A modified own-occupation policy offers the option of either collecting disability benefits or returning to work.

Merely having the ability to work would not affect your disability benefits. You would actually have to engage in another occupation (outside of neurosurgery) and earn more than 25 percent of your pre-disability income to have your benefits reduced.

For example, if you were earning \$300,000 and purchased an own-occupation policy with a monthly benefit of \$10,000 (\$120,000 annually), you could become as financially successful as you wanted in a new occupation without affecting your disability benefits. However, if your policy contained a modified own-occupation definition and you earned more than \$75,000 (25 percent of your prior income), your benefits would be reduced.

Cost and Availability

Although you might suspect that an own-occupation policy would be substantially more expensive than the modified version, there often is very little difference in cost. However, the sole insurer that still offers own-occupation policies to neurosurgeons has introduced a new policy series that includes substantial rate increases. Those who live or work in New Jersey, Massachusetts and California or other states that have not yet approved the rate increases can lock into significantly lower premium rates while they are still available.

Some may feel that if a neurosurgeon cannot operate but decides to work in another capacity earning a similar income, he or she should not be entitled to receive disability benefits. However, the fact that you might be resourceful, talented or motivated enough to pursue a new career should not affect your disability benefits.

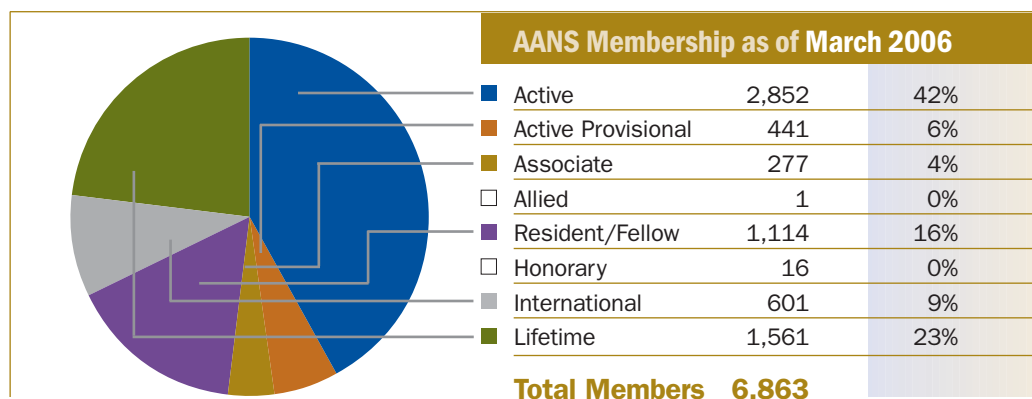
Finding a disability policy that will meet your individual needs can be a challenge. A professional insurance agent who specializes in working with physicians and who knows which companies' policies are best suited to neurosurgeons can help simplify the process. ■

Lawrence B. Keller, CFP®, CLU, ChFC, RHU, LUTCF, is the founder of Physician Financial Services, www.physicianfinancialservices.com, New York.

AANS Welcomes 711 New Members in 2005

Robust Numbers Bode Well for AANS 75th Anniversary Year

From four founding members in 1931 to nearly 7,000 members in 2006, the The AANS offers several categories of membership to neurosurgeons, residents, fellows and allied health professionals. Information detailing membership categories and benefits is available online at www.aans.org/membership.



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James D. Weinstein, MD
Matthew John Wills, MD

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These members successfully completed ABNS certification.

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Brent T. Alford, MD
Arun Paul Amar, MD
Kenan Arnautovic, MD
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Wesley C. Fowler III, MD
Kai U. Frerichs, MD
Victor T. Freund, MD
Regan Shawn Gallaher, MD
Aruna Ganju, MD
P. Charles Garell, MD
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Abdi S. Ghodsi, MD
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Rohit K. Khanna, MD
Nilesh N. Kotecha, MD
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Sandeep M. Kunwar, MD

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Todd W. Vitaz, MD
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Andrew E. Wakefield, MD
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John E. Wanebo, MD
Charles A. Wetherington, MD
Jonathan A. White, MD
Benjamin T. White, MD
Gregory C. Wiggins, MD
Julie E. York, MD

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D. Cory Adamson, MD, PhD
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 Elad I. Levy, MD
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NEUROSURGERY Opportunity:

Salt Lake City, Utah

Patients Tell Compelling Stories

New Contest Exposes the Heart of Neurosurgery

BETSY VAN DIE

That a young woman found and thanked the neurosurgeon who had saved her life 18 years before is remarkable. That he would then become her choice to walk her down the aisle at her wedding is a powerful testament to the impact neurosurgeons have on the lives of their patients.

This compelling story was just one of the more than 30 entries in the first-ever AANS Neurosurgical Patient Stories Contest conducted last fall by the AANS Public Relations Committee. The top three entries selected by the judges are highlighted in press releases that promote the Third Annual Neurosurgery Awareness Week, which coincides with the 2006 AANS Annual Meeting in San Francisco April 22–27. Only patients treated by AANS neurosurgeon members were eligible to participate, and the three patients whose stories were chosen each received a \$200 honorarium.

The competition was developed to educate the public about the role of the neurosurgeon in treating a wide range of medical disorders and to demonstrate to neurosurgeons that the media can be a useful tool in furthering their work.

“While it is true that media attention has recently been focused on such topics as medical liability and neurosurgeon shortages, there is great opportunity to publicize the hundreds of success stories unfolding every day at hospital neurosurgery departments across the country,” said Alex B. Valadka, MD, FACS, chair of the AANS Public Relations Committee.

The contest entries covered the spectrum of neurological conditions and included stories about brain tumors, spina bifida, scoliosis, craniosynostosis, epilepsy, Tarlov cyst and traumatic brain injury. The age of patients ranged from newborn to 82 years. The depth and variety of submissions illustrated the breadth of neurological conditions being treated by neurosurgeons and negated the old adage that “neurosurgeons are just brain surgeons.” A common theme in all of the submissions was the genuine gratitude and admiration expressed by patients toward their neurosurgeons.

Neurosurgical Patient Stories Contest Winners

PATIENT: *Ariel Nelsen, age 4, craniopharyngioma*

NEUROSURGEON: *Monica C. Wehby, MD*

For about six months, Ariel Nelsen had been experiencing headaches that were getting increasingly worse, accompanied by bouts of nausea. Just one day after her fourth birthday, Ariel underwent brain surgery at Emanuel Children’s Hospital. Her entire four-centimeter tumor was successfully removed, leaving the pituitary stalk and gland intact. Like the majority of patients with craniopharyngiomas, Ariel is on hormonal replacement therapy, but she is doing remarkably well.

PATIENT: *Sylvia Lee, age 45, cerebral aneurysm*

NEUROSURGEON: *Jeffrey E. Thomas, MD, FACS*

For four days, Sylvia Lee experienced an excruciating headache and vomiting. On the fourth day, she went to the emergency room at her local hospital, where she was diagnosed with a small, ruptured cerebral aneurysm. She was transferred to California Pacific Medical Center, where she underwent surgery to clip her aneurysm. She went back to work six weeks after surgery and feels great.

PATIENT: *Sister Claire, age 82, trigeminal neuralgia*

NEUROSURGEON: *Mark R. McLaughlin, MD*

Sister Claire suffered from the excruciating pain of trigeminal neuralgia for two years while she was unsuccessfully treated solely with medication. When the condition became unbearable, she was referred to Dr. McLaughlin. Sister Claire underwent microvascular decompression surgery at St. Mary Medical Center to alleviate the pain caused by a small blood vessel touching the trigeminal nerve. Now pain-free, she has returned to St. Matthew’s Catholic School and is celebrating her 57th year of teaching.

These patient stories are posted in their entirety in the “What Is Neurosurgery” area of www.NeurosurgeryToday.org, the public Web site of the AANS.

Who Walked His Patient Down the Aisle?

That would be Joel Singer, MD. His patient had been diagnosed with an “inoperable” brain tumor at age 6 in 1981. He operated on the little girl, removing the entire cerebellar hemisphere that had been overtaken by tumor. Despite the odds, she grew up to become a high school soccer star and later a marathon runner. She was so touched by her experience that she tracked Dr. Singer down and traveled from California to Virginia to thank him in person for saving her life. A few years later, he made the cross-country trek himself and proudly gave his patient away on her wedding day.

These patient stories represent the thousands of tales yet untold. Given this fact and the robust participation in the first AANS Neurosurgical Patient Stories Contest, the competition is expected to become an annual event.

“I hope that the number of entries next year grows considerably,” added Dr. Valadka. “I encourage each and every one of you to ask your patients to submit stories highlighting their successes when next year’s contest is announced.” ■

Betsy van Die is AANS director of communications.

EVENTS

Calendar of Neurosurgical Events

2006 AANS Annual Meeting

April 22–27, 2006
San Francisco, Calif.
www.AANS.org

American Society of Neuroradiology 44th Annual Meeting

April 29–May 5, 2006
San Diego, Calif.
www.asnr.org

Brain Tumor Symposium

May 12, 2006
Bloomington, Minn.
www.cme.umn.edu

The Society of Neurological Surgeons Annual Meeting

May 21–23, 2006
Durham, N.C.
www.societyofns.org

Carotid Intervention: Interactive Seminar With Live Demonstration and Simulation⁺

May 22–23, 2006
Buffalo, N.Y.
(716) 887–5200, ext. 2135

Uniformed Services University 18th Annual International Spine and Peripheral Nerve Workshop

May 31–June 6, 2006
Bethesda, Md.
www.bethesdaspine.com

American Society for Stereotactic and Functional Neurosurgery⁺

June 1–4, 2006
Boston, Mass.
www.assfn.org

Neurosurgical Society of America⁺

June 4–7, 2006
Ojai, Calif.
www.neurosurgicalsociety.com

Rocky Mountain Neurosurgical Society⁺

June 10–14, 2006
Sedona, Ariz.
www.rmns.org

Carotid Intervention: Interactive Seminar With Live Demonstration and Simulation⁺

June 12–13, 2006
Buffalo, N.Y.
(716) 887–5200 ext. 2135

9th International Conference on Cerebral Vasospasm

June 27–30, 2006
Istanbul, Turkey
www.cerebralvasospasm9.org

Computer Assisted Radiology and Surgery (CARS 2006)

June 28–July 1, 2006
Osaka, Japan
www.cars-int.org

Interventional Neuroradiology Peer Review Conference⁺

June 28–July 1, 2006
Jackson Hole, Wyo.
(716) 887–5200, ext. 2135

8th International Conference on Cerebral Blood Flow and Brain Metabolic Imaging in Clinical Practice

July 10–12, 2006
Cambridge, U.K.
www.neurosurg.cam.ac.uk/xe2006

13th International Meeting on Advanced Spine Techniques

July 12–15, 2006
Athens, Greece
www.imastonline.org

Pennsylvania Neurosurgical Society Annual Scientific Meeting

July 14–15, 2006
Hershey, Pa.
jjudy@pamedsoc.org

12th Annual Montana Neurosurgery Symposium⁺

July 23–25, 2006
Big Sky, Mont.
www.umt.edu/mnif/symposium.htm

Aspen Symposium on Brain Tumor Immunotherapy

Aug. 7–9, 2006
Aspen, Colo.
diana.doyle@ucltsc.edu

Tennessee Neurosurgical Society⁺

Aug. 19–20, 2006
Chattanooga, Tenn.
(423) 265–2233

Hydrocephalus 2006

Sept. 6–9, 2006
Goteborg, Sweden
www.hydrocephalus2006.com

8th Annual Interventional Neuroradiology Symposium

Sept. 8–9, 2006
Toronto, Canada
www.cme.utoronto.ca

Western Neurosurgical Society⁺

Sept. 16–19, 2006
Blaine, Wash.
www.westnsurg.org

2006 Annual Meeting of the Congress of Neurological Surgeons

Oct. 7–12, 2006
Chicago, Ill.
www.neurosurgeon.org

American Neurological Association Annual Meeting

Oct. 8–11, 2006
Chicago, Ill.
www.aneuroa.org

3rd International Symposium on Microneurosurgical Anatomy

Nov. 5–8, 2006
Antalya, Turkey
www.isma2006.org

2006 American Academy of Physical Medicine and Rehabilitation Annual Assembly

Nov. 9–12, 2006
Honolulu, Hawaii
www.aapmr.org

AANS/CNS Section on Pediatric Neurological Surgery⁺

Nov. 28–Dec. 1, 2006
Denver, Colo.
www.neurosurgery.org/pediatric

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

AANS Courses

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

■ Managing Coding & Reimbursement Challenges in Neurosurgery

*Coding for the Pros prerequisite: AANS coding course taken within two years.

May 5–6, 2006* Philadelphia, Pa.
Sept. 8–9, 2006 Chicago, Ill.
Nov. 3–4, 2006* Los Angeles, Calif.

■ Neurosurgery Review by Case Management: Oral Board Preparation

May 7–9, 2006 Houston, Texas
Nov. 5–7, 2006 Houston, Texas

■ Minimally Invasive Spinal Techniques

June 10–11, 2006 St. Louis, Mo.

■ Neurosurgical Practice Management: Improving the Financial Health of Your Practice

May 7, 2006 Philadelphia, Pa.
Sept. 10, 2006 Chicago, Ill.



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Never Confuse Activity With Results

Expanding Services With an Eye on Members' Needs

I'm not exactly sure where I first heard the phrase. The sinking feeling my memory generates suggests it was from the executive director I reported to at the first membership association I worked for in the 1980s. The feeling is sinking because he and I most definitely did not enjoy what organizational consultants then termed "cooperatively productive management team chemistry."

But fortunately—and inexplicably—some of the best and most lasting lessons I've learned were from teachers with whom I shared uncooperative and irritating chemistry that was—also inexplicably—productive.

So, the phrase still resonates for me today: "Never confuse activity with results."

Given where the AANS finds itself today as we start the second half of this decade, it occurs to me that our success in the first half was significant in large part because we honored this notion.

Associations work best and offer their greatest benefits when they serve as generators of ideas and implementers of initiatives. But what often results from enthusiastic bursts of well-meaning brainstorming is a deluge of disparate activities, unbounded by the realities of scope and capability. And those activities then generate torrents of reports, timelines, board motions, wasted infrastructure and volunteer resources, and of course, dollars. Because one of the things associations do worst is realize when it's time to sunset projects whose time has passed, the champions of those projects are prone to mistake the frenzied activity they generate for substantive progress.

Fortunately, the AANS has not fallen victim to that syndrome. In the "downsizing and reassessment" phase it went through five years ago, there was only one mission for the organization: remain solvent. That made this particular threat realistically avoidable.

However, danger lurks for an organization hitting on all cylinders, when the crises are past and the coffers are sufficiently robust, to rapidly change the mission from survival to sustenance, and then to progress and growth.



Thomas A. Marshall
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In the last several years the AANS has enjoyed a satisfying growth in stability *and* in ability to serve its members' needs. The organization's leadership has been as vigilant as they've been creative in undertaking programs aimed at meeting the greatest needs of membership in the most cost-effective manner—and with the greatest "bang for the buck." There are not many organizations that can exercise this kind of restraint in their decision-making. After a phase of providing members limited service, the tendency is to make up for lost time by attempting to deliver anything that merely, in the dangerous parlance of many governing bodies, "seems like an appropriate thing for us to do."

While the expansion of services you enjoy as an AANS member has been accelerated over the last several years, those services have been carefully identified, selected and delivered more efficiently than at any time in our history. Part of the reason is that we now determine program and service development by what you tell us you need through our various survey tools. Service development is therefore predominantly determined by what the membership tells the organization it desires, not vice versa.

But the AANS' efficiency also results from many years of AANS leadership not defining progress by the length of project lists, board reports, or verbal ornamentation camouflaging moribund programs. The desired result drives the activity, not the other way around.

Thus, the maxim "Never confuse activity with results" is instructive for all of us involved in the AANS, and it also can serve as a model that many larger service organizations would do well to recognize. The immediate benefit is vital, but its ultimate value is timeless. ■



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This seminar focuses on the current professional liability crisis, including a history of reform measures that have worked and those that have not. Methods to reduce exposure to professional liability claims will be discussed, as well as ways physicians can limit personal liability. Viewers will also learn what organized neurosurgery is doing to combat the situation.

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Moderator: James I. Ausman, MD, PhD
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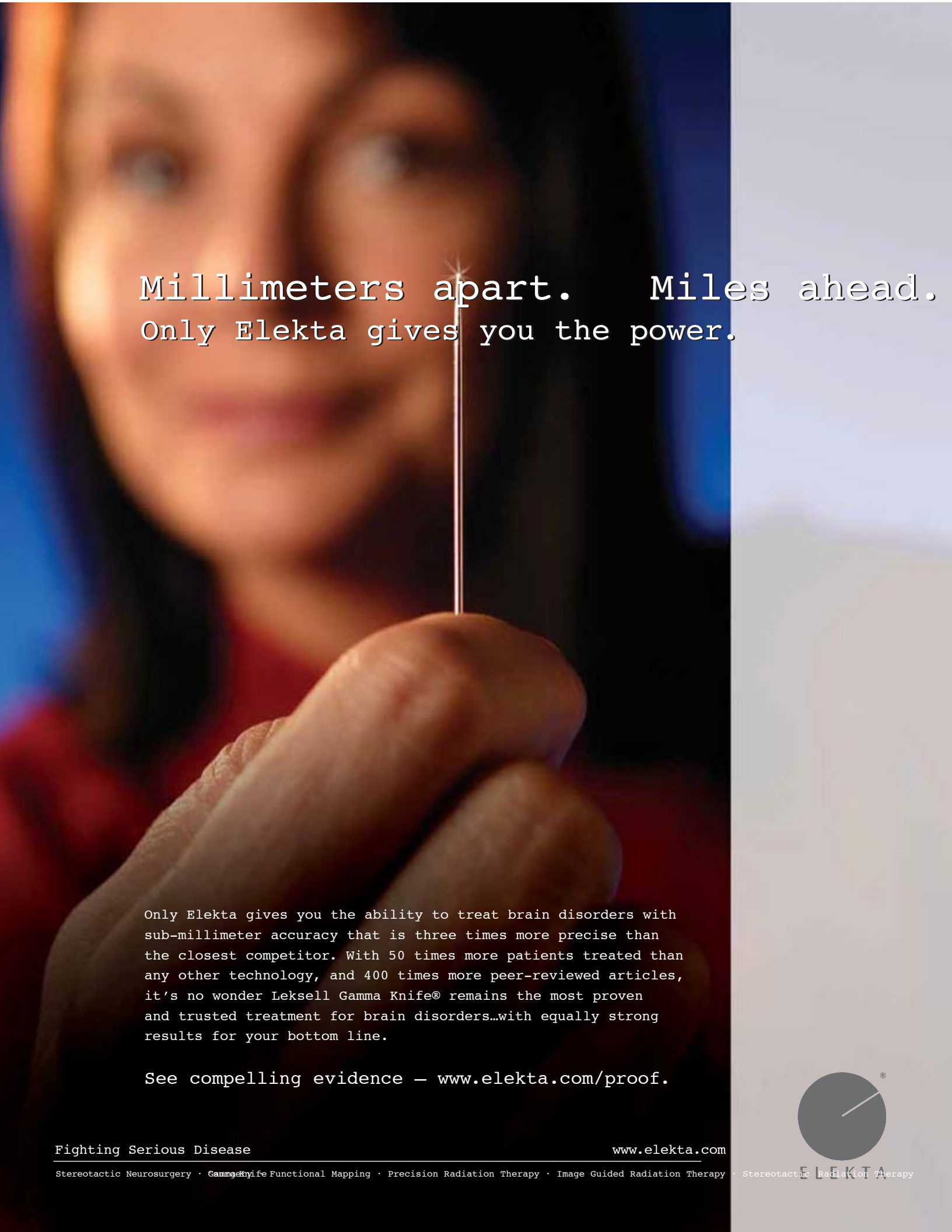


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